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Council Meeting

Monday 23 February 2026

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10.1 Aqualink Nunawading Concept Design and Community Consultation

Attachment 1 Aqualink Nunawading Business Case

Attachment 2 Aqualink Nunawading Redevelopment Options

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Ensuring equitable and sustainable participation in sport and active recreation in Whitehorse

Aqualink Nunawading Redevelopment Business Case

Department of Jobs, Skills, Industry and Regions - Sport and Recreation

Senior Responsible Officer attestation

The undersigned attests that this business case:

- has been prepared in compliance with the policy and legislative requirements outlined in Ministerial Direction 7.2 issued under the *Project Development and Construction Management Act 1994* (Vic) and with consideration of the *Investment Lifecycle and High Value High Risk Guidelines* (both available on the DTF website). ☐
- will achieve the full intended service outcome. ☐
- will achieve the intended service outcome subject to the following additional investments: ☐

[Additional investment 1]

[Additional investment 2]

[Additional investment 3]

Signature: ..... Date: .....

Name of Senior Responsible Officer: .....

Title: .....

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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Ensuring equitable and sustainable participation in sport and active recreation in Whitehorse

Business Case for Aqualink Nunawading Redevelopment

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Overview

The Aqualink Nunawading Redevelopment Business Case is seeking $31 million TEI (capital funding of $30 million and output funding of $1 million) over four years (2026-2027 to 2029-2030) to redevelop and expand the aquatic and dry fitness facilities to best service an evolving community in decades to come. This ensures the community's water competency, health and wellbeing needs and high-performance sporting aspirations can be met, enabling equitable and sustainable participation in sport and recreation in Whitehorse.

No ongoing financial support is sought and there are no funding offsets for the State Government on this project. City of Whitehorse will be responsible for remainder of funding to $142.7 million.

This investment addresses the Victorian Budget Priority of *A Fairer, More Connected Victoria.* It responds to the Whitehorse community's current and future needs for accessible, inclusive, high-quality, flexible health and aquatic facilities and services, and creates opportunities to:

- Increase health and wellbeing outcomes through participation in physical and social activities
- Enable greater financially and operationally sustainable council services to the community
- Assure greater water awareness and swimming competence through to high performance within an increasingly diverse community.

This investment helps achieve the primary three of the ten objectives of *Victoria's Infrastructure Strategy 2021-2051*:

- Prepare for Population Change
- Foster Healthy, Safe, Inclusive Communities
- Reduce Disadvantage.

It is strategically aligned to the Active Victoria Strategy key objectives, Victoria's Health and Well-being Plan, the Victorian Water Safety Strategy and the State's investment in the Suburban Rail Loop and the population growth in the Whitehorse municipality, which is projected to double by 2051.

It is directly aligned to *Victorian Infrastructure Plan 2021* to fund libraries and aquatic centres in growth areas. Whitehorse is ranked 8 in Infrastructure Victoria's top 10 of nominated growth areas[2].

Aqualink Nunawading has been a focal point in the community for more than 60 years. However, it is facing an imminent risk of failure and closure at any time and definitively, asset-decline driven closure in 2032. Over 200,000 people per year learn to swim, train and participate in carnivals at Aqualink Nunawading, seeding future aspiring athletes via the co-located Nunawading Swim Club. Closure will impact important physical and social activity, causing lost health benefits, water competency and safety in the community.

WCC has carefully considered its options and proposes a solution that enables equitable and sustainable participation in sport and active recreation in Whitehorse. This will be achieved through redevelopment at the existing site and comprises:

- An inclusive and accessible facility of ~21,000 sqm (incl car parking)
- 50m x 8 lane indoor pool with swim wall and ramp
- Learn to swim pool with moveable floor and ramp

[1] City of Whitehorse is facing unprecedented population growth in the next two decades from migration and stimulated by infrastructure projects such as Suburban Rail Loop (SRL) and North East Link. Current SRL population forecasts predict growth of 77,500 for Box Hill SRL precinct and another 44,500 people for the Burwood SRL precinct by 2056, each within the 8km catchment for Aqualink Nunawading. Whitehorse is projected to double its households by 2051 with an additional 79,000 new homes targeted under the State Government's Housing Target 2051, to accommodate forecast growth of 2 million+ new residents in Victoria. Sources: Victorian Government (16 June 2024) *Housing Targets 2051*; Source: https://www.premier.vic.gov.au/councils-get-first-shot-unlocking-space-more-homes and Suburban Rail Loop East (2023) Draft Precinct Vision Box Hill; Draft Precinct Vision Burwood https://bigbuild.vic.gov.au/library/suburban-rail-loop/planning/draft-precinct-vision

[2] Infrastructure Victoria (2021) *Background paper: Social infrastructure in Melbourne's growth areas*; Source: https://www.infrastructurevictoria.com.au/resources/social-infrastructure-in-melbournes-growth-areas (accessed 30/4/24)

- Leisure water and toddler pool
- Warm water program pool
- Spa, sauna and steam rooms
- Gymnasium and group fitness
- Allied health and consulting suites
- Dedicated Nunawading Swim Club facilities
- Smart, sustainable technology for building services, mechanical and pool plant
- Improved amenity and gathering spaces for visitors including gender equity / inclusive change, café, meeting rooms, prayer/quiet rooms.

The $31 million State Government investment in Aqualink Nunawading achieves $28M net present value of net economic benefit for the construction period and first 10 years of operations and a Benefit Cost Ratio of 1.21. It is projected to create 1,681 direct and indirect jobs (FTE) during this time.

The recommended solution is considered the best value for money outcome.

It stands as an investment ready to be implemented that will enable increased, equitable participation in sport and recreation activities for all and as the Nunawading population grows.

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Summary statistics

Table 1: Summary statistics – Output funding sought **$ million**

Description	2026-27	2027-28	2028-29	2029-30	2030-31	5-year total	Ongoing
Output funding sought							
Gross	0.000	0.150	0.350	0.300	0.150	**1.000**	1.000
Offsets	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	***0.000***	*0.000*
Net	**0.000**	**0.150**	**0.350**	**0.300**	**0.250**	**1.000**	**1.000**

Table 2: Summary statistics – Capital funding sought **$ million**

Description	2026-27	2027-28	2028-29	2029-30	2030-31	5-year total	2031-32	2032-33	TEI
Asset funding sought									
Gross	0.000	1.000	1.000	12.000	16.000	30.000	0.000	0.000	**30.000**
Offsets	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	***0.000***
Net	**0.000**	**1.000**	**1.000**	**12.000**	**16.000**	**30.000**	**0.000**	0.000	**30.000**

Table 3: Summary statistics – Deliverables, performance measures and staffing impacts

Description	2026-27	2027-28	2028-29	2029-30	2030-31	Ongoing
New VPS staff[(c)]	0.0	0.0	0.0	0.0	0.0	0.0
New non-VPS staff	0.0	0.0	0.0	0.0	0.0	0.0
Existing VPS staff	0.0	0.0	0.0	0.0	0.0	0.0
Existing non-VPS staff	0.0	0.0	0.0	0.0	0.0	0.0
New SES staff	0.0	0.0	0.0	0.0	0.0	0.0

Notes:

(a) Detailed information on VPS staff: State of the Public Sector in Victoria 2018-19 report (pages 155 to 156): vpsc.vic.gov.au/wp-content/uploads/2020/04/Report-State-of-the-Public-Sector-in-Victoria-2018-to-2019.pdf

Table 4: Key construction dates

Construction commencement date	Construction completion date	Financial completion date
Qtr 2/2028-2029	Qtr 2/2030-2031	Qtr 2/2031-2032

Qtr 1 = Jul-Sep; Qtr 2 = Oct-Dec; Qtr 3 = Jan-Mar; Qtr 4 = Apr-Jun

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Part 1 – Investment case

1. Problem definition

1.1 Background

For many Australians, the public swimming pool is central to communities and their personal health and wellbeing: where people learn to swim and families play, where they exercise and train, where people socialise at all ages and stages of life. Aqualink Nunawading has been such a place within the Whitehorse municipality for more than 60 years. Originally built as the outdoor Nunawading Memorial Pool, it has been enclosed and added to as the community's needs changed. However, it is no longer meeting the needs of the community.

Aqualink Nunawading is approaching end-of-life, its plant and equipment requiring ever greater levels of maintenance. It is currently at risk of serious failure and complete closure by 2032. Its facilities and functional amenity do not meet the contemporary needs of the community, now a much larger and more diversified population. The two pools are at capacity at peak times, shared by recreational and lap swimmers, learn-to-swim programs and elite athletic training by at least five local clubs and swim squads.

Aqualink Nunawading has been the training ground for Olympic and World Championship swimmers, water polo and triathlon athletes. Currently, over 300 young and emerging swimmers and athletes train at the facility and in partnership with these clubs, it offers a pathway to the elite level and the dream of national and international sporting success. Aqualink Nunawading's facilities and configuration are outdated and now do not provide the high-performance training systems and environment that can support and fully enable our future athletes.

There are also many people who cannot use Aqualink Nunawading. It is not easily accessible for people with mobility issues and is not considered Disability Discrimination Act (DDA) compliant by contemporary standards. Its amenities are not inclusive and are insufficient for families and school groups. Some segments of the community do not feel welcome and a lack of familiarisation and safety around water comes with the risk of drowning. It is putting vulnerable people at risk through the inability to access, be safe and participate in sport and aquatic-based activities.

Adding to these challenges, Whitehorse's population is set to expand by an additional 45,150 people (26.38% growth)[3] in the next twenty years. This will be further impacted by urban planning and infrastructure developments including North-East Link and the Suburban Rail Loop, which trigger even greater growth in the municipality once these projects are complete. Recent announcements by the Victorian State Government propose further material increases in population for Whitehorse and other similar municipalities, impacting local government planning to meet demand. This is a growing and aging population that requires access to aquatic and dry fitness facilities that can meet their health and well-being needs across all age groups and demographics. Active participation in physical activity and sport offers many health benefits and can help minimise the growing cost burden of health services, both mental and physical, particularly for aging cohorts, now impacting every level of government. Aquatic centres help build strong social networks and every swimming pool visit generates $26 in health benefits, collectively totalling $1.82 billion in Victoria[4] alone.

Whitehorse City Council (WCC) has developed this investment case to address these challenges. The investment case responds to and advances these themes and ideas – supporting elite sport training pathways through to professional opportunities whilst also ensuring that people of all ages and abilities can equitably and safely participate in sport and wellness activities within their community, balancing the needs of the community.

[3] ID Community (2023) *City of Whitehorse Population Summary* https://forecast.id.com.au/whitehorse/population-summary (Accessed 23/04/23)
[4] Aquatics Recreation Victoria and Life Saving Victoria, *Victorian public pools state of the sector report 2019–2020*, Melbourne, VIC, p. 7

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On this basis, it invites the Commonwealth Government and Victorian State Government (State Government) to contribute to the outcomes that can be achieved by redevelopment of Aqualink Nunawading, enabling health, water familiarisation and safety, inclusivity and well-being outcomes while enhancing the opportunities for sports development from the earliest age that can lead to Olympic gold, the long game and goal of training, to foster new Australian champions.

From Sport Australia: Sport 2030

"Australia's ageing and ethnically diverse population has made us a stronger, more inclusive country, and the rapidly growing role of technology has transformed the way we live, work and play.

But fewer Australians are playing sport and engaging in physical activity — this is a trend we need to reverse." (p.2)

1.1.1. Commonwealth and State Government alignment

Both the Commonwealth Government and the State Government share common objectives around health and active participation in physical activity and sport. Sport has been a defining motif in Australian identity and for generations has helped grow and enhance our international reputation. We enjoy the social and health benefits of participating in sport, and our sporting clubs are situated at the heart of all communities.

The Commonwealth Government has a clear and bold vision for sport in Australia — to ensure we are the world's most active and healthy nation, known for our integrity and sporting success[5]. Sport matters economically to Australia, delivering $83 billion of benefits annually, returning $7 for each dollar invested. Our national brand in sport indirectly supports many other industries including tourism.

Equally, the State Government has set priorities for sport and active recreation, not only for reasons of economic growth and jobs but also because it helps make Victorians healthier, happier, builds community cohesion and contributes to the liveability of local communities.[6]

While the community is shaped and inspired by sporting champions at the elite level, equally concerning for all levels of government is the decline in physical activity and participation in sports activities at every age.

It is the responsibility of all governments to work collectively to arrest the decline in participation in sport and physical activity and to minimise the associated health costs on government budgets that come from lack of activity, health and wellness. The right facilities in the community enable this. Aquatic and recreation centres are commonly used seven days per week and operate almost every day of the year, enabling participation.

A combined approach between the Commonwealth and State governments with WCC will progress health, well-being and social cohesion and connectivity in the City of Whitehorse and will deliver the front-line services and facilities that its communities need to achieve their health objectives and through this, enable the training and development of new sport heroes.

1.1.2. Enabling participation and water safety: Australians and swimming

We are a nation surrounded by water. Swimming and aquatic sport, recreation and culture loom large in Australia's national identity. Oceans, beaches, pools, lakes and rivers dominate our collective experience, offering delight and fear, inciting wonder and importantly - the challenge to be safe around water.

Young Australians are usually introduced to water and learn to swim before walking. Our prowess and performance in the pool is globally recognised and respected.

Swimming is now recognised as 'the number one participation sport in the country' in the Australian Sport Commission's latest national AusPlaydata[7] .Nearly six million Australians participate in swimming through learn to swim programs, recreational lap swimming, squad training, competition and ocean swimming.

- It is the most popular sport for children - 37.9% of all children participate (1.92 million).
- It is notably popular amongst women and girls (54.8% of all swimmers - 3.22 million).

[5] Sport Australia (2018) *Sport 2030 National Sport Plan* https://www.sportaus.gov.au/nationalsportplan (Accessed 23/04/24)

[6] Sport and Recreation Victoria (2021) *Active Victoria 2022-2026* https://sport.vic.gov.au/publications-and-resources/strategies/active-victoria-strategic-framework-sport-and-recreation (Accessed 23/04/224)

[7] Swimming Australia (3 November 2023), *AusPlay confirms swimming no.1 sport in country* Source: https://www.swimming.org.au/articles/ausplay-confirms-swimming-no-1 (accessed 02/05/24)

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- It is the leading sport for people with a disability (573,000) and amongst people who speak a language other than English (LOTE) at home (995,000).

Yet what happens if you have not grown up around open water and a culture of swimming? Over the past few summers, Australians have borne witness to a growing number of drowning incidents which need not have happened if victims had greater exposure to water and learn to swim programs. Australia wide, there were 99 recorded drowning deaths between 1 December 2023 and 29 February 2024: tragically a 10% increase from the previous summer and a 5% increase on the 5-year average of 94 drowning deaths[8].

Many people are venturing to waterways for the first time with varying levels of water safety experience, including many from culturally and linguistically diverse (CALD) communities. Increasing numbers of people are poorly assessing risk and swimming in unsuitable environments[9]. CALD Victorians are at higher risk. This cohort is overrepresented in drowning statistics (36% of drownings compared to 28% representation in population) and are at a higher risk of drowning when 'day-tripping' to waterways.

Over 5 million swimming lessons were missed during the 6-12 months of Covid lockdowns in Victoria[10] and there have been some tragic deaths of children from drowning in the past three years. A local swimming pool is vital within communities to enable participation in sport and for safety in and around water for both children and adults.

1.1.3. Aqualink Nunawading

Aqualink Nunawading first opened in 1960 and has been subject to significant and periodic redevelopment since then. Originally known as Nunawading Memorial Pool, it was classified as a Memorial Pool in recognition of those who served in the first and second world wars. The centre is located at Fraser Place, Forest Hill, and situated within the wider Forest Hill Reserve. It is one of two Aqualink leisure centres located in the City of Whitehorse, the other at Box Hill, with both available to use by members and casual visitors. Aqualink Nunawading includes the only 50m pool between the two complexes.

Figure 1: Historic postcard of the original Nunawading Memorial Pool complex.

Notably, it has been the home training site for the Nunawading Swim Club for more than 60 years, which offers pathways for athletes through state to national levels, and to a high-performance stream, with over 260 members training weekly. It is one of three Victorian clubs that are part of Swimming Australia's Podium Performance Centre program, to provide a world's best training environment and support for Australian elite swimmers and coaches, as they push for international podium success in pinnacle events such as LA 2028, Brisbane 2032 and beyond. Many Nunawading Swim Club high performers have gone on to win gold, silver and bronze medals at past Olympic and Commonwealth Games as well as represent Australia at key meets including world championships and World University Games.[11]

Additional longstanding sport clubs and squads also train at Aqualink Nunawading including Nunawading Triathlon club, NYP Dragons Water Polo (est. 1960), Nunawading Orcas Masters Swim Club (est. 1994) and a regular 3KM adult squad whose current members have used the pool for more than 30 years. A further 60+ athletes from these clubs train weekly with their members also competing in national and international competitions and meets.

[8] Royal Life Saving Australia (2024) Summer Drowning Report 2023/24; Source: https://www.royallifesaving.com.au/research-and-policy/drowning-research/summer-drowning-toll#:~:text=Summer%20Drowning%20Report%202023%2F24,2023%20and%2029%20February%202024. (accessed 28/05/24).
[9] Life Saving Victoria (2021) noted in *The challenge – water safety risks are increasing,* Source: *https://www.vic.gov.au/victorian-water-safety-strategy-2021-25/challenge-water-safety-risks-are-increasing, accessed 06/06/24*
[10] Life Saving Victoria (2021) noted in *The challenge – water safety risks are increasing,* Source: *https://www.vic.gov.au/victorian-water-safety-strategy-2021-25/challenge-water-safety-risks-are-increasing, accessed 06/06/24*
[11] Nunawading Swim Club (2023) *Former Nunawading Elite Athletes* Source: https://uk.gomotionapp.com/team/nunwadingsc/page/our-people/former-nunawading-elite-athletes; accessed 31/05/24.

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Its additional facilities include a family leisure pool combining a learn to swim section, beach entry and water play area, spa, sauna and steam room, a 400m^2 gym and two program rooms, café, entry foyer with merchandise store and on-site carparking.

Over 3,000 students learn to swim at Aqualink Nunawading each week through lessons currently provided by Just Swimming Nunawading, a division of the Nunawading Swim Club. Swim classes are offered from 4 months of age through to adults. Additionally, it hosts one of the busiest intensive schools' programs at a suburban pool (58,000 students per year), growing swimming competence and water safety skills in children.

Annual usage of Aqualink Nunawading is approximately 574,000 uses per annum. It currently has 2,732 members using aquatic and dry-fitness facilities on a regular basis.

1.1.4. Whitehorse City Council

The City of Whitehorse is located in Melbourne's middle eastern suburbs, between 12 and 22 kilometres east of the Melbourne CBD. It is home to an estimated resident population of 178,639 people [12]in approximately 72,000 dwellings and covers an area of 64 square kilometres. The population density is 2,781 persons per square kilometre.

The City of Whitehorse is divided into eleven wards with a single Councillor for each ward.

The organisation of WCC is led by the Chief Executive Officer who operates under the guidance of the elected Council and delivers its services to the community via five departments.

The City of Whitehorse includes the suburbs of Balwyn North (part), Blackburn, Blackburn North, Blackburn South, Box Hill, Box Hill North, Box Hill South, Burwood (part), Burwood East, Forest Hill, Mitcham, Mont Albert (part), Mont Albert North, Nunawading (part), Surrey Hills (part), Vermont (part) and Vermont South.

The area is predominantly residential in nature but also includes major retail and commercial centres at Box Hill, Nunawading, Mitcham and Forest Hill. The City of Whitehorse is also home to major educational institutions such as the Melbourne campus of Deakin University, and Box Hill Institute.

Aqualink Nunawading is an important community facility within the municipality, originally opening in 1960 and contributing to the profile of the area as a family suburb and high liveability.

Whitehorse is facing significant growth over the next three decades, driven by population growth and significant infrastructure developments underway. This includes North East Link, Suburban Rail Loop and the Housing Target 2051 program, seeking an effective doubling of households with 79,000 new households to be accommodated as the State Government seeks to ensure more than two million additional homes by 2051[13] to accommodate anticipated migration levels.

Figure 2: Aqualink Nunawading 50m pool hall

[12] ABS (2023) *City of Whitehorse* Source: https://profile.id.com.au/whitehorse/about; accessed 29/04/24
[13] State Government of Victoria (2024) *Councils Get First Shot At Unlocking Space For More Homes* (16 June); Source: https://www.premier.vic.gov.au/councils-get-first-shot-unlocking-space-more-homes

1.2 Define the problem

A series of investment logic mapping (ILM) workshops to understand the problems associated with Aqualink Nunawading were held in April-May 2024 (refer to Appendix A) which resulted in three key problem statements:

# No.	Problem Statement
Problem 1	*Continued operation of an inefficient, end-of-life facility prone to failure exposes the council and community to further costs and service disruption and risk of permanent closure.*
Problem 2	*Failure to be safe, accessible and relevant to many within the community constrains the level of participation in important physical and social activity.*
Problem 3	*Disruption to the transition from learn to swim through to recreational and high-performance activity impacts opportunities for competence and excellence in aquatic sports.*

The following discussion provides context to the underlying issues for stakeholders involved in these workshops.

1.2.1. End-of-Life Facility and Compliance Issues

WCC has an important role in the provision of community access to public aquatic facilities as part of its broader role to deliver social and economic outcomes for all municipal residents, visitors, and businesses. However, the existing Aqualink Nunawading facility no longer meets the diverse needs of the community, falling short in delivering essential services and opportunities for physical activity and social engagement.

Faced with growing inefficiencies and increasing operational costs, WCC began a process to assess Aqualink Nunawading to understand its role and usage within the community. In 2021, the Council commissioned a team of specialist consultants to undertake a feasibility study. This found the centre is not fulfilling community needs, is at an end-of-life state and will require significant investment to continue operating into the future.

The 2021 Aqualink Nunawading (AQN) Feasibility Study concluded that the centre is not fulfilling community needs, is at an end-of-life stage, and will require significant investment to continue operating into the future.

Following on from the 2021 Feasibility Study, further technical studies were undertaken which confirmed Aqualink Nunawading is near end of life, non-compliant to contemporary standards in various areas, and is facing an imminent risk of failure and closure at any time and definitively, asset-decline driven closure in 2032.

The 2023 WCC report[14] determined that the facility has multiple points of non-compliance and is at risk of failure now, leading to potential temporary or permanent closure. It should be closed by 2032 due to asset decline. This would disrupt current services to the community that cannot be replicated or replaced elsewhere. This exposes the council and community to further costs, service disruption and the risk of permanent closure if a solution cannot be achieved in the next eight years.

This report also found that it is neither financially nor operationally viable to undertake significant alteration, upgrade and/or extension to expand the centre's buildings and functionality to meet community needs, as such upgrades come with considerable risk and compliance issues.

The more significant limitations and deficiencies of Aqualink Nunawading relate to its aquatic water treatment and building and site services. The back-of-house plant areas and pool water treatment systems are not

[14] Whitehorse City Council (2023) *Aqualink Nunawading Facility Assessment and Options Review Report* (25 July), Not published – internal/supplied.

adequate for the current aquatic facilities, include non-compliance issues and could not service additional water options, making them unsuitable for long-term operation or redevelopment.

Under the Building Code of Australia (BCA), any extension or alteration beyond 50% of the existing building volume mandates upgrading all existing areas to current BCA requirements. Retaining the current 50m pool (the shell is now 60+ years old) and building new program/warm water pools and health and fitness components on the existing site is therefore unviable due to compliance, remaining service life, and predictability should new structures be added, and the associated costs.

Specifically:

- The existing pool water treatment plants are undersized and not compliant with current standards. New pool water treatment systems for the existing pool volumes would be approximately double the size of the existing systems, triggering a complete replacement.
- Limitations with pool hydraulics pipework (between the plant rooms and the pools) would prevent supplying increased flows from upgraded pool plants.
- The Toddler's pool is hydraulically connected to the Leisure pool system and cannot be separated, limiting operational flexibility in the event of contamination.
- The existing plant spaces are not serviceable from an access perspective, with compliance issues due to extensions over time and differing levels.
- Chemical delivery provisions are non-compliant.
- High-level ventilation for the existing 50m pool gas-fired boilers is non-compliant, and the boilers are outdated compared to more efficient current technology.
- Most of Aqualink Nunawading's building services assets are at or near end-of-life (15-20 years old or older), suited only for the current layout and operational needs. Any change to operations or layout would require new or supplemental plans.
- Increased risk associated with these building service assets includes the inability to obtain replacement parts, catastrophic failure requiring full replacement, and operational inefficiency potentially increasing running costs.

This poses a challenge to the objectives outlined in the Victorian Infrastructure Plan, which prioritises the maintenance and upgrading of public assets to ensure their continued utility and safety. In this case, the existing Aqualink Nunawading has been confirmed as not operationally nor financially viable to upgrade.

1.2.2. The needs of the community are no longer met by Aqualink Nunawading

There is clear, functional and strategic misalignment between the existing capacity of Aqualink Nunawading, and the current and future needs of the community.

Stakeholder consultations from 2021 to 2024 highlighted that many visitors feel excluded from using the services at Aqualink Nunawading due to physical barriers or a perception of the centre being unsafe and inadequate for their needs. Some users seek alternative facilities to achieve their health and fitness goals. These issues are related to the outdated range and form of facilities, limited capacity and configuration which no longer align with the community's changing expectations. The facility lacks appropriate separation for user groups, and the change rooms are not fit-for-purpose. It does not support contemporary DDA compliance. This is constraining the level of participation in important physical and social activity.

This inadequacy undermines the Victorian Government's Active Victoria strategy[15], which aims to support thriving places and communities and increase physical activity participation across all demographics. It hinders the ability to support Whitehorse City Council's strategic priorities (mapped in Figure 3), including general community water safety competence and broader community and health objectives. The key objective of Connecting Communities - that all Victorians have access to high-quality environments and appropriate participation opportunities cannot be achieved at Aqualink Nunawading, making it inequitable.

[15] Department of Jobs, Regions and Precincts (July 2022) *Active Victoria 2022-2026*

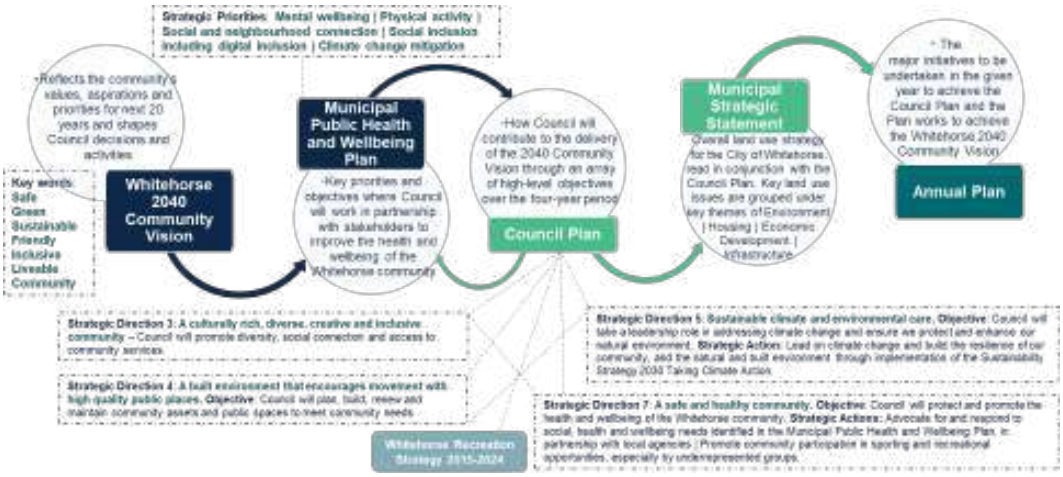

Figure 3: Mapping of Whitehorse City Council strategic priorities and directions

Support for High-Performance and Elite Swimmers

Aqualink Nunawading is currently unable to fully support the pathway for development of high-performance swimmers to elite-level programs due to several critical facility limitations.

The existing infrastructure does not meet the needs for high-performance training and competition, hindering the Nunawading Swim Club's ability to produce world-class athletes consistently. Aqualink Nunawading holds the only 50m pool in the area. Closure of the facility from asset failure would further disrupt the important transition and pathway opportunities for swimming competency, from learn to swim to elite levels that can represent the state and nation in competition. Its two pools are frequently at capacity during peak times, restricting growth for the aquatic sports clubs that train at Aqualink Nunawading and limiting community participation in leisure, health and well-being activities.

Key Limitations:

Aquatic facility capacity: The learn-to-swim and squad training aquatic facilities at Aqualink Nunawading are effectively at capacity. Over 3,000 students participate in swim lessons weekly (134,511 in FY23-24), as well as providing one of the busiest schools' intensive programs (58,000 students per year) and the club has 260 members training multiple times per week. This high demand restricts the club's ability to build its base and train elite athletes to the standards required for national and international competitions.

High-Performance Training Disruptions: Disruptions, such as the COVID-19 pandemic, have shown the impact of facility closures on athlete development. Many elite Victorian swimmers, including those from the Nunawading Swim Club, had to move interstate to continue their training, significantly affecting their performance and reducing the number of Olympians emerging from Victoria.

Facility Features do not support contemporary DDA compliance:

- The 50m, 8-lane pool lacks a ramp, failing to meet current Disability Discrimination Act (DDA) standards.
- There is no dedicated warm water pool for use in therapy or rehabilitation.
- There are no accessible change room amenities at pool level, nor is there a Changing Places change room.
- Multiple floor levels create disconnected and arduous navigation for individuals with impaired mobility and vision.

Ad-Hoc Development: The centre's ad-hoc development over the years has resulted in a poor sequence of spaces that do not promote diversity of uses, social cohesion, or connection. The inward-looking building is

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seen as disconnected from its site and setting within the Forest Hill Reserve, including its relationship to adjacent parkland and sports clubs (Nunawading Football Club and Nunawading Cricket Club).

Accessibility and Connectivity: Vehicle parking and transport options, including active transport options to the precinct, need improvement to enhance access for different user groups and neighbouring clubs.

These limitations contradict the objectives of the State Government's Active Victoria 2022-2026 – Sports and Recreation Strategic Framework, which aims to foster sporting excellence and support pathways for athletes from grassroots to elite levels.

Upgrading Aqualink Nunawading is essential to provide adequate facilities for swimming competency in the wider community through to high-performance swimmers, aligning with the strategic goals of fostering sporting excellence and supporting athlete development. This will ensure that Nunawading Swim Club (as well as the Nunawading Water Polo and Triathlon clubs) can continue their legacy of producing world-class athletes and providing essential services to the community through sport participation.

1.2.3. Future Demand from Changing Demographics and their Health Needs

The current facility is not able to accommodate demand nor meet the needs of the future population of Whitehorse and catchment areas.

The existing Aqualink facility is ill-equipped to accommodate the current and future demand driven by the evolving population demographics and associated health needs, necessitating a comprehensive upgrade to meet these challenges effectively. The facility is already noted as at capacity for sport club training schedules and learn-to-swim programs by Nunawading Swim Club, who use other pools to run lessons at.

Between 2021 and 2041, the population of Whitehorse is forecast to increase by 45,150 persons (26.38% growth). In addition, WCC anticipates impacts on residents due to major transport projects such as the North-East Link and Suburban Rail Loop, which will bring significant new populations within 8km of Aqualink Nunawading. In June 2024, the Victorian Government announced that an additional 79,000 homes will be required in the municipality by 2051[16], effectively doubling household numbers (estimated at 74,200 in 2023 – see Figure 4). Substantial investment in infrastructure and amenity is required now to maintain liveability in Whitehorse and cater to this level of future growth and demand.

Many people in Whitehorse enjoy good health and wellbeing due to the liveability of the municipality and the relative advantage of most people. However, health and wellbeing issues in Whitehorse are influenced by social inequity, obesity, lack of physical activity, poor eating habits, and mental health challenges. Emerging threats include the impacts of social media, e-cigarette use among young people, and broader social changes due to the COVID-19 pandemic and climate change.

Currently, older Australians (aged 65 and over) comprise 16% of the Australian population, projected to reach up to 23% by 2066. In Whitehorse, these percentages are higher with more than 18.5 % of people aged 65+ and 3.2 % aged 85+[17]. Additionally, 63.4 % of people with a disability are aged 65 or over. Supporting the health and wellbeing of this demographic is crucial, as physical health significantly impacts functionality and life expectancy, adding health service costs to governments at every level.

The community continues to diversify through migration, increasingly driven by skills shortages in the wider population. CALD communities are a higher proportion of the Whitehorse community, 41.5% were born overseas compared to the Victorian average of 30% and is

Figure 4: New housing to be added under Victorian Government's Housing Target 2051

[16] Victorian Government (16 June 2024) Housing Targets 2051; Source: https://www.premier.vic.gov.au/councils-get-first-shot-unlocking-space-more-homes

[17] Whitehorse City Council (2024), Interim City of Whitehorse Health and Wellbeing Profile 2024; Source: https://www.whitehorse.vic.gov.au/sites/whitehorse.vic.gov.au/files/assets/documents/Whitehorse%20Health%20and%20Wellbeing%20Profile%202024%20-%20Interim%20February%202024.pdf

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increasing (by 13% between the 2016 and 2021 census). The largest non-English speaking country of birth in the City of Whitehorse was China, where 13.0% of the population, or 21,962 people, were born, followed by India (3.9%) and Malaysia (3.3%).

The impact of the lack of water safety and swimming competence is most keenly felt on people from CALD communities, where people born overseas accounted for 42 % of all Victoria's drowning deaths in the ten years to June 2022 and were almost two and half (2.42) times more likely to fatally drown when compared to the general rate per head of population[18].

Aqualink Nunawading must undergo comprehensive upgrades to address these evolving community needs, ensuring it has new capacity and can meet future demand, and thereby equitably support the water competence, health and wellbeing of all Whitehorse residents including CALD community members. This gap is particularly critical and relevant to the context of Victoria's Infrastructure Strategy 2021-2051 and the State Government's Growing Suburbs Fund, which seeks to address the infrastructure needs of rapidly growing communities.

1.3 Evidence of the problem

1.3.1. Problem 1

Continued operation of an inefficient, end-of-life facility prone to failure exposes the council and community to further costs and service disruption and risk of permanent closure.

Whitehorse City Council's past studies between 2021 and 2023 have confirmed that the centre is at an end-of-life stage with pending asset failure and asset-driven complete closure in 2032 and requires significant investment for continued operation.

As noted in section 1.2, there are multiple issues ranging from lack of DDA compliance and access, to the form and functionality of the mechanical, hydraulic and ventilation systems in place that make it unpractical and not financially nor operationally viable to undertake significant alteration and/or extension to the centre. Effectively, the council is faced with complete closure within eight years by 2032 or replacement of Aqualink Nunawading and the services it provides to the community, to best service an evolving community in decades to come and ensuring their water competency, health and wellbeing needs and aspirations can be met.

The COVID-19 pandemic and lockdown set the precedent as to how councils and communities are affected by disruption and closure of key services including aquatic facilities which are used seven days a week, year around. Such disruption causes impact to the community's physical and mental health, wellbeing and social connection. It impacts a community's ability to be safe around water, industry-related jobs and job security, with a correlating reduction in local amenity and financial strain to councils. All up, these are considerable costs to the council and the community.

Statistics and Evidence

The value of health and wellbeing and cost of aquatic facility closure

- The Royal Life Saving Society Australia (RLSSA)[19] has estimated that lack of sufficient physical activity costs the Australian economy $3.7 billion every year. In 2021, the aquatic industry alone contributed $2.5 billion annually to reducing the burden of disease.
- Physical activity has a 26% preventative impact on anxiety and depression.
- Insufficient physical activity is responsible for 5% of all death and disability in Australia.
- The closure of aquatic facilities during lockdowns deprived communities of an important outlet for managing stress and maintaining mental well-being. Additionally, centres like Aqualink Nunawading

[18] Lifesaving Victoria (2022), Drowning Report 2021-2022, p.15 Source: https://lsv.com.au/wp-content/uploads/LSVDrowningreport2122.pdf (accessed 29/05/24)
[19] PWC and RLSSA (2021) *The health, social and economic value of the national aquatic industry*, https://www.royallifesaving.com.au/Aquatic-Risk-and-Guidelines/aquatic-research/Health-Social-and-Economic-Value-of-Aquatic-Industry, (accessed 28/05/24)

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function as important social hubs, and their absence exacerbates feelings of isolation and loneliness. 19% of Australians reported their mental health as either worse or much worse than before COVID-19.

- Each swimming pool visit generates $26.00 in health benefits to the community and in Victoria, this is equated to $1.82 billion in collective health benefits each year.[20]
- It has been calculated that there is a $4.87 social return on investment for every dollar spent on an aquatic facility in capital cities.

The terrible cost of loss of swimming competency

- Life Saving Victoria noted that over 5 million learn-to-swim lessons were missed during the 6–12-month lockdown periods in 2020-21. When pools reopened, a 25% fall in learn-to-swim enrolments compared to the previous year was noted and there was a dramatic increase in the number of aquatic rescues required. [21]
- In Victoria, 59 people lost their lives to drowning in 2022-2023 -15 more than the 10-year average.
- A lack of water safety knowledge and swimming competence significantly affects CALD communities; where people born overseas accounted for 42 % of all Victoria's drowning deaths in the ten years to June 2022 and were almost two and half (2.42) times more likely to fatally drown when compared to the general rate per head of population[22]. Whitehorse has a higher CALD population (41.5%) compared to Victoria (30%).

Figure 5: The social impact of Victorian public pools and health insights [21]

Job loss and industry sustainability from pool closure

- Aquatic industry jobs were significantly impacted by COVID-19 pool closures, predominantly affecting women and young people. RLSSA research shows that the aquatic industry employs approximately a 47% casual workforce as well as a 73% female workforce. Students make up 60% of the pool lifeguard force and 61% are under 25 years of age.
- Aquatic industry workforce sustainability is affected. Extended pool closure causes a high staff turnover due to inconsistent work opportunities. Facilities cannot host lifeguard and swim teacher courses which diminishes the talent pool of qualified staff to recruit for replacement when people choose not to return to work.
- WCC run Aqualink Nunawading with staffing equivalent to 57.68 FTE over a total headcount of 302 people, who will be affected by closure of the facility. Pool closure will significantly impact these people (includes 178 women and ~35% young people aged under 25) Please refer to Table 5.

[20] Infrastructure Victoria (2021) Background paper: Social infrastructure in Melbourne's growth areas; Source: https://www.infrastructurevictoria.com.au/resources/social-infrastructure-in-melbournes-growth-areas (accessed 30/4/24)
[21] Life Saving Victoria (2021) *State of the Sector Report 2021*, https://lsv.com.au/wp-content/uploads/LSVARVStateofSectorReport2021_2021-12-07_07-16-23.pdf (accessed 10/6/24).
[22] Lifesaving Victoria (2022), Drowning Report 2021-22, p15

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Table 5: WCC Aqualink Nunawading staff breakdown (FY23/24)

Employment Type	Head Count	Total Budgeted FTE
Casual	250	
Full-time	13	
Part-time	38	**57.68 FTE**
Temporary full-time	1	
Total headcount	**302**	

Increasing costs to Council from asset limitations and failure

- WCC commissioned specialist consultants[23] to assess the existing pool structures and pool water treatment systems and provide clear advice to support either upgrade/refurbishment or redevelopment. Consulting engineers examined the building services including mechanical, electrical and hydraulic services. The 2023 report clearly states that upgrading/refurbishing the existing facility is unviable because of cost, compliance, remaining service life and predictability. The existing facility includes multiple instances of non-compliance and that the back-of-house plant areas and pool water treatment systems are not adequate for current aquatic facilities and are not suitable for long term operation or redevelopment. Modification and or extension of the existing buildings will come with considerable risk and compliance issues and therefore is not practical.
- The 2023 report also estimated the capital costs to keep Aqualink Nunawading open to 2032 as >$4m, in addition to WCC's normal planned capital expenditure. This capital expenditure will only address faults and failures in existing critical assets (e.g. pool plant and equipment, HVAC)[24] and not extend the asset life past 2032.
- In addition, Aqualink Nunawading has its normal planned capital maintenance expenditure, which was estimated at $2.88 million to end of 2032. We have discounted this expenditure in our financial forecasts to allow for rationale decision-making and extending life of existing assets as the facility approaches its closing date at the end of 2032. The facility currently operates at a loss of ~$800k per annum, excluding any capital of asset life cycle expenditure. Given the limitations of Aqualink Nunawading's condition and amenity, and taking the community's feedback into consideration, income is unlikely to increase to improve service/facility viability and we have assumed this loss continues each year until the 2032 closure.
- Please refer to Table 6 for a summary of the Aqualink Nunawading forecast financials from 2025 to 2032, which shows a net deficit of in excess of $11 million for WCC ($2024).

Table 6: WCC Aqualink projected operating costs for WCC

Item	2025	2026	2027	2028	2029	2030	2031	2032	Total 2025-32
Financial Projections ($2024)									
Income	$3,515,000	$3,515,000	$3,515,000	$3,515,000	$3,515,000	$3,515,000	$3,515,000	$3,515,000	**$28,120,000**
Expenditure	$4,270,000	$4,270,000	$4,270,000	$4,270,000	$4,270,000	$4,270,000	$4,270,000	$4,270,000	**$34,160,000**
Asset Life Cycle	$615,000	$735,000	$752,000	$588,000	$803,000	$658,000	$719,000	$454,000	**$5,324,000**
Surplus/ Deficit	**($1,370,000)**	**($1,490,000)**	**($1,507,000)**	**($1,343,000)**	**($1,558,000)**	**($1,413,000)**	**($1,474,000)**	**($1,209,000)**	**($11,364,000)**

[23] Whitehorse City Council (2023) *Aqualink Nunawading Facility Assessment and Options Review Report* (25 July), Not published – internal/supplied
[24] Whitehorse City Council (2023) *Council Report – Aquatics* (14 Jan), Not published – internal/supplied.

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1.3.2. Problem 2

Failure to be safe, accessible and relevant to many within the community constrains the level of participation in important physical and social activity.

WCC has undertaken a range of stakeholder consultations in 2021, 2022 and 2024 to understand the community's experience of Aqualink Nunawading and why they may attend/participate less or not attend at all. Key feedback has indicated that some members of the community do not feel safe getting to or using the centre, the centre is not accessible for some and that there is not appropriate pool and change room facilities for their needs. Other feedback indicates that some members of the community do not feel welcome. Existing users highly value the facility but note the deteriorating condition and lesser amenity.

As discussed in section 1.2.1, Aqualink Nunawading lacks important functionality including the kind of water spaces, dry fitness and wellbeing facilities, range of amenities particularly for families, people with disability, groups and school groups and gender-neutral options which constrains their participation in important physical and social activity.

- The 50m pool is not compliant with the current standards of DDA access.
- There is no warm water pool.
- The configuration of the spaces and café do not encourage social activities and interaction as other more contemporary facilities offer.
- Multiple floor levels create disconnected and arduous navigation for individuals with impaired mobility and vision.

WCC has noted the key user profiles for Aqualink Nunawading (Figure 6) and compared against benchmarks for successful centres that ensure both financial and social viability.

This indicates Aqualink Nunawading is not attracting participants for recreational/leisure purposes and catering less to health and wellness participants, which has an associated community cost to health and well-being. However, as the only 50m pool in the municipality, it plays a pivotal role in for training, fitness and education of swimmers to elite levels. This is demonstrated by the high percentage for these two segments.

In 2021, Royal Life Saving Australia released its pivotal report, the Health, Social and-Economic Value of the Aquatic Industry, which provides **$9.1 billion** annually in benefits to the Australian community.

This report makes clear the importance of aquatic facilities to physical and social activity and the benefits to the Australian community including water competence:

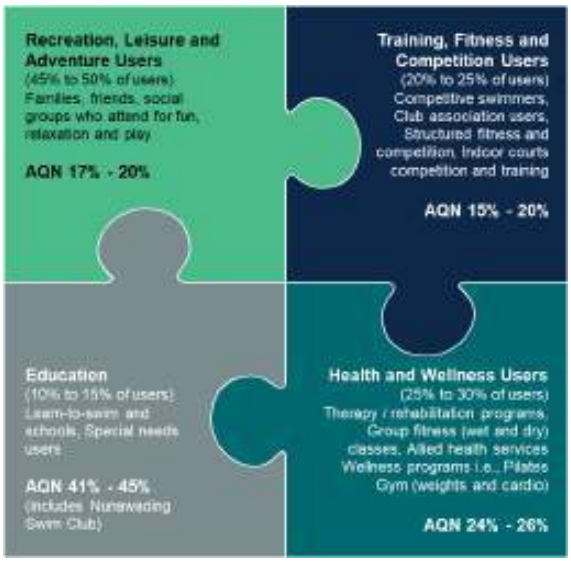

Figure 6: Visitor profile for Aqualink Nunawading against industry benchmarks

- Provides $2.5 billion in reduced burden of disease in Australia
- 7,479 disability adjusted life years are saved each year
- There are over 333 million visits to Australian public and publicly accessible pools each year.
- Over $174 million is saved annually from avoided child drownings.

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Figure 7 The economic, health and social benefits of the Australian aquatic industry, RLSSA (2021)

KPMG[25] has estimated the annual value supported by community sport and active recreation infrastructure in Victoria is at least $7.04 billion in economic, health and social benefits. Such infrastructure provides important qualitative benefits including increased social connectedness, inclusion and networking, community pride, increased levels of trust in other, reduced anti-social behaviour, creation of a community hub and greater national and elite sporting outcomes (as aspirational athletes are trained and move into competitive activities). The current facility is not able to fully deliver this important activity and achieve these benefits as already at capacity at peak times and some community members are unable to access and use the facility. It is therefore inequitable as some community members are excluded from use.

Consideration needs to be given to maximising participation for non-traditional users of indoor facilities to ensure Aqualink Nunawading can be relevant to all members of the community and the changing expectations for aquatic facilities.

A leading aquatic pool consultant notes the move towards greater health and well-being outcomes or 'preventable hospitals' within aquatic facilities. Numerous factors have been identified[26] as critical to the objective to maximise participation across the whole community including:

- Pricing affordability
- Universal design factors
- Facility ambience and welcoming 'feel'
- Facility components such as warm water space, allied health services, educational spaces and passive spaces.
- A soft entry option such as the provision of targeted programs and services (e.g. over 55s programs).
- The provision of adequate car parking which can be a barrier for non-traditional users
- Partnerships that enhance the services offering and customer experience
- Capability development to deliver services outside of the four walls of the facility.

[25] KPMG for Sport and Recreation Victoria (2020) *The Value of Community Sport and Active Recreation Infrastructure*
[26] Warren Green Consulting (2024) *Aquatic and Leisure Centre Facility Developments, Benchmarks and Trends*, Commercial in Confidence (supplied)

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1.3.3. Problem 3

Disruption to the transition from learn to swim through to recreational and high-performance activity impacts opportunities for competence and excellence in aquatic sports.

Swimming is unique as it is a life-skill, a sport and a recreation. 5.34 million Australians regularly participate in swimming, the largest participation sport in the country. The swimming community spans from 6-month-old learn to swimmers to 100-year-old masters swimmers. The Australian sport industry including swimming represents 3% of the Australian economy and is a complex eco-system between different layers of government, sport institutes, sporting organisations and key international sport movements[27].

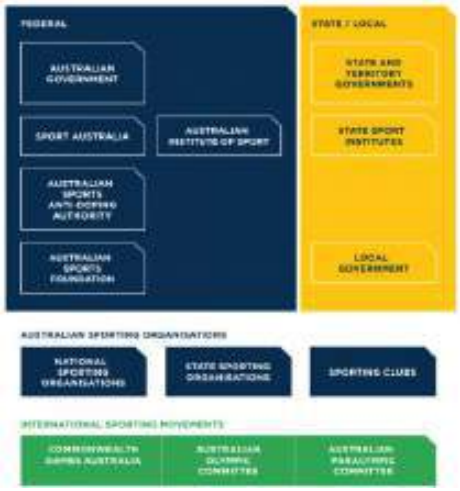

Figure 8: The Australian sporting industry ecosystem (Commonwealth Government (2018)

In Victoria, sport makes a $4 billion value-added contribution to the state's economy and directly generates 20,447 jobs, with an additional 51,000 jobs attributable to full-time recreation.[28] While for most Victorians, the sport experience might include participation in community sport or attendance at events, behind these exist the athletes, professionals and administrators driving the industry and delivering health, economic and community benefits.

Swimming is also Australia's most successful Olympic and Paralympic sport, generating over 40% of Australia's medals. Nine of Australia's top 10 Olympic medal winners are swimmers. Emma McKeon overtook Ian Thorpe at the Paris 2024 Olympics, to be the most awarded gold medal winner, having now won six gold (11 medals in total). At the Olympic level, the water sports include swimming, diving, water polo, artistic swimming and marathon swimming.

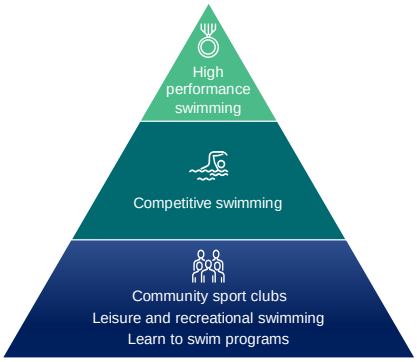

Figure 9: The pathway to high performance swimming

Continuous recruitment of talent into this eco-system is vital to sustain Australia's elite athletic representation. The aquatic athlete's pathway, from grassroots community participation at local pools through swimming lessons and recreation to competitions and ultimately elite level requires commitment and dedication by the athlete, their family, coaches and aquatic sports clubs.

Swimming Australia and swim clubs across the country are focused on the next decade for development of athletes in the lead up to the Brisbane 2032 Olympic Games when Australia is firmly on the world stage, including the Los Angeles Olympics in 2028. This athlete and collateral coach development will help achieve Australia's best Olympic and Paralympic performances following on from the highs of Paris 2024, officially Australia's most successful Olympic games in history.

Local government has a key role to play in working with sporting clubs to help facilitate the progression of high-performance athletes. Aqualink Nunawading has a proud history of enabling a number of talented swimmers to progress and represent Australia in international competitions.

Over 200,000 of the annual visits to Aqualink Nunawading relate to swimming lessons, squad training and carnivals.

[27] Australian Government (2018) *Sport 2030: Participation, Performance, Integrity, Industry*, Sport Australia, Department of Health
[28] Marsden Jacob Associates (2018) *Value of Sport: The economic impacts of sport in Victoria*

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In 2024, the Nunawading Swim Club plays a part in this activity through the provision of swimming lessons at Aqualink Nunawading that introduce and skill-up new swimmers, and swimmer development and squad training offering a dedicated pathway through competitions to high performance opportunities. Over 200,000 of the annual visits to Aqualink Nunawading relate to swimming lessons, squad training and carnivals.

Nunawading Swim Club is one of three Victorian clubs that are part of Swimming Australia's Podium Performance Centre program which is designed to capitalise on the existing strengths of producing world class athletes through a strong club system. Many of the Nunawading Swim Club high performers have gone on to win gold, silver and bronze medals at past Olympic and Commonwealth Games as well as represent Australia at key meets including various world swimming championships and World University Games.

Aqualink Nunawading is currently unable to fully support the development of high-performance swimmers to elite-level program as the facility lacks critical features necessary for high-performance training and competition. The 50m, 8-lane pool is not equipped with essential elements such as dive blocks at both ends, touchpads, and proper lane markings required for competitive swimming. Additionally, there is no secondary pool, which is recommended for warm-up, warm-down, training and recovery. The club states that it is at capacity. An additional pool with moveable floor will enable capacity and functionality for both the community (for use in learn-to-swim programs) and the swim club.

The absence of advanced training equipment, such as resistance training tools and underwater cameras for technique analysis, further limits the potential for developing elite swimmers. The facility also lacks sufficient space for dryland training, strength conditioning, and athlete support services, all of which are integral to a comprehensive high-performance program.

Currently as well as the Nunawading Swim Club, there are other sporting clubs producing high performance athletes who train at Aqualink Nunawading, the Nunawading Water Polo Club and Nunawading Triathlon Club. The Nunawading Orcas Masters Swim Club supports older competitive swimmers and a 3K squad provides a dedicated yet informal, social and exercise forum in the community.

Closure of Aqualink Nunawading from asset failure in the short-term and asset-decline driven closure in 2032 will interrupt this pathway and impact the development of high-performance swimmers and aquatic athletes being fed into the sport eco-system and inhibit participation in aquatic sports in the municipality.

Loss of swimming competency in the broader community as a result of closure is equally of concern. Following the COVID-19 Pandemic, notable higher levels of drowning occurred in Australia than previously on record. Tragically there were 59 Victorian fatal drownings recorded over the summer of 2022-2023, a 33% increase compared to the 10-year average and a direct cost to society of lives lost of $312.7million. [29].

Analysis of data shows that in Victoria, 42% of people that died from drowning in the ten years to June 2022 were born overseas and were almost two and a half (2.42 times) as likely to drown than Australian-born people. This rate, against the fact that 30% of people in Victoria are born overseas, demonstrates the need for campaigns to promote water safety and competence and grow participation in swimming amongst CALD communities, and ensure facilities are available to learn in. In City of Whitehorse, CALD communities are a higher proportion of the community, 41.5% were born overseas compared to the Victorian average of 30%[30]

WCC needs to balance the needs of the changing community at Aqualink Nunawading - to provide the opportunities for swimming competence for all community members and to support the high-performance pathways to develop potential Victorian and Australian champions.

Statistics and Evidence:

Pathway to gold: Beginners to elite athlete development at Aqualink Nunawading

- The Nunawading Swim Club, based at Aqualink Nunawading, has been a vital part of the community since the 1960s, around the time Aqualink Nunawading opened its doors for the first time. It is one of three Victorian clubs' that are part of Swimming Australia's Podium Performance Centre program, focusing on producing world-class athletes.

[29] Life Saving Victoria (2022) *Drowning Report 2021-2022* p.15
[30] Idcommunity (2023)

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- Many of the club's high performers have gone on to win medals at the Olympic and Commonwealth Games and represent Australia at key meets. Disruption at any point on the critical sport pathway, such as an unplanned closure of Aqualink Nunawading, impacts the pursuit of excellence and representation at the elite level. (See below - Case-Study on Will Petric)
- The club provides swimming lessons, swimmer development, and squad training, offering a dedicated pathway through competitions to high-performance opportunities.
- There are currently 260 swim club members supported by eight coaches that train at least weekly through to multiple times per week at the higher levels.

Figure 10: Matthew Temple, Bronze relay medallist at Paris 2024 and Tokyo 2020 Olympic Games; Senior Club: Nunawading Swim Club

- Swim classes are offered from 4 months of age through to adults. Over 200,000 of the annual visits to Aqualink Nunawading (about a third of annual visits) relate to swimming lessons, squad training and carnivals – a much larger proportion than at other like pools, where the benchmark is normally ~15% of visits.
- The learn to swim and squad training aquatic facilities at the existing pool are effectively at capacity. This impacts on the Nunawading Swim Club's ability to build its base and effectively train its local elite athletes to the standard required for national and international competition. It impacts the facility's capacity to service a growing population in the local area.
- Moreover, the 60-year-old existing facility does not feature the modern aquatic and other training facilities to enable the most optimal preparation of Victoria's elite swimming pathway athletes. This is impacting Victoria's ability to provide the best opportunities for its most talented athletes on the national and international stage. Only 5 of the 41-member Australian Olympic swimming team for Paris 2024 came from Victoria[31].

Case Study: Will Petric | Swimmer | Australian Olympic Team | Paris 2024

Age: 20 Senior Club: Nunawading Swim Club

Career Events: Swimming Men's 200m Individual Medley | Swimming Men's 400m Individual Medley

William Petric grew up in a sporting family in Melbourne and at the age of nine, decided to take the plunge into swimming (over golf and AFL) and joined the Nunawading Swimming Club.

William rapidly rose through junior ranks, participating in his first national event at just 11 years old at the Pacific School Games. At the age of 14, he broke his first Victorian record in the 200m breaststroke and his first Australian record in the same event, previously held by Olympic Champion Zac Stubblety-Cook.

William's focus eventually shifted to the individual medley, showcasing his proficiency in all four disciplines. In 2021, he won a spot on the Australian junior team, although the pandemic deprived him of the opportunity to compete. When his results began to suffer during his final year of school in 2022, William and his coach meticulously reconstructed his stroke.

His hard work paid off later that year when he clinched his first international medal in the 200m IM at the Junior Pan Pacs in Hawaii, finishing third in the event. He continued to improve through 2023 and at the 2024 Australian Championships on the Gold Coast in April, he won gold in the 200m medley and bronze in the 400m medley, also making the final in the 200m breaststroke. He booked his ticket to Paris by winning the 200m IM at the Australian Olympic trials in Brisbane in June, with a time of 1:57.54.

William's aim is to continue swimming until the home Games in Brisbane in 2032.

The prospect of winning an Olympic gold medal on home soil is powerful motivation.

(Source: https://www.olympics.com.au/olympians/william-petric/)

[31] Swimming Victoria (2024) *Victorians Shine at Paris Olympics*; Source: https://vic.swimming.org.au/news-articles/victorians-shine-paris-olympics (accessed 13/08/24)

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Enabling water competency for all the community

- CALD communities are at a higher risk of drowning – over twice as likely compared to other Victorians born here. Whitehorse's CALD community represents 41.5% of its population as compared to 30% Victoria-wide, which is increasing (comparing 2016 and 2021 census data[32]). Growing their participation in swim lessons from babies to catering to adult learners is important, and for those who didn't learn to swim as a child is deemed critical.
- While a swimming program targeting vulnerable migrant residents has run in partnership with the Migrant Information Centre and Nunawading Swim Club, it has been delivered on an ad-hoc basis and only focused on initial water safety without a structured program to further develop swimming competency, and without the aim to integrate participants and their families longer term into mainstream programs.
- In October 2024, WCC has introduced a phased program, Welcome Around Water, which has the objective to ensure all Whitehorse migrant adults, initially asylum seekers and refugees, are safe around water, and have the opportunity to enjoy its aquatic environments. This provides an 8-week program for adults and children, with participants to receive an Aqualink multi-visit pass to continue to access the facility outside of lesson times and following in 2025, WCC will establish additional activities to support development pathways and integration into mainstream programs and related opportunities. As well, WCC intends to identify and recruit future swim teachers, and support them to undertake AusSwim accreditation (to train 4 teachers per year). Due to the current capacity of AQN, the Welcome Around Water program can only be run at off-peak times and is also limited by capacity per class.

1.4 Timing considerations

1.4.1. Urgency of Government Action and Budget Inclusion

To ensure Aqualink Nunawading's new facilities are operational by the target date of January 2031, it is critical to secure confirmation of major investment in the 2026-2027 budget cycle. This timeline necessitates the release of funds in as part of WCC's FY2025/26 Budget to facilitate further project pre-concept design and development, extending the planned investment for this purpose by Council. This strategic investment will support critical path activities essential for timely project completion.

1.4.2. Implications of Delaying the Response

1. **Capacity and Physical Limits**: Delaying investment will exacerbate the current physical and capacity constraints of Aqualink Nunawading. The facility is already struggling to meet community demands, leading to overcrowding and limited access, particularly during peak times.
2. **Increase in Risk of Service Reductions**: Further delays will result in significant increase in the risk of impacts to the quality and quantity of services provided. The aging infrastructure and frequent breakdowns are already causing service disruptions, which will only worsen over time, diminishing community trust and usage. The existing facility is to close from 100% asset decline in 2032 necessitating action now in order to maintain services after this time.
3. **Government Commitments and Legislative Requirements**: Failure to address the facility's deficiencies promptly will result in increased non-compliance with accessibility standards and other legislative requirements, undermining government commitments to inclusive and accessible community services.
4. **Additional Costs associated with Urgent Action**: Delaying the response could necessitate urgent and costly interventions due to potential asset failures and system overloads. The increasing frequency of breakdowns is already adding to maintenance costs, which will escalate as the facility's condition continues to age and deteriorate.
5. **Lead Time for Investment**: The significant lead time required for planning, design, and construction of this fundamental community infrastructure means that immediate investment is essential to ensure the new facility is ready by the start of 2031 and the risks of closure from asset failure and further

[32] ABS via iD (2021) *City of Whitehorse Migration Profile*; Source: https://profile.id.com.au/whitehorse (accessed 05/06/24)

escalation of costs are minimised. Any delay in funding will push back the entire project timeline, elevating key risks, impacting community health and wellbeing. It may affect elite athlete training programs ahead of the Brisbane 2032 Olympics and limit the opportunities associated with the post-Olympic surge of interest in swimming and aquatic sports from the community.

6. **Critical Dependencies**: The project's timing is intertwined with other significant initiatives, such as the Master Planning for the Forest Hill Reserve and the Whitehorse City Council's Capital Works process. Delays could disrupt these interconnected plans, causing further complications and inefficiencies.

1.4.3. Staged Response Feasibility

Given the facility's critical role as a provider of aquatic services in the local community, a staged response may be considered to maintain some level of service while the redevelopment works are constructed. Exploring a staged approach would help mitigate the impact on the community and ensure continuous service delivery, albeit at a reduced capacity, while the long-term solution is implemented. This would also provide a smoother transition for key sporting clubs and elite athletes, minimising disruptions to their training schedules and maintaining momentum towards upcoming international competitions.

The Staging and Constructability Review in Appendix Q explores an approach whereby public access to the existing aquatic facilities located on the northern part of the site could be safely maintained for all or part of the construction period, which is assumed to be two years as per the Project Program in Appendix N (the 2029 and 2030 calendar years).

The northern part of the existing site is the proposed location of the new, northern car park for the redeveloped Aqualink Nunawading. As such, maintaining access to this part of the site will not materially impact the main construction works for the new Aqualink Nunawading. The facilities where access could be maintained include:

- 50m Pool, including seating area
- First Aid Room
- Leisure/Toddler Pools/Learn to Swim & associated concourse areas
- Spa
- Plant & Storerooms
- Sauna & Steam Rooms
- Pool Filtration & Boiler Plant Room and all associated Equipment.

To maintain an acceptable level of customer experience, the following temporary facilities would be required to support those listed above:

- Airlock / Entry
- Reception and Access Control
- Administration and Staff Areas
- Male, Female and Accessible Amenities (incl parents' room)
- A weatherproof wall that acts act as the dividing wall between the retained/operational 50m pool area and the construction site for the new facility.

There is also a critical need to relocate all existing engineering services out of the proposed construction site prior to the construction contractor taking possession of the site. Some of these services, particularly power and gas are required to be relocated and new supplies provided to service the retention of the existing facilities and services associated with the 50m Pool.

The cost of the temporary works outlined above has been estimated by WTP to be ~$4.8 million. There is also likely to be a financial deficit associated with staffing and operating the existing facilities, which is estimated at $1 million over 18 months. As such, the total cost to WCC of maintaining public access to these facilities for 18 months would be in the order of $5.8 million (WTP estimate). Under this scenario, the existing facilities would operate for 18 months of the two-year construction phase and be closed at the end of Q2 2030, providing six months to demolish the asset and construct the northern car park to match the Q4 2003 completion date for the balance of the project. Hence, no additional contractor preliminaries are factored into this cost estimate.

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Should WCC wish to maintain access to these facilities across the entire two-year construction period (i.e. an additional six-month period) it is estimated that a further $1.5 million should be allowed for extension to contractor preliminaries and overhead in order to undertake demolition and construct the new, northern car park after the opening of the new facility. There would also be a significant additional cost associated with this. Also, continued operational losses of ~$0.3 million would be incurred for the six-month period. Moreover, as the existing facilities are located on the site of the proposed new, northern car park, additional temporary car parking would have to be made available to cater for the expected demand upon opening. As such, the cost of maintaining access to existing facilities for the full two-year construction period would be greater than $7.6 million.

Should WCC be willing to accept these additional time, cost and risk impacts, it is possible to maintain access to the existing facilities for the entire two-year period until the new facility is operational.

As construction works for the new facility are not planned to commence on site until 2028, this provides more than adequate time to carry out the due diligence work that is required to scope all the temporary work required to maintain the 50m Pool and associated facilities operational during the construction phase of the new project.

Note this analysis does not form part of any of the project options outlined herein. Rather, this is provided as information only as to future optionality for WCC.

1.5 Consideration of the broader context

1.5.1. Commonwealth Government

Sport 2030 – National Sport Plan

Australia's demography is continuing to evolve, becoming older, more ethnically diverse, and increasingly time-poor. A key challenge for the Commonwealth Government is how to encourage Australians' participation rates in sport to counteract inactivity. Inactivity is the fourth largest cause of chronic conditions in Australia, and the nation is now one of the most obese on earth. Fifty-six percent of Australian adults — or more than 10 million people — are living sedentary or low-activity lifestyles. Only 19% of young people (aged 5-17 years) are meeting the recommended guidelines of 60 minutes of moderate to vigorous physical activity each day, yet they spend an average of 2-3 hours on screens. In the next 10 years, this translates to an additional $88 billion of extra health and social costs for the Commonwealth Government and, by default, the Australian taxpayer.

The Commonwealth Government has a clear and bold vision for sport in Australia — to ensure we are the world's most active and healthy nation, known for our integrity and sporting success. Sport 2030 has four key priority areas which will, when fully implemented, create a platform for sporting success through to 2030 and beyond. The priorities are:

- **Build a more active Australia:** More Australians, more active, more often.
- **Achieving sporting excellence:** National pride, inspiration, and motivation through international sporting success.
- **Safeguarding the integrity of sport:** A fair, safe, and strong sport sector free from corruption.
- **Strengthening Australia's sport industry:** A thriving Australian sport and recreation industry.

Table 7 demonstrates how investment in Aqualink Nunawading helps achieve these priorities:

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Table 7: Alignment to Sport 2030: National Sport Plan

Government Priority	How Aqualink Nunawading Helps Achieve these Outcomes
Build a more active Australia	Redeveloping Aqualink Nunawading will provide modern facilities that encourage increased community participation in physical activities, contributing to better health and reduced inactivity.
Achieving sporting excellence	Upgraded facilities will support the development of high-performance swimmers to elite levels, fostering sporting excellence and national pride.
Safeguarding the integrity of sport	Improved facilities ensure a safe environment for all users, promoting fair and inclusive access to sport and recreation.
Strengthening Australia's sport industry	Enhancing Aqualink Nunawading will boost the local sport and recreation industry, supporting jobs and economic growth.

1.5.2. Victorian State Government

Alignment with State Government Priorities

The State Government is committed to creating value across the state to ensure the economy stays strong, to build a big and prosperous future for Victoria, with Victoria set to hit 10.3 million residents by 2051[33]. As the Victorian Treasurer noted in his May 2024 budget speech, "A sustainable, ongoing pipeline will provide certainty to the construction industry, and help them to build critical social and economic infrastructure for all Victorians"[34]. The planned redevelopment of Aqualink Nunawading is aligned to these objectives, unlocking value in Whitehorse, ensuring the community has the vital infrastructure it needs for its future population and creating jobs along the way.

Major infrastructure projects impacting the local area such as the Suburban Rail Loop (SRL) and North-East Link will significantly increase population growth and urban development, necessitating the need for upgraded community facilities to be planned now. Current SRL population forecasts note 77,500 for Box Hill SRL precinct and another 44,500 for the Burwood SRL precinct by 2056. Aqualink Nunawading is sited between each precinct, and less than 8km from each to attract users from these catchments areas in the future[35].

Announced in June 2024, the State Government's Housing Targets 2051 projects an additional 79,000 homes are needed in Whitehorse, doubling the current number of homes to meet this population growth. This level of forecast population growth in Whitehorse demands State Government investment in community infrastructure in partnership with local governments to ensure amenity and liveability is maintained for all. A collective approach is needed to manage the rapid rate of population growth in our communities, and address the challenge of funding such important infrastructure, given its very high capital delivery cost.

Investment in sport and active recreation infrastructure such as Aqualink Nunawading delivers more opportunities for Victorians to participate in physical and social activity and contributes to greater national and elite sporting outcomes through athlete development.

More than 200,000 people currently participate in swimming lessons, training and carnivals at Aqualink Nunawading annually. A redeveloped aquatic facility not only helps more Victorians to lead active and healthy lives but will enable more people to pursue their dream to represent Victoria in national and international sporting competitions through preparation and training in a suitable and enabling environment. This investment is strongly aligned to the objectives and strategic priorities of Active Victoria.

[33] Department of Transport and Planning (2024) *Victoria in Future 2023:* Source: https://www.planning.vic.gov.au/guides-and-resources/Data-spatial-and-insights/discover-and-access-planning-open-data/urban-development-program/victoria-in-future (Accessed 03.10.24)
[34] Department of Treasury and Finance and Pallas, T. (2024) *Helping families: Treasurer's Speech Budget Paper No.1 (May, 2024);* Source: https://www.budget.vic.gov.au/budget-papers (Accessed 06.08.2024)
[35] Victoria's Big Build - Suburban Rail Loop *Draft Precinct Vision Papers* Source: https://bigbuild.vic.gov.au/projects/suburban-rail-loop/planning/srl-east-precinct-planning#precincts (Accessed 05.06.24)

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Table 8: Alignment to Victorian Government strategies

Government Priority	How Aqualink Nunawading Helps Achieve these Outcomes
Active Victoria Strategy – Sports and Recreation Strategic Framework	The redevelopment will increase access to high-quality aquatic facilities, promoting physical activity across all demographics, supporting health and well-being of Victorians. As well, enhanced facilities will support the development of elite athletes, aligning with the framework's goal of fostering sporting excellence and the right infrastructure to meet demand, ensuring connected and co-ordinated pathways exist to pursue sport at the highest level and showcase Victoria to the world.
Victorian Infrastructure Plan	Upgrading Aqualink Nunawading aligns with the plan's objectives to maintain and enhance public assets, ensuring their continued utility and safety.
Suburban Rail Loop	Ensures population growth projected for Box Hill SRL and Burwood SRL is matched by high quality local amenity and services in a timely way to appeal to new residents and investors.
Growing Suburbs Fund	The project addresses the infrastructure needs of a growing population, ensuring access to essential community services.
Health and Wellbeing Plan	Improved amenities will support the health and wellbeing of residents, particularly older adults, by providing accessible, inclusive fitness, recreation and rehabilitation options.
Victorian Water Safety Strategy	Addressing local pressure on learn to swim facilities. Enabling more Victorians to safely participate and enjoy recreation in and around water. Empowering communities to better assess, and respond to, water safety risks. Collaboration between local and state government agencies with respect to funding.

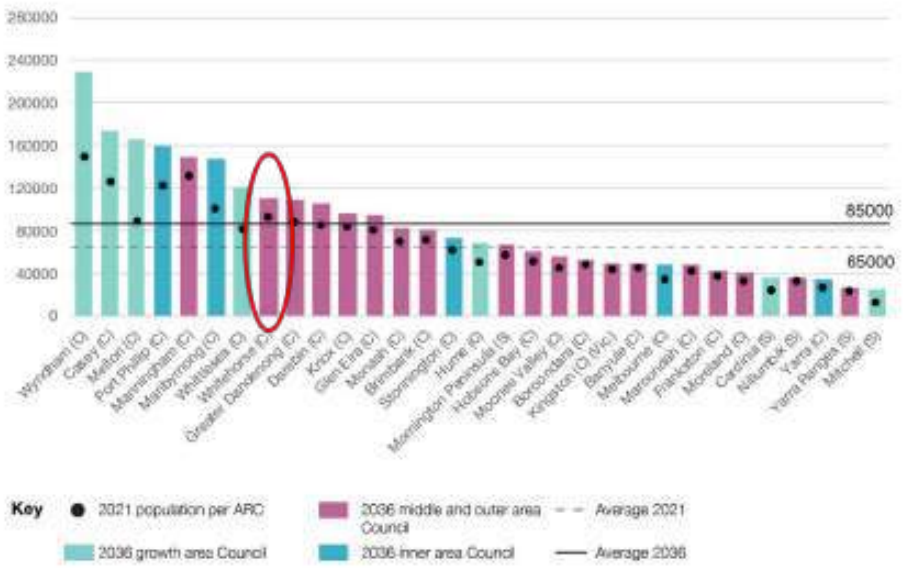

Figure 11: Whitehorse is in the top 8 of growth areas which have fewer ARCs per person [36]

Infrastructure Victoria notes that Whitehorse is in the top 8 of Melbourne's growth areas and has fewer aquatic and recreation centres (ARCs) than almost all other metropolitan local government areas[36]. This

[36] Infrastructure Victoria (2021) *Background paper: Social infrastructure in Melbourne's growth areas*; Source: https://www.infrastructurevictoria.com.au/resources/social-infrastructure-in-melbournes-growth-areas (accessed 30/4/24)

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difference is likely to grow as populations increase and is further accentuated by rapid growth in families with young children and is captured in Figure 11.

1.5.3. Broader Context and Strategic Alignment

The redevelopment of Aqualink Nunawading is crucial for aligning with both Commonwealth and State Government priorities. By addressing the facility's current deficiencies and planning for future demand, this project will ensure that the community continues to benefit from essential aquatic and fitness services. It will foster a more active and healthy population, support the development of elite athletes, and contribute to the social and economic wellbeing of the City of Whitehorse.

Investment in the redevelopment of Aqualink Nunawading is a strategic initiative that will deliver substantial benefits assisting both the Commonwealth and State Government to deliver on their objectives across multiple policies and objectives for the Australian community including job creation and sustainability.

It will enhance community health, support sporting excellence, ensure compliance with modern standards, and meet the growing demands of an evolving population. The combined approach of federal, state, and local government investment will progress health, wellbeing, and social cohesion in the City of Whitehorse, fostering the development of new sports heroes and champions to represent the state and nation in forthcoming events.

1.6 Problem dependencies and interfaces

This investment proposition seeks to ensure that people of all ages and abilities can actively and safely participate in sport, health, and wellbeing activities within their community and if desired and aspired to, access elite sport training pathways through to professional opportunities. The investment proposition relies on the overlapping issues and opportunities for aquatic sports training and water competence, shared with the strategic objectives of the WCC in regard to health and wellbeing, and aligned with the public policy outcomes of the Commonwealth Government and the Victorian State Government. The alignment is outlined in Table 9:

Table 9: Problem dependencies and interfaces

Problem/Opportunity	Aquatic sports	Health and Wellness	Whitehorse City Council
Increased costs, disruption of services and risk of closure from asset failure	Ensuring continuity of training and competition facilities essential for high-performance and elite swimmers.	Reducing the risk of service disruption that affects community health programs and general public access.	Aligns with Council's strategic priorities to maintain and upgrade public assets, ensuring their continued utility.
Constraints on participation in important physical and social activities	Providing modern, safe, and accessible facilities that encourage increased participation in aquatic sports.	Enhancing community health and wellbeing by promoting active lifestyles and social engagement through sport.	Supports Council's objectives to deliver social and economic outcomes for all municipal residents, businesses and visitors.
Limited opportunities for competence and excellence in aquatic sports	Upgrading facilities to include new water spaces and essential elements for learning through to high-performance training to enable greater national and elite sport outcomes.	Supports water competency, active recreation and local athletes, contributing to increased physical activity, safety, health and sport outcomes.	Fostering community pride, connection and cohesion by ensuring opportunities for competence and excellence in aquatic sports and vital community precinct are available.

1.7 Uncertainty around the problem

The identified problems relating to Aqualink Nunawading have an indeterminate timeline as it's impossible to predict when a key component asset may fail. However, the problem statements faithfully reflect the circumstances and operational reality of WCC, the projected changes in the Whitehorse municipality, and the considerations for how to best accommodate the needs of the community and the sporting clubs which have been clearly stated.

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1.7.1. Areas of Uncertainty and Impact on Investment Case:

Asset Failure Timeline:

The unpredictability of when critical components of the facility may fail introduces uncertainty in planning and budgeting. While immediate failure could necessitate urgent repairs or closures, proactive investment aims to mitigate these risks by ensuring continuity of services and avoiding costly emergency interventions. WCC accepts that closure of the pool from asset failure is predicted in 2032.

Participation and Demand Projections:

While current statistics on participation, growth, and projected demand provide a strong evidence base, changing demographics and external factors such as economic conditions or public health issues (e.g., pandemics) could impact these projections. Continuous monitoring and adaptive planning will be essential to respond to these variables effectively.

Corporate Plans, Strategies, and Policies:

Whitehorse City Council's plans and strategies are evidence-based, and they must remain flexible to accommodate unforeseen changes in community needs and priorities. Alignment with Commonwealth and State policies also requires adaptability as government priorities evolve.

Benchmarking and Future Trends:

Benchmarking against other facilities and incorporating future trends in sports and recreation highlight potential market opportunities and influences. The options considered within this business case are not inconsistent with what is considered the current standard service provision for like facilities across Melbourne and offer increased flexibility. However, these trends can shift rapidly, necessitating a dynamic approach to facility design and service offerings to stay relevant and competitive and to suit an evolving community and their future needs.

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2. Case for change

2.1 Benefits to be delivered.

WCC has prepared this business case to assess the benefits of committing to developing Aqualink Nunawading into a vibrant, inclusive, and sustainable health and aquatic hub. This business case presents the argument for a hub that aims to enrich lives, foster connections, and support community wellbeing by providing a highly utilised facility that caters to a broad range of potential user groups. The design and services offered will be guided by community needs and the facility's purpose to drive the desired benefits.

The vision for the Aqualink Nunawading Business Case is supported by five key pillars and underlying principles developed through stakeholder workshops (refer Appendix B). These workshops helped identify how this project will benefit the community and balance the diverse needs of various stakeholder groups. The anticipated benefits, derived from resolving the problems outlined in Section 1, are detailed below.

For further information, please refer to the Investment Logic Map in Appendix A.

The successful delivery of the proposed project is anticipated to deliver the following benefits.

The benefits and associated weightings of importance are:

1. Increase in health and wellbeing outcomes (50%)
2. More financially and operationally sustainable Council services (30%)
3. Greater water awareness and swimming competence within an increasingly diverse community (20%)

2.1.1. Benefit 1: Increase in health and wellbeing outcomes.

This benefit focuses on achieving greater health and wellbeing outcomes through an accessible and inclusive health and aquatic facility. The facility will promote physical activity, community health, mental wellbeing, and social inclusion, making it welcoming to individuals of all ages, abilities, and backgrounds.

KPI 1.1 Increase in levels of physical activity

Measures:

a. Program participation

b. Number of members

c. % of community satisfied with health opportunities.

KPI 1.2 Increase in levels of social activity

Measures:

a. Range of activities offered.

b. Average visit length

c. Average spend per week.

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2.1.2. Benefit 2: More financially and operationally sustainable Council services

This benefit aims to achieve an ongoing financially and operationally sustainable solution through appropriate and affordable capital investment. The facility will minimise its environmental footprint, conserve resources, and cater to health and recreation needs of current and future demographics. It will promote an ongoing social return on investment and help meet the challenges of climate change.

KPI 2.1 Reduction in service disruption

Measures:

a. Hours lost due to unplanned maintenance.

b. Hours lost due to planned maintenance.

KPI 2.2 Avoid increase in operating and asset lifecycle costs.

Measures:

a. Operating and lifecycle costs avoided.

b. Cost per visit

2.1.3. Benefit 3: Greater water awareness and swimming competence within an increasingly diverse community.

This benefit focuses on developing a solution that delights the community, cultivates a sense of place, increases community utilisation, and supports social inclusion, connection, health, and wellbeing. The facility will meet the growing needs and aspirations of the community through collaboration and partnerships, enabling greater water awareness and swimming competence across all community cohorts. A growing cohort of participants will feed the pipeline for future aquatic athletes.

KPI 3.1 Increase in participation in adult learn to swim programs

Measures:

a. No. participants in adult learn to swim programs (enrolments per term)

b. % of communities underrepresented in learn to swim

KPI 3.2 Increase in equity of participation in physical activity

Measures:

a. % of priority groups represented in programs.

Figure 12: U3A at Aqualink Nunawading

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2.2 Importance of benefits to Government

2.2.1. Alignment with Government Objectives

The Commonwealth Government seeks to promote physical activity and sports participation from grassroots to elite levels. This interest is reflected in the government's commitment to fostering Australia's sporting champions and supporting community sports activities. The investment in Aqualink Nunawading aligns with these objectives by providing fit-for-purpose health and training facilities, promoting equitable, active participation in sports, and contributing to the overall health and wellbeing of the community.

Similarly, the State Government has made substantial investments in sport and active recreation, including significant sports facilities for tennis, basketball, hockey, Australian Rules Football, netball, golf, and swimming, such as the Melbourne Sports and Aquatic Centre.

Supply and demand analysis completed on behalf of Sport and Recreation Victoria indicates that by 2038, Victoria will need to facilitate approximately 1.5 million more regular participants in physical activity.

To meet this demand, it is estimated that more than 5,000 new sport and active recreation facilities designed to suit the needs of all users will be required *(Active Victoria 2022-2026).*

This investment in Aqualink Nunawading will support athletes of all ages and abilities and encourage active participation in popular sports and recreational activities across a diversifying and aging community in a key urban growth corridor. Accessible, high-quality places and spaces can increase population-wide physical activity levels. This investment will help facilitate more regular participants in physical activity and better meet anticipated growth in demand.

2.2.2. Strategic Alignment with Active Victoria

The key policy guiding these investments is *Active Victoria 2022-2026 – A strategic framework for sport and recreation in Victoria*. Active Victoria aims to strengthen the sport and recreation sector, boost participation, and ensure every Victorian has the chance to be involved, helping achieve a broad range of Victorian Government policy objectives including supporting health and wellbeing. The key vision is a thriving, inclusive and connected sport and active recreation sector that benefits all Victorians. Partnerships are essential to achieving the collective vision. The strategy includes six priority outcomes, which align with the problem statements and the resultant benefits as outlined below, supporting the Active Victoria objectives:

Table 10: Active Victoria Outcomes

Active Victoria Outcome	Link to Problem Statements	Benefits
Increasing equitable participation in sport and active recreation	High	Victorians can participate in sport and active recreation in ways that suit them within their community. Under-represented groups can access and feel welcomed to participate.
Delivering quality infrastructure that is accessible, respectful and inclusive	High	Emphasis on accessible, inclusive, multi-use and sustainable community sport and active recreation infrastructure to meet demand where areas and population most need it
Building the capability of the sport and active recreation workforce	High	Local, inclusive jobs; attract and retain a skilled sport and active recreation workforce (paid and unpaid); financially sustainable and resilient organisations.
Good governance practices to ensure a safe and sustainable sector	Moderate	Safe, inclusive sport and active recreation settings to remove barriers to participation and achieve resilience. Evidence and data provides insights to strengthen sectors; a strong and innovative economy is developed.
Supporting a pipeline of sporting events within the Victorian events calendar	High	Connected and co-ordinated pathways exist to pursue sport at the highest level. Investment in infrastructure and event content that strengthens sports programs and human capital.

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Active Victoria Outcome	Link to Problem Statements	Benefits
Encouraging Victorians to achieve success at the highest level through high performance	High	Development of Victorian athletes. Investment proposition built on partnership arrangements between government, sport and education outcomes and collaboration between parties.

2.3 Constraints, risks and dependencies

To enable the delivery of the stated benefits, the following key constraints, risks, and dependencies must be considered:

- Securing appropriate arrangements with the Commonwealth and State governments to link their investment within any investment proposition of the Whitehorse City Council.
- Ongoing commitment by WCC to:
  - Provide land and engage with long-term tenure arrangements with prospective tenants.
  - Take on the financial and development risk of the project as project principal.
- Successful negotiation of appropriate agreements representing the commitment by parties to deliver the project and any ongoing responsibilities in the long term.
- Long-term operational model and infrastructure design constraints.

These constraints, risks, and dependencies must be managed effectively to ensure the successful delivery of the project and the realisation of its benefits.

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3. Response option development

3.1 Method and criteria

Strategic interventions include both asset and non-asset responses to problems and are framed under the following categories.

1. Change **demand** (reduce demand for the services)
2. Improve **productivity** (change to delivery mechanisms)
3. Change **supply** (add capacity to meet increased demand)

Interventions to reduce **demand** are seen as counterintuitive to the interests of the community and therefore the Council as the community has expressed desire for better and more facilities in multiple consultations and the current facility is already at capacity at peak times.

Using the Investment Logic Mapping process to guide the possible interventions, the identified strategic interventions have been grouped into sets of complementary and viable 'response options'. This included the base case as the first response option, and against which the other options can be compared. Each response option is qualitatively assessed under the following categories:

- The capacity of the response options to deliver the stated benefits including any dis-benefits
- Comparative risk profile of the options and uncertainty in the capacity to deliver
- Consideration of any dis-benefits
- Likely capital cost range and operational cost
- Time to deliver.

An overall assessment can be undertaken to rank the response options and determine which should be brought forward for assessment as project options.

3.1.2. Relevant infrastructure frameworks

The Victorian Government's infrastructure priority principles as follows have been adopted to inform the government's capital investment program. The following table identifies the principles and nominates those most applicable to this investment case in order to deliver this important social infrastructure.

Table 11: State Government infrastructure priority principles

Ref	Principle	Focus	Applicability
1	Prioritise investments that promote productivity and create new jobs in a new economy	Investments to lower the cost of doing business, facilitate the development of new jobs and new industries in a progressively decarbonised economy, support the economy to absorb future shocks including public health issues.	High - Investment in sports and active recreation supports industry sustainability *and* increased physical activity. This in turn results in improved health and wellbeing from improved cardiovascular health, reduced obesity and blood pressure. It also results in improved mental health and improved productivity in the workplace. Increased swimming competence results in less water related health and safety incidents.
2	Maximise direct employment impacts of investments	Emphasis on smaller projects that have significant direct employment benefits across a mix of skill levels and utilise and develop local employment and supply chains	High – Supply response would include building and landscaping with comparatively high labour and material costs, and strong leverage of local supply chains.
3	Focus on addressing emerging economic vulnerability and long-term disadvantage	High level investment in large infrastructure projects provides capacity constraints in construction market supporting stimulus for	High – Development of sport facilities of moderate scale by tier 2 or 3 contractors linked to local supply chains

Ref	Principle	Focus	Applicability
		smaller and more diverse construction program	
4	Focus on sectors and markets that are not already "over-heated	High level investment in large infrastructure projects provides capacity constraints in construction market supporting stimulus for smaller and more diverse construction program	High – Development of sport facilities of moderate scale by tier 2 or 3 contractors linked to local supply chains
5	Take account of anticipated changes in behaviour and demand patterns	Changes to behaviour as a result of competing technology and other influences, planning for a growing population and growing participation through targeted investment	High – Recreational swimming and dry fitness programs are growing in popularity and development aligns to population growth in the region; investment in new and existing assets gives people the opportunity to participate, creating healthier and more inclusive communities.
6	Establish a pipeline of projects that helps to smooth government investment Noting: Victorian Infrastructure Plan 2021 Recommendation #73 – Fund libraries and aquatic centres in growth areas[37]	Investment pipeline can be used to smooth out investment to avoid boom/bust cycles In the next five years, increase funding to support local governments to plan and deliver libraries and aquatic recreation centres	High – Timing of any investment remains at the discretion of government, noting if aquatic facilities are not delivered in a timely way, some benefits of participation in physical activity, health and well-being will not be delivered including our competitive edge in aquatic sports.
7	Investments to improve the productivity of existing assets	Investment to maintain and improve our current facilities whilst planning for a growing population. Modernising existing facilities and coordinating approaches to better demand is key to equitable access.	High – Replacing end-of-life assets ensures they are safe, suitable and appropriate, maximising benefit for both current and future generations in the community.

3.2 The base case

The Base Case, 'Business as Usual/Do Nothing', for Aqualink Nunawading is that the existing facility is operated for the next eight years, and then closed and services cease as the facility has been identified as being at the end of its useful life by 2032 as per Council's 2023 report[14].

The base case option is a business-as-usual option which then results in closure of the aquatic facility by 2032 due to 100% asset decline and end-of-life. Post closure, the base case assumes the facility is demolished and returned to green space.

The Base Case includes the assumption of flat visitation. Even with non-asset related intervention, incremental improvement as necessary to maintain the facility and population growth, the facility is not competitive with pools in the vicinity, offering a less-than-optimal experience and will continue to lose visitation and income and run at a deficit as highlighted in Table 6. Accordingly, it maintains the opportunity to deliver some benefits until the point of complete closure and from then, loss of all benefits relating to the facility and will accrue (dis)benefits.

Royal Life Saving Victoria has noted that closing community pools is inherently very unpopular and consistently aggravates community sentiment and mobilises communities towards involvement in the political process[38]. This correlates with the level of importance that provision of recreational facilities is seen as for local governments, with 96% of community members noting fairly to extremely important in local government

[37] Victorian Infrastructure Plan 2021, p.123.
[38] Royal Lifesaving Society – Australia (2022) *The State of Aquatic Infrastructure in Australia*

satisfaction surveys.[39] For these reasons in addition to the discussion in sections 1.2 and 1.3, Council do not see complete closure as a viable option.

WCC estimated the costs to maintain Aqualink Nunawading from 2025 through 2032 at more than $11 million, as outlined in section 1.3.1. This is comprised of:

- Operating Loss of ~$6.0 million
- Capital Expenditure of $~5.3 million

At the point of closure, there will be costs to provide skeleton staff for the facility plus any staff redundancy costs, which are estimated at $1.0 million. Following that, there will be demolition and land restoration costs, assuming the site reverts to open space within the Forest Hill Reserve.. These have been estimated at just under $16 million in 2024 dollars.

The cost of lost participation of the community in water safety, sport, health and wellness activities needs to be considered and quantified. The estimate[40] that each swimming pool visit generates $26.00 in health benefits to a community suggests that this loss can be quantified as an annual cost of $14.92M per year to the Whitehorse Community, based on existing visitation of 574,000 per year at Aqualink Nunawading.

The Base Case will cost over **$27M to maintain** Aqualink Nunawading to 2032 **and then to demolish** and restore the open space at Forest Hill Reserve **plus an additional $14.92M in annual lost health benefits** to the community

It is reasonable to suggest that some of these visitors will be accommodated by other nearby facilities run by WCC and neighbouring councils as well as private operators. Competition was mapped in WCC's 2021 Feasibility Study, indicating high competition. However, stakeholder consultation[41] with other like aquatic facilities has indicated these are at capacity or do not supply an equivalent range of services, and like Aqualink Nunawading, will struggle further given the population growth over time predicted for Melbourne[42].

3.3 Strategic interventions

In a Response Option workshop with key stakeholders across Council reviewing the problem statements, stakeholders identified the following strategic interventions to grow participation at Aqualink Nunawading in the targeted cohorts and achieve the desired outcomes and benefits in the community.

The nominated strategic interventions are as follows:

3.3.1. Change Demand

In this strategic assessment, demand interventions include measures to grow community participation at the facility to change the level of demand:

1. *Better target communication to improve awareness of opportunities for traditionally underrepresented communities*

   This involves improved strategic and targeted communication activities tailored to traditionally underrepresented communities to generate awareness of what facilities are available for their use and reduce barriers to participation.

2. *Encourage a greater diversity of physical activity in the community*

   Develop new and expanded physical activity programs that encourage participation by all members of the community and use of Whitehorse assets including open spaces and sports infrastructure, reducing barriers to participation and improving physical and mental health.

[39] JWS Research for Department of Government Services and Victorian Councils (2023) *2023 Local Government Community Satisfaction Survey;* Internal, supplied.
[40] Aquatics Recreation Victoria and Life Saving Victoria (2021). *Victorian Public Pools State of the Sector Report 2019-2020*, pp. 6-7.
[41] Ontoit/WCC *Vision workshop* (2024)
[42] Mantric Architecture for Whitehorse City Council (2021) *Stage 1 Feasibility Analysis Report*, pp. 368-380

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3.3.2. Improve Productivity

Productivity improvements enable greater levels of participation through better utilisation or redevelopment to provide enhanced access and inclusivity and thus participation opportunities that will help realise key benefits:

3. *Ensure greater inclusivity and accessibility at Aqualink Nunawading*

   Develop specific programs and upgrade accessibility features at Aqualink Nunawading that enable more people to access and participate in physical and social activity, improving physical and mental health and enhancing quality of life.

4. *Undertake targeted activities to encourage participation in traditionally underrepresented communities*

   Research, plan and develop an activities program that meets the needs and encourages participation from traditionally, underrepresented communities. This may be activities as well as incentives or other market tactics aimed at specific communities and groups that break down barriers to participation, improving physical and mental health in the community.

5. *Diversify social activities available to users to reflect current trends and interests in holistic health*

   New and diversified social opportunities and activities to activate the facility are developed to reflect current trends and interests such as welcoming spaces, expanded services aligned to broader health and wellbeing objectives (i.e. healthy eating/weight management, gentle group exercise, meditation, allied health and psychology options, meet-ups, technology and outreach options) for holistic health that use both wet and dry areas which will impact participation levels, physical and mental health and enhance quality of life.

3.3.3. Change Supply

Supply interventions involve the development of new facilities and come at a substantial upfront capital cost but also provide the greatest opportunity for service provision excellence and drive up the level of benefits that can be achieved:

6. *Modernise facilities and streamline processes*

   Redevelopment of the facility to include contemporary features and amenity, improving financial efficiency and sustainability, reducing carbon footprint. Modernisation will inspire participation and contribute to improved physical and mental health.

7. *Improve the flexibility of wet and dry spaces to accommodate a broader range of social and physical activities*

   Redevelopment of the facility to contemporary standards and amenity to include flexibility of wet and dry spaces for use in a variety of ways – for competition, fitness, fun, leisure, wellness, relaxation and rehabilitation activities that improve physical and mental health, break down barriers to participation and enhance quality of life in the community. A redeveloped facility will offer improved financial efficiency and sustainability and a reduced carbon footprint.

8. *Maximise opportunities for utilisation and revenue generation*

   A comprehensive redevelopment of the facility that includes multiple, advanced wet and dry areas that attract significant community utilisation and offer new income streams through programming and hires, catering, merchandise and other services housed on-site (i.e. allied health, psychology and wellness).

9. *Position this centre as a regional destination for aquatic activities and related services and social experiences*

   A comprehensive redevelopment of the facility to establish a regional, leading-edge training and recreational facility used for regional competitions, training and fitness, leisure and wellness activities and connects the community to services housed on site as well as being a meeting place for social activities. It will improve physical and mental health, break down barriers to participation and enhance

quality of life in the community. A redeveloped facility will offer improved financial efficiency and sustainability and a reduced carbon footprint.

10. *Maximise the flexibility of wet and dry spaces to accommodate a broader range of aquatic, social and physical activities*

    A comprehensive redevelopment of the facility that includes multiple, advanced wet and dry areas that can accommodate use in a variety of ways – for competition, fitness, fun, leisure, wellness, relaxation and rehabilitation activities. Spaces feature optimised flexibility- moveable walls/floors, acoustic treatments and so on that enable a broader range of social and physical activities that can improve physical and mental health, break down barriers to participation and enhance quality of life in the community. It will offer improved financial efficiency and sustainability and a reduced carbon footprint.

3.4 Response options

As part of Whitehorse's strategic assessment of Aqualink Nunawading through the feasibility study in 2021 and subsequent detailed investigation in 2022-2023 to determine effective asset condition and remaining life, alternative sites for the facility have been considered by WCC as part of these assessments and excluded due to site footprint limitations including prohibitive costs to develop these sites. A decision to consider only the current site was confirmed in early 2024.

A workshop was held with key stakeholders across Council to review the strategic interventions and determine what would be the most appropriate response options for the project. Stakeholders identified a number of characteristics across the interventions which allowed them to be grouped in a logical manner.

The 10 strategic interventions are grouped into the following five response options and then assessed via the tables following:

1. **Base case: Business as usual** – As outlined in section 3.2 above and augmented by non-asset initiatives to operate until the point of closure from asset-driven 100% decline.
2. **Contemporary Replacement** – Replaces like for like but ensures the replacement facility is a contemporary, compliant, inclusive and accessible version.
3. **Contemporary with a stronger social dimension** – Offers expanded flexible social and program areas and amenity that can accommodate a broader range of activities and encourages social inclusion and connection alongside swimmer education and training needs of local clubs.
4. **Contemporary with a stronger aquatic and health dimension** – Offers expanded, multiple wet and dry facilities that cater to active participation in health and fitness activities and enables swimming competence and training by local sport clubs from beginner to elite levels alongside social spaces.
5. **Aspirational: Transforming aquatic experiences within the industry** – This is an aspirational, 'Bells and Whistles' option that incorporates leading edge wet and dry facilities alongside expansive, flexible social and program areas and amenity, able to host competitions for up to 500 visitors, and offers a regional focus to health and aquatic activities and will better cater to growth in the population.

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Table 12: Response options

Interventions	Option 1	Option 2	Option 3	Option 4	Option 5
	Base Case: Business as usual / Do nothing	**Contemporary Replacement**	**Contemporary with a stronger social dimension**	**Contemporary with a stronger aquatic and health focus**	**Aspirational**
Better target communication to improve awareness of opportunities for traditionally underrepresented communities	**60%**				
Encourage a greater diversity of physical activity	**40%**				
Ensure greater inclusivity and accessibility at Aqualink		**30%**	**20%**	**20%**	**15%**
Modernise facilities and streamline processes		**20%**	**30%**	**30%**	**20%**
Undertake targeted activities to encourage participation in traditionally underrepresented communities		**20%**		**20%**	
Improve the flexibility of wet and dry spaces to accommodate a broader range of social and physical activities		**30%**			
Maximise opportunities for utilisation and revenue generation					**40%**
Position this centre as a regional destination for aquatic activities and related services and social experiences					**25%**
Diversify social activities available to users to reflect current trends and interests in holistic health			**30%**		
Maximise the flexibility of wet and dry spaces to accommodate a broader range of aquatic, social and physical activities			**20%**	**30%**	
Total	**100%**	**100%**	**100%**	**100%**	**100%**

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3.5 Ranking of response options

Table 13: Evaluation of response options

			Response options				
			Option 1	**Option 2**	**Option 3**	**Option 4**	**Option 5**
Benefits			Base Case: Business as usual/Do nothing	Contemporary Replacement	Contemporary with a stronger social dimension	Contemporary with a stronger aquatic and health focus	Aspirational
Percentage of full benefit to be delivered			**0.0%**	**50.0%**	**75.0%**	**85.0%**	**100.0%**
Benefit 1	Increase in health and wellbeing outcomes	**50%**	0.0%	25.0%	35.0%	40.0%	50.0%
Benefit 2	More financially and operationally sustainable Council services	**20%**	0.0%	10.0%	10.0%	15.0%	20.0%
Benefit 3	Greater water awareness and swimming competence within an increasingly diverse community	**30%**	0.0%	15.0%	30.0%	30.0%	30.0%
Risk and uncertainty (Likelihood and consequence)							
Risk 1			Community dissatisfaction	Some community dissatisfaction	Higher capital cost	Higher capital cost	Highest capital cost
Risk 2			Lost opportunity for health and wellness participation ($15.6M per year)	Limits opportunity for health and wellness participation	Construction and safety risks and if staged response adopted (existing facilities kept open)	Construction and safety risks and if staged response adopted (existing facilities kept open)	Site limitations for scale of development
Risk 3				Capital cost			Construction and safety risks and if staged response adopted (existing facilities kept open)
Risk 4				Does not provide for significant growth in demand			

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	Response options				
	Option 1	**Option 2**	**Option 3**	**Option 4**	**Option 5**
Dis-benefits					
Dis-benefit 1	Decrease in health and wellbeing outcomes	Temporary loss of access to aquatic and fitness facilities to community and sport clubs during construction phase causing lower health and wellbeing outcomes			
Dis-benefit 2	Decrease in swimming competency	Diverts the community to use other facilities during construction phase potentially impacting future demand			
Dis-benefit 3	Decrease/loss of valued council service				
Uncertainties					
Uncertainty 1	Asset failure timing	Funding and affordability			
Uncertainty 2	Future council strategies and plans impact	Future demand and participation			
Cost (range)					
Capital total estimated investment (TEI) (2024 $)	Up to $15M	$60M-$80M	$80M-$100M	$80M-$100M	Over $100M+
Net incremental output costs (annual)	Low op-ex cost	Moderate op-ex cost	Moderate op-ex cost	Moderate op-ex cost	High op-ex cost
Timeframe for delivery					
(Range)	Current to 2032	By January 2031	By January 2031	By January 2031	By January 2031
Ranking					
1-5 (1 being the preferred)	**5**	**4**	**2**	**1**	**3**

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3.5.1. Assessment

All the response options presented provide the opportunity to deliver some or considerable benefits against a proportionate level of investment. This means in general, that the higher the cost, the higher the return on benefit.

From Table 13: Evaluation of response options above, the following conclusions can be made:

1. Allowing Aqualink Nunawading to continue operating until critical asset failure occurs earlier or the 100% asset-decline driven closure in 2032 as per Option 1 (Base Case)—does not deliver on any of the priority desired benefits identified through the ILM. Council has already determined that renovation or extension is not viable due to a variety of compliance issues and the inadequacy of the existing plant and equipment systems. This option has been determined to be hugely disruptive to the community and sporting clubs, and works against the Council's strategic, health and well-being objectives. It does not meaningfully address the identified problems or provide benefits aligned to State and Commonwealth government policies and objectives. Accordingly, Option 1 ranks the lowest.
2. Replacing the current facility with a like for like version (Option 2), whilst the least capital cost, does not address the issues of facility capacity during peak times and the number and configuration of aquatic spaces. It is therefore unlikely to fulfill the needs of the aging Whitehorse population nor will meet the demand of the growing population over the next thirty years including aspiring and elite aquatic athletes. Some community dissatisfaction is anticipated if this is the preferred option as it doesn't meet the community's needs as expressed during past stakeholder consultations. It will only provide limited benefits to the community and the State and Commonwealth governments. It has been ranked as 4th priority.
3. Option 5 presents the most aspirational and transformative aquatic experiences within the one facility and caters to a full gamut of recreational, fitness and elite training and competitive sporting opportunities, with the potential to host regional events. It will achieve the highest level of benefits for all stakeholders however comes at the highest cost. There is concern that the current site at Forest Hill Reserve is not suited to the scale of this facility given the proximity of residents surrounding the site and only one road access into the site via residential streets. Another more suitable site in the municipality has not been identified in previous asset and land reviews by Council. Funding and affordability is seen as a higher risk for this option at this stage compared to Options 3 and 4. For these reasons, it is therefore ranked as 3rd priority.
4. Options 3 and 4 present as the leading options. Both expand the form and function via a redeveloped facility to provide more space for wet and dry health and wellbeing activities and cater to the needs of local sporting clubs, fitness and training to elite levels to support state and national athletic development goals and facilitate improved social outcomes. These options afford up to 85% of estimated benefits to be achieved and are ranked 1st and 2nd in priority.

3.5.2. Option Consolidation

Four design options in addition to the base case were initially selected based on the ILM process, which examined the options to achieve change to the identified problems. Functional area briefs were developed all project options and compared to the Base Case. Design workshops occurred on 27 May 2024 and 13 June 2024 and the preferred location of the building was selected. During those workshops, Council decided to consolidate Options 3 and 4 into one option, to be called Option 3A – Contemporary Hybrid as there was limited functional differentiation to make it viable to further pursue both design options separately at this stage. Option 3a Contemporary Hybrid combines the preferred elements of the Contemporary Social and Contemporary Aquatic / Health options. Later design phases can finesse functional opportunities within the footprint. All workshop participants were unanimous that there was insufficient delta between the two options.

As such, three design options have been developed:

- Option 2 - Contemporary Replacement (modern version of existing facility);

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- Option 3A - Contemporary Hybrid (accommodating increased aquatic, health and social dimensions); and
- Option 5 – Aspirational (transforming aquatic experiences).

These three options, plus the Base Case/Do-nothing as Option 1, form the basis for the business case.

Council's executive team have reviewed each of the proposed designs on 12 June 2024.

The preferred siting utilises the existing building location with a reduced footprint which is achieved through a stacked building. This will reduce the impact on the surrounding trees, infrastructure and existing operations, limiting disruption to the community and local sport clubs.

Additional workshops were established to finalise the preferred layout of the facility.

Finalised concept designs have been developed for the redevelopment options which have had estimated costs developed by a quantity surveyor.

This information has informed a Multi-Criteria Analysis (MCA) Assessment to select the preferred option for the business case.

3.5.3. Multi-Criteria Analysis (MCA) Assessment

The project used a structured Multi-Criteria Analysis (MCA), conducted in a workshop with key WCC representatives and other project stakeholders on 7 August 2024 for the Aqualink Nunawading project. The purpose of this analysis was to assess response options derived from the Investment Logic Mapping (ILM) process, culminating in the endorsement of the preferred strategic solution by the Project Control Group (PCG). Option 3A – Contemporary Hybrid, emerged as the most favourable choice based on a comprehensive evaluation of various criteria.

MCA process

WCC aimed to make an informed decision on the most suitable strategic response, using a systematic evaluation process. The MCA workshop, a pivotal part of this assessment, was conducted to gauge responses to options against specific criteria determined through stakeholder agreement, following the ILM process. This allowed for a thorough examination of each option and facilitated informed decision-making.

The four options of Base Case (Business as Usual until closure by 2032), Option 2 – Contemporary Replacement; Option 3A – Contemporary Hybrid Facility and Option 5 Aspirational were each evaluated against predetermined criteria. From this, Option 3A emerged as the preferred strategic response because of its superior response across the specified criteria.

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Scoring Methodology

The MCA employed a structured scoring methodology to assess each strategic option against the established criteria. The criteria, aligned with project priorities, included:

Table 14: MCA Criteria and Weightings

Criterion	Definition	Weighting & Rationale
Capital Cost **30%**	This criterion measures the expected upfront total project capital cost. A higher score indicates a lower capital cost, with options higher than $100 million (in 2024 dollars) penalised more severely.	Local government need to manage the huge cost of building aquatic facilities in the face of rising escalation and capped rates. The weighting of 30% was assigned to ensure a strong emphasis on council priorities and responsibilities to rate-payers.
Financial Outcome **20%**	This criterion measures the forecast ongoing estimated operational surplus/deficit (incl asset lifecycle costs). A higher score indicates a better ongoing financial performance (often measured by an NPV of cash flows).	Given the critical role of ongoing financial sustainability in project success, the weighting of 20% was assigned to underscore the significance of options that can achieve better ongoing financial performance over time
Stakeholder support **20%**	This criterion evaluates the extent to which a response option aligns with and supports the strategic priorities and policies of WCC and the wider community, the government and the views of the project stakeholders. A higher score indicates strong alignment with WCC, government priorities and community and stakeholder preferences.	Recognising the strong interest of stakeholders by council, a weight of 20% was assigned to prioritise options that offer a facility and functionality aligned to their expectations.
Social and economic benefits **20%**	Measures the forecast qualitative and quantitative social and economic benefits (and disbenefits). It also measures the likely annual visitation for each project option over time. A higher score indicates higher forecast benefits and visitation.	Acknowledging the social impact of a revitalised aquatic facility, a weight of 15% was assigned to ensure that options prioritise community outcomes. Equally the economic benefits need to be considered and a weight of 5% is allocated to this to provide 20% overall weighting for these benefits and value to the community.
Environmental Impact **5%**	Measures the level of contribution to Council's sustainability (or emission reduction) targets and how it supports climate adaptation. A higher score indicates a higher contribution to sustainability targets and climate adaption.	A weighting of 5% is allocated to assess the environmental impact of each option, to ensure due consideration to ecological risk, sustainability targets including design options and climate adaptation.
Project Risk **5%**	This criterion measures the likely level of project and ongoing risk to Council and the community across all risk categories post mitigation. A higher score indicates a lower level of project risk.	While overall project risks are not substantial and can generally be mitigated effectively through good governance and robust processes, reputational risk is a valid concern and scope/budget creep and a 5% weighting has been allocated to assess project risk.

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Stakeholders agreed upon the weightings applied to each criterion, reflecting their relative importance.

Scores were then assigned to each option based on its performance against the criteria. Scores were on a 5-point scale:

Weak Limited Moderate Good Strong

Table 15: MCA Scored outcomes

	Capital Cost	Financial Outcome	Stakeholder Support	Social & Economic Benefits	Environmental Impact	Project Risk
Option 1: Base Case *Operate to asset failure*	●	○	○	○	◔	○
Option 2: Contemporary Replacement *(Modern Like-to-like)*	◔	◔	◔	◑	◑	◑
Option 3A: Contemporary Hybrid *(Balanced Social and Functional)*	◑	◔	◔	◔	◑	◑
Option 5: Aspirational *(Long-Term Growth Focus)*	○	◑	◔	●	◔	◔

These scores were then applied with the relevant weightings according to the predetermined percentages. The results were then compiled to generate a Total Weighted Score for each option, providing a comprehensive overview of their overall performance.

The scores were calculated and shared with stakeholders during the workshop process to allow discussion and ensure consensus on the final results.

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MCA Results and Preferred Strategic Response

The final results from the MCA process are illustrated in the following table:

Table 16: Overall weighted MCA scores

	Capital cost		Financial Outcome		Stakeholder support		Social & Economic benefits		Environmental Impact		Project Risk		Total Weighted Score (100 scale)
Option	**Score**	**30%**	**Score**	**20%**	**Score**	**20%**	**Score**	**20%**	**Score**	**5%**	**Score**	**5%**	**100%**
Base Case (Business as Usual / Do Nothing)	**5**	30%	**1**	4%	**1**	4%	**1**	4%	**4**	4%	**1**	1%	47
Option 2: Contemporary Replacement	**4**	24%	**4**	16%	**2**	8%	**3**	12%	**3**	3%	**3**	3%	66
Option 3A: Contemporary Hybrid facility	**3**	18%	**4**	16%	**4**	16%	**4**	16%	**3**	3%	**3**	3%	**72**
Option 5: Aspirational	**1**	6%	**3**	12%	**4**	16%	**5**	20%	**2**	2%	**2**	2%	58

Option 3A - Contemporary Hybrid Facility (Total weighted score 72%)

Option 3A Contemporary Hybrid emerges as the preferred strategic response with the highest Total Weighted Score. It excels across all criteria, particularly in alignment with cost, financial outcome and preference of stakeholders. The combination of facilities and their flexibility of use to best drive social and economic outcomes further solidifies its position as the most robust strategic option. This option will best address the strategic problems identified during the ILM process.

Option 2 – Contemporary Replacement (Total weighted score 66%)

Option 2 as a modernised replacement of the existing facility emerged as the second preferred option, in that it presents an achievable capital cost and financial outcome and will fulfill stakeholder needs to some extent however not meet all their expectations. In the consideration of project risks, the lesser scope reduced the potential for budget creep.

Option 5 – Aspirational (Total weighted score 58%)

While there was recognition of the likely significant stakeholder support and highest social and economic benefits to be achieved by this greatly expanded facility, the highest capital cost was a concern alongside larger operating costs on balance pitched against the projected catchment and estimated future demand. For these reasons, the total weighted score sits lower than Option 3A and Option 2.

Base Case (Business as Usual/ Do Nothing) (Total weighted score 42%)

The option to operate the current facility until closure, demolish and return the site to predominately open, green space was the least preferred option given the anticipated community backlash to closure as well as consideration of how best to service the health and wellbeing needs of a growing population. While this offers the least capital and financial outcome costs, the loss of service and community benefits resulted in the lowest weighted score.

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3.6 Recommended response option

The recommended response option is to redevelop Aqualink Nunawading at the existing site versus the base case to operate until closure in 2032, then to demolish and not replace the facility.

The recommended response option to address the key problems and deliver the highest benefit to the community and therefore Council is Option 3A.

The preferred option comprises a redeveloped, inclusive and accessible facility of ~21,000 sqm (existing facility is ~13,200sqm) and proposes an astute expansion of both aquatic and dry fitness areas with contemporary change and social spaces. The Nunawading Swim Club facilities will be rebuilt and integrated into the new facility. It can accommodate a reasonable number of spectators for swimming competitions and other events yet has the flexibility with additional water spaces to cater to other visitors concurrently. A dedicated learn to swim pool with a movable floor providing flexible functionality enables water education and safety across ages and abilities to be provided without conflict with leisure options, which are serviced in a separate pool as well as a warm water pool for therapeutic and rehabilitation activities. It also provides a secondary pool for NSC to utilise for warm up, warm-down etc. By housing dry fitness including gym and additional program rooms on an upper level, separate access can be accommodated (potentially 24/7). This option accommodates the needs of the community's stakeholders and includes social spaces.

Aquatic facilities:

- Entry foyer and reception areas
- 50m 8 lane indoor pool (with concourse), swim wall and ramp
- Spectator seating for 415 people
- 25 x 12m learn to swim pool with moveable floor and access ramp
- 100sqm leisure water and toddler pool with concourse
- 20 x 15m warm water pool, spa and ramp
- Sauna and steam rooms
- Wet lounge
- Birthday party/meeting room
- Contemporary change amenities for all members of the community (F/M/Family/Accessible/Changing Places/All-Gender/Group)
- Multiple storerooms to accommodate local club and facility needs
- Dedicated area for Swim Club events marshalling, storage and own change rooms.

Dry areas:

- Lobby / 24/7 separate entry to fitness
- Cardio and strength area (900sqm)
- 4 group fitness rooms
- Allied health and consulting/testing suites
- Quiet/Prayer room
- Community Meeting room
- Café and retail spaces
- Social spaces
- Offices, staff and utility rooms
- Dedicated facilities for Nunawading Swim Club with separate entry (office, administration, storage, strength and conditioning gym)

Other:

- Carparking for 328 cars
- Entry plaza
- Plant and waste management areas

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4. Project options assessment

4.1 Project options considered

The recommended response option is to redevelop Aqualink Nunawading at the existing site and incorporate a better configuration of water and dry fitness spaces that will enable increased participation in health and wellbeing activities, and that are inclusive and accessible to all in the community.

The amenities should aim to equitably balance the community's expectations and provide a diverse array of recreational, health and educational opportunities for all to access and enjoy. A redeveloped Aqualink Nunawading can continue to provide outstanding educational opportunities that can also pathway aspiring swimmers to elite performance levels through the Nunawading Swim Club, housed on site in new facilities, as it has done for more than 60 years.

By modernising facilities, Aqualink Nunawading can remove barriers to participation and increase demand for and productivity of this asset, growing income. Concurrently, greater financial and environmental sustainability can be targeted through redevelopment by incorporation of leading-edge technologies that reduce operating costs and climate change impacts.

WCC has undertaken extensive consultation with the community, its members, resident sports clubs and groups, schools, casual recreational and fitness visitors and non-participants as well as related business operators, their own and neighbouring council staff to inform the extent of service needs and the required and preferred facility upgrades. The range of consultation activities is outlined in the following section and a summary report is included in Appendix C. WCC has also factored the future demand for this facility in line with population projections and further impacts from key transport projects and housing targets anticipated in the municipality.

From the stakeholder consultation, the optimum facility mix includes separated multiple, flexible pools that can cater to elite training, recreational/family, learn to swim, older persons and rehabilitation with water at different temperatures; expanded dry fitness, training, health and wellness opportunities including facilities, programs and expertise on site including for wellness and rehabilitation. The facility needs to include the highest standard of accessibility for people of all ages and abilities that enable social connection and engagement. Stakeholders want an inviting precinct that integrates open space and recreational facilities with surrounding parks and incorporates improved active transport and vehicle access and parking.

Based on that consultation, and through engagement with Whitehorse City Council, three carefully considered project options and concept designs were prepared for comparative assessment.

These are described below and compared in Table 17 (following). Please note area measurements are rounded up.

Option 2 – Contemporary Replacement

Total project area: ~17,000 sqm

Option 2 essentially modernises and streamlines the configuration of the existing facility (~13,200 sqm) through this like-for-like redevelopment. It separates out the Learn to Swim and Leisure + Toddlers pool options into two water areas. The 50m pool is rebuilt and all pools incorporate accessibility. Change rooms are configured to include all contemporary options (Female/Male/All-Gender/Family Change Village/Accessible/Changing Places/Group Change). The Nunawading Swim Club facilities of club offices, administration, strength and conditioning gym and storage areas are integrated into the new facility yet maintain independent access for NSC staff and members.

Dry fitness is housed on an upper level which enables a separate lobby and 24/7 access. It features the same combination of a cardio and strength area and three group fitness rooms (small to large). This also minimises the footprint on the site whilst creating greater internal capability.

Staff areas and storage are increased to enable better functionality and productivity. Car-parking is increased by 80 spaces to 328. Improved drop-off including by bus for school groups is included.

Mechanical and pool plant is to be all electric. A 5-star Green Star rating is targeted.

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Option 3A - Contemporary Hybrid (Preferred Option)

Total project area: ~21,000 sqm

The preferred option comprises a redeveloped, inclusive and accessible facility of ~21,000 sqm (existing facility is ~13,200 sqm) and proposes an astute expansion of both aquatic and dry fitness areas with more generously sized, contemporary change and social spaces. The Nunawading Swim Club facilities will be rebuilt and integrated into the new facility. It can accommodate a reasonable number of spectators for swimming competitions and other events yet has the flexibility with additional water spaces to cater to other visitors concurrently. A dedicated learn to swim pool (25m x 12m) enables water education and safety to be provided without conflict with leisure options, which are serviced in a separate pool. In comparison to a like-for-like replacement (Option 2), it includes a warm water pool for therapeutic and rehabilitation activities and related programs and two spas. By housing dry fitness on an upper level, 24/7 access can be accommodated. Option 3A includes a larger gym (900sqm – more than double Option 2) and additional -plus larger-program rooms. It includes spaces for allied health and consulting/assessment rooms. It has more storage spaces. This option accommodates the needs of the community's stakeholders and includes social spaces.

As per Option 2, improvements compared to the existing facility are included, mechanical and pool plant is to be all electric and a 5-star Green Star rating is targeted.

Option 5 - Aspirational

Total Project area: ~25,150 sqm

Option 5 is the option that will most readily cater to population growth in Whitehorse as it offers a substantial increase in aquatic and fitness facilities compared to all other options. It is a larger site footprint, double the existing facility (~25,150 sqm as compared to the existing site of ~13,200 sqm), with more facilities, more external public areas and an outdoor training space. It has a larger learn to swim pool (25m x 15m) and much larger leisure water and toddler pool to cater to more families. Spectator seating is increased from 415 to 500 seats compared to Option 3A. Dry fitness areas are bigger at 2,690 sqm – the gym (cardio/strength) area is three times larger (1,400 sqm) than the existing / Contemporary Replacement (400 sqm) and has 5 program/group fitness rooms providing an additional 360 sqm. It offers expanded allied health and consulting/testing rooms.

Mechanical and pool plant is to be all electric. A 5-star Green Star rating is targeted.

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*Table 17: Comparison of options by critical scope and floor area (Sqm)**

Room type	Base Case: Existing	Option 2 Contemporary Replacement	Option 3A Contemporary Hybrid	Option 5 Aspirational
Entry and administration	445	995	1,175	1,280
Aquatic facilities	4,145	3,680	4,710	5,930
Includes	50m pool Leisure water + toddler pool (combined) Sauna and steam Spectator seating	50m pool LTS pool with ramp and moveable floor (15 x 10m) Leisure water + toddler pool Sauna and steam Contemporary amenities and change Spectator seating	50m pool LTS pool with ramp and moveable floor (25m x 12m) Warm Water (20 x15m) with 2 x spa Leisure water + toddler pool (100sqm) Sauna and steam Contemporary amenities and change Wet Lounge Birthday party room Spectator seating (415 seats)	50m pool LTS pool with ramp and moveable floor (25m x 15m) Warm Water (20 x15m) with 2 x spa Leisure water + toddler pool (720sqm) Sauna and steam Contemporary amenities and change Wet Lounge Birthday party room Spectator seating (500 seats)
Health and Wellness facilities	915	1,040	2,015	2,690
Includes	Gym (cardio/strength) 3 program rooms	Gym (cardio/strength) (400sqm) 3 program rooms 24/7 lobby and entry	Large gym (cardio/strength) (900sqm) 4 program rooms 24/7 lobby and entry 2 allied health suites Community meeting rooms Quiet/ Prayer room	Larger gym (cardio/strength) (1,400sqm) 5 program rooms 24/7 lobby and entry 6 allied health suites Community meeting rooms (larger) Quiet/ Prayer room
Building services	305	755	1,055	1,170
Gross Floor Area including circulation	6,085	7110	9,850	12,180
External Areas	7,100	9,690	11,190	12,970
	220 car parks	300 car parks	350 car parks	Outdoor functional training space 400 car parks
Total Project Area	**~13,200**	**~17,000**	**~21,000**	**~25,150**

* Note: areas have been rounded up/down to convey difference.

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4.2 Alignment with infrastructure frameworks

Based on the discussion on relevant infrastructure priority principles at section 3.1.2, each of the principles are nominated as 'highly' applicable to this project:

Principle 1	Prioritise investments that promote productivity and create new jobs in a new economy
Principle 2	Maximise direct employment impacts of investments
Principle 3	Focus on addressing emerging economic vulnerability and long-term disadvantage
Principle 4	Focus on sectors and markets that are not already "over-heated"
Principle 5	Take account of anticipated changes in behaviour and demand patterns
Principle 6	Establish a pipeline of projects that helps to smooth government investment
Principle 7	Investments to improve the productivity of existing assets

Broadly, given the similarities between the three project options, they are considered to deliver equally against these principles.

We have also noted the Victorian Infrastructure Plan 2021 Recommendation #73 to fund libraries and aquatic centres in growth areas, to support local governments to plan and deliver such infrastructure. The follow up background paper '*Social infrastructure in Melbourne's growth areas*' notes Whitehorse in the top 8 of residential areas that has fewer aquatic and recreation centres (ARC) per head of population (refer to Figure 11) and is anticipating growth. This growth is also reiterated in the announced population targets released mid-2024[43]. The background paper notes that a lack of this type of infrastructure can impact community health, education and belonging and limits people's participation in sport, recreation and cultural events, for which if Aqualink Nunawading is closed, has been valued at $15.6M per year loss based on existing visitation. This project is a candidate to help fulfill Infrastructure Victoria's recommendation as it is suitably progressed in its planning and feasibility assessments.

Additionally, this project helps achieve the primary three of ten objectives of Victoria's Infrastructure Strategy 2021-2051[44] and aligns with land use and infrastructure integration:

Figure 13: Alignment to the primary three objectives of the Victorian Infrastructure Strategy 2021-2051

[43] State Government of Victoria (2024) *Councils Get First Shot At Unlocking Space For More Homes* (16 June); Source: https://www.premier.vic.gov.au/councils-get-first-shot-unlocking-space-more-homes
[44] Infrastructure Victoria (2021) *Victoria's Infrastructure Strategy 2021-2051- Volume 2*, p.09 and 13; Source: https://assets.infrastructurevictoria.com.au/assets/Resources/Victorias-infrastructure-strategy-2021-2051-Vol-2.pdf (accessed 31/07/24)

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4.3 Stakeholder identification and consultation

WCC has undertaken multiple stakeholder consultation studies between 2021 and 2024 to capture key perspectives to inform this business case:

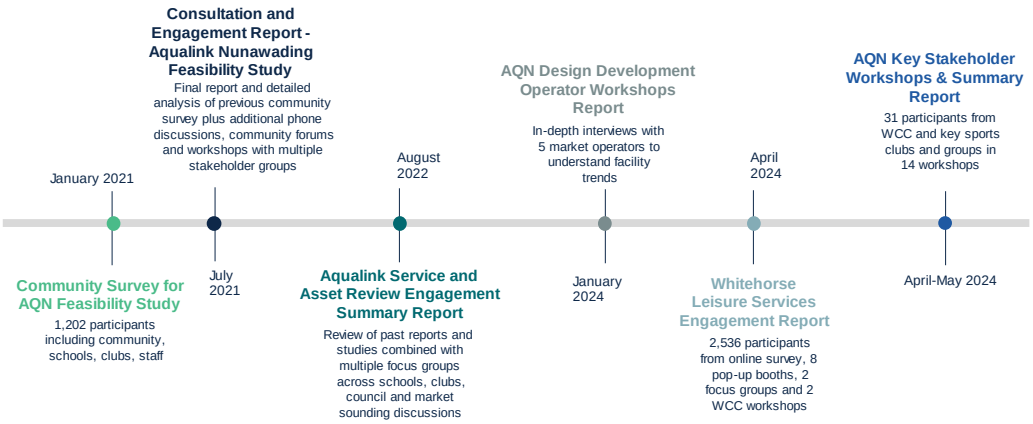

Figure 14: Timeline of Whitehorse community consultation and reports on Aqualink Nunawading

The investment solution proposed is informed by this extensive consultation with the community including current members, casual users, local aquatic sports clubs, primary and secondary schools, market operators, adjacent councils and WCC staff and executive and departmental managers.

This consultation and stakeholder engagement has been the source of key inputs and drivers of scope definition and the concept designs proposed.

Once the Business Case development process commenced in earnest, further workshops and meetings were held to develop the inputs upon which this Business Case is based. These included:

- Project Visioning Workshop
- Ontoit (April/May 2024) Aqualink Nunawading Stakeholder Engagement Summary Report (14 x one-one workshops held with five sport clubs and user groups plus various WCC departments including current facility managers to review and confirm previous findings) – Refer to Appendix C.
- Investment Logic Map Workshops including:

Problem Definition Workshop

Benefits Identification Workshop

Response Options Workshop

- Risk Management Workshop
- Procurement Strategy Workshop
- Value Management Workshop
- Stakeholder Engagement Plan Review Workshop
- Regular PCG Meetings
- Regular PWG meetings
- Regular briefing of the Whitehorse City Councillors

We believe this in-depth stakeholder engagement has formed a strong basis for the project proposed as part of this Business Case as the preferred option.

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4.3.1. Resident sports clubs

There are five tenant sport clubs and groups currently using Aqualink Nunawading who are strong supporters of a redeveloped facility, having a direct benefit from enhanced and extended training facilities and access to additional storage and meeting rooms on site. Option 5 offers the optimum mix of facilities for these stakeholders however the capital cost is of concern, to ensure value for money. Therefore the expanded facility mix offered by Option 3A offers the best alignment and will fulfill their needs.

The five clubs are:

- Nunawading Swim Club
- Nunawading Water Polo Club
- Nunawading Triathlon Club
- Nunawading Orcas Masters Swim Club
- Nunawading 3K Adult Squad

Of these, Nunawading Swim Club is the largest and oldest stakeholder. Dealings with the Nunawading Swim Club who hold a Ground Lease adjacent to Aqualink Nunawading site are sensitive in nature as the club's administration and training facility will be redeveloped and included in the proposed new facility. WCC are currently engaged in managing this dialogue with the Nunawading Swim Club.

Each of the sports clubs will be impacted by an extended closure of the facility. However, as outlined in section 1.4.4 and Appendix Q – Staging and Constructability Review, there is an option, albeit at some cost, to keep parts of the existing facility open as long as possible to minimise this impact. WCC will work with the clubs and project team to find solutions to mitigate their key risks during this time.

This will also offset the risk of high performance swimmers moving to other clubs including interstate for training, which, as experienced during COVID-19, has limited the number of elite Victorian swimmers in current cohorts (see section 1.3.3).

4.3.2. Stakeholder Engagement Plan for Delivery

As part of the development of this Business Case, Ontoit with WCC has composed a Stakeholder Engagement Plan, which is contained in Appendix M. The Stakeholder Engagement Plan outlines the communications and stakeholder engagement strategy required to successfully support Council during the funding, design, construction and commissioning phases of the Aqualink Nunawading project development. This strategy spans the period from Q1 2025 to project completion and opening by January 2031.

This plan will be adopted in the lead-up to the funding period.

4.3.3. Stakeholder impact summary

Overall, it is considered Option 5 is the preferred facility mix by the range of project stakeholders, including the wider community and resident sports clubs as summarised in the following table, however Option 3A delivers majority of stakeholder benefits sought at an acceptable capital cost.

Note: the colouring of the tables in section 4 represents the comparative contribution against that criterion. The orange palate represents an adverse impact, while the green represents a positive impact or contribution. The 'heavier' the colour, the more positive or negative the impact.

Table 18: Stakeholder Impact Summary

Base Case / Business as usual	Option 2 Contemporary Replacement	Option 3A Contemporary Hybrid (Preferred)	Option 5 Aspirational
Not supported by sport club partners or the community	Positive stakeholder benefit	Higher positive stakeholder benefit	Highest positive stakeholder benefit

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4.4 Social impacts

Investment in sports facilities typically involves a delineation of benefits across the professional sports industry, delivery of high-performance outcomes, and support for community sport and active recreation. For this investment, while redevelopment will support the development of professional sports and high performance athletes, the focus is on equitable community sport and recreational delivery as it has a positive impact on health and wellness in the wider community from participation and improved urban amenity (for non-users).

Ontoit commissioned MI Global to undertake a Cost Benefit Analysis (CBA) for this business case which examines the social and economic impacts of the project. The CBA measures the incremental socio-economic costs and benefits (i.e. net benefits) of the redevelopment relative to the base case. The costs and benefits are attributed to Victoria, with individuals (i.e. consumers/users), businesses, and local (City of Whitehorse) and State Government being the bearers and beneficiaries of the project.

In their analysis, the wider community benefits result from the benefit of having the option to use an asset ('option value'), the benefit of an asset that facilitates social interaction and well-being ('social value') and the enhancement of local amenity for the community ('passive value').

Participation benefits include improved health benefits for individuals, health cost savings to Government, increased productivity/reduced absenteeism for businesses and avoided drownings. Jobs will also be created during construction and during operation, which is discussed in further detail in section 4.7 (Economic Impact). Further consideration and quantification of the social impacts can be found in the full report and economic assessment included at Appendix L.

The base case offers no additional benefits and closure in 2032 will cause a number of impacts, not only to the community's health and wellbeing (estimated at up to $15M per year in added health burden) but also to neighbouring facilities and their capacity to service increased visitation, area liveability and to the Council's profile by not supplying expected services.

At the local level, a redevelopment of Aqualink Nunawading is anticipated to result in a number of positive and negative social impacts to the Whitehorse community during both the construction and operational phases.

Positive social impacts

During construction:

- Inclusive employment opportunities – jobs created during construction that are filled by those who are economically and socially disadvantaged.

During operation:

- Visitor experience (quantity and diversity) – the expanded and diversified program enabled by the capital works will attract more participants and a broader diversity of Victorians, particularly as improved facilities and programming are included.
- Visitor/ community pride and wellbeing (successful participation community-wide, events, clubs, athletes) – improving community participation in health and social activities, sports club performance and the successful hosting of key events will increase Victorian community pride and wellbeing.
- Jobs – Employment generated by growth in attendance and resultant demand for operational staff (noting the jobs quantified below in section 4.7.1 relate to employment generated through construction investment)
- Athlete experience and development – new dedicated facilities will allow the resident sport clubs to create an environment that better reflects their culture and values, improving the experience enjoyed by athletes, coaches and their supporters and improving athlete performance.
- Tenant staff experience – enhanced facilities and amenities will improve the work environment experienced by employees, potentially improving staff productivity and reducing staff turnover.

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- Improved sports participation (inclusive programming, elite athlete success) – improving sports club and player success, ensuring more high performance and elite swimmers come from Victoria, may help improve the state's profile through national and international participation. This can generate significant health and wellbeing benefits for sports participants and inspire others to participate.

Negative social impacts

During construction:

- Capital works nuisance – construction works can cause noise, dust and disruptions in traffic flows and residential impacts which result in a social dis-benefit.
- Loss of access by sports clubs and the community with a correlating impact on health and wellbeing

During operation:

- Major events nuisance – these are the dis-benefits linked with noise and congestion around the facility due to events or peak usage at the facility or adjacent sports clubs and experienced by non-attendees, reserve visitors and local residents.

Options comparison

The redevelopment is expected to deliver an increase in utilisation across memberships (full and aquatic), casual swimming, casual fitness, learn to swim programs, school use and general use. The incremental uplift in visits will drive participation benefits. These have been assessed and quantified by MI Global by measuring the links between an increase in physical activity from an average pool visit and reduced risk of mortality, morbidity and health care expenditure, as well as reduced absenteeism (i.e. increased productivity).

All three options return a positive socio-economic position with Option 3A providing the highest value and benefits to cost ratio:

- Option 2 – NPV $16.1M / BCR 1.16
- Option 3A – NPV $27.9M / BCR 1.21
- Option 5 – NPV $24.9M / BCR 1.16

Participation benefits account for 77% of all socio-economic benefits as a result of the redevelopment, while avoided capital costs (12%), financial benefits (9%) and community benefits (2%) account for the remainder.

Please also refer to section 4.7 for a summary discussion of the economic impacts.

4.4.1. Social Impact summary

All three of the redevelopment options deliver increased productivity, health benefits and avoided drownings as the main benefits of participation at the new facility. Overall, investment in the redevelopment is considered value for money, with Option 3A (Contemporary Hybrid) yielding the most positive return.

Table 19: Social Impact Summary

Base Case / Business as usual	Option 2 Contemporary Replacement	Option 3A Contemporary Hybrid (Preferred)	Option 5 Aspirational
Does not deliver any additional benefit Has negative health and wellbeing impacts after closure	Positive impact benefit	Higher social impact	Highest social impact

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4.4.2. Gender Impacts

The project solution will address current gaps in community and high performance infrastructure for differing demographics' ability to participate, providing equity of access and quality of facilities to support health and wellness and participation in aquatic sports and the industry. These include:

- Female dominant labour force in aquatics
- Community members living with a disability
- Increased mental health conditions for LGBTIQ+
- Socio-economic status impacting ability to participate in programs
- Low participation rates of women and girls in sports, health and wellness programs due to lack of confidence
- Increasing reports of violence against women
- Increased risk of chronic disease, including cardiovascular disease and Type 2 diabetes.

The project solution will specifically address the current facility's limitations to be inclusive and DDA compliant.

The overall gender impact is considered to be **positive** in that the redevelopment is:

- Accessible and Inclusive: it will be universally designed and inclusive, fostering participation in sport and active recreation by all of the Whitehorse community, across all life stages, genders and cultures.
- Diverse and Equitable: will offer a diverse mix of facilities, programs and experiences that are inclusive and accessible for all to utilise.
- Safe and Welcoming: Facilities are designed to be visible, open and welcoming to the community, creating a safe place for girls and women to participate.
- Multi-Use: Facilities will be multi-use, enabling multiple activities, programs and experiences for users and enabling access to girls and women's sport and recreation.
- Connected: Participation opportunities are connected to WCC's communities, including its unique natural environments.
- Sustainable: Facilities are designed to operate efficiently, whilst being well managed and maintained.

Further consideration of gender impacts can be found in the gender impact assessment at Appendix D.

WCC should consider further stakeholder engagement to assess subsequent design and layout in later stages to finesse design and address any unrecognised gender bias.

4.5 Environmental impacts

Aqualink Nunawading is an aquatic and recreation centre dating from 1960, having been progressively redeveloped and expanded since then. A redevelopment of the facility into a modern and compliant with current standards facility will greatly improve the environmental impacts of the project.

As the project is being developed on what is effectively a brown-field site, the direct environmental impacts relate to the existing amenity of surrounding parkland and local residential area, resource consumption and emissions from embodied energy.

The project will pursue a 5 Star Green Star rating or equivalent approach. This will serve to mitigate impacts and contribute to the Victorian Government's climate change strategy. Energy efficiencies afforded by contemporary design have environmental and financial benefits.

The redevelopment will take into account the Masterplan for Forest Hill Reserve (under development) and the City of Whitehorse Open Space Strategy 2024 (under development) which applies across the municipality.

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Positive environmental impacts:

Urban Heat island effects - The improved treatment of building structures and hard surfaces on site will reduce the heat retained in an area, reducing energy consumption and improved precinct user health outcomes. Landscaping surrounding the development will add canopy vegetation.

Negative environmental impacts:

Embedded carbon and other unpriced resource consumption – the materials used in the construction phase will have some component of embodied carbon in their manufacture. There may also be unpriced impacts from the production of resources that are not monetised in the capital costs.

Resource consumption – Energy, water, waste. Through the ESD initiatives incorporated into the capital works program, notable energy, water and waste savings will be generated on site in comparison to the existing facility during operation.

Further consideration of the environmental impacts can be found in the Climate Action Assessment Template, noted in the following section 4.5.5.

Options Comparison

Essentially, Options 2, 3A and 5 each have low negative environmental impact given the additional environmental resources consumed during construction and operations however Option 5, being of the largest scale will use a larger amount of resources compared to the smaller scale of Options 2 (Contemporary Replacement) and 3A (Contemporary Hybrid). The Base Case offers a positive environmental impact as it will use no further resources once closed, demolished materials will be recycled to the extent possible and the land of the current site is reverted to open space use.

Table 20: Environmental impact summary

Base Case / Business as usual	Option 2 Contemporary Replacement	Option 3A Contemporary Hybrid (Preferred)	Option 5 Aspirational
Positive environmental impact	Low negative environmental impact	Low negative environmental impact	Low-medium negative environmental impact

Figure 15: Aerial image of existing Nunawading facility and context of Forest Hill Reserve and neighbouring dwellings, and Special Building Overlay of the Whitehorse Planning Scheme

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Other considerations:

The existing building is surrounded by mature native vegetation, which extends into the broader Forest Hill Reserve, which also includes parkland, a playground and a sporting oval. Immediately east of the Aqualink building is a separate outbuilding used as the headquarters of the Nunawading Swimming Club.

Aqualink Nunawading is located amongst the residential hinterland of Forest Hill and is not in an activity centre – the closest is a lowest-order Neighbourhood Activity Centre located on the corner of Canterbury and Springvale Roads. The Aqualink Nunawading building is generally set back from any residential use by some distance, with the closest dwelling at 2 Opal Street set back approximately 50 metres from the nearest built form to the rear façade of the dwelling. Aqualink's car park directly abuts the rear fences and rear gardens of single-storey dwellings fronting Husband Rd.

Department of Energy, Environment and Climate Action's (DEECA) NatureKit mapping of the Forest Hill reserve indicates the potential presence of remnant native vegetation belonging Valley Heathy Forest (127) ecological vegetation classes immediately to the north of the Aqualink centre.[45] This has been confirmed in the Ecology Report, in Appendix P. Refer to the discussion following in section 4.5.1.

Several easements exist for the land in the Forest Hill Reserve, which is under the ownership of Whitehorse City Council. These include for the establishment of gas pipeline easements on the western side of the lot, which are clear of the existing Aqualink building footprint by approximately 80 metres. The covenants provide for allowing access to and maintenance of the gas pipeline, but otherwise do not prevent the development of the balance of the land. A further easement for drainage affects land north of the Aqualink building generally consistent with the path of the SBO in Figure 15. There are also drainage and sewerage easements that are impacted by the future siting proposed under Option 3A, pictured in Figure 16.

Any extension would occur over the existing sewerage and drainage easement to the east, which would need to be re-routed around it. Additions would require the removal of a number of trees around the existing centre.

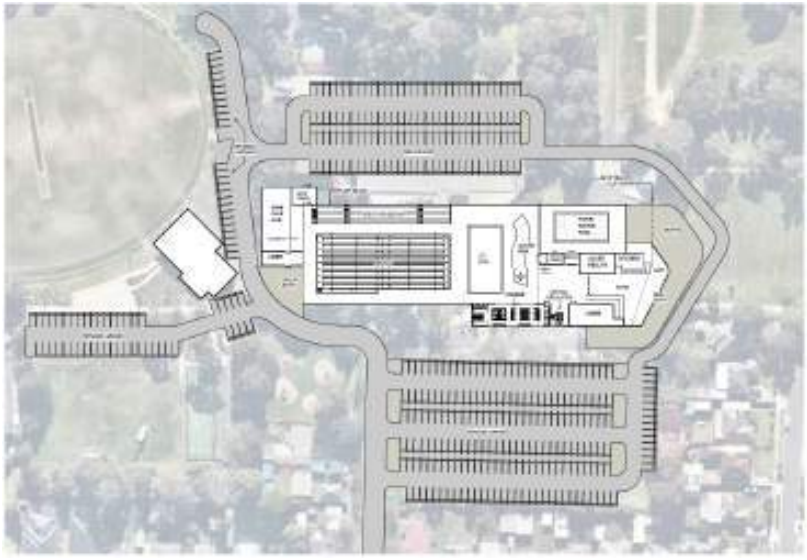

Figure 16: Aqualink Nunawading Option 3A redevelopment concept

[45] EMM (2024) Preliminary Planning Report; Internal – supplied document.

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4.5.1. Native vegetation, flora and fauna impacts

Efforts will be made to minimise impacts on native vegetation, flora and fauna. At this stage, it is intended that any vegetation that has to be removed will be replaced and ideally expanded to increase tree canopy of the site. Whitehorse City Council's Open Space Strategy 2024 will guide native vegetation impact assessment and mitigation.

In 2024, Ontoit engaged Ecology Australia Pty Ltd (EA) on behalf of WCC to prepare a Flora, Fauna and Native Vegetation Assessment which involved a review of the existing biodiversity information (an arborist study by Arbor Survey was included in the WCC's 2021 Feasibility Report), site assessment and review of the proposed site redevelopment options (refer to Appendix P for the full ecology report).

EA's report determined that under the Victorian Planning and Environment Act 1987 (P&E), the current concept designs will require the removal of 0.48 ha of valley heathy forest (Ecological Vegetation Class (EVC) 127) patches, seven large trees (scattered or in patched) and 8 small, scattered trees which would trigger an offset target of 0.093 General Habitat Units (GHUs) and the protection of seven large trees, with a Strategic Biodiversity Value (SBV) score of 0.1015, located in the Whitehorse City LGA or Melbourne Water CMA area. These offsets are available for purchase on the Native Vegetation Credit Register as at 19 September 2024. See Figure 17 (following).

A planning permit would be required under Clause 52.17 of the Whitehorse Planning scheme to remove, destroy or lop this native vegetation.

This assessment also determined:

- No threatened flora species listed under the EPBC Act or FFG Act are expected to be impacted by the proposed development, except a small number of Spotted Gum *Corymbia maculata* and Mugga *Eucalyptus sideroxylon* subsp. *Sideroxylon* occurring as planted amenity trees;
- No listed fauna species are susceptible to impacts from the proposed development.
- Declared noxious weeds would need to be managed during the construction phase of the project, to prevent outbreaks.

The project would be assessed under the intermediate assessment pathway, based on the proposed disturbance footprint considered in this assessment. The report made recommendations to address significant identified biodiversity impacts and/or legislation or policy matters:

- An arborist should be engaged to identify measures which could be employed to protect native trees (scattered or in patches), and to confirm whether this would result in further native vegetation retention.
- Any proposed landscaping should aim to be sensitive to and augment the existing indigenous vegetation and habitats in the study area.

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Figure 17: Native vegetation, threatened species and threatened ecological communities in the study area (EA, 2024 – see Appendix P)

4.5.2. Parkland amenity impacts

Development would need to be contextually appropriate and minimise the ecological, amenity and useability impacts on parkland and the sporting facilities to the east and west of the existing centre.

It is envisaged that the proposed redevelopment contributes to greater use of the adjacent open space and parkland to enable greater place-making within and by the community.

The redevelopment is to be considered as a key part of the Forest Hill Reserve Masterplan, currently in development. Whitehorse Open Space Strategy 2024 will also be considered.

4.5.3. Residential amenity impacts

In laying out the proposed redevelopment, the project architects should be mindful of the proximity of existing dwellings to the south and south east of the Aqualink centre fronting Husband Road and Opal Street. The at-grade car parking of the existing Aqualink centre is located directly north of the private open space (i.e. back gardens) of these dwellings. It should be sought not to increase amenity impacts to these properties as a result of the expanded centre, for example through additional noise from increased traffic, or additional light spill from enlarged car parking facilities.

It appears there may be scope to limit existing amenity impacts (e.g. by baffling existing unbaffled car park lighting), which could assist in ensuring no net increased impacts on neighbouring dwellings.

It is noted that new pool plant installations are proposed with a significant setback from any residential land use, and are sited behind the proposed building itself, further assisting to block the passage of noise offsite to sensitive receivers. The building design specialists who finalise the detailed design and configuration of this plant should ensure that noise and any other amenity impacts from this infrastructure are compatible with the reasonable amenity expectations of residents, including legal noise emission requirements as set out in the Environment Protection Authority's regulations.

During construction, construction impacts will be managed to minimise residential amenity impacts.

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4.5.4. Traffic and Parking Impacts

As per the visitation forecasts contained the Appendix K – Commercial & Financial Model, visitation to the site is expected to increase by 50% for Option 3A as compared to current visitation. As such, WCC should be mindful of what this means for traffic amenity impacts on local streets and for parking availability for Aqualink patrons and for other recreational visitors of the Forest Hill reserve.

The current concept design for all options, contained in Appendix E show a car parking allowance of 328 spaces. A traffic report commissioned for WCC from One Mile Grid has analysed the traffic impacts based on the current concept design and the forecast visitation and concluded (refer to Appendix R for the full traffic report) that:

- A total of at least 8 employee and 43 visitor bicycle parking spaces should be provided on-site for staff and visitor use, to meet or exceed the Planning Scheme requirements;
- The car parking survey data indicates that the existing site generates car parking in the order of 3.66 spaces per 10,000 annual visitations, which is commensurate with other benchmark sites in metropolitan Melbourne.;
- Based on this site-specific car parking rate of 3.66 per 10,000 annual visitations, the proposed supply of 328 car parking spaces is considered appropriate to accommodate the anticipated demands for Option 2 and preferred Option 3A over the first 10-year period. However, the analysis shows that the parking demands for Option 5 exceed the supply after the first year of the development and will have a shortfall of 27 spaces at the end of the 10-year period.
- The anticipated traffic volumes generated by the development are not expected to have a significant impact on the operation of the Husband Road / Fraser Place intersection; and
- Allowance for the signalisation of the Springvale Road/Husband Road intersection should be considered in the future, based on actual traffic data, to improve intersection safety, particularly for Option 3A and Option 5.

Additional traffic routes for vehicle access to Aqualink Nunawading are not currently being considered by WCC.

Improved active transport routes are always being considered by WCC around the municipality however these opportunities are challenging to achieve in a well-developed municipality. WCC will continue to consider their development through other strategies and master planning of reserves and other municipal areas.

4.5.5. Climate Action impacts: Climate Action Screening and Assessment Template

Please refer to the completed Climate Action Screening and Assessment Template in Appendix G.

4.6 Financial analysis

The financial analysis of options comprises:

1. The comparative capital cost
2. The comparative financial assessment
3. Integrated capital and financial assessment.

4.6.1. Capital Cost

The estimated capital cost of the three development options, plus the Base Case, is included in Table 21. These have been prepared by an industry specialist cost planner based on the design report and other due diligence reports included in the various appendices to this business case.

The cost plan for the development options is included at Appendix I – Cost Plans.

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Table 21: Capital cost of options ($ million)

Scope Element	Option 2	Option 3A	Option 5	Notes
Indoor Aquatic Hall	$28.14	$33.99	$43.88	50m pool and spectator area, LTS Pool, Leisure Water, Sauna & Steam, Concourses, Wet Lounge, Storage. Warm Water Pool (Options 3A & 5 only)
Health & Wellness Area	$4.56	$9.91	$13.49	Gym, Group Fitness. Options 3A & 5 only - Allied Health & Consulting Suites, Community Meeting Rooms
Front of House Area	$6.85	$8.72	$9.89	Entry / Reception, Café, Kitchen, Retail, Administration, NSC Specific Areas, Store
Amenities / Facility Support	$4.75	$5.70	$5.69	Change Areas
Other Internal Areas	$5.44	$7.81	$9.22	Plant, data & comms, circulation allowance
External Areas	$5.51	$6.01	$6.67	External plant, loading, car park, roads, landscaping
Total Trade Cost	**$55.25**	**$72.14**	**$88.84**	**Including contractor's preliminaries and margin**
Demolition	$0.85	$0.85	$0.85	Demolish existing facility
ESD Allowance (5-Star Greenstar)	$1.10	$1.44	$1.77	Allowance for inclusion of ESD initiatives
Consultant Fees (excl PM)	$5.56	$7.21	$8.85	Includes design and other consultancy fees, plus project management and client costs
Internal Client Costs (incl PM)	$5.00	$5.00	$5.00	Client will internally Project Manage the job, with specialist consultants assisting
In Ground and Contamination Allowance	$1.10	$1.44	$1.78	
Authority Charges and Headworks Allowance	$1.33	$1.50	$1.67	
Fittings, furniture and equipment	$0.57	$1.07	$1.29	General FF&E, based on assumption that clubs are responsible for gymnasium equipment
Total Base Cost Estimate	**$70.76**	**$90.65**	**$110.05**	**Current day excluding contingency**
P95 Risk Contingency	$12.45	$16.14	$19.78	Based on probabilistic risk costing
Total Cost Current Day	**$83.21**	**$106.79**	**$129.83**	**Total Cost of Project Current Day excl VPS Costs**
Escalation on Base Cost	$21.73	$27.89	$33.90	4.5% pa to 2029 and 4.0% thereafter
Cost Escalation Contingency (P95)	$6.27	$8.05	$9.78	Contingency on escalation only
Total Capital Cost (P95)	$111.21	$142.73	$173.51	Total Capital Cost upon Completion
NPV of Capital Cost	**$76.33**	**$97.97**	**$119.09**	**NPV of Capital Cost ($2024) - Discounted at 7.0% pa**

Note the above cost estimates do not include any costs associated with keeping part of the existing facility operational during the construction phase, as outlined in Section 1.4.3.

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4.6.2. Financial assessment

The present value of the base case together with each project option has been assessed with costs and revenues modelled over a 20-year time period (2025 – 2044).

For the Base Case, the following is assumed:

- Normal operations through 2032
- Facility closure at end of 2032
- Demolition and rebuild into a park, commencing late 2033.

For the project options, the following is assumed:

- Normal operations through 2028
- Closed for construction 2029-2030 Operations for new
- Aqualink Nunawading commence 2031.

The assumptions for the Base Case have been outlined in detail in Section 1.3.1, including cost associated with ongoing operations, capital asset expenditure to 2032, closure and subsequent demolition. It is assumed that the facility is redeveloped into a public park at a cost of $15 million[46] post demolition.

For the project options, a detailed financial model was developed by an experienced aquatic and health facility consultant, Warren Green Consulting, based on like projects. A summary of all key assumptions used in developing this financial model is included in Appendix K – Commercial & Financial Model. The key performance metrics for each project option driving the financial assessment herein are outlined in Table 22 (following).

It should be noted that the financial forecasts include a line item for an annual sinking fund allocation, based on the 25-year asset-lifecycle costs estimated by WTP contained in the whole-of-life cost report in Appendix I. WTP's estimate was based on Preferred Option 3A, which has been pro-rated for other options based on total capital cost.

WTP's report shows lumpy costs based on the expected life of individual assets. Instead of modelling lumpy cash flows, we have allowed for a steady annual sinking fund commensurate with the total 25-year whole-of-life cost estimate by WTP, noting a ramp up over the first 3 years.

The financial forecasts from Warren Green Consulting have been created in 2024 dollars, while WTP's forecasts have been created in 2030 dollars. All numbers were subsequently adjusted by CPI of 3.5% pa from the base year of 2024. As such, all net present values in this analysis are as per 2024.

[46] Based on the cost of the new Booran Reserve, City of Glen Eira (opened in 2017, $10.8M) and escalated to 2024 dollars. See https://www.heraldsun.com.au/leader/inner-south/booran-reserve-playground-in-glen-huntly-could-be-best-in-melbourne/news-story/f132e57ea7cb7b1b7ebba5ca420d6230

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Table 22: Key performance metrics (Year 5 of Operation)

Item	Option 2	Option 3A	Option 5
Financial Projections			
Income	$8,604,340	$10,463,458	$11,343,603
Expenditure	$7,763,742	$9,135,159	$9,841,753
Operational Surplus / Deficit	**$840,598**	**$1,328,299**	**$1,501,850**
Sinking Fund Allocation	$935,167	$1,200,167	$1,459,000
Total Surplus / Deficit	**($94,568)**	**$128,132**	**$42,850**
Visits			
Aquatics	507,245	552,407	613,773
Health Club	164,933	291,053	299,170
Other	0	7,000	14,000
Total	672,178	850,460	926,943
Memberships			
Learn to Swim	3,194	3,194	3,606
Health and Wellness	2,081	3,642	3,746
Aquatics	1,249	1,561	1,561
Performance Indicators			
Subsidy / Surplus per Visit *	$1.25	$1.56	$1.62
Revenue per Visit	$12.80	$12.30	$12.24
Full Time Equivalent	47.1	57.6	60.9
Total Wages	$4,310,100	$5,158,035	$5,472,543
Staffing Expense to Total Income	50%	49%	48%

** before sinking fund allocation*

Based on these metrics in Table 22 above, the net present value of cashflows at a discount rate of 7.0% p.a. is summarised in Table 23.

Table 23: Net Present Value @7% p.a. ($ million) (operating assessment only, not including capital)

	Base case	Option 2	Option 3A	Option 5
20-Year Net Present Value Operating*	($10.57)	($4.33)	($1.78)	($2.18)
Variance to Base Case – Operating Improvement	-	$6.24	$8.80	$8.39

The net present value of operating cash flows for the project options are an improvement on those for the Base Case, mainly due to the better forecast operating performance of the new facility as compared to that of the existing facility, including expected annual asset lifecycle costs.

Integrated financial assessment

Combining the capital and financial assessment results in a net present value as summarised in the following table.

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Table 24: Integrated financial assessment ($million) 20 years@ 7% p.a. Discount Rate

Component	Base case	Option 2	Option 3A	Option 5
NPV of Total Capital Cost	($11.45)	($76.33)	($97.97)	($119.09)
NPV of recurrent operating surplus/(deficit)	($10.57)	($4.33)	($1.78)	($2.18)
Net Present Value (Capital and Recurrent) @ 7.0% pa	**($22.02)**	**($80.66)**	**($99.74)**	**($121.27)**

The financial assessment demonstrates a sliding scale across the options, with the base case delivering the best financial outcome, noting the reduction in community amenity as a result of closing the existing facility. The table above demonstrates that any improvement in operating performance above the Base Case is more than offset by the upfront capital investment required to replace the end-of-life Aqualink Facility.

Sensitivity analysis

The integrated financial assessment has been assessed using various discount rate scenarios, as outlined in the table below.

Table 25: Sensitivity of the financial assessment – by discount rate scenario ($million)

Component	Base case	Option 2	Option 3A	Option 5
NPV of Total Capital Cost				
4% pa	($15.19)	($89.39)	($114.73)	($139.47)
7% pa	($11.45)	($76.33)	($97.97)	($119.09)
10% pa	($8.70)	($65.49)	($84.05)	($102.18)
NPV of recurrent operating surplus				
4% pa	($12.08)	($4.19)	($0.46)	($1.07)
7% pa	($10.57)	($4.33)	($1.78)	($2.18)
10% pa	($9.33)	($4.30)	($2.51)	($2.77)
Net Present Value (Capital and Recurrent)				
4% pa	($27.27)	($93.58)	($115.18)	($140.54)
7% pa	($22.02)	($80.66)	($99.74)	($121.27)
10% pa	($18.03)	($69.79)	($86.56)	($104.95)

There are no material changes to financial outcomes based on these various discount rates.

4.7 Economic impacts

Ontoit commissioned MI Global Partners to undertake a Cost Benefit Analysis (CBA) and Economic Impact Analysis (EIA) for this business case which examines the social and economic impacts of the project and provides a quantification of these impacts. Please see Appendix L for the full CBA report.

4.7.1. CBA Appraisal Framework

The CBA measures the incremental socio-economic costs and benefits (i.e. net benefits) of the redevelopment relative to the base case. The costs and benefits are attributed to Victoria, with individuals (i.e. consumers/users), businesses, and local (City of Whitehorse) and State Government being the bearers and beneficiaries of the project.

Figure 18 provides an overview of MI Global's approach to developing the CBA for the redevelopment of Aqualink Nunawading.

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The redevelopment options will deliver benefits across four key categories:

1. Uplifts in financial revenue to the facility operator based on increased utilisation.
2. The avoided capital costs of the asset maintenance for the existing facility to extend its life to 2032 and the costs to prepare the site for community use.
3. Wider community benefits (non-users) through improved urban amenity
4. Participation benefits including improved health benefits for individuals, health cost savings to Government, increased productivity / reduced absenteeism for businesses and avoided drownings.

The cost of the project includes the initial construction costs as well as ongoing annual lifecycle and incremental operational costs.

Three key drivers have been identified for the analysis which have the greatest impact on the CBA results and sensitivity testing has been completed for these key drivers.

- Discount rates (4% and 10%);
- Demand such as facility users (+/- 15%); and
- Cost estimates including the new infrastructure capital and operational costs (+/- 15%).

The final indicators are the Benefit cost Ratio (BCR) and Net Project Value (NPV) to assess each option.

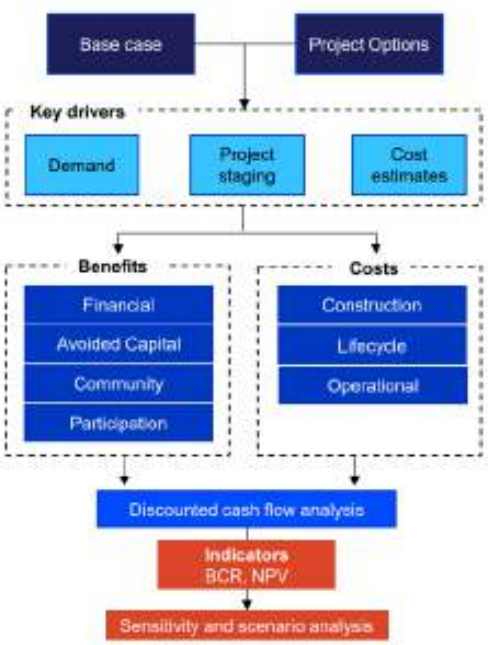

Figure 18: CBA appraisal framework

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4.7.2. CBA Summary

Table 26: CBA Summary

Present value cash flows discounted by 7% p.a.	Option 2 Contemporary Replacement		Option 3A Contemporary Hybrid		Option 5 Aspirational	
Costs	Nominal Value	Present Value (2024)	Nominal Value	Present Value (2024)	Nominal Value	Present Value (2024)
Construction Costs *	$80,135,500	$55,003,000	$106,796,500	$73,302,400	$129,828,700	$89,111,100
Life Cycle Costs	$17,110,300	$5,808,600	$22,803,200	$7,741,200	$27,721,000	$9,410,700
Operating Costs	$133,082,600	$40,004,400	$160,909,800	$49,763,200	$175,103,900	$54,712,300
Total Costs	**$230,328,400**	**$100,815,900**	**$290,509,500**	**$130,806,800**	**$332,653,600**	**$153,234,000**
Benefits	Nominal Value	Present Value (2024)	Nominal Value	Present Value (2024)	Nominal Value	Present Value (2024)
Facility Revenue	$150,978,400	$45,269,200	$189,147,100	$58,604,200	$207,193,100	$64,894,600
Avoided Capital Costs	$21,259,000	$12,136,000	$21,259,000	$12,136,000	$21,259,000	$12,136,000
Consumer Non-Use Surplus	$2,923,100	$1,008,400	$5,846,200	$2,016,700	$8,857,900	$3,055,700
Increased Productivity	$33,871,700	$11,001,700	$51,409,100	$17,125,700	$57,309,000	$19,185,700
Health Benefits	$105,899,100	$34,440,600	$155,714,600	$51,833,800	$174,550,900	$58,410,600
Health Cost Savings	$9,048,300	$2,940,600	$13,541,200	$4,509,500	$15,132,200	$5,065,000
Avoided Drownings	$10,463,800	$3,238,400	$10,463,800	$3,238,400	$13,274,500	$4,216,500
Residual value	$40,067,800	$6,899,500	$53,398,300	$9,194,900	$64,914,400	$11,178,000
Total Benefits	**$374,511,300**	**$116,934,300**	**$500,779,300**	**$158,659,200**	**$562,491,000**	**$178,141,900**
Net Benefits (NPV)	**$144,182,800**	**$16,118,400**	**$210,269,700**	**$27,852,400**	**$229,837,400**	**$24,907,800**
Benefit Cost Ratio (BCR)	**1.16**		**1.21**		**1.16**	

** Excludes escalation*

The CBA presents the benefits and costs associated with each option incremental to the base case.

All three investment options return a positive socio-economic position and a BCR greater than 1, meaning investment in the facility will deliver more socio-economic benefits to Victoria compared to the costs to develop and operate.

In summary:

- Option 2 – NPV $16.1M / BCR 1.16
- Option 3A – NPV $27.9M / BCR 1.21
- Option 5 – NPV $24.9M / BCR 1.16

Participation benefits account for 77% of all socio-economic benefits as a result of the redevelopment, while avoided capital costs (12%), financial benefits (9%) and community benefits (2%) account for the remainder.

Overall, investment in the redevelopment is considered value for money, with Option 3A (Contemporary Hybrid) yielding the most positive return.

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4.7.3. EIA Appraisal Framework

Economic impacts were evaluated by MI Global in terms of direct impacts and indirect impacts.

Direct impacts relate to both construction activity and the scale of additional expenditure on resources within the facility and broader Victoria.

Indirect impacts are increases to the supply chain as a result of the direct impact of construction or increased expenditure. The indirect impacts could occur within or outside Victoria.

The analysis is based on an input-output model created from input-output tables produced by the Australian Bureau of Statistics (ABS) in 2019-20. These tables are published every five years and provide detailed snapshots of the Australian economy's structure and the interconnectedness of the various industries operating in it. Typically, these tables present a summary of the transactions in the economy over a year. The model takes into consideration the composition of industries and interlinkages between the different industries, employment levels, revenue, and household income level.

In addition to the ABS input-output tables, MI have also utilised output and value add figures provided by National Institute of Economic and Industry Research (NIEIR) to estimate the value added to the Gross State Product (GDP) of each direct and indirect impact.

The EIA determines the total output, the value added to GDP and the number of jobs created as a result of each of the impacts delivered by the project.

4.7.4. EIA Summary

Total Economic Output

The preferred Option 3A is projected to deliver a total direct and indirect economic output (i.e., the measure of total economic activity in the production of new goods and services) of $306M during construction and the first ten years of operations.

The total direct and indirect economic output includes $163M during construction and $153M via facility operations.

Each year after 2040 will deliver a further $14M direct and indirect impact through operations.

Total Economic Value added to the GDP

The preferred Option 3A is projected to deliver $107M in total direct and indirect value added to the Victorian GDP (i.e., the total economic output minus the cost of producing all inputs and raw materials) during construction and the first ten years of operations.

The total direct and indirect value added includes $51M during construction and $56M via facility operations.

Each year after 2040 will deliver a further $6M direct and indirect impact through operations.

Total Job Creation

The preferred Option 3A is projected to create 1,681 direct and indirect full time equivalent (FTE) jobs during construction and the first ten years of operations.

The total direct and indirect jobs includes 696 during construction (139 each year on average) and 985 from facility operations (98 each year). FTE jobs during the operations phase includes those employed at the facility as well as employment in other industries derived from the operations of the facility (i.e. maintenance, training, education, retail, IT, utilities, marketing etc.).

4.7.5. Economic analysis summary

Option 3A – Contemporary Hybrid is considered the preferred option in comparison to the base case and the two alternative investment options (i.e. contemporary replacement and the aspirational option).

In summary, Option 3A:

- Will cost $107M in 2024 Australian dollars to redevelop, excluding escalation.

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- Will cost an additional $23M (2024) in capital maintenance costs across twenty years of operations.
- It is projected that Year 1 will see 803,841 visits (uplift of 229,841 on the status quo) and 889,304 visits in Year 10 (uplift of 315,304).
- It will deliver $28M in net benefits (NPV) and a BCR of 1.21.
- It will deliver 112 new full time equivalent jobs (FTE) per year (over five years of construction and the first ten years of operations).
- It will deliver $306M in direct and indirect economic output of five years of construction and the first ten years of operations ($20M per year), $107M of which is value added to the Victorian Gross Domestic Product ($7M per year).

Table 27: Economic analysis summary

	Option 1 Base Case	Option 2 – Contemporary Replacement	Option 3A – Contemporary Hybrid	Option 5 - Aspirational
Total Capital Costs*	$16M	$80M	$107M	$130M
Total Lifecycle Costs	$5M	$17M	$23M	$28M
Total Annual Visits	574,000 (current)	702,574 (year 10)	889,304 (year 10)	969,331 (year 10)
Benefit Cost Ratio	n/a^	1.16	1.21	1.16
Net Benefits	n/a^	$16M	$28M	$25M
New FTE Jobs created per year**	n/a^	88	112	129
Total Economic Output**	n/a^	$239M	$306M	$356M
Total Value Added to the Victoria GDP**	n/a^	$84M	$107M	$124M

** Excludes escalation*
*** Total direct and indirect impact during construction and the first ten years of operations*
^ The assessment is incremental to the base case

4.7.6. Options comparison

The following table summarises the net and comparative economic impacts of the project for the project options.

Table 28: Economic impact summary

Base Case / Business as usual	Option 2 Contemporary Replacement	Option 3A Contemporary Hybrid (Preferred)	Option 5 Aspirational
No economic benefit	Positive economic impact	Highest positive economic impact	Positive economic impact

4.8 Risk comparison

4.8.1. Risk methodology

Project option risks were identified and quantified through a staged process involving an initial externally facilitated risk workshop with key stakeholders that identified project risks and developed a draft rated risk register with pre- and post-mitigation of measures – reference should be made to Appendix J.

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The risk assessment included allocation of risks to the four development options outlined in this business case.

The MCA process, through the expert judgement of key Project stakeholders and advisors identified the summary risk profile for each option to achieving the project objectives. This took into consideration the likely impact of key project risks and that these would generally increase proportionately to the larger scale project options.

4.8.2. Risk profile

From a pure delivery perspective, the Base Case has the lowest number of individual implementation (delivery) risks, as it involved facility closure, demolition and rebuild as public open space. As such, the Base Case has a low delivery risk. Note there will be some reputational risk to Council and expected negative publicity related to the closure of the facility, which is used by thousands of local residents.

With respect to the project options, the risk profile is moderate, as the compared favourably to other aquatic and health facility projects of comparable scale delivered successfully in metropolitan Melbourne. Our risk analysis demonstrates that there are very few high rated risks post mitigation for all project options. Some of the key risks identified on this project are related to:

- Reputational risk to Council based on community expectations
- Level of design definition and scope variety
- Sensitivity to cost and unanticipated budget impacts
- Construction works in a residential area and adjacent open space environment.

While due diligence and project planning activities have been undertaken to understand and mitigate, a reasonable level of post-mitigation risk remains. The summary risk report, including the full risk register is included at Appendix J.

Table 29: Risk impact summary

Base Case / Business as usual	Option 2 Contemporary Replacement	Option 3A Contemporary Hybrid (Preferred)	Option 5 Aspirational
Lowest delivery risk	Moderate risk impact	Moderate risk impact	Higher risk impact

Other risk allocation for procurement, planning consents, schedule and budget, are further discussed in Sections 6, 7, 8 and 9 respectively.

4.9 Uncertainties

This investment proposition and the associated options have been developed with a high level of due diligence to inform both delivery and operation. Project development and due diligence activities undertaken to date are further discussed in section 5.5 below.

WCC has been mindful to consider the various sources of uncertainty in the project and develop measures to manage these as outlined in the approach to risk (refer Appendix J - Risk).

There are four key matters of uncertainty that remain to be resolved or for which the success of the investment and realisation of benefits remain vulnerable. These are outlined in the following table.

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Table 30: Uncertainty associated with Aqualink Nunawading Redevelopment

Source of uncertainty	Impact on investment strategy	Approaches to deal with uncertainty	Trigger points that may prompt a decision to take a different course of action
Asset Failure Timeline The unpredictability of when critical components of the facility may fail introduces uncertainty in planning and budgeting.	Uncertainty in planning and budgeting. While immediate failure could necessitate urgent repairs or closure prior to 2032, proactive investment in maintenance where viable aims to mitigate these risks to ensure continuity of services and avoid costly emergency interventions.	WCC have undertaken a detailed technical review of Aqualink Nunawading's mechanical and pool plant to understand the likelihood of critical failure. Maintenance and Emergency Funds have been set aside for such events.	It is unviable to undertake the required repair to maintain the service at Aqualink Nunawading because certain existing assets are so old that spare parts are unavailable, or replacement is deemed unviable.
Participation and Demand Projections: While current statistics on participation, growth, and projected demand provide a strong evidence base, changing demographics and external factors such as economic conditions or public health issues (e.g., pandemics) could impact these projections.	Uncertainty in funding to support a larger facility to meet revised demand projections. However the preferred option 3A accommodates reasonable flexibility for a diversity of health, fitness and wellness needs at a scale larger than currently available. Lower demand is not anticipated.	Accept the uncertainly. Continuous monitoring and adaptive planning will be essential to respond to these variables effectively. Expansion at both Aqualink sites (Box Hill and/or Nunawading) and other market-led solutions in the municipality in the longer term may be required.	None. This uncertainty will only become known after the project is complete and further impacts may only become apparent five years and up to 20 years after based on population growth potential from unconfirmed yet announced State Government projects.
Corporate Plans, Strategies, and Policies: Whitehorse City Council's plans and strategies are evidence-based but must remain flexible to accommodate unforeseen changes in community needs and priorities. Alignment with state and federal policies also requires adaptability as government priorities evolve.	Changed priorities causes uncertainty in planning and budgeting.	Accept the uncertainly. Continuous monitoring and adaptive planning will be essential to respond to these variables effectively.	Investment required is unrealised due to changed priorities at local, state and Commonwealth government levels.
Benchmarking and Future Trends: Future trends can shift rapidly, necessitating a dynamic approach to facility design and service offerings to stay relevant and competitive.	Unmet community expectations based on new, similar facilities or future trends causes financial and reputational impact to Whitehorse City Council and causes decrease in participation and lower health and wellbeing outcomes.	Accept the uncertainty. Continuous monitoring and adaptive planning will be essential to respond to these variables effectively. Stakeholder management to inform and manage expectations.	None. Beyond the due diligence undertaken on this project with leading experts to determine the optimum design brief for the community, there is limited ability to respond to future, critical design, form and function trends.

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4.10 Integrated analysis and options ranking

A multi-criteria assessment is submitted as the preferred method of assessing and differentiating between the project options. This has been adopted rather than pursuing a net-present-value/benefit-cost-ratio approach, as it has been determined that many of the key project benefits, such as improved health and fitness of the local community, cannot be robustly monetised.

The criteria for assessment are as follows:

1. Project capital cost
2. Preference of the Project Owner
3. Social impact
4. Environmental impact
5. Economic impact
6. Financial impact – on Whitehorse City Council
7. Comparative delivery risks.

Program is not a consideration in this assessment as it is assumed all project options will deliver facilities in a similar timeframe.

The project criteria have not been weighted. Rather, a holistic assessment by WCC's key internal project stakeholders with Ontoit has been undertaken to nominate a preferred option.

Assessment

All project options presented provide the opportunity to deliver responses to the identified problems against a proportionate level of expenditure. This means that in general, the higher the cost, the stronger the response to the problem. However, the value for money assessment also considers the cost, benefits, risk and the range of other impacts and contributions the proposed development delivers upon, as summarised below:

- Stakeholder preference – Option 3A provides the best mix of opportunities at what is considered an acceptable cost to the community and affordable for WCC. This has been a primary driver for WCC.
- Social Impact – All three of the redevelopment options deliver increased productivity, health benefits and avoided drownings as the main benefits of participation at the new facility. This has been the key driver of the project and the most significant concern for WCC, encompassing the investment logic problems and benefits identified. Overall, investment in the redevelopment is considered value for money, with Option 3A (Contemporary Hybrid) yielding the most positive return. Closure without replacement of the facility results in $14.92M per year of lost health benefits to the community each year based on the existing visitation as discussed in section 3.2 and therefore is not an acceptable option to WCC given the desired social intent of the project, stakeholder needs and projected population growth for the municipality.
- Environmental Impact – direct environmental impacts relate to resource consumption and emissions, with the project pursuing a Green Star or equivalent approach for the new build structures, mitigating impacts and contributing to Victoria's climate change strategy. Overall, low negative environmental impact is assessed for all project options. Moreover, the ecology report identified no fauna impacts as a result of any of the proposed options and only minor flora impacts.
- Economic impact – Participation benefits account for 77% of all socio-economic benefits as a result of the redevelopment, while avoided capital costs (12%), financial benefits (9%) and community benefits (2%) account for the remainder. Overall, investment in the redevelopment is considered value for money, with Option 3A (Contemporary Hybrid) yielding the most positive return. For Option 3A, the Net Benefits (NPV) is estimated at $28M and benefit cost ratio (BCR) is highest at 1.21. It will deliver 112 new full-time equivalent jobs (FTE) per year (over five years of construction and the first ten years of operations). It will deliver $306M in direct and indirect economic output of five years of construction and first ten years of operations, $107M of which is value added to the Victorian Gross Domestic Product ($7M per year).

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- Financial impact – demonstrates a sliding scale across the project options with the base case resulting in a net positive financial outcome, and progressively increasing across the project options. Option 3A will cost $107M in 2024 $AUD to redevelop and will cost an additional $23M (2024) in capital maintenance costs across 20 years of operations.
- Comparative delivery risk – The Base Case has the lowest project delivery risk, as post closure construction works are limited to demolition and creation of new open space. The other three project options are all considered to be moderate risk options, incorporating the normal project delivery risks of like aquatic and health facility projects of similar scale that have been successfully delivered in metropolitan Melbourne by other local governments.

These factors are summarised and illustrated in Table 31.

Multi Criteria Assessment

Table 31 (following) presents the comparative assessment of project options, drawing together the matters considered in this section 4 – Project Options Assessment. The colouring of the table represents the comparative contribution against that criterion. The orange-red palate represents an adverse impact, while the green represents a beneficial impact or contribution. The 'heavier' the colour, the more positive or negative the impact.

The preferred option is the one that delivers the best value for money investment: Responds to stated problems; delivers project benefits; can be delivered with acceptable social and environmental impact; delivers economic and financial benefits; can be delivered with acceptable risk and at an appropriate cost.

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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Table 31: MCA Assessment

Options → / Criteria ↓	Option 1: Base Case - Business-as-usual	Option 2: Contemporary Replacement	Option 3A: Contemporary Hybrid (Preferred)	Option 5: Aspirational
Capital Cost *Incl Escalation*	$16M	$111M	$142M	$173M
Stakeholder preference	Not supported by sport club partners or the community	Positive stakeholder benefit	Higher positive stakeholder benefit	Highest positive stakeholder benefit
Social impact	Negative social impact	Positive impact benefit	Higher social impact	Highest social impact
Environmental impact	Neutral environmental impact	Low negative environmental impact	Low negative environmental impact	Low negative environmental impact
Economic impact Benefit Cost Ratio	N/A – as economic benefit is measured in comparison to Base Case	Positive economic impact: BCR 1.16 - 16M net present value of construction and 10 years of operations	Highest positive economic impact: BCR: 1.21 - 28M net present value of construction and 10 years of operations	Positive economic impact: BCR: 1.16 - 28M net present value of construction and 10 years of operations
Financial impact – on the Council	The NPV of the financial impact to Council is negative $22 million over 20 years, with no material asset on the balance sheet at the end of the period.	The NPV of the financial impact to Council is negative $80 million over 20 years, less the present value of any external funding. Council owns an asset with a significant useful life at the end of the period.	The NPV of the financial impact to Council is negative $99 million over 20 years, less the present value of any external funding. Council owns an asset with a significant useful life at the end of the period.	The NPV of the financial impact to Council is negative $120 million over 20 years, less the present value of any external funding. Council owns an asset with a significant useful life at the end of the period.
Comparative delivery risk	Lowest risk impact	Moderate risk impact	Moderate risk impact	Moderate risk impact
Conclusion: Option 3A represents the best value for money investment				

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4.10.1. Testing the robustness of the options analysis

As a qualitative multi criteria assessment has been undertaken to nominate the preferred solution, a sensitivity analysis of the assessment is not proposed, noting a sensitivity analysis of the financial model has been undertaken as outlined in section 4.6 above.

4.10.2. Economic evaluation of project solution

The economic assessment of each of the four options is included at section 4.7 above.

Recommended response option

From the *Multi Criteria Assessment* table above, the following conclusions can be made:

1. Option 1: The business-as-usual option, even if supplemented with modest capital investment, will not meaningfully respond to the identified problems and will result in a steady decline of benefits as the facility ages, visitation drops off further and is closed by 2032 if not before due to major critical asset failure. Closure without replacement of the facility results in $14.92M per year of lost health benefits to the community, and a shortage of suitable health and aquatic facilities in the region ongoing.
2. Option 2 involves significant investment and is a lower capital cost proposition. It provides reasonable responses to the stated problems, delivery of positive beneficial impacts and contributions including positive social, economic and financial impacts, and has low negative environmental impacts. However replacing like-for-like may not adequately service the growing future population of Nunawading sufficiently nor meet the current community's expectations for a new replacement facility given the expressed need for additional aquatic options of warm water/therapy pool and fitness spaces. It delivers the lowest net project economic benefits of $16M.
3. Option 3A delivers the highest net economic project benefits ($28M) and Benefits-Cost Ratio (BCR 1.21) while appropriately responding to the stated problems. It is also the medium capital cost proposition that is within the range considered most acceptable to WCC and can achieve the preferred mix of facilities that will fulfill the long-term stakeholder needs and meet the community's expectations. It also delivers the best recurrent, forecast, operating financial outcome. This results in the best mix of social, economic and financial impacts being enjoyed, as compared to Options 2 and 5.
4. Option 5 provides the largest and most comprehensive facility that can service the Nunawading community into the future yet comes with far higher capital costs, has a lower BCR (1.16) and net benefits of $25M compared to Option 3A. The site will not be able to service the higher visitation easily and as this grows, WCC will also need to consider traffic impacts and parking after the first 8-10 years of operation. There is an affordability issue for WCC with this option.
5. As such, it is considered that the preferred project option is Option 3A, offering a redeveloped, inclusive and accessible facility of ~21,000 sqm and proposes an astute expansion of both aquatic and dry fitness areas with more generously sized, contemporary change and social spaces. The Nunawading Swim Club facilities will be rebuilt and integrated into the new facility. It can accommodate a reasonable number of spectators for swimming competitions and other events yet has the flexibility with additional water spaces to cater to other visitors concurrently.

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This option delivers responses to stated problems through:

- A better configuration of water and dry fitness spaces that will enable increased participation in health and wellbeing activities for all ages, and as the Nunawading population grows.
- It will be inclusive and accessible to all in the community, enabling equitable participation.
- A facility that can enable outstanding educational opportunities and swimming competency for all ages and that can also pathway aspiring swimmers to elite performance levels through the Nunawading Swim Club, housed on site in new facilities, as it has done for more than 60 years.
- By modernising facilities, WCC can remove barriers to participation and increase demand for and productivity of this asset, growing income and sustainable participation. Greater financial and environmental sustainability will also be achieved by the redevelopment through incorporation of leading-edge technologies that reduce operating costs and climate change impacts.
- An affordable capital cost for WCC aligned with its long-term planning for future capital expenditure.

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Part 2 – Delivery case

5. Project solution

5.1 Project Objectives

Further to the established vision for Aqualink Nunawading (refer to section 2), WCC has set the following project objectives for the redevelopment of Aqualink Nunawading at the existing site:

- **Enhance Community Health and Wellbeing**: Increase levels of physical and social activity and swimming competence by providing modern, accessible, and inclusive facilities.
- **Ensure Financial Sustainability**: Achieve a sustainable outcome managing scope and budget within the available funding envelope.
- **Support High-Performance Athlete Development**: Provide modern training facilities to support high-performance pathways and maximise opportunities to compete at all levels.
- **Community Consultation:** Utilise best-in-class communications and engagement strategies to gather the views of the local community to inform the project outcomes.
- **Environmentally Sustainable:** Deliver an environmentally sustainable facility through the construction and operations phases

5.2 Detailed project scope, service specification and outcomes

The proposed project scope for the preferred option for the Aqualink Nunawading Redevelopment is aimed at delivering on the Project Vision and Project Objectives and serving the local community for generations to come.

The facility is essentially split into six parts, totalling ~21,000 sqm, being:

1. Aquatic Facilities
2. Dry Fitness Facilities
3. Change Facilities
4. Nunawading Swim Club Facilities
5. Other Social and Operational Facilities
6. External Areas

The diagrams below (Figure 19 and Figure 20) detail the concept plan for the preferred option.

5.2.1. Aquatic Facilities

The largest part of the Aqualink Nunawading Redevelopment is the provision of aquatic facilities, all of which are located on the ground floor. This includes four separate pools:

a. 8 lane x 50m lap pool with moveable wall to split the pool int 2 x 25m sections. This pool will include a ramp for all-abilities access requirements. This pool will be adjacent to spectator seating for use at carnival events.
b. A 25m x 12m Learn-to-Swim (LTS) pool with moveable floor and ramp for all-abilities access. The moveable floor allows a range of depths to be catered for, so the LTS pool can cater for all age ranges and for use as a warm-up or cool-down pool during event days
c. A 20m x 15m warm water pool, plus 2 x hot/cold spas. These pools are important to cater for the wide social demographics in the local area, who may not necessarily desire to use the other pool types.
d. Leisure Water / Toddler Pool of ~100 sqm, catering to children of the youngest age groups
e. Sauna and Steam Room of ~40 sqm
f. Pool Concourse and Deck Showers – generous concourse areas around various aquatic facilities, supported by on pool deck showers

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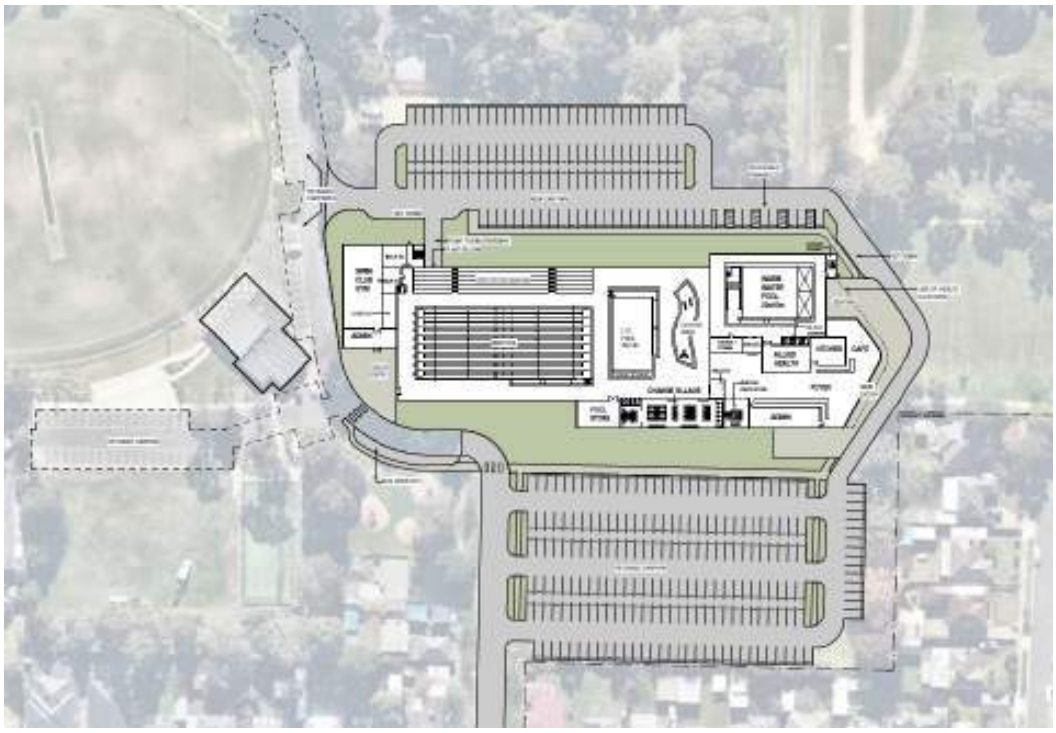

Figure 19: Ground Floor Plan – Preferred Option 3A

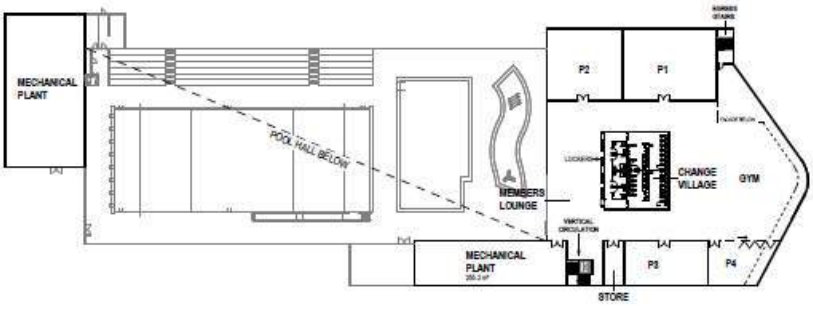

Figure 20: First Floor Plan – Preferred Option 3A

5.2.2. Dry Fitness Facilities

All dry fitness facilities are located on Level One and total ~1,600 sqm, including:

a. Cardio and strength area (gym) (900 sqm)
b. 4 x group fitness rooms (ranging from 100sqm – 250sqm)
c. Store

5.2.3. Change Facilities

A range of change facilities will be offered, with a focus on providing best-practice change amenities for the widest possible demographic and for people of all abilities.

The ground floor change facilities, supporting the aquatic facilities, totals ~500sqm and includes:

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a. Male and female change
b. Family Change
c. Accessible Change
d. Changing Places
e. All-Gender Change; and
f. Group Change.

The first-floor change facilities, supporting the dry fitness facilities, totals ~200sqm and includes:

a. Male and female change
b. Accessible Change; and
c. All-Gender Change.

5.2.4. Nunawading Swim Club Facilities

The Nunawading Swim Club (NSC) has existing facilities on site that will need to be replaced. Space allocated to the NSC totals ~600sqm and comprises:

a. NSC Office and Administration
b. Strength and Conditioning (400 sqm)
c. Events and Marshalling
d. Dedicated NSC Change
e. Store

5.2.5. Other Social and Operational Facilities

Other social and operational facilities, located mostly on ground floor include:

a. Café, Kitchen and Store
b. Foyer, Reception and Retail
c. Social Areas, Meeting Rooms, Prayer Rooms
d. Allied Health Suites
e. Offices and Administration
f. Cleaner and Store
g. Building Services and Plant

5.2.6. External Areas

External areas include an entry plaza, immediately surrounding landscaped areas, a north and south car park (including accessible car-parking) and a surrounding ring road.

5.3 Interdependencies and interfaces

A successful design and construction project for WCC and its local community will involve authentic and comprehensive community consultation over a significant period of time pre-design and ongoing during the detailed design and construction phases, into operational commissioning. There are three key areas of stakeholder consultation that interface with delivering a successful project:

1. **Facility Design:** Undertaking a process to garner authentic community feedback around the design of the new facility is a key issue for WCC and the local community. As part of the project program, WCC have allocated a 9-month period for pre-design and stakeholder consultation commencing mid-2025 in recognition of its importance ahead of any formal funding allocation to the construction of the project.

2. **Adequately catering for displaced demand through the construction phases:** WCC acknowledges the impact on the local community and the NSC arising from the temporary closure of the Aqualink Nunawading site during the two-year construction phase (currently programmed for calendar 2029 and 2030) and the likelihood that nearby facilities will be unable to cater for all the displaced demand. WCC acknowledges the increased cost, operational complexity and safety risk associated with keeping parts of the existing facility open during the construction phase and must

carefully consult with the community and the facility operations team to ensure the optimal decision is made.

Ontoit has undertaken an initial analysis of the costs and risk associated with keeping the existing aquatic facilities open during the construction phase and this analysis is contained in Appendix Q. These aquatic facilities are located on the site of the new, northern car park. The report found that it would cost up ~$6.0 million to safely maintain access to these facilities, at an acceptable level of patron experience, for 18 months of the expected two-year construction period. This would allow sufficient time for the new, northern car park to be completed at the same time as the balance of the project.

Should WCC wish to keep the existing facilities open for the full construction period, the cost would be materially higher due to additional preliminaries and overhead to be charged by the contractor and the need to find temporary parking to cater for the expected demand upon opening of the redeveloped Aqualink Nunawading.

3. **Residential traffic and noise during construction** - The Aqualink Nunawading site is located in a residential area, with dozens of houses being located nearby to the south of the site. Understanding and communicating the likely impact of traffic and construction noise will be an important issue for WCC and the nearby residents, noting that the number of visitors to the facility during that time will be reduced or potentially zero due to the facility's full or partial closure during construction.

   Development of an acceptable Construction Management Plan by the selected novated design and construct contractor, and communicating the key elements of that plan, will be key to ensuring a 'no surprises' outcome for construction noise and traffic at acceptable times.

5.4 Lessons learnt/project insights

Warren Green Consulting (WGC) provided a benchmarking report to WCC which summarised the key elements of recent and successful sports and aquatic centres of similar size built and opened in Victoria over the past 10-15 years. This was in addition to the significant previous work that has been undertaken by WCC in understanding its preferred project brief elements.

The WGC report documented the move towards health and wellbeing outcomes or 'preventable hospitals' within aquatic facilities to accommodate changing community needs and expanded programming to service a wider section of a community and reduce barriers to participation. Inclusion of wellness and warm water pools, dedicated learn to swim pools, swim walls and passive spaces, environmentally sustainable design has been considered in the new concept design for Aqualink Nunawading.

Moreover, WCC currently own and operate the existing Aqualink Nunawading and also Aqualink Box Hill, so used the insights of its operational and executive staff in developing its project brief.

Ontoit also explored the forecast change in the local population in both size and demographics and this was also fed into the analysis. The WGC report noted that similar new facilities in the region have far exceeded the projections for use and surpassed industry participation and financial performance benchmarks.

All of this information was synthesised when determining the functional area schedules for all options, including the preferred option.

5.5 Scalability of the project solution

The recommended solution has been carefully prepared to be delivered as an integrated package. If project funding was an issue, it would be recommended to deliver a small facility, akin to that detailed in Option 2, noting its negative impacts on service delivery for the growing local community.

There is not significant opportunity to scale the preferred solution of Option 3A. Some of the minor items that could be considered as staged options, include:

- the additional car parking to the north and the new surrounding ring road; and
- the construction and/or fit-out of level 2 of the facility, being the location of the dry-fitness facilities.

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However, these options have not been seriously entertained due to its impact on service delivery, the commerciality of the new facility and the increased cost and operational complexity of undertaking this work post opening.

5.6 Project development and due diligence (PDDD)

Project planning and due diligence encompasses the planning, engineering, design, site investigations, environmental assessments, analysis and research or any other activity that provides technical input to the project solution.

Extensive due diligence activities have been undertaken to support the Aqualink Nunawading Redevelopment project and which have informed design, costing and the allocation of project resources to manage and mitigate risk.

Table 32: Summary of project development and due diligence (PDDD) assessment

PDDD element	Summary	Level of Assessment*	Reference
Project scope and design			
Client requirements and scope development	Extensive previous consultation and commissioning of various consultant's report, together with stakeholder consultation through the business case process, has informed the scope definition of the project options and concept design development.	Preliminary	Appendix F
Concept design	Three concept design options have been prepared by Co-Op Architects, based on the functional area schedule and site constraints.	Preliminary	Appendix E
Feasibility, planning and approvals			
Investment logic map	Full investment logic map prepared through consultative sessions, with inputs from various WCC internal departments and consultant team members by an accredited facilitator	Final	Appendix A
Benefits management plan	Full benefits management plan, including associated key performance indicators, and measures prepared through the investment logic map consultative sessions by an accredited facilitator	Final	Appendix A
Planning approval strategy	Planning due diligence and strategy report, prepared by EMM Consulting, outlines the current statutory planning controls and triggers, identifies planning consent options, analyses key planning risks and mitigation options, and recommends planning pathway/s, and other relevant planning matters.	Final	Appendix H
Social and Economic appraisal	Social and economic impact and cost-benefit analysis of all three project options has been prepared by MI Global comprising a qualitative and quantitative assessment.	Final	Appendix L

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PDDD element	Summary	Level of Assessment*	Reference
Financial model	A financial assessment including revenues and costs (including asset lifecycle costs) for all three project options has been developed by aquatic expert, Warren Green Consulting, with reliance on asset maintenance forecasts provided by WTP.	Final	Appendix K
Whole-of-life Costing	WTP have analysed the forecast whole-of-life costing of the asset for Option 3A. These forecasts have been pro-rated for the other project options based on total capital cost.	Final	Appendix I
Project management			
Risk management	A risk register has been prepared by Ontoit in accordance with the procedures of the Australian standard, through consultative sessions with WCC.	Preliminary – noting ongoing revisions required	Appendix J
Cost estimation	A cost plan has been prepared by WT Partnership for each of the project options, based on an area schedule prepared as part of the design report, and applies unit rates based on benchmarked industry market and informed by stakeholder consultative sessions. It also includes an estimated cash flow for Option 3A based on the Project Program in Appendix N.	Preliminary – noting ongoing revisions required	Appendix I
Project schedule	A project program has been prepared for the preferred project option, based on a basis of schedule, including key assumptions informed by stakeholder consultative sessions, outlining key project activities including delivery staging.	Preliminary – noting ongoing revisions required	Appendix N
Governance plan	Governance arrangements are embedded in the Project Management Plan, including the allocation of resources and responsibilities.	Preliminary – noting ongoing revisions required	Appendix O
Stakeholder engagement plan	A project stakeholder engagement and communications plan outlines the extent of consultation with key external stakeholders, including precinct users with key interfaces and interdependencies.	Initial	Appendix M
Investigations			
Ecology	A review of the impact of the project on local flora and fauna, which also identifies the potential approval process has been prepared by Ecology Australia.	Final	Appendix P

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PDDD element	Summary	Level of Assessment*	Reference
Traffic	A report prepared by Onemilegrid analyses the level of car parking required per planning requirements and from the result of its traffic surveys. It also discusses the likely impacts of the forecast increased visitation on nearby intersections.	Final	Appendix R
Cultural heritage assessment	A cultural heritage due diligence assessment has been prepared by Andrew Long and Associates, with a mandatory Cultural Heritage Management Plan (CHMP) not required. However, consideration in preparing a voluntary CHMP was suggested.	Final	Appendix S
Procurement and delivery			
Procurement strategy	A procurement strategy has been prepared by Ontoit which identifies the preferred project delivery strategy.	Final	As per Section 6 of this Business Case
Management plans			
Project Management Plan	A project management plan has been prepared by Ontoit, outlining the project objectives, governance structure, and control mechanisms.	Final – noting updates required for future stages	Appendix O

5.7 Value Creation and Capture (VCC) opportunities

WCC is committed to supporting the State Government's Value Creation and Capture (VCC) Framework to maximise the social, economic and environmental value of the Aqualink Redevelopment project to extract greater value from this infrastructure investment. The VCC framework is an additional means to assess and increase the benefits from this investment to maximise public value. It considers how public value can be created to achieve economic, social and environmental benefits.

As the project has a capital TEI which is likely to exceed $100m (funded by WCC and ideally, State Government as per this Business Case), it has been initially assessed for VCC opportunities. It should be noted that the Project is driven by the social and economic benefits to be achieved by the facility's redevelopment which will mitigate substantial problems that are arising and further compounded if the facility closes due to end-of-life asset failure and is not replaced.

The following represents the VCC Statement of Intent and Strategic VCC Plan for the Project to deliver outcomes in accordance with the Framework's requirements, identifying opportunities to create additional public value by the project and additional measures.

As the Project Owner, WCC will work with a Project Sponsor within the State Government to progress and formalise the VCC Plan and other required documentation in subsequent phases of the Project.

5.7.1. Economic benefits

There are significant economic benefits to be derived through the jobs that are generated both during construction and through the employment of operational staff to run the facility and increased suite of services and programs made possible by the new facility.

This is relevant to ongoing stimulation of the Victorian economy and in the local context of supporting Victorian companies following the economic downturn created by the COVID-19 Pandemic. In particular,

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WCC anticipates that the Project will support tier 2 or 3 contractors linked to local supply chains, which aligns to Victorian infrastructure priority principles (refer to Table 11).

New capital infrastructure will deliver economic benefits to the State and Eastern Region of Melbourne with the Project fostering employment and jobs during the planning and design phase and significantly, the creation of jobs during construction and operations. Employment opportunities during the delivery and operations of the redeveloped Aqualink Nunawading will promote the use of local skills, products and can enable commercial gains through the provision of spaces that are attractive to other related service providers (swim schools/ swim clubs/health/ fitness/counselling consultants) and other commercial uses (F&B etc).

As demonstrated through the CBA (refer to section 4.7.2), the project is estimated to deliver 1,681 fulltime equivalent jobs during the construction period and first ten years of operation, $306M (total)($20M per year) in direct and indirect economic output (and after 2040 a further $14M per year impact through operations) and adds $107M total direct and indirect value to the Victorian Gross Domestic Product. Each year after 2040 will deliver a further $6M direct and indirect value through operations.

Key employment opportunities will be realised with the potential increases in the construction market with specialist expertise in aquatic facility construction and fit-out. As discussed in section 1.3.1, operational jobs within the new facility, predominantly these have been filled by women and young people, and sustainability of the aquatic industry will be positively impacted.

Increasing the suite of services and programs available at Aqualink Nunawading will also generate greater public and visitor consumption to the onsite café and health and fitness services projected to be on offer through increased facility capacity and functionality, which will drive economic value.

5.7.2. Social benefits

Improved health and wellbeing outcomes for people in the City of Whitehorse is expected through the redevelopment of Aqualink Nunawading and the avoidance of its complete closure by 2032 and the opportunities to an expanded services and program offer made possible.

Improved access to services will promote participation, drive the health and wellbeing of the community and enhances social connectivity; enhances public safety through the planning of movement and environmental design in and around the facility and adjacent sports and recreation facilities in the Forest Hill Reserve; and provides greater access to health promoting infrastructure. There are multiple social benefits to consumers, the wider community, the WCC and to the facility staff.

A key social benefit is the opportunity for expanded capacity and therefore programs that can be offered to the wider community, enabling water competency in an increasing, diversifying community from learn to swim options for children to adults and the opportunity to continue their skill development through to elite levels, also enabled through expanded training options via local sport clubs and informal squad activities.

WCC has implemented new adult learn to swim programs in 2024-2025 to target CALD community members, a growing component of their population. In future years, this will help appraise growth in water competency amongst this segment of the community in a new facility, and a key driver for redevelopment to drive greater attendance and participation.

In addition to greater water competency in the community, another dimension to this benefit that is unique to this facility is the number of high-performance swimmers that come through the facility. Nunawading Swim Club provides training pathways for aspiring swimmers and over time, the redeveloped facility may yield new elite candidates that can represent the state and nation in competitive events such as the 2032 Olympics and rounds of the World Swimming Championships.

Additional social value will be derived through a growth in social capital (the networks, relationships, trust within people within the community and informal groups and interactions that facilitate cooperation, collaboration and collective action – the social structures) enabled by aquatic facilities. The new facility will contain expanded social spaces as well an increased aquatic and fitness facilities, all of which will drive social capital and afford the community advanced opportunities to build social capital through their own needs and actions (i.e. meet ups, new social groups and so on).

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PWC and RSSLA (2021)[47] propose that social value is driven by an aquatic facility's role in:

- enhancing the leisure time or life satisfaction of users
- providing a community space which brings people together and increases amenity
- stimulating jobs for young people and communities supporting early learning in society.

This has been duly considered in the decisions regarding the redevelopment of Aqualink Nunawading.

Over the long term, WCC are seeking to drive the following key benefits through this project

- Benefit 1: Increase in health and wellbeing outcomes.
- Benefit 2: More financially and operationally sustainable Council services
- Benefit 3: Greater water awareness and swimming competence within an increasingly diverse community.

KPIs and measures have been set up to assess these formally. Please refer to Appendix A (ILM & Benefits Plan).

5.7.3. Environmental benefits

There is the potential for significant environmental value to be gained through design and construction material selection, increasing energy and/or water efficiency; building sustainability; adaptation to climate change; and through the potential to decrease greenhouse gas emissions.

The redevelopment of Aqualink Nunawading will achieve a more operationally sustainable facility. The project will pursue a 5 Star Green Star rating or equivalent approach. This will serve to mitigate impacts and contribute to the Victorian Government's climate change strategy. Energy efficiencies afforded by contemporary design have both environmental and economic benefits.

[47] PWC and RLSSA (2021) *The health, social and economic value of the national aquatic industry*, https://www.royallifesaving.com.au/Aquatic-Risk-and-Guidelines/aquatic-research/Health-Social-and-Economic-Value-of-Aquatic-Industry, (accessed 28/05/24)

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6. Commercial and procurement

6.1 Procurement strategy

This section of the Business Case outlines the evaluation process used to determine the preferred procurement strategy for the Aqualink Nunawading Project. Consideration on this matter was informed by a workshop held between WCC and the project's consultant Ontoit. This workshop was, in turn, informed by detailed pre-read provided to WCC by Ontoit.

The procurement strategy recommends that the full package of project works should be procured via a novated design and construct procurement method.

6.1.1. Project Characteristics

Key Project characteristics used in the delivery model analysis are shown in the following table.

Table 33: Project characteristics

Characteristics	Details
Project Objectives	As described in Section 5.1 above
Scope	As summarised in Section 5.2 above
Costs	$142.7 million (P95) including escalation
Program	Estimated completion – December 2030
Operational time span	50+ years

The delivery model workshop then considered the relative complexity of these characteristics. A review of the project characteristics by complexity is shown in the following table.

Table 34: Relative complexity of project characteristics

Characteristics	Complexity
Is the project unique?	No
Are the specialist/unique construction techniques required?	No
Is there a deep market capable of designing and constructing the project?	Yes
Are the risks that the market has to price and manage uncommon to the market?	No
Is there a political scale and significance to this project? • Largest undertaking to date for WCC. • Scale arises from the interfaces with funding entities.	Yes
Are the stakeholder groups that can influence successful delivery consulted? • Community stakeholders - are critical to the ongoing revenue base and will be impacted by temporary closure of existing facility • Local residents – local residential area location	Yes
Is there an identified operator and maintainer that has input to the brief and design? • WCC is firm on having the long-term interests in this regard.	Operator – No Maintainer - Yes

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6.1.2. Evaluation process

The evaluation process was comprised of four parts and based on the probabilistic technique Multi Utility Attribute Analysis (MUAA) to quantify subjective criteria:

1. Determine key project factors impacting on the procurement strategy
2. Weight each of the selected key project factors versus the others on a 5-point scale
3. Select the most suitable project delivery models for scoring
4. Score each model by each selected key project factor and calculate the weighted score of each procurement model.

At the procurement workshop, representatives discussed the key project factors impacting upon procurement strategy, then selected and weighted the most appropriate selection criteria to utilise when evaluating project delivery models. These criteria and respective weighting (in brackets) were:

- Whole-of-life cost effectiveness (18%)
  - Enhance whole-of-life cost outcomes by achieving cost effectiveness during construction and operations
- Quality outcomes (17%)
  - Enhance whole-of-life benefits of the asset such as its functionality, environmental benefits and the performance of the asset to the end users/operators/asset managers
- Market participation and competition (11%)
  - Promote market participation, capability, competition, innovation and continuous improvement to drive value-for-money given current market and supply chain dynamics
- Timely project completion (10%)
  - Deliver the project by a required timeframe.
- Effective management of risk and uncertainty (14%)
  - Achieve efficient risk pricing by retaining, sharing or allocating risks and incorporating flexibility where required to manage uncertainty, to deliver the project outcomes given the project's delivery and operational context
- Contractor Innovation (9%)
  - Incentivise the contractor to deliver new approaches in design and construction to support improved outcomes
- Cost certainty (21%)
  - Deliver the project within budget confidently predict its financial contribution to the project at contract award. High degree of cost certainty at contract award.

The workshop then discussed the various project delivery models available in the market considering the following factors:

- WCC will separately deliver and/or procure the operations and maintenance of the facility and therefore does not require these elements to be bundled into a delivery model.
- The project scope elements have been reviewed for interface considerations, use of specialist trades and other considerations such as risk. The review has not identified any material issues that would impact on the bundling of work elements, noting that sufficient time should be allowed in the program for any long-lead procurement items.
- The project is not viewed as overly complex, with the market having the capability and capacity to deliver against the majority of procurement models, or that would warrant significant consideration in packaging of the works.
- Early works or enabling works packaging is not required.
- There are no specialist trades that warrant a separate contract package approach and therefore can be bundled with the main works.
- No private financing is being sought.

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Based on the above, the workshop then selected four of the most suitable delivery models to evaluate for a project of this type and characteristics.

1. Construct Only
2. Design and Construct
3. Novated Design and Construct; and
4. Managing Contractor.

Each of the four delivery models were then rated on 10-point scale against each of the selection criteria and results calculated as outlined in Table 35 (see over). The Novated Design and Construct project procurement strategy was clearly the preferred model following evaluation and was accepted by the workshop as the preferred project delivery model.

6.1.3. Intended contractual arrangements

WCC will retain independent legal advice to assist it with contractual matters under the Novated Design and Construct project delivery model. Although it is expected that WCC will utilise a bespoke contract, the Australian Standard Novated Design and Construct contract (AS4300) will form the basis of any bespoke contract in order to assist in eliciting the best response from the contractor market.

6.1.4. Outline of potential payment mechanisms

Under the standard novated design and construct contractual arrangements, payments will be made in accordance with the provisions or the standard contracts, typically on a monthly basis, subject to approval from the contract superintendent, and in accordance with security of payment requirements.

6.2 Market conditions

The Aqualink Nunawading Redevelopment project is expected to elicit significant interest from the design and construction market to deliver the project in the coming years. Although, the market conditions for construction of large-scale sports projects is perceived to be competitive at present, it should be noted that contractor procurement for this project will not occur until 2028 and market conditions at that time are not yet known.

It would be expected that smaller tier one and all tier two contractors would be suitable and interested in delivering the project, as is evidenced by both ADCO and Kane Constructions currently delivering similar projects in other metropolitan Melbourne suburbs.

With a number of recent sports and recreation projects recently being completed (State Basketball Centre, Marvel Stadium and GMHBA Stadium) and a reduction in recent funding for sports and recreation projects by the State Government, the addition of the Aqualink Nunawading Redevelopment project is not expected to pose resource pressures on industry, or its capacity to deliver.

It should be noted that, market supply chains have been highly volatile recently and this combined with inflation is resulting in relatively high escalation in the construction sector. Current escalation is tracking at 4.5% p.a. for future years, as estimated by our cost planners WTP. In light of this and the extended procurement timeline, additional risk-weighted contingency has been added to the forecast escalation costs within the cost plan.

6.3 Commercial and procurement risk assessment

The delivery risk assessment approach has:

- Utilised the existing Project risk register.
- Considered the preferred risk profile for WCC.
- Identified those risk and opportunities that:
  - Give risk to a material different level of exposure to WCC for the various procurement models.
  - Create a threat or constraint to the selection of the procurement model.
  - Considered these impacts as part of the procurement model analysis.

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Table 35: Aqualink Nunawading Project Delivery Models Evaluation Summary

Aqualink Nunawading Business Case
Project Delivery Model Evaluation Ranking

RELATIVE IMPORTANCE SHOWN
ON A SCALE BETWEEN 0 - 5
Neutral Preference = 0 | Minor Preference = 1-2
Medium Preference = 3-4 | Major Preference = 5

SCORE 0 -10 IN GREEN CELLS

Score		Scoring Criteria
1 - 2	Poor	Does not achieve criterion objective, does not provide a satisfactory risk profile compared to other models
3 - 4	Average	Achieves criterion at a minimum level and is a higher risk than other procurement models
5 - 6	Good	Achieves criterion at a moderate level and is a similar risk profile to other procurement models
7 - 8	Very Good	Strongly achieves the criterion objective
9 - 10	Excellent	Achieves the criterion objective at the highest standard

Selected Assessment Criteria weighted against each other										Delivery Model Rating							
Criteria LHS criteria scored against criteria above right	Whole-of-life cost effectiveness	Quality outcomes	Market participation and competition	Timely project completion	Effective management of risk and uncertainty	Contractor Innovation	Cost certainty	RAW SCORE	RELATIVE WEIGHTED SCORE	Construct Only		Novated Design & Construct		Design & Construct (D&C)		Managing Contractor (MC)	
										Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Whole-of-life cost effectiveness: Enhance whole-of-life cost outcomes by achieving cost effectiveness during construction and operations		3	4	5	4	4	2	22	17.5%	9	15.7	9	15.7	4	7.0	7	12.2
Quality outcomes: Enhance whole-of-life benefits of the asset such as its functionality, environmental benefits and the performance of the asset to the end users/operators/asset managers	3		4	4	4	4	2	21	16.7%	8	13.3	9	15.0	4	6.7	7	11.7
Market participation and competition: Promote market participation, capability, competition, innovation and continuous improvement to drive value-for-money given current market and supply chain dynamics	2	2		3	2	3	2	14	11.1%	10	11.1	9	10.0	6	6.7	5	5.6
Timely project completion: Deliver the project by a required timeframe.	1	2	3		2	4	1	13	10.3%	4	4.1	8	8.3	9	9.3	8	8.3
Effective management of risk and uncertainty: Achieve efficient risk pricing by retaining, sharing or allocating risks and incorporating flexibility where required to manage uncertainty, to deliver the project outcomes given the project's delivery and operational context	2	2	4	4		4	1	17	13.5%	2	2.7	9	12.1	7	9.4	8	10.8
Contractor Innovation: Incentivise the contractor to deliver new approaches in design and construction to support improved outcomes	2	2	3	2	2		1	12	9.5%	3	2.9	7	6.7	9	8.6	9	8.6
Cost certainty: Deliver the project within budget confidently predict its financial contribution to the project at contract award. High degree of cost certainty at contract award.	4	4	4	5	5	5		27	21.4%	7	15.0	8	17.1	7	15.0	7	15.0
Total	Scale for relative importance is between 0-5							126	100.0%		64.84		84.92		62.62		72.06
										Ranking	3		1		4		2

The key procurement and delivery risks that can be mitigated to differing degrees by different delivery and procurement strategies, include those risks associated with:

- Adequacy of the design to meet user and operational requirements.
- Funding allocation and release delays
- Scope creep and cost escalation
- UC capability and capacity to project manage and deliver the Project.
- Project delays or impacts
- Future proofing for likely future service operations and ways of use.

These risks have been considered as part of the procurement delivery model selection.

6.4 Risk allocation

The risk allocation under the proposed delivery model relates to:

- The retention of risk by WCC including under the construction contract arrangements; and
- The transfer of risk to the novated design and construct contractor.

It is an established principle that design risk is rarely transferred in its entirety under a novated design and construct delivery model. WCC will retain risks as it is defining the functional requirements and determining the principal's project requirements.

The question of latent conditions risk is also pertinent. At the point of tender, WCC has the option to retain or transfer this risk, either wholly or in part. Transfer of risk comes at a price. The cost of this transfer is mitigated by the various due diligence activities undertaken ahead of contract procurement.

These matters will be resolved through the competitive procurement that will serve to deliver value for money for WCC, and to effect appropriate risk transfer from Council to the contractor.

Table 36 outlines the starting position in respect of risk allocation across the project parties:

Table 36: Risk allocation starting positions

Risk Description	Risk Allocation
Brief & Requirements	Principal
Funding/Financing	Principal
Planning Approval	Principal
Design	Contractor/Shared
Fitness for Purpose	Contractor
Errors & Conflicts	Contractor
Site Conditions	Contractor
Latent Conditions	Shared*
Inclement Weather	Contractor
Program delivery	Contractor
Workmanship	Contractor
Authority Approvals	Contractor/Shared
Permits & Compliance	Contractor
Industrial Relations	Shared*
Legislative Change	Contractor/Shared
Sub-contractor Failure	Contractor

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Risk Description	Risk Allocation
Supplier Failure	Contractor
Precinct Interface	Shared
Fit-out	Shared
Operations	Principal
Maintenance	Principal

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7. Planning, environment, heritage, land and culture

7.1 Planning, environment, land, heritage and culture considerations

Ontoit engaged town planning consultants, EMM to provide planning advice to WCC for the redevelopment of Aqualink Nunawading. Refer to the report in Appendix H – Town Planning.

As discussed in earlier sections, WCC have considered the relevant planning policies at a state and local level and possible impacts on the proposed redevelopment of Aqualink Nunawading in developing this business case and the design options.

Subject to final confirmation of the proposed use and development, and that the uses of the land for a café and sports medical clinic are ancillary, no permit is expected to be required for the continued use and redevelopment of the existing facility under the *Local Government Act 1989* as this will be undertaken by or on behalf of a public land manager.

A range of other Planning scheme provisions could potentially trigger a planning permit requirement including in relation to Clause 52.02 Easements, restrictions and reserves, Clause 52.05 Signs, Clause 52.17 Native vegetation removal and Clause 52.34 Bicycle parking.

Legal advice is recommended, once finalised plans are available and a detailed description of the nature of the uses(s) and the relationship between WCC and the proposed operator(s)/tenants of the centre is available. The legal advice should address:

- exemptions from needing a permit under the PPRZ
- whether the proposed future development of a café and sports health clinic constitute ancillary land uses;
- if required, consideration of existing use rights;
- if required, consideration of alternative approval pathways to facilitate relocation of an easement.

As per the ecology advice described in section 4.5.1, a planning permit is likely to be required to remove native vegetation pursuant to Clause 52.17 of the Planning Scheme, with these offsets available for purchase on the Native Vegetation Credit Register as at 19 September 2024. Refer to Appendix P for this report.

7.1.1. Potential Approvals Strategy

If some form of planning approval is required for the project, then two pathways available to facilitate any approval comprise:

- a planning permit application which WCC lodges with itself as the responsible authority; or
- the use of Clause 53.22 where the Minister becomes the responsible authority and a fast tracked approval process is used, providing the application satisfies the requirements of that Clause.

Which one of these two pathways is appropriate will depend upon the nature of the approval that is being sought and the priorities of WCC at that time, including from a stakeholder engagement perspective.

If a Clause 53.22 pathway is being considered, then early consultation should be undertaken with officers from the Development Facilitation Program at the Department of Transport and Planning to confirm whether the required approval can be processed via this pathway.

7.2 Planning, environment, land, heritage and culture risk summary

The Preliminary Planning Report for Ontoit (refer Appendix H) supports the Aqualink Nunawading Business Case, which has explored various redevelopment scenarios for the existing Aqualink Nunawading aquatic and recreation centre at Forest Hill Reserve, Forest Hill. Due to the age of the existing facility, key operational constraints, and suboptimal functionality and performance compared to modern standards for a facility of this type, it is proposed to redevelop the facility in the same location.

The report considers the existing planning controls that apply to the site pursuant to the Whitehorse Planning Scheme and the implications of these in the context of the most recent concept plan, Option 3A. The report

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also then considers likely planning permit requirements for the proposed redevelopment including key matters that will need to be resolved to confirm these requirements.

7.2.1. Planning Policy Framework

Relevant planning policies at a state and local level identify a range of matters that should be considered as part of any redevelopment of the Aqualink Nunawading aquatic and recreation centre including the following:

- Minimising impacts to biodiversity through minimising native vegetation removal, offsetting where this cannot be avoided, and incorporating plantings of vegetation indigenous to the area.
- Inclusion and participation by the Whitehorse community in cultural and community life is to be encouraged to the greatest degree possible.
- Amenity impacts of land use on sensitive land uses, like dwellings, are to be mitigated through sufficient setback distances and the siting of new sources of noise in physically distant or obstructed locations.
- Sufficient car and bicycle parking to be provided for any new land uses.

7.2.2. Zoning and Overlay Controls

The subject site is zoned Public Park and Recreation Zone, with a Special Building Overlay affecting the site to the north of the existing and proposed built form.

If it can be confirmed that the proposed use and development will be undertaken by or on behalf of a public land manager under the Local Government Act 1989, and that the uses of the land for a café and sports medical clinic are ancillary, no permit is expected to be required for the continued use and (re)development of the existing Indoor Recreation Facility.

Such confirmation will be possible following further definition of the project, including a detailed understanding of the nature of the various components of the use, and by seeking legal advice to confirm any conclusions about the applicability of exemptions and ancillary land uses.

7.2.3. Other Relevant Planning Controls

There are range of other Planning Scheme provisions, beyond the zone and overlay controls, that could potentially also trigger a planning permit requirement for the proposal which can only be determined once a finalised layout is developed. These include:

- Clause 52.02 Easements, restrictions and reserves
- Clause 52.05 Signs
- Clause 52.17 Native vegetation removal
- Clause 52.34 Bicycle parking.

7.2.4. Environmental requirements

A planning permit is likely to be required to remove native vegetation pursuant to Clause 52.17 of the Planning Scheme.

The ecology report (Appendix P) determined that under the Victorian Planning and Environment Act 1987 (P&E), the current concept designs will require the removal of 0.48 ha of valley heathy forest (Ecological Vegetation Class (EVC) 127) patches, seven large trees (scattered or in patched) and 8 small, scattered trees which would trigger an offset target of 0.093 General Habitat Units (GHUs) and the protection of seven large trees, with a Strategic Biodiversity Value (SBV) score of 0.1015, located in the Whitehorse City LGA or Melbourne Water CMA area. These offsets are available for purchase on the Native Vegetation Credit Register as at 19 September 2024.

This advice will need to be reviewed once finalised plans are available.

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7.2.5. Cultural Heritage

The subject site is not affected by any areas of legislated Aboriginal cultural heritage sensitivity. Accordingly, it is understood that no Cultural Heritage Management Plan is required to be prepared prior to the issue of a planning permit.

This has been also confirmed through a Due Diligence Assessment commissioned by Ontoit on behalf of WCC from Andrew Long and Associates (refer to Appendix S). While the proposed works are considered to be a high impact activity under Regulation 46 of the Regulations, no areas of cultural heritage sensitivity are located within study area. Therefore, in accordance with Regulation 7 of the Regulations, the mandatory preparation of a CHMP is not required in this instance.

7.3 Land Acquisition

Not applicable, as the site for Aqualink Nunawading is land currently owned by WCC.

7.4 Surplus Land

Not applicable.

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8. Project schedule

8.1 Detailed project schedule

The full project program for the preferred option is contained in Appendix N, with key milestones outlined in the table in section 8.3. The program was developed in Microsoft Project by Ontoit, in consultation with WCC. This consultation included a dedicated program workshop.

We have not prepared alternate project program for the other project options, noting however that it is unlikely to be any material change to the program for these other options, other than some minor reductions or extensions to Main Works Construction of +/- two months depending on whether the alternate project option is smaller or larger.

8.2 Basis of Schedule

The key assumptions utilised in the basis of schedule are as follows:

- The program is based upon the reference design documents scope.
- Funding is released on in June 2026 to allow project development and delivery commencement.
- The program is based on a novated D&C delivery strategy with design developed to 90% prior to tender for the works. Design halts through contractor tendering process.
- A design team will need to be procured to commence design development.
- Staged design and delivery approvals from Council have been allowed for as follows:
  - Concept Design (design halts while approval is sought)
  - Schematic Design (design continues while approval is sought)
  - 90% Detailed Design (design halts until preferred contractor selected)
  - Preferred contractor selected
  - Contract Award and IFC Documentation
- The Town Planning approval process will run in parallel with the contractor procurement process, with approval required prior to main works contract negotiation to allow incorporation of any approval conditions into the works contract. Town Planning document set based on Schematic Design approved by Council.
- Utility consultations will be undertaken by the design team with a view to progressing relevant agreements including a power supply offer for the electrical substation.
- The designer will be novated as part of the works RFP process.
- Key construction assumptions are:
  - Site access is not constrained, and works can be undertaken all year round and are not impacted by the university teaching calendar.
  - No major headworks activities are required, save for a new electrical sub-station
  - A 3-week services testing and commissioning period has been used that commences once fit-out has been completed to all areas.
- Practical completion will be granted once requisite asbuilt and operation and maintenance documentation are provided and the Relevant Building Surveyor has provided a Certificate of Occupancy
- A 6-week operational bump-in period has been assumed to enable facility operational training and any client loose equipment to be installed.
- A 12-month defects liability period is assumed.

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8.3 Critical path activities and key milestones

The critical path activities and key milestones are outlined in the table below:

Table 37: Critical path activities and key milestones

Milestones	Date to be completed
Pre-Design and Community Consultation	24-March-2026
Funding Confirmation	16-June-2026
Project Team Appointment	3-November-2026
Concept Design Approval	18-May-2027
Schematic Design Approval	29-October-2027
90% Detailed Design Approval	31-March-2028
Town Planning Approval	01-June-28
Tender Release	21-April-2024
Novated D&C Contract Award	13-October-2028
Works Commencement	13-November-2028
Practical Completion	**29-November-2030**
Operational Commencement	10-January-2031

8.4 Project schedule risk assessment

The key project schedule risks identified in the risk register are provided in the table below. This outlines 12 high risks and 14 medium risks post mitigation with the potential to have impact on schedule. There are no high or extreme risks post mitigation. For the full risk register refer Appendix J.

Note some risks identified in this table double-up risks identified elsewhere in the business case including town planning or contractor solvency risks, for example.

Table 38: Schedule risks

Risk Cause	Risk Consequence	Risk Treatment	Risk Level (Post Mitigation)
Project program assumptions are insufficient, inaccurate or overly ambitious	Delay to the project and/or increased project cost	Constructively challenge the Project basis of program assumptions Monitor the BC program against key dates.	Medium
Mis-alignment between stakeholders and user groups (i.e.. Priorities, scope, objectives).	Delays to the completion of Business Case	Regular Project Working Group (PWG) meetings held and reports maintained.	Low
Construction staging requirements underestimated or not properly considered against nominal existing asset end of life in 2030	Misses timeframe for access to aquatic facilities.	Adequately plan to complete the project before the end of life. Communicate outcomes to stakeholders well ahead of time to ensure no surprises.	Medium
Pandemic outbreak causes delays to the project.	Outbreak of viruses causes restrictions on materials sourced from certain countries. Staff and consultants on the	Ensure consultants have business continuity plans prior to engagement.	Medium

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Risk Cause	Risk Consequence	Risk Treatment	Risk Level (Post Mitigation)
	project unable to work due to illness.		
Limited resourcing capacity/capability in the Project Team causes delay in the design and procurement processes	Project faces delays Project not properly managed, including to governance and stakeholder expectations Project functional or quality outcomes, and benefits, are not realised.	Tailor resource skills and capacity to suit development need, timeframes and delivery strategy and contract form. Plan alignment of internal resource / skills to meet schedule and project needs - identify gaps and needs for supplementary internal/external resources Undertake periodic and milestone reviews to ensure capability gaps do not evolve. Undertake robust procurement and operating model analysis and select most appropriate form to maximise WCCs strengths and support its capability gaps	Low
Internal Council departments not allocating adequate resources to provide technical feedback.	Long lead times for feedback causing delays to the program.	Engage with Council departments early and obtain key contact to be allocated to the project by a manager.	Low
Program critical path durations are underestimated	General claim for EOT costs	Set program to have a baseline to track project slippage Allow for adequate program contingency.	Medium
Consultant does not deliver design to program	Delay to design delivery	Regular communication of expected program, including in Tender docs. Realistic expectations on deliverables. Strong design management by project manager.	Low
Scope creep requiring design issue resolution effecting time/cost/scope	Change in scope, delay to the project and/or increased project cost.	Project team to actively monitor contingency amounts and adhere to project governance requirements regarding changes to scope. Scope change process outlined in PMP. Engage Consultants with a proactive collaborative approach.	Medium
Poor design co-ordination, errors and omissions	Delays in production of documentation from lead design team and sub consultants resulting in delays to the program.	Ensure consultants are fully aware of project milestone timelines. Constant revision of project program to identify any slippage. Establish regular meetings with consultants to manage program.	Medium
Late or missed consideration of ESD elements of project including climate risk	Additional design effort resulting in delays, higher operational costs, higher environmental footprint and operations	Employ specific ESD consultant. Design reviews to be undertaken to confirm applicable ESD requirements have been set WOL costing undertaken as part of the Business Case assessment Align to WCC targets. Consider sustainability rating and assessment tools	Low
Functionality of new commercial tenancy spaces not adequately resolved before completion of tender documentation	Additional procurement effort	Design reviews with operational impact to be undertaken Integrate flexibility within design to accommodate service changes if unknown	Low

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Risk Cause	Risk Consequence	Risk Treatment	Risk Level (Post Mitigation)
Poor governance and timely decision making	Difficulty to obtain internal approvals and with stakeholders and user groups	Implement a strong governance structure with clearly set out terms of reference and authority delegations via a Project Management Plan. Select a governance group and chairperson with the right authority level and influence across the key project proponents. Develop a communications strategy to focus on governance layers and establish regular communication outside formal sessions. Ensure stakeholders are fully aware of the sign off process and sign off periods via communication plans. Hold points are clearly identified in the program within and between phases to allow appropriate time for decision-making.	Medium
Lack of time allowed for Council reporting processes (e.g. Council meetings)	Delays to the program	Build into the program Council meeting dates and approvals timeframes for governance committees. Regular communication to align expectations	Low
Planning issues arise during application processes	Additional time - delayed approvals	Early liaison and work closely with relevant internal stakeholders and departments (assumes WCC is the referral authority/Municipal Building Surveyor) Check zoning for proposed allied health/commercial offers within complex are within existing controls Review Melbourne water retarding basin and flood modelling requirements to achieve consent	Low
Secondary approvals including permits and licenses not considered as part of the approvals process	Additional time - delayed approvals	Review primary approvals conditions for secondary consent requirements Confirm risk allocation of permits and consents over to the builder Early engagement with authorities to understand constraints and risks.	Low
Relevant Building Surveyor does not grant Building Permit in a timely manner due to documentation requirements	Additional time - delayed approvals	Early liaison and work closely with relevant internal stakeholders and departments (assumes WCC is the Municipal Building Surveyor). Timely design responses to queries.	Low
Certificate of occupancy (COO) is not obtained in a timely manner or is provided with conditions	Additional time - delayed approvals	Early management of requirements trackers. Clear program activities and contingency for Fire Authority approval work closely with relevant internal stakeholders and departments (assumes WCC is the Municipal Building Surveyor)	Medium
Lack of time allowed for probity aspects of project	Delays to the program	Build into the program dates and approvals timeframes.	Low
Procurement and delivery timeframes inconsistent	Pushes out procurement duration and increases costs	Early identification of specialist/critical long lead items for incorporation into procurement strategy and packaging. Test approach through market sounding	Medium

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Risk Cause	Risk Consequence	Risk Treatment	Risk Level (Post Mitigation)
with lead times for specialist equipment		and update contingency assessment. Conduct early and regular Value management sessions to monitor. Ensure adequate contingency including in project program and budget, including for escalation	
Timing for bringing the works to market competes with other projects	Reduces market appetite and value for money procurement outcome	Undertake desk-top review of projects coming to market. Consider early market sounding with construction market.	Medium
Approach to market poorly managed	Contractors 'put-off' by naïve engagement. Cost and delay impacts	Informed review undertaken of all procurement options available and understanding of the markets part of procurement strategy and prior to engagement.	Medium
Contractual terms not thoroughly negotiated or unable to reach agreement including PI and PL insurance. Preferred Council risk profile.	Delay in procurement/contract award	Allocate adequate time within the program to agree contract terms. Provide the contract as part of the tender documentation and request departures.	Low
Works Contractor becomes insolvent	Additional time, cost and reputational damage	Undertake financial assessment during tender process Implement process and systems to ensure payment of sub-contractors and staff, including entitlements (stat decs, audits)	Medium
Poor testing and commissioning	Delay to operational acceptance and technical completion	Incorporate operational inputs into the project brief, set out the plan to test and accept the works as soon as possible with the contractor and sub-contractors. Allow appropriate program time for handover and commissioning	Medium
Works disruption due to union issues or external protest	Disruption to construction, time and cost delays.	Ensure contractors have systems in place for employee wellbeing and management of potential disruption. Identify any project characteristics that might attract protest scope components, sustainability, environmental/conservation, works access etc. and review as part of community consultation approach. Program contingency to allow for IR.	Medium

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9. Project budget

The project budget comprises the following two components:

- Capital costs – as prepared by an industry professional cost planner
- State delivery costs for Victorian Public Service staffing.

This section of the business case discussed whole of life costs but for the purpose of this business case these costs are contained within the operational arrangements for WCC and do not form part of this or any future budget bid. WCC is not requesting any recurrent funding.

For further information on the capital and whole of life costs refer to Appendix I.

9.1 Summary funding sought

Table 39: Summary statistics – funding sought *$ million*

Funding sought	2026-27	2027-28	2028-29	2029-30	2030-31	5-year total	Ongoing/ TEI
Net output funding sought	0.000	0.150	0.350	0.300	0.150	**1.000**	0.000
Net asset funding sought	0.000	1.000	1.000	12.000	16.000	30.000	TEI

The project's preferred Option 3A is costed at $142.73 million plus an additional $1.0 million for Victorian Public Servant staff (and Centralised Accommodation Management) costs. The headline capital costs over the project duration are outlined in the following table.

9.1.1. Summary of Total Project Cost

Table 40: Capital Costs *$ million*

Financial impact (capital)	2026-27	2027-28	2028-29	2029-30	2030-31	5-year total	TEI
Trade cost sub-total estimate	$0.93	$1.86	$7.25	$42.01	$20.09	**$72.14**	**$72.14**
Base cost sub-total estimate	$0.24	$0.48	$1.86	$10.78	$5.15	**$18.51**	**$18.51**
Base Cost Project Risk Estimate (P95)	$0.21	$0.42	$1.62	$9.40	$4.49	**$16.14**	**$16.14**
Escalation	$0.36	$0.72	$2.80	$16.24	$7.77	**$27.89**	**$27.89**
Escalation Project Risk Estimate (P95)	$0.10	$0.21	$0.81	$4.69	$2.24	**$8.05**	**$8.05**
Subtotal gross capital*	**$1.84**	**$3.67**	**$14.35**	**$83.13**	**$39.75**	**$142.73**	**$142.73**
Offsets from other sources	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**	**$0.00**
Net impact capital	**$1.84**	**$3.67**	**$14.35**	**$83.13**	**$39.75**	**$142.73**	**$142.73**

* Includes escalation

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9.1.2. Costing approach and assurance

The capital costs have been prepared by an industry specialist quantity surveyor based on the design and accommodation schedule prepared by the project designer and also informed by the project risk register. The full cost plan report is included at Appendix I.

The cost was also informed by the range of due diligence activities undertaken and documented at section 5.6 above. The cost planner had full access to all applicable reports and data, and costs were based on benchmarks of other comparable projects including major sports developments.

The risk component has been informed by the risk register and assessed by applying cost range and probabilities associated with the various risks, and modelled through a Monte-Carlo simulation. The resultant base cost risk estimate and the risk estimate for escalation only are provided for P95 level. Due to WCC's risk profile, being very risk-averse, it has been determined that a P95 risk profile represents an appropriate budget cap for this project. The total P95 risk contingency of $24.2 million equates to 16.9% of the total project cost estimate.

As a way of comparison, should the more common P80 risk contingency cap have been adopted, this would result in a risk-weighted contingency of $18.7 million ($5.5 million less than P95).

We have separated the risk-weighted contingency allocated to base cost and that allocated to escalation, which is material due to the lengthy project program to end of 2030.

9.1.3. Headline project cost

The headline project costs are outlined in the following table.

Table 41: Headline project cost element summary *$ million*

Element	Estimate	Table reference
Base cost estimate	$90.65	Section 9.2.1
Base risk estimate (P95)	$16.14	Section 9.2.2
Escalation	$27.89	Section 9.2.2
Escalation risk estimate (P95)	$8.05	Section 9.2.2
Total Project Cost	$142.73	Section 9.1
VPS staff costs	$1.000	Section 9.2.4

9.2 Budget impact – Detailed costing

9.2.1. Base cost estimate

The base cost estimate is outlined in the following table.

Table 42: Base Cost Estimate *$ million*

Base cost estimate (BCE)	
Effective date of BCE: 12/1//2024 **Estimated date of commencement of construction:** Q1 2029	
1 Trade costs	
1.1. Indoor Aquatic Hall	$33.99
1.2. Health & Wellness Area	$9.91
1.3. Front of House Area	$8.72
1.4. Amenities / Facility Support	$5.70

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Base cost estimate (BCE)	
1.5. Other Internal Areas	$7.81
1.6. External Areas	$6.01
Subtotal – Trade costs	**72.14**
2 Project allowances	
2.1. Demolition	$0.85
2.2. ESD Allowance (5-Star Greenstar)	$1.44
2.3. Consultant Fees (excl PM)	$7.21
2.4. Internal Client Costs (incl PM)	$5.00
2.5. In Ground and Contamination Allowance	$1.44
2.6. Authority Charges and Headworks Allowance	$1.50
2.7. FF&E	$1.07
Subtotal – On costs	**18.51**
Total of base cost estimate	**90.65**

9.2.2. Risk contingency

The risk contingency estimates are outlined in the following table.

Table 43: Project risks *$ million*

Risk estimate and contingency		
3 Base risk estimate		
3.1 P80 contingency value		12.100
3.2 Excess over P80 to P95 contingency value, to reflect WCC risk position		4.040
Subtotal		**16.140**
4 Escalation risk estimate		
4.1 Escalation		27.890
4.2 Escalation related P80 contingency value		6.620
4.3 Excess over P80 to P95 escalation related contingency value, to reflect WCC risk position		1.430
Subtotal		**35.940**
Total of project risk (Contingency)		24.190
Total of project risk and escalation		**52.080**

9.2.3. Funding history

The project has not received any State Government funding to date. WCC has invested well over $1 million developing a number of background reports which have informed this business case and towards the development of this business case.

9.2.4. State delivery costs

The deliverability of this initiative is not wholly dependent upon the necessary internal funding identified in this section being provided. It will be determined by the VPS in conjunction with WCC, based on the appropriate level of oversight.

The state delivery cost comprises X additional VPS staff for the duration of the project with zero ongoing.

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The Project Managers will be responsible for overall grant administration and ensuring that the project delivers on whole of Victorian Government outcomes. The Project Manager would hold a governance role and have oversight of and involvement in project delivery through a partnership approach with WCC. The role includes:

- Ensuring alignment of proposed project outcomes with any relevant government policy, long-term vision or other strategic alignment.
- Providing briefings to the responsible Minister and other Ministers, including the Department of Premier and Cabinet (DPC), the Department of Treasury and Finance (DTF) and submissions to cabinet
- Input into and approval of project designs to ensure these meet appropriate standards for community and high-performance sport as well as universal design and gender equity
- Decision making and negotiation regarding scope and budget
- Appropriate application of acknowledgement and publicity guidelines.

Additionally, the Project Manager will represent the department at all Project Working Group and Project Steering Committee meetings.

Table 44: Staffing impacts - Staff/contractors

Functional category		2026-27	2027-28	2028-29	2029-30	2030-31	Ongoing
For all components							
New VPS staff	Frontline	0.0	0.0	0.0	0.0	0.0	0.0
	Back office	0.0	0.0	0.0	0.0	0.0	0.0
	Contractor	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Existing VPS staff	Frontline	0.0	0.0	0.0	0.0	0.0	0.0
	Back office	0.0	0.0	0.0	0.0	0.0	0.0
	Contractor	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
New non-VPS staff	Frontline	0.0	0.0	0.0	0.0	0.0	0.0
	Back office	0.0	0.0	0.0	0.0	0.0	0.0
	Contractor	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Existing non-VPS staff	Frontline	0.0	0.0	0.0	0.0	0.0	0.0
	Back office	0.0	0.0	0.0	0.0	0.0	0.0
	Contractor	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Total staff		**2.0**	**2.0**	**2.0**	**3.0**	**0.0**	**0.0**

The costs of the staffing impacts is outlined in the following table and in accordance with budget guidance provided by the Department of Treasury and Finance.

Table 45: Staff costs

Description of funding provided	2026-27	2027-28	2028-29	2029-30	2030-31
5. Two VPS 5 staff (incl. CAM costs)	0.000	0.150	0.350	0.300	0.150

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9.3 Whole of life costs

The whole of life costings do not form part of this budget bid or any future budget bid. These costs will be met by WCC through its ongoing operations and managed in accordance with its asset management framework. It will be accounted for in the WCC's annual reports and in accordance with its disclosure requirements under the relevant local government act.

The asset replacement costs along with reactive and proactive maintenance have been included in the financial assessment (refer section 4.6.2) and have been informed by the WTP whole-of-life cost report contained in Appendix I. WTP's estimate was based on Preferred Option 3A, which has been pro-rated for other options based on total capital cost

WTP's report shows lumpy costs based on the expected life of individual assets. Instead of modelling lumpy cash flows, we have allowed for a steady annual sinking fund commensurate with the total 25-year whole-of-life cost estimate by WTP, with a ramp up over the first 3 years.

9.4 Funding sources

This business case requests a State Government contribution to the redeveloped Aqualink Nunawading of $30 million, plus output funding of $1 million. WCC will also explore the potential for a funding contribution from the Federal Government of up to $20 million. Notwithstanding such a contribution from the Federal Government, it is WCC's intention to fund the balance of the project of $112.7 million, for which it has made allowances in its future long-term capital expenditure planning.

Should State Government funding not be forthcoming, or not be forthcoming at the level requested, WCC will be forced to undertake a value management exercise which reduce total gross floor area. This reduction in project scope is likely to impact the level of service to the local community and the ongoing financial performance of the facility.

On the assumption that State Government funding is forthcoming, the following table summarises the funding mix.

Capital cost budget impact	2026-27	2027-28	2028-29	2029-30	2030-31	5-year total
Project budget – gross TEI	$1.84	$3.67	$14.35	$83.13	$39.75	**142.73**
Contribution from fundraising	0.00	0.00	0.00	0.00	0.00	**0.00**
Contribution from the Commonwealth Government	0.00	0.000	0.000	0 - 15.00	0 - 5.00	**0 - 20.00**
Contribution from WCC	0.00	2.67	13.35	56.13 – 71.13	18.75 – 23.75	**92.73 - 112.73**
Contribution from other sources	0.00	0.00	0.00	0.00	0.00	**0.00**
Victorian Government – net contribution	**0.00**	**1.00**	**1.00**	**12.00**	**16.00**	**30.000**

9.5 Project budget risk assessment

A summary of risks with a budget impact is outlined in the table following. There are 15 risks in the table of which three are identified as high risk, post mitigation. The full risk register is included at Appendix J.

Ontoit.

Table 46: Summary Risk Assessment

** Risk Rating is Post Control / Mitigation*

No	Risk	Control / Mitigation	Rating*
1	Project budget is insufficient to deliver the full scope of works against project objectives, requires extensive value management	Project scope is determined during Business Case. Clear understanding of likely capital funding and ongoing operational funding deficits/surpluses through the development of robust cost plans and financial and operating models Detailed functional and technical brief prepared and is monitored by PT, PWG, PCG.	High
2	Miss Government funding opportunities/cycle	Clear understanding of likely capital funding and ongoing operational funding deficits/surpluses through the development of robust cost plans and financial and operating models Develop clear and compelling narrative appealing to public funding contributors with appropriate supporting evidence	Medium
3	Cost Plans prepared may be inaccurate. Project budget does not allow the project to be delivered to Business Case expectations.	Update project cost plan for the concept design. Allocate appropriate contingency into cost plan to develop budget. Establish a Value Management process to keep project within Budget with focussed Value Management to consider / quantify impact on benefits from scope reduction and design change.	Medium
4	Authority service costs not anticipated in cost plan.	Liaise with representatives from various Service Authorities. Consultants are to assess service requirements early in the design and address Contingency allocation to be implemented.	Low
5	Cost plan does not cover all required scope	Ensure Cost Plan captured all aspects of the project. Resolve detailed functional and technical brief, detailed room data sheets, performance specifications brief prepared through detailed stakeholder consultation.	Low
6	Inadequate contractual engagement with consultants and/or contractors	Project team to review the risk profile of contract entered into. Seek detailed input from experienced internal professionals and external contractors, procurement, legal team, probity advisor, technical advisor etc	Low
7	Development triggers more significant upgrades to site services requirements not anticipated/allowed for in budget.	Project scope is determined and costs are interrogated by QS. Undertake early engagement with authorities to elicit support. Appropriate risk contingency to be applied	High
8	Additional consultants not allowed for in the budget.	Project scope is determined and costs are interrogated by QS.	Low
9	The design for the building is too excessive cause the project to run over budget.	Review quality of information being provided and undertake a gap analysis against design brief Ensure program includes sufficient time for design development and stakeholder engagement Scope management to be scrutinised and value managed against contingency assessment Regular cost plan updates to ensure project is managed within the adopted budget	Medium
10	Poor delivery model selection	Engage suitably qualified and experienced practitioners to assist with the evaluation and selection of the delivery model and procurement strategy Undertake procurement workshop as part of Business case process Communicating the outcomes to the stakeholders in terms of risk allocation.	Low

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No	Risk	**Control** / Mitigation	Rating*
11	Inappropriate risk allocation for the works	Engage suitably qualified and experienced practitioners to input market information, market screening data and assist with the risk allocation, risk transfer and management arrangements	Medium
12	Poor market response due to changing risk appetite by the market.	Early market engagement, including with other Council's, delivering large aquatic facilities, and ongoing communication during preparation to go to market, including appropriate contract risk allocation.	Medium
13	Poor investigation of site infrastructure, ground conditions and/or latent conditions	Ensure sufficient time is taken to properly assess the existing site conditions to inform the design, including site investigations for soil condition and contamination Include sufficient contingencies in the cost plan to manage identified risk. Appropriately transfer risk to the contractor.	Low
14	Changes in the market (e.g. Insolvencies, inflation, market saturation)	Ensure cost planning forms part of development of design at all stages, including appropriate risk and contingency assessment and program duration assessment for escalation Constantly re visit risk assessment matrix and undertake market scanning to identify potential risks.	Low
15	Project budget is insufficient to deliver the full scope of works against project objectives, requires extensive value management	Project scope is determined during Business Case. Clear understanding of likely capital funding and ongoing operational funding deficits/surpluses through the development of robust cost plans and financial and operating models Detailed functional and technical brief prepared and is monitored by PT, PWG, PCG.	High

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10. Management

10.1 Governance framework

The project will take place on the existing Aqualink site, which is owned by WCC. Once the project is completed, it will be owned and operated by WCC. As such, WCC is the natural principal of the project and will take on all procurement and contracting and the subsequent financial, development and operational risk.

The project is expected to be majority funded by WCC, with funding to be sought from both State and Commonwealth governments. It is expected that all funding parties will form part of the project's governance structure in line with any conditions of the associated funding agreements.

10.1.1. Governance structure

To ensure that all organisations and internal WCC departments with authority or interest in the project have adequate input, the following groups will be established.

- Project Steering Committee
- Project Control Group
- Project Reference Groups.

The arrangement of these groups along with representation are outlined in the governance structure diagram below, with the key and respective roles and responsibilities outlined in the following table.

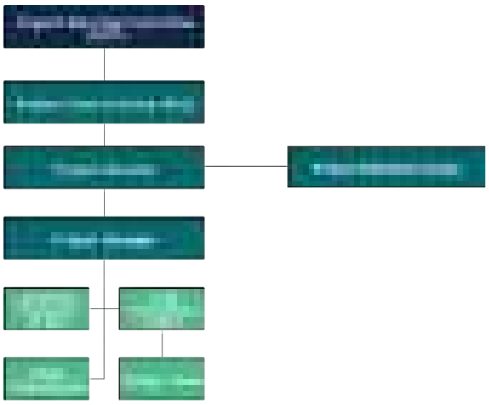

Figure 21: Governance structure

Table 47: Governance groups – Responsibilities

Project Steering Committee	Project Control Group	Project Reference Groups
Provide strategic direction and whole-of-government advice for delivery of the project	Act under direction of the steering committee	Coordinate with design team and provide input to design, scope and functional requirements
Agree and approve the project management plan including budget and program	Delivery of project objectives	Assist to ensure delivery of project benefits and managing impacts on the local community
Oversee the management of risk, contingency and probity	Management of budget, program, and risk	Coordinate with the Trust on commercial arrangements
Delegate responsibilities to the working group.	Oversight of procurement	Advise on construction and operations interface.
	Report and make recommendations to the steering committee	
	Advise on statutory processes.	

Further detail as to the operations and responsibilities of these groups is detailed in the Project Management Plan in Appendix O.

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10.2 Stakeholder Engagement and Communications Plan

A Stakeholder and Community Engagement Plan has been developed for Aqualink Nunawading which sets out the approach and methodology for meaningful stakeholder engagement as this is fundamental to the success of the project. Both identified stakeholders and the community need the ability to engage with the project in a collaborative manner and the proposed methodology is based around this. This is supplied in draft form in Appendix M – Stakeholder Engagement Plan and will be updated in subsequent phases of the project.

Stakeholder engagement is best carried out in an ongoing way, as a continued conversation, developing and maturing over time to become an essential and mutually beneficial strategic function. In this way, stakeholder engagement is a constant workstream over the course of the project.

The plan maps the key stakeholders and the format for their engagement based on IAP2's (International Association of Public Participation) Public Participation Spectrum, the level of participation appropriate to each stakeholder and their influence on decisions.

The plan is aligned to the Whitehorse 2040 Community Vision which acknowledges the importance of a united community and recognises that through collaboration and teamwork, together they have the power to shape their future. Genuine stakeholder engagement is crucial to meet the intent of the 2040 Community Vision, which provides for a focus on the environment whilst also balancing the social and economic needs of Whitehorse.

Stakeholder engagement will be undertaken in four stages, depending on Project phasing. Most government budget bids are assessed the year prior to the budget announcement in May of any year. Therefore advocacy and lobbying to government representatives, departments and agencies should commence at least 18 months prior to budget announcement (September/October – Stage One) to secure government project sponsors, with preliminary submission the following year (Sept/Oct), finalised submission by Jan/Feb for the highest approval in April/May (Stage 2) and budget confirmation for the following financial year (i.e. from 1 July). Confirmation of funding will then enable Stages 3 and 4.

Further community consultation will be undertaken in Stages 3 and 4 to support the detailed design and implementation of the project through construction to opening by 2031.

This is captured in Figure 22 below.

Figure 22: Four stages of stakeholder engagement for Aqualink Nunawading

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10.3 Project management strategy

The project steering committee will ensure a robust project management strategy is approved at the commencement of the next phase of project activities. The project management plan will be prepared by WCC as project manager – with an example of the document contained in Appendix O. The project management plan will be live document, updated or revised as required, and will include:

- Project overview - including objectives, background and project description
- Governance - project governance and management arrangements, and the roles and responsibilities of any governance bodies
- Project control mechanisms – scope change, budget establishment and variation, schedule management, quality management and risk management
- Engagement - project meetings, reporting, document control, correspondence, coordination protocols, and stakeholder consultation
- Quality management – including systems and processes to ensure delivery of quality outcomes
- Probity – to ensure fairness and delivery of value for money including through procurement.

The contents of the project management plan will be consistent with WCC policies, including procurement policies.

The project management plan will be implemented by the project control group, which may have limited delegation to amend the project management plan or its constituent components. The project management plan will include attachments, such as:

- The approved and current project budget, with cash flow forecast
- The current project schedule
- Risk management plan and risk register
- Communications and stakeholder management plan
- Probity management plan.

Importantly, the project management plan will need to outline procedures and authority for the expenditure of project funds, including financial delegation authority and contingency management.

The project management plan will need to be approved by the project steering committee before any project funds are expended.

10.4 Change management

While the project represents a significant asset intervention that will result in the closure and rebuild of a significant community asset, we expect that both staff and the general community will be generally supportive of the move that will effectively extend the life of the facility for generations to come. Accordingly, the change process from delivery to ‘readiness for service’ should also involve these groups.

For Council, the key challenge will be retaining some acceptable level of aquatic and health services for the community during the construction phase, and this Business Case has explored the potential of keeping the existing 50m pool operational during most/all of that time.

Despite this, change management plans will be required to be prepared and new commercial arrangements will need to be procured and executed. This will be the responsibility of the internal WCC staff to deliver.

10.5 Performance measures and benefits realisation

The recommended solution addresses the problems and key benefits identified in sections 1 and 2 of this business case. An overview of the performance measures for these benefits, including the baseline and change if the proposal is approved and funded is outlined in the table below. The specifications include a meaningful mix of quality, quantity, timeliness and cost performance measures for each output that assess:

(i) service efficiency and effectiveness

(ii) all major activities of the output.

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Appendix A – Benefits management plan that forms part of the ILM documentation, outlines in greater detail the basis and assumptions of baseline measurements and targets and the allocation of responsibilities for delivering the benefits. WCC will assume primary responsibility for delivery of benefits via the commercial 3rd party operator selected to manage and operate the facility.

It is noted that the benefits will not begin to be realised until after facilities have been developed and opened in 2031. After that time, WCC may convene the parties and lead a benefits realisation process to determine performance against the stated targets. All measures are existing measures, with no new measures proposed for this investment.

This initiative is aligned to Department of Jobs, Skills, Industry and Regions' Sport and Recreation outputs in regard to increasing participation opportunities and improving accessibility for the community through local infrastructure. Concurrently, it contributes to excellence in sport pathways, as Aqualink Nunawading is home to Nunawading Swim Club, an important training centre for high-performance Victorian aquatic athletes, and one of only three such podium training clubs in Victoria. The facility is also the training centre for the Nunawading Water Polo and Triathlon clubs, who also seed high-performance athletes.

It is also aligned to the Department of Transport and Planning's Suburbs output in regard to supporting thriving communities in Melbourne's growing suburbs.

Table 48: Benefits Management Plan Performance measures

Performance Measures	Status	Unit of Measure	Baseline	Target if proposal is endorsed
			FY 2023/24	2033 (Year 3 of operation)
Output: Whitehorse Community Health and Wellbeing outcomes				
Learn-to Swim program participation	Existing	Number per year	192,000	265,000
Number of AQN members (swim & gym)	Existing	Number per year	2,800	5,100
% of community satisfied with health opportunities	Existing	% of patrons surveyed	71%	90%
Average visit length	Existing	% of patrons above 60 mins	48% *(2019/20 baseline)*	65%
Average revenue per visit	Existing	Dollars per Visit	$10.90	$12.30
Output: Financially and operationally sustainable Whitehorse City Council services				
Hours lost due to unplanned maintenance	Existing	Hours	45	20
Hours lost due to planned maintenance	Existing	Hours	53	25
Council Annual Surplus / Deficit (incl lifecycle costs)	Existing	Dollars per Year	($1.2m)	Break-Even
Output: Water awareness and swimming competency within an increasingly diverse Whitehorse community				
No. participants in adult learn to swim programs (enrolments per term)	Existing	Patrons	50	250
% of persons born overseas using the facility	Existing	% of patrons surveyed	34%	50%
% of diverse community groups using the facility ^	Existing	% of patrons surveyed	19%	30%

^ a person with a non-English speaking background, disability or impairment, identifies as LGBTIQ+ or is of Aboriginal or Torres Strait Islander descent.

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10.6 Risk management

10.6.1. Risk planning methodology

The risk analysis process has been undertaken in accordance with ISO 31000:2018 and DTF Risk, Time, Cost and Contingency Guidelines.

Risk context

The risk management process utilised the standard WCC approach with a view to assessing the risks to achieving the project objectives aligned with the WCC Major Projects Risk Management Plan provided in Appendix J.

Risk Identification

Risks that may prevent the achievement of project objectives were defined through a facilitated risk workshop with key WCC stakeholders.

Project risks and mitigation strategies have been identified against the preferred Reference Concept Design through a workshop process with relevant key stakeholders, as defined in the Business Case Summary Risk Report provided in Appendix J.

Risk analysis

The qualitative assessment of identified risks for likelihood of occurrence and impact consequences has been undertaken on risks pre-mitigation and post mitigation to confirm proposed treatment strategies provide effective management and control. The resultant risk ratings are identified in the risk register in Appendix J as either low, moderate, high or extreme, aligned to the WCC tolerance for risk, both pre and post mitigation.

Risk evaluation

Probabilistic risk assessment has been undertaken to define the budget risk allocation for the delivery of the project. This has utilised the cost estimate to assess uncertainty levels inherent in the estimate and the current Risk Register for potential cost impacts from relevant risks. A probabilistic risk analysis has identified the P80 project delivery risk contingency for trade costs component and escalation component of the cost plan for the preferred project option (Option 3A). This project delivery risk contingency for the preferred option has been applied on a pro-rata basis to the other two project redevelopment options (Options 2 and 5). The risk analysis report is shown in Appendix J.

The P80 probabilistic estimate value refers to a confidence level in the probabilistic estimate value not being exceeded and indicates there is a 80% probability of the project being delivered for less than the probabilistic estimate value and a 20% probability of being delivered for more than the probabilistic estimate value.

Risk allocation

The risk allocation under the proposed delivery model relates to the following key parties:

- The retention of risk by WCC including under the construction contract arrangements
- The risk exposure by the WCC as AQN asset owner and operator, noting that this Business Case assumes that some of this risk will be transferred to a 3rd party commercial operator.
- The transfer of risk to the main contractor(s) and 3rd party operator of the facility

The risk allocation between WCC and the private sector for the preferred delivery model has been reviewed as part of the Procurement Strategy workshop. The starting point for this risk allocation is summarised in Table 36 in Section 6.4 of this Business Case.

10.6.2. Risk assessment outcomes

Risk assessment summary

The whole of project risk assessment has been undertaken to identify and evaluate project risks and inform project development requirements. A summary of the risk assessment is shown in the following table.

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Table 49: Summary of risk assessment

Risk rating	No. of Risks
Extreme	0
High	2
Medium	26
Low	43
Total	**71**

A key consideration is the level of residual risk WCC is willing to retain for AQN in the pursuit of the project objectives. A summary of the residual risk assessment where risks are outside of WCC risk tolerance is shown in the following table

Table 50: Summary of residual risk assessment

Critical Success Factor	No of risks
A. Cost	2
B. Schedule	0
C. Performance	0
D. Safety	4
E. Reputation	2
Total	**8**

It should be noted that the 2 (No.) high level risks also form part of the risks that are above WCC risk tolerance thresholds are shown in the following table, Table 51.

The risk assessment outcomes are summarised in Summary Risk Report in Appendix J.

Key project risks

The key project risks that are outside of WCC risk threshold tolerance are summarised against each risk category in the following table.

Table 51: Summary of key project risks outside WCC risk thresholds

Critical Success Factor	Key risk		Residual Risk Level	Authority
A. Cost	A01	Project budget is insufficient to deliver the full scope of works against project objectives, requires extensive value management	High	Director Infrastructure
	A07	Development triggers more significant upgrades to site services requirements not anticipated/allowed for in budget.		
B. Schedule		Nil		

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Critical Success Factor	Key risk		Residual Risk Level	Authority
C. Performance		Nil		
D. Safety	D02	Construction incident / injury to member of the public - Quality of OH&S systems not acceptable.	Medium	Manager, Major Projects
	D03	Construction incident / injury to worker - Quality of OH&S systems not acceptable.		
	D04	Noise and dust from construction		
	D06	Traffic management of ingress, egress and surrounding areas including truck parking.		
E. Reputation	E07	Poor staging of works with existing operations.	Medium	Manager, Major Projects
	E16	Design criteria does not align with Council expectations.		

Key project risks mitigation strategies

Risk mitigation strategies have been identified for all risks. The mitigation strategies for key risks are shown in the following table.

Table 52: Key risk mitigation strategies

Key risk		Mitigation strategies
A01	Project budget is insufficient to deliver the full scope of works against project objectives, requires extensive value management	Project scope is determined during Business Case. Clear understanding of likely capital funding and ongoing operational funding deficits/surpluses through the development of robust cost plans and financial and operating models Detailed functional and technical brief prepared and is monitored by Project Team, PWG, PCG.
A07	Development triggers more significant upgrades to site services requirements not anticipated/allowed for in budget.	Project scope is determined and costs are interrogated by QS. Undertake early engagement with authorities to elicit support. Appropriate risk contingency to be applied.

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Key risk		Mitigation strategies
D02	Construction incident / injury to member of the public - Quality of OH&S systems not acceptable.	Ensure strong attention to OH&S systems and procedures compliance. Ensure CMP is monitored by Contractor. Monitoring and surveillance requirements are established in the tender documents including evaluation criteria.
D03	Construction incident / injury to worker - Quality of OH&S systems not acceptable.	Ensure strong attention to OH&S systems and procedures compliance.
D04	Noise and dust from construction	Ensure tender documentation stipulates requirements. Review of Contractor Tender CMP's or equivalent for adequacy of process and controls. Consider requirement for dust/noise monitoring during works.
D06	Traffic management of ingress, egress and surrounding areas including truck parking.	Contract to have suitable Traffic Management Plan and traffic worker requirements, KPIs to be considered to manage the impact.
E07	Poor staging of works with existing operations.	Consider staging of existing swim club. Confirm feasibility of staging. Consider impact of staging on swim club operations with potential offers for disruption. Clear communication protocols defined with appropriate notice periods.
E16	Design criteria does not align with Council expectations.	Project brief and criteria to be developed and signed off by Council. Design workshops are to be held at the end of each design phase to review the development and provide approval.

10.6.3. Risk review management

Continued risk assessment is a key part of the governance arrangement of the project and a comprehensive Risk Management Plan (RMP) has been developed. The Risk Management Plan is provided in Appendix J.

10.7 Exit strategy

There is no contractual arrangement, policy commitment or other impediment that could constrain WCC to exit the project now, or at any time up until execution of a head construction contract.

Any abandonment of the project will result in the cost of this Business Case and previous investigations being a sunk investment in whole or in part.

Other ongoing investment in the existing end-of-life Aqualink Nunawading will continue, in-line with the Base Case Scenario.

Exiting the project in pursuit of the business-as-usual scenario will result in a slow decline of the asset until its expected end-of-life and closure in 2032. Such a closure will see a decrease in the social, economic and health impacts derived by the local community from the facility and will result in some of this patronage

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moving to other nearby facilities – to the extent these nearby facilities can cater for that increased demand. It is likely that the overall level of participation in aquatic sports and dry fitness by the local community will decrease upon its closure. Loss of health benefits from this facility's closure is estimated to be a cost to the community of approximately $15M per year based on current visitation numbers (refer to section 3.2) and expected to cause significant community outrage. Stakeholder response to closure or a lesser facility is seen as a high risk for the project.

Because of the athletic training pathway to elite levels available on site through the Nunawading Swim Club (dedicated club facilities) and to a lesser degree the Nunawading Water Polo and Triathlon Clubs (facility regular users), Victoria may field less elite swimmers and aquatic athletes in the interim as senior swimmers move interstate to maintain training as happened during COVID-19 pandemic and younger swimmers cannot as easily move up to and achieve the training pathway to high-performance swimming due to the Nunawading pool closure.

10.8 Readiness and next steps

WCC are in a position to move to through the pre-design phase of works ahead of formal funding commitment from all potential funding partners for the FY2026/27 budget. This pre-design phase will include significant stakeholder consultation to revisit all past consultations' key themes, and further confirmation of scope and cost.

WCC have allowed for the likely funding of the Aqualink Nunawading Redevelopment as part of its forward estimates on capital funding, noting that no WCC funding has been formally requested or confirmed.

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Checklist and sign-off

Initiative title:	[Business case/Initiative title]	
Department:	Department of Jobs, Skills, Industry and Regions - Sport and Recreation	Yes
1.	Was DTF/DPC consulted during the preparation of the business case and/or costings agreed?	☐
2.	Has a *Business case cover sheet* been completed to accompany this business case?	☐
3.	Has the SRO signed an attestation statement for this business case?	☐
4.	Is the project High Value High Risk (HVHR) (i.e. has a PPM been completed)?	☐
5.	If the project is HVHR, has a Gateway review for Gates 1/2 been undertaken?	☐
6.	If applicable, have the relevant Value Creation and Capture documents been completed and included?	☐
7.	If applicable, does the business case state whether the initiative is eligible for Growth Areas Infrastructure Contribution funding?	☐
8.	If applicable, does the business case state whether the initiative is eligible for funding under an Infrastructure Contributions Plan or Development Contributions Plan?	☐
9.	If the project is identified in an infrastructure framework, has the framework been clearly stated? (See Overview for examples.)	☐
10.	Does the submission address a Budget Priority? If yes, has it clearly identified how it addresses the Budget Priority?	☐
11.	If applicable, has a Gender Impact Assessment as required under Section 9 of the *Gender Equality Act 2020* been incorporated through the business case for any policies, programs, or services with a direct and significant impact on the public? Is a copy of the assessment attached?	☒
12.	If the initiative is seeking consideration under the Early Intervention Investment Framework, has additional information on outcome measures and avoided costs been included?	☐
13.	Have the following documents been submitted to DTF?:	☐
	• Project Profile Model (PPM)	☐
	• Investment Logic Map (ILM)	☒
	• Benefits management plan	☒
	• Procurement strategy	☒
	• Costed risk register	☒
	• Detailed project schedule	☒
	• Detailed cost plan including project owner costs breakdown	☒
	• Red rated Gateway recommendations in the Recommendations Action Plan (RAP)	☐

This model checklist is designed for the project proponent's endorsement.

Prepared by: **Date:**

Approved by: ..... **Date:** .....

Approving officer/ delegate name: ..... **Date:** .....

Secretary: ..... **Date:** .....

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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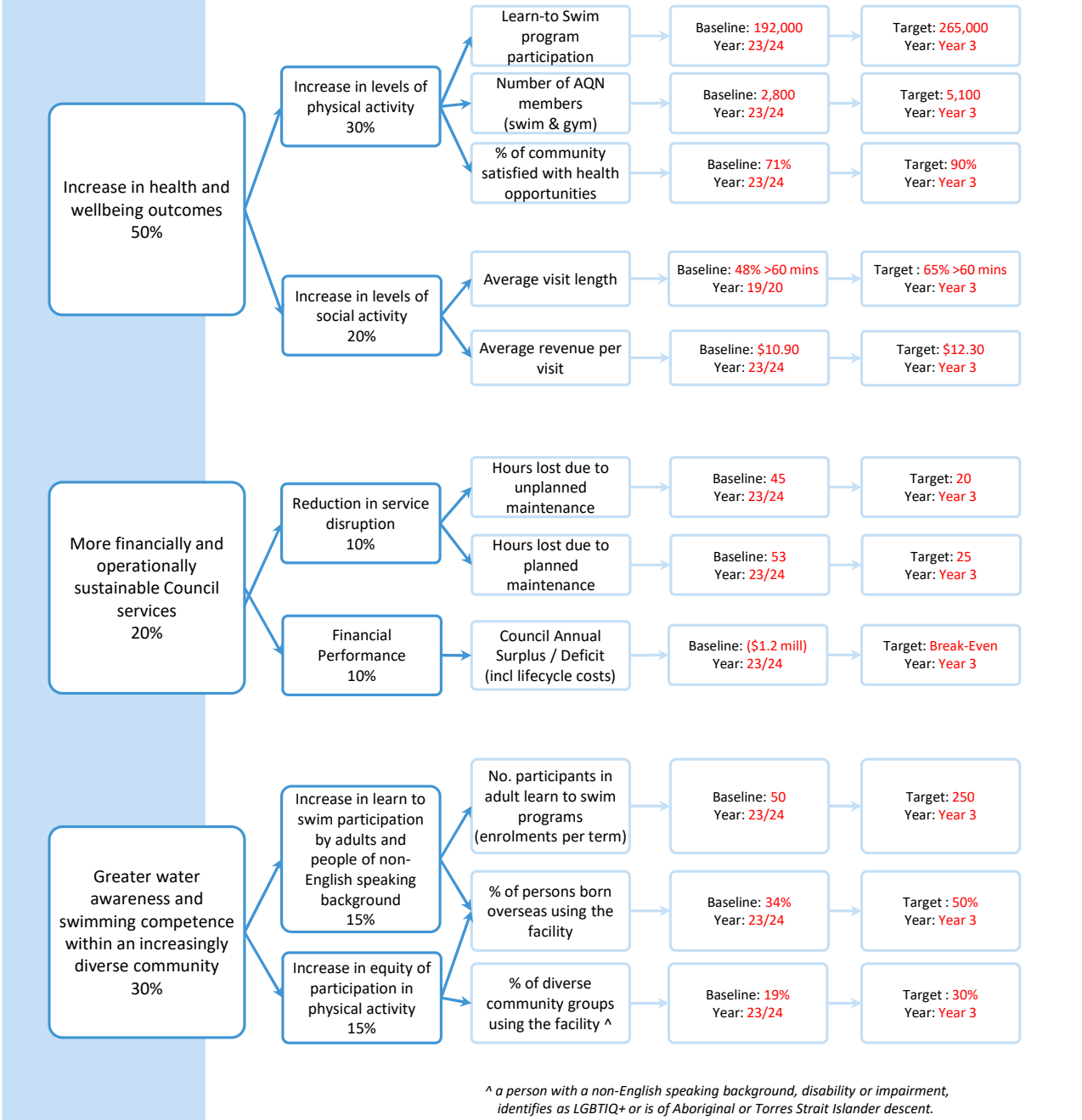
Appendix A - Investment Logic Map & Benefits Plan

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

WHITEHORSE CITY COUNCIL

Aqualink Nunawading

BENEFIT MANAGEMENT PLAN
Part 1: Benefit Map



^ a person with a non-English speaking background, disability or impairment, identifies as LGBTIQ+ or is of Aboriginal or Torres Strait Islander descent.

Investor: CEO, Whitehorse City Council
Facilitator: Jeremy Smart
Accredited Facilitator: Yes

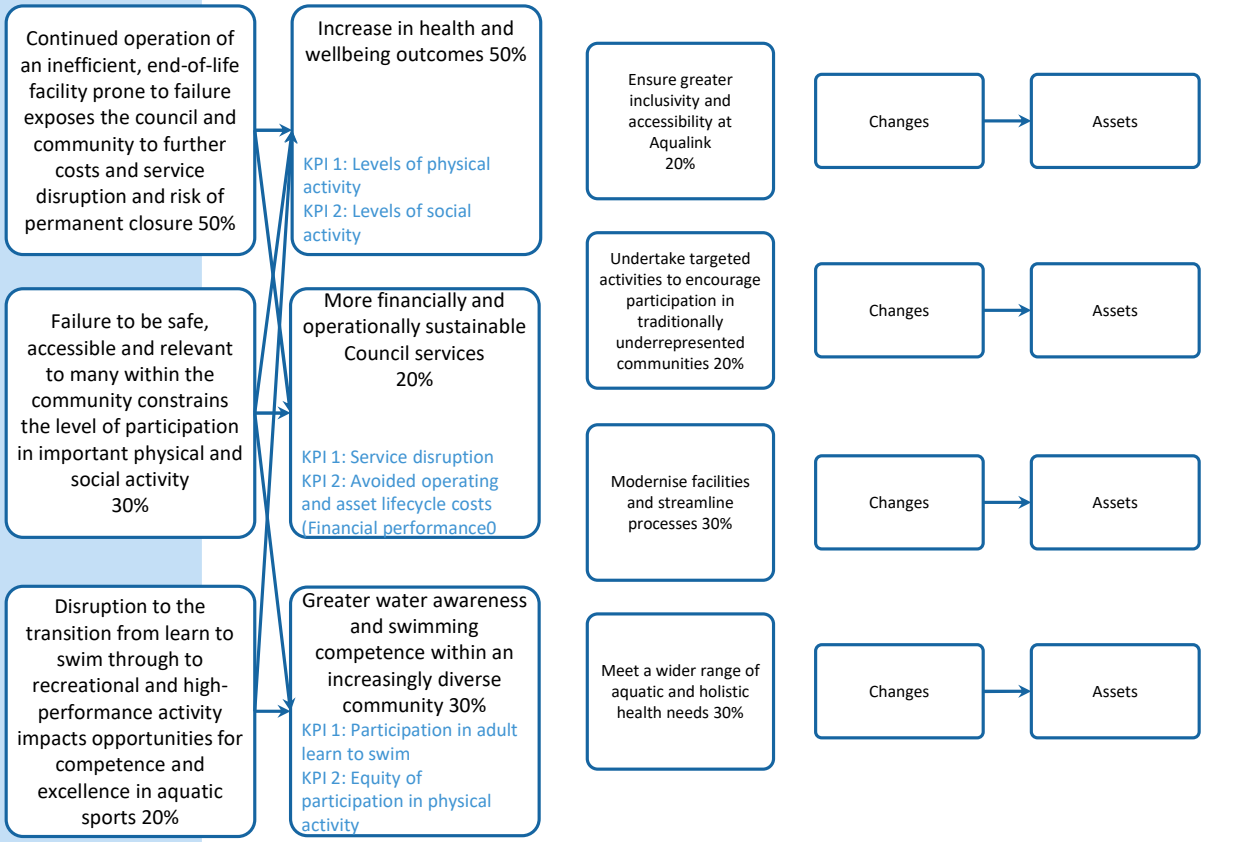
Version no: 0.2
Initial Workshop: 15/04/2024
Last modified by: Simon Gorr /Amelia Bartak 04/10/2024
Template version: 6.0

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

WHITEHORSE CITY COUNCIL

Aqualink Nunawading

INVESTMENT LOGIC MAP
Initiative



Investor: CEO, Whitehorse City Council
Facilitator: Jeremy Smart
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Version no: 0.4
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Initial Workshop: 29/04/2024
Version No.: 0.4
Last Modified by: Amelia Bartak
19/08/2024

Interventions	Response options					
	Option 1	**Option 2**	**Option 4**	**Option 3**	**Option 5**	
	Base Case: Business as usual /Do Nothing	Contemporary Replacement	Contemporary with a stronger social dimension	Contemporary with a stronger aquatic and health focus	Aspirational	
Better target communication to improve awareness of opportunities for traditionally underrepresented communities	**60%**					
Encourage a greater diversity of physical activity	**40%**					
Ensure greater inclusivity and accessibility at Aqualink		**30%**	**20%**	**20%**	**15%**	
Modernise facilities and streamline processes		**20%**	**30%**	**30%**	**20%**	
Undertake targeted activities to encourage participation in traditionally underrepresented communities		**20%**		**20%**		
Improve the flexibility of wet and dry spaces to accommodate a broader range of social and physical activities		**30%**				
Maximise opportunities for utilisation and revenue generation					**40%**	
Position this centre as a regional destination for aquatic activities and related services and social experiences					**25%**	
Diversify social activities available to users to reflect current trends and interests in holistic health			**30%**			
Maximise the flexibility of wet and dry spaces to accommodate a broader range of aquatic, social and physical activities			**20%**	**30%**		
Total	**100%**	**100%**	**100%**	**100%**	**100%**	

NOTES
1 The range of interventions that could respond to the identified problem and deliver the KPIs for the expected benefits are listed in the left-hand column.
2 Against the listed interventions a spread of response options are structured to provide genuine alternative approaches to the problem.
3 Response options should be titled to reflect the underlying strategy.
4 The shaded boxes indicate which interventions are used in each response and the percentage (%) indicates the relative importance of each specific intervention within the response. The total should be 100%.
5 This is a balance of two factors: the importance of the intervention in delivering the response option, and the likely effort/cost involved.

Benefits			Response options					
			Option 1	**Option 2**	**Option 3**	**Option 4**	**Option 5**	
			Base Case: Business as usual /Do Nothing	Contemporary Replacement	Contemporary with a stronger social dimension	Contemporary with a stronger aquatic and health focus	Aspirational	
Percentage of full benefit to be delivered			**0.0%**	**50.0%**	**75.0%**	**85.0%**	**100.0%**	
Benefit 1	Increase in health and wellbeing outcomes	50%	0.0%	25.0%	35.0%	40.0%	50.0%	
Benefit 2	More financially and operationally sustainable Council services	20%	0.0%	10.0%	10.0%	15.0%	20.0%	
Benefit 3	Greater water awareness and swimming competence within an increasingly diverse community	30%	0.0%	15.0%	30.0%	30.0%	30.0%	
Benefit 4	N/A		0.0%	0.0%	0.0%	0.0%	0.0%	

Risk and uncertainty (Likelihood/Consequence)

Risk 1	Community dissatisfaction	Some community dissatisfaction	Higher capital cost	Higher capital cost	Highest capital cost	
Risk 2	Lost opportunity for health and wellness participation ($15.6M per year)	Limits opportunity for health and wellness participation	Construction and safety risks and if staged response adopted (existing facilities kept open)	Construction and safety risks and if staged response adopted (existing facilities kept open)	Site limitations for scale of development	
Risk 3		Capital cost			Construction and safety risks and if staged response adopted (existing facilities kept open)	
Risk 4		Does not provide for significant growth in demand				

Unofficial

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Dis-benefits (Impact)						
Dis-benefit 1	Decrease in health and wellbeing outcomes	Temporary loss of access to aquatic and fitness facilities to community and sport clubs during construction phase causing lower health and wellbeing outcomes				
Dis-benefit 2	Decrease in swimming competency	Diverts the community to use other facilities during construction phase potentially impacting future demand				
Dis-benefit 3	Decrease/loss of valued council service					
Interdependencies (Impact)						
Interdependency 1						
Interdependency 2						
Cost						
Capital total estimated investment (TEI) (range)	Up to $15M	$60M-$80M	$80m-$100m	$80m-$100m	$100M+	
Net incremental output costs (range)						
Time						
(Range)	Current to 2032	By January 2031	By January 2031	By January 2031	By January 2031	
Ranking						
1-6	**5**	**4**	**2**	**1**	**3**	

Overall Assessment:	Options 3 and 4 present as the leading options. Both expand the form and function via a redeveloped facility to provide more space for wet and dry health and wellbeing activities and cater to the needs of local sporting clubs, fitness and training to elite levels to support state and national athletic development goals and facilitate improved social outcomes. These options afford up to 85% of estimated benefits to be achieved and are ranked 1st and 2nd in priority.
Recommendation:	Explore options 2-5 through design and cost examination versus Base Case.

Notes:

a Benefits - % benefit weighting derived from ILM
b Benefit delivery- rank (0-Marginal, 1-Partial, 2-Full) - See Worksheet 2.
c Dis-benefits - negative impacts that are likely to occur as a direct consequence of successfully implementing this option.
d Risk - one to four of the most significant things that might result in the delivery of the benefits being significantly different from expectations. These should include exogenous factors that may influence the investment's benefit delivery.
e Interdependencies - identify external factors that need to be in place if an intervention is to be successful.
f Real options workshop - determine whether a real options, or managing uncertainty, analysis workshop is required.
g Timeframe - from commencement of funding to date of full benefit delivery (not completion of the investment delivery)
h Capital TEI- range should be sufficiently reliable to provide an order of magnitude for the response.
i Output costs- output costs should be identified as these may substantially differ between responses. These should be the incremental costs, directly incurred as a result of the investment, net of any expected savings as a result of the investment.
j Ranking - considering all factors, which response option is the preferred approach to resolving the problem?
k Overall Assessment - why was the preferred response chosen? Are there any other assessment observations?
l Recommendation - how should this investment proceed…or not?

Instructions for creating Response Options Analysis Report (Word)

a Complete KPI intervention assess and then select Copy Interventions function under ROA Report.
b Complete risk and uncertainty, dis-benefit, interdependencies, cost, timeframe, ranking and overall assessment and recommendation fields (after relevant workshops).
c To add additional rows for Risk and uncertainty, Dis-benefits or Interdependencies: Right-click the row heading of the last existing item of the type (Risk and uncertainty, Dis-benefits or Interdependencies) you want to add and select Copy. Then right-click the same row heading and select Insert Copied Cells. Then renumber the new row and edit the descriptions of the relevant Risk and uncertainty, Dis-benefits or Interdependencies
d Save and select Create Report function to generate Word Report of Response Options Analysis.

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Appendix B - AQN Vision

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Aqualink Nunawading Business Case Vision Statement & Project Objectives

WHITEHORSE CITY COUNCIL

The creation of the AQN project vision

The AQN project vision has been developed in consultation with the WCC CEO and Executive Leadership through a facilitated project vision workshop held 25 March 2024.

Project Vision for Aqualink Nunawading

The project vision is supported by 5 key pillars or underpinning principles

Extended principles for Aqualink Nunawading

Our vision for the aquatic facility at Nunawading is driven by a deep commitment to enhancing the quality of life for all members of our community. We envision a dynamic hub that transcends traditional notions of aquatic centres, embodying inclusivity, sustainability, and innovation at its core, catalysing community health.

At the heart of our vision is the belief that **access to aquatic facilities is essential for promoting physical activity, community health, mental wellbeing, and social inclusion**. Recognising the diverse needs and aspirations of our community, we seek to create a space that is welcoming to individuals of all ages, abilities, and backgrounds, fostering a sense of belonging and empowerment for everyone who walks through our doors.

Community Delight

Our vision extends **beyond the physical infrastructure of the facility to encompass the surrounding precinct and its integration into the fabric of the community**. We envision a vibrant, thriving hub that serves as a focal point for social interaction, cultural exchange, and economic vitality, cultivating delight. By activating surrounding spaces, fostering partnerships with local businesses and organisations, and creating a welcoming environment for all, we seek to catalyse precinct utilisation and active living, creating positive change and lasting value for our community.

Environmental Sustainability

In realising our vision, we are guided by **principles of sustainability and environmental stewardship**. We recognise the interconnectedness of our facility with the broader ecosystem, and we are committed to minimising our environmental footprint, conserving resources, and promoting ecological resilience. Through initiatives such as energy efficiency, water conservation, and green infrastructure, we aim to create a facility that not only serves the needs of our community today but also preserves and protects our natural heritage for future generations and meets the challenges posed by climate change.

Excellence in Design and Operations

Central to our approach is a commitment to excellence in design, programming, and operations. We aspire to create a facility that equitably balances our community's expectations and provides a high-quality and diverse array of contemporary recreational, health and educational opportunities. By embracing innovation and creativity in our consideration of every aspect, we can raise the bar for community health and wellbeing across the region.

Financial Sustainability

Financial sustainability is integral to our vision. Our capital investment is commensurate to our current and anticipated economic position and we understand the importance of prudent financial management to ensure the long-term viability of the facility. Through careful budgeting, revenue diversification, and cost-saving measures, we aim to optimise commercial returns and maintain financial stability while delivering high-quality services to our community now and into the future.

Future-proofed Demand

In pursuit of our vision, we recognise that **collaboration and partnership are essential** to fulfill and surpass demand. We are committed to working closely with stakeholders, including residents, community groups, government agencies, and private sector partners, to co-create a facility that reflects the aspirations and priorities of our community, enabling health and wellbeing outcomes. Together, we will build a legacy of health, happiness, and resilience that will endure for generations to come, delighting all.

Project Objectives

1. **Enhance Community Health and Wellbeing:** Increase levels of physical and social activity and swimming competence by providing modern, accessible, and inclusive facilities.
2. **Ensure Financial Sustainability:** Achieve a sustainable outcome managing scope and budget within the available funding envelope.
3. **Support High-Performance Athlete Development:** Provide modern training facilities to support high-performance pathways and maximise opportunities to compete at all levels.
4. **Community Consultation:** Utilise best-in-class communications and engagement strategies to gather the views of the local community to inform the project outcomes.
5. **Environmentally Sustainable:** Deliver an environmentally sustainable facility through the construction and operations phases.

Vision workshop key outcomes

What does success look like?

- Meets needs of broad range of community / people / social groups
- Place activation / vibrant community hub
- Services health and community – 'cradle to grave' / intergenerational social use
- Welcoming and accessible
- Financially sustainable / commercially optimised
- Best practice ESD and to accommodate changing climate impacts
- Future-proofed to cater to emerging needs over time including population changes and future trends
- Market-leading – state of the art and not just replace

Key objectives?

- Optimise current site – accept its challenges
- 50m pool plus ancillary uses
- Warm water pool & gym
- Cater appropriately to differently abled users – disability, dementia inclusive
- Accessibility and alignment with municipal health and well-being priorities
- Create community spaces that enable social inclusion across all ages
- Placemaking and space activation
- Community outcome and benefits focussed
- Lowest possible operating costs
- Revenue growth compared to current
- Increased patronage <1.5M per year
- Financially and environmentally sustainable
- Improved cycling and pedestrian access
- Precinct utilisation

Appealing words?

- Delight
- Inclusive
- Community-focused
- Sustainable (triple bottom line – social, environmental, economic / people, profit and planet)
- Activation
- Precinct
- High utilisation
- Future proof
- Multipurpose
- Multigenerational
- Intergenerational
- Flexible
- Adaptive/adaptable
- Safe
- Accessible
- Health & wellbeing
- Welcoming
- Placemaking: delight the community
- Proud
- Meaningful connections
- Wellbeing hub
- Enables/cultivates meaningful high quality life
- Quality

Shaping Whitehorse

The AQN vision aligns with current WCC strategic frameworks

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Appendix C - Stakeholder Key Themes Summary

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Aqualink Nunawading Business Case Stakeholder Engagement

Summary of Key Themes

May 2024

Project Context

- In partnership with Whitehorse City Council, Ontoit has been appointed to deliver a detailed Business Case for the redevelopment of Aqualink Nunawading
- The aim of the Business Case is to inform the investment decision for the replacement of the Aqualink Nunawading facility at the current Fraser Place site. WCC has undertaken various formative studies and stakeholder engagement to understand the feasibility of the AQN redevelopment. The case for change is summarised on the following slides.
- The first stage of work for the Business Case has been to undertake a stakeholder engagement phase, speaking with key AQN and WCC stakeholders to review known aspects. This considered information provided during previous stakeholder consultations.

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Past stakeholder consultation report review

Ontoit has reviewed the following previous consultation reports and summaries of commentary:

- Planning for Communities (January 2021) *Community Survey for Aqualink Nunawading Feasibility Study (1,202 participants including community, school, clubs, staff)*
- Planning for Communities with Sport and Leisure Solutions (July 2021) *Consultation and Engagement Report - Aqualink Nunawading Feasibility Study (incorporating previous survey, community forum, phone discussions and workshops with council advisory groups, stakeholder organisations, community organisations, primary and secondary schools in Whitehorse)*
- Planning for Communities (July 2021), Appendix A: *AQN Feasibility Detailed Community Survey Results and Analysis - Final at 8 July 2021.pdf*
- Otium Planning Group (August 2022) *City of Whitehorse Aqualink Service and Asset Review Engagement Summary Report (incorporating previous reports and other multiple focus groups across the community, schools, clubs, council, market sounding etc)*
- Otium (January 2024) *Aqualink Nunawading Design Development Operator Workshops Report (5 market operators)*
- Capire (April 2024), *Whitehorse Leisure Services Engagement Report (2,536 participants; results of 6-week engagement Jan-Feb 2024) involving online survey, eight pop-ups at sport/leisure/community and retail locations in Whitehorse, two focus groups and two WCC staff sessions)*

Case for change – previous stakeholder comments summary

- **Pool and plant facilities are at end of life. There is an increasing risk of service discontinuation.**
- **Universal accessibility and inclusive for all** – some community members cannot access and do not feel welcome, price barriers to entry / use – need to enable participation across all ages and cultures of the community to facilitate health and wellbeing outcomes including families and seniors
- **Pool facilities do not adequately service the community's needs** – **insufficient access to lanes, leisure water and outdated amenity**:
  - Water spaces available – additional and different spaces are needed: more space for lap swimming, a warm water/hydrotherapy pool, dedicated water play and recreational areas, Learn to Swim pool, integrated and connected outdoor water/pool, picnic and leisure areas
  - Change room facilities – family and accessible change rooms needed, change rooms that meet current standards including private facilities as opposed to communal only, dedicated rooms for school groups, shared wet and dry change rooms, change rooms closer to pool.
- **Improved and additional fitness facilities, program rooms and program options are required -** 24/7 gym, expanded programs, social spaces.
- **Strengthen the wider precinct to become a community and sporting hub** including competitive / high-performance training
  - Social connections and community use – café, lounge, entrance, activity rooms that can be used by additional groups (for 100-200 people), improved childcare/creche and other family spaces including water play
  - Youth opportunities including programming to reach and support young people – design to appeal to youth, marketing, food options, water slides
  - Right balance of water sports and club use / sports precinct – water polo, triathlon etc – not just Nunawading Swim Club – also consider clubs in adjacent reserve areas - Netball Club, Cricket Club, Scouts - option to integrate club rooms into a redeveloped centre and better integration in the wider reserve
  - Allied health and wellness rooms – i.e. physiotherapy, spaces for rehabilitation activities which can also support elite swim squad as well as community – consider options for partnership with Eastern Health/Peter James Centre to support rehabilitation and aged community; also commercial /private operators; specialized, personal training for older adults and rehab for injuries.
  - Diversified programing (recreational and wellness) including reformer pilates, outdoor wellness, running club, outdoor bootcamp, pilates for men, classes for older people, adult swim classes, nutrition classes, group personal training, squash, table tennis, diving.
- **Visibility and access to and around the site** including way-finding
- **Car-park improvement** including bus access and parking which is important for school groups
- **Financial and environmental sustainability** including incorporation of ESD initiatives
- **Changing demographics** predicted over next 40 years: 30%+ by 2041 and increase in 70+ years age group requires alternate facility and program options. Increasing proportion of CALD communities.

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Stakeholder Consultation April / May 2024

A focused stakeholder consultation process comprising 14 x 1-hour group discussions with key AQN internal and external stakeholders.

WCC Internal groups

Future Management/Ops - 29 April 2024
- Terry Jenvey
- Tim Gledhill

ELT/PCG – 3 May 2024
- Steven White
- Lisa Letic
- Andrew Butterfield
- Andrea Ghastine
- Jeff Green
- Stuart Cann

Community Services – 3 May 2024
- Zoe Quinn

Project Team – 7 May 2024
- Andrew Butterfield
- Leanne Longmuir
- Danni Nguyen
- Jack Whitbourne

Building/Infrastructure – 7 May 2024
- Nigel Brown
- Steve Day
- Tony Peak
- Simon Kinsey

Council Services – 10 May 2024
- Kim Marriott
- Julie Cushing

AQN Management & Ops – 10 May 2024
- Terry Jenvey
- Anita Williams
- John Blias

Community & Services – 13 May 2024
- Iris Wang
- Tony Johnson

Leisure Services – 23 May 2024
- Kim Gasch

AQN External stakeholders

Nunawading Water Polo Club - 2 May 2024
- John Malvestuto

Nunawading Orcas Masters Swim Club - 2 May 2024
- Larry Murray and Greg Palmer

Nunawading Swim Club - 9 May 2024
- Simon Beqir

Nunawading Triathlon Club - 9 May 2024
- Marc Wrobel, President

Nunawading Adult Squad - 9 May 2024
- Andrew Barnes (Peter Card away)

Aqualink Stakeholder Consultation – Summary of Key Themes

KEY THEMES

Optimum Facility Mix

1. Stakeholders have expressed strong support for multiple, flexible water options that can service a future, growing community with changing needs and demographics.
2. Stakeholders are seeking expanded dry fitness, health and wellness opportunities including facilities, programs and expertise on site.
3. Strong support for the highest standard of accessibility and inclusion for people of all abilities and ages.
4. Stakeholders want facilities that enable social connection and engagement at all ages; this was noted as critical for community well-being.
5. Stakeholders want an inviting precinct that integrates open space and recreational facilities with surrounding parks, and incorporates improved pedestrian, bike and vehicle access and parking.

Council Considerations / Key Risks

6. Potential closure of the pool from failing assets prior to when a new facility can be built and the impact on community well-being and water familiarity/safety.
7. Inclusion of environmentally sustainable design features aligns with Council's targets and presents opportunities for funding through Melbourne Water and State Government.
8. Concern regarding the privatisation of the operating model was noted in some sections of the community.
9. The brief for the facility may require revision to align with other Council strategic and planning projects that crossover with this project and unlock opportunities to incorporate other assets.

Opportunities and Demand

10. Belief that an improved mix of facilities will maximise return through key revenue drivers of membership, learn to swim, fitness programs and aquatic activities.
11. AQN needs to be welcoming and cater to current non/low-use visitor segments of the community including LOTE, disability, seniors, rehabilitation, families through diversified amenities and facilities.
12. There are opportunities to achieve better integration of sports and other clubs through incorporating club facilities, meeting spaces, collaborative programming and facility use.
13. Support for an expanded footprint with optimised orientation to maximise functionality and to minimise the extent of facility closure. Recognition that some sacrifice of open space/trees may be necessary.

Aqualink Nunawading Stakeholder Consultation – Key theme: Optimum Facility Mix

1 Stakeholders have expressed strong support for multiple, flexible water options that can service a future, growing community with changing needs and demographics.

- The need for multiple, flexible pools that can cater to elite training, recreational/family, learn to swim, older persons and rehabilitation with water at different temperatures and levels of chlorination was raised in every session.
- Suggested aquatic facilities (with *separate* filtration systems) included:
  - 10 lane x 50m pool with moveable floor/wall and dive blocks at both ends for training and competitions for a variety of sports (swimming, water polo) and personal fitness.
  - Warm water
  - Learn to swim (25m)
  - Rehabilitation / hydrotherapy pool / spa /sauna facilities
  - Leisure and family water play including zero depth, water slides
  - Competition-capable lane ropes/dividers
  - Ability to install removable water polo goals.
  - Competition enabled systems: In-pool camera systems, electronic lap/scoreboard/timing equipment.
- Stakeholders are strongly interested in outdoor facilities being provided – 50m or 25m pool / water play and recreation – Note: outdoor options were flagged in this and previous consultations.
- Lane use is seen as at capacity already at peak times (am and pm); lap swimmers and clubs noted they also use alternative pools and it would be preferable to have more options at AQN.

2 Stakeholders are seeking expanded dry fitness, health and wellness opportunities including facilities, programs and expertise on site.

- The need for expanded dry fitness, health and wellness facilities and programs is critical and will impact market engagement and commercial returns if a new facility is constrained to the current mix and size.
- These include flexible, multipurpose spaces for diverse programming - at least double or more of the current gym and sport program rooms for pilates, spin, yoga, group personal training etc; seen as growth opportunity.
- Stakeholders were keen to have allied health co-located at AQN including physio, OT, psychology and dietician. Sport clubs would use these services also for their members/athletes. Allied health works well with warm water/ rehab pool options.
- Rehabilitation and wellness facilities and programs including allied health options were raised, specifically for catering to older persons and those recovering from injuries; seen as growth opportunity.
- Additional training options suggested by clubs (to add regional value):
  - Indoor cycling /bike studios and running rooms (for use in dedicated program slots by clubs vs only public classes) were suggested by the Triathlon Club and considered to add value for the community as well as all the club and sporting stakeholders.
  - NSC (if creating a bigger sport centre) suggested altitude and heat training rooms for athletes to use.

Aqualink Nunawading Stakeholder Consultation – Key theme: Optimum Facility Mix

3 Strong support for the highest standard of accessibility and inclusion for people of all abilities and ages.

- Accessibility improvements for both people of all abilities and seniors including ease of access throughout the centre was strongly supported. This includes ramps into pools, and additional lanes in the main pool so as not compromise lane configuration. Carers to be considered.
- Limited availability of accessible change facilities and proximity to wet areas was noted.
- There is the need to address and manage issues of safety and passive surveillance in current facility (there has been reportable offences); including revised change room configurations.
- Warm water pool for therapy and recreation is strongly desired by multiple stakeholders.
- Learn to swim (LTS) offer to be structured for diversified communities and age groups – priority for water safety and appropriate for adult LOTE community members. Separate pool recommended.
- Expanded family-friendly facilities including seating, pools and recreation spaces which are currently not seen as adequate and families less likely to come for recreation. Also seating specifically for families adjacent to LTS pool – 50 or more – current not enough.

4 Stakeholders want facilities that enable social connection and engagement at all ages; this was noted as critical for community well-being.

- An integrated precinct with facilities that enable social connection and engagement at all ages creates better social outcomes, both indoor and outdoor.
- Stakeholders noted the importance of the café and use for social connection alongside use of AQN's facilities.
- Recreational areas including picnic and play areas for families were deemed important considerations; both inside the facility's grounds and externally accessible in adjacent parklands.
- The Orcas, Water Polo and Triathlon clubs were interested in shared club rooms and expressed interest in flexible meeting/recreational rooms to hold AGMs and other social events to grow more connections with the community via onsite AQN activities. Water Polo already uses Nunawading Swim Club's facilities on occasion.
- Stakeholders noted the need for more social spaces, community use/recreational rooms at the pool and this was also raised in past consultation sessions with Council advocacy networks for youth and disability communities.

Aqualink Nunawading Stakeholder Consultation

5. Optimum Facility Mix / 6. Council Considerations / Key Risks

5 Stakeholders want an inviting precinct that integrates open space and recreational facilities with surrounding parks, and incorporates improved pedestrian, bike and vehicle access and parking.

- All stakeholders discussed the need for well-integrated open spaces with connectivity to the surrounding grounds, Forest Hill Reserve, play and sport facilities. Built footprint in balance with open space.
- Stakeholders discussed the need to leverage recreational areas integrated with the facility to encourage people to stay longer and make AQN and the adjacent parks a destination; to become a vibrant precinct that contributes to social connectivity, wellness and drives economic prosperity.
- Improved pedestrian and bike access routes including bike storage and lockers for cyclists were requested.
- Vehicle access and parking is of concern including impact to local residents as there is only one route in and out currently. A double level carpark is to be explored however paid parking is not recommended. Bus mobility and parking, particularly for school groups is important.
- New traffic access from either Canterbury Rd or Springvale Rd to be explored and linkages to Brentford Square Shopping Centre, and Pipe Track (linear reserve).

6 Risk of closure of the pool from failing assets prior to when a new facility can be built and the impact on community well-being and water familiarity / safety.

- The current facility is nearing end of asset life - the infrastructure is aging (e.g. leaks and plant issues are occurring with greater frequency)
- There is a natural reluctance within some areas of Council to spend too much money now due to the known replacements planning, increasing the risk of total closure of the facility.
- If the pool is closed for an extended period of time, activities such as learn to swim may take extended time to rebuild and recapture the market, which impacts the current operator of those programs and causes a dip in the level of the community's water familiarity and safety.
- Loss of social connection and wellbeing from closure – stakeholders frequently discussed the way AQN enables connections through swimming and use of the fitness programs and facilities and has done so for 30+ years for many people.

Aqualink Nunawading Stakeholder Consultation - Key Theme: Council Considerations / Key Risks

7 Inclusion of environmentally sustainable design features aligns with Council's targets and presents opportunities for funding through Melbourne Water and State Government.

- Council's Climate Response Strategy and the aim of Net Zero by 2032 needs to be front of mind. Both pools are major gas users in the council and this needs to be reconsidered in the commitment to carbon neutral.
- Consider the water harvesting, reuse and sustainability features that align with state government targets and can attract funding.
- Water reuse: AQN used to be connected to the irrigation system for overflow water to irrigate the oval, now disconnected and being explored for reconnection. May save up to 70-80,000 litres per night in summer.
- Opportunities for wastewater filtration to return water to creek. Could be one of three big water harvesting projects to be built by Council in next ten years and attract funding.
- Melbourne Water (MW) has opportunities for funding including in relation to the retarding basin. Lerne Street Flood Retarding Basin seen as priority and contingent on MW's engineering risk assessment.
- As density (of population) increases over next 30+ years, sharing facilities and open space is one of the solutions that enables sustainable use and growth as the council can't keep building single purpose facilities. Flexible facilities and scale need to be considered to suit projected future demand.

8 Concern regarding the privatisation of the operating model was noted in some sections of the community.

- Community concern noted in relation to possible operating model changes, particularly impacts such as price increases and anticipated decrease in quality of asset, customer service, or loss of access to the smaller community clubs due to the pursuit of commercial returns.
- Stakeholders think it's important that the Council is committed to engaging with community and ensuring a continuance of social investment to maintain health and wellbeing assets, now and for future generations.
- AQN is easily identified as a connection between community and Council, which could be lost under an out-sourced model.
- NSC noted their longevity of 60 years' close connection between the club and the facility and Council.
- Clubs represent a core proportion of the AQN membership, and many are long-standing – 30+ years or longer if they learnt to swim also at Nunawading as children; each spoke to the deep connection to the 50m pool and facility in their members' lives.
- The high-quality service provided by the current staff was commended.

Aqualink Nunawading Stakeholder Consultation

Key Theme: Council Considerations / Key Risks

9 The brief for the facility may require revision to align with other Council strategic and planning projects that crossover with this project and unlock opportunities to incorporate other assets.

- Forthcoming Council work and facility planning was noted including the Open Space strategy, Community Infrastructure Plan, Indoor Sports Plan, Master Plan for Forest Hill Reserve (includes AQN, Sapphire Willurah Park and Lernes Street Flood Retarding Basin), Sports Pavilion upgrade, Master Plan for Surrey Park (includes AQB).
- The current audit as part of the Community Infrastructure Plan may recommend that some facilities are no longer required as stand-alone facilities, and a redevelopment of AQN may present an opportunity to consolidate these within a revitalised facility and precinct.
- Open Space Strategy is close to completion which has relevance to sport and the Forest Hill Reserve including AQN.
- Also to consider the Urban Forest Strategy and targets around tree canopy cover; Integrated water management strategy including potable water usage.
- Suburban Rail Loop and North East Link need to be factored. Linking to State policies around urban densification and transport hubs may provide funding opportunities. WCC also involved in Plan East dialogue re Plan Victoria and the opportunities for a regional approach to urban planning with other councils through the Eastern corridor.
- This suggests the final brief for AQN may change over time once these plans are more progressed. Council should consider how to mitigate rework and minimise cost from re-design at a later time as more information becomes known. The timing needs to be balanced against risk of AQN failure / closure.

Key Theme: Opportunities and Demand

10 Belief that an improved mix of facilities will maximise return through key revenue drivers of membership, learn to swim, fitness programs and aquatic activities.

- Key revenue drivers will be membership, learn to swim programs, fitness programs and aquatics - these should be designed for maximum commercial opportunity.
  - Warm water, LTS, health and fitness/gym offer and facilities should be aligned to best practice in the market.
- Ability to attract kids into recreational swimming activities before, during or after they have learned to swim is important as this is a key revenue generator – 30-40% of sustainable revenue.
- Like-for-like rebuild will constrain commercial returns and limit the engagement with future commercial operators.
- Flexibility in gym and aquatic spaces is important to accommodate known needs and trends today as well as adaptability for future, unknown activities.
- New facility will be of huge community benefit, particularly for diversity and inclusion programs around aquatics and LTS.
- Some concern that the recent fall-off in visitation is lasting and a redevelopment won't attract new and increased visitation rates unless facility is expanded to accommodate greater needs. Similar new facilities suggest otherwise (Northcote, Brimbank etc)
- Revised café and merchandise areas will generate higher revenue.

Aqualink Nunawading Stakeholder Consultation - Key Theme: Opportunities and Demand

11 AQN needs to be welcoming and cater to current non/low-use visitor segments of the community including LOTE, disability, seniors, rehabilitation, families through diversified amenities and facilities.

- Non/low-use visitor segments need to be welcomed, catered to and programmed for: LOTE, disability, seniors, rehabilitation, families. Key facilities noted for these visitors include:
  - Warm water.
  - Recreation spaces indoor and outdoor; and
  - Improved café and amenities.
- Further discussion with non-user and LOTE communities including Sikh and Muslim sections of the community to understand future programming opportunities.
- Significant opportunities seen in recreational swimming to complement learner programs.
- Families including new mothers post-birth seen as important to target within the municipality to enhance health and well-being.
- Consistent marketing activities should be invested to grow membership and visitation, including collaborative activities across Council teams to target key non/low-use visitor segments.
- Extended opening hours to wet and dry facilities would be welcomed by the community and would encourage use by non-visitor segments.

12 There are opportunities to achieve better integration of sports and other clubs through incorporating club facilities, meeting spaces, collaborative programming and facility use.

- Water Polo, Triathlon and Orcas Masters would use shared club facilities at a new AQN including meeting rooms.
- Nunawading Swim Club (NSC) are open to further discussion about integration into a new facility vs separate building however maintaining independence of access and movement requires a solution and is seen as critical to NSC. Ground lease noted to 2033.
- NSC has high demand at junior levels, especially from the Chinese community. They are currently at maximum capacity of 260 swimmers, with demand for 350-400 if more space becomes available.
- NSC requests separate gym space to allow for tailored training away from public gym. Water Polo use NSC gym and meeting rooms for club activities.
- Water Polo would be interested to collaborate on alternative programming such as FlippaBall to aid LTS and water polo club growth. They are open to providing modified pool programs for different groups and abilities.
- Triathlon are open to greater integration with NSC for coaching and programs.
- All clubs see the potential of AQN as a regional hub attracting more training and would welcome its growth via competition standard facilities that can attract top level swimmers to the area while providing a facility that the general public can use.
- NSC may host more competitions locally vs hiring MSAC.
- Football facilities / change could be built onto the oval side.

Aqualink Nunawading Stakeholder Consultation - Key Theme: Opportunities and Demand

13 Support for an expanded footprint with optimised orientation to maximise functionality and to minimise the extent of facility closure. Recognition that some sacrifice of open space/trees may be necessary.

- Siting options across the whole site should be explored to find best outcome. However, minimizing loss of open space and removal of trees is important.
- Adjacent parkland and rezoning can be examined. Ensure uses are commensurate with the underlying zoning.
- Minimising disruption during construction is desirable but not imperative for all stakeholders. The long-term outcome is more important than continuity of service and will bring many benefits.
- LTS programs and intakes will take time to recover from full closure and a lack of capacity has been noted at other centres to cater to all new learners.
- Club viability becomes a larger risk over time from facility closure.
- Increased usage/road changes may trigger need for signalized intersections, road upgrades which needs exploration if access from Canterbury Road or Springvale Road is pursued.
- That only a local road access is available is concerning and becomes a risk if there is a major water main burst or other disaster. Also people coming out of Husband Road and turning right with the speed of traffic.
- Expanded traffic flow to the site from improved facilities and access will benefit revenue.
- Tree protection, replacement and shadowing on residences are considerations.
- Loss of open space will likely cause community concern. However, there is overall greater support for an enhanced health and leisure offering over a minimised loss of open space.

Appendix 1: Aqualink Nunawading Stakeholder Consultation - Nunawading Swim Club Key Feedback

A summary of key points raised in the Nunawading Swim Club (NSC) is included here as the primary sports club stakeholder for AQN with adjacent lease and club building impacted by the proposed redevelopment. They offer training and run learn-to-swim programs through their business, Just Swimming at AQN.

- NSC was founded in 1960.
- Currently has just over 600 members including 260 athletes.
- Staff team is 140 including for Just Swimming
- NSC employs 8 coaches plus 8-10 support staff for the swim club alone
- Other club facility users are the volunteer board, the volunteer staff, volunteer parent group etc
- Gym is 500sqm training facility used by athletes in conjunction with pool, managed by their in-house trainer
- They hold functions and social events at the club house (has kitchen, BBQs etc) for up to 300 people including use of their outdoor spaces
- Have their own change rooms and storage lockers for athletes
- Have an internal door that connects club house to pool deck directly.

Key Takeaways

- **Their independence from the Council facility is important to maintain** and the flexibility to access their grounds and building at any time (24/7) without Council liaison or to open up/lock up for them.
- The swim club requires sufficient lane space to accommodate their growing membership and programs which would be served better with at least 2 pools to balance community needs
- Having a connected but separate clubroom facility is crucial for the club's operations and sense of community – the dynamics are vital and part of its history and the area's.
- Additional training features are of interest, and growing AQN as regional centre
- A total closure of 2+ years during construction would severely impact the club's viability and would lose capacity and swimmers to other and interstate clubs as per Covid.

Topics summary:

Proposed Facility Features

- 50m pool plus additional 25m outdoor/indoor pool for flexible lane space
- Movable pool floors to convert between different configurations
- Dedicated learn-to-swim pool separate from main pools
- Potential altitude/heat training rooms for enhanced training
- Camera systems and timing equipment for training and to host competitions
- Safe, secure access between clubrooms and main facility – there is not safe egress from club to AQN main entrance – no pathway or lighting and via car-park only.
- Outdoor spaces could be activated with amenities like table tennis

Growth Potential and Demand

- Currently at maximum capacity of 260 swimmers, with demand for 350-400 if more space; high demand at junior levels, especially from Chinese community which drops off by secondary school
- Opportunity to host more club competitions if additional pool space available –and currently using MSAC three times per year, also a fundraising exercise for the club and pay $20k (estimate) per competition, hosting 750 swimmers per day – 50/50 am and pm; up to 400-500 people at a time including spectators.
- NSC think there is demand throughout SE of Melbourne for a regional venue that is hireable for competitions, which will require an additional pool for other recreational and lap swimmers.

Clubroom Integration

- Preference to maintain ownership/control over separate clubroom facility
- Slight separation from main building ideal for independent operations
- Open to discussion on this topic.

Construction Impact and Continuity

- Ideal scenario is phased construction to maintain some operations
- Total 2-year closure would severely impact all NSC club programs and operations
- COVID-19 resulted in $2M loss for club due to shutdowns.

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Appendix D - Gender Impact Assesssment

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Gender Impact Assessment

Project Lead (Person completing form)	Form completed by consultants Otium Planning Group Pty Ltd for LARS
Policy / Program / Service Name	Aqualink Nunawading
Policy / Program / Service Type	☐ Policy ☐ Program ☐ Service ☒ Project
Policy / Program / Service Status	☒ Development ☐ Review

Brief Policy / Program / Service Description:

Whitehorse City Council is proposing to redevelop the current aquatic and leisure facility known as Aqualink Nunawading. Located in Fraser Place, this facility is part of Council's network of leisure facilities within the municipality, including Aqualink Box Hill and Sportlink. These centres are central in providing facilities and spaces that promote social connections, and physical and mental health and wellbeing benefits to the community.

Since opening its doors in 1960, Aqualink Nunawading has provided a family-friendly facility for the local community.

The facilities currently on offer at Aqualink Nunawading include:

- 50m, 8-lane heated indoor pool
- Family leisure pool with beach entry and water play equipment
- Spa, sauna and steam room
- 400m2 Gym
- Group Fitness program rooms
- Café
- Foyer/Reception
- Amenities and change facilities
- Administration/Staff areas.

HPE Content Manager Folder:	
Legislative & Risk Implications	The Gender Equality Act 2020 requires council to promote gender equality in its policies, programs and services that impact the public and complete gender impact assessments on policy, program and services with a significant community impact.
Supporting Plans/Documents	

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Plan *Examples: Procurement Plan, Communications Plan, Risk Management Plan ect.*	Responsible Person	Current status		Comments
		Complete	Under development	
Whitehorse Recreation Strategy 2015-2024				
Municipal Public Health and Wellbeing Plan 2021-25				
Disability Action Plan				
Diversity Action Plan				
Family Violence Prevention Action Plan				
Gambling Policy				
Early Years Plan				
Healthy Aging Plan				
Municipal Youth Plan				

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Gender Impact Assessment

Definitions used in this document:

Gendered Data: Refers to data that is disaggregated by gender, meaning that it is broken down by men and women or other gender identities (sex may also be used in lieu of gender data availability).

Analyse: Analysing gendered data is an important step in identifying potential differences or inequities that may exist within a policy, program or service.

Data: Facts, figures, statistics, or other information used to support analysis, decision-making, or evaluation.

Intersectional Identities: Refers to the idea that individuals have multiple identities that intersect and interact with each other to shape their experiences and opportunities. In the context of a gender impact assessment, it is important to consider how different identities such as race, ethnicity, religion, disability, age, and sexual orientation intersect with gender to create unique experiences and challenges for different groups of people.

Before you start the gender impact assessment:

> Watch this 4 minute video on to understand what a gender lens is and how you can apply it.

This will help you to get in the mindset of how policies, programs, services impact people differently and why applying not just a gender lens, but an intersectional lens is essential in their development.

1. The Where, Why, How and Who of Gender Impacts.

1.1 In this step you will:

Identify **where** this policy, program or service could impact the different areas of a person's life.

> Identifying "the where" will help you to draw out any inequality that could be experienced. This step will assist in narrowing down your data search in step 2. It will also assist you to make appropriate recommendations to mitigate these impacts in step 4.

Tick all that apply:

- ☒ Economic (eg. Income, Expenses, Unpaid Labour, Employment)
- ☒ Social and Community (eg. Support Systems, Isolation, Participation, Discrimination)
- ☒ Neighbourhood and Built Environment (eg. Housing, Transportation, Shopping)
- ☐ Natural Environment (eg. Parks, Open Spaces, Air Quality, Clean Water)
- ☐ Education (eg. Literacy, Language, Early Childhood)
- ☒ Health (eg. Risk Factors, Physical, Mental, Diet, Exercise)
- ☐ Safety (eg. Crime, Intimate Partner Violence, Family Violence, Sexual Harassment)

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1.2 In this step you will:

Consider **why** and **how** this policy, program or service could be influenced by different gender factors.

This step will assist you to understand how the policy, program or service may be influenced by broader social norms or gender roles in society. It will also help you to think about why a policy, program or service may benefit some people more than others.

Tip: Watch this 3 minute video to understand why and how gender can effect a person's life experiences.

Differences in **personal** gendered factors:

- Knowledge
- Expectations
- Attitudes
- Needs

Differences in **environmental** gendered factors

- Social Norms
- Access
- Influence

Differences in **behavioural** gendered factors:

- Skills
- Practise
- Self-efficiency

1.3 In this step you will:

Identify **who** might be impacted differently by this policy, program or service because of their gender.

This step will inform whose needs you must consider when developing the policy, program or service.

Tip: You can watch this 5 minute video on understanding how genders can be impacted differently.

Tick all that apply:

☒ Women ☒ Intersex ☒ Non-Binary

☒ Men ☒ Transgender ☒ Other:

1.4 In this step you will:

Identify any other intersectional identities that could be impacted differently by the policy, program or service.

This step will inform the intersecting identities that will further impact a person's experience of this policy, program or service.

Tip: You can watch this 1 minute video to understand what intersectionality is.

Tick all that apply

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☒ Aboriginal or Torres Strait Islander
☒ Religion
☒ Age
☒ Socioeconomic status
☒ Disability or people with lived experience of mental illness
☒ Sexual orientation
☒ Culture
☒ Ethnicity
☒ Language
☒ Sex

2. Collect the Data

2.1 In this step you will:

Using the 'Where, Why, How and Who', identify what data you could look at to understand why women, men and non-binary people might experience this policy, program or service differently. It is important for this step that you only focus on **gendered data**.

Tip: This could be from internal data, desktop research and/or stakeholder engagement. You can find gendered data from the places like the ABS, previous versions of the project, surveys, research, examples from other LGA's ect.

For example: If a policy impacts on the **natural environment**, you may wish to look at data on differences in **mobility needs** for different genders and include the following data:

In 2021, 9.3% of the City of Whitehorse's female population has arthritis. This compares to a significantly lower percentage of males which in 2021, only 4.6% of the City of Whitehorse's male population had arthritis.

The following tables shows the population breakdown for girls and women in the City of Whitehorse. We note that the statistics provided are binary.

TABLE 1: POPULATION BREAKDOWN

Council	Total 2021 Pop.	Total 2041 Pop.	Total Pop. Change %	Female Pop. 2021	Female Pop. 2021 %	Female Pop. 2041^	Female Pop. Diff.	Female Aboriginal Pop. 2021 >	Female CALD Pop. 2021 (Born OS) >	Female Active Years (5-49) Pop. >
Whitehorse City Council	169,346	216,317	27.70%	87,430	51.60%	111,620	24,190	269	36,283	50,154

^ If current proportion of women and girl's is maintained.
> If current proportion of target group; and current proportion of women and girl's is maintained.

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In 2021 46.4% of females and 33.5% of males earned less than the minimum weekly wage ($0-$649)
ABS Census of Population and Housing 2016

Gendered groups in society broadly are at differing risks of health concerns, notably mental health conditions.

- 2 to 3 times more women than men experience mental health problems like depression and anxiety.
- Harmful stereotypes about sexuality and body image play a part in this.
- The gender pay gap and inequality at work puts women at higher risk of physical and mental illness.
- Gender-based violence and harassment affect how and when women access and use public services and spaces.
- Women have less time and money to participate in sport and recreation
- Men are less likely to go to the doctor or seek help when they need it.

Gender Equality and Health and Wellbeing – Victorian Government March 2021

Pools and gyms are also often not perceived as inclusive spaces for women

- Fear of judgement by others, racism and discrimination stops many women from being physically active in public.

Gender Equality and Health and Wellbeing – Victorian Government March 2021

Research demonstrates that sport and recreation is an identified priority setting

- Experience suggests these are settings through which primary prevention approaches can be effectively targeted, especially to men and boys. There are features associated with some sporting environments that increase the risk of the perpetration of violence by men associated with them. This suggests that there is an important role for education and organisational development initiatives to prevent violence against women in such environments.

Preventing Violence before it Occurs

Aquatic facilities' labour force is predominantly women and casual employment

- 73% of staff are female
- 46% casual employment

Lifesaving Victoria- Victorian Public Pools State of Sector report 2021-22

Programming of (aquatic) facilities has a significant impact on differing demographics ability to participate

- Despite the benefits of physical activity for women, their participation rates in sport and recreation are lower than men's.

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- There are fewer opportunities for women to participate in organised sport. A programmed space is taken up by historic agreements and/or female facilities (such as change rooms) are not available

Gender Equality and Health and Wellbeing – Victorian Government March 2021

Men are at higher risk of drowning in public pools than women or gender diverse people.

- 82% of fatalities in public pools (July 2000-June 22) were male.

Lifesaving Victoria- Victorian Public Pools State of Sector report 2021-22

In 2017 in Whitehorse,

- 20.6 per cent of people experienced anxiety or depression; 23.6 per cent were female and 17.2 per cent were male.
- Over 75 per cent of mental health problems occur before the age of 25.

Additionally,

- 52.6 per cent of people do not meet either the fruit or vegetable consumption guidelines
- Men are less likely to meet the dietary guidelines for healthy eating than women.
- 46.9 per cent of adults in Whitehorse were overweight or obese and, while this is lower than the Victorian average of 50.8 per cent, it is evident that a significantly large proportion of the population is faced with a higher risk for many chronic diseases such as cardiovascular disease and type 2 diabetes.
- 46.6 per cent of people in Whitehorse did not obtain sufficient exercise for good health, with 23.3 percent spending eight or more hours sitting on an average weekday.

City of Whitehorse – Municipal Public Health and Wellbeing Plan 2021-25

In 2017 in Whitehorse:

- 52.6 per cent of people do not meet either the fruit or vegetable consumption guidelines
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- 46.6 per cent of people in Whitehorse did not obtain sufficient exercise for good health, with 23.3 percent spending eight or more hours sitting on an average weekday.

City of Whitehorse – Municipal Public Health and Wellbeing Plan 2021-25

A survey relating to The Fair Access Policy found that 29% of committee members were female, dropping to 19.5% at executive level within Sports Clubs in the City of Whitehorse. This is well short of State Sporting Associations requiring 40% of boards to have female representation to gain State Government funding.

Covid-19 has shown that women are disproportionately more affected by economic impacts than men, highlighting existing inequalities and issues

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Nenad – Demographic Consultant .id February 3 2022

The World Health Organisation recently conducted a study into the *Barriers and Facilitators of Physical Activity Participation in Adolescent Girls.* The report was released in March 2022 and found:

- Participation of girls between 10 and 19 is in decline, and there is urgent action needed to reverse this trend to safeguard their long-term health. "Globally, around 85% of girls do not meet the WHO recommendations of at least 60 minutes per day of moderate to vigorous physical activity. Also, the participation of girls in exercise and sports declines throughout adolescence.
- WHO identifies providing for physical exercise (PE) in the school curriculum but also before, during and after school day. A whole-of-school approach that links the school curriculum with the broader school environment and local community programs can increase the participation of adolescent girls.

2.2 In this step you will:

Look at what data exists to support why different **intersectional identities** might experience this policy, program or service differently.

For example: If a policy impacts on the **social and community**, some **religious groups** may require specific spaces or accommodations for prayer or religious ceremonies. To support this, you could look at the percentage of residents who identify as members of different religious groups and include the following data:

In 2021, 1.6% of the City of Whitehorse nominated Islam as their religious affiliation, 3.8% nominated Hinduism and 5.4% nominated Buddhism.

2021 ABS Census data from profile.id:

In 2021 41.5% of people in the City of Whitehorse were born overseas, compared with 35.7% in Greater Melbourne. China accounted for 13% of Country birthplaces, followed by India (3.9%) and Malaysia (3.3%).

40.5% of people used a language other than English at home, with Mandarin accounting for 16.2%, followed by Cantonese (5.5%).

In 2021, 9,374 people (or 5.5% of the population) in the City of Whitehorse reported needing help in their day-to-day lives due to disability. This was a percentage increase from 2016.

Among people in low income households in the City of Whitehorse, the most common long-term health condition was Arthritis, while 38.5% of low income households reported one or more health conditions, a lower rate than Greater Melbourne.

Historically, aquatics and sporting facilities have been avoided by many LGBTIQ+ community members.

- 80% of all sports participants in Australian have experienced or witnessed discrimination on the basis of sexuality

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- 87% of gay males and 75% of lesbians are completely or partially in the closet while playing youth sports
- Over 80% of people have either witnessed or experienced homophobia in sport
- Sport is considered hostile and unwelcoming to young people with diverse sexualities and genders
- Gender norms and stereotypes mean health outcomes for LGBTI people are often worse than for non-LGBTI people.
- Background, disability, location and economic status also impact health.

(VicSport LGBTIQ+ Summary)

The following barriers to women and girls, transgender and gender diverse people participation in sport and active recreation for different life stages:

- Girls aged 0-14 years - Being the wrong age for available activities, lack of confidence and don't like sport or physical activity.
- Women aged 15+ - Not enough time/too many other commitments, cost, fear of being judged and self-consciousness about appearance, body image, skills and poor health and injury.

AusPlay 2021

There are certain groups of women that encounter higher levels of disadvantage and discrimination, as well as additional obstacles to achieving good health and well-being. These groups include Aboriginal women, immigrant and refugee women, transgender and gender-diverse people, women facing socio-economic challenges, and women with disabilities.

(Women's Health East, 2021)

Gendered groups in society broadly are at differing risks of health concerns, notably mental health conditions.

- More than half of all transgender people, a quarter of males and 10% of females avoided playing sports they would like to play because of their sexuality or gender identity

Proud to Play Research Summary

Gendered groups in society broadly are at differing risks of health concerns, notably mental health conditions.

- 37% of LGBTIQ+ people aged 16 and over reported being diagnosed or treated for a mental health disorder in the past three years

(VicSport LGBTIQ+ Summary)

We acknowledge that 'intersectionality' can impact participation in sport and active recreation. Intersectionality refers to the ways in which different aspects of a person's identity can expose them to overlapping forms of discrimination and marginalisation. For example, an immigrant woman also identifies as a person with a disability and is more likely to experience discrimination.

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- Women and girls, transgender and gender diverse people with a disability participate less than all women and girls, transgender and gender diverse Australians. The latest Ausplay Survey 2021 found 70.2% of women (over 18 years) with a disability participate at least 1x per week (compared to 84.1% of other Australian women) and 53.7% three times per week (compared to 67.9%). There were 21.3% that did not participate in any sport or physical activity (compared to 9.1%). Limited opportunities to participate in a supported and modified way is restricted participation by people with a disability. Providing adaptive programs and services and accessible sport and recreation facilities are key ingredients to improving participation by women and girls, transgender and gender diverse people with a disability.
- The Proud to Play Report found 80% of all sports participants in Australia have experienced or witness discrimination based on sexuality. Also, over 50% of all transgender people avoided playing sports they would like to play because of their sexuality or gender identity. LGBTIQ+ communities face significant barriers to accessing essential inclusive services and supports in the community including in sport and active recreation environments. This experience often leads to a fear that this will be experienced in other life settings like within a sports club or fitness program. Providing welcoming and inclusive environments to play that considers an intersectional approach is critical to encouraging greater participation by the LGBTIQ+ community.

Those living with ASD have reported:

- Families who have children with disabilities identify swimming as their most popular physical activity and overall favourite activity.
- Children with ASD are 106 more times likely to die from drowning compared to other children
- ASD is the largest % of primary conditions on approved NDIS Plans

Autism Swim, 'Autism and drowning – the underreported issue' 2019

Further Information and Engagement

2.3 In this step you will:

- Identify what, if any further information is needed?
- Consider if you can incorporate this missing information into your engagement plan?

Consultation and engagement ensures that the voices and perspectives of all members of the community, including different genders and intersectional groups, are heard and taken into account.

Tip: The intranet hosts resources for how engagement should be used as well as the Strategic Engagement and Communications Plan template.

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For example: If the previous steps have highlighted a lack of information on gender specific experiences for non-binary people in leisure and recreation, you may look at 'environmental' gendered factors and include a question on barriers and opportunities to access leisure facilities.

Conducting a Gender Impact Assessment Survey with community would capture information about expectations, level of understanding, attitudes and beliefs for gender equality in sport and active recreation.

Targeted focus group workshops with key stakeholders. This could include sports clubs and advisory or representative groups for specific communities such as LGBTIQ+, youth, disability, ageing, Aboriginal, CALD, etc.

These activities may form part of any activities conducted if the business case progresses.

Continued review of municipal demographic data at a detailed level with a view of understanding intersectionality trends impacting women and girls, transgender and gender diverse people participation in sport and active recreation.

3. Analysis

3.1 In this step you will:

- Analyse the gender impacts identified
- Identify challenges and opportunities for this policy, program or service

For example:

Gendered Impact / Challenge: Women and girls may have caregiving responsibilities, such as taking care of children or elderly family members, which can limit their ability to travel longer distances or to use certain modes of transportation.

Opportunity: Therefore, they may need to have access to transportation that is reliable and flexible, and that accommodates their caregiving responsibilities.

Impact/Challenge: Female dominant labour force in aquatics.

Opportunities:

- Ensure CPTED principles are applied to the design of the new facility with clear and safe access for those working opening and close shifts ie. Avoid creating blindspots
- Operators of the facility to have annual gender employee reporting, gender equity recruitment policies etc
- Rostering to address caregiving responsibilities
- Providing opportunities for professional development and pathways for career progression enhancing women's contribution to the workforce

Impact/Challenge: Community members living with a disability.

Opportunities:

- Layout and individual components of the new facility to cater to people living with disabilities (ie. application of Universal design principles)

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- Programs and services within the facility to cater to people living with a disability (ie. Learn to swim – access and inclusion program, Allied Health services, Arthritis / Stroke programs etc)

Impact/Challenge: Increased mental health conditions for LGBTIQ+.

Opportunities:

- Welcoming and inclusive facilities (all gender change facilities), signage, and programs to increase participation of LGBTIQ+ community in recreation, sport and health and wellbeing programs.
- Staff to undertake training for inclusive language, and programming (ie. gym exercises for those wearing bindings etc)

Impact/Challenge: Socio-economic status impacting ability to participate in programs

Opportunity:

- Council endorsed fees and charges for the facility should not hinder access to new facility for both members and casual users. The fees charged should be equitable, and there should be discounted rates for people who are vulnerable and/or experiencing hardship.

Impact/Challenge: Broadly, low participation rates of women and girls in sports, health and wellness programs due to lack of confidence.

Opportunities:

- Components within the new facility should be flexible and allow for a broad range of programs to engage with women and girls in an aquatic environment.
- Learn to swim program and pathway to elite aquatic programs should be engaging for young girls, with role models as teachers/coaches to build confidence in swimmers and promote continued participation throughout teens years and beyond.
- Showcasing women in leadership roles, facilitating a pathway that encourages future leaders.
- Representation of women on Committees as per 'Change our Game Initiative'

Impact/Challenge: Women and girls, transgender and gender diverse people with a disability participate less than all women and girls, transgender and gender diverse Australians.

Opportunity/Challenge:

- Providing adaptive programs and services and accessible sport and recreation facilities are key ingredients to improving participation by women and girls, transgender and gender diverse people with a disability.

Impact/Challenge: Increasing reports of violence against women

Opportunity/Challenge:

- As there are some features associated with organised sporting environments that increase the risk of perpetration of violence by boys and men associated with them, a targeted approach to

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education and organisational development initiatives to decrease this risk should be considered.

Impact/Challenge: Increased risk of chronic disease, including cardiovascular disease and type 2 diabetes.

Opportunity/Challenge:

- Facilitating more opportunities for people to be more active, more often, through welcoming and inclusive spaces and the diversity of programs and services offered.
- Promotion of healthy eating programs and choices through Allied Health services and café offerings, aligning to the Victorian State Government's Healthy Choices Policy (traffic light system).

4. Recommendations

4.1 In this step you will:

List your recommendations for how the policy, program or service could be improved to further meet the needs of:

- Different genders and/or promote gender equality.
- Intersectional considerations

Below are two recommendations that all policies, programs and services should include (where appropriate).

Planning frameworks provide the following principles that will guide the design of future sport and recreation facilities, programs and services in general. These should be considered and incorporated into the Guiding Principles and Design and Facility Objectives for the Aqualink Nunawading project:

- Accessible and Inclusive: will be universally designed and inclusive, fostering participation in sport and active recreation by all our community, across all life stages, genders and cultures.
- Diverse and Equitable: will offer a diverse mix of facilities, programs and experiences. The council will provide an equitable distribution of sport and active recreation precincts across the municipality and to girls' and women's sport and recreation.
- Safe and Welcoming: Facilities and programs are designed to be visible, open and welcoming to the community, creating a safe place for girls and women to participate.
- Multi-Use: Facilities will be multi-use, offering several activities, programs and experiences for users and enabling access to girls and women's sport and recreation.
- Connected: Participation opportunities are connected to our communities, including our unique natural environments.
- Sustainable: Facilities will be designed and operate efficiently, whilst being well managed and maintained.

The following reference documents and links are provided for guiding design principles:

- Creating Places for People

Whitehorse City Council

Gender Impact Assessment

- Making Places for Girls
- Healthy Active by Design
- Crime Prevention through Environmental Design
- Universal Design Principles
- Female Friendly Sports Infrastructure Design Guidelines
- Monash XYX Lab.

Examples of specific recommendations for the Aqualink Nunawading project are:

Planning/Design Phase

- The new facility should use inclusive and non-gendered language that ensures inclusion and consideration for all community members and avoids perpetuating harmful stereotypes or reinforcing the gender binary. Therefore, gendered language like "his or hers" should be removed.
- Individuals from non-English-speaking backgrounds may face language barriers that limit their ability to access information on the project itself, or to participate in community engagement opportunities. Therefore, this project should strive to provide information in multiple languages and to offer interpretation services for community engagement events.
- Conduct targeted community engagement to understand expectations and requirements from the community as outlines in 2.3.
- Consideration of design elements within the new facility to promote inclusive programming, for example, aquatics change village with a range of all gender/accessible/family cubicles to promote safe, inclusive and welcoming facilities (not specifically male/female areas), remove visibility/include blinds in areas for women's only programming, spread of equipment throughout gym to minimise lack of confidence of women entering area.
- Design and layout of facility should ensure intuitive pathways for all users and community members, with consideration of user experience and best practice according to LifeSaving Victoria Guideline for Safe Pool Operations (Facility Design) and Universal Design Principles. Consideration of proximity of car park to entrance of facility, lift (if required to 1st floor) location within facility, warm water pool and change facility locations, equipment within gym to cater for all abilities. Inclusive multiuse spaces that promote privacy for those in need (ie. Feeding parents, quiet/prayer, low sensory) should be considered.

Management Model:

The development of the tender documents and specification should include requirements of:

- Deidentified annual employee gender reporting, across levels of role, and an assessment of any trends of findings
- An element of contract performance is assessed on the delivery of services meeting the outcomes in the Council's Municipal Health and Wellbeing Plan, including relevant connected social action plans (CALD, Gender Equality, Disability etc).
- An element of contract performance is assessed on the social impact and benefits generated, connected to the outcomes sought in the Council Plan.
- Commitment to implementing the principles of the ARV "Inclusive Aquatics and Recreation" guide (or a comparable internal developed program).

Whitehorse City Council

Gender Impact Assessment

- Any Swim School program proposed, to include a strong Access and Inclusion program.
- A localised Community Engagement plan, with examples of programming that will be tailored and delivered to meet Councils broader aims and goals.

Evaluation of external management companies should include their experience/commitment to:

- Tailored community programming to meet the needs of differing genders and cultural groups.
- A history of successful partnerships with local community and council to achieve social outcomes, particularly those that support gender equality.
- A management team, board and organisation that reflects the female industry demographic.
- Funded pathways to employment for disadvantaged communities for whom the cost of obtaining entry-level qualifications is a barrier.

Operational Phase:

- Staff working in the new facility should have adequate training to enable positive interactions with the community and eliminate bias against Aboriginal and Torres Strait Islanders, CALD, people with disabilities, low socio-economic, women and girls and LGBTIQ+ community.
- Specific programming of components within the new facility (aquatics, gym) that allow for comfortable experiences for women and girls, transgender, and people with disabilities (women only sessions, transgender and allies sessions, low sensory hours, etc.) to increase participation by these cohorts.
- Website, app for online sales and program registrations, printed programming materials should include diverse photographs and also cater for individuals from non-English-speaking backgrounds who may face language barriers that limit their ability to access information on the services available within the facility. Therefore, the Operators of the facility should strive to provide information in multiple languages and to offer interpretation services for the community.
- Forms and administrative procedures to use inclusive language along with LGBTIQ+ inclusive language guide.
- Public advertising and marketing that does not support harmful stereotyping or shaming of men, women, or people of other genders. (Evidence of using "This Girl Can" marketing messaging guidelines or similar)
- Educational programs and café offerings to support healthy eating choices to minimise chronic disease diagnosis, such as cardiovascular disease and type 2 diabetes. Alignment to the Victorian State Government's Healthy Choices Policy (traffic light system).

Reference List

Please list all information cited.

All information cited throughout paper

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Whitehorse City Council

Gender Impact Assessment

Next steps:

1. Save your completed GIA in HPE Content Manager folder SF22/1031
2. Please email your completed GIA to the Gender Equality Program Advisor.
3. Apply the recommendations to your policy, program or service.

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Ontoit.

Appendix E - Concept Design

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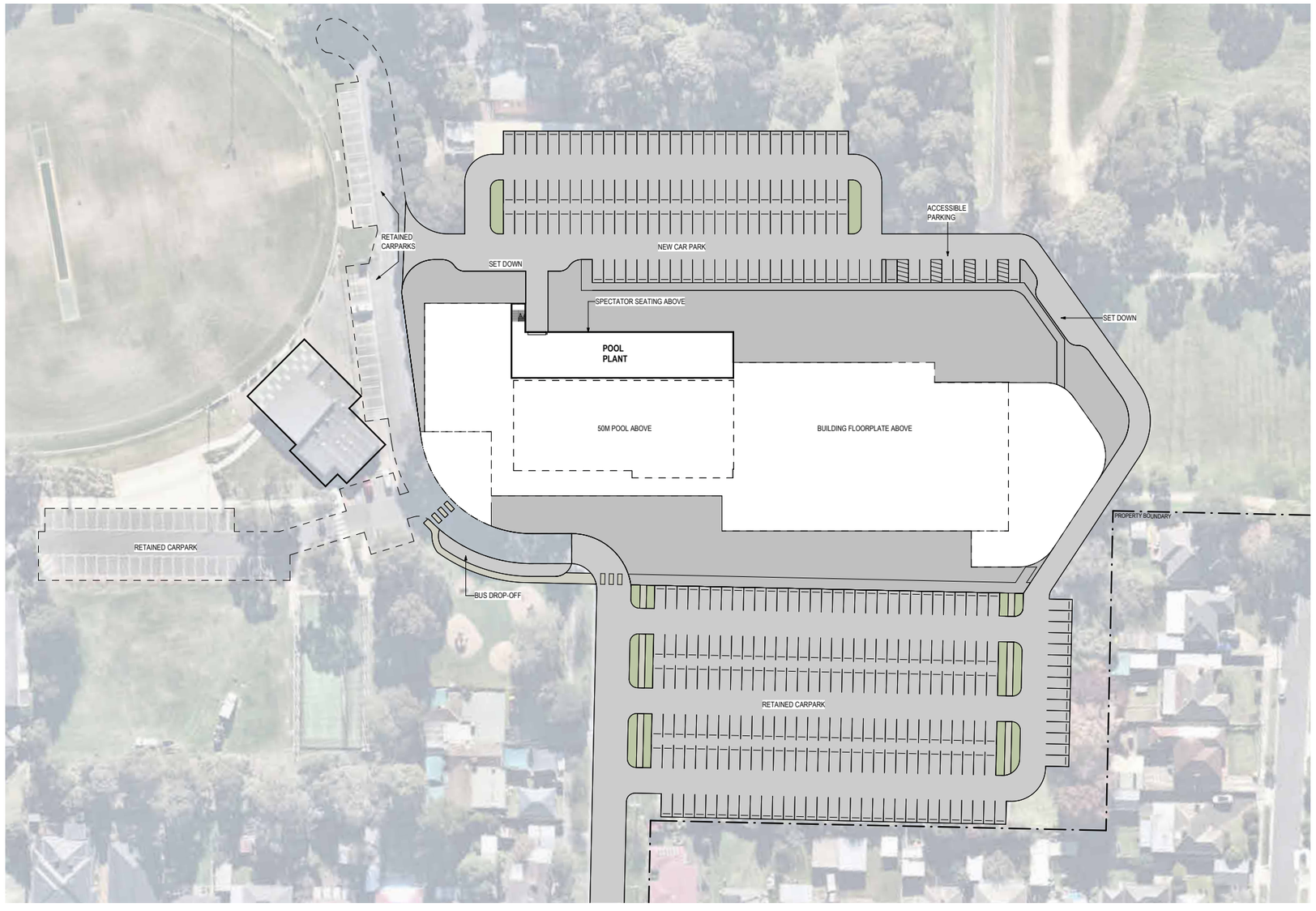

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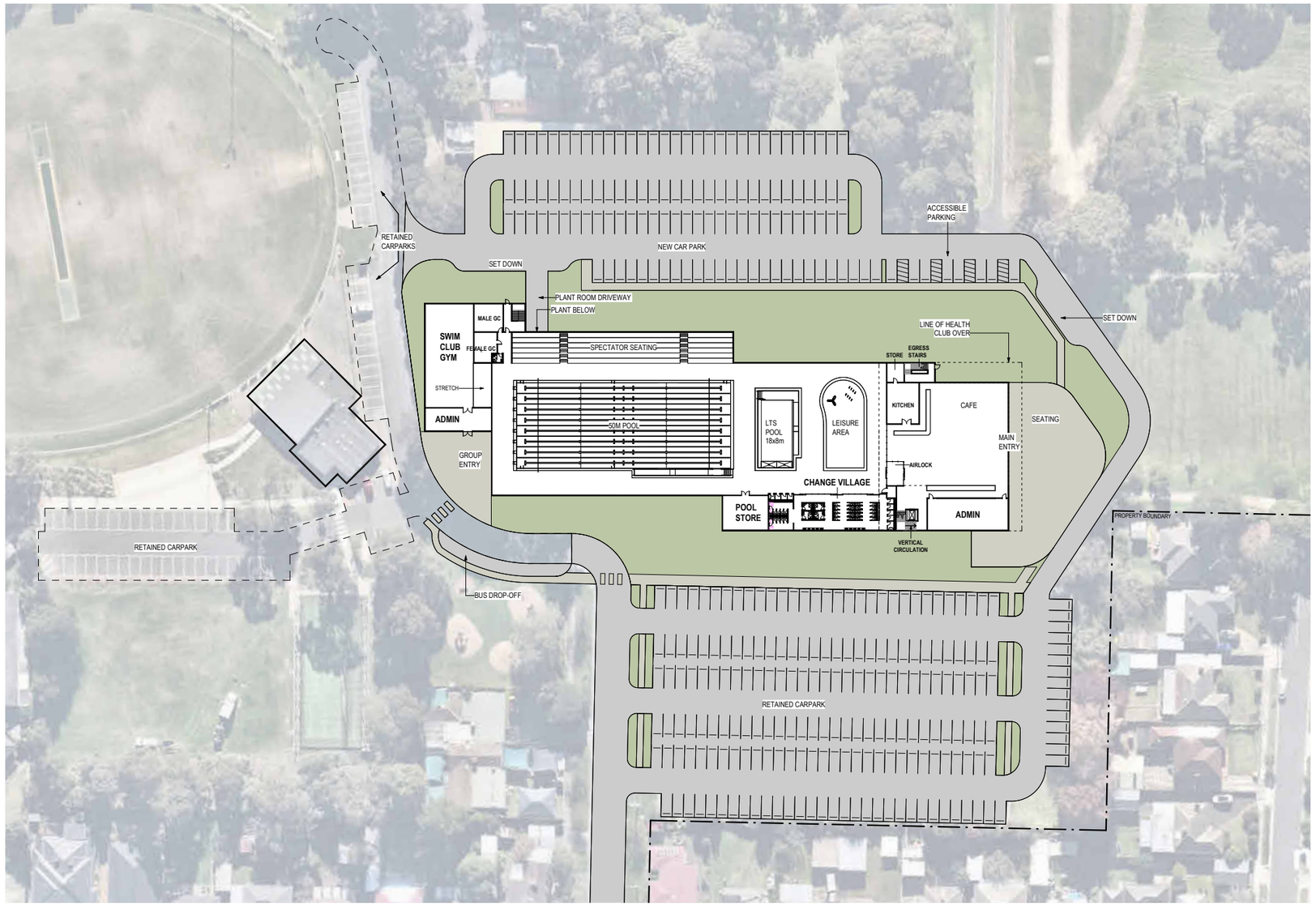

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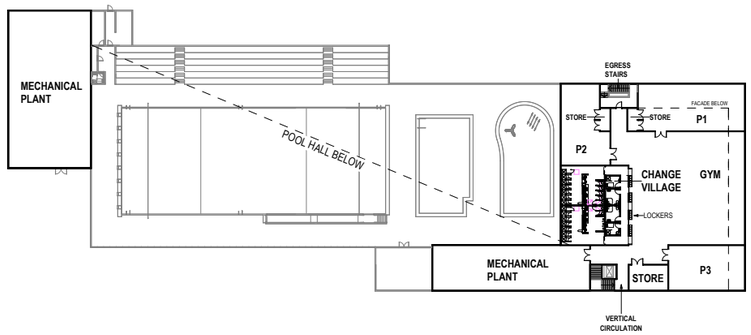

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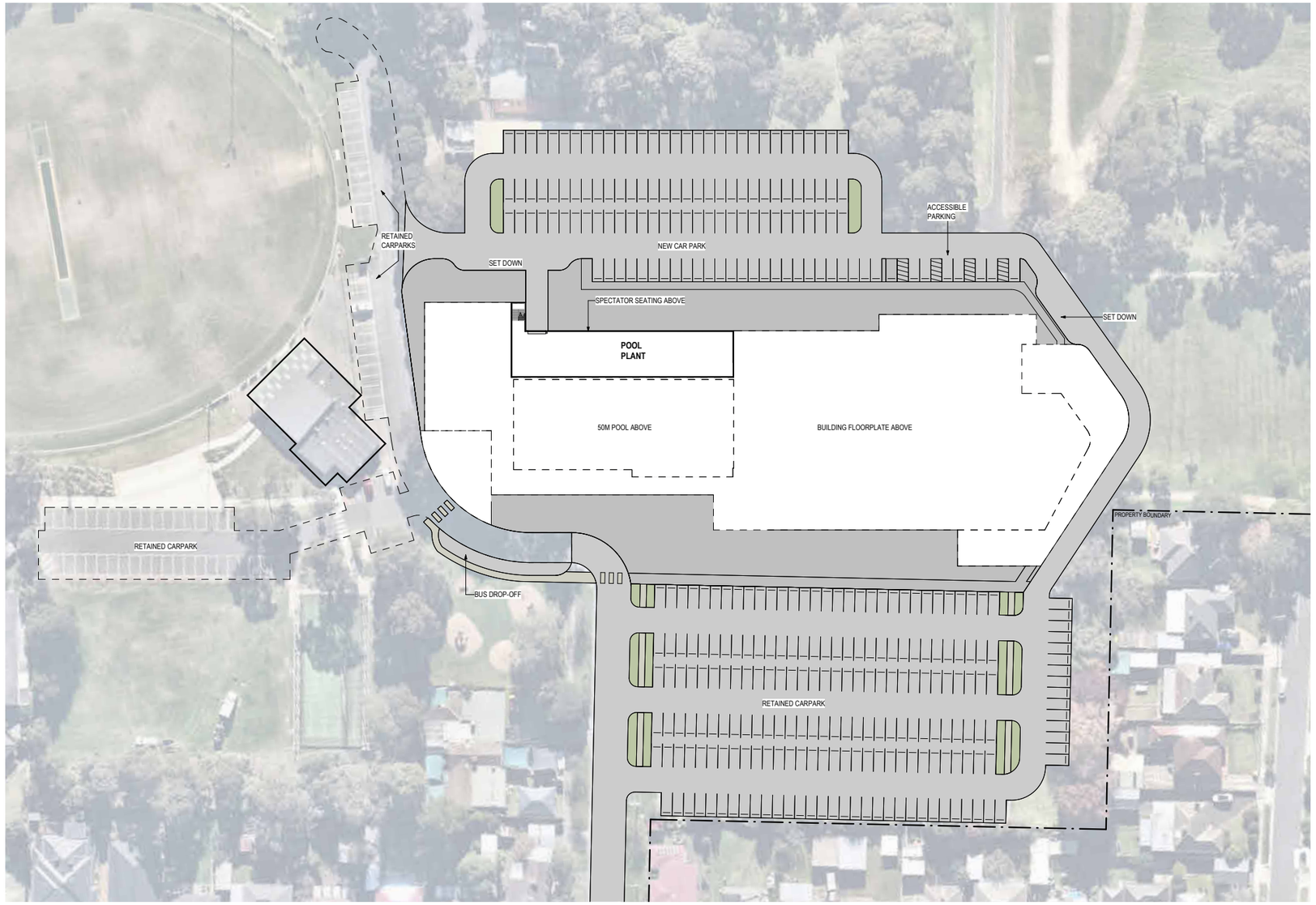

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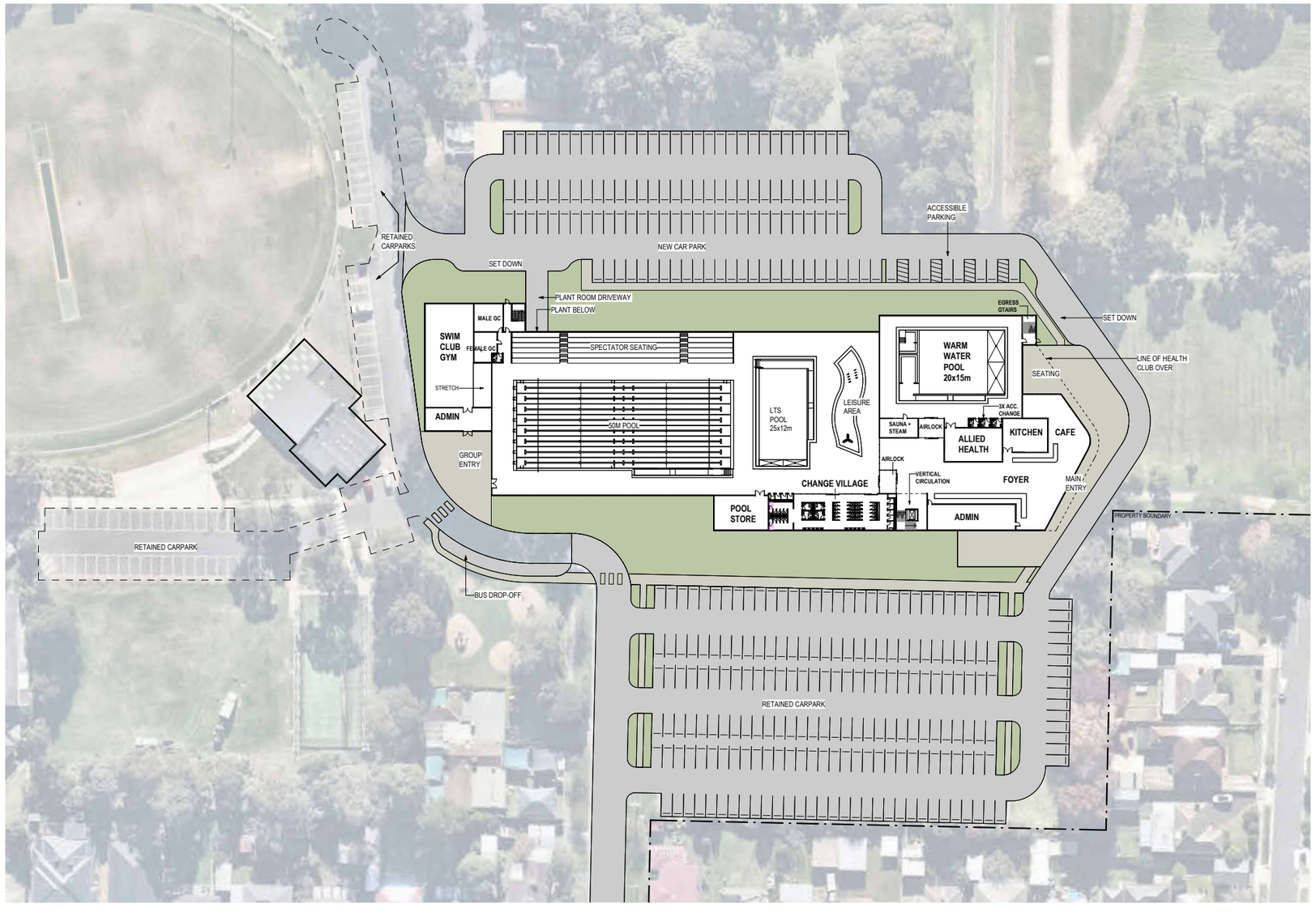

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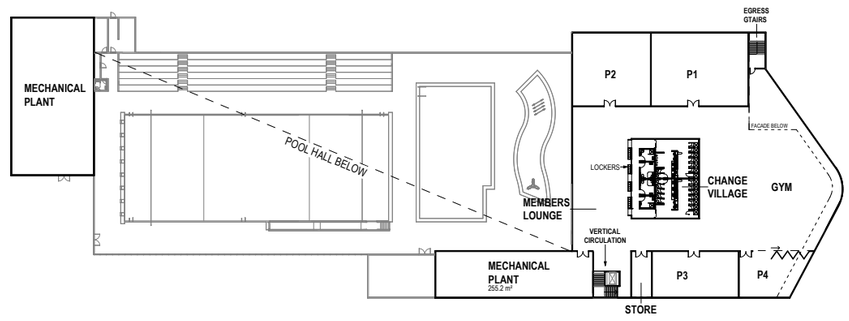

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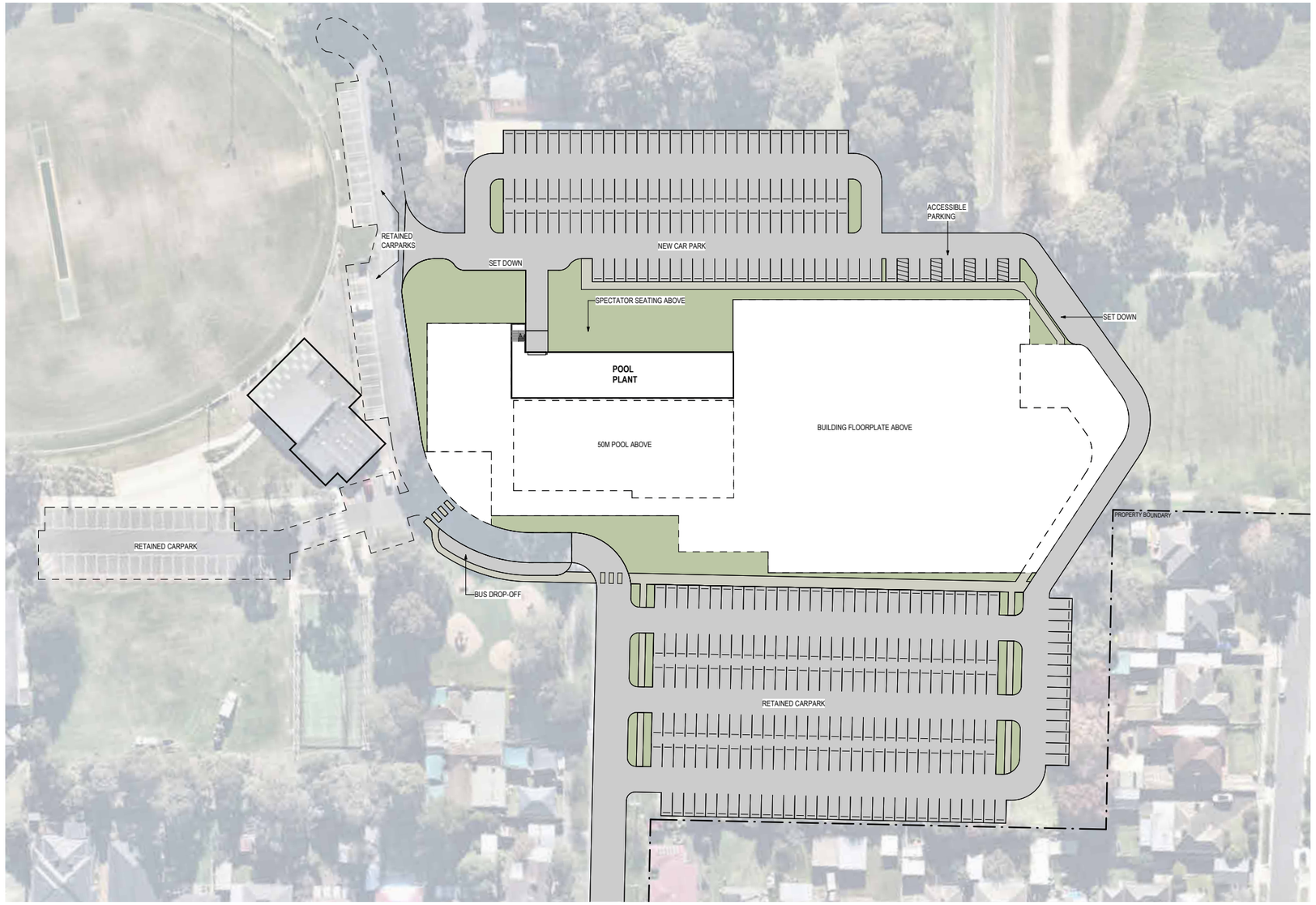

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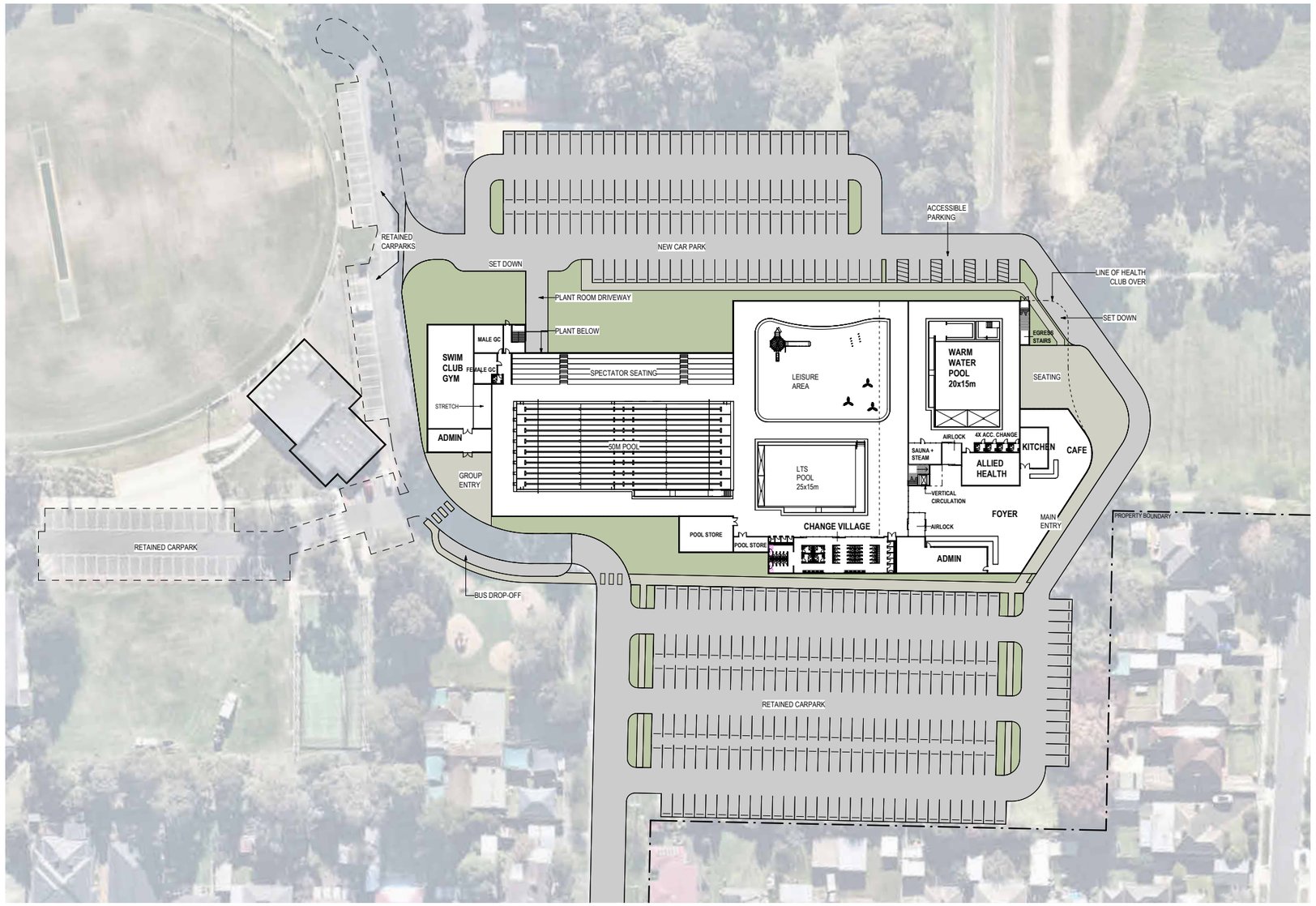

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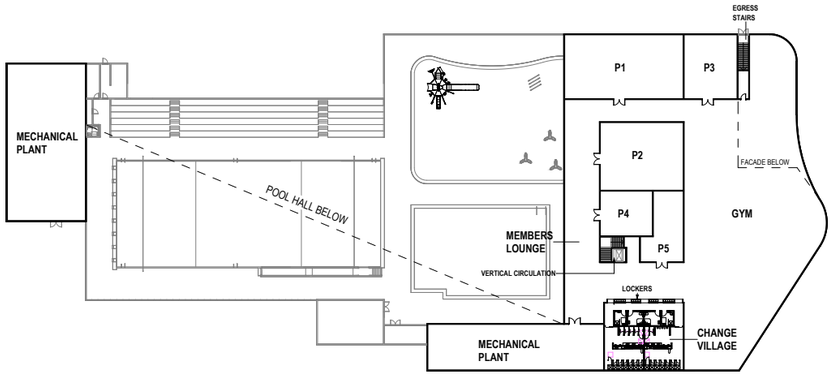

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Aqualink Nunawading Business Case

Site Summary Report
Building Services, Structure, Civil

Prepared for: Ontoit

Project No: MEL4107
Date: 24 May 2024
Revision: 01

ADP Consulting : Engineering

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

ADP Consulting : Engineering

Project:	Aqualink Nunawading Business Case
Location:	Aqualink Nunawading - 6 Fraser Place, Forest Hill
Prepared by:	ADP Consulting Pty Ltd Level 13, 55 Collins Street Melbourne VIC 3000
Project No:	MEL4107
Revision:	01
Date:	24 May 2024

Rev	Date	Comment	Author	Signature	Technical Review	Signature	Authorisation & QA	Signature
01	15/5/24	Issue for comment	MN/RP/SS/S/SB		LS		CH	

Project Team

Client	City of Whitehorse
Architect	Co.Op Studio
Project Manager	Ontoit

Other

ADP Consulting : Engineering

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1. Introduction

Aim of Report

ADP Consulting have been engaged and briefed by Ontoit Project Managers to undertake a review of the existing services, structure & civil condition and infrastructure at Aqualink Nunawading Aquatic Centre. This was to consider if the existing facility can be upgraded to achieve the Council's desired outcomes for a new Aquatic Centre, as laid out in the **Aqualink Nunawading Facility Assessment and Options Review** dated 25-07-23.

The building services included in this report are:

1. Electrical services
2. ICT services
3. Water Services
4. Sewer Services
5. Fire Protection Services

It is intended that this is a qualitative assessment only based on visual inspection and review of the provided reports.

Figure 1 – Site Extents

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Limitations

This report has been produced based on a non-intrusive site walkthrough and recommendations are based on the available information obtained and the existing site conditions observed. It does not necessarily constitute a full and complete analysis or provide pathways for more robust engineering solutions.

As-Installed documentation was not available for the preparation of this report.

Numerical assessment has been excluded from this assessment.

Sources of Information

This report is based upon the site walkthrough carried out on 25/03/2024, the **Engineering Services Assett Review** dated 03.03.2023, prepared by *BRT Consulting Engineers* and the **Structural Conditions Report** dated 03/03/2023, prepared by *Creo Consultants*.

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2. Existing Electrical Services

The following section consists of an overview of the existing electrical services at Aqualink Nunawading - this is based on a non-invasive physical inspection and covered the following systems and subsystems:

- Substation
- Main Switchboard
- Electrical infrastructure - Distribution boards and cabling
- Essential power provision
- Solar PV
- Lighting and lighting control
- Emergency and exit lighting
- Fire Detection System
- Communications
- Security

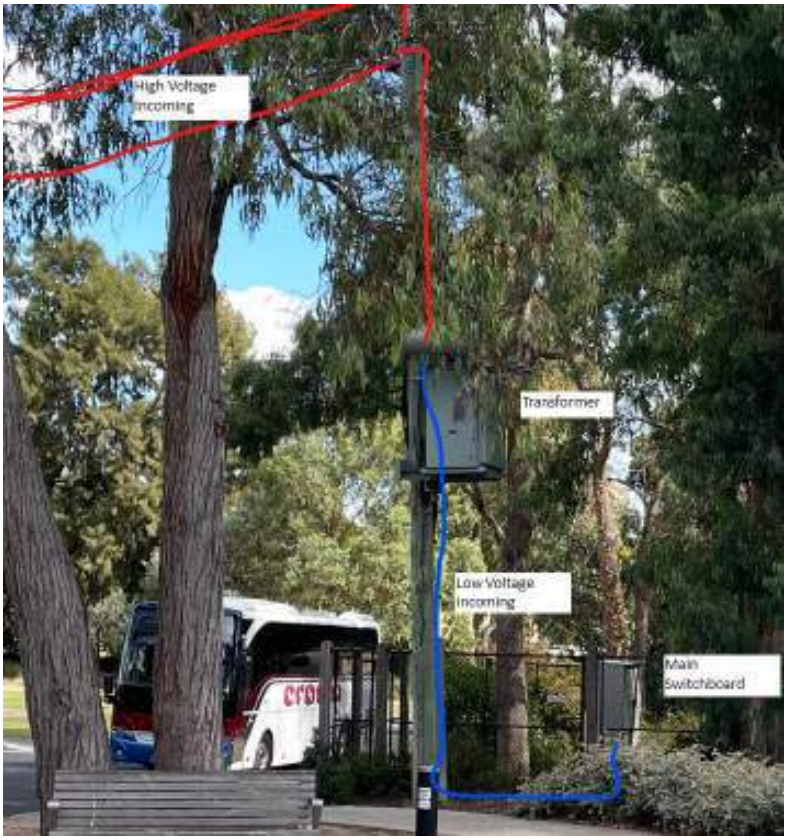
2.1 Substation

The site is serviced from an authority (United) provided pole mounted substation with a capacity of 500 kVA. This transformer is named Aquatic - Fraser.

The incoming high voltage connection is sourced from overhead.

Figure 1 Pole mounted substation

Figure 2 Incoming Electrical Supply



2.1.1 New facility provision for new substation

If a new facility is built on or adjacent to the existing facility, it is likely that all services will be electrical, i.e. a natural gas connection will not be provided. This is becoming a common trend with new and existing facilities such as Northcote Aquatic and Brimbank Aquatic & Wellness Centre.

Existing and future power loads, as well as onsite renewable sizing will need to be check, however at this time a new 500kVa kiosk substation should be provisioned for the new all electrical facility.

2.2 Main Switchboard

The existing main switchboard is a freestanding Form 2 switchboard limited to 630 Amps. The switchboard includes the Authority metering for the site. The switchboard is considered adequate for usage, but with limited future capacity. It was manufactured under an older standard and being installed outside we would indicatively allow outdoor switchboards to have an indicative 25 year lifecycle, which it appears to be meeting or exceeding.

There is labelling indicating that there is a CT meter for the large Aquatic supply but also a direct connect meter for a small tenancy (possible to be the on site café, to be confirmed).

Figure 3 Main Switchboard

Figure 4 Existing Main Switchboard Nameplate

2.3 Electrical infrastructure - Distribution boards and cabling

Existing distribution boards are generally the older style type with black NEMA type breakers and they contain some miniature circuit breakers without residual current devices (RCD's). As such the current installation is not compliant with the regulatory requirements of AS/NZS 3000 "Wiring Rules". Upgrades to meet compliance are required where modification works or replacement are undertaken to the switchboards. Some switchboards do not contain a circuit schedule and so maintenance on the board would be quite difficult.

Any significant changes would require replacement of these distribution boards. There is some evidence of the switchboards running out of capacity and needing extension boards being installed below.

Cabling viewed was generally flexible cable type and therefore considered fit for purpose.

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Figure 5 DB-2 Interior

Figure 6 DB-2 Exterior

Figure 7 Mechanical Switchboard example

Figure 8 Example Distribution Board

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2.4 Essential power provision

No generator was noted as being present on site.

2.5 Solar PV

There is significant opportunity to provide more solar panels on the roof space for this building.

Figure 9 Site Photo

2.6 Lighting and lighting control

The majority of the lighting viewed had been replaced relatively recently with LED source fittings which are considered to be good practice. It was noted that some back of house and plantroom fittings had missed the upgrade.

There was no lighting control (other than manual switching) noted on site and we note this would not comply with the current National Construction Code.

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Figure 10 LED fixtures in the multipurpose rooms

Figure 11 LED fixtures in the pool hall

Figure 12 Exterior fittings past recommended EOL.

Figure 13 Interior fitting past end of life.

2.7 Emergency and exit lighting

Exit signs and emergency fittings appear to have been replaced relatively recently (Running Man rather than "EXIT" exit signs generally noted) through the majority of the spaces. Manual test switches were present in some distribution boards.

2.8 Fire Detection System

No smoke detectors or occupant warning system was noted on site.

Some speakers were present which appeared to be connected to the public address system.

As a Class 9B building it is possible that it is not required, for final determination by the building surveyor.

No reference to a fire panel on the evacuation diagram.

Figure 14 Evacuation Diagram

2.9 Communications

Communications infrastructure was extremely limited, and no significant assets were noted on site.

2.10 Security

There was noted proximity based HID type card readers for some controlled doors. It is likely to be a Tecom challenger system present or similar based on the age of installation, however this would need further investigation. Some CCTV cameras were noted on site.

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3. Existing Hydraulic Services

3.1 Sanitary Plumbing & Drainage

Based on the Yarra Valley Water overview plan, the site is served by a sewer main located to the north of the site.

The main bathroom fixtures and fittings are in fair condition and are dated.

However, all appear to be in working condition.

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3.2 Domestic Cold Water

The site is provided with a single domestic cold-water supply from Fraser Place, located to the south-west of the site. The meter is Ø65mm.

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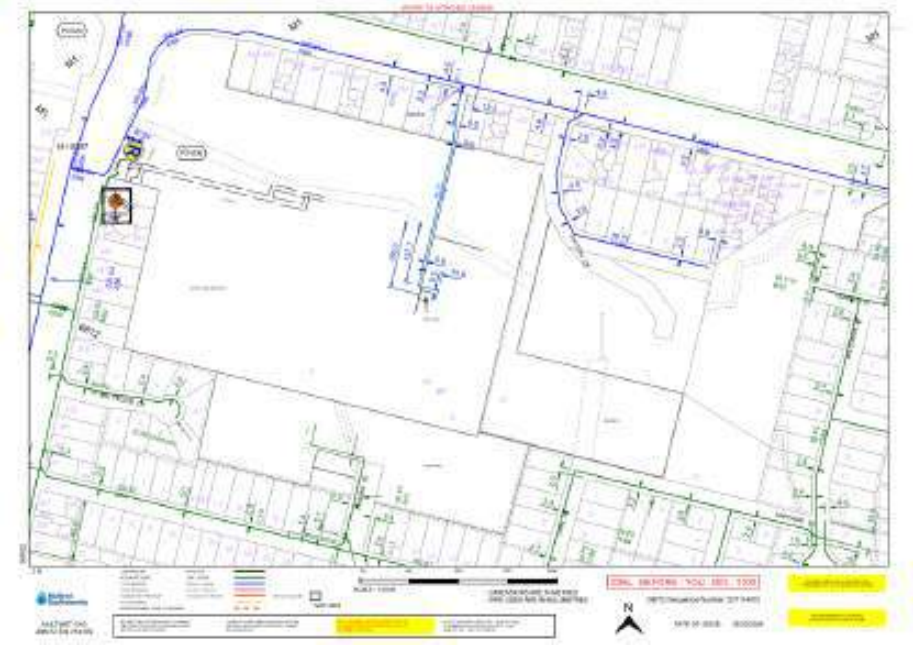
3.3 Natural Gas Service

Natural gas is supplied to the site from a High-Pressure gas main in Canterbury Rd to a gas meter located adjacent the main pool plant.



The gas meter is in fair condition and appears to be operating satisfactorily.

Natural Gas is then reticulated from the gas meter to the various boilers used for pool water heating, space heating and domestic water heating.

3.4 Rainwater

Rainwater is harvested from the roof of the facility and stored in tanks adjacent the pool plant area to the north of the building. The rainwater is treated and then utilised for pool top-up and backwashing of filtration systems.

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4. Existing Mechanical Services

ADP Consulting have reviewed the **Engineering Services Asset Review** prepared by *BRT Consulting Engineers* for Aqualink Nunawading, dated 03.03.2023 and visited site on 25.03.2024. It is intended that this is a qualitative assessment based on visual inspection only for the existing Aqualink Nunawading.

4.1 HVAC Systems

The following mechanical heating, ventilation and air conditioning (HVAC) systems were observed.

- Natural Gas Fire Boilers – providing primary source of heating to pool water and some HVAC systems
  - Leisure Pool
  - Main/ Training Pool
- Heat Exchangers
  - Air (rotary type)
  - Water (plate type)
- Chilled water generators (Chillers)
- Multiple direct expansion (DX), split type, small air conditioning units
- Air Handling Units (Central system)
- Rooftop packaged, ducted type air conditioning units
- Mechanical ventilation systems to
  - Change rooms
  - Cleaners rooms
  - Pool filtration plant
  - Mechanical plantrooms

4.2 Areas Inspected

The following areas were inspected:

- Main Entry
- Multi-purpose room
- Group Fitness room
- Staff Offices
- Change rooms
- Gymnasium
- Main Pool Hall
- Leisure Pool
- Main Pool Plant
- Leisure Pool Plant
- External areas.

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Figure 15 Main Entry from carpark to South of building

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Figure 16 Multi-Purpose Room (360° image)

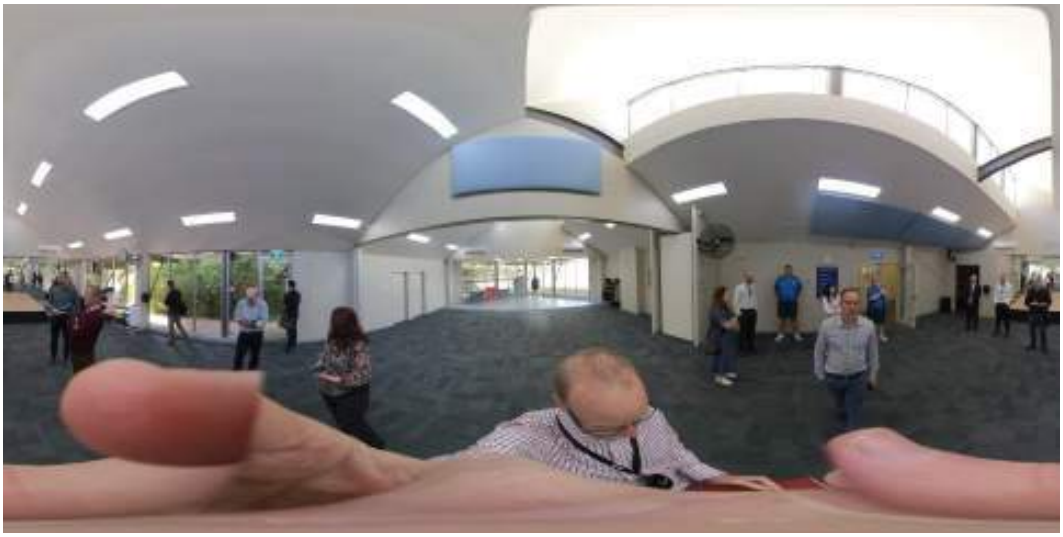

Figure 17 Multi-purpose Room – Auxiliary AC units

Figure 18 Group Fitness room (360° image)

Figure 19 Typical mes WC and Urinal

Figure 20 Main Pool Hall – seating and circular duct

Figure 21 Main Pool Hall, northern facing clerestorey windows

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Figure 22 Leisure Pool

Figure 23 Main Pool Filtration and Water Circulation Plant

Figure 24 Main Pool – Heat injection boilers (Raypack)

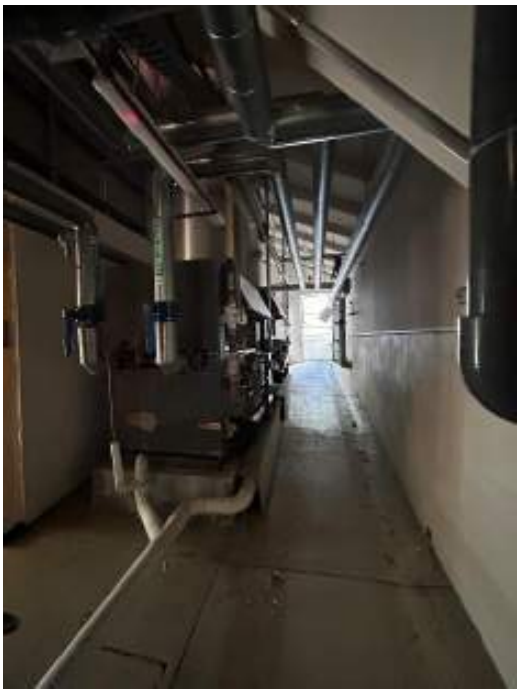

Figure 25 Leisure Pool – Filtration and water circulation plant

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Figure 26 Rooftop AC plant for Leisure Pool

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Figure 27 Main Pool Plant (boiler flues)

Figure 28 North Facing Windows of Main Pool Hall

4.3 Condition Assessment

In general, the mechanical HVAC plant sighted appears to be well maintained and in fair condition.

Several items are old and will be approaching or have already passed their viable economic life and will be listed in any CAPEX plan for replacement in the immediate to near future. In particular, we note the age of the main gas fired boilers providing pool heating.

As noted on site, as plant has failed it has been replaced with the most economical option, which does not always match the original installed equipment. Whilst meeting the technical requirements, the cheaper/ lowest first cost replacement plant does not always have the same economic lifecycle, durability or reliability as the original plant and will therefore be subject to a shorter lifecycle. This is amplified when the main systems are not replaced as part of significant upgrades or full replacement works, e.g. water pumps.

Supplementary plant has been introduced in certain areas to meet the requirements of spaces that have been created or have been altered in terms of purpose or function, e.g. The Multi-Purpose Room, Group Fitness Room & Gymnasium have all be fitted with supplementary split air conditioning units to deal with higher internal heat loads than the original ducted systems were able to cool.

Whilst this addresses the primary issue, it is not always the most efficient or technically correct outcome. E.g. additional outdoor air as per AS1668.2 may be required due to a greater population in the room than the original design allowed for, which the split units do not provide.

As identified in the BRT report of 3 March 2023, should the facility be retained and continue operating, plant or equipment failures can be dealt with on an as needs basis, but it is understood that the remaining operational equipment may not deliver efficient operation, peak or full capacity or operate satisfactorily.

The major plant shall be included in a CAPEX replacement plan and should include the boiler plant, air handling units, packaged air conditioning units and controls.

The procurement and delivery times for these types of plant can be up to several months.

4.4 Future Development or Refurbishment

As identified in the BRT report, refurbishment or future development of the Aquatic Centre will result in significant upgrades being required to the HVAC plant to ensure compliance with the latest mechanical standards and the BCA (Building Code of Australia), which mandates efficiency of HVAC plant in buildings.

In many instances, compliant plant efficiency can only be achieved when the building thermal envelope (walls, glass, roof, etc) is compliant with the latest BCA.

This would result in significant portions of the existing building façade, roof and walls be replaced or rebuilt. As identified in the Business Case, this is not feasible nor results in the desired community & economic outcomes.

ADP Consulting : Engineering

5. Existing Fire Protection Services

5.1 Fire Protection Systems

The site is served by the following fire protection systems:

a. Fire hydrant system
b. Fire hose reel
c. Portable fire extinguishers and fire blanket
d. Fire Data Book at main entrance.

There are multiple fire hydrants located around the site, connected in an in-ground ring main.

The fire hydrant ring-main is served from the street water mains in Fraser Str with a Hydrant Booster located to the south-west corner of the site.

A maintenance record tag on the fire hydrants noted maintenance had occurred in March 2024.

Figure 29 Hydrant Booster

The hydrants are typically dual-head type with Storz connectors and appear to be in fair condition.

Figure 30 Hydrant

Any new development will require the installation of fire water storage tanks and/or pumps due the diminishing pressure and flow in the Authority assets.

The remainder of the building is protected by Fire Hose Reels and Fire Extinguishers located in specific areas.

Figure 31 Evacuation Diagram

ADP Consulting : Engineering

Figure 32 Hose Reel

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

ADP Consulting : Engineering

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6. Existing Structure

6.1 Introduction

ADP Consulting personnel conducted a non-exhaustive, visual site inspection of the existing structure located at the Nunawading Aqualink facility on the 22nd of March, 2024.

The purpose of the inspection was to gain an appreciation of the as-built condition of the building and to identify any major structural damage, dilapidation or non-conformance noted to inform the business case studies.

6.2 Description of Existing Structure

Generally, the existing structure comprises:

- Steel portal framed superstructure in the primary direction
- Braced steel framed superstructure in the transverse direction
- Light-gauge steel purlins supporting metal roof sheeting
- Reinforced concrete (RC) concourse slab on ground

Figure 33 Pool Hall Image

Figure 34 Pool Concourse Slab

6.3 Condition Assessment Observations & Recommendations

The following definitions are used to describe the condition of the structural elements:

Good – Negligible deterioration or damage evident.

Fair – Minor deterioration or damage (some maintenance needs to be undertaken).

Poor – Major deterioration or damage (major remediation required – approaching end of service life).

The following minor deterioration was observed during the inspection:

- Inclined cracking in the brickwork adjacent to the building entry.
- Miscellaneous corrosion of posts supporting the shade structure.
- Cracking and deterioration of the concourse slab.
- Degradation of the concourse slab joint caulking.

ADP Consulting : Engineering

Figure 35 Brick Wall Adjacent to Facility Entry (Cracking on RHS of Wall)

Figure 36 External Terrace (Corrosion of Shade Structure Posts)

ADP Consulting : Engineering

Figure 37 Concourse Slab (Cracking and Deterioration of Concrete Slab)

Figure 38 Concourse Slab (Deterioration of Joint Caulking)

As noted above, some minor deterioration was observed, but in general, no signs of major dilapidation, damage or movement were observed in the existing structure. Overall, the building structure appears to be in **fair to good** condition.

Repairs to address the cracking, corrosion and deterioration of joint caulking noted above should be undertaken over the next 12 months to avoid prevent further damage to the brickwork, concrete and any embedded reinforcing steel.

Given the age of the existing building however (between 20 and 60 years old), it should be noted that the structure is approaching the end of its serviceable life and it is likely that components of the structure will not comply with modern NCC and Australian standard requirements for earthquake, wind and FRL etc.

ADP Consulting : Engineering

7. Existing Civil

7.1 Description of Existing Site

Stormwater Discharge

The existing stormwater discharge point is located on the northern boundary of the Aqualink Nunawading site as shown in Figure 1. The stormwater discharges into the Forest Hills Drain which is an open park area and stormwater flow path for the discharge of the basin. The upstream catchment from the east will be captured by the flood retarding basin prior to the culvert on Forest Hill Drain, as shown in Figure 1. It should be noted that we were unable to determine the current capacity or integrity of the existing stormwater system within the site. We assume at this stage that the system operates at a satisfactory level to discharge stormwater for the existing building.

Figure 39 Stormwater Discharge location

ADP Consulting : Engineering

Natural topography

The site naturally falls toward the north-west of the site, as shown in Figure 1&2. The carpark fronting the Aqualink building falls from east to west following the general topography of the area.

Flooding Issue

It was noted on site, that the existing childcare terrace area of the development has frequent flooding issues. It was identified that there is no grated drainage within the outdoor area of the childcare terrace. We also noticed that the grade of the exposed area was toward the building in some areas, this creates ponding up against the building which likely is entering the doorway as shown in the Figure 3 below.

Figure 40 Door facing south from the childcare

7.2 Recommendations

We understand that there are two potential options for this proposed site,

1. Retain the existing structure

2. Re-develop by extension or demolish and re-build

The below recommendations have considered both scenarios. For either scenario, we would recommend the assessment of climate change rainfall intensity on the existing stormwater systems and also consider the installation of water quality systems (such as rain gardens/rainwater re-use). This will ensure that we are demonstrating to the community and project stakeholders that we are providing a sustainable solution to suit the future design life of the project.

Retain Existing

A detailed assessment of the site's existing stormwater infrastructure will need to be completed to determine the capacity. In addition, we recommend a builder/plumber undertakes a condition assessment of the existing stormwater services to determine if the system is in good working order or requires replacement/repair.

In relation to the flooding issue at the childcare terrace, we recommend retrofitting a grated drain at the doorway entry. We also recommend diverting the overland flow towards the north by introducing a grading of the turfed area that is falling away from the building. Installing a concrete hob at the threshold between the building and the external areas is also a suitable option (albeit more costly). In addition, a drainage system shall also be considered at the turfed playground adjacent to the timber retaining wall and prevent water from ponding up at the childcare's door.

Re-develop by knockdown re-build or extension

For either option of the knockdown re-build or extension, we would recommend the use of the existing discharge outlet to the northern boundary.

Any extension should consider the above points noted in the "Retain Existing" section.

Any proposed development works (particularly outside of the existing building envelope) must consider the impact to the existing trees of significance as noted earlier in this report (see Figure 2).

Upstream overland flow paths traversing toward the building footprint must be managed by grading levels away from the building through natural or man-made overland flow paths (swales or dish drains). We would recommend sufficient freeboard to proposed finished floor levels from adjacent overland flow paths to ensure that water ingress is avoided.

8. Recommendations

To summarise the observations from the site inspection and the documents reviewed, ADP have the following recommendations based on project direction:

Building Services

Retain Existing

- The services & equipment were observed to be in good condition however are passed/close to their economic life. If it was decided to retain the existing site, the equipment could be maintained / replaced on a need's basis.
- There were some non-compliances to latest code noted on site, particularly for electrical services. Any modifications to these areas will likely require to be brought to latest NCC e.g. Switchboards

Demolish existing and build new facility

- If it was decided to rebuild the Aqualink site it would be recommended that most equipment is replaced with new. There are very few opportunities for reuse as noted in the BRT report e.g. Heat recovery wheels
- A new 500kVa kiosk substation should be provisioned for the new all electrical facility

Structural

Retain Existing

- Based on the visual inspection, the building structure appears to be in **fair to good** condition. Maintenance repairs to address minor cracking, corrosion and deterioration of joint caulking noted in the report should be undertaken over the next 12 months to prevent further damage to the brickwork, concrete and any embedded reinforcing steel if the building is to be retained.
- Given the age of the existing building however (between 20 and 60 years old), it should be noted that the structure is approaching the end of its serviceable life and it is likely that components of the structure will not comply with modern NCC and Australian Standard requirements for earthquake, wind and FRL etc.

Demolish existing and build new facility

- Demolition of the existing building and replacement with new would eliminate the need for short and long-term remediation and provide a new, compliant facility with a minimum 50 year life span that also addresses future facility needs.

Civil

Retain Existing

- A detailed assessment of the site's existing stormwater infrastructure will need to be completed to determine the capacity.

- We recommend a builder/plumber undertakes a condition assessment of the existing stormwater services to determine if the system is in good working order or requires replacement/repair.

Demolish existing and build new facility

- For either option of the knockdown re-build, we would recommend the use of the existing discharge outlet to the northern boundary.
- Any proposed development works (particularly outside of the existing building envelope) must consider the impact to the existing trees of significance. The "Stage 1 Feasibility Analysis Report" prepared by Mantric Architecture for Aqualink Nunawading, refer to an arborist report in Appendix 5 for recommendations and advice.
- Upstream overland flow paths traversing toward the building footprint must be managed by grading levels away from the building through natural or man-made overland flow paths (swales or dish drains).
- We would recommend sufficient freeboard to proposed finished floor levels from adjacent overland flow paths to ensure that water ingress is avoided.

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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Ontoit.

Appendix F - Functional Area Schedule

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Project: 100365 Aqualink Nunawading Business Case
Issue: 08
Date 08.08.2024

Legend
- Area of line Item is 20-29% more than Option 2
- Area of line Item is 40-99% more than Option 2
- Area of line Item is 100%+ more than Option 2

CO.OP

area schedule

ID	Room	Otium FDB - Final ("Bells & Whistles") Area	Qty	Total	Option 1 (Do nothing) Area	Qty	Total	Notes	Option 2 (Contemporary like-for-like) Area	Qty	Total	Notes	Option 3 (Contemporary social) Area	Qty	Total	Notes	Option 3a (Contemporary hybrid) Area	Qty	Total	Notes	Option 4 (Contemporary aquatics / health) Area	Qty	Total	Notes	Option 5 (Aspirational) Area	Qty	Total	Notes	Comments	Changes to Option 1 - Current Design: Option 2 (Contemp Like for Like) sqm	Option 3 (Contemp Social) sqm	Option 4 (Contemp Aquatics / Health) sqm	Option 5 (Aspirational) sqm	Changes to Option 2 - Contemp Like for Like: Option 3 (Contemp Social) sqm	Option 4 (Contemp Aquatics / Health) sqm	Option 5 (Aspirational) sqm
FLOOR LEVEL																																						
Entry and Administration																																						
GF	Foyer	130.00	1	130.00	86.00	1	86.00		100.00	1	100.00		120.00	1	120.00		120.00	1	120.00		150.00	1	150.00		150.00	1	150.00			14.00	34.00	64.00	64.00	20.00	50.00	50.00
GF	Airlock	15.00	1	15.00	13.00	1	13.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00			2.00	2.00	2.00	2.00	0.00	0.00	0.00
GF	Reception / Entry control	50.00	1	50.00	21.00	1	21.00		30.00	1	30.00		40.00	1	40.00		40.00	1	40.00		40.00	1	40.00		50.00	1	50.00			9.00	19.00	19.00	29.00	10.00	10.00	20.00
GF	Retail Area	50.00	1	50.00			0.00				0.00		30.00	1	30.00		30.00	1	30.00		50.00	1	50.00		50.00	1	50.00			0.00	30.00	50.00	50.00	30.00	50.00	50.00
GF	Store	20.00	1	20.00	3.00	1	3.00		5.00	1	5.00		15.00	1	15.00		15.00	1	15.00		20.00	1	20.00		20.00	1	20.00			2.00	12.00	17.00	17.00	10.00	15.00	15.00
GF	Administration Area	80.00	1	80.00	35.00	1	35.00		35.00	1	35.00		60.00	1	60.00		60.00	1	60.00		60.00	1	60.00		80.00	1	80.00			0.00	25.00	25.00	45.00	25.00	25.00	45.00
GF	Offices	9.00	2	18.00	12.00	3	36.00		9.00	3	27.00		9.00	2	18.00		9.00	2	18.00		9.00	2	18.00		9.00	2	18.00			-9.00	-18.00	-18.00	-18.00	-9.00	-9.00	-9.00
GF	Meeting Room	20.00	1	20.00			0.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00			20.00	20.00	20.00	20.00	0.00	0.00	0.00
GF	Cash / Utility Room	10.00	1	10.00			0.00		10.00	1	10.00		10.00	1	10.00		10.00	1	10.00		10.00	1	10.00	Accessible from Reception.	10.00	1	10.00			10.00	10.00	10.00	10.00	0.00	0.00	0.00
GF	Administration Store	40.00	1	40.00			0.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00			15.00	15.00	15.00	15.00	0.00	0.00	0.00
GF	Staff Room	40.00	1	40.00	26.00	1	26.00		25.00	1	25.00		40.00	1	40.00		40.00	1	40.00		40.00	1	40.00		40.00	1	40.00			-1.00	14.00	14.00	14.00	15.00	15.00	15.00
GF	Staff Amenities	20.00	1	20.00			0.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00			20.00	20.00	20.00	20.00	0.00	0.00	0.00
GF	Café Dry Lounge	100.00	1	100.00	148.00	1	148.00		120.00	1	120.00		100.00	1	100.00		100.00	1	100.00		80.00	1	80.00		120.00	1	120.00			-28.00	-48.00	-68.00	-28.00	-20.00	-40.00	0.00
GF	Café Serveries	40.00	1	40.00			0.00		20.00	1	20.00		40.00	1	40.00		40.00	1	40.00		30.00	1	30.00		40.00	1	40.00			20.00	40.00	30.00	40.00	20.00	10.00	20.00
GF	Kitchen	115.00	1	115.00	69.00	1	69.00		40.00	1	40.00		60.00	1	60.00		60.00	1	60.00		50.00	1	50.00		80.00	1	80.00			-29.00	-9.00	-19.00	11.00	20.00	10.00	40.00
GF	Café Store	30.00	1	30.00			0.00		9.00	1	9.00		20.00	1	20.00		20.00	1	20.00		15.00	1	15.00		30.00	1	30.00			9.00	20.00	15.00	30.00	11.00	6.00	21.00
GF	Café - other	10.00	1	10.00			0.00																		10.00	1	10.00			0.00	0.00	0.00	10.00	0.00	0.00	10.00
GF	Social Spaces	50.00	1	50.00		1	0.00				0.00		50.00	1	50.00		50.00	1	50.00		50.00	1	50.00		50.00		0.00			0.00	50.00	50.00	0.00	50.00	50.00	0.00
GF	Swim Club Office	15.00	2	30.00			0.00	Separate building	9.00	2	18.00		9.00	2	18.00		9.00	2	18.00		9.00	2	18.00		15.00	2	30.00			18.00	18.00	18.00	30.00	0.00	0.00	12.00
GF	Swim Club Administration	40.00	1	40.00			0.00	Separate building	40.00	1	40.00		40.00	1	40.00		40.00	1	40.00		60.00	1	60.00		40.00	1	40.00			40.00	40.00	60.00	40.00	0.00	20.00	0.00
GF	Swim Club Storage	10.00	1	10.00			0.00	Separate building	30.00	1	30.00		30.00	1	30.00		30.00	1	30.00		30.00	1	30.00		30.00	1	30.00			30.00	30.00	30.00	30.00	0.00	0.00	0.00
GF	Swim Club Strength & Conditioning								400.00	1	400.00		400.00	1	400.00		400.00	1	400.00		400.00	1	400.00		400.00	1	400.00			400.00	400.00	400.00	400.00	0.00	0.00	0.00
GF	Foyer Amenities (Accessible)	10.00	2	20.00	9.00	1	9.00		7.00	2	14.00		7.00	2	14.00		7.00	2	14.00		7.00	2	14.00		7.00	2	14.00			5.00	5.00	5.00	5.00	0.00	0.00	0.00
	Subtotal			**938.00**			**446.00**				**993.00**				**1,175.00**				**1,205.00**								**1,282.00**			**547.00**	**729.00**	**759.00**	**836.00**	**182.00**	**212.00**	**289.00**
Aquatic Facilities																																						
GF	50m Indoor Pool (with Concourse)	2,087.00	1	2,087.00	1,896.00	1	1,896.00	50x20m (8 lanes).	1,650.00	1	1,650.00	8 lanes, swimwall, ramp	1,650.00	1	1,650.00	8 lanes, swim wall, ramp	1,650.00	1	1,650.00	8 lanes, swim wall, ramp	1,650.00	1	1,650.00	8 lanes, swimwall, ramp	1,650.00	1	1,650.00	8 lanes, swim wall, ramp	8 x 2.5m lanes,swim wall and ramp.	-246.00	-246.00	-246.00	-246.00	0.00	0.00	0.00
GF	Spectator Seating	0.75	500	375.00	325.00	1	325.00		0.80	415	332.00	~415 seat	0.80	415	332.00	~415 seats	0.80	415	332.00	~415 seats	0.80	500	400.00	500 seats	0.80	500	400.00	500 seats	500 people.	7.00	7.00	75.00	75.00	0.00	68.00	68.00
GF	Learn-to-Swim (with Concourse)	969.00	1	969.00			0.00	~20x8m in Leisure Pool.	525.00	1	525.00	15x10m + ramp (180sqm)	550.00	1	550.00	15x10m + ramp (180sqm)	800.00	1	800.00	25x12m + ramp (350sqm)	900.00	1	900.00	25x15m + ramp (425sqm)	900.00	1	900.00	25x15m + ramp (425sqm)	25x15m plus ramp.	525.00	550.00	900.00	900.00	25.00	375.00	375.00
GF	Leisure Water + Toddler Pool (with Concourse)	1,200.00	1	1,200.00	1,025.00	1	1,025.00	~400sqm (incl LTS).	500.00	1	500.00	~180sqm.	900.00	1	900.00	~500sqm.	250.00	1	250.00	~100sqm.	400.00	1	400.00	~150sqm.	1,200.00	1	1,200.00	~720sqm.	600sqm splash pad plus 60sqm Toddler Pool.	-525.00	-125.00	-525.00	175.00	400.00	-100.00	700.00
GF	Warm Water Program + 2 x Spa (with Concourse)	741.00	1	741.00			0.00		750.00	1	750.00	20x15m, spa, ramp (420sqm)	750.00	1	750.00	20x15m, spa, ramp (420sqm)	750.00	1	750.00	20x15m, spa, ramp (420sqm)	750.00	1	750.00	20x15m, spa, ramp (420sqm)	750.00	1	750.00	20x15m, spa, ramp (420sqm)	20x15m WWP plus ramp , 3x15m 2x spas.	0.00	750.00	750.00	750.00	750.00	750.00	750.00
GF	Sauna + Steam	40.00	1	40.00	35.00	1	35.00		40.00	1	40.00		40.00	1	40.00		40.00	1	40.00		40.00	1	40.00		40.00	1	40.00		20sqm Sauna, 20sqm Steam.	5.00	5.00	5.00	5.00	0.00	0.00	0.00
GF	Pool Concourse and Deck Showers	5.00	1	5.00			0.00		5.00	1	5.00		5.00	1	5.00		5.00	1	5.00		5.00	1	5.00		5.00	1	5.00			5.00	5.00	5.00	5.00	0.00	0.00	0.00
GF	Swim Club Events / Marshalling	40.00	1	40.00			0.00				0.00		40.00	1	40.00		40.00	1	40.00		40.00	1	40.00		40.00	1	40.00			0.00	40.00	40.00	40.00	40.00	40.00	40.00
GF	Swim Club Equipment Store												30.00	1	30.00		30.00	1	30.00		30.00	1	30.00		30.00	1	30.00			0.00	30.00	30.00	30.00	30.00	30.00	30.00
GF	Swim Club Change												60.00	1	60.00		60.00	1	60.00		60.00	1	60.00		60.00	1	60.00			0.00	60.00	60.00	60.00	60.00	60.00	60.00
GF	Change Rooms - Female	100.00	1	100.00	156.00	1	156.00		80.00	1	80.00		100.00	1	100.00		100.00	1	100.00		100.00	1	100.00		100.00	1	100.00			-76.00	-56.00	-56.00	-56.00	20.00	20.00	20.00
GF	Change Rooms - Male	100.00	1	100.00	156.00	1	156.00		80.00	1	80.00		100.00	1	100.00		100.00	1	100.00		100.00	1	100.00		100.00	1	100.00			-76.00	-56.00	-56.00	-56.00	20.00	20.00	20.00
	Services areas	20.00	1	20.00			0.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00			20.00	20.00	20.00	20.00	0.00	0.00	0.00
GF	Family Change Village	200.00	1	200.00	29.00	1	29.00		150.00	1	150.00		200.00	1	200.00		200.00	1	200.00		200.00	1	200.00		200.00	1	200.00			121.00	171.00	171.00	171.00	50.00	50.00	50.00
GF	Accessible Change Room	12.00	3	36.00			0.00		9.00	3	27.00		9.00	4	36.00		9.00	4	36.00		9.00	4	36.00		9.00	4	36.00			27.00	36.00	36.00	36.00	9.00	9.00	9.00
GF	Changing Places	14.00	1	14.00			0.00		14.00	1	14.00		14.00	1	14.00		14.00	1	14.00		14.00	1	14.00		14.00	1	14.00			14.00	14.00	14.00	14.00	0.00	0.00	0.00
	All-Gender Change			0.00			0.00		3.00	4	12.00		3.00	6	18.00		3.00	6	18.00		3.00	6	18.00		3.00	20	60.00	CO.OP addition.		12.00	18.00	18.00	60.00	6.00	6.00	48.00
GF	Group Change Room	40.00	2	80.00	10.00	2	20.00		40.00	2	80.00		40.00	2	80.00		40.00	2	80.00		60.00	2	120.00		40.00	2	80.00			60.00	60.00	100.00	60.00	0.00	40.00	0.00
GF	Wet Lounge			0.00	362.00	1	362.00		60.00	1	60.00		60.00	1	60.00		30.00	1	30.00		60.00	1	60.00		60.00	1	60.00			-302.00	-302.00	-302.00	-302.00	0.00	0.00	0.00
GF	Birthday Party Room / Meeting Room			0.00			0.00			1	0.00		30.00	1	30.00		30.00	1	30.00			1	0.00		30.00	1	30.00			0.00	30.00	0.00	30.00	30.00	0.00	30.00
GF	First Aid Room	15.00	1	15.00	20.00	1	20.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00	CO.OP addition.		-5.00	-5.00	-5.00	-5.00	0.00	0.00	0.00
GF	50m Pool Store	50.00	1	50.00	53.00	1	53.00		50.00	1	50.00		40.00	1	40.00		50.00	1	50.00		60.00	1	60.00		50.00	1	50.00			-3.00	-13.00	7.00	-3.00	-10.00	10.00	0.00
GF	WWP Store	30.00	1	30.00			0.00			1	0.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00		30.00	1	30.00			0.00	20.00	20.00	30.00	20.00	20.00	30.00
GF	LTS Store	50.00	1	50.00	66.00	1	66.00		30.00	1	30.00		30.00	1	30.00		30.00	1	30.00		40.00	1	40.00		50.00	1	50.00			-36.00	-36.00	-26.00	-16.00	0.00	10.00	20.00
GF	Cleaner	15.00	1	15.00			0.00		10.00	1	10.00		10.00	1	10.00		10.00	1	10.00		10.00	1	10.00		10.00	1	10.00			10.00	10.00	10.00	10.00	0.00	0.00	0.00
GF	Pool Blanket Store Space			0.00			0.00																															
	Sub-total			**6,167.00**			**4,143.00**				**3,680.00**				**5,130.00**				**4,710.00**				**5,088.00**				**5,930.00**			**-463.00**	**987.00**	**945.00**	**1,787.00**	**1,450.00**	**1,408.00**	**2,250.00**
Health and Wellness Facilities																																						
L1	Cardio and Strength Area	1,400.00	1	1,400.00	405.00	1	405.00		405.00	1	405.00		800.00	1	800.00		900.00	1	900.00		800.00	1	800.00		1,400.00	1	1,400.00			0.00	395.00	395.00	995.00	395.00	395.00	995.00
L1	Group Fitness - 1	250.00	1	250.00	217.00	1	217.00		217.00	1	217.00		250.00	1	250.00		250.00	1	250.00		250.00	1	250.00		250.00	1	250.00			0.00	33.00	33.00	33.00	33.00	33.00	33.00
L1	Group Fitness - 2	200.00	1	200.00	100.00	1	100.00		100.00	1	100.00		200.00	1	200.00		200.00	1	200.00		200.00	1	200.00		200.00	1	200.00			0.00	100.00	100.00	100.00	100.00	100.00	100.00
L1	Group Fitness - 3	140.00	1	140.00	72.00	1	72.00		72.00	1	72.00		140.00	1	140.00		140.00	1	140.00		140.00	1	140.00		140.00	1	140.00			0.00	68.00	68.00	68.00	68.00	68.00	68.00
L1	Group Fitness - 4	80.00	1	80.00			0.00			1	0.00		100.00	1	100.00		100.00	1	100.00		80.00	1	80.00		80.00	1	80.00			0.00	100.00	80.00	80.00	100.00	80.00	80.00
L1	Group Fitness - 5	80.00	1	80.00			0.00			1	0.00		0.00	1	0.00		0.00	1	0.00		80.00	1	80.00		80.00	1	80.00			0.00	0.00	0.00	80.00	0.00	0.00	80.00
L1	Group Fitness Store	50.00	2	100.00	15.00	1	15.00		15.00	1	15.00		30.00	2	60.00		30.00	2	60.00		20.00	2	40.00		20.00	2	40.00			0.00	45.00	25.00	25.00	45.00	25.00	25.00
L1	Lobby / 24-7 Entry	30.00	1	30.00			0.00		30.00	1	30.00		30.00	1	30.00		30.00	1	30.00		30.00	1	30.00		30.00	1	30.00			30.00	30.00	30.00	30.00	0.00	0.00	0.00
L1	Office	20.00	1	20.00	7.00	1	7.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00		20.00	1	20.00			8.00	8.00	8.00	13.00	0.00	0.00	5.00
L1	Consulting / Testing Rooms	20.00	2	40.00			0.00			1	0.00		9.00	2	18.00		9.00	2	18.00		9.00	2	18.00		12.00	3	36.00			0.00	18.00	18.00	36.00	18.00	18.00	36.00
L1	Store	30.00	1	30.00			0.00		12.00	1	12.00		12.00	1	12.00		12.00	1	12.00		12.00	1	12.00		30.00	1	30.00			12.00	12.00	12.00	30.00	0.00	0.00	18.00
L1	Allied Health Suite	9.00	1	9.00			0.00			1	0.00		9.00	1	9.00		9.00	1	9.00		9.00	1	9.00		9.00	1	9.00			0.00	9.00	9.00	9.00	9.00	9.00	9.00
L1	Member - Female	72.00	1	72.00	30.00	1	30.00		60.00	1	60.00		70.00	1	70.00		70.00	1	70.00		72.00	1	72.00		72.00	1	72.00			30.00	40.00	42.00	42.00	10.00	12.00	12.00
L1	Member - Male	72.00	1	72.00	40.00	1	40.00		60.00	1	60.00		70.00	1	70.00		70.00	1	70.00		72.00	1	72.00		72.00	1	72.00			20.00	30.00	32.00	32.00	10.00	12.00	12.00
L1	Services areas	20.00	1	20.00			0.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00			20.00	20.00	20.00	20.00	0.00	0.00	0.00
L1	Accessible change	8.00	2	16.00	6.00	1	6.00		9.00	2	18.00		9.00	2	18.00		9.00	2	18.00		9.00	2	18.00		9.00	2	18.00	CO.OP addition.		12.00	12.00	12.00	12.00	0.00	0.00	0.00
L1	All-Gender Change			0.00			0.00		4.00	2	8.00		3.00	4	12.00		3.00	4	12.00		3.00	4	12.00		3.00	8	24.00	CO.OP addition.		8.00	12.00	12.00	24.00	4.00	4.00	16.00
L1	Cleaner	15.00	1	15.00			0.00		6.00	1	6.00		6.00	1	6.00		6.00	1	6.00		6.00	1	6.00		6.00	1	6.00			6.00	6.00	6.00	6.00	0.00	0.00	0.00
L1	Allied Health Foyer	6.00	1	6.00			0.00			1	0.00		15.00	1	15.00		15.00	1	15.00		30.00	1	30.00		30.00	1	30.00			0.00	15.00	30.00	30.00	15.00	30.00	30.00
L1	Allied Health Suite	9.00	4	36.00	24.00	1	24.00			1	0.00		9.00	2	18.00		9.00	2	18.00		9.00	4	36.00		9.00	6	54.00			-24.00	-6.00	12.00	30.00	18.00	36.00	54.00
L1	Community Meeting Room	80.00	1	80.00			0.00			1	0.00		30.00	1	30.00		30.00	1	30.00		30.00	1	30.00		60.00	1	60.00	Divisible.		0.00	30.00	30.00	60.00	30.00	30.00	60.00
	Storage	10.00	1	10.00			0.00			1	0.00		12.00	1	12.00		12.00	1	12.00		12.00	1	12.00		10.00	1	10.00			0.00	12.00	12.00	10.00	12.00	12.00	10.00
L1	Quiet / Prayer Room		1	0.00			0.00			1	0.00		9.00	1	9.00		9.00	1	9.00		9.00	1	9.00		9.00	1	9.00	CO.OP addition.		0.00	9.00	9.00	9.00	9.00	9.00	9.00
	Sub-total			**2,706.00**			**916.00**				**1,038.00**				**1,914.00**				**2,014.00**				**1,911.00**				**2,690.00**			**122.00**	**998.00**	**996.00**	**1,774.00**	**876.00**	**873.00**	**1,652.00**
Building Services																																						
GF	Internal Aquatics Plant Rooms	805.00	1	805.00	242.00	1	242.00		450.00	1	450.00		700.00	1	700.00		700.00	1	700.00		700.00	1	700.00		805.00	1	805.00			208.00	458.00	458.00	563.00	250.00	250.00	355.00
L1	Internal Services Plant		1	0.00	58.00	1	58.00		250.00	1	250.00		300.00	1	300.00		300.00	1	300.00		300.00	1	300.00		300.00	1	300.00			192.00	242.00	242.00	242.00	50.00	50.00	50.00
GF	Data and Communications	30.00	1	30.00			0.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00		20.00	1	20.00		30.00	1	30.00			20.00	20.00	20.00	30.00	0.00	0.00	10.00
GF	MSB	18.00	1	18.00	4.00	1	4.00		18.00	1	18.00		18.00	1	18.00		18.00	1	18.00		18.00	1	18.00		18.00	1	18.00	CO.OP addition.		14.00	14.00	14.00	14.00	0.00	0.00	0.00
GF	Waste Management	15.00	1	15.00			0.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00		15.00	1	15.00	CO.OP addition.		15.00	15.00	15.00	15.00	0.00	0.00	0.00
	Sub-total			**868.00**			**304.00**				**753.00**				**1,053.00**				**1,053.00**				**1,053.00**				**1,168.00**			**449.00**	**749.00**	**749.00**	**864.00**	**300.00**	**300.00**	**415.00**
Nett Internal Area				**10,679.00**			**5,809.00**				**6,464.00**				**9,272.00**				**8,952.00**				**9,257.00**				**11,070.00**			**655.00**	**3,463.00**	**3,448.00**	**5,261.00**	**2,808.00**	**2,793.00**	**4,606.00**
	Circulation (10% of net internal area)			1,067.90			274.00				646.40				927.20				895.20				925.70				1,107.00			372.40	653.20	651.70	833.00	280.80	279.30	460.60
	GROSS FLOOR AREA			**11,746.90**			**6,083.00**				**7,110.40**				**10,199.20**				**9,847.20**				**10,182.70**				**12,177.00**			**1,027.40**	**4,116.20**	**4,099.70**	**6,094.00**	**3,088.80**	**3,072.30**	**5,066.60**
External Areas																																						
	Outdoor Functional Training Space	120.00	1	120.00			0.00			1	0.00			1	0.00			1	0.00		120.00	1	120.00		120.00	1	120.00	CO.OP addition.		0.00	0.00	120.00	120.00	0.00	120.00	120.00
	Plant Access and Loading	120.00	1	120.00			0.00		120.00	1	120.00		120.00	1	120.00		120.00	1	120.00		120.00	1	120.00		120.00	1	120.00	CO.OP addition.		120.00	120.00	120.00	120.00	0.00	0.00	0.00
	External Plant (roof top)	170.00	1	170.00			0.00		240.00	1	240.00		240.00	1	240.00		240.00	1	240.00		240.00	1	240.00		300.00	1	300.00	Includes access.		240.00	240.00	240.00	300.00	0.00	0.00	60.00
	Waste Management Area	30.00	1	30.00			0.00		30.00	1	30.00		30.00	1	30.00		30.00	1	30.00		30.00	1	30.00		30.00	1	30.00	CO.OP addition.		30.00	30.00	30.00	30.00	0.00	0.00	0.00
	Entry Plaza - External Area	300.00	1	300.00	500.00	1	500.00		300.00	1	300.00		300.

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Ontoit.

Appendix G - Climate Action Assessment

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Climate Action Screening and Assessment Template

Climate Action Assessment

About the Climate Action Assessment

The Climate Action Assessment is intended to enable the alignment of policies put forward in the annual budget process with Victoria's climate action goals.

Over time, it aims to build capacity across the Victorian Public Service to think critically about how policies, programs and services help or hinder Victoria's climate action goals.

How to complete the Climate Action Screening and Assessment Template

A completed Climate Action Screening and Assessment Template ('the Template') must be attached to all budget proposals.

The Template comprises two sections:

1. **Climate Action Screening** – All budget proposals must complete Section 1. It is designed to screen for proposals likely to have a material impact (both beneficial and adverse) on Victoria's climate action goals.
2. **Climate Action Assessment** - Only proposals likely to have a material impact are required to complete Section 2. This section is designed to gather information about the proposal's potential climate action impacts.

Departments may self-select to complete Section 2 of the Template if they consider the initiative to have material beneficial or adverse impacts for climate action even if it is not captured in the Climate Action Screening.

Guidelines have been provided to accompany this template. The Guidelines provide further instructions to assist in completing this Template and additional information, including relevant climate action policies and resources.

For further information regarding the Climate Action Assessment process, please contact climate.change@deeca.vic.gov.au

1. Climate Action Screening

Budget Proposal Title	Area or Group & Department	Budget Proposal Contact
Aqualink Nunawading Redevelopment	City of Whitehorse	Andrew Butterfield

This section screens for material impacts on climate action.

Section 1.1 screens for initiatives that are likely to have a **beneficial** material impact on climate action.

Section 1.2 screens for initiatives that are likely to have an **adverse** impact on climate action.

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

1.1 Proposals that support Victoria's climate action

Question A: Is the proposal designed to contribute to:

- meeting Victoria's emissions reduction targets; or
- reducing government operational emissions; or
- Victoria's resilience to climate change, including implementing Adaptation Action Plans; or
- a climate action policy?

☐ No – please go to Question B	☒ Yes – please go to Question D

1.2 Proposals with potential adverse climate action impacts

Question B: Is the proposal likely to:

Involve new fossil gas connections?	☐ No	☐ Yes – please go to Question L	☐ Don't know – please go to Question C
Require substantial off-grid energy generation from fossil fuels (e.g. diesel) over the life of the initiative?	☐ No	☐ Yes – please go to Question L	☐ Don't know – please go to Question C
Directly encourage the purchase of new internal combustion engine (ICE) light vehicles or involve procuring ICE light vehicles?	☐ No	☐ Yes – please go to Question L	☐ Don't know – please go to Question C
Involve or encourage land clearing greater than 100 hectares?	☐ No	☐ Yes – please go to Question L	☐ Don't know – please go to Question C
Seek >$100 million for infrastructure funding?	☐ No	☒ Yes – please go to Question P	

If you answered **no to all the above questions,** a Climate Action Assessment is not required. Please attach this Template to your proposal.

☑ **You have completed the Climate Action Screening**

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Question C: If you answered "don't know" to Question B, please, provide a short explanation

If you answered **no or don't know to all parts of Question B and completed Question C**, a Climate Action Assessment is not required. Please attach this Template to your proposal.

☑ **You have completed the Climate Action Screening**

2. Climate Action Assessment

2.1 Proposals that support Victoria's climate action

Question D: Will the budget proposal:	
Support emissions reductions in Victoria?	☒ Yes – please go to Question E
Support Victoria's resilience to climate change, including by implementing Adaptation Action Plan action(s)?	☒ Yes – please go to Question H

If you select **yes to both options in Question D**, please complete both sets of relevant questions.

Question E: Are you able to provide estimates of the emissions reduction that could occur due to this proposal?	
☒ No – please go to Question G	☐ Yes – please go to Question F

Question F: Please provide your emissions reduction estimates

Sector & action	**Estimated total emissions reduction in Victoria from the initiative in FY2030 (tCO_2-e)**	**Estimated total emissions reductions in Victoria over life of the initiative (tCO_2-e)**
Type here.	Type here.	Type here.

Question G: Please provide any other information on how this proposal may contribute to reducing emissions in Victoria

This project is in early stages and therefore estimates of the emissions reduction are not yet calculated. The project is targeting a 5 Star Green Star rating or equivalent approach, plus the provision of significant solar and water storage capacity on site. Mechanical and pool plant is to be all electric, supported by a large area of rooftop photo-voltaic cells. The redevelopment replaces an end-of-life stage asset with out-dated technology (including gas-fuelled pool plant) and construction with high emissions so its replacement will contribute to reducing emissions in Victoria over time.

The evidence from recently built aquatic facilities in the state of Victoria demonstrates that a new facility will be estimated to save approximately 50% of running costs of an old and end-of-life facility, such as the existing Aqualink, with forecast energy use of the new facility to be determined as design progresses further and more accurate estimates can be calculated.

Commented [MK1]: This is based on the assumption that the scope of the new pool is the same but all-electric. Generally, asset replacement has seen a larger footprint based on increased scope and functionality. E.g. WH Arts Centre vs The Round - Operation costs have increased rather than net positive.

Commented [AB2R1]: @Simon Gorr Spoke to Warren and its running costs that may be reduced - we don't know about the energy use so have tweaked this.

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

If no other sections are applicable to your proposal, you have completed the Climate Action Assessment. Please attach this Template to your proposal.

☑ **You have completed the Climate Action Assessment**

Question H: Does the proposal contribute to climate resilience by supporting the implementation of one or more of Victoria's seven Adaptation Action Plans (AAPs)?

- If yes, please list which AAP(s), and which specific AAP action(s) the proposal will contribute to.
- If no, please go to Question I.

AAPs	AAP actions
Built Environment Climate Change Adaptation Action Plan 2022–2026	Support development of place-based resilient energy generation (Action 14) (p.6)
Water Cycle Climate Change Adaptation Action Plan 2022–2026	Investigate ways to enable greater uptake of stormwater and recycled water (Action 1)

Question I: Does the proposal contribute to Victoria's climate resilience more generally (i.e. other than by supporting the implementation of an AAP)?

- If **yes**, describe below how this proposal will contribute to increasing Victoria's resilience to climate change.
- If **no**, please go to Question J.

The proposal will contribute to Victoria's climate resilience through:

- Integrating emission reduction and climate adaptation into design of the Aqualink Nunawading redevelopment.
- The building will respond to the elevated hazards posed by climate change in a new community facility.
- It will be an energy efficient upgrade through redevelopment, likely to result in the reduction of energy use (to be calculated at a later design stage) and approximately 50% savings in running costs based on similar aquatic facility redevelopment. This will deliver multiple resilience benefits to increased heat from climate change and can provide respite to vulnerable persons in the Whitehorse community.
- Subsequent design phases will investigate ways to enable greater uptake of stormwater and recycled water and diversify water supply to the facility.
- Develops the capability of the community to prepare for and respond to climate-related hazards.

Commented [MK3]: An all-electric asset will put significant pressure on the already aging electricity infrastructure. The BC should address how the new asset could address and reduce this pressure. There is great opportunity to explore external partnerships with United Energy, neighbouring facilities/organisations at a precinct level.

Commented [AB4R3]: @Simon Gorr - we don't know but we can include a reference to this in the BC - do you want to include as this kind of activity is beyond the remit of our scope on the BC.

Commented [AB5R3]: Also added diversified water supply statement from the water plan here

Commented [AB6R3]: @Simon Gorr also tweaked Qu I further to talking to Warren

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Question J: **Cost-benefit of climate resilience** - Are you able to provide the amount of the bid that will be attributed specifically to addressing climate resilience, including disaster risk mitigation and preparedness?

☐ No – please go to Question K

☒ Yes – please provide the amount ($) ~$2 million specifically allocated to 5 Star Green Star related outcomes

Question K: **Cost-benefit of climate resilience** - Are you able to provide information on the potential avoided damages or similar (e.g., return-on-investment or benefit-cost-ratio etc.) to your project by implementing climate resilience measures?

☐ No

☒ Yes – please provide the potential avoided damages or similar figure below (e.g., return on investment or benefit cost ratio etc.):

- Redevelopment of Aqualink Nunawading provides a minimum community health benefit of $15.6M per year based on the existing visitation of 600,000 per year. Visitation is targeted to 890,000 within 10 years, providing $23.14M per year in health benefits. This has been calculated based on the value of $26 per pool visit in health benefits to a community in Aquatics Recreation Victoria and Life Saving Victoria (2021). Victorian Public Pools State of the Sector Report 2019-2020, pp. 6-7.
- With no gas connection being proposed for the new facility, gas usage will be reduced by 100%.
- The reduction in electricity use of the new facility as opposed to the existing facility is yet to be calculated. Similar aquatic facilities have shown a reduction in operating costs, including energy costs, by 50% per annum.

Commented [MK7]: This figure seems very high. The removal of gas to all-electric will see electricity consumption and $ increase substantially. This will eliminate the need to purchase carbon offsets for the gas component, however this $ saved from carbon offsets avoided would not be attributed to 'reduction in energy use.'

Commented [AB8R7]: @Simon Goh amended text further to talking to WarrenG

If no other sections are applicable to your proposal, you have completed the Climate Action Assessment. Please attach this Template to your proposal.

☑ **You have completed the Climate Action Assessment**

2.2 Proposals with potential adverse climate action impacts

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Question L: Are you able to provide estimates of the emissions increase resulting from this proposal?

☐ No – please go to Question N & O ☐ Yes – please go to Question M & O

Question M: Please provide your emissions estimates

Sector & action	Estimated total increase in Victoria's emissions from the initiative in FY2030 (tCO_2-e)	Estimated total increase in Victoria's emissions over the life of the initiative (tCO_2-e)
Type here.	Type here.	Type here.

Question N: Please provide further detail regarding the likely emissions impact of the initiative.

Refer to the Guidelines for prompts on how to answer this question

Type here.

Question O: Have you considered options to mitigate the emissions impact? (NB: Mitigation options are not expected to be costed within the proposal).

Refer to the Guidelines for prompts on how to answer this question.

☐ No – please provide details ☐ Yes – please provide details

Type here. Type here.

If no other sections are applicable to your proposal, you have completed the Climate Action Assessment. Please attach this Template to your proposal.

☑ **You have completed the Climate Action Assessment**

Question P: Are the following climate hazards likely to have a potential impact (out to 2050) on the proposed infrastructure initiative or the people using it?			
Bushfire	☒ No	☐ Yes – please go to Question R&S	☐ Don't know – please go to Question Q
Riverine flooding	☒ No	☐ Yes – please go to Question R&S	☐ Don't know – please go to Question Q
Coastal flooding	☒ No	☐ Yes – please go to Question R&S	☐ Don't know – please go to Question Q
Extreme heat	☐ No	☒ Yes – please go to Question R&S	☐ Don't know – please go to Question Q

If you answered **no** to **all parts of Question P,** you have completed the Climate Action Assessment. Please attach this Template to your proposal.

☑ **You have completed the Climate Action Assessment**

Question Q: If you answered "don't know" in Question P, please provide a short explanation

Type here.

If you answered **no or don't know to all parts of Question P and completed Question Q**, you have completed the Climate Action Assessment. Please attach this Template to your proposal.

☑ **You have completed the Climate Action Assessment**

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Question R: Please outline potential impacts the climate hazard(s) you identified in Question P could have on the proposed infrastructure initiative and the people using it.

The Whitehorse Community could have a potential impact on their health by extreme heat.

A redeveloped aquatic facility (Aqualink Nunawading) will provide a climate resistant building that provides respite and refuge from days of extreme heat.

It is targeting a 5-Star Green Star rating.

With the targeted growth in the municipality of doubling by 2051 (79,000 new homes – see https://engage.vic.gov.au/project/shape-our-victoria/page/housing-targets-2051), Whitehorse City Council will also examine the opportunities for Green Star Communities, Green Star – Performance, Green Star - Interiors ratings.

Question S: Please outline ways to reduce the potential impacts you identified in Question R on the proposed infrastructure initiative and people using it.

A redeveloped aquatic facility (Aqualink Nunawading) will provide a climate resistant building that provides respite and refuge from days of extreme heat.

It is targeting a 5-Star Green Star rating.

With the targeted growth in the municipality of doubling by 2051 (79,000 new homes – see https://engage.vic.gov.au/project/shape-our-victoria/page/housing-targets-2051), Whitehorse City Council will also examine the opportunities for Green Star Communities, Green Star – Performance, Green Star -Interiors ratings.

Please attach this Template to your proposal.

☑ **You have completed the Climate Action Assessment**

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Ontoit.

Appendix H - Town Planning Report

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

EMM
creating opportunities

Aqualink Nunawading Business Case

Preliminary Planning Report

Prepared for Ontoit

July 2024

Aqualink Nunawading Business Case

Preliminary Planning Report

Ontoit

E240064 RP#1

July 2024

Version	Date	Prepared by	Approved by	Comments
1	26/04/2024	Mitchell Connolly	Deb Butcher	

Approved by

Debra Butcher
Associate Director - Planning
26 July 2024

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This report has been prepared in accordance with the brief provided by Ontoit and has relied upon the information collected at the time and under the conditions specified in the report. All findings, conclusions or recommendations contained in the report are based on the aforementioned circumstances. The report is for the use of Ontoit and no responsibility will be taken for its use by other parties. Ontoit may, at its discretion, use the report to inform regulators and the public.

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ES1 Executive Summary

This Preliminary Planning Report for Ontoit supports the Aqualink Nunawading Business Case, which has explored various redevelopment scenarios for the existing Aqualink Nunawading aquatic and recreation centre at Forest Hill Reserve, Forest Hill. Due to the age of the existing facility, key operational constraints, and suboptimal functionality and performance compared to modern standards for a facility of this type, it is proposed to redevelop the facility in the same location.

This report considers the existing planning controls that apply to the site pursuant to the Whitehorse Planning Scheme and the implications of these in the context of the most recent concept plan which is under consideration. The report also then considers likely planning permit requirements for the proposed redevelopment including key matters that will need to be resolved to confirm these requirements.

The key findings of this Preliminary Planning Report can be summarised as follows.

Planning Policy Framework

Relevant planning policies at a state and local level identify a range of matters that should be considered as part of any redevelopment of the Aqualink Nunawading aquatic and recreation centre, including the following.

- Minimising impacts to biodiversity through minimising native vegetation removal, offsetting where this cannot be avoided, and incorporating plantings of vegetation indigenous to the area.
- Inclusion and participation by the Whitehorse community in cultural and community life is to be encouraged to the greatest degree possible.
- Amenity impacts of land use on sensitive land uses, like dwellings, are to be mitigated through sufficient setback distances and the siting of new sources of noise in physically distant or obstructed locations.
- Sufficient car and bicycle parking to be provided for any new land uses.

Zoning and Overlay Controls

The subject site is zoned Public Park and Recreation Zone, with a Special Building Overlay affecting the site to the north of the existing and proposed built form.

If it can be confirmed that the proposed use and development will be undertaken by or on behalf of a public land manager under the *Local Government Act 1989*, and that the uses of the land for a café and sports medical clinic are ancillary, no permit is expected to be required for the continued use and (re)development of the existing Indoor Recreation Facility.

Such confirmation will be possible following further definition of the project, including a detailed understanding of the nature of the various components of the use, and by seeking legal advice to confirm any conclusions about the applicability of exemptions and ancillary land uses..

Other Relevant Planning Controls

There are range of other Planning Scheme provisions, beyond the zone and overlay controls, that could potentially also trigger a planning permit requirement for the proposal. These include:

- Clause 52.02 Easements, restrictions and reserves
- Clause 52.05 Signs
- Clause 52.17 Native vegetation removal
- Clause 52.34 Bicycle parking.

Whether a permit requirement is triggered pursuant to these clauses can only be determined once a finalised layout is developed for the site to enable the detailed assessment of the project against the relevant requirements.

Potential Approvals Strategy

If some form of planning approval is required for the project, then two pathways available to facilitate any approval comprise:

- a planning permit application which Council lodges with itself as the responsible authority; or
- the use of Clause 53.22 where the Minister becomes the responsible authority and a fast tracked approval process is used, providing the application satisfies the requirements of that Clause.

Which one of these two pathways is appropriate will depend upon the nature of the approval that is being sought and the priorities of Council at that time, including from a stakeholder engagement perspective.

If a Clause 53.22 pathway is being considered then early consultation should be undertaken with officers from the Development Facilitation Program at the Department of Transport and Planning to confirm whether the required approval can be processed via this pathway.

Recommendations for Additional Advice

Legal advice is recommended, once finalised plans are available and a detailed description of the nature of the uses(s) and the relationship between Council and the proposed operator(s)/tenants of the centre is available. The legal advice should address:

- exemptions from needing a permit under the PPRZ
- whether the proposed future development of a café and sports health clinic constitute ancillary land uses;
- if required, consideration of existing use rights;
- if required, consideration of alternative approval pathways to facilitate relocation of an easement.

Ecology advice is also recommended to confirm whether a planning permit is required to remove native vegetation pursuant to Clause 52.17 of the Planning Scheme and any relevant offset requirements for this.

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1 Introduction

This Preliminary Planning Report has been prepared for Ontoit to support a business case for the redevelopment of the existing Aqualink Nunawading aquatic and recreation centre at Fraser Place, Forest Hill, within the Forest Hill Reserve. This initiative seeks to determine how and to what extent the centre should be redeveloped to best meet the social and economic needs of its owner and operator, Whitehorse City Council (WCC), as well as its users and the local community.

The existing centre dates from 1960 and has been redeveloped and expanded progressively since then. Recent technical appraisals of the Aqualink Nunawading facility have noted the ageing state of the building and have identified deficiencies when compared to contemporary standards and modern user expectations. Functionality issues identified include insufficient pool sizes and gym area, limited program rooms, and poor accessibility, notably the lack of a ramp for the 50m pool and inadequate change facilities.

The facility's layout is the result of iterative additions over many decades, and today has connectivity problems, with disjointed paths and visual disconnection from entry to various areas, impacting users' experience and accessibility. The building's energy inefficiency has also been highlighted due to its poor thermal performance and high resource consumption. It is understood that significant renovations to the existing structure are not likely to be cost effective due to high compliance risks and building code requirements, suggesting that the aquatic and building services would require major overhauls for viability. Accordingly, this report considers the planning implications of the full redevelopment of the existing centre.

This report considers the existing planning controls that apply to the site pursuant to the Whitehorse Planning Scheme and the implications of these in the context of the most recent concept plan which is under consideration. The report also then considers likely planning permit requirements for the proposed redevelopment including key matters that will need to be resolved to confirm these requirements.

2 Subject Site and Surrounds

The existing Aqualink Nunawading centre is located within Forest Hill Reserve in Forest Hill. Aqualink Nunawading is an aquatic and recreation centre dating from 1960, having been progressively redeveloped and expanded since then. The building is single storey, with tiered floor levels following the site topography, containing the following facilities:

- 50m 8-lane heated indoor pool
- Family leisure pool with learn to swim section, beach entry and water play equipment
- Spa, sauna and steam room
- 400sqm gym
- Group fitness class rooms
- Café and merchandise store
- Car parking.

Figure 2.1 **Aerial image of existing Aqualink Nunawading facility and context of Forest Hill Reserve and neighbouring dwellings, and Special Building Overlay of the Whitehorse Planning Scheme**

The existing building is surrounded by mature native vegetation, which extends into the broader Forest Hill Reserve, which also includes parkland, a playground and a sporting oval. Immediately east of the Aqualink building is a separate outbuilding used as the headquarters of the Nunawading Swimming Club.

Aqualink Nunawading is located amongst the residential hinterland of Forest Hill and is not in an activity centre – the closest is a lowest-order Neighbourhood Activity Centre located on the corner of Canterbury and Springvale Roads. The Aqualink Nunawading building is generally set back from any residential use by some distance, with the closest dwelling at 2 Opal Street set back approximately 50 metres from the nearest built form to the rear

façade of the dwelling. Aqualink's car park directly abuts the rear fences and rear gardens of single-storey dwellings fronting Husband Rd.

DEECA NatureKit mapping of the Forest Hill reserve indicates the potential presence of remnant native vegetation belonging to the Swampy Riparian Complex (126) and Valley Heathy Forest (127) ecological vegetation classes immediately to the north of the Aqualink centre.

Land in the Forest Hill Reserve is formed of multiple lots – for the purposes of this report, only those lots upon which elements of the proposed redevelopment project may be sited will be discussed. All lots are in ownership of the Whitehorse City Council.

2.1 Lot 15 of TP944338H

The existing Aqualink building is located on Lot 15 of TP944338H, which also takes in most of the remaining part of Forest Hill Reserve to the north and west of the building. The land Title for this lot lists two covenants which relate to the establishment of gas pipeline easements on the western side of the lot, which are clear of the existing Aqualink building footprint by approximately 80 metres. The covenants provide for allowing access to and maintenance of the gas pipeline, but otherwise do not prevent the development of the balance of the land. A further easement for drainage affects land north of the Aqualink building generally consistent with the path of the SBO in Figure 2.1.

2.2 Lot 2 of TP903461Q

The Nunawading Swimming Club building is located on a separate lot to the east, Lot 2 of TP903461Q. This lot also extends north and west in an L shape, featuring a long abuttal to Sapphire Street. The land is mostly used as informal public open space, featuring a large expanse of turf and trees and walking paths around its edges. The western and southern boundaries of this lot are affected by a drainage and sewerage easement, as is a strip of land 16 metres wide running north from Opal Street.

2.3 Lot 1 of PS312648F

This lot is located south of the existing Aqualink building and contains at-grade car parking for the centre. It's affected by a drainage and sewerage easement along its southern and eastern boundaries.

3 Scope of Land Use and Development Under Consideration

Over the course of the business case preparation project, a range of redevelopment options have been explored including partial or complete demolition and reconstruction of the existing facility on the subject site or elsewhere.

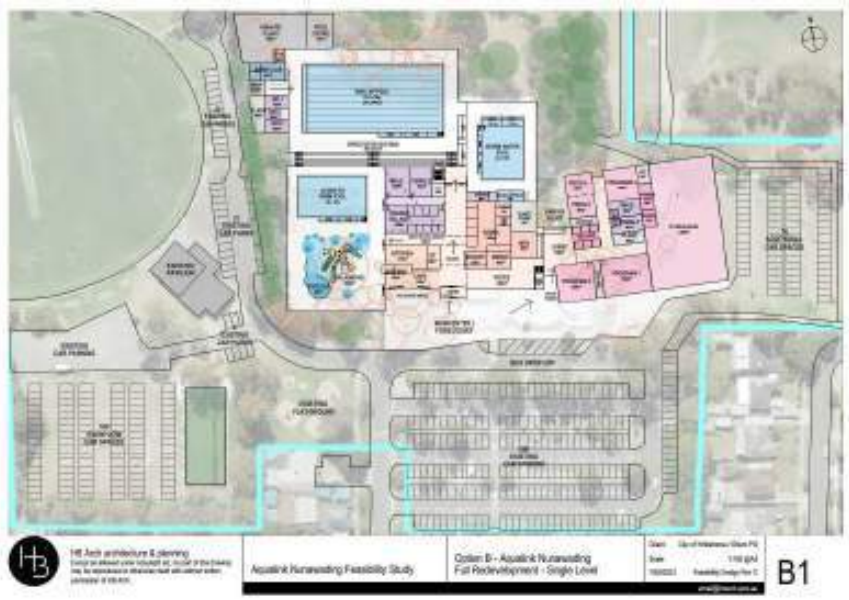

Figure 3.1 **Aqualink Forest Hill site redevelopment concept – *Aqualink Nunawading Facility Assessment and Options Review Report July 2023, HB Arch***

Figure 3.1, a concept by HB Arch featured in the *Aqualink Nunawading Facility Assessment and Options Review Report July 2023,* was the redevelopment concept initially provided to inform this report. The design is for a single- or -double storey centre featuring generally expanded facilities and pools, requiring an extension of the facility to the north, east and south. The extension would occur over the existing sewerage and drainage easement to the east, which would need to be re-routed around it. The proposal also includes an additional 70 car parking spaces to be provided at grade in addition to the 200 already provided. These additions would have required the removal of a significant number of trees to the north and south of the existing centre.

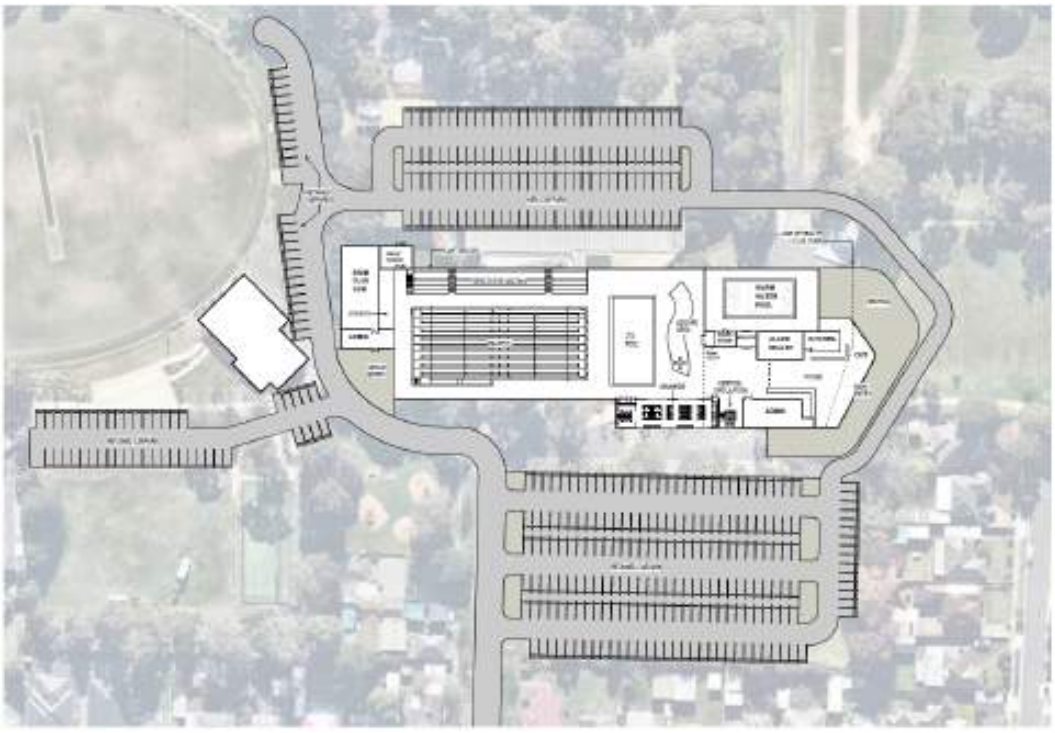

Figure 3.2 **Aqualink Forest Hill site redevelopment concept – *Aqualink Nunawading Facility "Option 3A" – July 2024***

The concept shown in Figure 3.2 was shared in July 2024 following several months of the business case preparation and was relied upon to form the planning advice included in this report.

The design is for a new, double-storey-height centre featuring generally expanded facilities and pools, with the northernmost extent of the footprint reduced, and expanded both to the east and west. The extension would occur over the existing sewerage and drainage easement to the east, which would need to be re-routed around it. These additions would require the removal of a number of trees around the existing centre. A new, additional carpark would be constructed on the footprint of the existing 50m pool (to be demolished) with access provided from the existing sports oval carpark, and an orbital link around the eastern side of the expanded facility.

The plans of the internal parts of the facility show the following additional uses:

- A small café
- Sports health clinic, i.e. sports medicine and physiotherapy services

It's understood that delivery of these services could be by a third party contracted to Council, though the exact nature of this relationship – whether an otherwise independent landlord-tenant relationship, or one where Council plays a more controlling role in operations – is unknown at this stage.

4 Previous Approvals

Several other planning permits have previously been issued by Whitehorse City Council for development within the Forest Hill Reserve, but not in relation to the Aqualink Nunawading facility itself.

Permit number	Date application lodged	Permit address	Permit allows	Outcome
WH/2011/906	8/11/2011	10 Fraser Place, FOREST HILL VIC 3131	Extension to the existing swimming club building	Permit Issued
WH/2003/13927	16/05/2003	2 Fraser Place, FOREST HILL VIC 3131	Addition of a Storage Room to an Existing Child Care Centre.	Permit Issued
WH/2001/12111	19/02/2001	4-10 Fraser Place, FOREST HILL VIC 3131	Construct Timekeepers booth and Scoreboard	Permit Issued
WH/2000/11930	2/11/2000	2 Fraser Place, FOREST HILL VIC 3131	Alterations to existing child care centre	Permit Issued

5 Whitehorse Planning Scheme

5.1 Planning Policy Framework

5.1.1 Clause 12.01-2S - Native vegetation management

This policy seeks to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation by ensuring that decisions that involve, or will lead to, the removal, destruction or lopping of native vegetation, apply the three-step approach in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment, Land, Water and Planning, 2017).

5.1.2 Clause 13.03-1S Floodplain Management

Under this clause, it is relevantly sought to protect property and infrastructure by locating it outside of flood-prone areas.

5.1.3 Clause 13.07-1S - Land use compatibility

This policy seeks to protect community amenity, human health and safety while facilitating appropriate commercial, industrial, infrastructure or other uses with potential adverse off-site impacts. The policy seeks to ensure that adverse off-site impacts to sensitive land uses, like dwellings, are reduced through land use separation and sensitive building siting and design.

5.1.4 Clause 15.01-1S – Urban Design

Under Clause 15.01-1S of the Scheme, it is sought to *'create urban environments that are safe, healthy, functional and enjoyable and that contribute to a sense of place and cultural identity'.*

5.1.5 Clause 15.01-1R - Urban design - Metropolitan Melbourne

This policy has the objective to create a distinctive and liveable city with quality design and amenity, through supporting the creation of well-designed places that are memorable, distinctive and liveable.

5.1.6 Clause 15.01-2S - Building design

This policy seeks to achieve building design and siting outcomes that contribute positively to the local context, enhance the public realm and support environmentally sustainable development, through various strategies including:

- Ensuring a comprehensive site analysis forms the starting point of the design process and provides the basis for the consideration of height, scale, massing and energy performance of new development.
- Ensuring development responds and contributes to the strategic and cultural context of its location.
- Minimising the detrimental impact of development on neighbouring properties, the public realm and the natural environment.
- Encouraging development to retain existing vegetation.

5.1.7 Clause 15.01-4R - Healthy neighbourhoods - Metropolitan Melbourne

This policy seeks to create a city of 20-minute neighbourhoods, that gives people the ability to meet most of their everyday needs within a 20 minute walk, cycle or local public transport trip from their home.

5.1.8 Clause 18.01-1S - Land use and transport integration

This policy seeks to facilitate access to social, cultural and economic opportunities by effectively integrating land use and transport.

5.1.9 Clause 19.02-3R - Cultural facilities - Metropolitan Melbourne

This policy seeks to maintain and strengthen Melbourne's distinctiveness as a leading cultural and sporting city with world-class facilities.

5.1.10 Clause 19.02-4S - Social and cultural infrastructure - Metropolitan Melbourne

This policy seeks to provide fairer distribution of and access to, social and cultural infrastructure. Strategies for this include:

- Encourage the location of social and cultural infrastructure in activity centres.
- Ensure social infrastructure is designed to be accessible.

5.1.11 Clause 19.02-6S - Open space

- This policy seeks to establish, manage and improve a diverse and integrated network of public open space that meets the needs of the community.

5.1.12 Clause 19.02-6R – Open space - Metropolitan Melbourne

- This policy seeks to establish, manage and improve a diverse and integrated network of public open space that meets the needs of the community.

5.2 Local Planning Policy Framework

5.2.1 Clause 21.05-3 – Environment

The Whitehorse Municipal Strategic Statement contains the following relevant strategies and objectives in relation to the environment:

- Ensuring that the replanting of tall trees and indigenous vegetation is appropriate to the type of vegetation in the area and enhances and retains biodiversity.
- Encouraging appropriate development that responds to environmental characteristics and infrastructure constraints.
- To protect and enhance areas with special natural, environmental, cultural or historic significance for the future enjoyment of the community.
- To facilitate environmental protection and improvements to known assets including water, flora, fauna and biodiversity assets.

5.2.2 Clause 21.07-3 - Economic Development

The Whitehorse Municipal Strategic Statement contains the following relevant objective:

- To increase participation in the cultural and recreational tourism of the City and facilitate the provision of entertainment, arts, cultural, recreational and leisure facilities and promoting these locally and regionally.

5.2.3 Clause 22.04 – Tree Conservation

This policy seeks to retain existing trees in order to maintain tree canopy cover and contribution this makes to the character of the municipality.

5.2.4 Clause 22.06 – Activity Centres

This policy lists the various Activity Centres within the municipality and seek ensure that centres provide for community facilities appropriate to the scale of the activity centre. The Forest Hill Reserve is not within an Activity Centre – the closest is the Forest Hill Chase, 1km to the west.

5.3 Zone

The existing Aqualink Nunawading centre is included in the Public Park and Recreation Zone (PPRZ) at Clause 36.02 of the Planning Scheme as shown in Figure 5.1. The purpose of the PPRZ is:

- '*To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To recognise areas for public recreation and open space.*
- *To protect and conserve areas of significance where appropriate.*
- *To provide for commercial uses where appropriate*'.

It is considered that the centre is best defined as an 'indoor recreation facility', defined at Clause 73.03 'Land Use Terms' as '*a building used for indoor leisure, recreation, or sport*'.

Figure 5.1 Zoning map

An Indoor Recreation Facility is a Section 1 use (i.e. no planning permission required) pursuant to Clause 36.02-1 'Table of Uses', subject to the use being conducted by or on behalf of a public land manager under the *Local Government Act 1989, the Reference Areas Act 1978, the National Parks Act 1975, the Fisheries Act 1995, the Wildlife Act 1975, the Forest Act 1958, the Water Industry Act 1994, the Water Act 1989, the Marine Safety Act 2010, the Port Management Act 1995* or the *Crown Land (Reserves) Act 1978.* On the basis that the use is considered to be conducted by or on behalf of the public land manager, the proposed use of the land would not trigger the requirement for a planning permit under the PPRZ.

In any event, the long-established use of the land as an Indoor Recreation Centre has highly likely established existing use rights under Clause 63 of the Whitehorse Planning Scheme for this use to continue on the site indefinitely.

The proposed café use (which is also existing and is defined as a Food and Drink Premises, which in turn is included under Retail Premises pursuant to Clause 73.03) and allied health clinic (defined at Clause 73.03 as Medical Centre which in turn is included under Office pursuant to Clause 73.03) would likely be considered ancillary uses – that is, uses that just form part of the dominant Indoor Recreation Facility use. This means that so long as the Indoor Recreation Facility use is permitted or allowed as of right, these minor uses do not also need to be assessed for compliance against the planning scheme. If the uses were not considered ancillary, then both uses would still be exempt from needing a permit in the PPRZ if they are considered to be conducted by or on behalf of a public land manager in accordance with one of the Acts of Parliament referenced above. If they do not meet this requirement then to be permissible, they must be associated with the public land use. This issue of ancillary uses is discussed further at Section 7 of this report

Pursuant to Clause 36.02-2, a permit is not required for buildings and works when carried out by or on behalf of a public land manager under one of the same Acts of Parliament referenced above.

Once again, on the basis that the WCC is a public land manager under one of the referenced Acts of Parliament, the development of new buildings and works would not trigger the requirement for a planning permit under the PPRZ. If this is not the case, a planning permit would be required for buildings and works at the subject site.

It is EMM's experience, based on other projects undertaken in the PPRZ, that the definition of a public land manager but in particular whether a use is conducted 'by or on behalf of a public manager' is not always straightforward. Accordingly, we recommend obtaining legal advice in relation to this issue once the project is further defined (including the nature of the various components of the use and how it will operate) to confirm the exemptions from needing a permit apply. This is discussed further at Section 7.1.

5.4 Overlays

5.4.1 Cl 45.06 Development Contributions Plan Overlay (Schedule 1)

Schedule 1 to the Development Contributions Plan Overlay applies to the subject site and seeks to facilitate financial contributions from development to fund communal infrastructure. The Clause does not apply to the construction of a building, the construction or carrying out of works or a subdivision specifically excluded by a schedule to this overlay.

Clause 4.0 of Schedule 1 states that Buildings and facilities developed by the Whitehorse City Council for Council or community use are excluded from needing to make development contributions.

5.4.2 Cl 44.05 Special Building Overlay

The Special Building Overlay relates to flooding risk and applies to part of the Forest Hill Reserve to the north of the existing Aqualink Nunawading complex, as shown in Figure 2.1. This is well outside the existing chain link fencing that delineates the complex from Forest Hill Reserve.

Provided that no development occurs within the extent of the SBO, no planning permit would be required under this overlay.

5.5 Particular Provisions

5.5.1 Clause 52.02 - Easements, Restrictions and Reserves

Clause 52.02 seeks to enable the removal and variation of an easement or restrictions to enable a use or development that complies with the planning scheme after the interests of affected people are considered. The Clause sets out the need to vary or remove an easement under several sections of the *Subdivision Act 1988*. Section 6A(3) of the *Planning and Environment Act 1987* states that a Planning Scheme must not prohibit or restrict a person from creating, varying or removing an easement or restriction, whether under the *Subdivision Act 1988* or under another law. It is understood from EMM's meeting with Council on 5 July 2024, that there is a legal avenue through which Council can remove the easement from its own land without needing to apply for planning permission from itself to do so. This is likely to be required if the footprint of new buildings or works extends east from the existing building footprint over the adjacent drainage easements. Further advice on this will be required from Council.

5.5.2 Clause 52.05 – Signs

The Public Park and Recreation Zone is in Category 4 under the signage requirements at Clause 52.05. This is the most restrictive category for signage.

An indoor recreation facility can have at most 3sqm of non-illuminated business identification signage (i.e. signage identifying the tenant of the land) subject to obtaining a planning permit. It can also have a sign identifying the

functions or property of a government department, public authority or municipal council (but not a promotion sign) displayed at the direction of any of these bodies, without requiring a planning permit. Otherwise most other signs are prohibited.

5.5.3 Clause 52.06 – Car Parking

Clause 52.06 determines the number of car parking spaces that should be provided on land to address traffic generation associated with its use. Clause 52.06 specifies neither maximum nor minimum parking requirements associated with an 'Indoor Recreation Centre'. Therefore, there are no planning permit triggers associated with changing parking provision at the site – but parking must be provided to the satisfaction of Whitehorse City Council.

5.5.4 Clause 52.17 – Native Vegetation

Clause 52.17 seeks to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation.

A planning permit may be required to remove native vegetation, subject to further investigations and confirmation of the development footprint. Some permit exemptions apply, for example in relation to planted native vegetation.

5.5.5 Clause 52.30 State Projects

Clause 52.30 has the purpose to facilitate the development and delivery of projects by or on behalf of, or jointly or in partnership with, or funded by the State of Victoria or a public authority, or on Crown land.

It grants such projects an exemption from almost all requirements of the planning scheme. To be a State project, pursuant to Clause 52.30-2 the Minister must be satisfied that a project is either:

- carried out by or on behalf of, or jointly or in partnership with, the State of Victoria or a public authority; or
- funded, or partly funded by, the State of Victoria or a public authority; or
- carried out on Crown land

The Aqualink redevelopment project would appear to meet this criteria, however if ultimately it is determined that a permit is required for the Project, it is unlikely that this pathway will be the most appropriate route to follow. Any benefits afforded are likely to be significantly outweighed by the uncertainty involved in gaining the Minister for Planning's direct intervention in approving the project. Further, projects approved under this Clause must undertake public consultation and submit the results of this along with comprehensive application documentation to the Minister for Planning for assessment and approval – this is unlikely to require any less work than a standard planning permit application, particularly give the other permit exemption provisions discussed in this report.

5.5.6 Clause 52.34 – Bicycle Parking

Clause 52.34 determines the number of bike parking spaces that should be provided on land to address traffic generation associated with its use. Clause 52.34 specifies the following minimum bike parking requirements associated with 'Minor sports and recreation facility', under which 'Indoor Recreation Facility' is included:

- 1 per 4 employees
- 1 to each 200 sq m of net floor area

Bicycle parking at these rates is only required to be provided in the case of new or expanded land uses, and only then if no planning permit is sought for a dispensation.

Therefore, appropriate numbers of bicycle parking spaces are to be provided, with a planning permit required for any dispensation.

5.5.7 Clause 53.18 – Stormwater Management in Urban Development

Clause 53.18 only applies to a planning permit application where there is a development trigger under the relevant zoning provision.

Clause 53.18 seeks to ensure stormwater generated by new development is managed on-site to regulate its quantity and quality when discharged off-site. A planning permit application to construct a building (or extension to an existing building) of more than 50sqm must manage stormwater on-site in accordance with the Clause – generally by meeting the performance objectives for stormwater quality as contained in the *Urban Stormwater – Best Practice Environmental Management Guidelines (Victorian Stormwater Committee, 1999).*

5.5.8 Clause 53.22 – Significant Economic Development

Clause 53.22 seeks to prioritise and facilitate the planning, assessment and delivery of projects that will make a significant contribution to Victoria's economy and provide substantial public benefit, by:

- making the Minister for Planning the responsible authority for assessing and approving a planning permit application
- removing the ability for third-party objections and planning appeals to prevent or delay the issue of a planning permit
- granting the Responsible Authority the ability to waive any application requirement if, in its opinion, the information is not relevant to the assessment of the application

If a planning permit is required associated with the use of the land as an indoor recreation facility (which sits within the definition of 'leisure and recreation' at Clause 73.03), and which will be carried out by or on behalf of a public authority, it would appear to be eligible for this 'fast track' assessment and approval pathway.

It would be advisable to meet with officers from the Development Facilitation Program at the Department of Transport and Planning to establish whether the project would be a candidate for this pathway. If council elects to follow this route, it would prevent third party objections from delaying the issue of a permit following advertising of the application and would prevent such objectors appealing Council's decision at the Victorian Civil and Administrative Tribunal (VCAT).

5.6 General Provisions

5.6.1 Clause 62 – General Exemptions

Clause 62.02-2 relates to buildings and works not requiring a permit unless specifically required by the planning scheme. This includes the internal rearrangement of a building or works provided the gross floor area of the building, or the size of the works is not increased; and artwork that is carried out by or on behalf of a public land manager, street furniture, playground equipment, bicycle pathways and trails.

Clause 62.05 states that a permit is not required for the demolition or removal of a building or works unless a permit is specifically required for demolition or removal. There is no requirement for a permit in the case of the subject site.

5.6.2 Clause 63 - Existing Uses

Clause 63.02 outlines how an existing use right can be established, how it is characterised and permit requirements where the application of an existing use right is proposed.

5.6.3 Clause 64 - General Provisions for Use And Development Of Land

Clause 64.01, "Land Used for More Than One Use", states that "if land is used for more than one use and one is not ancillary to the other, each use must comply with this scheme". The reverse is then also true – that ancillary uses (a minor use whose function is subservient to a significant parent use) do not need to comply with the planning scheme, if the parent use is compliant.

5.6.4 Clause 65 - Decision Guidelines

Clause 65 Decision Guidelines outlines the matters that a responsible authority must consider when deciding on a planning permit application or plan. These include the following:

- The matters set out in section 60 of the Act.
- Any significant effects the environment, including the contamination of land, may have on the use or development.
- The Municipal Planning Strategy and the Planning Policy Framework.
- The purpose of the zone, overlay or other provision.
- Any matter required to be considered in the zone, overlay or other provision.
- The orderly planning of the area.
- The effect on the environment, human health and amenity of the area.
- The proximity of the land to any public land.
- Factors likely to cause or contribute to land degradation, salinity or reduce water quality.
- Whether the proposed development is designed to maintain or improve the quality of stormwater within and exiting the site.
- The extent and character of native vegetation and the likelihood of its destruction.
- Whether native vegetation is to be or can be protected, planted or allowed to regenerate.
- The degree of flood, erosion or fire hazard associated with the location of the land and the use,
- development or management of the land so as to minimise any such hazard.
- The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.

5.6.5 Clause 66 - Referral and Notice Provisions

This clause outlines the relevant referral and notice provisions that apply to different types of applications, as well as referrals that are required under particular planning controls. Whether a referral authority is a 'recommending'

referral authority (where the referral authority provides comment/recommendations but the responsible authority doesn't have to adopt the recommendation) or a 'determining' referral authority (where the recommendation of the referral authority must be followed by the responsible authority, including the refusal of a permit if that is the response of the referral authority) is specified in the clause.

The extent of referrals depends upon the nature of a proposal, for example, whether it is a permit for use and buildings and works, or only buildings and works, whether it affects land in the TRZ2 and so forth. Accordingly, the following is an overview of potential referrals that could be required in relation to a planning permit application but noting that ultimately referrals will depend upon the detail of what is proposed and could vary from what is below.

- Clause 66.02-2 Native Vegetation Removal (in particular circumstances) – Referral to Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the Conservation, Forests and Lands Act 1987), recommending authority.
- Clause 66.03 Application pursuant to Clause 52.29 to create or alter access to a road declared as a freeway or arterial road (i.e. land in the TRZ2), referral to the head of Transport for Victoria, determining referral authority.
- Clause 66.03 An application under the Clause 44.05-6 Special Building Overlay within the waterway management district of Melbourne Water Corporation, determining referral authority.

5.6.6 Clause 67 - Land Owned or Permit Required by Responsible Authorities

The Responsible Authority for determining a planning permit application at the Forest Hill Reserve would normally be the Whitehorse City Council.

Section 96(1) of the *Planning and Environment Act 1987* states that *'a responsible authority must obtain a permit from the Minister* [for Planning] *before carrying out any use or development for which a permit is required under the planning scheme for which it is the responsible authority unless the planning scheme exempts the land, use or development from this subsection'*. However, Clause 67.01 of the Scheme states that any application for use and development is exempted from this part of the Act and can be determined by Whitehorse City Council itself.

However, for an application to which Clause 53.22 applies, the Responsible Authority would become the Minister for Planning.

Pursuant to Clause 67.02 of the Scheme, and in accordance with section 52(1)(c) of the Act, notice of any application must be given to the owners and occupiers of adjoining land.

This does not apply to an application:

- To remove, destroy or lop native vegetation under clause 52.17.
- If a permit is only required under the Bushfire Management Overlay, Floodway Overlay, Land Subject to Inundation Overlay, Salinity Management Overlay or Special Building Overlay.

In accordance with section 52(1)(c) of the Act, notice of an application to remove, destroy or lop native vegetation under clause 52.17 must be given to the Secretary to the Department of Environment, Land, Water and Planning [i.e. DEECA] (as constituted under Part 2 of the Conservation, Forests and Lands Act 1987).

This does not apply if the application must be referred to the Secretary under section 55 of the Act.

5.7 Current Planning Scheme Amendments

No amendments to the Whitehorse Planning Scheme are currently in preparation.

5.8 Cultural Heritage

The subject site is not affected by any areas of legislated Aboriginal cultural heritage sensitivity. Accordingly, it is understood that no Cultural Heritage Management Plan is required to be prepared prior to the issue of a planning permit. This is discussed further in the cultural heritage advice prepared for the project.

6 Key Planning Issues

6.1 Determination of whether Use and Development permit exempt in PPRZ

The use of an Indoor Recreation Facility, along with a café and sports health clinic, are all permissible land uses in the PPRZ. However, depending on the role and function of these uses, the PPRZ may exempt some or all of the proposed uses, as well as any accompanying development, from the requirement for a planning permit under the zone. This would mean that the only planning permit triggers would then relate to matters addressed in the particular provisions – for example native vegetation removal or not satisfying the bicycle parking requirements.

Demonstrating that the use and development of the Indoor Recreation Facility doesn't trigger the need for a permit requires the permit applicant to demonstrate that the use/development is being carried out by or on behalf of a public land manager under one of the Acts of Parliament listed in the PPRZ.

The uses of the café (defined as Food and Drink Premises, being a type of Retail Premises) and sports health clinic (defined as Medical Centre, considered to sit within the definition of Office) would also need to meet this requirement if proposed on their own; however if ancillary to the Indoor Recreation Facility, only the Indoor Recreation Facility needs to clear this hurdle.

These two matters are discussed further below.

6.1.1 Whether Use/Development is by/on behalf of the Public Land Manager

Various legal cases have explored the nexus use and development must have with a Council as the manager of public land, to benefit from the permit exemptions of the PPRZ. VCAT has found that there must be a clear and direct connection between the public land manager's objectives and the proposed uses, which it has termed a "direct representative interest or relationship". This ensures that the use and development aligns with the broader public interests and recreational purposes envisioned for the land. The principles to be observed, set out in *Wertheimer v Bayside CC [2017] VCAT 726* and summarised in *Bence v Bayside CC [2020] VCAT 1379,* as follows:

- *"The use must be undertaken by a person having a direct representative interest or relationship with the public land manager (i.e. referencing the practice note (now the 'Practitioners Guide'), and the decision in Toohey.)*
- *Not all actions undertaken or supported by a Council by reference to its very broad powers and functions under the Local Government Act 1989 will necessarily equate to land being used 'by or on behalf of' the public land manager. It is not sufficient that broad municipal community interests are being served. Consideration must be given to who is the real and substantial proponent of the use.*
- *It may be a legitimate exercise of a Council function to support a service provider or community group and to make public space available for its use. However, these flow-on benefits and position of support are not automatically equivalent to the use being carried out 'on behalf of' the Council.*
- *A general level of connection needs to be established, beyond the position of general Council support for the purpose or operator of the use, and beyond the Council or ratepayers obtaining a general benefit from the operation of the use. The relationship must be more than a beneficial one.*
- *The use is unlikely to be undertaken 'on behalf of' the Council if the use is controlled exclusively by a club and its members, and pursuant to a lease providing for an exclusive possessory interest over the land where the use is conducted – unless the lease provides evidence of a qualifying or controlling relationship by the Council."*

It is understood that Aqualink Nunawading is directly owned and operated by Whitehorse City Council, which would satisfy the above tests. The relationship between Council and any tenant of the Food and Drink Facility and Medical Centre should be immaterial if these uses are considered ancillary as discussed in the following section, but if not ancillary, it should be considered whether these uses require planning permission if not being operated directly by the Council.

6.1.2 Whether Food and Drink and Medical Centre premises is ancillary

The concept of ancillary land uses has been examined in numerous legal cases, focusing on the 'real and substantial purpose' of land use. Key principals to be used in determining the real and substantial purpose of the use of land were summarised in editorial comments of the former Administrative Affairs Tribunal (5 AATR 212), as follows:

- *"If land is in more than one use and one use is not ancillary to the other, each use must comply with the scheme.*
- *In determining whether an ancillary use has grown too far, the yardsticks will vary according to the use concerned, but comparative scale, degrees of intensity and the continued existence of a close association between the principal and ancillary uses will all be very relevant factors.*
- *An appropriate measure of dominant use (though not in all cases) might be the comparison of receipts from sales of one of the uses compared with receipts from other sales).*
- *The relationship between the uses may also be assessed by reference to certain planning characteristics for example, traffic and parking generation."*

Applying these principles to the proposed Indoor Recreation Centre with a smaller internal Food and Drink Premises and a Medical Centre, it follows that the primary recreational function must remain dominant. The ancillary uses should support the recreational activities, with the food and drink services catering to the centre's users and the Medical Centre providing primarily sports-related medical services such as physiotherapy. The ancillary uses should not overshadow the main recreational purpose, considering factors like traffic, parking impacts, and the comparative scale of income and space allocation. If these principles are followed, the Food and Drink Premises and a Medical Centre could be considered ancillary, and not require assessment for planning permit requirements separately under the Scheme.

6.1.3 Recommended approach

Once the project is further defined (including a more detailed understanding of the nature of the various components of the use including how it will operate and by who) it is recommended that legal advice is sought in relation to the above two matters. The legal advice should be sought to confirm a) whether the principles associated with determining whether a use and development is on behalf of a public land manager are met and b) whether the planning principles associated with ancillary land uses are also met.

If the proposal does not benefit from some or any of these exemptions, a planning permit could be sought.

Notwithstanding the above it should also be noted that the long-established use of the land as an Indoor Recreation Centre means it is highly likely it has established existing use rights under Clause 63 of the Whitehorse Planning Scheme for this use (including existing café operations) to continue on the site indefinitely. Council could pursue this route, should legal advice advise that the planning scheme exemptions cannot be relied upon.

6.2 Native Vegetation

Efforts should be made to minimise impacts on native vegetation to avoid the need for a planning permit for vegetation removal. If impacts cannot be avoided, areas of higher biodiversity value should be preserved, and trees or patches requiring offsetting should ideally be avoided. Landscaping with species indigenous to the Ecological Vegetation Classes found in Forest Hill Reserve, while not a formal replacement for offsetting requirements, would be considered a positive outcome.

An arborist's report prepared by Arbor Survey in January 2021 estimates that approximately 90% of the trees surveyed on the site are planted, with the remainder being self-sown or remnant vegetation. Nineteen of these trees meet the Whitehorse Planning Scheme definition of Native Vegetation, which includes "*plants that are indigenous to Victoria, including trees, shrubs, herbs, and grasses*". The arborist's report did not survey patches of shrubs, herbs, and grasses that may also constitute Native Vegetation under the Whitehorse Planning Scheme, nor did it assess how such patches and trees, alone or in combination, would generate offset requirements if removed, as per the Guidelines for the Removal, Destruction or Lopping of Native Vegetation (DELWP, December 2017).

It is recommended that an ecologist conduct further assessments, using the existing arborist's report as a starting point. The ecologist should determine if there are any native vegetation patches or trees that would require offsets under the Guidelines if impacted. This information could inform spatial constraints of the redevelopment proposal to ideally avoid any impacts on native vegetation. Where impacts are unavoidable, efforts should focus on avoiding vegetation of significance or that would require offsetting. Providing detailed and well-informed information on native vegetation impacts is crucial for meeting the requirements of Clause 67.02 of the Whitehorse Planning Scheme. Any application by the Whitehorse City Council to remove native vegetation must be advertised to the Secretary, DEECA, in accordance with section 52(1)(c) of the Act, if not otherwise required to be formally referred.

It is also noted that approval to remove any trees may also be required by WCC local laws. This would need to be confirmed by Council.

6.3 Interface with Drainage and Sewerage Easements

If development is to expand east over the existing drainage and sewerage easement on the western edge of Lot 2 of TP903461Q, this infrastructure will possibly need to be relocated and the corresponding easements on title amended at a later stage to reflect this, depending on the intensity of development over the easement. It's understood that Council can amend or delete easements on its own land without needing to secure planning permission to do so – however further advice from Council should be sought to confirm this.

6.4 Parkland Amenity Impacts

If a permit is triggered by development in the Public Park and Recreation Zone, planning considerations would need to consider the planning policy and Municipal Strategic Statement summarised in Section 5. Development would need to be contextually appropriate and minimise the ecological, amenity and useability impacts on parkland and the sporting facilities to the east and west of the existing centre.

6.5 Residential Amenity Impacts

In laying out the proposed redevelopment, the project architects should be mindful of the proximity of existing dwellings to the south of the Aqualink centre fronting Husband Road and Opal Street. The at-grade car parking of the existing Aqualink Centre is located directly north of the private open space (i.e. back gardens) of these dwellings. It should be sought not to increase amenity impacts to these properties as a result of the expanded centre, for example through additional noise from increased traffic, or additional light spill from enlarged car

parking facilities. It appears there may be scope to limit existing amenity impacts (e.g. by baffling existing unbaffled car park lighting), which could assist in ensuring no net increased impacts on neighbouring dwellings.

It's noted that new pool plant installations are proposed with a significant setback from any residential land use, and are sited behind the proposed building itself, further assisting to block the passage of noise offsite to sensitive receivers. The building design specialists who finalise the detailed design and configuration of this plant should ensure that noise and any other amenity impacts from this infrastructure are compatible with the reasonable amenity expectations of residents, including legal noise emission requirements as set out in the Environment Protection Authority's regulations.

6.6 Traffic and Parking Impacts

If the number of visitors travelling to the redeveloped Aqualink centre by car is expected to increase, Council should be mindful of what this means for traffic amenity impacts on local streets and for parking availability for other recreational visitors of the Forest Hill reserve. Husband Road is currently the main vehicle access route to the site from Springvale Road, yet is only a lowest-order residential street.

The additional northern carpark proposed in the June 2024 sketch plan suggests that a substantial uplift in visits by car to the centre is envisioned, with access arrangements to all car parks on the site not proposed to change – that is, access is to continue to occur only via Husband Road.

Council must evaluate whether the increase in estimated traffic impacts and impacts on levels of service on local streets will be acceptable to residents and practicable for visitors to the centre.

7 Planning Approval Pathway

7.1 Planning permit triggers

As discussed in Section 6.1, it would appear that pursuant to the PPRZ provisions, the proposed redevelopment is likely to be exempt from needing a planning permit from a use and development perspective. However, as also highlighted at Section 6.1, to determine if this is the case, further definition of the proposal is required including a more detailed understanding of the nature of the various components of the use, and legal advice to confirm any conclusions about the applicability of exemptions and ancillary land uses.

However, aside from the permit triggers associated with the PPRZ, there are also other permit triggers that could apply to the redevelopment including those associated with:

- Clause 52.02 Easements, restrictions and reserves
- Clause 52.05 Signs
- Clause 52.17 Native vegetation removal
- Clause 52.34 Bicycle parking.

Whether a permit requirement is triggered pursuant to these clauses can only be determined once a finalised layout is developed for the site to enable the detailed assessment of the project against the relevant requirements.

7.2 Approvals strategy – if a planning permit is required

If planning approval is required for the either the project as a whole, or particular elements of the project (for example removal of native vegetation and signage), then two key pathways available to facilitate any approval will be either via a planning permit application which Council lodges with itself as the responsible authority, or the use of Clause 53.22 where the Minister becomes the responsible authority and the fast tracked approval process is used, providing the application satisfies the requirements.

Which one of these two pathways is appropriate will depend upon the nature of the approval that is being sought and the priorities of Council at that time, including from a stakeholder engagement perspective.

As an example, if the only permit trigger is for native vegetation removal, then it would likely be appropriate to lodge the permit with Council, and to rely upon the exemptions from advertising afforded by Clause 67.02-2 for native vegetation removal applications. In comparison if a broader use and/or development permit is required it might be that Clause 53.22, assuming it is an option, offers a more appropriate pathway.

Accordingly, the permit triggers for the project will need to be confirmed, to then inform the final approval strategy.

7.3 Summary of further advice requirements

The following provides an overview of the key recommendations made in this report in relation to further advice that will be required prior to confirming future approval requirements.

- Legal advice is recommended once finalised plans are available, and a detailed description of the nature of the uses(s) and the relationship between Council and the proposed operator(s)/tenants of the centre is available, that addresses the following.

- Confirms whether the use and development is considered to be conducted by a public land manager under the *Local Government Act 1989*, and thus whether there are permit triggers under the PPRZ for the use or development of an Indoor Recreation Facility on the land.
- Confirms whether the scope and nature of operations of any café or sports science clinic can appropriately be considered ancillary to the overall use and development of the land for an Indoor Recreation Centre.
- If the advice finds that the use and development is not permit-exempt, confirms the extent of the existing use rights accrued by the existing Indoor Recreation Facility, and whether these are satisfactory to allow for the continued use of the redeveloped centre without requiring a planning permit for use.
- If Council has not been able to confirm the non-planning pathway for removing/altering easements exists (for example under the *Subdivision Act 1988* or *Transfer of Land Act 1958)* confirm the appropriate approvals pathway for the expected relocation of the easement.

- Ecology advice should be sought to confirm whether a planning permit is required to remove native vegetation pursuant to Clause 52.17 of the Planning Scheme and any relevant offset requirements for this.
- If it is determined that a planning permit is required for elements of the project, and Council is considering the use of Clause 53.22, then advice should be sought from officers from the Development Facilitation Program at the Department of Transport and Planning to establish whether the required approval could be considered pursuant to that clause.

8 Conclusion

The conclusions of this Preliminary Planning Report are as follows.

Planning Policy Framework

Relevant planning policies at a state and local level identify a range of matters that should be considered as part of any development or redevelopment of the Aqualink Nunawading aquatic and recreation centre, including the following.

- Minimising impacts to biodiversity through minimising native vegetation removal, offsetting where this cannot be avoided, and incorporating plantings of vegetation indigenous to the area.
- Inclusion and participation by the Whitehorse community in cultural and community life is to be encouraged to the greatest degree possible.
- Amenity impacts of land use on sensitive land uses, like dwellings, are to be mitigated through sufficient setback distances and the siting of new sources of noise in physically distant or obstructed locations.
- Sufficient car and bicycle parking to be provided for any new land uses.

Zoning and Overlay Controls

The subject site is zoned Public Park and Recreation Zone, with a Special Building Overlay affecting the site to the north of the existing and proposed built form.

If it can be confirmed that the proposed use and development will be undertaken by or on behalf of a public land manager under the *Local Government Act 1989*, and that the uses of the land for a café and sports medical clinic are ancillary, no permit is expected to be required for the continued use and (re)development of the existing Indoor Recreation Facility.

Such confirmation will be possible following further definition of the project, including a detailed understanding of the nature of the various components of the use, and by seeking legal advice to confirm any conclusions about the applicability of exemptions and ancillary land uses.

Other Relevant Planning Controls

There are range of other Planning Scheme provisions, beyond the zone and overlay controls, that could potentially also trigger a planning permit requirement for the proposal. These include:

- Clause 52.02 Easements, restrictions and reserves
- Clause 52.05 Signs
- Clause 52.17 Native vegetation removal
- Clause 52.34 Bicycle parking.

Whether a permit requirement is triggered pursuant to these clauses can only be determined once a finalised layout is developed for the site to enable the detailed assessment of the project against the relevant requirements.

Potential Approvals Strategy

If some form of planning approval is required for the project, then two pathways to facilitate any approval comprise:

- a planning permit application which Council lodges with itself as the responsible authority; or
- the use of Clause 53.22 where the Minister becomes the responsible authority and a fast tracked approval process is used, providing the application satisfies the requirements of that Clause.

Which one of these two pathways is appropriate will depend upon the nature of the approval that is being sought and the priorities of Council at that time, including from a stakeholder engagement perspective.

If a Clause 53.22 pathway is being considered then early consultation should be undertaken with officers from the Development Facilitation Program at the Department of Transport and Planning to confirm whether the required approval can be processed via this pathway.

Recommendations for Additional Advice

Legal advice is recommended, once finalised plans are available and a detailed description of the nature of the uses(s) and the relationship between Council and the proposed operator(s)/tenants of the centre is available. The legal advice should address:

- exemptions from needing a permit under the PPRZ
- whether the proposed future development of a café and sports health clinic constitute ancillary land uses
- if required, consideration of existing use rights
- if required, consideration of alternative approval pathways to facilitate relocation of an easement.

Ecology advice is also recommended to confirm whether a planning permit is required to remove native vegetation pursuant to Clause 52.17 of the Planning Scheme and any relevant offset requirements for this.

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Ontoit.

Appendix I - Cost Plan Report

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

wtpartnership.com

17 December 2024

Simon Gorr
Ontoit
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Stephanie.Hope@rpinfrastructure.com.au

Dear Simon

AQUALINK NUNAWADING

OPERATIONAL EXPENDITURE AND LIFECYCLE REPORT

Please find attached our Operational Expenditure and Lifecycle Report produced for the Aqualink Nunawading redevelopment.

We trust the report is self-explanatory and in accordance with your current requirements. If you have any queries regarding this matter, please do not hesitate to contact the undersigned.

Yours sincerely

JOSH KNAGGS
Associate Director
WT

WT REF: PR-024183-01B - LCC & OPEX - OPTION 3A

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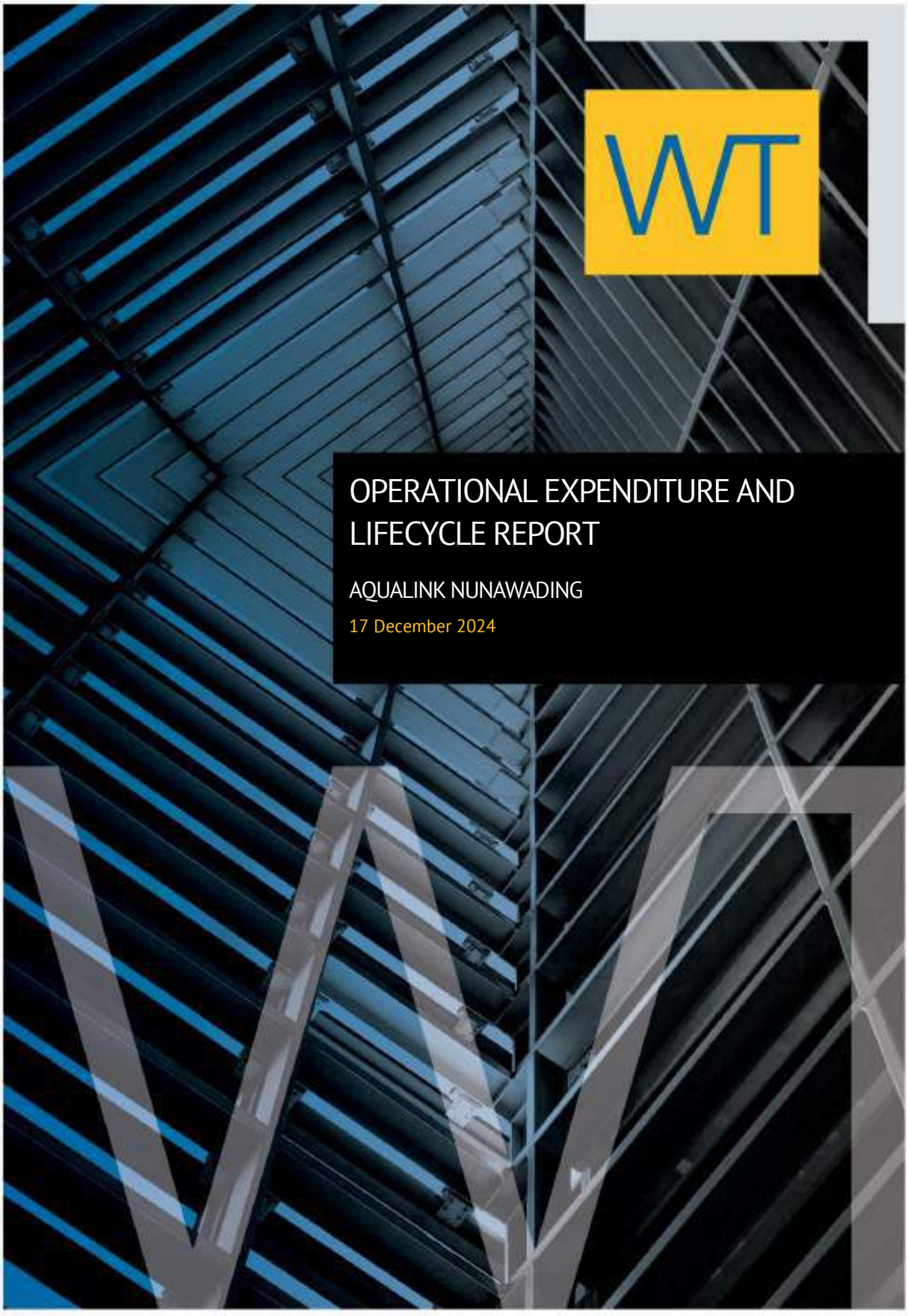
10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case



10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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APPENDIX A LIFECYCLE MODEL

wtpartnership.com

1 INTRODUCTION

WTP Australia Pty Ltd (WT) were engaged by Ontoit to prepare this report to provide estimated costs for the future ongoing operational expenditure and lifecycle works in relation to the proposed Aqualink Nunawading development site (The Project).

This report is carried out for the benefit of Ontoit on behalf of the Whitehorse City Council in the planning of future operational and lifecycle works and to support future budgeting requirements for their proposed Project.

WT has collected benchmark costs from several other projects which have similarities to this Project.

1.1 BACKGROUND & PURPOSE

This report has been compiled by WT Australia Pty Ltd ('WT').

We work in partnership with our Clients and their advisors throughout the life of projects from origination, through construction and operation, to divestment and disposal. Our approach centres on giving professional, timely and reliable advice on all aspects of strategy, procurement, delivery and operation.

We advise on a wide range of projects around the world, drawing on the resources of over 1,300 staff operating from over 50 offices across North America, the United Kingdom, Europe, Asia, Central America, Australia and the Pacific regions. As one of the only major international firms that is privately owned and operates all of our offices, our open structure enables us to work flexibly and collaboratively to serve our clients based upon long-term relationships. Our global reach and resource depth enable us to leverage world's best-practice, a huge data footprint and our own subject matter experts to provide clients with a focused high performance team on each and every project.

1.2 AQUALINK NUNAWADING – OPTION 3A

WT understand the proposed Project includes demolition of the existing structure and construction of a new building which comprises a 50m Pool with spectator seating, learn to swim pool, leisure area, warm water pool, sauna and steam, adjoining change facilities, swim club gym, kitchen, café, admin and storage, on grade car park and associated landscaping, site services and infrastructure.

Total building GFA of 9,825m² as provided in the CO-OP Studio Business Case Area Schedule issue 06 dated 21 June 2024.

2 LIFECYCLE EXPENDITURE

2.1 PREMISE

Once an asset has been installed within a building there is a requirement to maintain the asset during its normal economic life and a requirement to replace the asset at the end of its normal economic life. This is especially relevant in public works projects, given the legislative requirements for essential assets to be maintained and to ensure the safety of patrons and the general public.

The Lifecycle costs that are presented in this report consider replacement costs that will be incurred by the building owner for the replacement of assets and periodic redecoration works to the property.

2.2 METHODOLOGY

Our Asset & Facilities Management team have reviewed the WT Cost Plan for Option 3A (Draft Rev 9) – Contemporary Hybrid on a line by line basis to assess the items within the cost estimate for lifecycle modelling.

We have applied the indirect costs (ESD allowance, contingency and escalation) at an item level to ensure that the lifecycle model reflects all the costs that were included in the Cost Estimate. Furniture/Fittings & Equipment are included within the LCC model. We have excluded the following costs; Demolition, Authority Charges, Consultant Fees, Internal Client Cost and In-ground Conditions and Contamination. When the Capital Estimate cost is stated in this report it will be excluding the items discussed above including the contingency associated with each.

We have then reviewed each line item within the estimate to assess whether the items are to be modelled for lifecycle. Items including demolition works and in ground works have not been assessed for lifecycle as these are one-off costs that do not carry a cost burden throughout the life of the project.

We have applied our benchmark LCC percentage profile to produce the lifecycle output for all line items within the estimate with a lifecycle requirement. The benchmark doesn't consider detailed granular asset information, and the below items are indicative of activities taking place in the benchmarking.

This methodology has produced 25-year lifecycle profiles which we apply to the relevant building or external works function.

2.3 ASSUMPTIONS

All costs are shown in 2030 Australian dollars to tie in with the current anticipated completion date and exclude GST. No further escalation has been applied to future lifecycle costs within the 25-Year model.

2.4 LIFECYCLE ESTIMATE

The WT Cost Plan includes escalation during construction with a completion date of December 2030. Benchmarking is based on Real (2030) dollars and excludes escalation beyond this point.

The lifecycle estimate for the project is as follows over a 25-year horizon period.

TABLE 1 – LIFECYCLE ESTIMATE

OPTION	CAPITAL ESTIMATE ($) EXCL GST	LIFECYCLE (LCC) ESTIMATE ($) EXCL GST	LCC ESTIMATE AS A % OF CAPITAL ESTIMATE
Option 3A	122,383,681	35,407,000	28.93%

The lifecycle estimate represent 28.93% of the initial project capital cost for option 3A and falls within our expected benchmark range of 15% to 35% of the initial project capital cost.

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The significant lifecycle costs through the 25 year period are due to the likely occurrence of the following:

Year 6 – Appliance, pool equipment replacement, repainting of painted finishes

Year 10 – Recurring FF&E partial replacement

Year 16 – Mechanical/Hydraulic replacement

Year 20 & 21 – Mechanical / Hydraulics and Plumbing Fixture replacements, Pool Refurbishment, Fitout refurbishment and recurring FF&E partial replacements

Please refer to Appendix A for further details.

3 OPERATIONAL EXPENDITURE (OPEX)

3.1 OPEX METHODOLOGY – BUILDING AREAS

Building area benchmarking for Opex has been obtained from similar projects for which WT has provided Opex models, and it includes allowances on a metre square basis for cleaning, utilities and pest control.

We have worked through the functional areas of the Project and grouped each room/ space into categories of either Amenity (change rooms and toilet areas), Front of House (FOH/ Office), Front of House (Sports), Back of House (BOH), Car Park and soft and hard landscaping areas. Benchmark rates per metre square for each Opex service have then been applied to each functional area total to produce an annual Opex budget.

Benchmarking is based on current rates as of October 2024 and escalated to the expected year of project completion in 2030. The rates are priced in Australian dollars and exclude GST.

Opex services have been assumed to be sourced locally hence, no additional localised source cost factors have been applied.

3.2 OPEX ESTIMATE (EXCLUDING MAINTENANCE) – BUILDING AREAS

The estimated annual Opex for the building and external areas is provided in the table below.

TABLE 2 – ESTIMATED ANNUAL OPEX SUMMARY

OPTION	CAPITAL ESTIMATE ($) EXCL GST	OPEX ESTIMATE ($) EXCL GST	OPEX ESTIMATE AS A % OF CAPITAL ESTIMATE
Option 3A	122,383,681	681,849	0.54%

The Opex estimate for the building, car park and landscaping components of the project Option 3A is detailed below:

TABLE 3 – ESTIMATED ANNUAL OPEX DETAIL

	QUANTITY	UNIT	RATE	TOTAL
Amenity				
Cleaning	792	m2	32.00	25,344
Utilities	792	m2	17.00	13,464
Pest Control	792	m2	2.00	1,584
FOH				
Cleaning	5,744	m2	30.00	172,326
Utilities	5,744	m2	37.00	212,535
Pest Control	5,744	m2	2.00	11,488
FOH-Sports				
Cleaning	2,050	m2	20.00	41,000
Utilities	2,050	m2	37.00	75,850
Pest Control	2,050	m2	2.00	4,100
BOH				
Cleaning	1,629	m2	14.00	22,806
Utilities	1,629	m2	17.00	27,693
Pest Control	1,629	m2	2.00	3,258
Car Park				
Utilities	8,400	m2	5.00	42,000
Pest Control	8,400	m2	1.00	8,400
TOTAL				**$661,849**
			25 Year	**$16,546,225**

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The above Opex estimate of **$681,849 excluding GST** per annum represents 0.54% of the initial project capital cost of $122,383,681 excluding GST.

3.3 OPEX METHODOLOGY (EXCLUDING MAINTENANCE) - POOL

Pool benchmarking for Opex has been obtained from similar projects for which WT has provided Opex models, and it includes allowances on a per-pool basis for chemical costs, and utilities (water/sewer and electric) costs.

Benchmark rates per pool type have been applied and modelled to produce an Opex estimate for the pool assets. Benchmarking is based on Real (2030) dollars and excludes escalation beyond this point.

Estimated annual operational expenditure is calculated based on the pool assets stated within WT's Aqualink Nunawading Masterplan Estimate No.1 (Draft Rev 9) dated 21/10/2024.

Utility rates are based on high level benchmarking, and we would anticipate the engineer's guidance to be able to provide more accurate forecasting of consumption. Reactive and planned maintenance is excluded and can be found in section 3.5.

3.4 OPEX ESTIMATE – POOLS

The estimated annual Opex summary for the pool assets of the project is as follows:

TABLE 4 – ESTIMATED ANNUAL POOL OPEX SUMMARY

OPTION	CAPITAL ESTIMATE ($) EXCL GST	POOL OPEX ESTIMATE ($) EXCL GST	POOL OPEX ESTIMATE AS A % OF CAPITAL ESTIMATE
Option 3A	122,383,681	563,400	0.46%

The Opex estimate for the pool assets of the Project option 3A is summarised below:

TABLE 5 – ESTIMATED ANNUAL POOL OPEX DETAIL

OPTION 3A	50M INDOOR POOL	LEISURE POOL	WARM WATER POOL	LEARN TO SWIM	SPA, SAUNA, STEAM RM	TOTAL
Chemical Costs	34,400	4,000	9,400	6,700	6,900	61,400
Water Costs	53,900	6,100	14,100	10,100	10,800	95,000
Electricity Costs	189,500	76,200	54,500	43,400	43,400	407,000
TOTAL	**$277,800**	**$86,300**	**$78,000**	**$60,200**	**$61,100**	**$563,400**
					25 Year	**$14,085,000**

3.5 MAINTENANCE

Building area benchmarking for maintenance has been obtained from similar projects for which WT has provided Opex models, and it includes allowances on a metre square basis for general maintenance and fire protection system maintenance.

We have worked through the functional areas of the Project and grouped each room/ space into categories of either Amenity (change rooms and toilet areas), Front of House (FOH/ Office), Front of House (Sports), Back of House (BOH), Car Park and soft and hard landscaping areas. Benchmark rates per metre square for maintenance and fire protection system maintenance have then been applied to each functional area total to produce an annual maintenance budget.

Pool benchmarking for maintenance has been obtained from similar projects for which WT has provided Opex models, and it includes allowances on a per-pool basis for planned and reactive maintenance.

Benchmarking is based on current rates as of October 2024 and escalated to the expected year of project completion in 2030. The rates are priced in Australian dollars and exclude GST.

Maintenance services have been assumed to be sourced locally hence, no additional localised source cost factors have been applied.

TABLE 6 – ESTIMATED ANNUAL MAINTENANCE SUMMARY

OPTION	CAPITAL ESTIMATE ($) EXCL GST	TOTAL MAINTENANCE ESTIMATE ($) EXCL GST	POOL OPEX ESTIMATE AS A % OF CAPITAL ESTIMATE
Option 3A	122,383,681	628,982	0.51%

The estimate for the building maintenance, fire protection maintenance and pool asset maintenance of the Project option 3A is summarised below:

TABLE 7 – ESTIMATED ANNUAL MAINTENANCE DETAIL

	QUANTITY	UNIT	RATE	TOTAL
Building Maintenance				
Amenity	792	m2	47.00	37,224
FOH	5,744	m2	43.00	247,001
FOH-Sports	2,050	m2	33.00	67,650
BOH	1,629	m2	39.00	63,531
Car Park	8,400	m2	4.00	33,600
Soft landscaping	3,000	m2	4.00	12,000
Hard Landscaping	300	m2	8.00	2,400
Building Maintenance Total				**463,406**

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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	QUANTITY	UNIT	RATE	TOTAL
Fire Protection Maintenance				
Amenity	792	m2	5.00	3,960
FOH	5,744	m2	5.00	28,721
FOH-Sports	2,050	m2	5.00	10,250
BOH	1,629	m2	5.00	8,145
Car Park	8,400	m2	1.00	8,400
Fire Protection Maintenance Total				**59,476**
Pools – Reactive Maintenance				
50m Indoor Pool	1	Item	17,700	17,700
Leisure Pool	1	Item	3,500	3,500
Warm Water Pool	1	Item	8,200	8,200
Learn to Swim	1	Item	5,900	5,900
Spa, Sauna, Steam Rm	1	Item	1,800	1,800
Pools – Reactive Maintenance Total				**37,100**
Pools – Planned Maintenance				
50m Indoor Pool	1	Item	32,900	32,900
Leisure Pool	1	Item	6,600	6,600
Warm Water Pool	1	Item	15,300	15,300
Learn to Swim	1	Item	10,900	10,900
Spa, Sauna, Steam Rm	1	Item	3,300	3,300
Pools – Planned Maintenance Total				**69,000**
All Maintenance Total				**$628,982**
	25 Year			**$15,724,540**

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3.6 OPEX SUMMARY

The combined Opex estimates for building works and pool assets represent a combined Opex budget of 1.52% of the initial project capital cost.

TABLE 8 – OPEX SUMMARY

OPTION	CAPITAL ESTIMATE ($) EXCL GST	COMBINED OPEX ESTIMATE ($) EXCL GST	COMBINED OPEX ESTIMATE AS A % OF CAPITAL ESTIMATE
Option 3A	122,383,681	1,854,231	1.52%

The estimates are within an acceptable range of our benchmark range of 1.5% to 3.5% per annum.

3.7 OPEX INCLUSIONS

The OPEX estimate is inclusive of the following expenses, to be incurred by the building owner:

- HVAC contract services
- Cleaning
- Maintenance of physical utility assets
- Fire protection equipment
- Pest Control
- General maintenance
- Utilities Consumption Operating expenses
- Grounds Maintenance

3.8 OPEX EXCLUSIONS

The OPEX estimate excludes the following:

- Client Direct Costs
- Relocation Costs
- Out of hours working and working out of sequence
- Artwork & Sculptures
- Taxes, charges and fees such as council rates and audit fees.
- Building Management & Administration staff (if required)
- Events Managements
- Security (Physical Patrols)
- IT Systems and Associated software

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- Business vehicles
- Offsite document storage
- Business insurances
- Asset replacement works to building and services (included in WT's lifecycle estimate – refer to Section 4)
- Furniture, Fixtures and Equipment including window furnishings and street furniture
- Whitegoods, kitchen equipment and other 'plug in' electrical goods
- AV Equipment, POS or networking active equipment
- Outside catering
- Statutory Outgoings
- All other business-related operating expenses
- Goods & Services Tax (GST)

4 NEXT STEPS

WT recommend that a more detailed lifecycle modelling exercise is completed once the design is complete to a level that allows for this task to be undertaken at an asset level.

Following completion of the project WT recommends the analysis should be updated regularly to reflect the true value of future inflation and other assumptions included herein.

5 DISCLAIMER

WT highlights this Report should be considered as indicative only of the replacement costs that may be incurred by the operator for the replacement of assets and periodic redecoration works to the property.

WT is not and does not hold out to be a building diagnostician or an expert in the assessment of building materials design lives. WT does not represent that the information included within this report is the limit of all issues that may be experienced over the lifecycle horizon of the assets.

This benchmark analysis is prepared for the express purpose of assisting RP Infrastructure in their general understanding of maintenance strategies. It should not be used for any other purpose or by a third party without the written consent of WT.

This Report is solely for the use of the party by whom we were instructed and for no other purpose. We owe no duty of care to any third party who becomes aware of this Report and, without our knowledge, chooses to act or rely on the whole or any part of it.

Neither the whole nor any part of this Report nor any reference thereto may be included in any document, circular or statement without our approval of the form and context in which it will appear.

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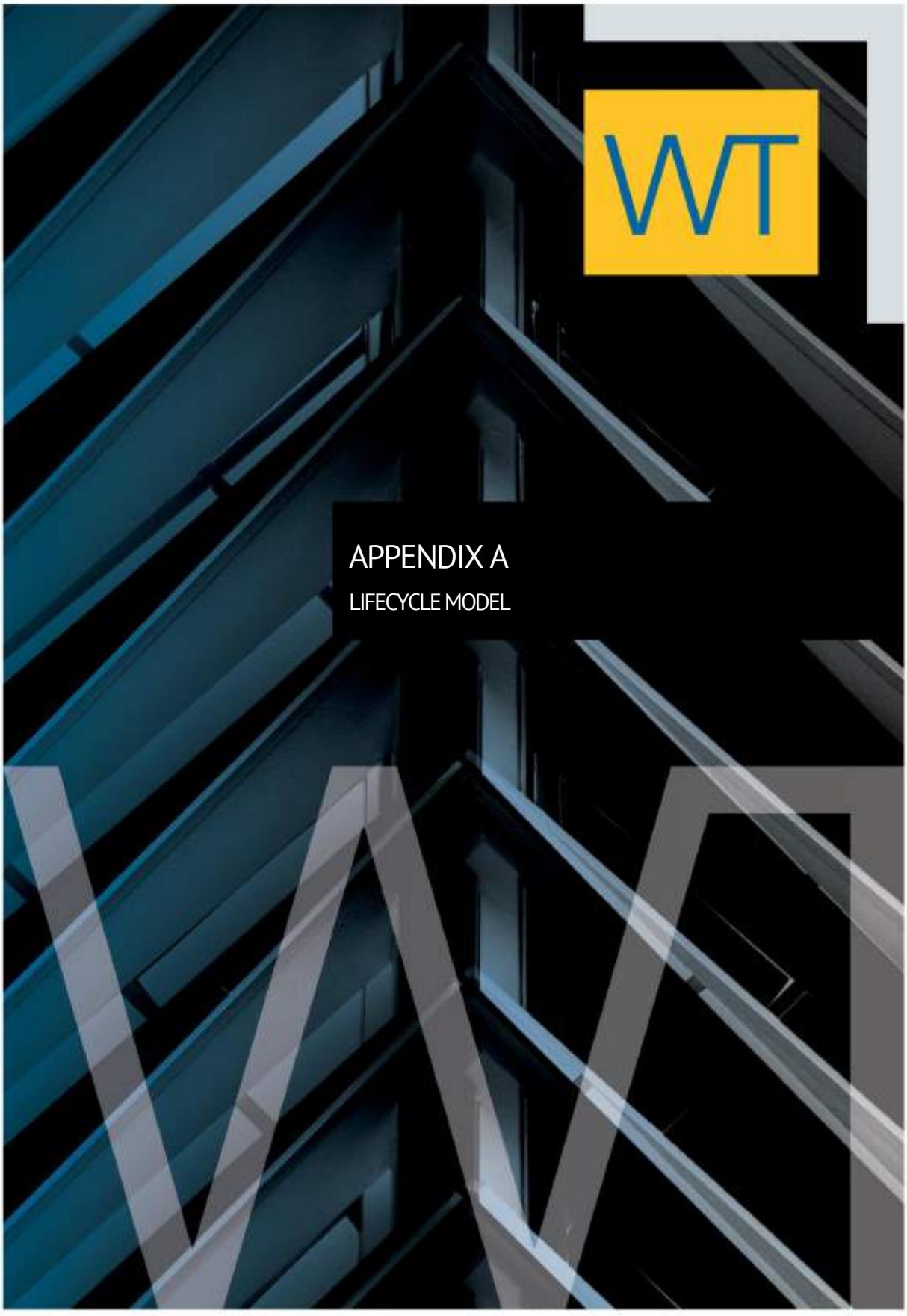
10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case



10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Aqualink Nunawading
Option 3A
Contemporary Hybrid

Description	TOTAL	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year
	LCC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
INDOOR AQUATIC HALL																										
50m Indoor Pool (with Concourse)	**7,998,000**	0	58,521	61,659	65,757	52,077	412,764	211,888	114,058	239,028	399,229	424,742	417,917	150,251	283,579	429,214	1,050,861	122,229	328,477	194,247	545,138	847,333	368,050	174,080	499,132	153,022
Spectator Seating (Extra Over) - allow 500 no. per option	**225,000**	0	1,636	1,752	1,827	1,447	17,015	5,887	8,256	6,645	11,091	11,803	11,613	4,174	7,790	11,925	29,197	3,396	9,126	5,397	15,091	23,542	10,224	4,837	13,868	4,253
Learn-to-Swim (with Concourse)	**1,521,000**	0	25,765	27,127	28,948	22,924	269,719	93,286	138,210	105,228	175,754	186,981	183,981	66,128	124,452	188,954	462,634	53,809	144,606	85,514	239,107	373,017	162,028	76,636	219,734	67,365
Leisure Water + Toddler Pool (with Concourse)	**980,000**	0	7,170	7,549	8,056	6,380	75,073	25,959	38,477	29,294	48,911	52,057	51,201	18,405	34,650	52,581	128,746	14,975	40,241	23,798	66,542	103,849	45,091	21,327	61,151	18,747
Warm Water Program + 2 x Spa (with Concourse)	**2,747,000**	0	20,695	21,836	23,579	17,882	210,408	72,757	107,845	82,076	137,085	145,846	143,501	51,575	96,275	147,382	360,841	41,971	112,795	66,700	186,500	290,948	126,375	59,735	171,390	52,544
Sauna + Steam	**247,000**	0	1,802	1,897	2,024	1,603	18,845	6,523	9,663	7,359	12,291	13,076	12,866	4,625	8,632	13,214	32,353	3,763	10,111	5,980	16,721	26,086	11,333	5,359	15,367	4,713
Pool Concourse and Deck Showers	**18,000**	0	138	144	145	114	1,536	462	685	535	871	926	913	328	631	936	2,292	267	716	424	1,184	1,848	803	380	1,088	334
Wet Lounge	**78,000**	0	588	598	639	506	5,930	2,058	3,050	2,321	3,877	4,125	4,056	1,459	2,725	4,168	10,205	1,185	3,192	1,886	5,274	8,228	3,574	1,690	4,847	1,486
Birthday Party Room / Meeting Room	**77,000**	0	581	593	631	501	5,850	2,040	3,011	2,316	3,843	4,089	4,003	1,446	2,689	4,133	10,116	1,177	3,162	1,870	5,228	8,157	3,543	1,676	4,805	1,474
First Aid Room	**49,000**	0	364	372	398	315	3,708	1,280	1,900	1,446	2,414	2,526	2,529	909	1,697	2,597	6,358	740	1,988	1,175	3,287	5,127	2,227	1,053	3,020	926
LTS Store	**49,000**	0	356	372	400	317	3,712	1,290	1,913	1,456	2,431	2,587	2,545	915	1,708	2,614	6,408	744	2,002	1,183	3,308	5,161	2,241	1,060	3,040	932
WWP Store	**15,000**	0	238	250	267	213	2,488	860	1,275	971	1,621	1,727	1,697	610	1,138	1,743	4,267	496	1,334	789	2,205	3,440	1,494	707	2,027	621
Cleaner	**17,000**	0	113	115	133	106	1,244	430	638	485	810	862	848	305	569	871	2,133	248	667	394	1,103	1,720	747	353	1,013	311
Pool Storage	**82,000**	0	594	621	667	529	6,230	2,151	3,188	2,426	4,052	4,311	4,241	1,525	2,846	4,357	10,667	1,241	3,334	1,972	5,513	8,601	3,736	1,767	5,067	1,553
Subtotal																										
HEALTH & WELLNESS AREA																										
Cardio and Strength Area	**2,404,000**	0	17,586	18,517	19,760	15,449	184,138	63,471	94,076	71,829	119,670	127,417	125,186	45,040	84,251	128,581	315,789	36,730	98,709	58,372	163,255	254,622	110,405	52,212	149,991	45,984
Group Fitness (Incl. Associated Store)	**2,003,000**	0	14,655	15,431	16,467	15,041	153,449	53,061	78,647	59,858	99,975	106,364	104,655	37,616	70,153	107,484	263,158	30,609	82,257	48,643	136,053	212,186	92,167	43,593	124,993	38,320
Allied Health Foyer & Suites	**114,000**	0	829	873	931	718	8,673	3,001	4,448	3,386	5,655	6,016	5,919	2,128	3,971	6,079	14,888	1,731	4,651	2,751	7,695	12,001	5,211	2,466	7,070	2,167
Community Meeting & Storage	**103,000**	0	780	822	886	702	8,218	2,856	4,211	3,221	5,380	5,724	5,632	2,024	3,779	5,781	14,162	1,645	4,422	2,618	7,320	11,413	4,960	2,346	6,727	2,062
Prayer Room	**24,000**	0	168	176	190	150	1,720	613	903	690	1,153	1,227	1,207	434	810	1,240	3,035	353	949	561	1,569	2,447	1,063	503	1,441	442
Consulting / Testing Rooms	**47,000**	0	338	356	380	301	3,539	1,234	1,814	1,381	2,306	2,451	2,414	868	1,619	2,479	6,070	706	1,897	1,122	3,137	4,894	2,126	1,005	2,881	884
Subtotal																										
FRONT OF HOUSE AREAS																										
Ground Floor Foyer Incl. Airlock, Reception / Entry Control & Associated Store	**598,000**	0	4,374	4,606	4,915	3,892	45,808	15,857	23,474	17,866	29,840	31,747	31,236	11,227	20,956	32,081	78,545	9,136	24,551	14,519	40,596	63,331	27,389	13,011	37,307	11,437
Café & Lounges incl. Kitchen (Incl. FF&E)	**1,080,000**	0	7,895	8,313	8,871	7,026	82,669	28,586	42,370	32,248	53,860	57,302	56,383	20,265	37,826	57,906	141,771	16,490	44,315	26,206	73,275	114,311	49,454	23,485	67,338	20,644
Café - Other (Incl. FF&E)	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Admin, Offices, Meeting, Cash/Utility, Store, Staff Room & Staff Amen.	**488,000**	0	3,568	3,757	4,009	3,171	37,339	12,918	19,147	14,571	24,340	25,891	25,479	9,158	17,094	26,168	64,068	7,452	20,026	11,841	33,134	51,659	22,433	10,611	30,411	9,325
Swim Club Office, Administration & Associated Storage	**226,000**	0	1,652	1,740	1,857	1,471	17,301	5,985	8,868	6,750	11,275	11,999	11,801	4,242	7,917	12,120	29,679	3,451	9,275	5,485	15,337	23,926	10,393	4,916	14,084	4,321
Swim Club Strength & Conditioning	**1,069,000**	0	7,816	8,230	8,782	6,953	81,838	28,299	41,941	31,924	53,320	56,727	55,816	20,062	37,447	57,327	140,311	16,325	43,871	25,941	72,540	113,166	49,116	23,250	66,663	20,457
Swim Club Events / Marshalling	**107,000**	0	783	825	879	696	8,194	2,835	4,199	3,197	5,342	5,683	5,591	2,009	3,751	5,713	14,059	1,635	4,397	2,599	7,264	11,337	4,924	2,329	6,676	2,049
Swim Club Equipment Store	**49,000**	0	356	375	400	317	3,712	1,290	1,913	1,456	2,431	2,587	2,545	915	1,708	2,614	6,408	744	2,005	1,183	3,308	5,161	2,241	1,060	3,040	932
Swim Club Change	**210,000**	0	1,531	1,612	1,721	1,363	16,031	5,545	8,218	6,255	10,447	11,115	10,936	3,931	7,337	11,232	27,508	3,199	8,596	5,085	14,213	22,173	9,633	4,555	13,062	4,004
Level 1 Lobby / 24-7 Entry	**91,000**	0	681	727	776	615	7,232	2,501	3,706	2,821	4,712	5,015	4,932	1,773	3,309	5,063	12,410	1,442	3,877	2,292	6,410	10,000	4,344	2,054	5,891	1,806
Retail - assume warm shell	**60,000**	0	417	440	491	389	4,576	1,581	2,346	1,785	2,982	3,172	3,121	1,122	2,094	3,206	7,848	913	2,451	1,451	4,056	6,328	2,749	1,192	3,728	1,143
Social Spaces	**158,000**	0	1,151	1,212	1,293	1,024	12,053	4,168	6,177	4,702	7,853	8,354	8,220	2,955	5,515	8,442	20,678	2,404	6,461	3,821	10,681	16,666	7,239	3,424	9,818	3,010
Subtotal																										
AMENITIES / FACILITY SUPPORT																										
Amenities - Accessible	**49,000**	0	357	376	402	318	3,742	1,294	1,918	1,460	2,438	2,593	2,551	917	1,712	2,621	6,417	746	2,006	1,186	3,316	5,174	2,247	1,063	3,048	934
Change Rooms - Female	**594,000**	0	4,339	4,569	4,876	3,861	45,431	15,710	23,286	17,723	29,605	31,492	30,986	11,137	20,789	31,824	77,916	9,063	24,351	14,402	40,271	62,824	27,289	12,907	37,008	11,346
Change Rooms - Male	**594,000**	0	4,339	4,569	4,876	3,861	45,431	15,710	23,286	17,723	29,605	31,492	30,986	11,137	20,789	31,824	77,916	9,063	24,351	14,402	40,271	62,824	27,289	12,907	37,008	11,346
Change Rooms - Family Change Village	**498,000**	0	3,691	3,975	5,736	4,543	53,451	18,483	27,395	20,850	34,824	37,050	36,454	13,103	24,452	37,443	91,666	10,662	28,651	16,944	47,377	73,911	32,101	15,185	43,539	13,348
Change Rooms - Accessible Change Room	**189,000**	0	1,378	1,451	1,549	1,227	14,411	4,990	7,397	5,630	9,405	10,003	9,845	3,538	6,605	10,109	24,750	2,879	7,736	4,575	12,793	19,956	8,668	4,100	11,755	3,604
Change Rooms - Changing Places	**49,000**	0	357	376	402	318	3,742	1,294	1,918	1,460	2,438	2,593	2,551	917	1,712	2,621	6,417	746	2,006	1,186	3,316	5,174	2,247	1,063	3,048	934
Change Rooms - All Gender	**105,000**	0	766	806	860	681	8,018	2,772	4,109	3,128	5,224	5,557	5,469	1,965	3,669	5,614	13,750	1,599	4,298	2,542	7,107	11,087	4,816	2,278	6,531	2,002
Change Rooms - Group Change	**280,000**	0	2,043	2,150	2,294	1,817	21,388	7,393	10,963	8,345	13,930	14,816	14,591	5,045	9,781	14,976	36,666	4,265	11,461	6,778	18,951	29,564	12,843	6,074	17,415	5,339
Change Rooms - Services Area	**140,000**	0	1,021	1,075	1,147	909	10,693	3,697	5,479	4,170	6,965	7,410	7,295	2,621	4,891	7,488	18,333	2,133	5,731	3,389	9,475	14,782	6,421	3,037	8,708	2,670
Cleaner	**10,000**	0	73	75	80	65	746	258	383	295	486	517	509	183	342	523	1,280	149	400	237	662	1,033	448	212	608	186
Subtotal																										
OTHER AREAS - INTERNAL																										
General Circulation Allowance	**1,995,000**	0	14,596	15,369	16,401	12,949	152,832	52,848	78,150	59,617	99,571	105,957	104,259	37,465	69,930	107,051	262,160	30,486	81,927	48,448	135,466	211,151	91,597	43,418	124,491	38,164
Internal Aquatics Plant Rooms	**1,117,000**	0	8,336	8,757	9,345	7,401	87,080	30,101	44,611	33,968	56,734	60,368	59,390	21,347	39,844	60,991	149,518	17,370	46,682	27,604	77,181	120,412	52,183	24,738	70,931	21,746
Internal Services Plant	**482,000**	0	3,564	3,753	4,005	3,172	37,328	12,915	19,127	14,578	24,322	25,868	25,453	9,149	17,076	26,143	64,092	7,444	20,006	11,830	33,079	51,605	22,411	10,602	30,389	9,315
Data & Comms, MSB & Waste Management	**87,000**	0	630	663	708	560	6,591	2,280	3,379	2,572	4,296	4,570	4,497	1,616	3,017	4,618	11,327	1,315	3,534	2,090	5,844	9,117	3,960	1,873	5,371	1,646
Subtotal																										
OTHER AREAS - EXTERNAL																										
External Plant (Rooftop) - ULICA	**145,000**	0	1,044	1,100	1,174	929	10,936	3,781	5,601	4,266	7,125	7,581	7,459	2,681	5,004	7,660	18,753	2,181	5,862	3,467	9,694	15,112	6,559	3,107	8,908	2,733
Plant Access and Loading	**196,000**	0	1,411	1,507	1,608	1,273	14,982	5,181	7,679	5,844	9,761	10,381	10,218	3,671	6,853	10,494	25,694	2,989	8,031	4,749	13,280	20,712	8,989	4,256	12,204	3,743
Waste Management Area	**49,000**	0	356	372	400	317	3,712	1,290	1,913	1,456	2,431	2,587	2,545	915	1,708	2,614	6,408	744	2,001	1,183	3,308	5,161	2,241	1,060	3,040	932
Entry Plaza - External Area	**67,000**	0	488	514	548	434	5,108	1,766	2,618	1,992	3,328	3,540	3,481	1,252	2,337	3,578	8,759	1,019	2,738	1,619	4,527	7,063	3,065	1,451	4,160	1,275
Carpark and new road	**809,000**	0	5,933	6,252	6,650	5,267	61,972	21,439	31,762	24,174	40,374	42,956	42,266	15,192	28,356	43,408	106,279	12,363	33,220	19,645	54,936	85,691	37,223	17,606	50,480	15,474
Landscaping and External Works Allowance to balance of site - $1m allowance to work within	**238,000**	0	1,734	1,826	1,940	1,543	18,160	6,285	9,308	7,084	11,832	12,588	12,386	4,462	8,309	12,720	31,144	3,622	9,751	5,757	16,097	25,132	10,909	5,159	14,795	4,535
External Services Allowance	**519,000**	0	867	913	974	772	9,080	3,140	4,654	3,542	5,916	6,294	6,193	2,231	4,155	6,360	15,572	1,811	4,876	2,878	8,048	12,566	5,454	2,580	7,396	2,268
Subtotal																										
SUB TOTAL CONSTRUCTION COST (EXCL GST)																										
Demolition Allowance	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESD Allowance - 5 Star Greenstar in Design	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Authority Charges	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Headworks Allowance based on ADP Advice	**156,000**	0	1,137	1,197	1,277	1,012	11,901	4,116	6,101	4,643	7,755	8,251	8,118	2,918	5,447	8,336	20,414	2,374	6,381	3,771	10,551	16,462	7,150	3,382	9,696	2,973
Consultant Fees excl. PM	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Internal Client Costs incl. PM	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FF&E - Gym/Strength Cond. Equip. - $400/m2 across gym/program area	**1,754,000**	0	0	0	0	0	0	0	0	0	876,717	0	0	0	0	0	0	0	0	0	0	876,717	0	0	0	0
FF &E - General Lease - $250k allowance to work within	**502,000**	0	0	0	0	0	0	167,061	0	0	0	0	0	0	0	0	0	0	0	0	0	167,061	0	0	0	0
In Ground Conditions and Contamination Allowance	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Design Contingency	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction Contingency	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Client Contingency - $1m	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal																										
TOTAL DESIGN & CONSTRUCTION COST (EXCL GST) - CURRENT DAY																										
Cost Escalation to Construction Start - January 2029 @ 4.5% pa	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost Escalation during Construction - Completion December 2030 @ 4.0% pa at 50% discount	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost Escalation Contingency	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL DESIGN AND CONSTRUCTION COST (EXCL GST) - COMPLETION																										
	35,407,000	0	**243,000**	**256,000**	**271,000**	**216,000**	**2,538,000**	**1,045,000**	**1,301,000**	**990,000**	**2,531,000**	**1,760,000**	**1,731,000**	**623,000**	**1,329,000**	**1,778,000**	**4,355,000**	**507,000**	**1,361,000**	**805,000**	**2,127,000**	**3,477,000**	**1,525,000**	**721,000**	**2,068,000**	**634,000**
		0	**243,000**	**499,000**	**772,000**	**988,000**	**3,526,000**	**4,571,000**	**5,872,000**	**6,862,000**	**9,393,000**	**11,153,000**	**12,884,000**	**13,507,000**	**14,836,000**	**16,614,000**	**20,967,000**	**21,474,000**	**22,835,000**	**23,640,000**	**26,767,000**	**30,444,000**	**31,969,000**	**32,690,000**	**34,758,000**	**35,392,000**

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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13 November 2024

Simon Gorr
Ontoit
Suite 3, Level 1/150 Collins Street
MELBOURNE VIC 3000
simon.gorr@ontoit.com

Dear Simon

AQUALINK NUNAWADING

BUSINESS CASE COST REPORT NO.1 (UPDATE NO.2)

We are pleased to confirm our Updated Business Case Cost Report No. 1 dated 13 November 2024, for the above project to include an update to Option 2 costings only based on comments received from Whitehorse City Council.

Please do not hesitate to contact us to discuss any aspect which requires clarification or amendment to the assumed scope of works on our part.

Yours sincerely

TIM BESSELL
National Director
WT

WT REF: PR-024183-02B COST REPORT NO. 1 (UPDATE NO.2)

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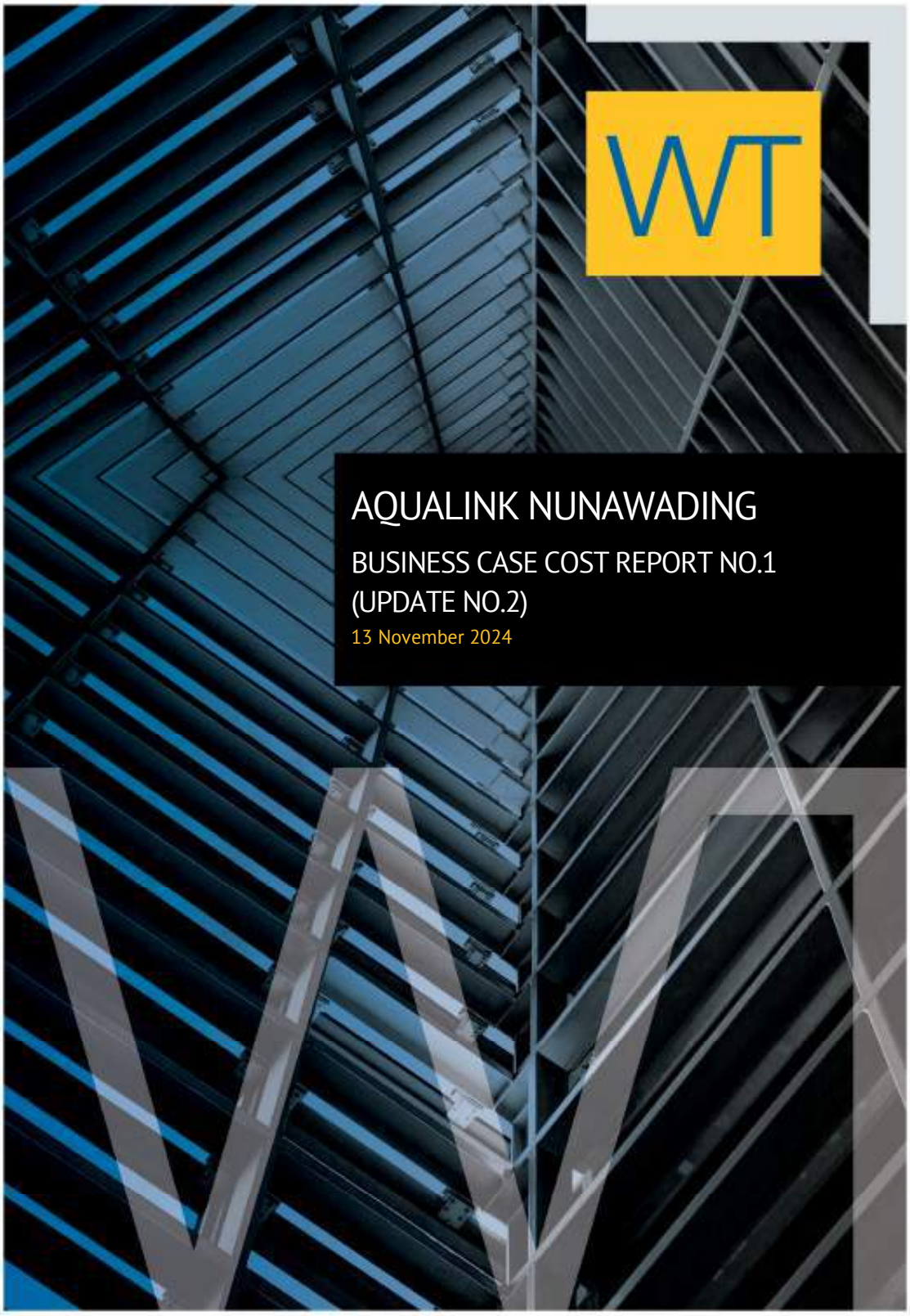

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

CONTENTS

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2	PROJECT DEFINITION	2
3	SCHEDULE OF AREAS	2
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7	P95 CONTINGENCY VALUES	4
8	FORECAST CAPITAL EXPENDITURE CASHFLOW	5
9	DISCLAIMER	5

APPENDICES

APPENDIX A	CAPITL EXPENDITURE ESTIMATE NO. 1
APPENDIX B	RISK MODELS INCLUDING COST ESCALATION & EXCLUDING COST ESCALATION
APPENDIX C	FORECAST CAPITAL EXPENDITURE CASHFLOW

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1 ESTIMATE SUMMARY

We estimate the cost of design and construction, assuming construction start in January 2029 and finish in December 2030, in the following amounts:

- Option 2 Contemporary in the amount of **$111,216,356 (Excl GST)**
- Option 3A Contemporary Hybrid **(Preferred)** in the amount of **$142,732,468 (Excl GST)**
- Option 5 Aspirational in the amount of **$173,514,723 (Excl GST)**

The Estimate No. 1 is summarised as follows:

	OPTION 2 COST $ (EXCL GST)	OPTION 3A COST $ (EXCL GST)	OPTION 5 COST $ (EXCL GST)
Construction Cost including Demolition	56,101,168	72,991,002	89,684,249
ESD Allowance - 5 Star Greenstar in Design	1,105,066	1,442,863	1,776,727
Authority Charges	552,533	721,431	888,364
Headworks Allowance	775,000	775,000	775,000
Consultant Fees	5,560,708	7,213,378	8,846,812
Internal Client Costs	5,000,000	5,000,000	5,000,000
FF&E – Gym and General	573,600	1,070,000	1,286,000
In ground conditions allowance	1,105,066	1,442,863	1,776,727
P95 Contingency allowance	12,442,135	16,140,000	19,794,824
Subtotal Design & Construction Cost (Excl GST) – Current Day	**83,215,276**	**106,796,536**	**129,828,705**
Cost Escalation to construction start and during construction	21,728,565	27,885,932	33,899,924
P95 Cost Escalation Contingency allowance	6,272,516	8,050,000	9,786,095
TOTAL DESIGN AND CONSTRUCTION COST (EXCL GST) - COMPLETION	**111,216,356**	**142,732,468**	**173,514,723**

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2 PROJECT DEFINITION

The project comprises an Aqualink indoor aquatic facility with supporting health & wellness areas, front of house and facility support, located in Nunawading.

The project is currently broken down into three options as follows:

- Option 2 Contemporary
- Option 3A Contemporary Hybrid **(Preferred)**
- Option 5 Aspirational

3 SCHEDULE OF AREAS

The estimate is based on the following schedule of areas and functions.

The Gross Floor Area is made up as follows:

	OPTION 2 M²	OPTION 3A M²	OPTION 5 M²
TOTAL	6,670	9,825	12,177

WTP Australia Pty Ltd (WT) has calculated the Gross Floor Area (GFA) as defined by the *Australian Institute of Quantity Surveyors (AIQS) Australian Cost Management Manual*. This convention provides consistency of the measurement process and assists benchmarking of comparable projects.

WT's GFA differs from the *Property Council of Australia*'s Gross Floor Area and the *City of Melbourne Planning Scheme Amendment C262* Gross Floor Area definitions which are used for the calculation of the Site Plot Ratio. Such areas should be quantified separately as per the required authority's definitions where required.

Refer Appendix A for detailed schedule of areas.

4 DOCUMENTATION

This estimate is based on the following documentation:

- Architectural drawings and area schedule for Options 2, 3A & 5 received via email on 15/07/2024, 17/07/2024 & 23/07/2024.
- Indicative programme provided via email on 26/07/2024.
- Scope clarifications via emails on 29/07/2024, 20/08/2024, 30/8/24, 11/9/24, 26/9/24, 18/10/24 and 17/02/25

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5 SPECIFIC INCLUSIONS

The Estimate assumes competitive lump sum tender for the whole of the Works from suitably qualified contractors.

The Estimate is inclusive of the following allowances:

- Aquatics costs (50m pool - $4m, Swim wall - $350k, Learn to Swim $2.3m incl. movable floor of $1.2m, Warm water pool $1.1m and Toddler's and Splashpad equipment $1m)
- ESD Allowance – 5 Star Green Star (2%)
- Authority Charges (1%)
- Headworks based on advice from ADP ($775,000)
- Consultant Fees excl. PM (9.5%)
- Client costs as advised by Council ($5m)
- Gym / Strength and Conditioning FF&E ($400/m2)
- General loose FF&E ($250k)
- In ground conditions allowance (2%)
- Contingencies (refer Section 7)
- Future Cost escalation 4.5% p.a. out to construction start of January 2029 and 4% p.a. during construction with a 50% discount assuming construction completion in December 2030

6 SPECIFIC EXCLUSIONS

The estimate excludes the following:

- Contamination, Removal of hazardous Materials and Site Remediation above current allowances
- Carbon reduction initiatives and offsets unless noted otherwise
- Underpinning of adjacent footings
- Abnormal and unforeseen ground conditions above current allowances
- Works outside the site boundary
- Adjoining owner issues
- Any make goods to local roads post construction activity
- Public Art
- First Nations cultural recognition (to be included in design development)
- IT Equipment including POS
- Site access / working hour restrictions

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- Negotiated Contracts / Construction Management Underpinning of adjacent footings
- Any Non-Design or Construction Operational Cost (communications, marketing, stakeholder engagement, or any pre-opening operational costs)
- Staging
- Delay and Prolongation Allowances
- GST

7 P95 CONTINGENCY VALUES

The risk provisions outlined in the estimate has been calculated using a probabilistic cost estimating approach for the works to produce a Risk Model.

The probabilistic cost estimating approach assesses the uncertainty in scope and cost of each section of the base estimate (Inherent Risk) and estimates the cost and probability of wider projects risks identified by the project team (Contingent Risk), and then models this information using Monte Carlo simulation software @Risk to simulate thousands of possible outcomes and produce probabilistic estimate value of P95 in this case.

We note due to the project not starting for some time and cost escalation pressures still in the market we have undertaken risk models including and excluding cost escalation. This will enable us to provide a risk allocation against our cost escalation figures as well as risk allocation towards design, construction and client changes.

We note the design has not progressed enough to properly identify and cost contingent risks, as such, we have focused on the inherent risk of the capital cost allocations within our estimate.

We were requested to risk model only Preferred Option 3A, then extrapolate out these figures to Options 2 and 5. Please refer to Appendix B for the risk model for Option 3A which includes the risk model including escalation first and then the risk model excluding cost escalation. As per page 5 of each risk model, this highlights the following Contingency Values ($) for Preferred Option 3A as follows:

- P95 Contingency Value including cost escalation $24,190,000 (Excl GST)
- P95 Contingency Value excluding cost escalation $16,140,000 (Excl GST)

We have then extrapolated the risk allowances percentages from Option 3A and applied these to Option 2 and Option 5 as follows:

	OPTION 2 $ (EXCL GST)	OPTION 3A $ (EXCL GST)	OPTION 5 $ (EXCL GST)
P95 Contingency excl cost escalation	12,442,134	16,140,000	19,794,824
P95 Contingency for cost escalation only	6,272,516	8,050,000	9,786,095
Total P95 Contingency including cost escalation	18,714,650	24,190,000	29,580,919

As requested by Council, we have then broken down the P95 contingency figures excluding cost escalation into design, construction and client contingencies as follows:

	OPTION 2 $ (EXCL GST)	OPTION 3A $ (EXCL GST)	OPTION 5 $ (EXCL GST)
Design Contingency	5,835,623	7,570,000	9,284,190
Construction Contingency	5,835,623	7,570,000	9,284,190
Client Contingency	770,888	1,000,000	1,226,445
P95 Contingency excl cost escalation	12,442,134	16,140,000	19,794,824

Please refer to Appendix A where the above contingency values have been represented.

8 FORECAST CAPITAL EXPENDITURE CASHFLOW

We have been requested to provide a capital expenditure cashflow based on the Preferred Option 3A in the amount of $142,732,468 (Excl GST). This is based on the following timing as advised by Ontoit:

- Design start January 2027 for 24 months
- Construction start January 2029 for 24 months

Please refer to Appendix C for a copy of the forecast capital expenditure cashflow.

9 DISCLAIMER

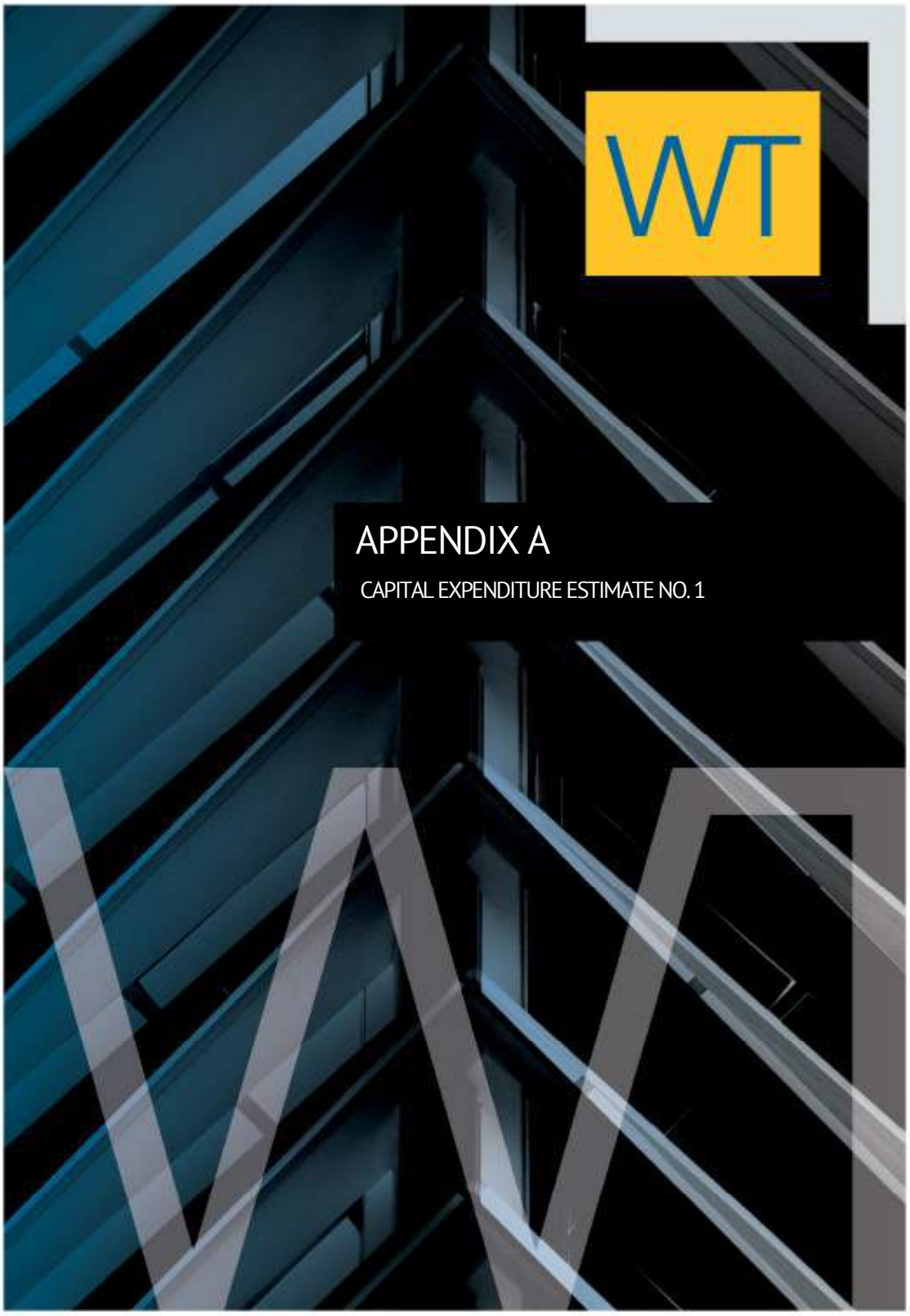
We highlight that due to the preliminary nature of the documentation, our Estimate should be viewed as indicative and a preliminary opinion of the probable order of cost based on a concept without definition of design scope or quality.

Where WT has not been provided with sufficient information, we have made assumptions and allowances which will require detailed review once the design is developed.

Please review the detail of our Estimate, in particular the many assumptions as to scope, quality, performance and finishes of the current design intent to ensure it generally reflects your requirements.

The estimate has been prepared expressly for Ontoit for the purpose of preparing a preliminary feasibility assessment and is not to be used for any other purpose or distributed to any third party outside of Whitehorse City Council.

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case



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AQUALINK NUNAWADING
MASTERPLAN ESTIMATE NO.1
13/11/2024

	OPTION 2 CONTEMPORARY LIKE FOR LIKE			OPTION 3A CONTEMPORARY HYBRID			OPTION 5 ASPIRATIONAL		
INDOOR AQUATIC HALL	**Area**	**Rate**	**Construction Cost**	**Area**	**Rate**	**Construction Cost**	**Area**	**Rate**	**Construction Cost**
	m2	$/m2	$	m2	$/m2	$	m2	$/m2	$
50m Indoor Pool (with Concourse)	1,982	8,512	16,871,083	1,982	8,512	16,871,083	2,050	8,512	17,449,909
Spectator Seating (Extra Over) - allow 500 no. per	Incl	468,750	468,750	Incl	468,750	468,750	Incl	468,750	468,750
Learn-to-Swim (with Concourse)	525	10,227	5,369,100	800	9,284	7,427,200	969	8,970	8,691,996
Leisure Water + Toddler Pool (with Concourse)	500	8,268	4,133,907	250	8,268	2,066,954	1,200	8,268	9,921,377
Warm Water Program + 2 x Spa (with Concourse)	N/A	N/A	N/A	750	7,724	5,793,116	741	7,724	5,723,598
Sauna + Steam	40	12,985	519,404	40	12,985	519,404	40	12,985	519,404
Pool Concourse and Deck Showers	5	7,358	36,791	5	7,358	36,791	5	7,358	36,791
Wet Lounge	60	5,461	327,661	30	5,461	163,831	60	5,461	327,661
Birthday Party Room / Meeting Room	N/A	N/A	N/A	30	5,414	162,408	30	5,414	162,408
First Aid Room	15	6,806	102,093	15	6,806	102,093	15	6,806	102,093
LTS Store	30	3,425	102,752	30	3,425	102,752	50	3,425	171,253
WWP Store	N/A	N/A	N/A	20	3,425	68,501	30	3,425	102,752
Cleaner	10	3,425	34,251	10	3,425	34,251	10	3,425	34,251
Pool Storage	50	3,425	171,253	50	3,425	171,253	50	3,425	171,253
SUBTOTAL	3,217	8,746	$ 28,137,045	4,012	8,472	$ 33,988,386	5,250	8,359	$ 43,883,496
HEALTH & WELLNESS AREA	**Area**	**Rate**	**Construction Cost**	**Area**	**Rate**	**Construction Cost**	**Area**	**Rate**	**Construction Cost**
	m2	$/m2	$	m2	$/m2	$	m2	$/m2	$
Cardio and Strength Area	405	5,633	2,281,427	900	5,633	5,069,839	1,400	5,633	7,886,416
Group Fitness (Incl. Associated Store)	404	5,633	2,275,794	750	5,633	4,224,866	790	5,633	4,450,192
Allied Health Foyer & Suites	N/A	N/A	N/A	42	5,690	238,964	93	5,690	529,134
Community Meeting & Storage	N/A	N/A	N/A	42	5,414	227,371	70	5,414	378,952
Prayer Room	N/A	N/A	N/A	9	5,414	48,722	9	5,414	48,722
Consulting / Testing Rooms	N/A	N/A	N/A	18	5,414	97,445	36	5,414	194,890
SUBTOTAL	809	5,633	$ 4,557,222	1,761	5,626	$ 9,907,206	2,398	5,625	$ 13,488,305
FRONT OF HOUSE AREAS	**Area**	**Rate**	**Construction Cost**	**Area**	**Rate**	**Construction Cost**	**Area**	**Rate**	**Construction Cost**
	m2	$/m2	$	m2	$/m2	$	m2	$/m2	$
Ground Floor Foyer Incl. Airlock, Reception / Entry Control & Associated Store	150	6,637	995,525	190	6,637	1,260,998	235	6,637	1,559,656
Café & Lounges incl. Kitchen (Incl. FF&E)	189	10,346	1,955,373	220	10,346	2,276,095	270	10,346	2,793,390
Café - Other (Incl. FF&E)	N/A	N/A	N/A	N/A	N/A	N/A	10	20,000	200,000
Admin, Offices, Meeting, Cash/Utility, Store, Staff Room & Staff Amen.	179	5,414	969,034	190	5,414	1,028,584	253	5,414	1,369,641
Swim Club Office, Administration & Associated Storage	88	5,414	476,397	88	5,414	476,397	100	5,414	541,360
Swim Club Strength & Conditioning	400	5,633	2,253,262	400	5,633	2,253,262	400	5,633	2,253,262
Swim Club Events / Marshalling	N/A	N/A	N/A	40	5,633	225,326	40	5,633	225,326
Swim Club Equipment Store	N/A	N/A	N/A	30	3,425	102,752	30	3,425	102,752
Swim Club Change	N/A	N/A	N/A	60	7,358	441,494	60	7,358	441,494
Level 1 Lobby / 24-7 Entry	30	6,637	199,105	30	6,637	199,105	30	6,637	199,105
Retail - assume warm shell	N/A	N/A	N/A	30	4,200	126,000	50	4,200	210,000
Social Spaces	N/A	N/A	N/A	50	6,637	331,842	N/A	N/A	N/A
SUBTOTAL	1,036	6,611	$ 6,848,695	1,328	6,568	$ 8,721,854	1,478	6,696	$ 9,895,984
AMENITIES / FACILITY SUPPORT	**Area**	**Rate**	**Construction Cost**	**Area**	**Rate**	**Construction Cost**	**Area**	**Rate**	**Construction Cost**
	m2	$/m2	$	m2	$/m2	$	m2	$/m2	$
Amenities - Accessible	14	7,358	103,015	14	7,358	103,015	14	7,358	103,015
Change Rooms - Female	140	7,358	1,030,152	170	7,358	1,250,899	142	7,358	1,044,869
Change Rooms - Male	140	7,358	1,030,152	170	7,358	1,250,899	142	7,358	1,044,869
Change Rooms - Family Change Village	150	7,358	1,103,734	200	7,358	1,471,646	200	7,358	1,471,646
Change Rooms - Accessible Change Room	45	7,358	331,120	54	7,358	397,344	54	7,358	397,344
Change Rooms - Changing Places	14	7,358	103,015	14	7,358	103,015	14	7,358	103,015
Change Rooms - All Gender	20	7,358	147,165	30	7,358	220,747	84	7,358	618,091
Change Rooms - Group Change	80	7,358	588,658	80	7,358	588,658	80	7,358	588,658
Change Rooms - Services Area	40	7,358	294,329	40	7,358	294,329	40	7,358	294,329
Cleaner	6	3,425	20,550	6	3,425	20,550	6	3,425	20,550
SUBTOTAL	649	7,322	4,751,892	778	7,328	5,701,103	776	7,328	5,686,387
OTHER AREAS - INTERNAL	**Area**	**Rate**	**Construction Cost**	**Area**	**Rate**	**Construction Cost**	**Area**	**Rate**	**Construction Cost**
	m2	$/m2	$	m2	$/m2	$	m2	$/m2	$
General Circulation Allowance	606	4,711	2,856,764	893	4,711	4,207,886	1,107	4,711	5,215,102
Internal Aquatics Plant Rooms	450	3,425	1,541,276	700	3,425	2,397,541	805	3,425	2,757,172
Internal Services Plant	250	3,425	856,265	300	3,425	1,027,517	300	3,425	1,027,517
Data & Comms, MSB & Waste Management	53	3,425	181,528	53	3,425	181,528	63	3,425	215,779
SUBTOTAL	1,359	3,999	5,435,833	1,946	4,015	7,814,472	2,275	4,051	9,215,570

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10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

AQUALINK NUNAWADING
MASTERPLAN ESTIMATE NO.1
13/11/2024

	OPTION 2 CONTEMPORARY LIKE FOR LIKE			OPTION 3A CONTEMPORARY HYBRID			OPTION 5 ASPIRATIONAL		
OTHER AREAS - EXTERNAL	**Area**	**Rate**	**Construction Cost**	**Area**	**Rate**	**Construction Cost**	**Area**	**Rate**	**Construction Cost**
	m2	$/m2	$	m2	$/m2	$	m2	$/m2	$
External Plant (Rooftop) - UUCA	240	1,255	301,104	240	1,255	301,104	300	1,255	376,380
Plant Access and Loading	120	3,438	412,500	120	3,438	412,500	120	3,438	412,500
Waste Management Area	30	3,425	102,752	30	3,425	102,752	30	3,425	102,752
Entry Plaza - External Area	300	938	281,250	300	938	281,250	400	938	375,000
Carpark and new road	7,200	406	2,925,000	8,400	406	3,412,500	9,600	406	3,900,000
Landscaping and External Works Allowance to balance of site - $1m allowance to work within	1	1,000,000	1,000,000	1	1,000,000	1,000,000	1	1,000,000	1,000,000
External Services Allowance	1	500,000	500,000	1	500,000	500,000	1	500,000	500,000
SUB TOTAL CONSTRUCTION COST (EXCL GST)	**7,070**	**$ 7,815**	**55,253,293**	**9,825**	**$ 7,343**	**72,143,127**	**12,177**	**$ 7,295**	**88,836,374**
Demolition Allowance	6,783	125	847,875	6,783	125	847,875	6,783	125	847,875
ESD Allowance - 5 Star Greenstar in Design	2%	1,105,066	1,105,066	2%	1,442,863	1,442,863	2%	1,776,727	1,776,727
Authority Charges	1%	552,533	552,533	1%	721,431	721,431	1%	888,364	888,364
Headworks Allowance based on ADP Advice	1	775,000	775,000	1	775,000	775,000	1	775,000	775,000
Consultant Fees excl. PM	9.5%	5,560,708	5,560,708	9.5%	7,213,378	7,213,378	9.5%	8,846,812	8,846,812
Internal Client Costs incl. PM	1	5,000,000	5,000,000	1	5,000,000	5,000,000	1	5,000,000	5,000,000
FF&E - Gym/Strength Cond. Equip. - $400/m2 across gym/program area	809	400	323,600	2,050	400	820,000	2,590	400	1,036,000
FF&E - General Loose - $250k allowance to work within	1	250,000	250,000	1	250,000	250,000	1	250,000	250,000
In Ground Conditions and Contamination Allowance	2%	1,105,066	1,105,066	2%	1,442,863	1,442,863	2%	1,776,727	1,776,727
Design Contingency - circa 10% of construction	1	5,835,623	5,835,623	1	7,570,000	7,570,000	1	9,284,190	9,284,190
Construction Contingency - circa 10% of construction	1	5,835,623	5,835,623	1	7,570,000	7,570,000	1	9,284,190	9,284,190
Client Contingency - circa 1% of construction	1	770,888	770,888	1	1,000,000	1,000,000	1	1,226,445	1,226,445
TOTAL DESIGN & CONSTRUCTION COST (EXCL GST) - CURRENT DAY			**83,215,275**			**106,796,536**			**129,828,705**
Cost Escalation to Construction Start - January 2029 @ 4.5% pa	1	17,857,301	17,857,301	1	22,917,642	22,917,642	1	27,860,153	27,860,153
Cost Escalation during Construction - Completion December 2030 @ 4.0% pa at 50% discount	1	3,871,264	3,871,264	1	4,968,290	4,968,290	1	6,039,771	6,039,771
Cost Escalation Contingency	1	6,272,516	6,272,516	1	8,050,000	8,050,000	1	9,786,095	9,786,095
TOTAL DESIGN AND CONSTRUCTION COST (EXCL GST) - COMPLETION			**111,216,356**			**142,732,468**			**173,514,723**

Exclusions
- Contamination, Removal of hazardous Materials and Site Remediation above current allowances
- Underpinning of adjacent footings
- Abnormal and unforeseen ground conditions above current allowances
- Works outside the site boundary
- Adjoining owner issues
- Any make goods to local roads post construction activity
- Public Art
- First Nations cultural recognition (to be included in design development)
- IT Equipment including POS
- Site access / working hour restrictions
- Negotiated Contracts / Construction Management
- Any Non-Design or Construction Operational Cost (communications, marketing, stakeholder engagement, or any pre-opening operational costs)
- Staging
- Delay and Prolongation Allowances
- GST

Aquatics Costings:
- 50m pool - $4m
- Swim wall - $350k
- Learn to Swim $2.3m incl. movable floor of $1.2m
- Warm water pool $1.1m
- Toddler's and Splashpad equipment $1m

Documentation
- Architectural drawings and area schedule for Options 2, 3A & 5 received via email on 15/07/2024, 17/07/2024 & 23/07/2024.
- Indicative programme provided via email on 26/07/2024.
- Scope clarifications via emails on 29/07/2024, 20/08/2024, 30/8/24, 11/9/24, 26/9/24, 18/10/24 and 17/02/2025

Disclaimer
- Where WT has not been provided with sufficient information, we have made assumptions and allowances which will require detailed review once the design is developed.
- Please review the detail of our Estimate, in particular the many assumptions as to scope, quality, performance and finishes of the current design intent to ensure it generally reflects your requirements.
- The estimate has been prepared expressly for Whitehorse Council for the purpose of preparing a budget and is not to be used for any other purpose or distributed to any third party

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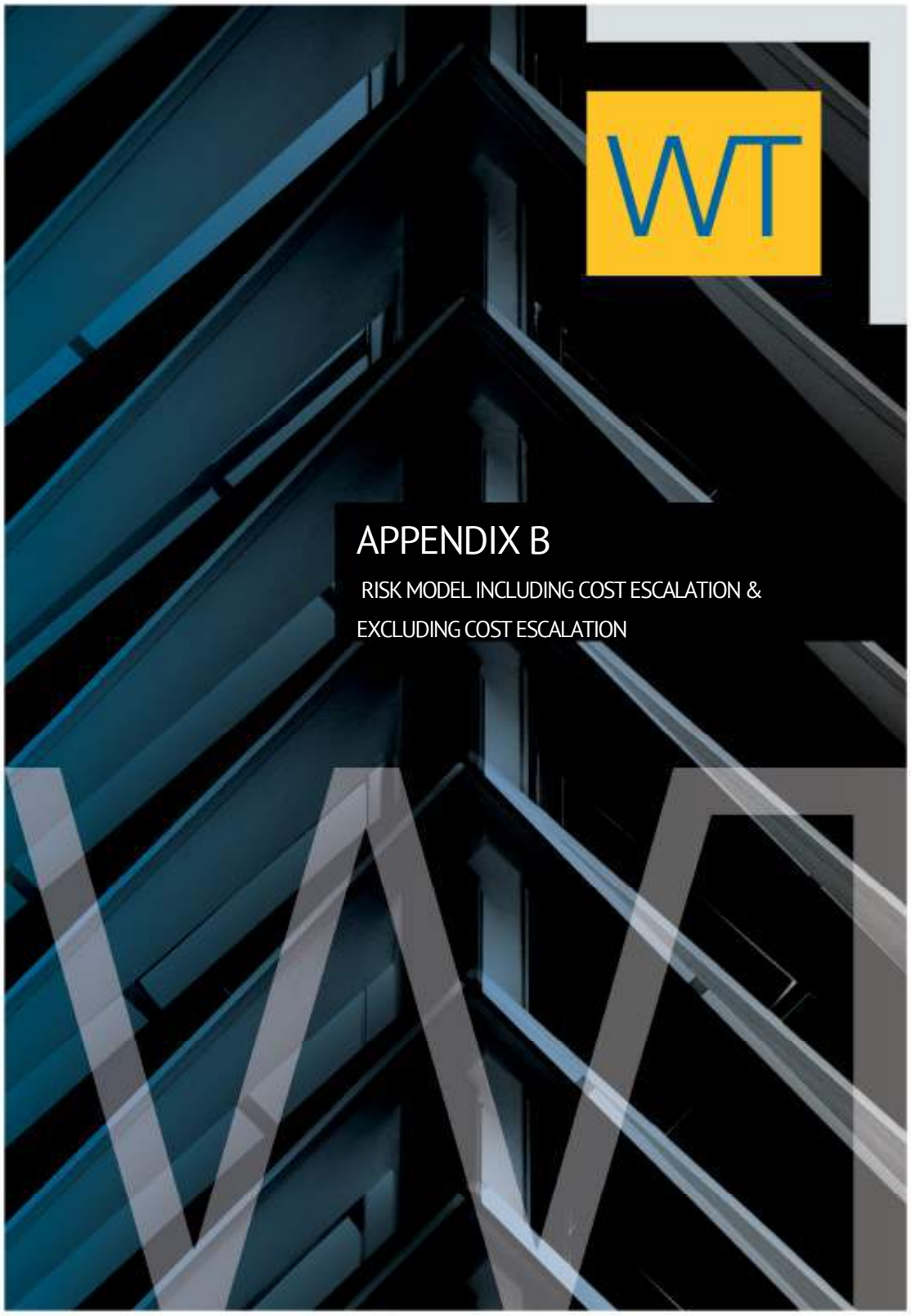
10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case



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RISK MODEL REPORT

PR-024183

Aqualink Nunawading

Business Case

Probabilistic Cost Estimate

Client:

Ontoit Global Pty Ltd

Version: 04 Oct 2024

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Aqualink Nunawading

Business Case

Probabilistic Cost Estimate

Version: 04 Oct 2024

DOCUMENT INFORMATION

ORGANISATION DETAILS

Business Name	WTP Australia Pty Ltd
Trading Name	WT Partnership
ACN	605 212 182
ABN	69 605 212 182
Address	Level 21, 2 Southbank Boulevard, Southbank VIC 3006
Phone	03 9867 3677

CONTACT DETAILS

Name	Latham Conley
Title	National Risk Manager
Email	lconley@wtpartnership.com.au
Phone	0421 865 532

RISK MODEL SIMULATION DETAILS

Software	Palisade @Risk Version 8.5.2 (Build 16) Professional Edition
Simulation date	Friday, 4 October 2024
Number of Simulations	1
Number of Iterations	10000
Seed used in simulation	1665303300
Sampling Type	Latin Hypercube
Generator	Mersenne Twister

Aqualink Nunawading

Business Case

Probabilistic Cost Estimate

Version: 04 Oct 2024

OVERVIEW

GENERAL

This risk model has been calculated using a probabilistic cost estimating approach in accordance with State Government, Federal Government, Industry guidance documents and ISO 31000:2018 Risk Management - Principles and Guidelines.

The information contained in this risk model is the opinion of the project team and relevant project stakeholders and has been based on the best information available at the time of conducting the risk model simulations and calculating the probabilistic estimate values. This information in this Risk Model is therefore a 'snap-shot' in time and should be reviewed and updated on a regular basis to ensure it is based on the most current information.

TERMINOLOGY

Inherent uncertainty (risk) has a 100% probability of occuring and the magnitude of that uncertainty (risk) is variable. Typical inherent risks include design development, scope changes and cost uncertainty. Some typical risks like latent conditions can be considered inherent or contingent, depending on what is included in base estimate.

Contingent risk has a probability less than 100% and the magnitude is variable. Contingent risks typically include schedule risk, latent conditions such as contamination, rock, utility modifications / upgrades, as well as contractor insolvency, legal disputes, damage, significant weather events (normal weather impact inherent), stakeholder management and more. Significant departures from base estimate scope would typically be costed as contingent risk.

Probabilistic Risk Modelling assesses the uncertainty, ambiguity, and variability of a project using Monte Carlo simulation software to model all possible outcomes to understand the impact of risk and uncertainty.

A probabilistic value refers to a confidence level in the probabilistic estimate value not being exceeded. For example, a P50 value indicates there is a 50% probability of the project being delivered for less than the probabilistic estimate value and a 50% probability of being delivered for more than the probabilistic estimate value.

PROCESS

Overview of risk modelling process outlined as follows:

The project risk register was prepared by project team and provided to WT for inclusion in the cost risk model.

The project risk register was reviewed by WT to determine if risk events were CAPEX or OPEX in nature. CAPEX events were then evaluated to determine if they were Inherent or Contingent.

Workshops were conducted by WT to review initial assessment of CAPEX/OPEX and Inherent/Contingent nature risks on register.

Aqualink Nunawading

Business Case

Probabilistic Cost Estimate

Version: 04 Oct 2024

OVERVIEW

PROCESS (CONTINUED)

Risks assessed to be CAPEX and contingent in nature were then costed in the event that the risk eventuated, and an appropriate frequency distribution and probability were allocated. Bernoulli is used for a single risk event. Binomial is used for multiple single events with the same impact. Poisson is used for risks with multiple potential occurances and impacts. The probability value for Bernoulli and Binomial is based on the Likelihood rating probability range.

Risks events that could be both risks and opportunities and/or have multiple possible outcome scenarios were transferred to multi-state risk tables to capture the range of potential states (scenarios) and probabilities for each state/scenario.

We then reviewed the uncertainty in the base estimate with the project team and allocated -/+% ranges to each element of the project.

The risk model was then run through Palisade @Risk 8 Modelling Software with at least 10,000 iterations in a single simulation from which the required probabilistic estimate values were extracted.

The risk model inputs were discussed multiple times with the project team to ensure each risk event description, cause and impact was fully understood and that the estimated cost, variability, frequency and probability were appropriate for the specific risk and the wider package risk model.

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Aqualink Nunawading

Business Case

Probabilistic Cost Estimate

Version: 04 Oct 2024

SUMMARY

ESTIMATE

Total Base Estimate including cost escalation	114,330,000

ESTIMATE & CONTINGENCY

P-value	Probabilistic Estimate Value ($)	Contingency Value ($)	Contingency Value (%)
P10	121,900,000	7,570,000	6.6%
P20	124,070,000	9,740,000	8.5%
P30	125,600,000	11,270,000	9.9%
P40	126,980,000	12,650,000	11.1%
P50	128,260,000	13,930,000	12.2%
P60	129,660,000	15,330,000	13.4%
P70	131,120,000	16,790,000	14.7%
P80	133,050,000	18,720,000	16.4%
P90	135,830,000	21,500,000	18.8%
P95	138,520,000	24,190,000	21.2%

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Aqualink Nunawading

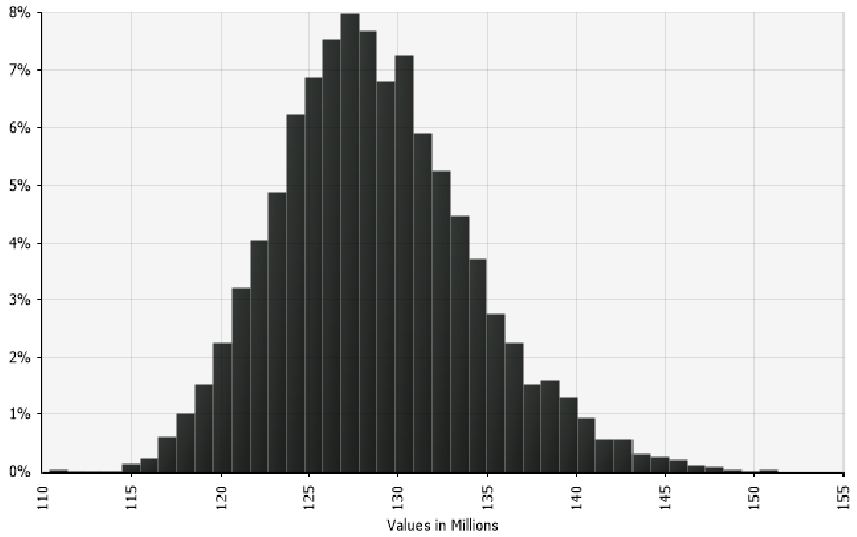
Business Case

Probabilistic Cost Estimate

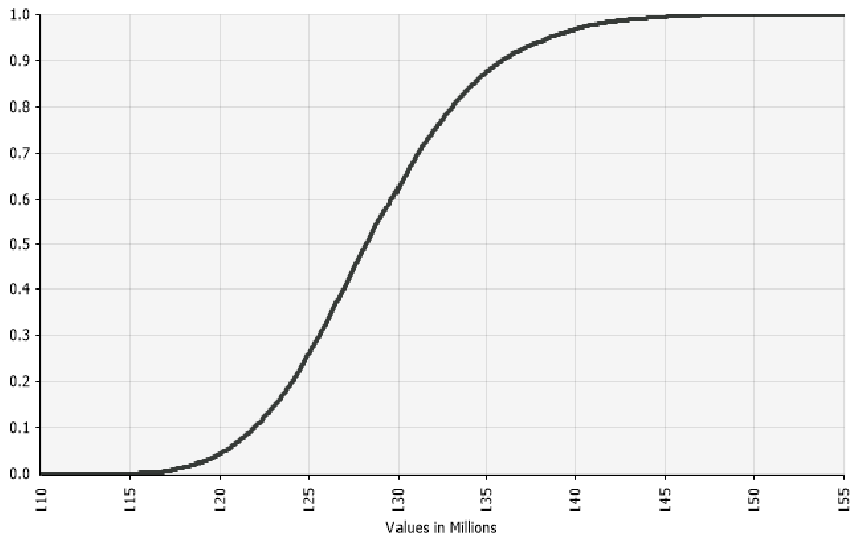
Version: 04 Oct 2024

GRAPHS

GRAPH 1 - BAR CHART



GRAPH 2 - LINE CHART



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Aqualink Nunawading

Business Case

Probabilistic Cost Estimate

Version: 04 Oct 2024

BASE COST							INHERENT UNCERTAINTY																	
Line Ref	Model Ref	Description	Unit	Qty	Rate	Estimated Base Cost	LOW (%)	MID (%)	HIGH (%)	LOW (Qty)	MID (Qty)	HIGH (Qty)	Qty Severity Distribution (Qty)	LOW (%)	MID (%)	HIGH (%)	LOW ($)	MID ($)	HIGH ($)	Rate/Cost Severity Distribution ($)	On-cost Calc	Severity Distribution ($)
		DIRECT COSTS																						
		INDOOR AQUATIC HALL																						
1	INH1	50m Indoor Pool (with Concourse)	m2	1,982	8,512	16,871,083								-10%	0%	+20%	15,183,975	16,871,083	20,245,300	17,596,953		17,596,953
2	INH2	Spectator Seating (Extra Over) – allow 500 no. per option	Item	1	468,750	468,750								-10%	0%	+20%	421,875	468,750	562,500	488,918		488,918
3	INH3	Learn-to-Swim (with Concourse)	m2	800	9,284	7,427,200								-10%	0%	+20%	6,684,480	7,427,200	8,912,640	7,746,752		7,746,752
4	INH4	Leisure Water + Toddler Pool (with Concourse)	m2	250	8,268	2,066,954								-10%	0%	+20%	1,860,259	2,066,954	2,480,345	2,155,884		2,155,884
5	INH5	Warm Water Program + 2 x Spa (with Concourse)	m2	750	7,724	5,793,116								-10%	0%	+20%	5,213,804	5,793,116	6,951,739	6,042,362		6,042,362
6	INH6	Sauna + Steam	m2	40	12,985	519,405								-10%	0%	+20%	467,465	519,405	623,286	541,752		541,752
7	INH7	Pool Concourse and Deck Showers	m2	5	7,358	36,792								-10%	0%	+20%	33,113	36,792	44,150	38,375		38,375
8	INH8	Wet Lounge	m2	30	5,461	163,831								-10%	0%	+20%	147,448	163,831	196,597	170,880		170,880
9	INH9	Birthday Party Room / Meeting Room	m2	30	5,414	162,408								-10%	0%	+20%	146,167	162,408	194,890	169,396		169,396
10	INH10	First Aid Room	m2	15	6,806	102,094								-10%	0%	+20%	91,885	102,094	122,513	106,487		106,487
11	INH11	LTS Store	m2	30	5,425	102,752								-10%	0%	+20%	92,477	102,752	123,302	107,173		107,173
12	INH12	WWP Store	m2	20	5,425	68,502								-10%	0%	+20%	61,652	68,502	82,202	71,449		71,449
13	INH13	Cleaner	m2	10	5,425	34,251								-10%	0%	+20%	30,826	34,251	41,101	35,725		35,725
14	INH14	Pool Storage	m2	50	5,425	171,255								-10%	0%	+20%	154,128	171,253	205,504	178,621		178,621
		Subtotal				**33,988,391**																**35,450,725**
		HEALTH & WELLNESS AREA																						
15	INH15	Cardio and Strength Area	m2	900	5,633	5,069,839								-10%	0%	+20%	4,562,855	5,069,839	6,083,807	5,287,966		5,287,966
16	INH16	Group Fitness (Incl. Associated Store)	m2	750	5,633	4,224,866								-10%	0%	+20%	3,802,379	4,224,866	5,069,839	4,406,639		4,406,639
17	INH17	Allied Health Foyer & Suites	m2	42	5,690	238,964								-10%	0%	+20%	215,068	238,964	286,757	249,245		249,245
18	INH18	Community Meeting & Storage	m2	42	5,414	227,372								-10%	0%	+20%	204,635	227,372	272,846	237,155		237,155
19	INH19	Prayer Room	m2	9	5,414	48,723								-10%	0%	+20%	43,851	48,723	58,468	50,819		50,819
20	INH20	Consulting / Testing Rooms	m2	18	5,414	97,445								-10%	0%	+20%	87,701	97,445	116,934	101,638		101,638
		Subtotal				**9,907,209**																**10,333,462**
		FRONT OF HOUSE AREAS																						
21	INH21	Ground Floor Foyer Incl. Airlock, Reception / Entry Control & Associated Store	m2	190	6,637	1,260,999								-10%	0%	+20%	1,134,899	1,260,999	1,513,199	1,315,253		1,315,253
22	INH22	Café & Lounges incl. Kitchen (Incl. FF&E)	m2	220	10,346	2,276,096								-10%	0%	+20%	2,048,486	2,276,096	2,731,315	2,374,024		2,374,024
23	INH23	Café - Other (Incl. FF&E)	Excl.											-10%	0%	+20%						
24	INH24	Admin, Offices, Meeting, Cash/Utility, Store, Staff Room & Staff Amen.	m2	190	5,414	1,028,584								-10%	0%	+20%	925,726	1,028,584	1,234,301	1,072,838		1,072,838
25	INH25	Swim Club Office, Administration & Associated Storage	m2	88	5,414	476,397								-10%	0%	+20%	428,757	476,397	571,676	496,894		496,894
26	INH26	Swim Club Strength & Conditioning	m2	400	5,633	2,253,262								-10%	0%	+20%	2,027,936	2,253,262	2,703,914	2,350,208		2,350,208
27	INH27	Swim Club Events / Marshalling	m2	40	5,633	225,327								-10%	0%	+20%	202,794	225,327	270,392	235,022		235,022
28	INH28	Swim Club Equipment Store	m2	30	3,425	102,752								-10%	0%	+20%	92,477	102,752	123,302	107,173		107,173
29	INH29	Swim Club Change	m2	60	7,358	441,494								-10%	0%	+20%	397,345	441,494	529,793	460,489		460,489

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Aqualink Nunawading

Business Case

Probabilistic Cost Estimate

Version: 04 Oct 2024

BASE COST							INHERENT UNCERTAINTY																	
Line Ref	Model Ref	Description	Unit	Qty	Rate	Estimated Base Cost	LOW (%)	MID (%)	HIGH (%)	LOW (Qty)	MID (Qty)	HIGH (Qty)	Qty Severity Distribution (Qty)	LOW (%)	MID (%)	HIGH (%)	LOW ($)	MID ($)	HIGH ($)	Rate/Cost Severity Distribution ($)	On-cost Calc	Severity Distribution ($)
30	INH30	Level 1 Lobby / 24-7 Entry	m2	30	6,637	199,106								-10%	0%	+20%	179,195	199,106	238,927	207,672		207,672
31	INH31	Retail - assume warm shell	m2	30	4,200	126,000								-10%	0%	+20%	113,400	126,000	151,200	131,421		131,421
32	INH32	Social Spaces	m2	50	6,637	331,842								-10%	0%	+20%	298,658	331,842	398,210	346,119		346,119
		Subtotal				**8,721,859**																**9,097,113**
		AMENITIES / FACILITY SUPPORT																				
33	INH33	Amenities - Accessible	m2	14	7,358	103,016								-10%	0%	+20%	92,714	103,016	123,619	107,448		107,448
34	INH34	Change Rooms - Female	m2	170	7,358	1,250,899								-10%	0%	+20%	1,125,809	1,250,899	1,501,079	1,304,718		1,304,718
35	INH35	Change Rooms - Male	m2	170	7,358	1,250,899								-10%	0%	+20%	1,125,809	1,250,899	1,501,079	1,304,718		1,304,718
36	INH36	Change Rooms - Family Change Village	m2	200	7,358	1,471,646								-10%	0%	+20%	1,324,481	1,471,646	1,765,975	1,534,963		1,534,963
37	INH37	Change Rooms - Accessible Change Room	m2	54	7,358	397,345								-10%	0%	+20%	357,611	397,345	476,814	414,441		414,441
38	INH38	Change Rooms - Changing Places	m2	14	7,358	103,016								-10%	0%	+20%	92,714	103,016	123,619	107,448		107,448
39	INH39	Change Rooms - All Gender	m2	30	7,358	220,747								-10%	0%	+20%	198,672	220,747	264,896	230,245		230,245
40	INH40	Change Rooms - Group Change	m2	80	7,358	588,659								-10%	0%	+20%	529,793	588,659	706,391	613,986		613,986
41	INH41	Change Rooms - Services Area	m2	40	7,358	294,330								-10%	0%	+20%	264,897	294,330	353,196	306,993		306,993
42	INH42	Cleaner	m2	6	3,425	20,551								-10%	0%	+20%	18,496	20,551	24,661	21,435		21,435
		Subtotal				**5,701,108**																**5,946,395**
		OTHER AREAS - INTERNAL																				
43	INH43	General Circulation Allowance	m2	893	4,711	4,207,886								-10%	0%	+20%	3,787,097	4,207,886	5,049,463	4,388,928		4,388,928
44	INH44	Internal Aquatics Plant Rooms	m2	700	3,425	2,397,541								-10%	0%	+20%	2,157,787	2,397,541	2,877,049	2,500,694		2,500,694
45	INH45	Internal Services Plant	m2	300	3,425	1,027,518								-10%	0%	+20%	924,766	1,027,518	1,233,022	1,071,726		1,071,726
46	INH46	Data & Comms, MSB & Waste Management	m2	53	3,425	181,529								-10%	0%	+20%	163,376	181,529	217,835	189,339		189,339
		Subtotal				**7,814,474**																**8,150,688**
		OTHER AREAS - EXTERNAL																				
47	INH47	External Plant (Rooftop) - UUCA	m2	240	1,255	301,104								-20%	0%	+50%	240,883	301,104	451,656	340,026		340,026
48	INH48	Plant Access and Loading	m2	120	3,458	412,500								-20%	0%	+50%	330,000	412,500	618,750	465,822		465,822
49	INH49	Waste Management Area	m2	30	3,425	102,752								-20%	0%	+50%	82,202	102,752	154,128	116,034		116,034
50	INH50	Entry Plaza - External Area	m2	300	938	281,250								-20%	0%	+50%	225,000	281,250	421,875	317,606		317,606
51	INH51	Carpark and new road	m2	8,400	406	3,412,500	-20%	0%	+40%	6,720	8,400	11,760	9,123	-10%	0%	+70%	366	406	488	424		3,865,597
52	INH52	Landscaping and External Works Allowance to balance of site - $1m allowance to work within	Item	1	1,000,000	1,000,000								-20%	0%	+50%	800,000	1,000,000	1,500,000	1,129,266		1,129,266
53	INH53	External Services Allowance	Item	1	500,000	500,000								-20%	0%	+50%	400,000	500,000	750,000	564,633		564,633
		Subtotal				**6,010,106**																**6,798,985**
		SUBTOTAL - CONSTRUCTION COSTS				**72,143,147**																**75,777,368**

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Aqualink Nunawading

Business Case

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BASE COST							INHERENT UNCERTAINTY																	
Line Ref	Model Ref	Description	Unit	Qty	Rate	Estimated Base Cost	LOW (%)	MID (%)	HIGH (%)	LOW (Qty)	MID (Qty)	HIGH (Qty)	Qty Severity Distribution (Qty)	LOW (%)	MID (%)	HIGH (%)	LOW ($)	MID ($)	HIGH ($)	Rate/Cost Severity Distribution ($)	On-cost Calc	Severity Distribution ($)
		DESIGN COSTS																						
54	INH54	Demolition Allowance	m2	6,783	125	847,875	-5%	0%	+5%	6,444	6,783	7,122	6,783	-20%	0%	+50%	100	125	188	141		957,476
55	INH55	ESD Allowance - 5 Star Greenstar in Design	Item	2.0%	72,143,147	1,442,863								0%	+20%	+50%	2.0%	2.4%	3.0%	2.6%	75,777,368	1,960,603
56	INH56	Authority Charges	Item	1.0%	72,143,147	721,432								-10%	0%	+50%	0.9%	1.0%	1.5%	1.1%	75,777,368	848,891
57	INH57	Headworks Allowance based on ADP Advice	Item	1	775,000	775,000								-10%	0%	+20%	697,500	775,000	930,000	808,344		808,344
58	INH58	Consultant Fees excl. PM	Item	9.5%	75,950,317	7,213,381								-5%	0%	+16%	9.0%	9.5%	11.0%	10.1%	80,352,682	8,116,601
59	INH59	Internal Client Costs incl. PM	Item	1	5,000,000	5,000,000								-10%	0%	+10%	4,500,000	5,000,000	5,500,000	5,000,000		5,000,000
60	INH60	FF & E - Gym/Strength Cond. Equip. - $400/m2 across gym/program area	m2	2,050	400	820,000	-5%	0%	+5%	1,948	2,050	2,153	2,050	-10%	0%	+25%	360	400	500	426		872,999
61	INH61	FF & E - General Loose - $250k allowance to work within	Item	1	250,000	250,000								-10%	0%	+10%	225,000	250,000	275,000	250,000		250,000
62	INH62	In Ground Conditions and Contamination Allowance	Item	2.0%	72,143,147	1,442,863								-50%	0%	+100%	1.0%	2.0%	4.0%	2.7%	75,777,368	2,056,151
63	INH63	Design Contingency	Excl.																			
64	INH64	Construction Contingency	Excl.																			
65	INH65	Client Contingency - $1m	Excl.																			
		Subtotal				**18,513,414**																**20,871,065**
		SUBTOTAL - DESIGN & CONSTRUCTION COSTS				**90,659,166**																**96,648,433**
		COST ESCALATION																				
66	INH66	Cost escalation (refer to Cost Escalation worksheet)	Item	1	23,670,834	23,670,834														28,852,000		28,852,000
		TOTAL				**114,330,000**																**125,500,433**

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Aqualink Nunawading
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WT

CONTINGENT RISK

Line Ref	Model Ref	Project Ref	Event Description	Notes (WT)	Residual Likelihood	Residual Consequence	Residual Rating	Unit	Qty (Nos)	Rate ($)	Estimated Base Cost ($)	Qty Severity Distribution LOW (%)	Qty Severity Distribution MID (%)	Qty Severity Distribution HIGH (%)	Qty Severity Distribution LOW (Qty)	Qty Severity Distribution MID (Qty)	Qty Severity Distribution HIGH (Qty)	Rate/Cost Severity Distribution LOW (%)	Rate/Cost Severity Distribution MID (%)	Rate/Cost Severity Distribution HIGH (%)	Rate/Cost Severity Distribution LOW ($)	Rate/Cost Severity Distribution MID ($)	Rate/Cost Severity Distribution HIGH ($)	Custom Distr.Arg1	Custom Distr.Arg3	Rate/Cost Severity Distribution ($)	Severity Distribution ($)	Frequency Type	Frequency Qty (#)	Frequency Probability (%)	Impact ($)
General																															
1	CR1	-	Programme		Possible	Moderate	Medium	Weeks	8	130,000	1,040,000	-50%	0%	+50%	4	8	12	9	+20%	0%	+40%	104,000	130,000	182,000			141,186	1,254,990	Bernoulli		50%	1,254,990
2	CR2	-	Trade package subcontractor becomes insolvent requiring them to be replaced	cost to re-tender, uplift cost, abortive work 50% complete, 20% upilft + ind rects + retender cost	Rare	Moderate	Low	Item	1	390,000	390,000	-50%	0%	+50%	0.50	1.00	1.50	1.00	+30%	0%	+30%	195,000	390,000	585,000			390,000	390,000	Binomial	20	5%	390,000
3	CR3	-	Head contractor goes into administration or becomes insolvent requiring them to be replaced	cost to re-tender, uplift cost, abortive works 50% complete, 10% upilft + ind rects + retender cost	Rare	Major	Medium	Item	1	4,900,000	4,900,000	-50%	0%	+50%	0.50	1.00	1.50	1.00	+30%	0%	+30%	2,450,000	4,900,000	7,350,000			4,900,000	4,900,000	Bernoulli		1%	-
4	CR4	-	Geotech	BA 4300m2 x 0.50 deep x 20% = 600m3	Possible	Major	High	m3	600	250	150,000	-50%	0%	+100%	300	600	1,200	729	+20%	0%	+40%	200	250	350			272	197,952	Bernoulli		58%	-
5	CR5	-	contamination	BA 4300m2 x 0.50 deep x 5% = 150m3	Possible	Major	High	m3	150	500	75,000	-50%	0%	+100%	75	150	300	182	+20%	0%	+40%	400	500	700			543	98,976	Bernoulli		58%	-
6	CR6	-	track	BA 4300m2 x 0.50 deep x 10% = 300m3	Possible	Major	High	m3	300	250	75,000	-50%	0%	+100%	150	300	600	365	+20%	0%	+40%	200	250	350			272	98,976	Bernoulli		58%	-
7	CR7	-	services relocation / modifications	water, power, sewer, stormwater	Possible	Major	High	Item	1,000	500	500,000	-50%	0%	+100%	500	1,000	2,000	1,215	+20%	0%	+40%	400	500	700			543	659,841	Bernoulli		58%	-
8	CR8	-	works outside site boundary - eg new entry, slip lane, signalised intersection	nominal allowance	Possible	Major	High	Item	1	750,000	750,000								+30%	0%	+100%	375,000	750,000	1,500,000			911,342	911,342	Bernoulli		58%	-
Cost																															
9	CR9	A01	Project budget is insufficient to deliver the full scope of works against project objectives, requires extensive value management	inherent uncertainty - cost	Possible	Severe	High																								
10	CR10	A02	Miss Government funding opportunities/cycle	outside risk model	Unlikely	Major	Medium																								
11	CR11	A03	Cost Plans prepared may be inaccurate. Project budget does not allow the project to be delivered to Business Case expectations.	inherent uncertainty - cost	Unlikely	Moderate	Medium																								
12	CR12	A04	Authority service costs not anticipated in cost plan.	nominal allowance above CR7	Unlikely	Minor	Low																								
13	CR13	A05	Project has not included all items that need to be costed within the budget (e.g. Salaries for internal staff, key swipe systems, authority payments and	salaries / staff = opex, outside risk model	Unlikely	Minor	Low																								
14	CR14	A06	Inadequate contractual engagement with consultants and/or contractors	clarify inadequate	Rare	Moderate	Low																								
15	CR15	A07	Development triggers more significant upgrades to site services requirements not anticipated/allowed for in budget.	nominal allowance above CR7	Possible	Major	High																								
16	CR16	A08	Additional consultants not allowed for in the budget.	inherent uncertainty	Unlikely	Minor	Low																								
17	CR17	A09	The design for the building is too excessive cause the project to run over budget.	outside risk model	Possible	Moderate	Medium																								
18	CR18	A10	Poor delivery model selection	to be managed, poor performance not considered in risk model	Unlikely	Minor	Low																								
19	CR19	A11	Inappropriate risk allocation for the works	purpose of risk model / contingency	Unlikely	Moderate	Medium																								
20	CR20	A12	Poor market response due to changing risk appetite by the market.	negotiated tender, assumed 5-10% premium	Unlikely	Moderate	Medium	Item	1	5,500,000	5,500,000								+33%	0%	+33%	3,666,667	5,500,000	7,333,333			5,500,000	5,500,000	Bernoulli		18%	-
21	CR21	A13	Poor investigation of site infrastructure, ground conditions and/or latent conditions	considered above CR4-7	Unlikely	Minor	Low																								
22	CR22	A14	Changes in the market (e.g. Insolvencies, inflation, market saturation)	insolvency - considered above inflation - cost escalation market saturation - similar above	Rare	Moderate	Low																								

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CONTINGENT RISK

Line Ref	Model Ref	Project Ref	Event Description	Notes (WT)	Residual Likelihood	Residual Consequence	Residual Rating	Unit	Qty (Nos.)	Rate ($)	Estimated Base Cost ($)	LOW (%)	MID (%)	HIGH (%)	LOW (Qty)	MID (Qty)	HIGH (Qty)	Qty Severity Distribution (Qty)	LOW (%)	MID (%)	HIGH (%)	LOW ($)	MID ($)	HIGH ($)	Custom Discr.Arg1	Custom Discr.Arg3	Rate/Cost Severity Distribution ($)	Severity Distribution ($)	Frequency Type	Frequency (Unit)	Frequency (#)	Frequency Probability (%)	Impact ($)
Schedule																																
13	CR23	R.01	Project program assumptions are insufficient, inaccurate or overly ambitious	programme delay above	Unlikely	Moderate	Medium																										
14	CR24	R.02	Misalignment between stakeholders and user groups (i.e., Priorities, scope, objectives).	programme delay - design, confirm if to be considered in construction cost risk model.	Unlikely	Minor	Low																										
15	CR25	R.03	Construction staging requirements underestimated or not properly considered against nominal existing asset end of life in 2050	confirm estimate allowances confirm potential additional staging requirement	Likely	Minor	Medium																										
16	CR26	R.04	Pandemic outbreak causes delays to the project.	outside risk model	Unlikely	Moderate	Medium																										
17	CR27	R.05	Limited resourcing capacity/capability in the Project Team causes delay in the design and procurement processes	programme delay - design capability - not considered in risk model	Unlikely	Minor	Low																										
18	CR28	R.06	Internal Council departments not allocating adequate resources to provide technical feedback.	programme delay - design capability - not considered in risk model	Unlikely	Minor	Low																										
19	CR29	R.07	Program critical path durations are underestimated	programme delay - construction	Unlikely	Moderate	Medium																										
20	CR30	R.08	Consultant does not deliver design to program	programme delay - design	Possible	Insignificant	Low																										
21	CR31	R.09	Scope creep requiring design issue resolution affecting time/cost/scope	scope to be managed inherent uncertainty - minor change major change - outside risk model	Unlikely	Moderate	Medium																										
22	CR32	R.10	Poor design/co-ordination, errors and omissions	poor performance outside risk model to be managed	Possible	Minor	Medium																										
23	CR33	R.11	Late or missed consideration of ESD elements of project including climate risk	poor performance outside risk model to be managed	Unlikely	Minor	Low																										
24	CR34	R.12	Functionality of new commercial tenancy spaces not adequately resolved before completion of tender documentation	to be managed not costed	Unlikely	Minor	Low																										
25	CR35	R.13	Poor governance and timely decision making	poor performance outside risk model to be managed	Unlikely	Moderate	Medium																										
26	CR36	R.14	Lack of time allowed for Council reporting processes (e.g. Council meetings)	poor performance outside risk model to be managed	Rare	Minor	Low																										
27	CR37	R.15	Planning issues arise during application processes	programme delay	Unlikely	Minor	Low																										
28	CR38	R.16	Secondary approvals including permits and licenses not considered as part of the approvals process	programme delay	Unlikely	Minor	Low																										
29	CR39	R.17	Relevant Building Surveyor does not grant Building Permit in a timely manner due to documentation requirements	programme delay to be managed	Unlikely	Minor	Low																										
40	CR40	R.18	Certificate of occupancy (COO) is not obtained in a timely manner or is provided with conditions	programme delay to be managed	Possible	Minor	Medium																										
41	CR41	R.19	Lack of time allowed for probity aspects of project	to be managed not costed	Rare	Minor	Low																										
42	CR42	R.20	Procurement and delivery timeframes inconsistent with lead times for specialist equipment	risk can be mitigated with early identification of items sourced from overseas and establishing an early procurement process	Possible	Moderate	Medium																										
43	CR43	R.21	Timing for bringing the works to market competes with other projects	similar risk above	Possible	Minor	Medium																										
44	CR44	R.22	Approach to market poorly managed	similar risk above	Unlikely	Moderate	Medium																										

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Line Ref	Model Ref	Project Ref	Event Description	Notes (WT)	Residual Likelihood	Residual Consequence	Residual Rating	Unit	Qty (Nos.)	Rate ($)	Estimated Base Cost ($)	LOW (%)	MID (%)	HIGH (%)	LOW (Qty)	MID (Qty)	HIGH (Qty)	Qty Severity Distribution (Qty)	LOW (%)	MID (%)	HIGH (%)	LOW ($)	MID ($)	HIGH ($)	Custom Discr.Arg1	Custom Discr.Arg3	Rate/Cost Severity Distribution ($)	Severity Distribution ($)	Frequency Type	Frequency Qty (#)	Frequency Probability (%)	Impact ($)
44	CR45	R.23	Contractual terms not thoroughly negotiated or unable to reach agreement including PI and PL insurance.	similar risk above	Unlikely	Minor	Low																									
46	CR46	R.24	Works Contractor becomes insolvent	insolvency risk above	Unlikely	Major	Medium																									
47	CR47	R.25	Poor testing and commissioning	poor performance outside risk model to be managed	Unlikely	Moderate	Medium																									
48	CR48	R.26	Works disruption due to union issues or external protest	aquatic centre unlikely to attract union attention, to be managed	Unlikely	Moderate	Medium																									
			Performance																													
49	CR49	C.01	AQN does not deliver on the Project vision or objectives	vision and objectives - deliver aquatic centre if failed then no project	Unlikely	Major	Medium																									
50	CR50	C.02	Requirements of the user groups are not identified or adhered to	adhered to/ suggests obligation stakeholders engagement outcomes to be considered in design	Unlikely	Minor	Low																									
51	CR51	C.03	Stakeholders lack the ability to read and interpret technical drawings	outside consideration of risk model	Unlikely	Minor	Low																									
52	CR52	C.04	Consultants do not meet the brief in terms of performance.	consultants deliverables to be clearly outlined, documented, manitored and managed action to be taken if performance is an issue risk - replacement of lead consultant, impact programme delay and cost increase	Rare	Minor	Low																									
53	CR53	C.05	Poor document management process resulting in errors and omissions in design and engineering drawings	similar to C04 inherent uncertainty ranges covered minor / moderate changes in design through design development process	Rare	Minor	Low																									
54	CR54	C.06	Aggressive program and heavy work demands	programme duration uncertainty	Unlikely	Minor	Low																									
55	CR55	C.07	Poor sub-consultant capability during development phase due to inadequate review during consultant procurement	performance to be monitored and managed programme duration uncertainty	Unlikely	Minor	Low																									
56	CR56	C.08	Poor consideration of facility operational requirements due to lack of operational and FM inputs into brief and design	OPEX costs outside risk model operational requirements to be documented and incorporated into technical specification and design	Unlikely	Minor	Low																									
			Safety																													
57	CR57	D.01	Poor consideration of safety in design	safety in design mandatory obligation on design team and contractor	Rare	Moderate	Low																									
58	CR58	D.02	Construction incident / injury to member of the public - Quality of OH&S systems not acceptable.	contractor responsibility, to be monitored	Rare	Major	Medium																									
59	CR59	D.03	Construction incident / injury to worker - Quality of OH&S systems not acceptable.	contractor responsibility, to be monitored	Rare	Major	Medium																									
60	CR60	D.04	Noise and dust from construction	contractor responsibility, to be monitored	Possible	Minor	Medium																									
61	CR61	D.05	Contractor non-compliance with Health & Safety legislation.	contractor responsibility, to be monitored	Rare	Minor	Low																									
62	CR62	D.06	Traffic management of ingress, egress and surrounding areas including truck parking.	contractor responsibility, to be monitored	Unlikely	Moderate	Medium																									
			Reputation																													

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CONTINGENT RISK

Line Ref	Model Ref	Project Ref	Event Description	Notes (WT)	Residual Likelihood	Residual Consequence	Residual Rating	Unit	Qty (Nos)	Rate ($)	Estimated Base Cost ($)	LOW (%)	MID (%)	HIGH (%)	LOW (Qty)	MID (Qty)	HIGH (Qty)	Qty Severity Distribution (Qty)	LOW (%)	MID (%)	HIGH (%)	LOW ($)	MID ($)	HIGH ($)	Custom Distr.Arg1	Custom Distr.Arg3	Rate/Cost Severity Distribution ($)	Severity Distribution ($)	Frequency Type	Frequency Qty (#)	Frequency Probability (%)	Impact ($)
63	CR63	E.E1	Council changes strategic direction on project delivery	If project does/ proceed there is no CAPEX risk	Rare	Moderate	Low																								
64	CR64	E.E2	Community engagement and consultation is unsatisfactory/dissatisfaction	stakeholder engagement process to be implemented, 'dissatisfaction' outside risk model	Rare	Minor	Low																								
65	CR65	E.E3	Poor Communication internally between Council and Officers resulting in lack of direction	outside consideration of CAPEX risk model	Unlikely	Minor	Low																								
66	CR66	E.E4	Local interest groups/external stakeholders operate outside of the project.	stakeholder engagement process to be implamented, 'adverse reaction' outside risk model	Unlikely	Minor	Low																								
67	CR67	E.E5	Inconsistent messaging across the project	stakeholder engagement and communication to be implement, to be managed	Unlikely	Minor	Low																								
68	CR68	E.E6	Communication Plan does not clearly state how and who to communicate.	stakeholder engagement and communication to be implement, to be managed	Rare	Insignificant	Low																								
69	CR69	E.E7	Poor staging of works with existing operations.	impact to existing operations outside consideration of CAPEX risk model	Possible	Moderate	Medium																								
70	CR70	E.E8	Inadequate traffic and transport planning and engineering assessment do not take into account logistics for works and ultimate build operations, including fire and emergency service access and ongoing operations.	traffic modelling to be implemented emergency services access is mandatory to be managed through design development	Unlikely	Minor	Low																								
71	CR71	E.E9	Social and Ethical Procurement not obtained throughout supply chain (Social Procurement including Modern Slavery Act)	Plant and material sourced from overseas to be nominated from accredited providers to be spec'ified in technical and contractual	Unlikely	Minor	Low																								
72	CR72	E.E10	Site works cause environmental damage e.g. to local trees	tree protection requirement to be documented contractual requirement and penalties to be documented.	Unlikely	Minor	Low																								
73	CR73	E.E11	Supply chain disruptions to the wider supply chain including truck drivers impact the delivery of the project to stakeholders.	Inherent uncertainty, BAU	Unlikely	Minor	Low																								
74	CR74	E.E12	Contractor liaison with public is confrontational and has a negative impact.	event description to be revised contractor does not need to engage with public, Client team to manage stakeholder / public	Unlikely	Minor	Low																								
75	CR75	E.E13	Failure of existing asset before the new pool is constructed.	outside consideration of CAPEX risk model	Unlikely	Minor	Low																								
76	CR76	E.E14	Business operations not adequately resourced during design, construction and delivery into commissioning and operations.	outside consideration of CAPEX risk model commercial risk	Unlikely	Minor	Low																								
77	CR77	E.E15	Lack of consideration of existing contracts and service providers	outside consideration of CAPEX risk model commercial risk	Unlikely	Minor	Low																								
78	CR78	E.E16	Design criteria does not align with Council expectations.	event description be revised expectations / requirements to be documented confirm not issue	Unlikely	Moderate	Medium																								
79	CR79	E.E17	The prize for users does not meet community expectations or is not inclusive.	outside consideration of CAPEX risk model commercial risk	Rare	Moderate	Low																								

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RISK MODEL REPORT

PR-024183

Aqualink Nunawading

Business Case

Probabilistic Cost Estimate

Client:

Ontoit Global Pty Ltd

Version: 04 Oct 2024

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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DOCUMENT INFORMATION

ORGANISATION DETAILS

Business Name	WTP Australia Pty Ltd
Trading Name	WT Partnership
ACN	605 212 182
ABN	69 605 212 182
Address	Level 21, 2 Southbank Boulevard, Southbank VIC 3006
Phone	03 9867 3677

CONTACT DETAILS

Name	Latham Conley
Title	National Risk Manager
Email	lconley@wtpartnership.com.au
Phone	0421 865 532

RISK MODEL SIMULATION DETAILS

Software	Palisade @Risk Version 8.5.2 (Build 16) Professional Edition
Simulation date	Friday, 4 October 2024
Number of Simulations	1
Number of Iterations	10000
Seed used in simulation	1665303300
Sampling Type	Latin Hypercube
Generator	Mersenne Twister

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OVERVIEW

GENERAL

This risk model has been calculated using a probabilistic cost estimating approach in accordance with State Government, Federal Government, Industry guidance documents and ISO 31000:2018 Risk Management - Principles and Guidelines.

The information contained in this risk model is the opinion of the project team and relevant project stakeholders and has been based on the best information available at the time of conducting the risk model simulations and calculating the probabilistic estimate values. This information in this Risk Model is therefore a 'snap-shot' in time and should be reviewed and updated on a regular basis to ensure it is based on the most current information.

TERMINOLOGY

Inherent uncertainty (risk) has a 100% probability of occuring and the magnitude of that uncertainty (risk) is variable. Typical inherent risks include design development, scope changes and cost uncertainty. Some typical risks like latent conditions can be considered inherent or contingent, depending on what is included in base estimate.

Contingent risk has a probability less than 100% and the magnitude is variable. Contingent risks typically include schedule risk, latent conditions such as contamination, rock, utility modifications / upgrades, as well as contractor insolvency, legal disputes, damage, significant weather events (normal weather impact inherent), stakeholder management and more. Significant departures from base estimate scope would typically be costed as contingent risk.

Probabilistic Risk Modelling assesses the uncertainty, ambiguity, and variability of a project using Monte Carlo simulation software to model all possible outcomes to understand the impact of risk and uncertainty.

A probabilistic value refers to a confidence level in the probabilistic estimate value not being exceeded. For example, a P50 value indicates there is a 50% probability of the project being delivered for less than the probabilistic estimate value and a 50% probability of being delivered for more than the probabilistic estimate value.

PROCESS

Overview of risk modelling process outlined as follows:

The project risk register was prepared by project team and provided to WT for inclusion in the cost risk model.

The project risk register was reviewed by WT to determine if risk events were CAPEX or OPEX in nature. CAPEX events were then evaluated to determine if they were Inherent or Contingent.

Workshops were conducted by WT to review initial assessment of CAPEX/OPEX and Inherent/Contingent nature risks on register.

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PROCESS (CONTINUED)

Risks assessed to be CAPEX and contingent in nature were then costed in the event that the risk eventuated, and an appropriate frequency distribution and probability were allocated. Bernoulli is used for a single risk event. Binomial is used for multiple single events with the same impact. Poisson is used for risks with multiple potential occurances and impacts. The probability value for Bernoulli and Binomial is based on the Likelihood rating probability range.

Risks events that could be both risks and opportunities and/or have multiple possible outcome scenarios were transferred to multi-state risk tables to capture the range of potential states (scenarios) and probabilities for each state/scenario.

We then reviewed the uncertainty in the base estimate with the project team and allocated -/+% ranges to each element of the project.

The risk model was then run through Palisade @Risk 8 Modelling Software with at least 10,000 iterations in a single simulation from which the required probabilistic estimate values were extracted.

The risk model inputs were discussed multiple times with the project team to ensure each risk event description, cause and impact was fully understood and that the estimated cost, variability, frequency and probability were appropriate for the specific risk and the wider package risk model.

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SUMMARY

ESTIMATE

Total Base Estimate excluding cost escalation	90,660,000

ESTIMATE & CONTINGENCY

P-value	Probabilistic Estimate Value ($)	Contingency Value ($)	Contingency Value (%)
P10	94,480,000	3,820,000	4.2%
P20	96,000,000	5,340,000	5.9%
P30	97,140,000	6,480,000	7.1%
P40	98,180,000	7,520,000	8.3%
P50	99,140,000	8,480,000	9.4%
P60	100,190,000	9,530,000	10.5%
P70	101,330,000	10,670,000	11.8%
P80	102,760,000	12,100,000	13.3%
P90	104,880,000	14,220,000	15.7%
P95	106,800,000	16,140,000	17.8%

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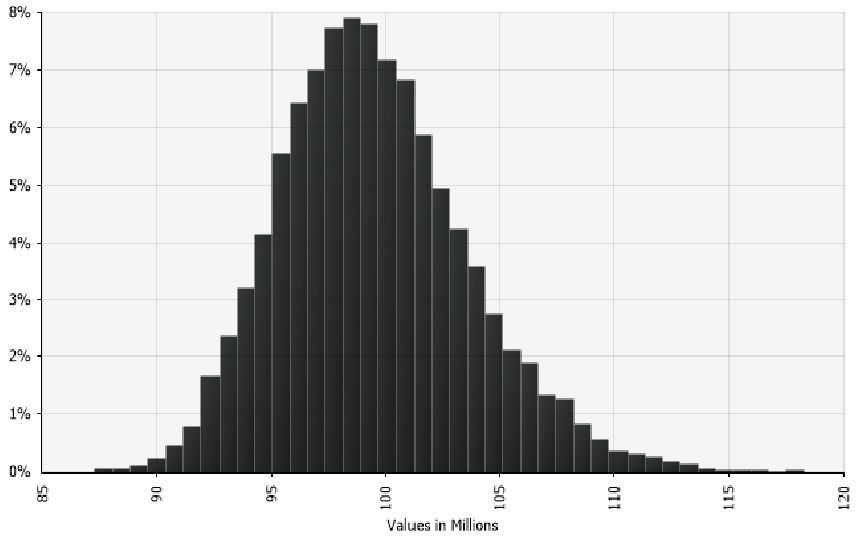
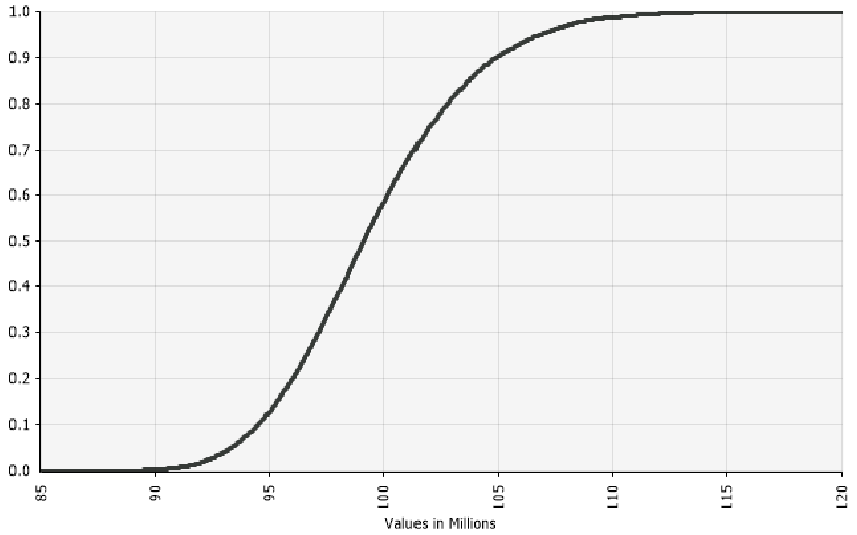
GRAPHS

GRAPH 1 - BAR CHART



GRAPH 2 - LINE CHART



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BASE COST							INHERENT UNCERTAINTY																
Line Ref	Model Ref	Description	Unit	Qty	Rate	Estimated Base Cost	LOW (%)	MID (%)	HIGH (%)	LOW (Qty)	MID (Qty)	HIGH (Qty)	Qty Severity Distribution (Qty)	LOW (%)	MID (%)	HIGH (%)	LOW ($)	MID ($)	HIGH ($)	Rate/Cost Severity Distribution ($)	Severity Distribution ($)
		DIRECT COSTS																				
		INDOOR AQUATIC HALL																				
1	INH1	50m Indoor Pool (with Concourse)	m2	1,982	8,512	16,871,083								-10%	0%	+20%	15,183,975	16,871,083	20,245,300	17,596,953	17,596,953
2	INH2	Spectator Seating (Extra Over) - allow 500 no. per option	Item	1	468,750	468,750								-10%	0%	+20%	471,875	468,750	567,500	488,918	488,918
3	INH3	Learn-to-Swim (with Concourse)	m2	800	9,284	7,427,200								-10%	0%	+20%	6,684,480	7,427,200	8,912,640	7,746,752	7,746,752
4	INH4	Leisure Water + Toddler Pool (with Concourse)	m2	250	8,268	2,066,954								-10%	0%	+20%	1,860,259	2,066,954	2,480,345	2,155,884	2,155,884
5	INH5	Warm Water Program + 2 x Spa (with Concourse)	m2	750	7,724	5,793,116								-10%	0%	+20%	5,213,804	5,793,116	6,951,739	6,042,362	6,042,362
6	INH6	Sauna + Steam	m2	40	12,985	519,405								-10%	0%	+20%	467,465	519,405	623,286	541,752	541,752
7	INH7	Pool Concourse and Deck Showers	m2	5	7,358	36,792								-10%	0%	+20%	33,113	36,792	44,150	38,375	38,375
8	INH8	Wet Lounge	m2	30	5,461	163,831								-10%	0%	+20%	147,448	163,831	196,597	170,880	170,880
9	INH9	Birthday Party Room / Meeting Room	m2	30	5,414	162,408								-10%	0%	+20%	146,167	162,408	194,890	169,396	169,396
10	INH10	First Aid Room	m2	15	6,806	102,094								-10%	0%	+20%	91,885	102,094	122,513	106,487	106,487
11	INH11	LTS Store	m2	30	3,425	102,752								-10%	0%	+20%	92,477	102,752	123,302	107,173	107,173
12	INH12	WWP Store	m2	20	3,425	68,502								-10%	0%	+20%	61,652	68,502	82,202	71,449	71,449
13	INH13	Cleaner	m2	10	3,425	34,251								-10%	0%	+20%	30,826	34,251	41,101	35,725	35,725
14	INH14	Pool Storage	m2	50	3,425	171,253								-10%	0%	+20%	154,128	171,253	205,504	178,621	178,621
		Subtotal				**33,988,391**																**35,450,725**
		HEALTH & WELLNESS AREA																				
15	INH15	Cardio and Strength Area	m2	900	5,633	5,069,839								-10%	0%	+20%	4,562,855	5,069,839	6,083,807	5,287,966	5,287,966
16	INH16	Group Fitness (Incl. Associated Store)	m2	750	5,633	4,224,866								-10%	0%	+20%	3,802,379	4,224,866	5,069,839	4,406,639	4,406,639
17	INH17	Allied Health Foyer & Suites	m2	42	5,690	238,964								-10%	0%	+20%	215,068	238,964	286,757	249,245	249,245
18	INH18	Community Meeting & Storage	m2	42	5,414	227,372								-10%	0%	+20%	204,635	227,372	272,846	237,155	237,155
19	INH19	Prayer Room	m2	9	5,414	48,723								-10%	0%	+20%	43,851	48,723	58,468	50,819	50,819
20	INH20	Consulting / Testing Rooms	m2	18	5,414	97,445								-10%	0%	+20%	87,701	97,445	116,934	101,638	101,638
		Subtotal				**9,907,209**																**10,333,462**
		FRONT OF HOUSE AREAS																				
21	INH21	Ground Floor Foyer Incl. Airlock, Reception / Entry Control & Associated Store	m2	190	6,637	1,260,999								-10%	0%	+20%	1,134,899	1,260,999	1,513,199	1,315,253	1,315,253
22	INH22	Café & Lounges incl. Kitchen (Incl. FF&E)	m2	220	10,346	2,276,096								-10%	0%	+20%	2,048,486	2,276,096	2,731,315	2,374,024	2,374,024
23	INH23	Café - Other (Incl. FF&E)	Excl											-10%	0%	+20%					
24	INH24	Admin, Offices, Meeting, Cash/Utility, Store, Staff Room & Staff Amen.	m2	190	5,414	1,028,584								-10%	0%	+20%	925,726	1,028,584	1,234,301	1,072,838	1,072,838
25	INH25	Swim Club Office, Administration & Associated Storage	m2	88	5,414	476,397								-10%	0%	+20%	428,757	476,397	571,676	496,894	496,894
26	INH26	Swim Club Strength & Conditioning	m2	400	5,633	2,253,262								-10%	0%	+20%	2,027,936	2,253,262	2,703,914	2,350,208	2,350,208

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27	INH27	Swim Club Events / Marshalling	m2	40	5,633	225,327								-10%	0%	+20%	202,794	225,327	270,392	235,022	235,022
28	INH28	Swim Club Equipment Store	m2	30	3,425	102,752								-10%	0%	+20%	92,477	102,752	123,302	107,173	107,173
29	INH29	Swim Club Change	m2	60	7,358	441,494								-10%	0%	+20%	397,345	441,494	529,793	460,489	460,489
30	INH30	Level 1 Lobby / 24-7 Entry	m2	30	6,637	199,106								-10%	0%	+20%	179,195	199,106	238,927	207,672	207,672
31	INH31	Retail - assume warm shell	m2	30	4,200	126,000								-10%	0%	+20%	113,400	126,000	151,200	131,421	131,421
32	INH32	Social Spaces	m2	50	6,637	331,842								-10%	0%	+20%	298,658	331,842	398,210	346,119	346,119
		Subtotal				**8,721,859**															**9,097,113**
		AMENITIES / FACILITY SUPPORT																			
53	INH33	Amenities - Accessible	m2	14	7,358	103,016								-10%	0%	+20%	92,714	103,016	123,619	107,448	107,448
54	INH34	Change Rooms - Female	m2	170	7,358	1,250,899								-10%	0%	+20%	1,125,809	1,250,899	1,501,079	1,304,718	1,304,718
55	INH35	Change Rooms - Male	m2	170	7,358	1,250,899								-10%	0%	+20%	1,125,809	1,250,899	1,501,079	1,304,718	1,304,718
56	INH36	Change Rooms - Family Change Village	m2	200	7,358	1,471,646								-10%	0%	+20%	1,324,481	1,471,646	1,765,975	1,534,963	1,534,963
57	INH37	Change Rooms - Accessible Change Room	m2	54	7,358	397,345								-10%	0%	+20%	357,611	397,345	476,814	414,441	414,441
58	INH38	Change Rooms - Changing Places	m2	14	7,358	103,016								-10%	0%	+20%	92,714	103,016	123,619	107,448	107,448
59	INH39	Change Rooms - All Gender	m2	30	7,358	220,747								-10%	0%	+20%	198,672	220,747	264,896	230,245	230,245
60	INH40	Change Rooms - Group Change	m2	80	7,358	588,659								-10%	0%	+20%	529,793	588,659	706,391	613,986	613,986
61	INH41	Change Rooms - Services Area	m2	40	7,358	294,330								-10%	0%	+20%	264,897	294,330	353,196	306,993	306,993
62	INH42	Cleaner	m2	6	3,425	20,551								-10%	0%	+20%	18,496	20,551	24,661	21,435	21,435
		Subtotal				**5,701,108**															**5,946,395**
		OTHER AREAS - INTERNAL																			
43	INH43	General Circulation Allowance	m2	893	4,711	4,207,886								-10%	0%	+20%	3,787,097	4,207,886	5,049,463	4,388,928	4,388,928
44	INH44	Internal Aquatics Plant Rooms	m2	700	3,425	2,397,541								-10%	0%	+20%	2,157,787	2,397,541	2,877,049	2,500,694	2,500,694
45	INH45	Internal Services Plant	m2	300	3,425	1,027,518								-10%	0%	+20%	924,766	1,027,518	1,233,022	1,071,726	1,071,726
46	INH46	Data & Comms, MSB & Waste Management	m2	53	3,425	181,529								-10%	0%	+20%	163,376	181,529	217,835	189,339	189,339
		Subtotal				**7,814,474**															**8,150,688**
		OTHER AREAS - EXTERNAL																			
47	INH47	External Plant (Rooftop) - UUCA	m2	240	1,255	301,104								-20%	0%	+50%	240,883	301,104	451,656	340,026	340,026
48	INH48	Plant Access and Loading	m2	120	3,438	412,500								-20%	0%	+50%	330,000	412,500	618,750	465,822	465,822
49	INH49	Waste Management Area	m2	30	3,425	102,752								-20%	0%	+50%	82,202	102,752	154,128	116,034	116,034
50	INH50	Entry Plaza - External Area	m2	300	938	281,250								-20%	0%	+50%	225,000	281,250	421,875	317,606	317,606
51	INH51	Carpark and new road	m2	8,400	406	3,412,500	-20%	0%	+40%	6,720	8,400	11,760	9,123	-10%	0%	+20%	366	406	488	424	3,865,597
52	INH52	Landscaping and External Works Allowance to balance of site - $1m allowance to work within	Item	1	1,000,000	1,000,000								-20%	0%	+50%	800,000	1,000,000	1,500,000	1,129,266	1,129,266

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53	INH53	External Services Allowance	Item	1	500,000	500,000								-20%	0%	+50%	400,000	500,000	750,000	564,633	564,633
		Subtotal				**6,010,106**															**6,798,985**
		SUBTOTAL - CONSTRUCTION COSTS				**72,143,147**															**75,777,368**
		DESIGN COSTS																			
54	INH54	Demolition Allowance	m2	6,783	125	847,875	-5%	0%	+5%	6,444	6,783	7,122	6,783	-20%	0%	+50%	100	125	188	141	957,476
55	INH55	ESD Allowance - 5 Star Greenstar in Design	Item	2.0%	72,143,147	1,442,863								0%	+20%	+50%	2.0%	2.4%	3.0%	2.6%	1,960,603
56	INH56	Authority Charges	Item	1.0%	72,143,147	721,432								-10%	0%	+50%	0.9%	1.0%	1.3%	1.1%	848,891
57	INH57	Headworks Allowance based on ADP Advice	Item	1	775,000	775,000								-10%	0%	+20%	697,500	775,000	930,000	808,344	808,344
58	INH58	Consultant Fees excl. PM	Item	9.5%	75,950,317	7,213,381								-5%	0%	+16%	9.0%	9.5%	11.0%	10.1%	8,116,601
59	INH59	Internal Client Costs incl. PM	Item	1	5,000,000	5,000,000								-10%	0%	+10%	4,500,000	5,000,000	5,500,000	5,000,000	5,000,000
60	INH60	FF&E - Gym/Strength Cond. Equip. - $400/m2 across gym/program area	m2	2,050	400	820,000	-5%	0%	+5%	1,948	2,050	2,153	2,050	-10%	0%	+25%	360	400	500	426	872,999
61	INH61	FF&E - General Loose - $250k allowance to work within	Item	1	250,000	250,000								-10%	0%	+10%	225,000	250,000	275,000	250,000	250,000
62	INH62	In Ground Conditions and Contamination Allowance	Item	2.0%	72,143,147	1,442,863								-50%	0%	+100%	1.0%	2.0%	4.0%	2.7%	2,056,151
63	INH63	Design Contingency	Excl																		
64	INH64	Construction Contingency	Excl																		
65	INH65	Client Contingency - $1m	Excl																		
		Subtotal				**18,513,414**															**20,871,065**
		SUBTOTAL - DESIGN & CONSTRUCTION COSTS				**90,660,000**															**96,648,433**
		COST ESCALATION																			
66	INH66	Cost escalation (refer to Cost Escalation worksheet)	Item	-	23,670,834	-														28,852,000	-
		TOTAL				**90,660,000**															**96,648,433**

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WT

CONTINGENT RISK

Line Ref	Model Ref	Project Ref	Event Description	Notes (WT)	Residual Likelihood	Residual Consequence	Residual Rating	Unit	Qty (Nos)	Rate ($)	Estimated Base Cost ($)	LOW (%)	MID (%)	HIGH (%)	LOW (Qty)	MID (Qty)	HIGH (Qty)	Qty Severity Distribution (Qty)	LOW (%)	MID (%)	HIGH (%)	LOW ($)	MID ($)	HIGH ($)	Custom Distr.Arg1	Custom Distr.Arg3	Rate/Cost Severity Distribution ($)	Severity Distribution ($)	Frequency Type	Frequency Qty (#)	Frequency Probability (%)	Impact ($)
General																															
1	CR1	-	Programme		Possible	Moderate	Medium	Weeks	8	130,000	1,040,000	-50%	0%	+50%	4	8	12	9	-20%	0%	+40%	104,000	130,000	182,000			141,186	1,254,990	Bernoulli		50%	1,254,990
2	CR2	-	Trade package subcontractor becomes insolvent requiring them to be replaced	cost to re-tender, uplift cost, abortive work 50% complete, 20% upilft + ind rects + retender cost	Rare	Moderate	Low	Item	1	390,000	390,000	-50%	0%	+50%	0.50	1.00	1.50	1.00	-30%	0%	+30%	195,000	390,000	585,000			390,000	390,000	Binomial	20	5%	390,000
3	CR3	-	Head contractor goes into administration or becomes insolvent requiring them to be replaced	cost to re-tender, uplift cost, abortive works 50% complete, 10% upilft + ind rects + retender cost	Rare	Major	Medium	Item	1	4,900,000	4,900,000	-50%	0%	+50%	0.50	1.00	1.50	1.00	-30%	0%	+30%	2,450,000	4,900,000	7,350,000			4,900,000	4,900,000	Bernoulli		1%	-
4	CR4	-	Cavaich	BA 4300m2 x 0.50 deep x 20% = 600m3	Possible	Major	High	m3	600	250	150,000	-50%	0%	+100%	300	600	1,200	729	-20%	0%	+40%	200	250	350			272	197,952	Bernoulli		38%	-
5	CR5	-	contamination	BA 4300m2 x 0.50 deep x 5% = 150m3	Possible	Major	High	m3	150	500	75,000	-50%	0%	+100%	75	150	300	182	-20%	0%	+40%	400	500	700			543	98,976	Bernoulli		38%	-
6	CR6	-	rock	BA 4300m2 x 0.50 deep x 10% = 300m3	Possible	Major	High	m3	300	250	75,000	-50%	0%	+100%	150	300	600	365	-20%	0%	+40%	200	250	350			272	98,976	Bernoulli		38%	-
7	CR7	-	services relocation / modifications	water, power, sewer, stormwater	Possible	Major	High	Item	1,000	500	500,000	-50%	0%	+100%	500	1,000	2,000	1,215	-20%	0%	+40%	400	500	700			543	659,841	Bernoulli		38%	-
8	CR8	-	works outside site boundary - eg new entry, slip lane, signalised intersection	nominal allowance	Possible	Major	High	Item	1	750,000	750,000								-30%	0%	+100%	525,000	750,000	1,500,000			911,342	911,342	Bernoulli		38%	-
Cost																															
9	CR9	A01	Project budget is insufficient to deliver the full scope of works against project objectives, requires extensive value management	inherent uncertainty - cost	Possible	Severe	High																									
10	CR10	A02	Miss Government funding opportunities/cycle	outside risk model	Unlikely	Major	Medium																									
11	CR11	A03	Cost Plans prepared may be inaccurate. Project budget does not allow the project to be delivered to Business Case expectations.	inherent uncertainty - cost	Unlikely	Moderate	Medium																									
12	CR12	A04	Authority service costs not anticipated in cost plan.	nominal allowance above CR7	Unlikely	Minor	Low																									
13	CR13	A05	Project has not included all items that need to be costed within the budget (e.g. Salaries for internal staff, key swipe systems, authority payments and	salaries / staff = opex, outside risk model	Unlikely	Minor	Low																									
14	CR14	A06	Inadequate contractual engagement with consultants and/or contractors	clarify inadequate	Rare	Moderate	Low																									
15	CR15	A07	Development triggers more significant upgrades to site services requirements not anticipated/allowed for in budget.	nominal allowance above CR7	Possible	Major	High																									
16	CR16	A08	Additional consultants not allowed for in the budget.	inherent uncertainty	Unlikely	Minor	Low																									
17	CR17	A09	The design for the building is too excessive cause the project to run over budget.	outside risk model	Possible	Moderate	Medium																									
18	CR18	A10	Poor delivery model selection	to be managed, poor performance not considered in risk model	Unlikely	Minor	Low																									
19	CR19	A11	Inappropriate risk allocation for the works	purpose of risk model / contingency	Unlikely	Moderate	Medium																									
20	CR20	A12	Poor market response due to changing risk appetite by the market.	negotiated tender, assumed 5-10% premium	Unlikely	Moderate	Medium	Item	1	5,500,000	5,500,000								+33%	0%	+33%	3,666,667	5,500,000	7,333,333			5,500,000	5,500,000	Bernoulli		18%	-
21	CR21	A13	Poor investigation of site infrastructure, ground conditions and/or latent conditions	considered above CR4-7	Unlikely	Minor	Low																									
22	CR22	A14	Changes in the market (e.g. Insolvencies, inflation, market saturation)	insolvency - considered above inflation - cost escalation market saturation - similar above	Rare	Moderate	Low																									

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Aqualink Nunawading
Business Case
Probabilistic Cost Estimate
Version: 04 Oct 2024

CONTINGENT RISK

Line Ref	Model Ref	Project Ref	Event Description	Notes (WT)	Residual Likelihood	Residual Consequence	Residual Rating	Unit	Qty (Nos.)	Rate ($)	Estimated Base Cost ($)	LOW (%)	MID (%)	HIGH (%)	LOW (Qty)	MID (Qty)	HIGH (Qty)	Qty Severity Distribution (Qty)	LOW (%)	MID (%)	HIGH (%)	LOW ($)	MID ($)	HIGH ($)	Custom Discr.Arg1	Custom Discr.Arg3	Rate/Cost Severity Distribution ($)	Severity Distribution ($)	Frequency Type	Frequency Qty (#)	Frequency Probability (%)	Impact ($)
Schedule																															
33	CR23	R.01	Project program assumptions are insufficient, inaccurate or overly ambitious	programme delay above	Unlikely	Moderate	Medium																								
34	CR24	R.02	Misalignment between stakeholders and user groups (i.e., Priorities, scope, objectives).	programme delay - design, confirm if to be considered in construction cost risk model.	Unlikely	Minor	Low																								
35	CR25	R.03	Construction staging requirements underestimated or not properly considered against nominal existing asset end of life in 2050	confirm estimate allowances confirm potential additional staging requirement	Likely	Minor	Medium																								
36	CR26	R.04	Pandemic outbreak causes delays to the project.	outside risk model	Unlikely	Moderate	Medium																								
37	CR27	R.05	Limited resourcing capacity/capability in the Project Team causes delay in the design and procurement processes	programme delay - design capability - not considered in risk model	Unlikely	Minor	Low																								
38	CR28	R.06	Internal Council departments not allocating adequate resources to provide technical feedback.	programme delay - design capability - not considered in risk model	Unlikely	Minor	Low																								
39	CR29	R.07	Program critical path durations are underestimated	programme delay - construction	Unlikely	Moderate	Medium																								
40	CR30	R.08	Consultant does not deliver design to program	programme delay - design	Possible	Insignificant	Low																								
41	CR31	R.09	Scope creep requiring design issue resolution affecting time/cost/scope	scope to be managed inherent uncertainty - minor change major change - outside risk model	Unlikely	Moderate	Medium																								
42	CR32	R.10	Poor design/co-ordination, errors and omissions	poor performance outside risk model to be managed	Possible	Minor	Medium																								
43	CR33	R.11	Late or missed consideration of ESD elements of project including climate risk	poor performance outside risk model to be managed	Unlikely	Minor	Low																								
44	CR34	R.12	Functionality of new commercial tenancy spaces not adequately resolved before completion of tender documentation	to be managed not costed	Unlikely	Minor	Low																								
45	CR35	R.13	Poor governance and timely decision making	poor performance outside risk model to be managed	Unlikely	Moderate	Medium																								
46	CR36	R.14	Lack of time allowed for Council reporting processes (e.g. Council meetings)	poor performance outside risk model to be managed	Rare	Minor	Low																								
47	CR37	R.15	Planning issues arise during application processes	programme delay	Unlikely	Minor	Low																								
48	CR38	R.16	Secondary approvals including permits and licenses not considered as part of the approvals process	programme delay	Unlikely	Minor	Low																								
49	CR39	R.17	Relevant Building Surveyor does not grant Building Permit in a timely manner due to documentation requirements	programme delay to be managed	Unlikely	Minor	Low																								
40	CR40	R.18	Certificate of occupancy (COO) is not obtained in a timely manner or is provided with conditions	programme delay to be managed	Possible	Minor	Medium																								
41	CR41	R.19	Lack of time allowed for probity aspects of project	to be managed not costed	Rare	Minor	Low																								
42	CR42	R.20	Procurement and delivery timeframes inconsistent with lead times for specialist equipment	risk can be mitigated with early identification of items sourced from overseas and establishing an early procurement process	Possible	Moderate	Medium																								
43	CR43	R.21	Timing for bringing the works to market competes with other projects	similar risk above	Possible	Minor	Medium																								
44	CR44	R.22	Approach to market poorly managed	similar risk above	Unlikely	Moderate	Medium																								

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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CONTINGENT RISK

Line Ref	Model Ref	Project Ref	Event Description	Notes (WT)	Residual Likelihood	Residual Consequence	Residual Rating	Unit	Qty (Nos)	Rate ($)	Estimated Base Cost ($)	LOW (%)	MID (%)	HIGH (%)	LOW (Qty)	MID (Qty)	HIGH (Qty)	Qty Severity Distribution (Qty)	LOW (%)	MID (%)	HIGH (%)	LOW ($)	MID ($)	HIGH ($)	Custom Discr.Arg1	Custom Discr.Arg3	Rate/Cost Severity Distribution ($)	Severity Distribution ($)	Frequency Type	Frequency Qty (#)	Frequency Probability (%)	Impact ($)
45	CR45	R.23	Contractual terms not thoroughly negotiated or unable to reach agreement including PI and PL insurance.	similar risk above	Unlikely	Minor	Low																								
46	CR46	R.24	Works Contractor becomes insolvent	insolvency risk above	Unlikely	Major	Medium																								
47	CR47	R.25	Poor testing and commissioning	poor performance outside risk model to be managed	Unlikely	Moderate	Medium																								
48	CR48	R.26	Works disruption due to union issues or external protest	aquatic centre unlikely to attract union attention, to be managed	Unlikely	Moderate	Medium																								
			Performance																												
49	CR49	C.01	AQN does not deliver on the Project vision or objectives	vision and objectives - deliver aquatic centre if failed then no project	Unlikely	Major	Medium																								
50	CR50	C.02	Requirements of the user groups are not identified and adhered to	adhered to/ suggests obligation stakeholders engagement outcomes to be considered in design	Unlikely	Minor	Low																								
51	CR51	C.03	Stakeholders lack the ability to read and interpret technical drawings	outside consideration of risk model	Unlikely	Minor	Low																								
52	CR52	C.04	Consultants do not meet the brief in terms of performance.	consultants deliverables to be clearly outlined, documented, manitored and managed action to be taken if performance is an issue risk - replacement of lead consultant, impact programme delay and cost increase	Rare	Minor	Low																								
53	CR53	C.05	Poor document management process resulting in errors and omissions in design and engineering drawings	similar to C04 inherent uncertainty ranges covered minor / moderate changes in design through design development process	Rare	Minor	Low																								
54	CR54	C.06	Aggressive program and heavy work demands	programme duration uncertainty	Unlikely	Minor	Low																								
55	CR55	C.07	Poor sub-consultant capability during development phase due to inadequate review during consultant procurement	performance to be monitored and managed programme duration uncertainty	Unlikely	Minor	Low																								
56	CR56	C.08	Poor consideration of facility operational requirements due to lack of operational and FM inputs into brief and design	OPEX costs outside risk model operational requirements to be documented and incorporated into technical specification and design	Unlikely	Minor	Low																								
			Safety																												
57	CR57	D.01	Poor consideration of safety in design	safety in design mandatory obligation on design team and contractor	Rare	Moderate	Low																								
58	CR58	D.02	Construction incident / injury to member of the public - Quality of OH&S systems not acceptable.	contractor responsibility, to be monitored	Rare	Major	Medium																								
59	CR59	D.03	Construction incident / injury to worker - Quality of OH&S systems not acceptable.	contractor responsibility, to be monitored	Rare	Major	Medium																								
60	CR60	D.04	Noise and dust from construction	contractor responsibility, to be monitored	Possible	Minor	Medium																								
61	CR61	D.05	Contractor non-compliance with Health & Safety legislation.	contractor responsibility, to be monitored	Rare	Minor	Low																								
62	CR62	D.06	Traffic management of ingress, egress and surrounding areas including truck parking.	contractor responsibility, to be monitored	Unlikely	Moderate	Medium																								
			Reputation																												

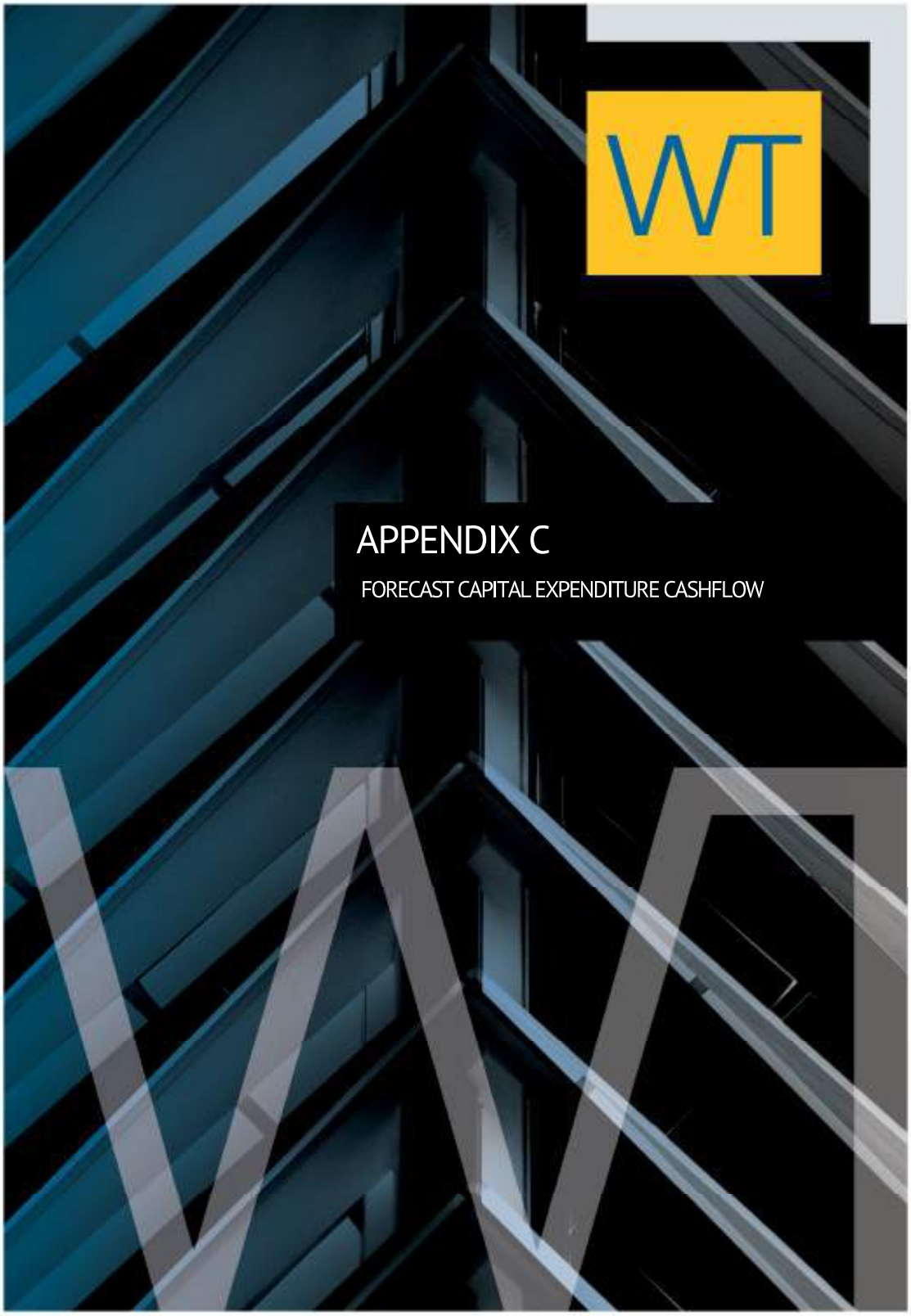
10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Aqualink Nunawading
Business Case
Probabilistic Cost Estimate
Version: 04 Oct 2024

CONTINGENT RISK

Line Ref	Model Ref	Project Ref	Event Description	Notes (WT)	Residual Likelihood	Residual Consequence	Residual Rating	Unit	Qty (Nos)	Rate ($)	Estimated Base Cost ($)	LOW (%)	MID (%)	HIGH (%)	LOW (Qty)	MID (Qty)	HIGH (Qty)	Qty Severity Distribution (Qty)	LOW (%)	MID (%)	HIGH (%)	LOW ($)	MID ($)	HIGH ($)	Custom Discr.Arg1	Custom Discr.Arg3	Rate/Cost Severity Distribution ($)	Severity Distribution ($)	Frequency Type	Frequency Qty (#)	Frequency Probability (%)	Impact ($)
63	CR63	E.E1	Council changes strategic direction on project delivery	If project does/ proceed there is no CAPEX risk	Rare	Moderate	Low																								
64	CR64	E.E2	Community engagement and consultation is unsatisfactory/dissatisfaction	stakeholder engagement process to be implemented, 'dissatisfaction' outside risk model	Rare	Minor	Low																								
65	CR65	E.E3	Poor Communication internally between Council and Officers resulting in lack of direction	outside consideration of CAPEX risk model	Unlikely	Minor	Low																								
66	CR66	E.E4	Local interest groups/external stakeholders operate outside of the project.	stakeholder engagement process to be implamented, 'adverse reaction' outside risk model	Unlikely	Minor	Low																								
67	CR67	E.E5	Inconsistent messaging across the project	stakeholder engagement and communication to be implement, to be managed	Unlikely	Minor	Low																								
68	CR68	E.E6	Communication Plan does not clearly state how and who to communicate.	stakeholder engagement and communication to be implement, to be managed	Rare	Insignificant	Low																								
69	CR69	E.E7	Poor staging of works with existing operations.	impact to existing operations outside consideration of CAPEX risk model	Possible	Moderate	Medium																								
70	CR70	E.E8	Inadequate traffic and transport planning and engineering assessment do not take into account logistics for works and ultimate build operations, including fire and emergency service access and ongoing operations.	traffic modelling to be implemented emergency services access is mandatory to be managed through design development	Unlikely	Minor	Low																								
71	CR71	E.E9	Social and Ethical Procurement not obtained throughout supply chain (Social Procurement including Modern Slavery Act)	Plant and material sourced from overseas to be nominated from accredited providers to be spec'ified in technical and contractual	Unlikely	Minor	Low																								
72	CR72	E.E10	Site works cause environmental damage e.g. to local trees	tree protection requirement to be documented contractual requirement and penalties to be documented.	Unlikely	Minor	Low																								
73	CR73	E.E11	Supply chain disruptions to the wider supply chain including truck drivers impact the delivery of the project to stakeholders.	Inherent uncertainty, BAU	Unlikely	Minor	Low																								
74	CR74	E.E12	Contractor liaison with public is confrontational and has a negative impact.	event description to be revised contractor does not need to engage with public, Client team to manage stakeholder / public	Unlikely	Minor	Low																								
75	CR75	E.E13	Failure of existing asset before the new pool is constructed.	outside consideration of CAPEX risk model	Unlikely	Minor	Low																								
76	CR76	E.E14	Business operations not adequately resourced during design, construction and delivery into commissioning and operations.	outside consideration of CAPEX risk model commercial risk	Unlikely	Minor	Low																								
77	CR77	E.E15	Lack of consideration of existing contracts and service providers	outside consideration of CAPEX risk model commercial risk	Unlikely	Minor	Low																								
78	CR78	E.E16	Design criteria does not align with Council expectations.	event description be revised expectations / requirements to be documented confirm not issue	Unlikely	Moderate	Medium																								
79	CR79	E.E17	The prize for users does not meet community expectations or is not inclusive.	outside consideration of CAPEX risk model commercial risk	Rare	Moderate	Low																								

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case



10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

AQUALINK NUNAWADING
OPTION 3A-FORECAST CASHFLOW (Rev.1)

Date	Construction Incl contamination	Contingency	Consult Fees INCL Client Costs	FF&E	Escalation	Monthly	Cumulative
	$ 77,373,158	$ 16,140,000	$ 12,213,378	$ 1,070,000 $ 356,667	$ 35,935,932		
Jan-27			$ 344,613		$ 115,959	$ 460,571	$ 460,571
Feb-27			$ 344,613		$ 115,959	$ 460,571	$ 921,142
Mar-27			$ 344,613		$ 115,959	$ 460,571	$ 1,381,714
Apr-27			$ 344,613		$ 115,959	$ 460,571	$ 1,842,285
May-27			$ 344,613		$ 115,959	$ 460,571	$ 2,302,856
Jun-27			$ 344,613		$ 115,959	$ 460,571	$ 2,763,427
Jul-27			$ 344,613		$ 115,959	$ 460,571	$ 3,223,998
Aug-27			$ 344,613		$ 115,959	$ 460,571	$ 3,684,569
Sep-27			$ 344,613		$ 115,959	$ 460,571	$ 4,145,141
Oct-27			$ 344,613		$ 115,959	$ 460,571	$ 4,605,712
Nov-27			$ 344,613		$ 115,959	$ 460,571	$ 5,066,283
Dec-27			$ 344,613		$ 115,959	$ 460,571	$ 5,526,854
Jan-28			$ 344,613		$ 115,959	$ 460,571	$ 5,987,425
Feb-28			$ 344,613		$ 115,959	$ 460,571	$ 6,447,997
Mar-28			$ 344,613		$ 115,959	$ 460,571	$ 6,908,568
Apr-28			$ 344,613		$ 115,959	$ 460,571	$ 7,369,139
May-28			$ 344,613		$ 115,959	$ 460,571	$ 7,829,710
Jun-28			$ 344,613		$ 115,959	$ 460,571	$ 8,290,281
Jul-28			$ 344,613		$ 115,959	$ 460,571	$ 8,750,852
Aug-28			$ 344,613		$ 115,959	$ 460,571	$ 9,211,424
Sep-28			$ 344,613		$ 115,959	$ 460,571	$ 9,671,995
Oct-28			$ 344,613		$ 115,959	$ 460,571	$ 10,132,566
Nov-28			$ 344,613		$ 115,959	$ 460,571	$ 10,593,137
Dec-28			$ 344,613		$ 115,959	$ 460,571	$ 11,053,708
Jan-29	$ 761,861	$ 807,000	$ 164,278		$ 583,183	$ 2,316,322	$ 13,370,030
Feb-29	$ 1,007,219	$ 807,000	$ 164,278		$ 665,744	$ 2,644,241	$ 16,014,271
Mar-29	$ 1,148,269	$ 807,000	$ 164,278		$ 713,206	$ 2,832,752	$ 18,847,023
Apr-29	$ 1,075,337	$ 807,000	$ 164,278		$ 688,665	$ 2,735,280	$ 21,582,304
May-29	$ 1,045,602	$ 807,000	$ 164,278		$ 678,659	$ 2,695,539	$ 24,277,843
Jun-29	$ 1,316,406	$ 807,000	$ 164,278		$ 769,782	$ 3,057,466	$ 27,335,309
Jul-29	$ 1,644,380	$ 807,000	$ 164,278		$ 880,142	$ 3,495,800	$ 30,831,109
Aug-29	$ 2,034,033	$ 807,000	$ 164,278		$ 1,011,256	$ 4,016,568	$ 34,847,677
Sep-29	$ 2,485,735	$ 807,000	$ 164,278		$ 1,163,249	$ 4,620,262	$ 39,467,939
Oct-29	$ 2,993,181	$ 807,000	$ 164,278		$ 1,334,000	$ 5,298,459	$ 44,766,398
Nov-29	$ 3,540,740	$ 807,000	$ 164,278		$ 1,518,248	$ 6,030,266	$ 50,796,664
Dec-29	$ 4,101,483	$ 807,000	$ 164,278		$ 1,706,932	$ 6,779,693	$ 57,576,357
Jan-30	$ 4,637,111	$ 586,909	$ 164,278		$ 1,813,107	$ 7,201,405	$ 64,777,762
Feb-30	$ 5,101,008	$ 586,909	$ 164,278		$ 1,969,203	$ 7,821,399	$ 72,599,161
Mar-30	$ 5,444,951	$ 586,909	$ 164,278		$ 2,084,937	$ 8,281,075	$ 80,880,236
Apr-30	$ 5,628,518	$ 586,909	$ 164,278		$ 2,146,705	$ 8,526,410	$ 89,406,647
May-30	$ 5,628,518	$ 586,909	$ 164,278		$ 2,146,705	$ 8,526,410	$ 97,933,057
Jun-30	$ 5,444,951	$ 586,909	$ 164,278		$ 2,084,937	$ 8,281,075	$ 106,214,132
Jul-30	$ 5,101,008	$ 586,909	$ 164,278		$ 1,969,203	$ 7,821,399	$ 114,035,531
Aug-30	$ 4,637,111	$ 586,909	$ 164,278		$ 1,813,107	$ 7,201,405	$ 121,236,936
Sep-30	$ 4,101,483	$ 586,909	$ 164,278		$ 1,632,873	$ 6,485,544	$ 127,722,480
Oct-30	$ 3,540,740	$ 586,909	$ 164,278	$ 356,667	$ 1,564,204	$ 6,212,798	$ 133,935,278
Nov-30	$ 2,993,181	$ 586,909	$ 164,278	$ 356,667	$ 1,379,956	$ 5,480,991	$ 139,416,270
Dec-30	$ 1,960,330		$ 164,278	$ 356,667	$ 834,923	$ 3,316,198	$ 142,732,468
Total EXCL GST	**$ 77,373,158**	**$ 16,140,000**	**$ 12,213,378**	**$ 1,070,000**	**$ 35,935,932**	**$ 142,732,468**	

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10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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Appendix J - Risk Register

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Aqualink Nunawading Project Risk Register

Risk Manager: Danni Nguyen
Version 03: 25/07/2024

ID	Risk Category	Risk Group	Risk Description (Risk Source element)	Risk Causes (Risk Event)	Risk Consequence	Likelihood	Consequence	Risk Level (Before Control)	Risk Treatment	Risk Owner	Residual likelihood	Residual Consequence	Residual Risk Level (After Control)	Control Effectiveness	Status (Open/ Closed/In Progress)	Date Closed	Outside risk tolerance Y/N	Project Phase	Risk Approval	Comments / Monitoring
A.00	A. Cost	01 Strategic	RISK CATEGORY A. COST																	
A.01	A. Cost	01 Strategic	Budget shortfall	Project budget is insufficient to deliver the full scope of works against project objectives, requires extensive value management	Council objectives are not achieved, delay to the project and/or increased project cost.	Likely	Severe	Extreme	Project scope is determined during Business Case. Clear understanding of likely capital funding and ongoing operational funding deficits/surpluses through the development of robust cost plans and financial and operating models Detailed functional and technical brief prepared and is monitored by PT, PWG, PCG.	PD	Possible	Severe	High	Effective	O		Y	Business Case	Director Infrastructure	
A.02	A. Cost	01 Strategic	Funding delayed	Miss Government funding opportunities/cycle	12-24 month delay to funding, funding shortfall	Possible	Major	High	Clear understanding of likely capital funding and ongoing operational funding deficits/surpluses through the development of robust cost plans and financial and operating models Develop clear and compelling narrative appealing to public funding contributors with appropriate supporting evidence	PD	Unlikely	Major	Medium	Effective	O		N	Business Case	Project team	
A.03	A. Cost	04 Funding	Budget shortfall	Cost Plans prepared may be inaccurate. Project budget does not allow the project to be delivered to Business Case expectations.	Project delay, request additional funding	Possible	Major	High	Update project cost plan for the concept design. Allocate appropriate contingency into cost plan to develop budget. Establish a Value Management process to keep project within Budget with focussed Value Management to consider / quantify impact on benefits from scope reduction and design change.	PD	Unlikely	Moderate	Medium	Mostly Effective	O		N	Business Case	Project team	
A.04	A. Cost	04 Funding	Budget shortfall	Authority service costs not anticipated in cost plan.	Additional costs required for authority connections, long lead-times on approvals.	Possible	Moderate	Medium	Liaise with representatives from various Service Authorities. Consultants are to assess service requirements early in the design and address Contingency allocation to be implemented.	PD	Unlikely	Minor	Low	Effective	O		N	Design	Project team	
A.05	A. Cost	04 Funding	Budget shortfall	Cost plan does not cover all required scope	Cost increase to the budget	Possible	Moderate	Medium	Ensure Cost Plan captured all aspects of the project. Resolve detailed functional and technical brief, detailed room data sheets, performance specifications brief prepared through detailed stakeholder consultation.	PD	Unlikely	Minor	Low	Effective	O		N	Business Case	Project team	
A.06	A. Cost	08 Design / Scope	Budget overrun	Inadequate contractual engagement with consultants and/or contractors	Cost increase to project	Unlikely	Major	Medium	Project team to review the risk profile of contract entered into. Seek detailed input from experienced internal professionals and external contractors, procurement, legal team, probity advisor, technical advisor etc	PD	Rare	Moderate	Low	Effective	O		N	Business Case	Project team	
A.07	A. Cost	08 Design / Scope	Budget overrun	Development triggers more significant upgrades to site services requirements not anticipated/allowed for in budget.	Cost increase to the project, uncertainty that approvals will be granted within program.	Likely	Major	High	Project scope is determined and costs are interrogated by QS. Undertake early engagement with authorities to elicit support. Appropriate risk contngencyt obe applied	PD	Possible	Major	High	Reasonably effective	O		Y	Design	Director Infrastructure	
A.08	A. Cost	08 Design / Scope	Budget shortfall	Additional consultants not allowed for in the budget.	Drawdowns into project contingency	Possible	Moderate	Medium	Project scope is determined and costs are interrogated by QS.	PD	Unlikely	Minor	Low	Effective	O		N	Business Case	Project team	
A.09	A. Cost	08 Design / Scope	Budget overrun	The design for the building is too excessive cause the project to run over budget.	Design is not affordable within the allocated budget	Possible	Major	High	Review quality of information being provided and undertake a gap analysis against design brief Ensure program includes sufficient time for design development and stakeholder engagement Scope management to be scrutinised and value managed against contingency assessment Regular cost plan updates to ensure project is managed within the adopted budget	PD	Possible	Moderate	Medium	Mostly Effective	O		N	Business Case	Project team	
A.10	A. Cost	10 Procurement	Increased costs	Poor delivery model selection	Continuous conflict and lack of certainty over delivery causing increased costs to manage the contract	Unlikely	Moderate	Medium	Engage suitably qualified and experienced practitioners to assist with the evaluation and selection of the delivery model and procurement strategy Undertake procurement workshop as part of Business case process Communicating the outcomes to the stakeholders in terms of risk allocation.	PD	Unlikely	Minor	Low	Effective	O		N	Development	Project team	

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

A.11	A. Cost	10 Procurement	Poor risk allocation	Inappropriate risk allocation for the works	High tender pricing or low confidence in delivery certainty	Possible	Moderate	Medium	Engage suitably qualified and experienced practitioners to input market information, market screening data and assist with the risk allocation, risk transfer and management arrangements	PD	Unlikely	Moderate	Medium	Effective	O		N	Development	Project team	
A.12	A. Cost	10 Procurement	Delay	Poor market response due to changing risk appetite by the market.	Limited tender responses reduces competitive market, value for money pricing.	Possible	Major	High	Early market engagement, including with other Council's, delivering large aquatic facilities, and ongoing communication during preparation to go to market, including appropriate contract risk allocation.	PD	Unlikely	Moderate	Medium	Effective	O		N	Development	Project team	
A.13	A. Cost	11 Construction	Budget overrun	Poor investigation of site infrastructure, ground conditions and/or latent conditions	Potential unknown scope, additional costs	Possible	Moderate	Medium	Ensure sufficient time is taken to properly assess the existing site conditions to inform the design, including site investigations for soil condition and contamination Include sufficient contingencies in the cost plan to manage identified risk. Apprpriately transfer risk to the contractor.	PD	Unlikely	Minor	Low	Effective	O		N	Business Case	Project team	
A.14	A. Cost	11 Construction	Budget overrun	Changes in the market (e.g. Insolvencies, inflation, market saturation)	Cost plan exceeds budget envelope	Possible	Major	High	Ensure cost planning forms part of development of design at all stages, including appropriate risk and contingency assessment and program duration assessment for escalation Constantly re visit risk assessment matrix and undertake market scanning to identify potential risks.	PD	Rare	Moderate	Low	Effective	O		N	Business Case	Project team	

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Likelihood

What is the chance that the event/risk will occur? The general tendency is to overestimate the possibility of an event happening. Decisions needs to be based on the historical or current experience where evidence is available both internally and externally. Existing controls (what is in place now to deal with this event if it does happen) must be considered when the level of likelihood is selected as per the matrix below.

Qualitative	Description	Frequency	Probability	On Project Basis
Almost Certain	This event is expected to occur in most circumstances	Monthly event	>99%	10 per Project
		Guide: Is expected to occur at some time or multiple times over the length of the project		
Likely	This event will probably occur in most circumstances	Annual event	>80%	1 per Project
		Guide: Would not surprise if this occurred during the project		
Possible	This event could occur at some time	1 / 10 years	>10%	>1/10 Projects
		Guide: May arise at sometime during the project		
Unlikely	This event is not expetced to occur	1 / 100 years	>1%	>1/100 Projects
		Guide: Would be a surprise if it occurred during the project		
Rare	This event may only occur in exceptional circumstances	> 1 / 100 years	< 1%	>1/1000 Projects
		Guide: Would be amazed if it happened		

Notes: 1. The "Frequency" scale to be used when assessing an event that occurs on a time or calendar basis.
2. The "Probability" scale to be used when assessing an event that occurs on a chance basis, where this is the chance of the event occurring in any given year.
3. The "On Project basis" scale to be used when assessing an event that occurs on a per project basis.

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PROJECT RISK CONSEQUENCE v CATEGORY MATRIX

		CATEGORY				
		Cost	**Schedule**	**Performance**	**Reputation**	**Safety**
CONSEQUENCE	**Severe or Extreme** (Req. Council & CEO Approval)	>10% of remaining Project Budget	>10% of remaining Project Schedule	Would cause the delivered capability to be functionally unfit for its intended purpose (i.e. unable to perform core missions or essential tasks)	If this risk was to eventuate there would be sustained (greater than two weeks) national media coverage	Would cause loss of life.
	Major	>5 - 10% of remaining Project Budget	>5 - 10% of remaining Project Schedule	Would cause the delivered capability to be only partly functionally fit for purpose (i.e. degraded ability to perform some core missions or essential tasks or unable to perform non-core missions or tasks, and there are no known workarounds).	If this risk was to eventuate there would be national media coverage for a period up to two weeks	Would cause serious casualties resulting in the long-term physical impairment of personnel.
	Moderate or Medium (Req. GMI and or Manager Major Projects Approval)	2.5 - 5% of remaining Project Budget	2.5 -5% of remaining Project Schedule	Would cause the delivered capability to be partly functionally fit for purpose (i.e. degraded ability to perform all desired missions or tasks; however, there are known workarounds). There would be some qualification to the level to which it would perform (e.g. due to issues of relationships, concurrency, etc). Several such qualifications would exist.	If this risk was to eventuate there would be national media coverage for a period of 1-3 days	Would cause several casualties that require hospitalisation with no long-term effects.
	Minor or Low (Req. Manager Major Projects Approval)	0 - 2.5 % of remainingProject Budget	0 – 2.5% of remaining Project Schedule	Would cause the delivered capability to be functionally fit for all desired missions or tasks, but there would be some qualification to the level to which it would perform non-critical elements of the mission or task. Several such qualifications would exist.	If this risk was to eventuate there may be localised media coverage for a period up to a week, however, this is not picked up by the national media	Would cause several minor casualties that require medical attention off-site with no long-term effects.
	Insignificant	No cost to the Project Budget	No schedule impact to the Project Schedule	Would cause the delivered capability to be functionally fit for all desired missions or tasks, but there may be some qualification to the level to which it would perform non-critical elements of the mission or task. Few such qualifications would exist.	If this risk was to eventuate there may be localised media coverage for 1-2 days, however, this is not picked up by the national media	Would cause minor injuries that are able to be treated at the site with no long-term effects.
		Project Specific				

Guidance:
The categories of risk are to be used as a guide only to help make an assessment of consequence and likelihood.
To determine the Risk Rating, consider:
1) what is the consequence that the risk would take in the most usual form should it eventuate?
e.g. the consequence of 'A paper cut' is:
- usual form: cut not requiring first aid treatment
- extreme form: cut resulting in an infection, blood poisoning and death.
2) what is the likelihood of that consequence?

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RISK LEVEL

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Medium	Medium	High	High	Extreme
Likely	Medium	Medium	Medium	High	Extreme
Possible	Low	Medium	Medium	High	High
Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Low	Medium	Medium

RISK RATING LEGEND

Low	It is expected that existing controls are effective with minor additional action required.
Medium	Existing controls, treatment plans and monitoring can be managed within existing operational routines.
High	High priority in planning, allocation of resources, treatment plans and monitoring
Extreme	Not acceptable and must be reduced. Highest priority in planning, decision making, allocation of resources, treatment and monitoring

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RISK CONTROL EFFECTIVENESS

Not Effective	Not effective at all in mitigating the risk (will not have any effect in terms of reducing the likelihood and/or consequence of the risk)
Negligible	Partial control in some circumstances (will have very little effect in terms of reducing the likelihood and/or consequence of the risk)
Reasonably Effective	Partial control most of the time (will have some effect in terms of reducing the likelihood and/or consequence of the risk)
Mostly Effective	Effective in most circumstances (will have a reasonably significant effect in terms of reducing the likelihood and/or consequence of the risk)
Effective	Fully effective at all times (will significantly reduce the likelihood and/or consequence of the risk at all times).

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RESIDUAL RISK TOLERANCE (From RMP)

Residual Risk Threshold Target

Target Risk criteria below are the criteria against which the assessed risk is compared to determine whether escalation may be required. To that end, the following are the evaluation criteria for Major Projects.

		What level of residual risk are we willing to retain for AQN in the pursuit of our objectives			
	Critical Success Factor	**Low**	**Medium**	**High**	**Extreme**
A	Cost		*		
B	Schedule		*		
C	Performance		*		
D	Safety	*			
E	Reputation (of the organisation not the project)	*			

	Outside of residual risk tolerance Y / N			
Critical Success Factor	**Low**	**Medium**	**High**	**Extreme**
A. Cost	N	N	Y	Y
B. Schedule	N	N	Y	Y
C. Performance	N	N	Y	Y
D. Safety	N	Y	Y	Y
E. Reputation	N	Y	Y	Y

Residual Risk Threshold Approvals

Approval is required to exceed the stated acceptable target level of risk and to accept an additional level of residual risk. The assigned authority for control and management (including retention) of residual risk above the stated target for is detailed below:

		Authority for Continued Tolerance/Retention of Non-Safety Related Residual Risk			
	Critical Success Factor	**Low**	**Medium**	**High**	**Extreme**
A	Cost	Project team	Project team	Director Infrastructure	CEO
B	Schedule	Project team	Project team	Director Infrastructure	CEO
C	Performance	Project team	Project team	Director Infrastructure	CEO
D	Safety	Project team	Manager Major Projects	CEO	Council
E	Reputation (of the organisation not the project)	Project team	Manager Major Projects	CEO	Council

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Risk Dashboard Outputs

PRE-MITIGATION DASHBOARD

RISK CONSEQUENCE BY LIKELIHOOD	NO. OF OPEN RISKS BY RISK RATING: PRE-MITIGATION STRATEGIES				
LIKELIHOOD	Insignificant	Minor	Moderate	Major	Severe
Almost Certain					
Likely		1		2	1
Possible		10	29	14	1
Unlikely		1	7	4	
Rare				1	

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RISK RATING BY RISK GROUP	NO. OF OPEN RISKS BY RISK RATING: PRE-MITIGATION STRATEGIES				
Risk Group	Low	Medium	High	Extreme	Total
01 Strategic			3	1	4
02 Business Case			1		1
03 Stakeholder / Communications	1	7			8
04 Funding		2	1		3
05 Interfaces / Staging		1	1		2
06 Health, Safety and Environment		1			1
07 Management / Resources		2			2
08 Design / Scope		10	5		15
09 Governance & Approvals		5	1		6
10 Procurement		7	2		9
11 Construction		12	3		15
12 Operational		5			5
Total	**1**	**52**	**17**	**1**	**71**

RISK TOLERANCE	NO. OF OPEN RISKS BY RISK RATING: PRE-MITIGATION STRATEGIES				
Risk Category	Low	Medium	High	Extreme	Total
A. Cost		7	6	1	14
B. Schedule		20	6		26
C. Performance		7	1		8
D. Safety		4	2		6
E. Reputation	1	14	2		17
Total	**1**	**52**	**17**	**1**	**71**

Within risk tolerance - managed by project team
Outside risk tolerance - approval required

POST-MITIGATION DASHBOARD

RISK CONSEQUENCE BY LIKELIHOOD	NO. OF OPEN RISKS BY RISK RATING: POST-MITIGATION STRATEGIES				
LIKELIHOOD	Insignificant	Minor	Moderate	Major	Severe
Almost Certain					
Likely		1			
Possible	1	4	3	1	1
Unlikely		30	13	3	
Rare	1	6	5	2	

RESIDUAL RISK RATING BY RISK GROUP	NO. OF OPEN RISKS BY RISK RATING: POST-MITIGATION STRATEGIES				
Risk Group	Low	Medium	High	Extreme	Total
01 Strategic	1	2	1		4
02 Business Case		1			1
03 Stakeholder / Communications	8				8
04 Funding	2	1			3
05 Interfaces / Staging		2			2
06 Health, Safety and Environment		1			1
07 Management / Resources	2				2
08 Design / Scope	10	4	1		15
09 Governance & Approvals	4	2			6
10 Procurement	4	5			9
11 Construction	8	7			15
12 Operational	4	1			5
Total	**43**	**26**	**2**		**71**

RESIDUAL RISK TOLERANCE	NO. OF OPEN RISKS BY RISK RATING: POST-MITIGATION STRATEGIES				
Risk Category	Low	Medium	High	Extreme	Total
A. Cost	7	5	2		14
B. Schedule	12	14			26
C. Performance	7	1			8
D. Safety	2	4			6
E. Reputation	15	2			17
Total	**43**	**26**	**2**		**71**

Within risk tolerance - managed by project team
Outside risk tolerance - approval required

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25 July 2024

Summary Development and Delivery Risk Report **Aqualink Nunawading Business Case**

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Document Information

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Document Control

Rev.	Date	Author	Reviewer	Signed Approval	Notes
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1. Purpose **1**

2. Background and Risk Register development **1**

3. Risk Workshop approach **1**

4. Risk Workshop findings **3**

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4.2. Risk tolerance 4

Appendix A – Project Risk Register **7**

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1. Purpose

Ontoit was engaged by the Whitehorse City Council (WCC) to facilitate two risk workshops and prepare the risk register for the Aqualink Nunawading Business Case (the Project).

The purpose of the risk workshop and risk register development was to identify, review and assess the impacts of project development and delivery risks to WCC to embark on the project following Business Case approval.

The Project risk register covering development and delivery risk will also allow the Cost Estimator to assess risk contingency to be applied to the capital cost estimate in line with Department of Treasury and Finance guidelines for the Detailed Business Case submission in 2025.

2. Background and Risk Register development

The following information was provided ahead of the risk workshops to assist in population of the initial Project risk register:

- Functional design brief and concept sketches
- WCC Major Projects Risk Management Plan and risk register February 2024.

The Project risk register was formatted to allow:

- identification of risk categories and risk groups; and
- identification of consequences including Financial and Project consequences to facilitate risk contingency assessment.

The general approach agreed with WCC was:

- to utilise the risk matrices from the WCC Major Projects Risk Management Plan, aligned to the February 2024 WCC risk register
- for Ontoit to prepare the initial Project risk register and populate risks and opportunities to reflect the design brief material, scope of the works and current market conditions using Ontoit's industry experience;
- the initial Project risk register was to then be further developed via a risk workshop to suit attendees knowledge base and experience:
- once updated from the workshop, the Project risk register would be used for risk contingency assessment and owned by WCC for ongoing review and management of the identified risks and opportunities.

3. Risk Workshop approach

The risk workshop approach was for the project team to discuss, and by consensus:

1. Confirm the process and guidance tools to be utilised;
2. Reconfirm the project objectives, risk categories and matrices and WCC risk appetite;
3. Confirm existing risk descriptions and potential management or treatments; and
4. Identify new risks to the delivery of the project objectives.

Due to time constraints, no risk classification (consequence & likelihood) was undertaken during the workshop.

The Risk Workshop was held via Microsoft Teams at 13:00 – 15:00 on 25 July 2024 and facilitated by Ontoit.

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The following people attended Risk Workshop No.1: Strategic risk categories:

- Andrew Butterfield, WCC Project Director, Major Project team
- Danni Nguyen – WCC Assistant Project Manager, Major Projects team
- Vivian Ferlaino – WCC Governance & Integrity Manager
- Julia Cushing – WCC,Coordinator Head of Procurement
- Kelli Batchelor – WCC, Risk and Insurance Advisor
- Tim Gledhill – WCC, Leisure Business Development Manager
- Nathan Moorcroft - – WCC, Coordinator Health Safety and Wellbeing
- Peter Scott – WCC Manager Contracts & Benefits
- Ben Bakker – WCC H&S Wellbeing Advisor
- Terry Jenvey -, WCC, Manager Leisure and Recreation Services O&M
- Simon Gorr -, Ontoit, Project Lead
- Amelia Bartak -, Ontoit, Business Case Writer
- Lachlan McGregor --, Ontoit, Design Lead
- Marco Furlan -, Ontoit, Risk Workshop Facilitator
- Tim Bessell – WTP, Cost Estimating Director
- Mike McGrath – Architect Principal

The format of the workshop involved reviewing each risk item by risk category. The Project risk register was updated by Ontoit during the workshop based on the discussion of the attendees.

The Project risk register was updated following the workshop to include impact and risk assessment, potential management/treatment, and post-treatment risk assessment, for review by WCC and the Project team.

The output from the risk workshop were:

- A Project risk register (refer Appendix A), and
- A Summary Risk Report (this document).

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4. Risk Workshop findings

4.1. Risks

A summary of the risk register by Group and Risk Rating is shown in Table 1.

The risk rating has been assessed after management / treatment of the identified risks.

Table 1 – AQN Residual Risk Register Group Rating Summary – Post risk mitigation strategy treatment

Group	Low	Medium	High	Extreme	Total
01 Strategic	1	2	1		4
02 Business Case		1			1
03 Stakeholder / Communications	8				8
04 Funding	2	1			3
05 Interfaces / Staging		2			2
06 Health, Safety and Environment		1			1
07 Management / Resources	2				2
08 Design / Scope	10	4	1		15
09 Governance & Approvals	4	2			6
10 Procurement	4	5			9
11 Construction	8	7			15
12 Operational	4	1			5
Total	43	26	2		71

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4.2. Risk tolerance

A key consideration is the risk tolerance acceptable to WCC. The RMP identifies the risk tolerance profile and approvals required. The residual risk tolerance profile against the identified risks is shown in Table 2.

Table 2 – AQN Residual Risk Register Group Rating Summary – Post risk mitigation strategy treatment

	The level of residual risk WCC is willing to retain for AQN in the pursuit of WCC objectives				
Critical Success Factor	Low	Medium	High	Extreme	Total
A. Cost	7	5	2		14
B. Schedule	12	14			26
C. Performance	7	1			8
D. Safety	2	4			6
E. Reputation	15	2			17
Legend		Within risk tolerance: managed by project team			
		Outside WCC risk tolerance – approval required			

Based on the risk outcomes, the authority for continued tolerance/retention of residual risk is shown in Table 3.

Table 3 – AQN Residual Risks – Authority for continued tolerance/retention

Critical Success Factor	Risk		Residual Risk Level	Authority
A. Cost	A01	Project budget is insufficient to deliver the full scope of works against project objectives, requires extensive value management	High	Director~~GM~~ Infrastructure
	A07	Development triggers more significant upgrades to site services requirements not anticipated/allowed for in budget.		
B. Schedule		Nil		
C. Performance		Nil		
D. Safety	D02	Construction incident / injury to member of the public - Quality of OH&S systems not acceptable.	Medium	~~Manager,~~ Project Director, Major Projects
	D03	Construction incident / injury to worker - Quality of OH&S systems not acceptable.		
	D04	Noise and dust from construction		
	D06	Traffic management of ingress, egress and surrounding areas including truck parking.		
E. Reputation	E07	Poor staging of works with existing operations.	Medium	Project Director~~Manager~~, Major Projects
	E16	Design criteria does not align with Council expectations.		

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It should be noted that a number of risks that have major impacts, including cost impacts, do not have a 'High' risk rating post mitigation, as the likelihood of occurrence is viewed as unlikely or rare. These can be found in the Project Risk Register in Appendix A.

The Detailed Business Case will expand upon management of the eight (8) risks contained in Table 3 above.

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Appendices

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Appendix A – Project Risk Register

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Appendix K - Commercial & Financial Model

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AQN BUSINESS CASE FINANCIAL PROJECTIONS
WGC BACKGROUND INFORMATION and RESEARCH (31st JULY 2024)
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The information below provides a summary of relevant background and research associated with the AQN Business Case financial projections. The intent of this information is to assist Warren Green Consulting (WGC) with the AQN financial projections. As the planning is for a greenfield development, the performance information on the current AQN is contextual only rather than critical to the future financial projections planning.

1. WGC GENERAL ASSUMPTIONS FOR AQN FINANCIAL PROJECTIONS

Based on the review undertaken, and advice provided, the following key assumptions are to be applied to the AQN financial projections.

General Assumptions

1) The three Design Options are:
    a. Option 2 – Contemporary Like for Like.
    b. Option 3A – Contemporary Hybrid.
    c. Option 5 – Aspirational.
2) The location is as per the current AQN site.
3) The opening date is July 2029.
4) All values are in 2024/25 prices (i.e. with no CPI applied as this can be done as part of the Business Case analysis).
5) Prices are as per the:
    a. AQN 2024/25 prices.
    b. Health and Wellness full membership at $50 (inc GST) per fortnight.
    c. Learn to swim 2024/25 at $46 (GST Free) per fortnight based on a review of 48 week programs.
6) Opening hours are:
    a. 6am to 10pm Monday to Friday.
    b. 8am to 8pm Saturday, Sunday and Public Holidays.
    c. Closed Good Friday and Christmas day.
7) The financial projections exclude GST.
8) No allowance has been made for the following:
    a. FF&E.
    b. City costs. (e.g. project management, contract management).
9) A steady annual sinking fund has been included (below the operational performance line) based on the 25-year whole-of-life cost estimate by WTP with a ramp up over the first 3 years. WTP's estimate was based on Preferred Option 3A, which has been pro-rated for other options based on total capital cost.
10) Facility management is via an outsourced management contract.
11) Learn to swim delivery model is based on a best practice facility management model.
12) The café is operated by the facility management group (and not outsourced).
13) Population growth is assumed to be 1% per annum.
14) Car parking provision will be adequate to meet demand.
15) The level of competitive rivalry is high and as a result, the projections are realistic with consideration to this situation.
16) It is assumed that there is no crèche service provided.

Income and Usage Assumptions

1) Year 1 has a visitation number close to 100% of future years (as per recent new Centres). This assumes an extensive pre-opening campaign.
2) Key elements regarding learn to swim are:
    a. The program will be 48 weeks per year (as per industry practice).
    b. A starting number at 3,100 for Options 3 and 3A (based on a 30% penetration rate of the catchment population – Note: suspensions reduce actual income).
    c. A starting number of 3,500 for Option 5 (a higher number due to the attraction of leisure water as a complementary offering with a 33% penetration).
    d. Year 1 gets to 90% of above numbers.

3) Health and wellness members are projected at:
    a. 2,000 for Option 2 (based on capacity constraints and offering associated with a small gym).
    b. 3,500 for Option 3A (a 6% market catchment penetration).
    c. 3,600 for Option 5 (with a slight increase to Option B but consideration to catchment penetration, competition and enhanced offering).
4) Allied health income is calculated at $275 per sqm.
5) Schools learn to swim income is consistent with the current AQN situation.
6) Assumes five carnivals per annum with an attendance of around 1,600 (like current).
7) Swim club usage is for 1,200 visits per month based on a multi-visit pass. Note: no lane hire is payable beyond standard lane usage hence entry fee charged.
8) Current visitation numbers (as per the VAGO report) by area are used as a high-level guide to potential aquatic usage.

Expenditure Assumptions

1) The proposed staffing structure based on industry benchmarks.
2) As an outsourced management model, it is assumed that all pre-opening expenses will be absorbed as part of the management fee hence $0 pre-opening allocation.
3) Salaries and wages are as per the Fitness Industry Award with on-costs of 23%. Note: this includes provision for a 12% superannuation contribution.
4) As a base level for staffing, the structure consists of the following key roles:
    a. Centre Manager.
    b. Four Co-Ordinators (Health and Wellness, Operations, Aquatic Programs, Customer Experience).
    c. Four Team Leaders (Health and Wellness, Operations, Aquatic Programs, Customer Experience).
    d. Key service delivery staff (subject to needs of each option).
5) The contract management fee is assumed to be 8% of income.
6) The gym cardio equipment is leased while the strength training equipment is purchased as part of the FF&E budget. Based on supplier advice the following costs are allocated.
    a. Equipment lease cost of $100K per annum for Option 2.
    b. Equipment lease cost of $140K per annum for Option 3A.
    c. Equipment lease cost of $160K per annum for Option 5.

    (Note: this is less than the Otium report which also included non-cardio equipment).
7) The Centre will be all-electric with electricity and water costs comparable to Brimbank AWC (rather than an older Centre). The following costs have been assumed:
    a. $600K per annum for electricity and $100K per annum for water for Option 2.
    b. $650K per annum for electricity and $120K per annum for water for Option 3A.
    c. $700K per annum for electricity and $140K per annum for water for Option 5.
17) Annual maintenance expense is calculated as per whole-of-life cost analysis by WTP, ramping up over the first 3 years. WTP's estimate was based on Preferred Option 3A, which has been pro-rated for other options based on total capital cost.

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Scope Element	Option 2	Option 3A	Option 5	Notes
Indoor Aquatic Hall	$28.14	$33.99	$43.88	50m pool and spectator area, LTS Pool, Leisure Water, Sauna & Steam, Concourses, Wet Lounge, Storage. Warm Water Pool (Options 3A & 5 only)
Health & Wellness Area	$4.56	$9.91	$13.49	Gym, Group Fitness. Options 3A & 5 only - Allied Health & Consulting Suites, Community Meeting Rooms
Front of House Area	$4.59	$8.72	$9.89	Entry / Reception, Café, Kitchen, Retail, Administration, NSC Specific Areas, Store
Amenities / Facility Support	$4.75	$5.70	$5.69	Change Areas
Other Internal Areas	$5.44	$7.81	$9.22	Plant, data & comms, circulation allowance
External Areas	$5.52	$6.01	$6.67	External plant, loading, car park, roads, landscaping
Total Trade Cost	**$53.00**	**$72.14**	**$88.84**	**Including contractor's preliminaries and margin**
Demolition	$0.85	$0.85	$0.85	Demolish existing facility
ESD Allowance (5-Star Greenstar)	$1.06	$1.44	$1.77	Allowance for inclusion of ESD initiatives
Consultant Fees (excl PM)	$5.34	$7.21	$8.85	Includes design and other consultancy fees, plus project management and client costs
Internal Client Costs (incl PM)	$5.00	$5.00	$5.00	Client will internally Project Manage the job, with specialist consultants assisting
In Ground and Contamination Allowance	$1.06	$1.44	$1.78	
Authority Charges and Headworks Allowance	$1.31	$1.50	$1.67	
FF&E	$0.57	$1.07	$1.29	
Total Base Cost Estimate	**$68.19**	**$90.65**	**$110.05**	**Current day excluding contingency**
P95 Risk Contingency	$11.94	$16.14	$19.78	Based on probabilistic risk costing
Total Cost Current Day	**$80.13**	**$106.79**	**$129.83**	**Total Cost of Project Current Day excl VPS Costs**
Escalation on Base Cost	$20.93	$27.89	$33.90	4.5% pa to 2029 and 4.0% thereafter
Cost Escalation Contingency (P95)	$6.04	$8.05	$9.78	Probablistic risk contingency on escalation only
Total Capital Cost	**$107.10**	**$142.73**	**$173.51**	**Total Capital Cost upon Completion**
NPV of Capital Cost	$73.51	$97.97	$119.09	NPV of Capital Cost ($2024) - Discounted at 7.0% pa

	Option 2	Option 3A	Option 5
NPV of Capital Cost @ 4.0%	$86.09	$114.73	$139.47
NPV of Capital Cost @ 7.0%	$73.51	$97.97	$119.09
NPV of Capital Cost @ 10.0%	$63.07	$84.05	$102.18

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Component	Base case	Option 2	Option 3A	Option 5
20-Year Net Present Value Operating*	-$10.57	-$3.90	-$1.78	-$2.18
Variance to Base Case – Operating Improvement	-	$6.67	$8.80	$8.39

Component	Base case	Option 2	Option 3A	Option 5
NPV of Total Capital Cost	($11.45)	($73.51)	($97.97)	($119.09)
Present value of recurrent operating surplus / (deficit)	($10.57)	($3.90)	($1.78)	($2.18)
Net Present Value (Capital and Recurrent)	($22.02)	($77.41)	($99.74)	($121.27)

Component	Base case	Option 2	Option 3A	Option 5
NPV of Total Capital Cost	($11.45)	($73.51)	($97.97)	($119.09)
Present value of recurrent operating surplus (20 years)	($10.57)	($3.90)	($1.78)	($2.18)

Component	Base case	Option 2	Option 3A	Option 5
NPV of Total Capital Cost				
4%	($15.19)	($86.09)	($114.73)	($139.47)
7%	($11.45)	($73.51)	($97.97)	($119.09)
10%	($8.70)	($63.07)	($84.05)	($102.18)
NPV of recurrent operating surplus				
4%	($12.08)	($3.55)	($0.46)	($1.07)
7%	($10.57)	($3.90)	($1.78)	($2.18)
10%	($9.33)	($4.00)	($2.51)	($2.77)
Net Present Value (Capital and Recurrent)				
4%	($27.27)	($89.64)	($115.18)	($140.54)
7%	($22.02)	($77.41)	($99.74)	($121.27)
10%	($18.03)	($67.07)	($86.56)	($104.95)

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Month	Construction Incl contamination	Contingency	Consult Fees Incl Client Costs	FF&E	Escalation	Monthly	Cumulative	%
Jan-27			$ 229,001		$ 77,056	$ 306,057	$ 306,057	0.21%
Feb-27			$ 229,001		$ 77,056	$ 306,057	$ 612,115	0.43%
Mar-27			$ 229,001		$ 77,056	$ 306,057	$ 918,172	0.64%
Apr-27			$ 229,001		$ 77,056	$ 306,057	$ 1,224,229	0.86%
May-27			$ 229,001		$ 77,056	$ 306,057	$ 1,530,286	1.07%
Jun-27			$ 229,001		$ 77,056	$ 306,057	$ 1,836,344	1.29%
Jul-27			$ 229,001		$ 77,056	$ 306,057	$ 2,142,401	1.50%
Aug-27			$ 229,001		$ 77,056	$ 306,057	$ 2,448,458	1.72%
Sep-27			$ 229,001		$ 77,056	$ 306,057	$ 2,754,515	1.93%
Oct-27			$ 229,001		$ 77,056	$ 306,057	$ 3,060,573	2.14%
Nov-27			$ 229,001		$ 77,056	$ 306,057	$ 3,366,630	2.36%
Dec-27			$ 229,001		$ 77,056	$ 306,057	$ 3,672,687	2.57%
Jan-28			$ 229,001		$ 77,056	$ 306,057	$ 3,978,744	2.79%
Feb-28			$ 229,001		$ 77,056	$ 306,057	$ 4,284,802	3.00%
Mar-28			$ 229,001		$ 77,056	$ 306,057	$ 4,590,859	3.22%
Apr-28			$ 229,001		$ 77,056	$ 306,057	$ 4,896,916	3.43%
May-28			$ 229,001		$ 77,056	$ 306,057	$ 5,202,973	3.65%
Jun-28			$ 229,001		$ 77,056	$ 306,057	$ 5,509,031	3.86%
Jul-28			$ 229,001		$ 77,056	$ 306,057	$ 5,815,088	4.07%
Aug-28			$ 229,001		$ 77,056	$ 306,057	$ 6,121,145	4.29%
Sep-28			$ 229,001		$ 77,056	$ 306,057	$ 6,427,202	4.50%
Oct-28			$ 229,001		$ 77,056	$ 306,057	$ 6,733,260	4.72%
Nov-28			$ 229,001		$ 77,056	$ 306,057	$ 7,039,317	4.93%
Dec-28			$ 229,001		$ 77,056	$ 306,057	$ 7,345,374	5.15%
Jan-29	$ 761,861	$ 158,924	$ 279,890		$ 404,014	$ 1,604,689	$ 8,950,063	6.27%
Feb-29	$ 1,007,219	$ 210,105	$ 279,890		$ 503,797	$ 2,001,011	$ 10,951,074	7.67%
Mar-29	$ 1,148,269	$ 239,528	$ 279,890		$ 561,159	$ 2,228,846	$ 13,179,920	9.23%
Apr-29	$ 1,075,337	$ 224,315	279890		531500	$ 2,111,041	$ 15,290,961	10.71%
May-29	$ 1,045,602	$ 218,112	$ 279,890		$ 519,407	$ 2,063,010	$ 17,353,972	12.16%
Jun-29	$ 1,316,406	$ 274,602	$ 279,890		$ 629,538	$ 2,500,435	$ 19,854,406	13.91%
Jul-29	$ 1,644,380	$ 343,017	$ 279,890		$ 762,919	$ 3,030,205	$ 22,884,612	16.03%
Aug-29	$ 2,034,033	$ 424,298	$ 279,890		$ 921,383	$ 3,659,605	$ 26,544,216	18.60%
Sep-29	$ 2,485,735	$ 518,523	$ 279,890		$ 1,105,082	$ 4,389,230	$ 30,933,446	21.67%
Oct-29	$ 2,993,181	$ 624,376	$ 279,890		$ 1,311,451	$ 5,208,898	$ 36,142,344	25.32%
Nov-29	$ 3,540,740	$ 738,597	$ 279,890		$ 1,534,133	$ 6,093,360	$ 42,235,704	29.59%
Dec-29	$ 4,101,483	$ 855,567	$ 279,890		$ 1,762,176	$ 6,999,116	$ 49,234,820	34.49%
Jan-30	$ 4,637,111	$ 967,299	$ 279,890		$ 1,980,006	$ 7,864,306	$ 57,099,126	40.00%
Feb-30	$ 5,101,008	$ 1,064,068	$ 279,890		$ 2,168,665	$ 8,613,630	$ 65,712,757	46.04%
Mar-30	$ 5,444,951	$ 1,135,814	$ 279,890		$ 2,308,540	$ 9,169,195	$ 74,881,951	52.46%
Apr-30	$ 5,628,518	$ 1,174,106	$ 279,890		$ 2,383,193	$ 9,465,707	$ 84,347,658	59.09%
May-30	$ 5,628,518	$ 1,174,106	$ 279,890		$ 2,383,193	$ 9,465,707	$ 93,813,365	65.73%
Jun-30	$ 5,444,951	$ 1,135,814	$ 279,890		$ 2,308,540	$ 9,169,195	$ 102,982,560	72.15%
Jul-30	$ 5,101,008	$ 1,064,068	$ 279,890		$ 2,168,665	$ 8,613,630	$ 111,596,190	78.19%
Aug-30	$ 4,637,111	$ 967,299	$ 279,890		$ 1,980,006	$ 7,864,306	$ 119,460,497	83.70%
Sep-30	$ 4,101,483	$ 855,567	$ 279,890		$ 1,762,176	$ 6,999,116	$ 126,459,613	88.60%
Oct-30	$ 3,540,740	$ 738,597	$ 279,890	$ 356,667	$ 1,654,147	$ 6,570,041	$ 133,029,654	93.20%
Nov-30	$ 2,993,181	$ 624,376	$ 279,890	$ 356,667	$ 1,431,465	$ 5,685,579	$ 138,715,233	97.19%
Dec-30	$ 1,960,330	$ 408,924	$ 279,890	$ 356,667	$ 1,011,424	$ 4,017,234	$ 142,732,468	100.00%

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

	Capital Cost	25 Year 2030	25 Year 2024	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25
Option A - ALC	$ 107,100,321	$ 26,568,000	$ 21,613,000	$ 300,181	$ 600,361	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542	$ 900,542
Option B - ALC	$ 142,732,468	$ 35,407,000	$ 28,804,000	$ 400,056	$ 800,111	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167	$ 1,200,167
Option C - ALC	$ 173,514,723	$ 43,043,000	$ 35,016,000	$ 486,333	$ 972,667	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000	$ 1,459,000

	Capital Cost	Annual 2030	Annual 2024	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25
Option A - Maintenance	$ 107,100,321	$ 472,000	$ 384,000	$ 128,000	$ 256,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000	$ 384,000
Option B - Maintenance	$ 142,732,468	$ 628,982	$ 511,000	$ 170,333	$ 340,667	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000	$ 511,000
Option C - Maintenance	$ 173,514,723	$ 765,000	$ 622,000	$ 207,333	$ 414,667	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000	$ 622,000

CPI	3.50% pa
2030 to 2024 Discount	81.4%

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

AQN - Base Case
Key Performance Indicators

Item	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	TOTAL 2025 - 32
Financial Projections											
Income - Council	$3,515,000	$3,515,000	$3,515,000	$3,515,000	$3,515,000	$3,515,000	$3,515,000	$3,515,000	$0		$28,120,000
Income - NSC	$2,745,000	$2,745,000	$2,745,000	$2,745,000	$2,745,000	$2,745,000	$2,745,000	$2,745,000	$0		$21,960,000
Total Income	$6,260,000	$6,260,000	$6,260,000	$6,260,000	$6,260,000	$6,260,000	$6,260,000	$6,260,000	$0		$50,080,000
Expenditure - Council	$4,270,000	$4,270,000	$4,270,000	$4,270,000	$4,270,000	$4,270,000	$4,270,000	$4,270,000	$1,000,000		$34,160,000
Asset Life Cycle - Council	$615,000	$735,000	$752,000	$588,000	$803,000	$658,000	$719,000	$454,000	$0		$5,324,000
Expenditure - NSC	$1,211,000	$1,211,000	$1,211,000	$1,211,000	$1,211,000	$1,211,000	$1,211,000	$1,211,000	$0		$9,688,000
Total Expenditure	$6,096,000	$6,216,000	$6,233,000	$6,069,000	$6,284,000	$6,139,000	$6,200,000	$5,935,000	$1,000,000		$49,172,000
Surplus/Deficit - Council	($1,370,000)	($1,490,000)	($1,507,000)	($1,343,000)	($1,558,000)	($1,413,000)	($1,474,000)	($1,209,000)	($1,000,000)		($11,364,000)
Surplus/Deficit - NSC	$1,534,000	$1,534,000	$1,534,000	$1,534,000	$1,534,000	$1,534,000	$1,534,000	$1,534,000	$0		$12,272,000
Total Surplus/Deficit	$164,000	$44,000	$27,000	$191,000	($24,000)	$121,000	$60,000	$325,000	($1,000,000)		$908,000
Visits											
Aquatics	420,000	420,000	420,000	420,000	420,000	420,000	420,000	420,000			
Health Club	154,000	154,000	154,000	154,000	154,000	154,000	154,000	154,000			
Other	0	0	0	0	0	0	0	0			
Total	574,000	574,000	574,000	574,000	574,000	574,000	574,000	574,000			
Memberships											
Learn to Swim											
Health and Wellness											
Aquatics											
Performance Indicators											
Subsidy / Surplus per Visit *	$1.36	$1.36	$1.36	$1.36	$1.36	$1.36	$1.36	$1.36			
Revenue per Visit	$10.91	$10.91	$10.91	$10.91	$10.91	$10.91	$10.91	$10.91			
Full Time Equivalent	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0			
Total Wages	$4,135,000	$4,135,000	$4,135,000	$4,135,000	$4,135,000	$4,135,000	$4,135,000	$4,135,000			
Staffing Expense to Total Income	66%	66%	66%	66%	66%	66%	66%	66%			

Demolition									($935,000)		
Rebuild as Park										($15,000,000)	

All 2024 Dollars Above

** Before Sinking Fund Allocation*

Operational												
CPI @ 3.5% pa	($1,417,950)	($1,596,125)	($1,670,838)	($1,541,123)	($1,850,415)	($1,736,938)	($1,875,340)	($1,592,022)	($1,362,897)	$0	($14,643,649)	3.50% CPI
NPV @ 4% pa											($12,081,415)	4.00% NPV
NPV @ 7% pa											($10,571,402)	7.00% NPV
NPV @ 10% pa											($9,328,546)	10.00% NPV

Capital												
NPV @ 10% pa	0%	0%	0%	0%	0%	0%	0%	0%	($1,274,309)	($21,158,981)	($22,433,290)	3.50% CPI
											($15,189,562)	4.00% NPV
											($11,449,293)	7.00% NPV
											($8,698,135)	10.00% NPV

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Base Case
Visitation Breakdown

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Full Memberships	154,000	154,000	154,000	154,000	154,000	154,000	154,000	154,000	154,000	154,000
Aquatic Memberships	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
Casual Swimming	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000
Casual Fitness	0	0	0	0	0	0	0	0	0	0
Learn to Swim	187,000	187,000	187,000	187,000	187,000	187,000	187,000	187,000	187,000	187,000
Schools	58,000	58,000	58,000	58,000	58,000	58,000	58,000	58,000	58,000	58,000
General	0	0	0	0	0	0	0	0	0	0
Total	**574,000**	**574,000**	**574,000**	**574,000**	**574,000**	**574,000**	**574,000**	**574,000**	**574,000**	**574,000**

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

AQN - Like for Like (Option 2)
Projections (2024/25 Values with No CPI)

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Income										
Casual Aquatics										
Adults	$122,727	$123,955	$125,194	$126,446	$127,710	$128,988	$130,277	$131,580	$132,896	$134,225
Children	$92,727	$93,655	$94,591	$95,537	$96,492	$97,457	$98,432	$99,416	$100,410	$101,414
Conc / Squad / Carn	$154,545	$156,091	$157,652	$159,228	$160,821	$162,429	$164,053	$165,694	$167,351	$169,024
Family	$90,182	$91,084	$91,994	$92,914	$93,844	$94,782	$95,730	$96,687	$97,654	$98,631
Swim Sauna Spa	$184,091	$185,932	$187,791	$189,669	$191,566	$193,481	$195,416	$197,370	$199,344	$201,338
Multi Visit	$368,182	$371,864	$375,582	$379,338	$383,131	$386,963	$390,832	$394,741	$398,688	$402,675
Warm Water Pool	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Hire										
Meeting Rooms and Functions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Centre Memberships										
Memberships	$2,381,312	$2,405,125	$2,429,176	$2,453,468	$2,478,002	$2,502,782	$2,527,810	$2,553,088	$2,578,619	$2,604,405
Casual Fitness										
Gym	$30,727	$30,727	$30,727	$30,727	$30,727	$30,727	$30,727	$30,727	$30,727	$30,727
Group Fitness	$18,153	$18,334	$18,518	$18,703	$18,890	$19,079	$19,269	$19,462	$19,657	$19,853
Aquatic Programs										
Learn to Swim	$3,236,735	$3,596,372	$3,632,336	$3,668,659	$3,705,346	$3,742,399	$3,779,823	$3,817,621	$3,855,798	$3,894,356
School Programs	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000
Birthday Parties	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other										
Retail Shop Income	$126,404	$130,931	$132,087	$133,256	$134,436	$135,627	$136,831	$138,047	$139,275	$140,515
Allied Health Leases	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Café	$189,606	$196,396	$198,131	$199,883	$201,653	$203,441	$205,247	$207,070	$208,912	$210,772
Crèche	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Lockers	$6,320	$6,547	$6,604	$6,663	$6,722	$6,781	$6,842	$6,902	$6,964	$7,026
Total Income	**$7,976,712**	**$8,382,011**	**$8,455,384**	**$8,529,492**	**$8,604,340**	**$8,679,937**	**$8,756,290**	**$8,833,407**	**$8,911,294**	**$8,989,961**
Expenses										
Staff										
Admin / Customer Service / Café	$1,265,670	$1,274,259	$1,276,416	$1,278,585	$1,280,766	$1,282,959	$1,285,164	$1,287,382	$1,289,612	$1,291,854
Aquatics	$1,604,734	$1,726,607	$1,738,794	$1,751,103	$1,763,535	$1,776,092	$1,788,774	$1,801,583	$1,814,520	$1,827,587
Operations	$799,500	$810,071	$812,726	$815,395	$818,079	$820,779	$823,493	$826,222	$828,967	$831,726
Sales & Marketing	$41,820	$41,820	$41,820	$41,820	$41,820	$41,820	$41,820	$41,820	$41,820	$41,820
Health and Wellness	$405,900	$405,900	$405,900	$405,900	$405,900	$405,900	$405,900	$405,900	$405,900	$405,900
Staff Costs										
Staff Training	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000
Courses/Seminars	$5,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Uniforms	$20,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Recruitment	$10,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Administration										
Retail Cost of Sales	$63,202	$65,465	$66,044	$66,628	$67,218	$67,814	$68,416	$69,023	$69,637	$70,257
Café Cost of Sales	$94,803	$98,198	$99,066	$99,942	$100,827	$101,721	$102,623	$103,535	$104,456	$105,386
Photocopying/Stationary	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Materials	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Consumables	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000
Software/Licenses/Subscriptions	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
Insurance	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
Utilities										
Information Technology / Phones	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000
Electricity	$600,000	$604,297	$605,365	$606,436	$607,510	$608,587	$609,667	$610,750	$611,837	$612,926
Gas	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Water	$100,000	$100,716	$100,894	$101,073	$101,252	$101,431	$101,611	$101,792	$101,973	$102,154
Services Costs										
Cleaning and Chemicals	$350,000	$352,507	$353,129	$353,754	$354,381	$355,009	$355,639	$356,271	$356,905	$357,540
Chemicals	$110,000	$110,788	$110,984	$111,180	$111,377	$111,574	$111,772	$111,971	$112,170	$112,370
Security	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
Maintenance										
Plant and Service Agreements	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
Buildings	$128,000	$256,000	$384,000	$384,000	$384,000	$384,000	$384,000	$384,000	$384,000	$384,000
Grounds	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Minor Equipment	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Marketing										
Promotion/Advertising	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000
Printing	$30,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000
Postage	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Banking										
Cash Collection	$7,977	$8,382	$8,455	$8,529	$8,604	$8,680	$8,756	$8,833	$8,911	$8,990
Bank Fees	$47,860	$50,292	$50,732	$51,177	$51,626	$52,080	$52,538	$53,000	$53,468	$53,940
Other										
Management Fees	$638,137	$670,561	$676,431	$682,359	$688,347	$694,395	$700,503	$706,673	$712,904	$719,197
Gym Equipment Lease Payments	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
Contractor/Legal	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Waste	$40,000	$40,286	$40,358	$40,429	$40,501	$40,572	$40,644	$40,717	$40,789	$40,862
General Purchases	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000
Contingency/Travel/Other	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000
Total Expenses	**$7,244,603**	**$7,539,149**	**$7,694,113**	**$7,721,310**	**$7,748,742**	**$7,776,412**	**$7,804,321**	**$7,832,473**	**$7,860,868**	**$7,889,510**
Operational Performance	**$732,109**	**$842,862**	**$761,272**	**$808,182**	**$855,598**	**$903,526**	**$951,969**	**$1,000,934**	**$1,050,426**	**$1,100,451**
Sinking Fund Allocation	$300,181	$600,361	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542
Total Performance	**$431,928**	**$242,501**	**($139,270)**	**($92,359)**	**($44,943)**	**$2,984**	**$51,427**	**$100,392**	**$149,885**	**$199,909**

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

AQN - Like for Like (Option 2)
Key Performance Indicators

		Existing Facility			Construction		New Facility Operational									New Facility Operational				
Item	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
Financial Projections																				
Income	$3,515,000	$3,515,000	$3,515,000	$3,515,000	$0	$0	$7,976,712	$8,382,011	$8,455,384	$8,529,492	$8,604,340	$8,679,937	$8,756,290	$8,833,407	$8,911,294	$8,989,961	$9,069,322	$9,149,383	$9,230,152	$9,311,633
Expenditure	$4,270,000	$4,270,000	$4,270,000	$4,270,000	$0	$0	$7,244,603	$7,539,149	$7,694,113	$7,721,310	$7,748,742	$7,776,412	$7,804,321	$7,832,473	$7,860,868	$7,889,510	$7,918,256	$7,947,107	$7,976,063	$8,005,125
Operational Surplus / (Deficit)	**($755,000)**	**($755,000)**	**($755,000)**	**($755,000)**	**$0**	**$0**	**$732,109**	**$842,862**	**$761,272**	**$808,182**	**$855,598**	**$903,526**	**$951,969**	**$1,000,934**	**$1,050,426**	**$1,100,451**	**$1,152,858**	**$1,207,761**	**$1,265,278**	**$1,325,535**
Sinking Fund Allocation	$615,000	$735,000	$752,000	$588,000	$0	$0	$300,181	$600,361	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542
Total Surplus (Deficit)	**($1,370,000)**	**($1,490,000)**	**($1,507,000)**	**($1,343,000)**	**$0**	**$0**	**$431,928**	**$242,501**	**($139,270)**	**($92,359)**	**($44,943)**	**$2,984**	**$51,427**	**$100,392**	**$149,885**	**$199,909**	**$252,316**	**$307,219**	**$364,737**	**$424,993**
Visits																				
Aquatics							473,473	494,533	498,728	502,965	507,245	511,568	515,933	520,343	524,796	529,294	533,830	538,406	543,020	547,675
Health Club							158,548	160,120	161,709	163,313	164,933	166,569	168,222	169,891	171,577	173,280	174,999	176,736	178,490	180,262
Other							0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total							632,021	654,653	660,437	666,278	672,178	678,137	684,155	690,234	696,373	702,574	708,830	715,141	721,509	727,934
Memberships																				
Learn to Swim							2,790	3,100	3,131	3,162	3,194	3,226	3,258	3,291	3,324	3,357	3,390	3,424	3,459	3,493
Health and Wellness							2,000	2,020	2,040	2,061	2,081	2,102	2,123	2,144	2,166	2,187	2,209	2,231	2,254	2,276
Aquatics							1,200	1,212	1,224	1,236	1,249	1,261	1,274	1,287	1,299	1,312	1,326	1,339	1,352	1,366
Performance Indicators																				
Subsidy / Surplus per Visit *							$1.16	$1.29	$1.15	$1.21	$1.27	$1.33	$1.39	$1.45	$1.51	$1.57	$1.63	$1.69	$1.75	$1.82
Revenue per Visit							$12.62	$12.80	$12.80	$12.80	$12.80	$12.80	$12.80	$12.80	$12.80	$12.80	$12.79	$12.79	$12.79	$12.79
Full Time Equivalent							45.3	46.6	46.7	46.9	47.1	47.2	47.4	47.6	47.7	47.9	48.1	48.3	48.4	48.6
Total Wages							$4,117,624	$4,258,656	$4,275,655	$4,292,803	$4,310,100	$4,327,549	$4,345,151	$4,362,907	$4,380,819	$4,398,887	$4,417,030	$4,435,248	$4,453,541	$4,471,909
Staffing Expense to Total Income							52%	51%	51%	50%	50%	50%	50%	49%	49%	49%	49%	48%	48%	48%

** Before Sinking Fund Allocation*

CPI @ 3.5% pa	$1,417,950	$1,596,125	$1,670,838	$1,541,123	$0	$0	$549,533	$319,327	$189,811	$130,282	$65,616	$4,509	$80,430	$162,505	$251,109	$346,640	$452,826	$570,656	$701,207	$845,647
NPV @ 4% pa																				
NPV @ 7% pa																				
NPV @ 10% pa																				

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

AQN - Like for Like (Option 2)
Visitation Breakdown

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10 Yr Ave.
Full Memberships	156,000	157,560	159,136	160,727	162,334	163,958	165,597	167,253	168,926	170,615	163,211
Aquatic Memberships	93,600	94,536	95,481	96,436	97,401	98,375	99,358	100,352	101,355	102,369	97,926
Casual Swimming	136,000	137,360	138,734	140,121	141,522	142,937	144,367	145,810	147,269	148,741	142,286
Casual Fitness	2,548	2,560	2,573	2,586	2,599	2,612	2,625	2,638	2,651	2,665	2,606
Learn to Swim	168,873	187,637	189,513	191,408	193,322	195,256	197,208	199,180	201,172	203,184	192,675
Schools	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
General*	0	0	0	0	0	0	0	0	0	0	0
Total	**632,021**	**654,653**	**660,437**	**666,278**	**672,178**	**678,137**	**684,155**	**690,234**	**696,373**	**702,574**	**673,704**

*Note: Meetings, Parties, Allied Health, Creche

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

AQN - Contemporary (Option 3A)
Projections (2024/25 Values with No CPI)

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Income										
Casual Aquatics										
Adults	$122,727	$123,955	$125,194	$126,446	$127,710	$128,988	$130,277	$131,580	$132,896	$134,225
Children	$30,909	$31,218	$31,530	$31,846	$32,164	$32,486	$32,811	$33,139	$33,470	$33,805
Conc / Squad / Carn	$154,545	$156,091	$157,652	$159,228	$160,821	$162,429	$164,053	$165,694	$167,351	$169,024
Family	$90,182	$91,084	$91,994	$92,914	$93,844	$94,782	$95,730	$96,687	$97,654	$98,631
Swim Sauna Spa	$184,091	$185,932	$187,791	$189,669	$191,566	$193,481	$195,416	$197,370	$199,344	$201,338
Multi Visit	$368,182	$371,864	$375,582	$379,338	$383,131	$386,963	$390,832	$394,741	$398,688	$402,675
Warm Water Pool	$185,455	$187,309	$189,182	$191,074	$192,985	$194,915	$196,864	$198,832	$200,821	$202,829
Hire										
Meeting Rooms and Functions	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Centre Memberships										
Memberships	$3,874,882	$3,913,631	$3,952,767	$3,992,295	$4,032,218	$4,072,540	$4,113,266	$4,154,398	$4,195,942	$4,237,902
Casual Fitness										
Gym	$61,455	$61,455	$61,455	$61,455	$61,455	$61,455	$61,455	$61,455	$61,455	$61,455
Group Fitness	$63,535	$63,535	$63,535	$63,535	$63,535	$63,535	$63,535	$63,535	$63,535	$63,535
Aquatic Programs										
Learn to Swim	$3,236,735	$3,596,372	$3,632,336	$3,668,659	$3,705,346	$3,742,399	$3,779,823	$3,817,621	$3,855,798	$3,894,356
School Programs	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000
Birthday Parties	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other										
Retail Shop Income	$160,768	$165,613	$167,091	$168,584	$170,092	$171,615	$173,153	$174,707	$176,276	$177,861
Allied Health Leases	$4,950	$4,950	$4,950	$4,950	$4,950	$4,950	$4,950	$4,950	$4,950	$4,950
Café	$241,152	$248,419	$250,637	$252,876	$255,138	$257,423	$259,730	$262,060	$264,414	$266,791
Crèche	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Lockers	$8,038	$8,281	$8,355	$8,429	$8,505	$8,581	$8,658	$8,735	$8,814	$8,893
Total Income	**$9,767,606**	**$10,189,707**	**$10,280,051**	**$10,371,298**	**$10,463,458**	**$10,556,540**	**$10,650,552**	**$10,745,504**	**$10,841,406**	**$10,938,267**
Expenses										
Staff										
Admin / Customer Service / Café	$1,533,810	$1,543,818	$1,546,827	$1,549,852	$1,552,894	$1,555,953	$1,559,029	$1,562,122	$1,565,232	$1,568,359
Aquatics	$1,634,254	$1,756,127	$1,768,314	$1,780,623	$1,793,055	$1,805,612	$1,818,294	$1,831,103	$1,844,040	$1,857,107
Operations	$1,030,740	$1,041,860	$1,045,203	$1,048,565	$1,051,945	$1,055,344	$1,058,761	$1,062,198	$1,065,653	$1,069,128
Sales & Marketing	$83,640	$83,640	$83,640	$83,640	$83,640	$83,640	$83,640	$83,640	$83,640	$83,640
Health and Wellness	$676,500	$676,500	$676,500	$676,500	$676,500	$676,500	$676,500	$676,500	$676,500	$676,500
Staff Costs										
Staff Training	$83,574	$85,490	$85,768	$86,048	$86,330	$86,614	$86,901	$87,190	$87,481	$87,774
Courses/Seminars	$5,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Uniforms	$25,000	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500
Recruitment	$12,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500
Administration										
Retail Cost of Sales	$80,384	$82,806	$83,546	$84,292	$85,046	$85,808	$86,577	$87,353	$88,138	$88,930
Café Cost of Sales	$120,576	$124,210	$125,318	$126,438	$127,569	$128,711	$129,865	$131,030	$132,207	$133,396

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Photocopying/Stationary	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000
Materials	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Consumables	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000
Software/Licenses/Subscriptions	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000
Insurance	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000
Utilities										
Information Technology / Phones	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000
Electricity	$650,000	$653,918	$655,085	$656,256	$657,429	$658,607	$659,787	$660,971	$662,159	$663,349
Gas	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Water	$110,000	$110,663	$110,861	$111,059	$111,257	$111,457	$111,656	$111,857	$112,058	$112,259
Services Costs										
Cleaning and Chemicals	$375,000	$377,260	$377,934	$378,609	$379,286	$379,965	$380,647	$381,330	$382,015	$382,702
Chemicals	$120,000	$120,723	$120,939	$121,155	$121,372	$121,589	$121,807	$122,025	$122,245	$122,464
Security	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
Maintenance										
Plant and Service Agreements	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
Buildings	$170,333	$340,667	$511,000	$511,000	$511,000	$511,000	$511,000	$511,000	$511,000	$511,000
Grounds	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Minor Equipment	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Marketing										
Promotion/Advertising	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000
Printing	$35,000	$28,000	$28,000	$28,000	$28,000	$28,000	$28,000	$28,000	$28,000	$28,000
Postage	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Banking										
Cash Collection	$9,768	$10,190	$10,280	$10,371	$10,463	$10,557	$10,651	$10,746	$10,841	$10,938
Bank Fees	$58,606	$61,138	$61,680	$62,228	$62,781	$63,339	$63,903	$64,473	$65,048	$65,630
Other										
Management Fees	$781,408	$815,177	$822,404	$829,704	$837,077	$844,523	$852,044	$859,640	$867,312	$875,061
Gym Equipment Lease Payments	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000
Contractor/Legal	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Waste	$45,000	$45,271	$45,352	$45,433	$45,514	$45,596	$45,678	$45,760	$45,842	$45,924
General Purchases	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000
Contingency/Travel/Other	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000
Total Expenses	**$8,533,093**	**$8,871,457**	**$9,072,649**	**$9,103,772**	**$9,135,159**	**$9,166,815**	**$9,198,740**	**$9,230,938**	**$9,263,411**	**$9,296,162**
Operational Performance	**$1,234,513**	**$1,318,250**	**$1,207,402**	**$1,267,527**	**$1,328,299**	**$1,389,725**	**$1,451,812**	**$1,514,566**	**$1,577,995**	**$1,642,105**
Sinking Fund Allocation	$400,056	$800,111	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167
Total Performance	**$834,457**	**$518,139**	**$7,235**	**$67,360**	**$128,132**	**$189,558**	**$251,645**	**$314,399**	**$377,828**	**$441,939**

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

AQN - Contemporary (Option 3A)
Key Performance Indicators

	Existing Facility				Construction		New Facility Operational									New Facility Operational				
Item	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**New Facility Ave**
Financial Projections																					
Income	$3,515,000	$3,515,000	$3,515,000	$3,515,000	$0	$0	$9,767,606	$10,189,707	$10,280,051	$10,371,298	$10,463,458	$10,556,540	$10,650,552	$10,745,504	$10,841,406	$10,938,267	$11,035,993	$11,134,593	$11,234,073	$11,334,442	$10,681,678
Expenditure	$4,270,000	$4,270,000	$4,270,000	$4,270,000	$0	$0	$8,533,093	$8,871,457	$9,072,649	$9,103,772	$9,135,159	$9,166,815	$9,198,740	$9,230,938	$9,263,411	$9,296,162	$9,329,028	$9,362,011	$9,395,110	$9,428,327	$9,170,477
Operational Surplus / (Deficit)	($755,000)	($755,000)	($755,000)	($755,000)	**$0**	**$0**	**$1,234,513**	**$1,318,250**	**$1,207,402**	**$1,267,527**	**$1,328,299**	**$1,389,725**	**$1,451,812**	**$1,514,566**	**$1,577,995**	**$1,642,105**	**$1,706,965**	**$1,772,582**	**$1,838,963**	**$1,906,116**	$1,511,201
Sinking Fund Allocation	$615,000	$735,000	$752,000	$588,000	$0	$0	$400,056	$800,111	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,114,440
Total Surplus (Deficit)	($1,370,000)	($1,490,000)	($1,507,000)	($1,343,000)	**$0**	**$0**	**$834,457**	**$518,139**	**$7,235**	**$67,360**	**$128,132**	**$189,558**	**$251,645**	**$314,399**	**$377,828**	**$441,939**	**$506,798**	**$572,415**	**$638,796**	**$705,949**	$396,761
Visits																					
Aquatics							516,873	538,367	543,000	547,680	552,407	557,181	562,003	566,873	571,792	576,760	581,771	586,826	591,924	597,067	563,609
Health Club							279,968	282,698	285,455	288,240	291,053	293,894	296,763	299,661	302,588	305,544	308,529	311,543	314,587	317,661	298,442
Other							7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Total							803,841	828,065	835,456	842,921	850,460	858,075	865,766	873,534	881,380	889,304	897,299	905,367	913,506	921,719	869,050
Memberships																					
Learn to Swim							2,790	3,100	3,131	3,162	3,194	3,226	3,258	3,291	3,324	3,357	3,390	3,424	3,459	3,493	3,257
Health and Wellness							3,500	3,535	3,570	3,606	3,642	3,679	3,715	3,752	3,790	3,828	3,866	3,905	3,944	3,983	3,737
Aquatics							1,500	1,515	1,530	1,545	1,561	1,577	1,592	1,608	1,624	1,641	1,657	1,674	1,690	1,707	1,602
Performance Indicators																					
Subsidy / Surplus per Visit *							$1.54	$1.59	$1.45	$1.50	$1.56	$1.62	$1.68	$1.73	$1.79	$1.85	$1.90	$1.96	$2.01	$2.07	$1.73
Revenue per Visit							$12.15	$12.31	$12.30	$12.30	$12.30	$12.30	$12.30	$12.30	$12.30	$12.30	$12.30	$12.30	$12.30	$12.30	$12.29
Full Time Equivalent							55.7	57.0	57.2	57.4	57.6	57.7	57.9	58.1	58.3	58.5	58.7	58.9	59.1	59.3	58.0
Total Wages							$4,958,944	$5,101,944	$5,120,484	$5,139,180	$5,158,035	$5,177,049	$5,196,225	$5,215,563	$5,235,066	$5,254,734	$5,274,475	$5,294,291	$5,314,182	$5,334,147	$5,198,166
Staffing Expense to Total Income							51%	50%	50%	50%	49%	49%	49%	49%	48%	48%	48%	48%	47%	47%	49%

** Before Sinking Fund Allocation*

CPI @ 3.5% pa	$1,417,950	$1,596,125	$1,670,838	$1,541,123	$0	$0	$1,061,663	$682,290	$9,861	$95,018	$187,069	$286,436	$393,562	$508,917	$632,994	$766,315	$909,539	$1,063,255	$1,228,087	$1,404,690	$3,003,658
NPV @ 4% pa																					$458,347
NPV @ 7% pa																					$1,776,176
NPV @ 10% pa																					$2,508,243

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

AQN - Like for Like (Option 3A)
Visitation Breakdown

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10 Yr Ave.
Full Memberships	273,000	275,730	278,487	281,272	284,085	286,926	289,795	292,693	295,620	298,576	285,618
Aquatic Memberships	117,000	118,170	119,352	120,545	121,751	122,968	124,198	125,440	126,694	127,961	122,408
Casual Swimming	156,000	157,560	159,136	160,727	162,334	163,958	165,597	167,253	168,926	170,615	163,211
Casual Fitness	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968
Learn to Swim	168,873	187,637	189,513	191,408	193,322	195,256	197,208	199,180	201,172	203,184	192,675
Schools	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
General*	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Total	**803,841**	**828,065**	**835,456**	**842,921**	**850,460**	**858,075**	**865,766**	**873,534**	**881,380**	**889,304**	**852,880**

*Note: Meetings, Parties, Allied Health, Creche

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

AQN - Aspirational (Option 5)
Projections (2024/25 Values with No CPI)

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Income										
Casual Aquatics										
Adults	$122,727	$123,955	$125,194	$126,446	$127,710	$128,988	$130,277	$131,580	$132,896	$134,225
Children	$247,273	$249,745	$252,243	$254,765	$257,313	$259,886	$262,485	$265,110	$267,761	$270,439
Conc / Squad / Carn	$154,545	$156,091	$157,652	$159,228	$160,821	$162,429	$164,053	$165,694	$167,351	$169,024
Family	$90,182	$91,084	$91,994	$92,914	$93,844	$94,782	$95,730	$96,687	$97,654	$98,631
Swim Sauna Spa	$184,091	$185,932	$187,791	$189,669	$191,566	$193,481	$195,416	$197,370	$199,344	$201,338
Multi Visit	$368,182	$371,864	$375,582	$379,338	$383,131	$386,963	$390,832	$394,741	$398,688	$402,675
Warm Water Pool	$185,455	$187,309	$189,182	$191,074	$192,985	$194,915	$196,864	$198,832	$200,821	$202,829
Hire										
Meeting Rooms and Functions	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Centre Memberships										
Memberships	$3,993,064	$4,032,995	$4,073,325	$4,114,058	$4,155,198	$4,196,750	$4,238,718	$4,281,105	$4,323,916	$4,367,155
Casual Fitness										
Gym	$61,455	$61,455	$61,455	$61,455	$61,455	$61,455	$61,455	$61,455	$61,455	$61,455
Group Fitness	$63,535	$63,535	$63,535	$63,535	$63,535	$63,535	$63,535	$63,535	$63,535	$63,535
Aquatic Programs										
Learn to Swim	$3,654,378	$4,060,420	$4,101,024	$4,142,034	$4,183,455	$4,225,289	$4,267,542	$4,310,218	$4,353,320	$4,396,853
School Programs	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000	$975,000
Birthday Parties	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other										
Retail Shop Income	$175,086	$180,501	$182,114	$183,743	$185,389	$187,051	$188,729	$190,424	$192,137	$193,866
Allied Health Leases	$14,850	$14,850	$14,850	$14,850	$14,850	$14,850	$14,850	$14,850	$14,850	$14,850
Café	$262,629	$270,751	$273,171	$275,615	$278,083	$280,576	$283,094	$285,637	$288,205	$290,799
Crèche	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Lockers	$8,754	$9,025	$9,106	$9,187	$9,269	$9,353	$9,436	$9,521	$9,607	$9,693
Total Income	**$10,571,206**	**$11,044,510**	**$11,143,217**	**$11,242,912**	**$11,343,603**	**$11,445,301**	**$11,548,016**	**$11,651,759**	**$11,756,538**	**$11,862,366**
Expenses										
Staff										
Admin / Customer Service / Café	$1,533,810	$1,544,080	$1,547,094	$1,550,124	$1,553,172	$1,556,235	$1,559,316	$1,562,414	$1,565,529	$1,568,661
Aquatics	$1,775,784	$1,913,382	$1,927,142	$1,941,040	$1,955,076	$1,969,253	$1,983,571	$1,998,033	$2,012,639	$2,027,392
Operations	$1,178,340	$1,192,034	$1,196,052	$1,200,093	$1,204,155	$1,208,241	$1,212,348	$1,216,479	$1,220,632	$1,224,808
Sales & Marketing	$83,640	$83,640	$83,640	$83,640	$83,640	$83,640	$83,640	$83,640	$83,640	$83,640
Health and Wellness	$676,500	$676,500	$676,500	$676,500	$676,500	$676,500	$676,500	$676,500	$676,500	$676,500
Staff Costs										
Staff Training	$88,300	$90,465	$90,776	$91,089	$91,405	$91,723	$92,044	$92,367	$92,693	$93,021
Courses/Seminars	$5,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Uniforms	$25,000	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500	$12,500
Recruitment	$12,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500
Administration										
Retail Cost of Sales	$87,543	$90,250	$91,057	$91,872	$92,694	$93,525	$94,365	$95,212	$96,068	$96,933
Café Cost of Sales	$131,315	$135,376	$136,585	$137,807	$139,041	$140,288	$141,547	$142,818	$144,103	$145,400

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Photocopying/Stationary	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
Materials	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Consumables	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
Software/Licenses/Subscriptions	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000
Insurance	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000
Utilities										
Information Technology / Phones	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000
Electricity	$700,000	$704,330	$705,588	$706,851	$708,117	$709,386	$710,660	$711,936	$713,217	$714,501
Gas	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Water	$120,000	$120,742	$120,958	$121,174	$121,391	$121,609	$121,827	$122,046	$122,266	$122,486
Services Costs										
Cleaning and Chemicals	$400,000	$402,474	$403,193	$403,915	$404,638	$405,364	$406,091	$406,821	$407,552	$408,286
Chemicals	$130,000	$130,804	$131,038	$131,272	$131,507	$131,743	$131,980	$132,217	$132,455	$132,693
Security	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
Maintenance										
Plant and Service Agreements	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
Buildings	$207,333	$414,667	$622,000	$622,000	$622,000	$622,000	$622,000	$622,000	$622,000	$622,000
Grounds	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Minor Equipment	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Marketing										
Promotion/Advertising	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000
Printing	$40,000	$32,000	$32,000	$32,000	$32,000	$32,000	$32,000	$32,000	$32,000	$32,000
Postage	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Banking										
Cash Collection	$10,571	$11,045	$11,143	$11,243	$11,344	$11,445	$11,548	$11,652	$11,757	$11,862
Bank Fees	$63,427	$66,267	$66,859	$67,457	$68,062	$68,672	$69,288	$69,911	$70,539	$71,174
Other										
Management Fees	$845,696	$883,561	$891,457	$899,433	$907,488	$915,624	$923,841	$932,141	$940,523	$948,989
Gym Equipment Lease Payments	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000
Contractor/Legal	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Waste	$45,000	$45,278	$45,359	$45,440	$45,522	$45,603	$45,685	$45,767	$45,850	$45,932
General Purchases	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000
Contingency/Travel/Other	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000
Total Expenses	**$9,131,760**	**$9,530,894**	**$9,772,443**	**$9,806,950**	**$9,841,753**	**$9,876,852**	**$9,912,252**	**$9,947,954**	**$9,983,962**	**$10,020,279**
Operational Performance	**$1,439,446**	**$1,513,615**	**$1,370,774**	**$1,435,961**	**$1,501,850**	**$1,568,449**	**$1,635,764**	**$1,703,804**	**$1,772,576**	**$1,842,087**
Sinking Fund Allocation	$486,333	$972,667	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000
Total Performance	**$953,112**	**$540,949**	**($88,226)**	**($23,039)**	**$42,850**	**$109,449**	**$176,764**	**$244,804**	**$313,576**	**$383,087**

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

AQN - Aspirational (Option 5)
Key Performance Indicators

	Existing Facility				Construction		New Facility Operational									New Facility Operational					
Item	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**New Facility Ave**
Financial Projections																					
Income	$3,515,000	$3,515,000	$3,515,000	$3,515,000	$0	$0	$10,571,206	$11,044,510	$11,143,217	$11,242,912	$11,343,603	$11,445,301	$11,548,016	$11,651,759	$11,756,538	$11,862,366	$11,969,146	$12,076,887	$12,185,599	$12,295,288	$11,581,168
Expenditure	$4,270,000	$4,270,000	$4,270,000	$4,270,000	$0	$0	$9,131,760	$9,530,894	$9,772,443	$9,806,950	$9,841,753	$9,876,852	$9,912,252	$9,947,954	$9,983,962	$10,020,279	$10,056,727	$10,093,308	$10,130,022	$10,166,870	$9,876,573
Operational Surplus / (Deficit)	**($755,000)**	**($755,000)**	**($755,000)**	**($755,000)**	**$0**	**$0**	**$1,439,446**	**$1,513,615**	**$1,370,774**	**$1,435,961**	**$1,501,850**	**$1,568,449**	**$1,635,764**	**$1,703,804**	**$1,772,576**	**$1,842,087**	**$1,912,419**	**$1,983,579**	**$2,055,576**	**$2,128,418**	$1,704,594
Sinking Fund Allocation	$615,000	$735,000	$752,000	$588,000	$0	$0	$496,333	$972,667	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,354,786
Total Surplus (Deficit)	**($1,370,000)**	**($1,490,000)**	**($1,507,000)**	**($1,343,000)**	**$0**	**$0**	**$953,112**	**$540,949**	**($88,226)**	**($23,039)**	**$42,850**	**$109,449**	**$176,764**	**$244,804**	**$313,576**	**$383,087**	**$453,419**	**$524,579**	**$596,576**	**$669,418**	$349,809
Visits																					
Aquatics							573,663	597,928	603,157	608,439	613,773	619,161	624,603	630,099	635,650	641,256	646,912	652,618	658,374	664,181	626,415
Health Club							287,768	290,576	293,412	296,277	299,170	302,092	305,043	308,024	311,034	314,075	317,145	320,246	323,376	326,538	306,770
Other							14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000
Total							875,431	902,504	910,569	918,715	926,943	935,253	943,645	952,122	960,684	969,331	978,056	986,859	995,742	1,004,705	947,183
Memberships																					
Learn to Swim							3,150	3,500	3,535	3,570	3,606	3,642	3,679	3,715	3,752	3,790	3,828	3,866	3,905	3,944	3,677
Health and Wellness							3,600	3,636	3,672	3,709	3,746	3,784	3,821	3,860	3,898	3,937	3,977	4,016	4,057	4,097	3,844
Aquatics							1,500	1,515	1,530	1,545	1,561	1,577	1,592	1,608	1,624	1,641	1,657	1,674	1,690	1,707	1,602
Performance Indicators																					
Subsidy / Surplus per Visit *							$1.64	$1.68	$1.51	$1.56	$1.62	$1.68	$1.73	$1.79	$1.85	$1.90	$1.96	$2.01	$2.06	$2.12	$1.79
Revenue per Visit							$12.08	$12.24	$12.24	$12.24	$12.24	$12.24	$12.24	$12.24	$12.24	$12.24	$12.24	$12.24	$12.24	$12.24	$12.23
Full Time Equivalent							58.9	60.3	60.5	60.7	60.9	61.1	61.4	61.6	61.8	62.0	62.2	62.5	62.7	62.9	61.4
Total Wages							$5,248,074	$5,409,636	$5,430,428	$5,451,396	$5,472,543	$5,493,869	$5,515,376	$5,537,066	$5,558,940	$5,581,001	$5,603,149	$5,625,385	$5,647,709	$5,670,122	$5,517,478
Staffing Expense to Total Income							50%	49%	49%	48%	48%	48%	48%	48%	47%	47%	47%	47%	46%	46%	48%

** Before Sinking Fund Allocation*

CPI @ 3.5% pa	$1,417,950	$1,596,125	$1,670,838	$1,541,123	$0	$0	$1,212,625	$712,326	$120,243	$32,499	$62,560	$165,385	$276,452	$396,263	$525,349	$664,268	$813,740	$974,400	$1,146,919	$1,332,001	$1,903,510	3.5%
NPV @ 4% pa																					$1,070,107	4.0%
NPV @ 7% pa																					$2,176,887	7.0%
NPV @ 10% pa																					$2,773,890	10.0%

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AQN - Like for Like (Option 5)
Visitation Breakdown

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10 Yr Ave.
Full Memberships	280,800	283,608	286,444	289,309	292,202	295,124	298,075	301,056	304,066	307,107	293,779
Aquatic Memberships	117,000	118,170	119,352	120,545	121,751	122,968	124,198	125,440	126,694	127,961	122,408
Casual Swimming	191,000	192,910	194,839	196,787	198,755	200,743	202,750	204,778	206,826	208,894	199,828
Casual Fitness	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968
Learn to Swim	190,663	211,848	213,966	216,106	218,267	220,450	222,654	224,881	227,130	229,401	217,537
Schools	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
General*	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000
Total	**875,431**	**902,504**	**910,569**	**918,715**	**926,943**	**935,253**	**943,645**	**952,122**	**960,684**	**969,331**	**929,520**

*Note: Meetings, Parties, Allied Health, Creche

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Appendix L - Social and Economic Impact Assessments

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About this Report

MI Global Partners (MI) has been commissioned to undertake a cost-benefit analysis (CBA) and Economic Impact Analysis (EIA) for the Aqualink Nunawading Redevelopment as part of the delivery of a business case.

A CBA is a widely accepted tool to identify the key socio-economic impacts of a project and is the preferred method of economic analysis by State and Federal Governments to understand the value for money and viability of government investment into major infrastructure.

The methodology used to conduct the CBA is developed in accordance with Victorian Government's *Guidance on undertaking economic assessments* and *Economic Evaluation for Business Cases -Technical guidelines* and assesses the incremental impact of the redevelopment over the current base case scenario.

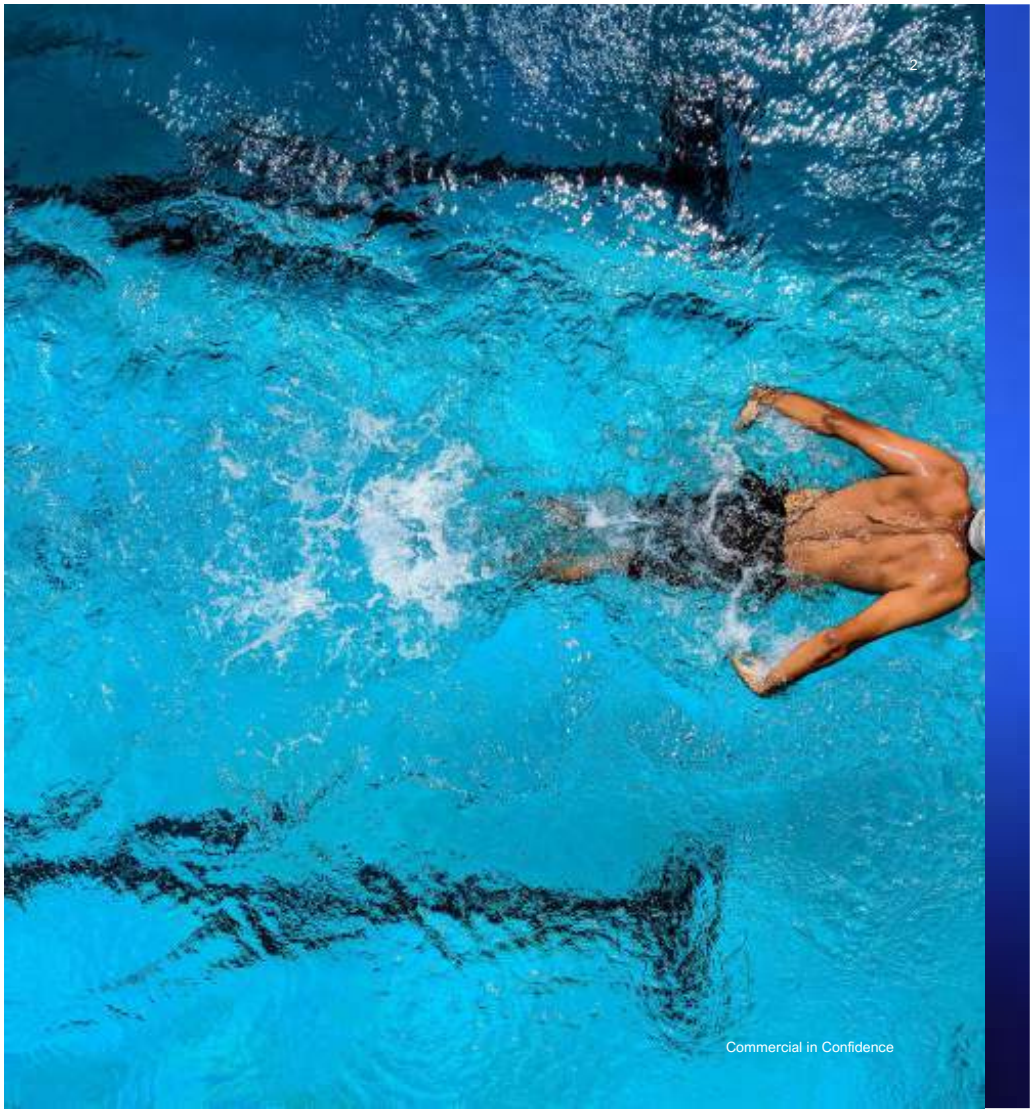
Benefits and costs in a CBA are expressed in monetary terms and are adjusted for the time value of money, referred to as discounting.

All flows of benefits and costs over the evaluation period are expressed in terms of their present value (AUD$ 2024), regardless of whether they have been incurred at different times. A discount rate aligned with Government policy (7%) is used to determine the present value of costs and benefits.

The EIA assesses the total impact of the project. This includes determining the total direct and indirect economic output, value added to the Gross Domestic Product (GDP) and job creation across both the construction and operations of Aqualink Nunawading.

In compiling this report, MI has utilised information provided as part of the business case, including the financial and utilisation modelling conducted by Ontoit, as well as third-party literature studies.

All assumptions used and sources of information are detailed throughout the report.



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Disclaimer

MI has prepared this report in conjunction with and relying on information provided by third parties. We do not imply, and it should not be construed that we have performed any audit or due diligence procedures on any of the information provided to us.

Accordingly, MI do not accept any responsibility for errors or omissions, or any loss or damage as a result of any persons relying on this report for any purpose other than that for which it has been prepared.

The report should not be provided to any other persons other than representatives of Ontoit, City of Whitehorse, Victorian Government, or made public without the prior written consent of MI.

MI disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs any party might incur as a result of the information being inaccurate or incomplete in any way, and for any reason.

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Commercial in Confidence

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Executive Summary

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Defining the options to be assessed

The assessment seeks to analyse the socio-economic impact of all three project scenarios incremental to the base case, which are defined as follows:

Option 1
Base Case
(Business as Usual / Do nothing)

The base case option is a business-as-usual option which then results in closure of the aquatic facility by 2032 due to 100% asset decline and end-of-life. It is projected that utilisation and financials remain consistent until closure.

Option 2
Contemporary Replacement
~17,000 sqm

A modernised and streamlined configuration of the existing facility through a like-for-like redevelopment. The 50m pool is rebuilt and all pools incorporate modern accessibility requirements. In addition, it will separate the Learn to Swim and Leisure + Toddlers pool options into two water areas. The Nunawading Swim Club facilities are integrated into the new facility and dry fitness is housed on an upper level which enables a separate lobby.

Option 3A
Contemporary Hybrid
~21,000 sqm

A preferred option is a redeveloped, inclusive and accessible facility and proposes an astute expansion of both aquatic and dry fitness areas. Compared to Option 2, a dedicated warm water pool is added to the aquatic facility to cater for therapeutic and rehabilitation activities, while the dry fitness facilities double in size, reflecting community demand. Allied health and consulting rooms are also included.

Option 5
Aspirational
~25,150 sqm

The largest option considered, allowing for long-term population forecasts, sees increase in aquatic facilities, external public areas and an outdoor training space compared to all Option 3A. It includes a larger learn to swim pool, leisure water and toddler pool and dry fitness areas are larger again. It also offers expanded allied health and consulting rooms.

Appraisal Framework

The adjacent figure provides an overview of the approach of developing the CBA for the redevelopment of Aqualink Nunawading.

The CBA measures the incremental socio-economic costs and benefits (i.e. net benefits) of the redevelopment relative to the base case. The costs and benefits are attributed to Victoria, with individuals (i.e. consumers/users), businesses, and local (City of Whitehorse) and State Government being the bearers and beneficiaries of the project.

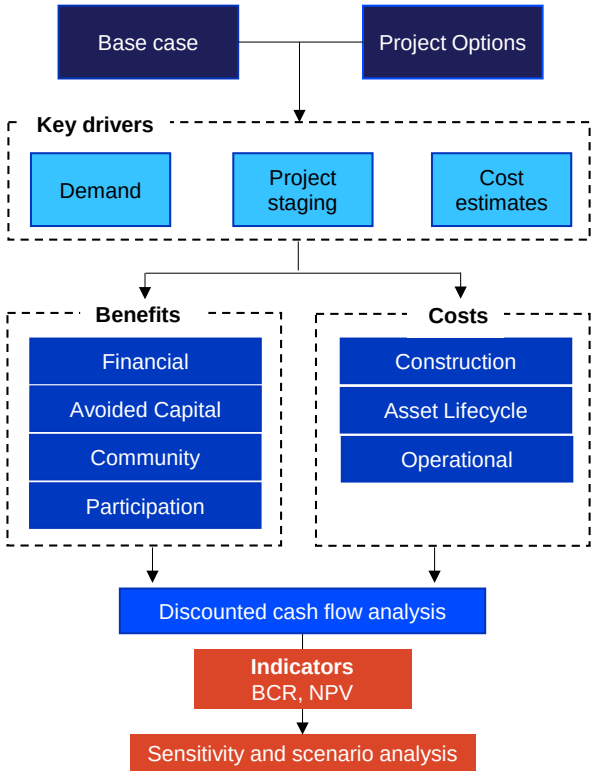
The redevelopment options will deliver benefits across four key categories:

1. Uplifts in financial revenue to the facility operator based on increased utilisation.
2. The avoided capital costs of the asset maintenance for the existing facility to extend its life to 2032 and the costs to prepare the site for community use.
3. Wider community benefits (non-users) through improved urban amenity
4. Participation benefits including improved health benefits for individuals, health cost savings to Government, increased productivity / reduced absenteeism for businesses and avoided drownings.

The cost of the project includes the initial construction costs as well as ongoing annual lifecycle and incremental operational costs.

Three key drivers have been identified for the analysis which have the greatest impact on the CBA results and sensitivity testing has been completed for these key drivers.

- Discount rates (4% and 10%);
- Demand such as facility users (+/- 15%); and
- Cost estimates including the new infrastructure capital and operational costs (+/- 15%).



Cost benefit analysis (CBA) summary

Present value cash flows discounted by 7% p.a.	Option 2 Contemporary Replacement		Option 3A Contemporary Hybrid		Option 5 Aspirational	
Costs	Nominal Value	Present Value (2024)	Nominal Value	Present Value (2024)	Nominal Value	Present Value (2024)
Construction Costs *	$80,135,500	$55,003,000	$106,796,500	$73,302,400	$129,828,700	$89,111,100
Life Cycle Costs	$17,110,300	$5,808,600	$22,803,200	$7,741,200	$27,721,000	$9,410,700
Operating Costs	$133,082,600	$40,004,400	$160,909,800	$49,763,200	$175,103,900	$54,712,300
Total Costs	**$230,328,400**	**$100,815,900**	**$290,509,500**	**$130,806,800**	**$332,653,600**	**$153,234,000**
Benefits	Nominal Value	Present Value (2024)	Nominal Value	Present Value (2024)	Nominal Value	Present Value (2024)
Facility Revenue	$150,978,400	$45,269,200	$189,147,100	$58,604,200	$207,193,100	$64,894,600
Avoided Capital Costs	$21,259,000	$12,136,000	$21,259,000	$12,136,000	$21,259,000	$12,136,000
Consumer Non-Use Surplus	$2,923,100	$1,008,400	$5,846,200	$2,016,700	$8,857,900	$3,055,700
Increased Productivity	$33,871,700	$11,001,700	$51,409,100	$17,125,700	$57,309,000	$19,185,700
Health Benefits	$105,899,100	$34,440,600	$155,714,600	$51,833,800	$174,550,900	$58,410,600
Health Cost Savings	$9,048,300	$2,940,600	$13,541,200	$4,509,500	$15,132,200	$5,065,000
Avoided Drownings	$10,463,800	$3,238,400	$10,463,800	$3,238,400	$13,274,500	$4,216,500
Residual value	$40,067,800	$6,899,500	$53,398,300	$9,194,900	$64,914,400	$11,178,000
Total Benefits	**$374,511,300**	**$116,934,300**	**$500,779,300**	**$158,659,200**	**$562,491,000**	**$178,141,900**
Net Benefits (NPV)	**$144,182,800**	**$16,118,400**	**$210,269,700**	**$27,852,400**	**$229,837,400**	**$24,907,800**
Benefit Cost Ratio (BCR)	**1.16**		**1.21**		**1.16**	

** The cost benefit analysis assesses costs and benefits in present day values (i.e. adjusted for the time value of money, referred to as discounting), while nominal values exclude escalation*

Summary Position

Th CBA presents the benefits and costs associated with each option incremental to the base case.

All three investment options return a positive socio-economic position and a BCR greater than 1, meaning investment in the facility will deliver more socio-economic benefits to Victoria compared to the costs to develop and operate.

In summary:

- Option 2 – NPV $16.1M / BCR 1.16
- Option 3A – NPV $27.9M / BCR 1.21
- Option 5 – NPV $24.9M / BCR 1.16

Participation benefits account for 77% of all socio-economic benefits as a result of the redevelopment, while avoided capital costs (12%), financial benefits (9%) and community benefits (2%) account for the remainder.

Overall, investment in the redevelopment is considered value for money, with Option 3A (Contemporary Hybrid) yielding the most positive return.

Overall Assessment Summary

Option 3A – Contemporary Hybrid is considered the preferred option in comparison to the base case and the two alternative investment options (i.e. contemporary replacement and the aspirational option).

In summary, Option 3A:

- Will cost $107M in 2024 Australian dollars to redevelop
- Will cost an additional $23M (2024) in capital maintenance costs across twenty years of operations
- It is projected that year 1 will see 803,841 visits (uplift of 229,841 on the status quo) and 889,304 visits in year 10 (uplift of 315,304)
- It will deliver $28M in net benefits (NPV) and a BCR of 1.21
- It will deliver 112 new full time equivalent jobs (FTE) per year (over five years of construction and the first ten years of operations)
- It will deliver $306M in direct and indirect economic output of five years of construction and the first ten years of operations ($20M per year), $107M of which is value added to the Victorian Gross Domestic Product ($7M per year)

	Option 1 Base Case	**Option 2** – Contemporary Replacement	**Option 3A** – Contemporary Hybrid	**Option 5** - Aspirational
Total Capital Costs*	$16M	$80M	$107M	$130M
Total Lifecycle Costs	$5M	$17M	$23M	$28M
Total Annual Visits	574,000 (current)	702,574 (year 10)	889,304 (year 10)	969,331 (year 10)
Benefit Cost Ratio	n/a^	1.16	1.21	1.16
Net Benefits	n/a^	$16M	$28M	$25M
New FTE Jobs created per year**	n/a^	88	112	129
Total Economic Output**	n/a^	$239M	$306M	$356M
Total Value Added to the Victoria Gross Domestic Product**	n/a^	$84M	$107M	$124M

** Excludes escalation*
*** Total direct and indirect impact during construction and the first ten years of operations*
^ The assessment is incremental to the base case

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Section 1

Assessment Overview

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Core Appraisal Assumptions

Discount rate

The discount rate is a critical parameter in a CBA whenever costs and benefits differ in their distribution over time, especially when they occur over a long time period.

To assess the viability of a potential project, a business or Government may use the weighted average cost of capital (WACC) as the discount rate, which is the average cost paid for capital from borrowing or selling equity.

This appraisal utilises a discount rate of 7% as per Victorian Government's *Guidance on undertaking economic assessments* and *Economic Evaluation for Business Cases - Technical guidelines*

Time increments

Demand projections, costs and benefits are presented in annual terms.

Reference Group

The CBA assesses the incremental costs and benefits to the residents and businesses of Victoria as well as the City of Whitehorse and Victorian Government.

Base year and appraisal period

The base year is defined as the first year of the evaluation period, providing the base date for costs and benefits to be discounted back to.

CBA's base year is 2024 and the appraisal period to assess the impact of investment from 2025 (i.e. year 1) to 2050 (i.e. 20 years post construction).

Inflation

Inflation in future years is excluded from the analysis as per cost-benefit analysis guidelines, however unit costs pre 2024 have been indexed to 2024 using information provided by the Reserve Bank of Australia.

Key Project Impacts

The bearers and beneficiaries of these impacts are Victorian residents, businesses and government. A combination of market valuations and benefits transfer methodologies have been used to project the value of these costs and benefits over the next 20 years.

Costs	Category	Bearer	Description	Method and Source
Construction Costs	Construction	Government	Construction costs of the facility	WT Partnership
Asset Life Cycle Costs	Asset Life Cycle	Government	Ongoing annual capital costs of maintaining the facility (i.e. asset maintenance costs)	WT Partnership
Operating Costs	Operating	Government	Incremental costs of operating the facility including staffing, utilities, marketing, administration, operating maintenance etc.	Warren Green Consulting
Benefits	**Category**	**Beneficiary**	**Description**	**Method and Source**
Facility Revenue	Financial	Government	Incremental revenue including memberships, casual use fees, venue / lane hire, F&B, retail	Warren Green Consulting
Avoided Capital Costs	Avoided Costs	Government	The projected CAPEX required to maintain current facility until 2032 and then prepare the site for community use	Ontoit Data
Consumer Non-Use Surplus	Community	Local Community	Consumer non-user benefit to local residents includes the option to use an asset, the benefit of an asset facilitating social interaction and well-being, and the benefit of an asset to enhance local amenity for the community	Whitehorse (2025 to 2052) x Consumer nonuser surplus benchmarked against sport infrastructure
Increased Productivity	Participation	Businesses	Business benefits arising from sport & recreation participation (i.e. reduced number of workdays off)	Literature study - Economic Benefits of Australian Public Aquatic Facilities Industry Report (value per visit)
Health Benefits	Participation	Consumers	Consumer benefits arising from sport & recreation participation (i.e. improved quality of life)	Literature study - Economic Benefits of Australian Public Aquatic Facilities Industry Report (value per visit)
Health Cost Savings	Participation	Government	Government benefits arising from sport & recreation participation (i.e. health cost savings)	Literature study - Economic Benefits of Australian Public Aquatic Facilities Industry Report (value per visit)
Avoided Drownings	Participation	Consumers	Consumer benefits arising from avoided drownings based on the statistical value of life years	Literature study - National Drowning Report 2023 (value per visit)
Residual value	Terminal	Government	The value of the asset at the end of the evaluation period (20 years of a 40-year useful life)	Guidance on undertaking economic assessments

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Section 2

Costs

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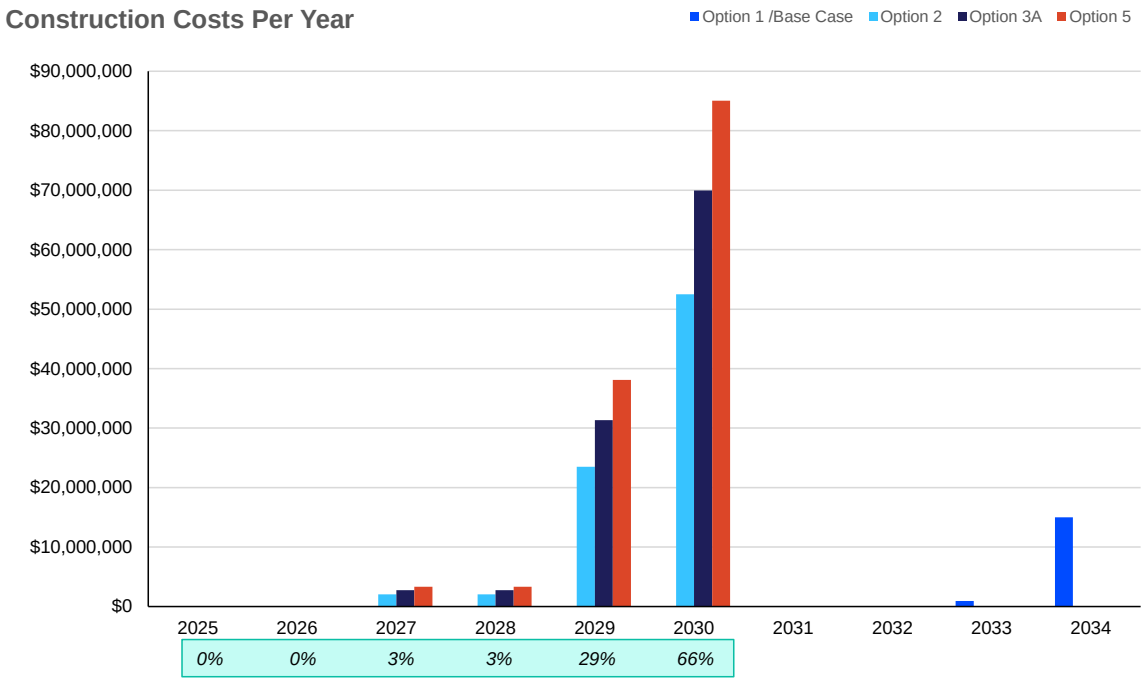
Construction costs

The projected construction costs (excluding escalation) for the base case and the project options are as follows:

- Option 1 / Base Case - $15,935,000 (2033-2034)
- Option 2 - $80,135,539 (2027-2030)
- Option 3A - $106,796,536 (2027-2030)
- Option 5 - $129,828,705 (2027-2030)

It should be noted that the $15,935,000 projected base case cost to demolish the existing facility and return it for community use is considered a benefit in the investment case and recorded as an avoided capital cost.

For more information on the construction costs for Options 2, 3A and 5 please refer to the WT Partnership cost plans and cash flow.



Source: Ontoit / WT Partnership

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Asset Lifecycle costs

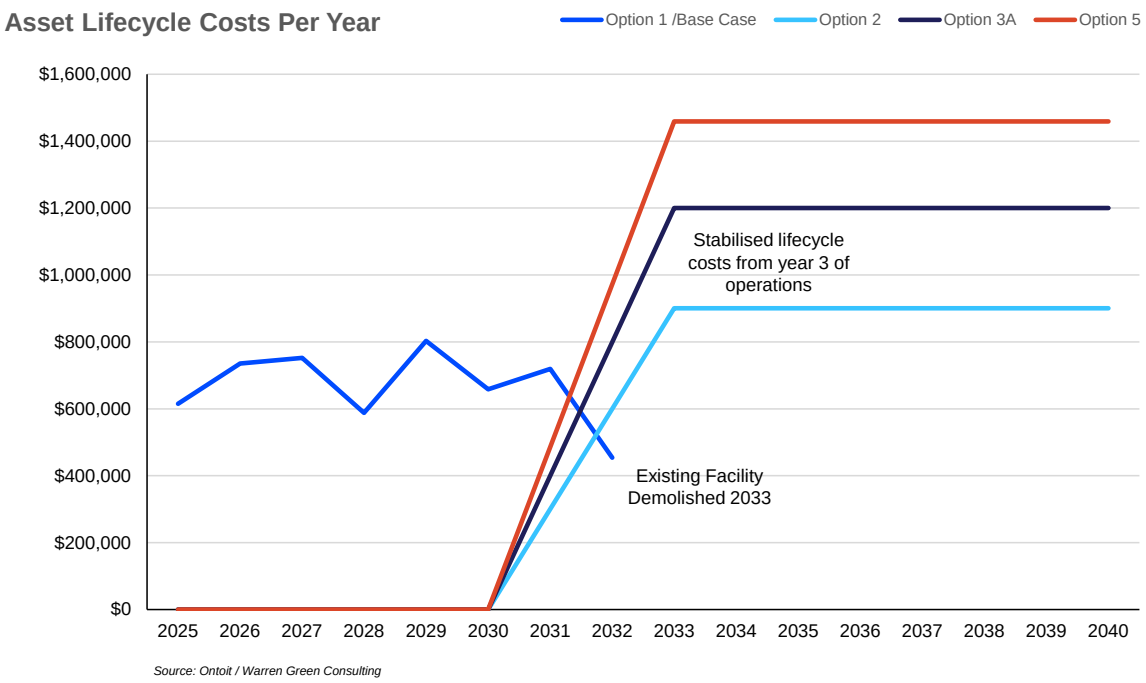
The projected annual asset lifecycle costs for the options are as follows:

- Option 1 (Base Case) - $0.65M on average (2025 – 2032)
- Option 2 - $0.3M (2031) escalating to $0.9M (2033 onwards)
- Option 3A - $0.4M (2031) escalating to $1.2M (2033 onwards)
- Option 5 - $0.5M (2031) escalating to $1.5M (2033 onwards)

The base case asset maintenance (i.e. lifecycle) costs have been identified in order to keep the facility open until the end of calendar 2032. The planned asset renewal costs that formed part of City of Whitehorse's forward financial planning have been discounted to allow for rational decision-making as the planned shut-down day approaches*.

For more information on the asset lifecycle costs please refer to the financial model.

**Source: Aqualink Nunawading Facility Assessment and Options Review, undertaken in February 2023 by an experienced multi-disciplinary consulting team and City of Whitehorse's forward financial capital expenditure plans*



Source: Ontoit / Warren Green Consulting

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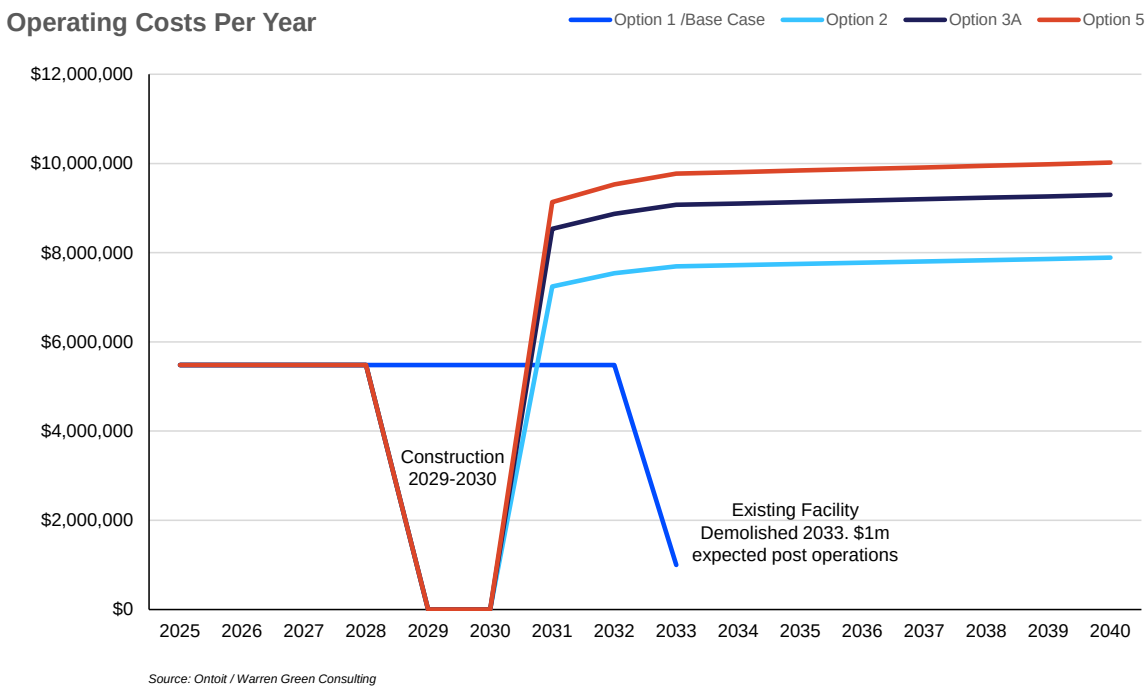
Operating costs

Total expenditure to operate the current facility (i.e. Option 1 / Base Case) is $5,481,000 per year. This is projected to remain consistent (2024 $AUD) until the facility ceases operations in 2032. A $1.0M has been projected as an operating cost in 20233 post the closure of the facility.

The projected operating costs for the project options are as follows:

- Option 2 - $7.2M (2031) escalating to $7.9M (2040)
- Option 3A - $8.5M (2031) escalating to $9.3M (2040)
- Option 5 - $9.1M (2031) escalating to $10.0M (2040)

For more information on the utilisation please refer to Appendix 1 of this report or the financial model (Ontoit).



Source: Ontoit / Warren Green Consulting

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Section 3

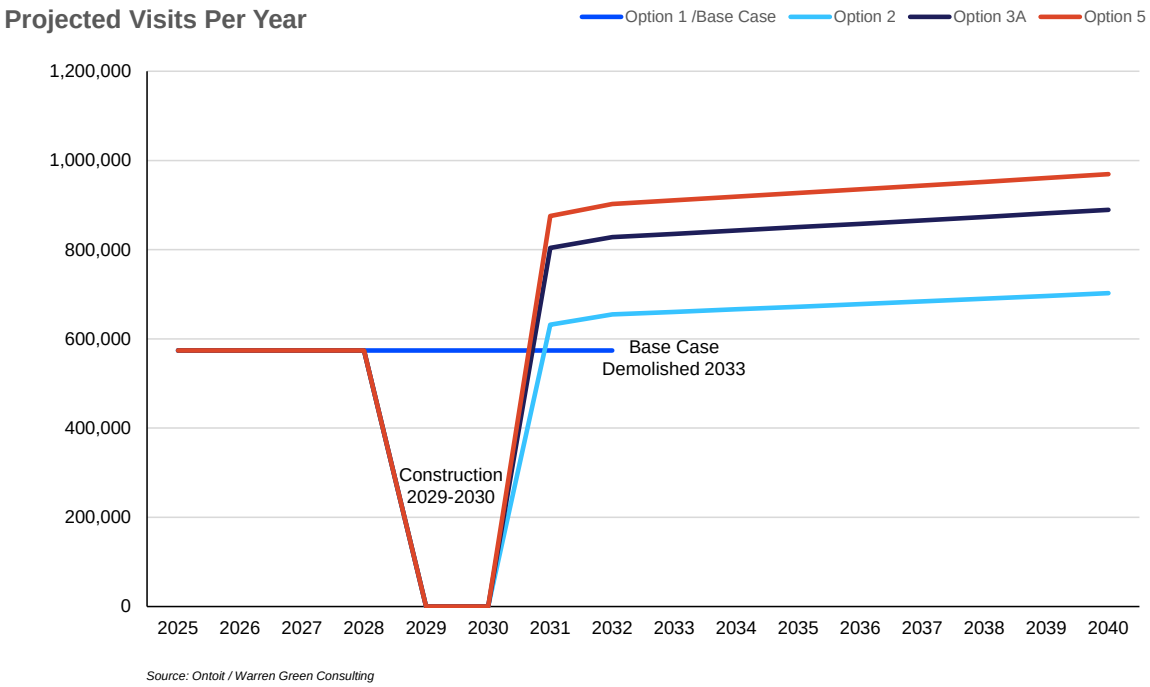
Investment Benefits

Projected Visits

The redevelopment is expected to deliver an increase in utilisation across memberships (full and aquatic), casual swimming, casual fitness, learn to swim programs, school use and general use.

The incremental uplift in visits will drive financial benefits and participation benefits.

For more information on the utilisation please refer to Appendix 1 of this report or the financial model (Ontoit).



Source: Ontoit / Warren Green Consulting

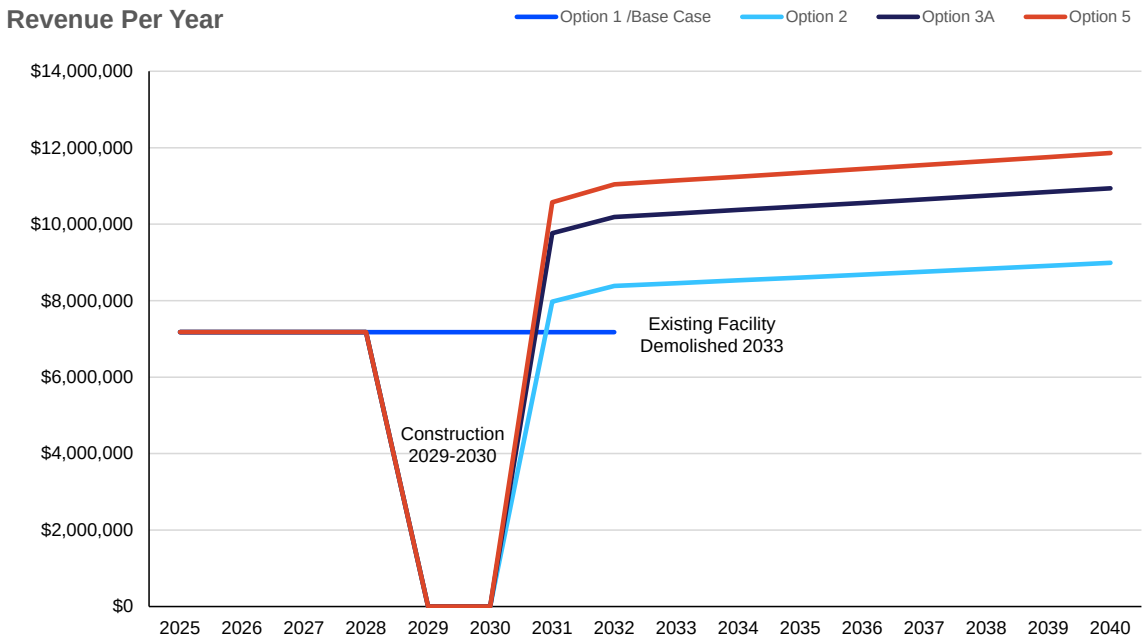
Operating revenues

Total revenue generated by the current facility (i.e. Option 1 / Base Case) is $7,176,000 per year. This is projected to remain consistent (2024 $AUD) until the facility ceases operations in 2032.

The projected operating revenues for the project options are as follows:

- Option 2 - $8.0M (2031) escalating to $9.0M (2040)
- Option 3A - $9.8M (2031) escalating to $10.9M (2040)
- Option 5 - $10.6M (2031) escalating to $11.9M (2040)

For more information on the operating costs please refer to Appendix 1 of this report or the financial model (Ontoit).



Source: Ontoit / Warren Green Consulting

Avoided capital costs

The base case asset maintenance (i.e. lifecycle) costs have been identified in order to keep the facility open until the end of calendar 2032. The planned asset renewal costs that formed part of the City of Whitehorse forward financial planning have been discounted to allow for rational decision-making as the planned shut-down day approaches*.

It is also projected that it will cost $15,935,000 in 2033 and 2034 to rebuild the site as a park for community use.

These costs are considered a benefit in the investment case and recorded as an avoided capital cost for all options.

	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Base Case Asset Maintenance Costs	$615,000	$735,000	$752,000	$588,000	$803,000	$658,000	$719,000	$454,000		
Demolition Costs									$935,000	
Rebuild the site as a park costs										$15,000,000
Avoided Capital Costs	$615,000	$735,000	$752,000	$588,000	$803,000	$658,000	$719,000	$454,000	$935,000	$15,000,000

**Source: Aqualink Nunawading Facility Assessment and Options Review, undertaken in February 2023 by an experienced multi-disciplinary consulting team and City of Whitehorse's forward financial capital expenditure plans*

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Wider community benefits

Several global literature studies have found evidence of a community benefit from the development of sport infrastructure.

Community benefit (i.e. consumer non-use surplus) can be derived from three sources. These include:

- Option value – the benefit of having the option to use an asset
- Social value – the benefit of an asset facilitating social interaction and well-being; and
- Passive value – the benefit of an asset to enhance local amenity for the community.

For the purpose of this analysis, the catchment population that would receive a community benefit is considered the population of Whitehorse City LGA as well as 20% of the neighbouring LGAs Maroondah, Knox, Monash and Manningham.

MI has utilised recently completed CBAs for sport and recreation facilities in Australia as a proxy for the redevelopment of Aqualink Nunawading.

- Facility A – $1.22 per resident
- Facility B – $2.77 per resident
- Facility C - $4.75 per resident

Facility A has been used as proxy for all options due to it being a relatively small scaled community facility. The per resident value has been scaled accordingly based on what each option will deliver to the community.

	Option 2	Option 3A	Option 5
% of Facility A proxy applied	33%	66%	100%
Community benefit per resident	$0.40	$0.81	$1.22
2031 catchment population	327,200	327,200	327,200
Total 2032 community benefit surplus	$131,731	$263,461	$399,184
Average population growth per annum	0.98%	0.98%	0.98%

Participation benefits

For the purposes of determining the socio-economic benefits arising from participating in aquatic and non-aquatic activities at Aqualink Nunawading, MI has utilised the "Economic Benefits of Australia's Public Aquatic Facilities – Industry Report" commissioned by Royal Life Saving Society Australia and the Australian Government.

The report aims to estimate the socio-economic benefits of an individual visits by measuring links between an increase in physical activity from an average pool visit and reduced risk of mortality, morbidity and health care expenditure, as well as reduced absenteeism (i.e. increased productivity).

Improving quality of life

A person who is affected by a chronic disease and mental health issues has a lower quality (and potentially length) of life, than a person who is not. With a strong relationship between physical inactivity and chronic disease and mental health issues, there is a personal health benefit that can be captured by improving quality and length of life through physical activity.

The report identifies that for each visit to a facility for aquatic participation generates benefits of $22.59 (AUD $2024) in improved health outcomes.

The impact of a chronic disease and mental health issues of a person can also be measured in disability adjusted life years (DALYs), where one DALY can be thought of as the equivalent of one lost year of healthy life. By establishing the reduced incidence in the development of the chronic disease that is supported by non-aquatic sport & recreation participation, the resulting savings of DALYs were able to be estimated.

The total DALYs are then converted into a monetary value using the value of a statistical life year (VSLY - the Commonwealth Department of the Prime Minister and Cabinet have outlined that best practice for VSLY is to use the work of Abelson, which corresponds to a value of $240,000 in 2024). Utilising the average years of life remaining, a conversion rate of 27.5% of all non-aquatic facility users were previously inactive (ABS) and average utilisation of the facility of 2 times a week, each non-aquatic visit to the facility generates benefits of $0.42 (AUD$2024) in improved health outcomes.

Cost savings to the health system

Every case of chronic disease brings a cost not only to the individual sufferer but also to the health system as a whole. In addition to the other benefits, there is also a cost saving associated with the greater treatment of mental illness through physical and social activity. By reducing the incidence of these diseases and reducing the mental health related burden on the health system, participation supports savings in the health system.

The report identifies that for each visit to a facility for aquatic participation generates benefits of $1.88 (AUD $2024) in health care cost savings.

A 2008 report 'The Cost of Physical Inactivity' for Medibank Private estimated the average Australian health system costs of each disease and illness to be approximately $110 per inactive person (2024 $AUD). By utilising a conversion rate of 27.5% of all non-aquatic facility users were previously inactive (ABS) and average utilisation of the facility of 2 times a week, each non-aquatic visit to the facility generates benefits of $0.29 (AUD$2024) in health cost savings.

Avoided productivity cost / Reduced Absenteeism

Studies have proven individuals to be mentally and physically healthier and achieve enhanced cognitive performance through participating in sport and social programs, and as a result the economy is, on average, more productive. The increased productivity is captured through lower absenteeism from work and lower presenteeism which is where employees come to work but are not performing at their best due to illness or other conditions as a result of a lack of physical inactivity.

The relationship between inactivity and a negative impact on productivity in Australia is outlined in the report which identifies that for each visit to a facility for aquatic participation generates benefits of $6.90 (AUD $2024) in avoided productivity cost through reduced absenteeism. By utilising the work conducted by Medibank Private in 2008, each non-aquatic visit to the facility generates benefits of $1.86 (AUD $2024) in productivity benefits.

Participation benefits (cont.)

Avoided Drownings

The National Drowning Report (2023) issued by Royal Life Saving Australia states that there are, on average, 279 drowning deaths in Australia each year over the past decade, with 45 of these involving individuals under the age of 18. It is estimated that 40% of children in Australia under 18 cannot swim proficiently, equating to 2.4 million children and an estimated drowning rate of 0.002%.

In Victoria, 42% of people who drowned in the ten years leading to June 2022 were born overseas, with these individuals almost two and a half times more likely to drown than Australian-born people. In the City of Whitehorse, the proportion of residents born overseas is higher (41.5%) than the Victorian average (30%), underscoring the importance of targeted campaigns to promote water safety and swimming skills, especially within CALD (Culturally and Linguistically Diverse) communities. Despite this statistic and for this analysis, the same swim proficiency ratios have been applied to the City of Whitehorse.

Within the catchment area, those under 18 account for 17.6% of the population (55,641), and it is estimated that 22,257 cannot swim proficiently, with a projected annual drowning rate of 0.42 individuals (equivalent to one drowning every 2.5 years).

All three proposed options include intervention and prevention measures, such as improved swimming facilities and dedicated learn-to-swim programs, which are expected to reduce the number of youth unable to swim proficiently and, in turn, lower the annual projected drowning rate. Through these learn-to-swim programs, the drowning projection is expected to decrease by 0.05 each year (to 0.37).

According to literature, the estimated value of a statistical life is $240,875 in 2024 dollars. For a child with an average life expectancy of 73.5 more years, this equates to a total life value of $17.7 million. Given the projected annual life savings of 0.05, and with an average of 60.5 visits per child in a learn-to-swim program, each visit is estimated to deliver a $5.50 benefit in avoided drownings.

Participation Benefits (Year 10)

Participation Benefits	Per visit benefit	Option 2	Option 3A	Option 5
Total Incremental Aquatic Visits		**366,101**	**477,548**	**546,310**
Avoided Productivity Cost (Absenteeism)	$6.90	$1,651,607	$2,259,435	$2,542,292
Health Benefits (Quality of life)	$22.59	$5,272,730	$7,080,837	$7,994,475
Health Cost Savings	$1.88	$445,369	$604,211	$680,892
Avoided Drownings	$5.50	$603,554	$603,554	$747,820
Total Incremental Non-Aquatic Visits		**49,472**	**117,756**	**122,021**
Avoided Productivity Cost (Absenteeism)	$1.88	$209,985	$498,239	$516,922
Health Benefits (Quality of life)	$1.86	$539,605	$1,277,464	$1,326,534
Health Cost Savings	$0.42	$51,622	$122,375	$127,009
Avoided Drownings	n/a	n/a	n/a	n/a
Total Participation Benefits		$8,774,472	$12,446,116	$13,935,944

MI GLOBAL PARTNERS

Section 4

Cost-benefit analysis

Commercial in Confidence

Cost benefit analysis – Option 2 Contemporary Replacement

$AUD (000,000's)	2025 - 2050	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036 - 2050
Costs	Nominal Value	Present Value 7%												
Construction Costs	**$80.14**	**$55.00**	$0.00	$0.00	$2.06	$2.06	$23.52	$52.49	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Life Cycle Capital Costs	**$17.11**	**$5.81**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.30	$0.60	$0.90	$0.90	$0.90	$13.51
Operational Costs	**$133.08**	**$40.00**	$0.00	$0.00	$0.00	$0.00	-$5.48	-$5.48	$1.76	$2.06	$6.69	$7.72	$7.75	$118.06
Total Costs (Nominal)	**$230.33**		**$0.00**	**$0.00**	**$2.06**	**$2.06**	**$18.04**	**$47.01**	**$2.06**	**$2.66**	**$7.59**	**$8.62**	**$8.65**	**$131.57**
Total Discounted Costs (Present)		**$100.82**	**$0.00**	**$0.00**	**$1.68**	**$1.57**	**$12.86**	**$31.33**	**$1.29**	**$1.55**	**$4.13**	**$4.38**	**$4.11**	**$37.92**
Benefits														
Financial Benefit	**$150.98**	**$45.27**	$0.00	$0.00	$0.00	$0.00	-$6.26	-$6.26	$1.72	$2.12	$8.46	$8.53	$8.60	$134.07
Avoided Capital Costs	**$21.26**	**$12.14**	$0.62	$0.74	$0.75	$0.59	$0.80	$0.66	$0.72	$0.45	$0.94	$15.00	$0.00	$0.00
Community Benefits	**$2.92**	**$1.01**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.13	$0.13	$0.13	$0.14	$0.14	$2.25
Increased Productivity	**$33.87**	**$11.00**	$0.00	$0.00	$0.00	$0.00	-$1.14	-$1.14	$1.65	$1.67	$1.69	$1.72	$1.74	$27.68
Health Benefits	**$105.90**	**$34.44**	$0.00	$0.00	$0.00	$0.00	-$3.52	-$3.52	$5.16	$5.23	$5.30	$5.37	$5.44	$86.44
Health Cost Savings	**$9.05**	**$2.94**	$0.00	$0.00	$0.00	$0.00	-$0.30	-$0.30	$0.44	$0.45	$0.45	$0.46	$0.47	$7.39
Avoided Drownings	**$10.46**	**$3.24**	$0.00	$0.00	$0.00	$0.00	-$0.51	-$0.51	$0.41	$0.52	$0.53	$0.54	$0.55	$8.94
Residual value	**$40.07**	**$6.90**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$40.07
Total Benefits (Nominal)	**$374.51**		**$0.62**	**$0.74**	**$0.75**	**$0.59**	**-$10.93**	**-$11.08**	**$10.23**	**$10.57**	**$17.50**	**$31.75**	**$16.94**	**$306.84**
Total Discounted Benefits (Present)		**$116.93**	**$0.57**	**$0.64**	**$0.61**	**$0.45**	**-$7.79**	**-$7.38**	**$6.37**	**$6.15**	**$9.52**	**$16.14**	**$8.05**	**$83.60**
Net Benefits (Nominal)	**$144.18**		**$0.62**	**$0.74**	**-$1.31**	**-$1.47**	**-$28.97**	**-$58.09**	**$8.17**	**$7.92**	**$9.90**	**$23.13**	**$8.29**	**$175.27**
Net Discounted Benefits (Present)		**$16.12**	**$0.57**	**$0.64**	**-$1.07**	**-$1.12**	**-$20.66**	**-$38.71**	**$5.09**	**$4.61**	**$5.39**	**$11.76**	**$3.94**	**$45.68**
BCR		**1.16**												

Cost benefit analysis – Option 3A Contemporary Hybrid

$AUD (000,000's)	2025 - 2050	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036 - 2050
Costs	Nominal Value	Present Value 7%												
Construction Costs	**$106.80**	**$73.30**	$0.00	$0.00	$2.75	$2.75	$31.34	$69.96	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Life Cycle Capital Costs	**$22.80**	**$7.74**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.40	$0.80	$1.20	$1.20	$1.20	$18.00
Operational Costs	**$160.91**	**$49.76**	$0.00	$0.00	$0.00	$0.00	-$5.48	-$5.48	$3.05	$3.39	$8.07	$9.10	$9.14	$139.12
Total Costs (Nominal)	**$290.51**		**$0.00**	**$0.00**	**$2.75**	**$2.75**	**$25.86**	**$64.48**	**$3.45**	**$4.19**	**$9.27**	**$10.30**	**$10.34**	**$157.12**
Total Discounted Costs (Present)		**$130.81**	**$0.00**	**$0.00**	**$2.24**	**$2.10**	**$18.44**	**$42.96**	**$2.15**	**$2.44**	**$5.04**	**$5.24**	**$4.91**	**$45.28**
Benefits														
Financial Benefit	**$189.15**	**$58.60**	$0.00	$0.00	$0.00	$0.00	-$6.26	-$6.26	$3.51	$3.93	$10.28	$10.37	$10.46	$163.11
Avoided Capital Costs	**$21.26**	**$12.14**	$0.62	$0.74	$0.75	$0.59	$0.80	$0.66	$0.72	$0.45	$0.94	$15.00	$0.00	$0.00
Community Benefits	**$5.85**	**$2.02**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.26	$0.27	$0.27	$0.27	$0.28	$4.50
Increased Productivity	**$51.41**	**$17.13**	$0.00	$0.00	$0.00	$0.00	-$1.14	-$1.14	$2.47	$2.50	$2.53	$2.56	$2.59	$41.03
Health Benefits	**$155.71**	**$51.83**	$0.00	$0.00	$0.00	$0.00	-$3.52	-$3.52	$7.49	$7.58	$7.67	$7.77	$7.86	$124.38
Health Cost Savings	**$13.54**	**$4.51**	$0.00	$0.00	$0.00	$0.00	-$0.30	-$0.30	$0.65	$0.66	$0.67	$0.68	$0.68	$10.81
Avoided Drownings	**$10.46**	**$3.24**	$0.00	$0.00	$0.00	$0.00	-$0.51	-$0.51	$0.41	$0.52	$0.53	$0.54	$0.55	$8.94
Residual value	**$53.40**	**$9.19**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$53.40
Total Benefits (Nominal)	**$500.78**		**$0.62**	**$0.74**	**$0.75**	**$0.59**	**-$10.93**	**-$11.08**	**$15.51**	**$15.91**	**$22.88**	**$37.19**	**$22.43**	**$406.18**
Total Discounted Benefits (Present)		**$158.66**	**$0.57**	**$0.64**	**$0.61**	**$0.45**	**-$7.79**	**-$7.38**	**$9.66**	**$9.26**	**$12.45**	**$18.90**	**$10.66**	**$110.63**
Net Benefits (Nominal)	**$210.27**		**$0.62**	**$0.74**	**-$2.00**	**-$2.16**	**-$36.79**	**-$75.55**	**$12.06**	**$11.72**	**$13.61**	**$26.88**	**$12.10**	**$249.06**
Net Discounted Benefits (Present)		**$27.85**	**$0.57**	**$0.64**	**-$1.63**	**-$1.65**	**-$26.23**	**-$50.35**	**$7.51**	**$6.82**	**$7.40**	**$13.67**	**$5.75**	**$65.35**
BCR		**1.21**												

Cost benefit analysis – Option 5 Aspirational

$AUD (000,000's)	2025 - 2050	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036 - 2050
Costs	Nominal Value	Present Value 7%												
Construction Costs	**$129.83**	**$89.11**	$0.00	$0.00	$3.34	$3.34	$38.10	$85.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Life Cycle Capital Costs	**$27.72**	**$9.41**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.49	$0.97	$1.46	$1.46	$1.46	$21.89
Operational Costs	**$175.10**	**$54.71**	$0.00	$0.00	$0.00	$0.00	-$5.48	-$5.48	$3.65	$4.05	$8.77	$9.81	$9.84	$149.94
Total Costs (Nominal)	**$332.65**		**$0.00**	**$0.00**	**$3.34**	**$3.34**	**$32.62**	**$79.56**	**$4.14**	**$5.02**	**$10.23**	**$11.27**	**$11.30**	**$171.83**
Total Discounted Costs (Present)		**$153.23**	**$0.00**	**$0.00**	**$2.73**	**$2.55**	**$23.26**	**$53.02**	**$2.58**	**$2.92**	**$5.57**	**$5.73**	**$5.37**	**$49.52**
Benefits														
Financial Benefit	**$207.19**	**$64.89**	$0.00	$0.00	$0.00	$0.00	-$6.26	-$6.26	$4.31	$4.78	$11.14	$11.24	$11.34	$176.89
Avoided Capital Costs	**$21.26**	**$12.14**	$0.62	$0.74	$0.75	$0.59	$0.80	$0.66	$0.72	$0.45	$0.94	$15.00	$0.00	$0.00
Community Benefits	**$8.86**	**$3.06**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.40	$0.40	$0.41	$0.41	$0.42	$6.82
Increased Productivity	**$57.31**	**$19.19**	$0.00	$0.00	$0.00	$0.00	-$1.14	-$1.14	$2.74	$2.78	$2.81	$2.85	$2.88	$45.53
Health Benefits	**$174.55**	**$58.41**	$0.00	$0.00	$0.00	$0.00	-$3.52	-$3.52	$8.37	$8.47	$8.57	$8.68	$8.78	$138.72
Health Cost Savings	**$15.13**	**$5.06**	$0.00	$0.00	$0.00	$0.00	-$0.30	-$0.30	$0.73	$0.73	$0.74	$0.75	$0.76	$12.02
Avoided Drownings	**$13.27**	**$4.22**	$0.00	$0.00	$0.00	$0.00	-$0.51	-$0.51	$0.53	$0.65	$0.66	$0.67	$0.69	$11.09
Residual value	**$64.91**	**$11.18**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$64.91
Total Benefits (Nominal)	**$562.49**		**$0.62**	**$0.74**	**$0.75**	**$0.59**	**-$10.93**	**-$11.08**	**$17.80**	**$18.27**	**$25.28**	**$39.60**	**$24.87**	**$455.99**
Total Discounted Benefits (Present)		**$178.14**	**$0.57**	**$0.64**	**$0.61**	**$0.45**	**-$7.79**	**-$7.38**	**$11.09**	**$10.64**	**$13.75**	**$20.13**	**$11.82**	**$123.62**
Net Benefits (Nominal)	**$229.84**		**$0.62**	**$0.74**	**-$2.59**	**-$2.75**	**-$43.55**	**-$90.64**	**$13.66**	**$13.25**	**$15.04**	**$28.34**	**$13.57**	**$284.16**
Net Discounted Benefits (Present)		**$24.91**	**$0.57**	**$0.64**	**-$2.11**	**-$2.10**	**-$31.05**	**-$60.40**	**$8.51**	**$7.71**	**$8.18**	**$14.41**	**$6.45**	**$74.10**
BCR		**1.16**												

Cost benefit analysis (CBA) summary

Present value cash flows discounted by 7% p.a.	Option 2 Contemporary Replacement		Option 3A Contemporary Hybrid		Option 5 Aspirational	
Costs	Nominal Value	Present Value (2024)	Nominal Value	Present Value (2024)	Nominal Value	Present Value (2024)
Construction Costs *	$80,135,500	$55,003,000	$106,796,500	$73,302,400	$129,828,700	$89,111,100
Life Cycle Costs	$17,110,300	$5,808,600	$22,803,200	$7,741,200	$27,721,000	$9,410,700
Operating Costs	$133,082,600	$40,004,400	$160,909,800	$49,763,200	$175,103,900	$54,712,300
Total Costs	**$230,328,400**	**$100,815,900**	**$290,509,500**	**$130,806,800**	**$332,653,600**	**$153,234,000**
Benefits	Nominal Value	Present Value (2024)	Nominal Value	Present Value (2024)	Nominal Value	Present Value (2024)
Facility Revenue	$150,978,400	$45,269,200	$189,147,100	$58,604,200	$207,193,100	$64,894,600
Avoided Capital Costs	$21,259,000	$12,136,000	$21,259,000	$12,136,000	$21,259,000	$12,136,000
Consumer Non-Use Surplus	$2,923,100	$1,008,400	$5,846,200	$2,016,700	$8,857,900	$3,055,700
Increased Productivity	$33,871,700	$11,001,700	$51,409,100	$17,125,700	$57,309,000	$19,185,700
Health Benefits	$105,899,100	$34,440,600	$155,714,600	$51,833,800	$174,550,900	$58,410,600
Health Cost Savings	$9,048,300	$2,940,600	$13,541,200	$4,509,500	$15,132,200	$5,065,000
Avoided Drownings	$10,463,800	$3,238,400	$10,463,800	$3,238,400	$13,274,500	$4,216,500
Residual value	$40,067,800	$6,899,500	$53,398,300	$9,194,900	$64,914,400	$11,178,000
Total Benefits	**$374,511,300**	**$116,934,300**	**$500,779,300**	**$158,659,200**	**$562,491,000**	**$178,141,900**
Net Benefits (NPV)	**$144,182,800**	**$16,118,400**	**$210,269,700**	**$27,852,400**	**$229,837,400**	**$24,907,800**
Benefit Cost Ratio (BCR)	**1.16**		**1.21**		**1.16**	

** The cost benefit analysis assesses costs and benefits in present day values (i.e. adjusted for the time value of money, referred to as discounting), while nominal values exclude escalation*

Summary Position

Th CBA presents the benefits and costs associated with each option incremental to the base case.

All three investment options return a positive socio-economic position and a BCR greater than 1, meaning investment in the facility will deliver more socio-economic benefits to Victoria compared to the costs to develop and operate.

In summary:

- Option 2 – NPV $16.1M / BCR 1.16
- Option 3A – NPV $27.9M / BCR 1.21
- Option 5 – NPV $24.9M / BCR 1.16

Participation benefits account for 77% of all socio-economic benefits as a result of the redevelopment, while avoided capital costs (12%), financial benefits (9%) and community benefits (2%) account for the remainder.

Overall, investment in the redevelopment is considered value for money, with Option 3A (Contemporary Hybrid) yielding the most positive return.

Sensitivity and scenario testing

To enable an informed appraisal of the project, sensitivity testing has been conducted on a number of key variables. This includes testing the:

- Discount rate at 4% and 10%;
- Demand at +/- 15% (visitation); and
- Costs at +/- 15% (capital and operational costs)

Results

Developing Option 3A (the preferred option) returns a socio-economic BCR (1.04 to 1.13) when increased costs (+15%), decreased demand (-15%) and the higher real discount rate of 10% were individually tested. The high cost and discount rate and low demand variables were also tested in combination to assess a worst-case scenario. This returned a negative NPV of -$9.5M and a BCR of 0.90.

Option 3A returns a BCR (1.28 to 1.42) when decreased costs (-15%), increased demand (15%) and the lower discount rate of 4% were individually tested. The best-case scenario (high demand and low cost and discount rate tested in combination) returns a NPV of $109.7M and a BCR of 1.63.

	Option 2 – Contemporary Replacement			Option 3A – Contemporary Hybrid			Option 5 - Aspirational		
Sensitivity	**Low**	**Baseline**	**High**	**Low**	**Baseline**	**High**	**Low**	**Baseline**	**High**
Discount Rates	**10%**	**7%**	**4%**	**10%**	**7%**	**4%**	**10%**	**7%**	**4%**
Net Benefits / NPV (2024 $AUDM)	-$0.50	$16.12	$48.43	$3.72	$27.85	$74.20	-$1.49	$24.91	$76.45
BCR	0.99	1.16	1.35	1.04	1.21	1.42	0.99	1.16	1.37
Costs	**15%**	**-**	**-15%**	**15%**	**-**	**-15%**	**15%**	**-**	**-15%**
Net Benefits / NPV (2024 $AUDM)	$8.26	$16.12	$23.98	$18.24	$27.85	$37.47	$14.30	$24.91	$35.52
BCR	1.08	1.16	1.26	1.13	1.21	1.31	1.09	1.16	1.25
Demand	**-15%**	**-**	**15%**	**-15%**	**-**	**15%**	**-15%**	**-**	**15%**
Net Benefits / NPV (2024 $AUDM)	$8.70	$16.12	$23.53	$16.14	$27.85	$39.57	$11.47	$24.91	$38.35
BCR	1.09	1.16	1.22	1.13	1.21	1.28	1.08	1.16	1.23
Scenarios	**Worst**	**Baseline**	**Best**	**Worst**	**Baseline**	**Best**	**Worst**	**Baseline**	**Best**
Net Benefits / NPV (2024 $AUDM)	-$9.72	$16.12	$74.30	-$9.45	$27.85	$109.66	-$16.42	$24.91	$116.24
BCR	0.87	1.16	1.55	0.90	1.21	1.63	0.86	1.16	1.57

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Section 5
Economic impact analysis

Economic Impact Analysis (EIA)

This section provides an assessment of potential economic impacts associated with the proposed redevelopment.

Economic impacts were evaluated in terms of direct impacts and indirect impacts.

Direct impacts relate to both construction activity and the scale of additional expenditure on resources within the facility and broader Victoria.

Indirect impacts are increases to the supply chain as a result of the direct impact of construction or increased expenditure. The indirect impacts could occur within or outside Victoria.

The analysis is based on an input-output model created from input-output tables produced by the Australian Bureau of Statistics (ABS) in 2019-20. These tables are published every five years and provide detailed snapshots of the Australian economy's structure and the interconnectedness of the various industries operating in it. Typically, these tables present a summary of the transactions in the economy over a year. The model takes into consideration the composition of industries and interlinkages between the different industries, employment levels, revenue, and household income level.

In addition to the ABS input-output tables, MI have also utilised output and value add figures provided by National Institute of Economic and Industry Research (NIEIR) to estimate the value added to the Gross State Product (GDP) of each direct and indirect impact.

The EIA determines the total output, the value added to GDP and the number of jobs created as a result of each of the impacts delivered by the project.

The table summarises the factors of economic impact considered, metrics and data sources used to project the economic impacts of the proposed redevelopment.

Projected Impact	Metric / Description	Data Source
Direct Impact		
Construction expenditure (total output)	Dollar value of construction works	WT (QS Report)
Value added to the VIC GDP from construction	Dollar value of labour and capital used in producing total output	WT / Input-Output Tables / NIEIR Tables
Construction jobs created	Full time equivalent construction jobs	WT / Input-Output Tables
Facility Operations (total output)	Dollar value of the total projected revenue	Financial Report
Value added to the VIC GDP from facility operations	Dollar value of labour and capital used in producing total output	Financial / Input-Output Tables / NIEIR Tables
Facility operations jobs created	Full time equivalent jobs (includes event day casual staff)	Financial Model
Indirect Impact		
Supply chain expenditure (total output) from construction	Dollar value of increased supply chain expenditure to meet the direct impact of the initial increase in construction production	Input-Output Tables
Value added to the VIC GDP from supply chain expenditure (construction)	Dollar value of labour and capital used in producing total output	Input-Output Tables
Construction supply chain jobs created	Full time equivalent supply chain jobs	Input-Output Tables
Supply chain expenditure (total output) from Facility operations	Dollar value of increased supply chain expenditure to meet the direct impact of the increase in production	Input-Output Tables
Value added to the VIC GDP from supply chain expenditure (operations)	Dollar value of labour and capital used in producing total output	Input-Output Tables
Facility operations supply chain jobs created	Full time equivalent supply chain jobs	Input-Output Tables

Total Economic Output

The preferred Option 3A is projected to deliver a total direct and indirect economic output (i.e., the measure of total economic activity in the production of new goods and services) of $306M during construction and the first ten years of operations.

The total direct and indirect economic output includes $163M during construction and $153M via facility operations.

Each year after 2040 will deliver a further $14M direct and indirect impact through operations.

Option	Direct Impact	Indirect Impact	Total Impact (2026-2040)	Average Direct and Indirect Impact per year
Option 2 – Contemporary Replacement				
Construction (2026-2030)	$80,135,500	$42,332,300	$122,467,900	$24,493,600
Operations (2031-2040)	$73,254,400	$43,470,900	$116,725,300	$11,672,500
Total	$153,389,900	$85,803,300	$239,193,200	$15,946,200
Option 3A – Contemporary Hybrid				
Construction (2026-2030)	$106,796,500	$56,416,300	$163,212,800	$32,642,600
Operations (2031-2040)	$89,711,700	$53,237,100	$142,948,800	$14,294,900
Total	$196,508,200	$109,653,300	$306,161,600	$20,410,800
Option 5 – Aspirational				
Construction (2026-2030)	$129,828,700	$68,583,200	$198,411,900	$39,682,400
Operations (2031-2040)	$98,994,100	$58,745,500	$157,739,600	$15,774,000
Total	$228,822,800	$127,328,700	$356,151,500	$23,743,400

Total Economic Value Added to the GDP

The preferred Option 3A is projected to deliver $107M in total direct and indirect value added to the Victorian GDP (i.e., the total economic output minus the cost of producing all inputs and raw materials) during construction and the first ten years of operations.

The total direct and indirect value added includes $51M during construction and $56M via facility operations.

Each year after 2040 will deliver a further $6M direct and indirect impact through operations.

Option	Direct Impact	Indirect Impact	Total Impact (2026-2040)	Average Direct and Indirect Impact per year
Option 2 – Contemporary Replacement				
Construction (2026-2030)	$24,594,700	$13,734,300	$38,329,000	$7,665,800
Operations (2031-2040)	$28,887,700	$17,169,300	$46,057,000	$4,605,700
Total	$53,482,400	$30,903,600	$84,386,000	$5,625,700
Option 3A – Contemporary Hybrid				
Construction (2026-2030)	$32,777,300	$18,303,700	$51,081,000	$10,216,200
Operations (2031-2040)	$35,377,600	$21,026,500	$56,404,200	$5,640,400
Total	$68,154,900	$39,330,200	$107,485,100	$7,165,700
Option 5 – Aspirational				
Construction (2026-2030)	$39,846,200	$22,251,100	$62,097,300	$12,419,500
Operations (2031-2040)	$39,038,100	$23,202,100	$62,240,200	$6,224,000
Total	$78,884,300	$45,453,300	$124,337,600	$8,289,200

Total Job Creation

The preferred Option 3A is projected to create 1,681 direct and indirect full time equivalent (FTE) jobs during construction and the first ten years of operations.

The total direct and indirect jobs includes 696 during construction (139 each year on average) and 985 from facility operations (98 each year). FTE jobs during the operations phase includes those employed at the facility as well as employment in other industries derived from the operations of the facility (i.e. maintenance, training, education, retail, IT, utilities, marketing etc.).

Option	Direct Impact	Indirect Impact	Total Impact (2026-2040)	Average Direct and Indirect Impact per year
Option 2 – Contemporary Replacement				
Construction (2026-2030)	360	162	522	104
Operations (2031-2040)	596	208	804	80
Total	956	370	1,326	88
Option 3A – Contemporary Hybrid				
Construction (2026-2030)	480	216	696	139
Operations (2031-2040)	729	255	985	98
Total	1,210	471	1,681	112
Option 5 – Aspirational				
Construction (2026-2030)	584	262	846	169
Operations (2031-2040)	805	282	1,087	109
Total	1,389	544	1,932	129

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Appendix
Utilisation and Operations Projections

Option 1 / Base Case – Business as Usual

Item	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Financial Projections										
Income	$6,260,000	$6,260,000	$6,260,000	$6,260,000	$6,260,000	$6,260,000	$6,260,000	$6,260,000		
Expenditure	$5,481,000	$5,481,000	$5,481,000	$5,481,000	$5,481,000	$5,481,000	$5,481,000	$5,481,000	$1,000,000	
Surplus/Deficit	$779,000	$779,000	$779,000	$779,000	$779,000	$779,000	$779,000	$779,000	-$1,000,000	
Sinking Fund	$615,000	$735,000	$752,000	$588,000	$803,000	$658,000	$719,000	$454,000		
Visits										
Full Memberships	154,000	154,000	154,000	154,000	154,000	154,000	154,000	154,000		
Aquatic Memberships	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000		
Casual Swimming	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000		
Casual Fitness	0	0	0	0	0	0	0	0		
Learn to Swim	187,000	187,000	187,000	187,000	187,000	187,000	187,000	187,000		
Schools	58,000	58,000	58,000	58,000	58,000	58,000	58,000	58,000		
General	0	0	0	0	0	0	0	0		
Total	574,000	574,000	574,000	574,000	574,000	574,000	574,000	574,000		
Memberships										
Learn to Swim										
Health and Wellness										
Aquatics										
Performance Indicators										
Subsidy / Surplus per Visit	$1.36	$1.36	$1.36	$1.36	$1.36	$1.36	$1.36	$1.36		
Revenue per Visit	$10.91	$10.91	$10.91	$10.91	$10.91	$10.91	$10.91	$10.91		
Full Time Equivalent	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0		
Total Wages	$4,135,000	$4,135,000	$4,135,000	$4,135,000	$4,135,000	$4,135,000	$4,135,000	$4,135,000		
Staffing Expense to Total Income	66%	66%	66%	66%	66%	66%	66%	66%		
Demolition									($935,000)	
Rebuild as Park										($15,000,000)

Source: Ontoit / Warren Green Consulting

Option 2 – Contemporary Replacement

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Financial Projections										
Income	$7,976,712	$8,382,011	$8,455,384	$8,529,492	$8,604,340	$8,679,937	$8,756,290	$8,833,407	$8,911,294	$8,989,961
Expenditure	$7,244,603	$7,539,149	$7,694,113	$7,721,310	$7,748,742	$7,776,412	$7,804,321	$7,832,473	$7,860,868	$7,889,510
Surplus/Deficit	$732,109	$842,862	$761,272	$808,182	$855,598	$903,526	$951,969	$1,000,934	$1,050,426	$1,100,451
Sinking Fund	$300,181	$600,361	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542	$900,542
Visits										
Full Memberships	156,000	157,560	159,136	160,727	162,334	163,958	165,597	167,253	168,926	170,615
Aquatic Memberships	93,600	94,536	95,481	96,436	97,401	98,375	99,358	100,352	101,355	102,369
Casual Swimming	136,000	137,360	138,734	140,121	141,522	142,937	144,367	145,810	147,269	148,741
Casual Fitness	2,548	2,560	2,573	2,586	2,599	2,612	2,625	2,638	2,651	2,665
Learn to Swim	168,873	187,637	189,513	191,408	193,322	195,256	197,208	199,180	201,172	203,184
Schools	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
General*	0	0	0	0	0	0	0	0	0	0
Total	632,021	654,653	660,437	666,278	672,178	678,137	684,155	690,234	696,373	702,574
Memberships										
Learn to Swim	2,790	3,100	3,131	3,162	3,194	3,226	3,258	3,291	3,324	3,357
Health and Wellness	2,000	2,020	2,040	2,061	2,081	2,102	2,123	2,144	2,166	2,187
Aquatics	1,200	1,212	1,224	1,236	1,249	1,261	1,274	1,287	1,299	1,312
Performance Indicators										
Subsidy / Surplus per Visit	$1.16	$1.29	$1.15	$1.21	$1.27	$1.33	$1.39	$1.45	$1.51	$1.57
Revenue per Visit	$12.62	$12.80	$12.80	$12.80	$12.80	$12.80	$12.80	$12.80	$12.80	$12.80
Full Time Equivalent	45.3	46.6	46.7	46.9	47.1	47.2	47.4	47.6	47.7	47.9
Total Wages	$4,117,624	$4,258,656	$4,275,655	$4,292,803	$4,310,100	$4,327,549	$4,345,151	$4,362,907	$4,380,819	$4,398,887
Staffing Expense to Total Income	52%	51%	51%	50%	50%	50%	50%	49%	49%	49%

Source: Ontoit / Warren Green Consulting

Option 3A – Contemporary Hybrid

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Financial Projections										
Income	$9,767,606	$10,189,707	$10,280,051	$10,371,298	$10,463,458	$10,556,540	$10,650,552	$10,745,504	$10,841,406	$10,938,267
Expenditure	$8,533,093	$8,871,457	$9,072,649	$9,103,772	$9,135,159	$9,166,815	$9,198,740	$9,230,938	$9,263,411	$9,296,162
Surplus/Deficit	$1,234,513	$1,318,250	$1,207,402	$1,267,527	$1,328,299	$1,389,725	$1,451,812	$1,514,566	$1,577,995	$1,642,105
Sinking Fund	$400,056	$800,111	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167	$1,200,167
Visits										
Full Memberships	273,000	275,730	278,487	281,272	284,085	286,926	289,795	292,693	295,620	298,576
Aquatic Memberships	117,000	118,170	119,352	120,545	121,751	122,968	124,198	125,440	126,694	127,961
Casual Swimming	156,000	157,560	159,136	160,727	162,334	163,958	165,597	167,253	168,926	170,615
Casual Fitness	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968
Learn to Swim	168,873	187,637	189,513	191,408	193,322	195,256	197,208	199,180	201,172	203,184
Schools	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
General*	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Total	803,841	828,065	835,456	842,921	850,460	858,075	865,766	873,534	881,380	889,304
Memberships										
Learn to Swim	2,790	3,100	3,131	3,162	3,194	3,226	3,258	3,291	3,324	3,357
Health and Wellness	3,500	3,535	3,570	3,606	3,642	3,679	3,715	3,752	3,790	3,828
Aquatics	1,500	1,515	1,530	1,545	1,561	1,577	1,592	1,608	1,624	1,641
Performance Indicators										
Subsidy / Surplus per Visit	$1.54	$1.59	$1.45	$1.50	$1.56	$1.62	$1.68	$1.73	$1.79	$1.85
Revenue per Visit	$12.15	$12.31	$12.30	$12.30	$12.30	$12.30	$12.30	$12.30	$12.30	$12.30
Full Time Equivalent	55.7	57.0	57.2	57.4	57.6	57.7	57.9	58.1	58.3	58.5
Total Wages	$4,958,944	$5,101,944	$5,120,484	$5,139,180	$5,158,035	$5,177,049	$5,196,225	$5,215,563	$5,235,066	$5,254,734
Staffing Expense to Total Income	51%	50%	50%	50%	49%	49%	49%	49%	48%	48%

Source: Ontoit / Warren Green Consulting

Option 5 – Aspirational

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Financial Projections										
Income	$10,571,206	$11,044,510	$11,143,217	$11,242,912	$11,343,603	$11,445,301	$11,548,016	$11,651,759	$11,756,538	$11,862,366
Expenditure	$9,131,760	$9,530,894	$9,772,443	$9,806,950	$9,841,753	$9,876,852	$9,912,252	$9,947,954	$9,983,962	$10,020,279
Surplus/Deficit	$1,439,446	$1,513,615	$1,370,774	$1,435,961	$1,501,850	$1,568,449	$1,635,764	$1,703,804	$1,772,576	$1,842,087
Sinking Fund	$486,333	$972,667	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000	$1,459,000
Visits										
Full Memberships	280,800	283,608	286,444	289,309	292,202	295,124	298,075	301,056	304,066	307,107
Aquatic Memberships	117,000	118,170	119,352	120,545	121,751	122,968	124,198	125,440	126,694	127,961
Casual Swimming	191,000	192,910	194,839	196,787	198,755	200,743	202,750	204,778	206,826	208,894
Casual Fitness	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968
Learn to Swim	190,663	211,848	213,966	216,106	218,267	220,450	222,654	224,881	227,130	229,401
Schools	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
General*	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000
Total	875,431	902,504	910,569	918,715	926,943	935,253	943,645	952,122	960,684	969,331
Memberships										
Learn to Swim	3,150	3,500	3,535	3,570	3,606	3,642	3,679	3,715	3,752	3,790
Health and Wellness	3,600	3,636	3,672	3,709	3,746	3,784	3,821	3,860	3,898	3,937
Aquatics	1,500	1,515	1,530	1,545	1,561	1,577	1,592	1,608	1,624	1,641
Performance Indicators										
Subsidy / Surplus per Visit	$1.64	$1.68	$1.51	$1.56	$1.62	$1.68	$1.73	$1.79	$1.85	$1.90
Revenue per Visit	$12.08	$12.24	$12.24	$12.24	$12.24	$12.24	$12.24	$12.24	$12.24	$12.24
Full Time Equivalent	58.9	60.3	60.5	60.7	60.9	61.1	61.4	61.6	61.8	62.0
Total Wages	$5,248,074	$5,409,636	$5,430,428	$5,451,396	$5,472,543	$5,493,869	$5,515,376	$5,537,066	$5,558,940	$5,581,001
Staffing Expense to Total Income	50%	49%	49%	48%	48%	48%	48%	48%	47%	47%

Source: Ontoit / Warren Green Consulting

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Thank you

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Appendix M - Stakeholder Engagement Plan

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Stakeholder and Community Engagement Plan

Aqualink Nunawading Business Case

August 2024

Ontoit.

Document Information

Document Control

Rev.	Date	Author	Reviewer	Signed Approval	Notes
1.0	13.08.2024	Amelia Bartak	Simon Gorr		Draft Stakeholder Engagement Plan

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1. The Approach

Meaningful stakeholder engagement that involves people, communities and stakeholders is essential for effective service delivery and improvement. Effective communication and involvement with the community throughout the process will help to build ownership and support for proposals to transform services and will also help identify potential areas of concern.

We understand that stakeholder engagement and communication is fundamental to the success of this project. Both identified stakeholders and the community need the ability to engage with the project in a collaborative manner and our proposed methodology is based around this.

1.1. IAP²'s Public Participation Spectrum

(IAP²)'s Public Participation Spectrum. The IAP2's Public Participation Spectrum is designed to assist with the selection of the level of participation that defines the public's role in any community engagement program.

The Spectrum show that differing levels of participation are legitimate depending on the goals, time frames, resources and levels of concern in the decision to be made - and it is therefore important to clarify these factors in the development of the stakeholder and community engagement plan. The Spectrum also sets out the promise being made at each participation level.

The further to the right on the Spectrum, the more influence the community has over decisions, and each level can be appropriate depending on the context, noting that higher levels are not necessarily better – it is about what is appropriate in the given context.

1.2. Sustainability and Stakeholder Engagement

The Whitehorse 2040 Community Vision acknowledges the importance of a united community and recognises that through collaboration and teamwork, together we have the power to shape our future. The Whitehorse community embraces sustainability and innovation.

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We understand that Whitehorse City Council is required to deliver exemplary sustainable development to meet the intent of the 2040 Community Vision, and we believe that genuine stakeholder engagement has a crucial part to play in this. Sustainability is often thought of from the environmental perspective, however, social and cultural outcomes, and how they interplay with environmental outcomes are also crucial for the delivery of sustainable development. The vision provides for a focus on the environment whilst also balancing the social and economic needs of Whitehorse.

Best practice stakeholder engagement leads to positive outcomes such as:

- Better identification and understanding of the community's values and ideas
- More informed stakeholders
- Delivery of more targeted and effective programs and services,
- Greater access and use of community services and increased community participation by all ages and abilities, leading to greater health and well-being outcomes
- More public trust and confidence in local government.

1.3. Objectives and Values

The objectives for stakeholder engagement are further refined on project inception in collaboration with stakeholders and the Council in the initial stages of the project.

Engage with stakeholders and the community with:

- Clear purpose
- Openness and respect
- Authentic intent
- Mindfulness of inclusiveness and diversity
- Clarity of information presented and requested
- Opportunity for feedback.

2. Methodology

Stakeholder engagement is best carried out in an ongoing way, as a continued conversation, developing and maturing over time to become an essential and mutually beneficial strategic function. In this way, stakeholder engagement is a constant workstream over the course of the project.

2.1. Objectives and Values

A clear purpose for engagement is to be established upfront, providing direction and guidance, creating realistic expectations, and increasing the understanding and transparency of the engagement process. From project inception, the Council will work to ensure that all participants have a mutual understanding of the outcomes required from the engagement.

- Purpose - Vision, aims and objectives
- Identification of key stakeholders - stakeholder mapping and level of engagement required
- Approach for engagement - key workshops, meetings, community events and ongoing engagement methods
- Consideration of inclusion and diversity
- Risk identification and management
- Written summary of feedback received
- Evaluation process.

2.2. Stakeholder Mapping

Stakeholder mapping ensures the project team can make informed decisions about who to engage with and how best to do so. In the stakeholder identification process, we will also consider the level of influence of the stakeholder or stakeholder group and identify the required level of engagement according to risk and level of involvement.

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Key Stakeholders

- Current Aqualink members
- Current Aqualink Nunawading visitors (users)
- Nunawading Swim Club
- Nunawading Water Polo Club
- Nunawading Triathlon Club
- Nunawading Masters Swim Club
- 3K Adult Squad
- Local education/school users (pre-school, primary and secondary)
- Adjacent residents to Forest Hill Reserve
- Whitehorse Community

Internal Whitehorse City Council Stakeholders

- Councillors
- CEO
- Transformation:
  - Change and Continuous Improvement
- City Development
  - Community Safety
  - Engineering and Investment
  - City Planning and Development
  - Property and Leasing
- Community Services:
  - Communities, Engagement and Integrated Planning
  - Leisure and Recreation Services
  - Health and Family Services
  - Arts and Cultural Services
- Corporate Services
  - People & Culture
  - Strategic Marketing and Communications
  - Customer Service
  - Governance and Integrity
  - Finance
  - Organisational technology
  - Contracts and Benefits Realisation
- Infrastructure
  - Project Delivery and Assets
  - Major Projects
  - City Services
  - Parks and Natural Environment

Internal Whitehorse City Council Reference Groups

Internal reference groups will be convened as required throughout the design and construction phases of the project to consider aspects such as design, procurement, construction, operational readiness.

Members of these groups will often be engaged as the mediums through which local stakeholder support (local sport clubs, WCC Sport and Recreation Advisory, Disability Advisory, Reconciliation, Parkland Advisory, Whitehorse Youth Representative committees, Environment and Sustainability Reference Group) will be considered throughout the project.

Likely input into reference groups will include:

- Internal subject matter experts from:
  - Infrastructure, Design and Construction
  - Community Services
  - Active Communities
  - Strategic and Statutory Planning
  - Parks and Natural Environment

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- Social inclusion team

Internal WCC Committees

- Whitehorse Sport and Recreation Advisory Group
- Whitehorse Youth Connection/Representative Committee
- Whitehorse Disability Advisory Committee
- Whitehorse Reconciliation Advisory Committee
- Interfaith Committee
- Parkland Advisory Committee
- Environment and Sustainability Reference Group

Other Identified Stakeholders

- Commonwealth Government
- Victorian State Government
- General community (beyond Whitehorse) and current non-users
- Sport and Recreation Victoria
- Australian Sports Commission
- Swimming Australia
- Swimming Victoria
- Victorian Institute of Sport
- Australian Olympic Committee
- Commonwealth Games Australia
- Water Polo Australia
- Eastern Region Group of Councils
- Adjacent local councils
- Surrey Park Swimming Club
- Forest Hill Netball Football Club
- Forest Hill Cricket Club
- Leisure providers and facility operators
- Brentford Square Shopping Centre

Other Potential Stakeholders

- Community groups – First Nations, Disability-focus, Scouts, Senior Citizens etc
- Health networks (Eastern Health, allied health providers)
- Local businesses and organisations
- Local schools
- State infrastructure projects (Suburban Rail Loop East, North East Link).

2.3. Key Stakeholder Workshops

At each of key phases of the project (Scoping, Design and Integration/Implementation) there will be an initial scoping exercise, followed by a series of workshops that will support the development of Aqualink Nunawading.

The focus for the stakeholder engagement will be to communicate information about the project, gather information about the place and people and seek input into the design for the project.

Key Stakeholder Workshops

- to gather information and seek input
- to test, refine and agree on user requirements
- to validate plans, products and programs:
  - Various WCC departments
  - WCC Advisory committees
  - Aqualink members
  - Aquatic sport clubs including Nunawading Swim Club, Nunawading Water Polo Club, Nunawading Triathlon Club, Nunawading Masters Swim Club, 3K Adult Squad

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- Educational users: U3A, schools
- Wider community

2.4. Workshops

Workshops are an important step in engagement of the key stakeholders and perform the following functions:

- Introduce the project
- Provide background for the project
- Identify opportunities and constraints
- Establish communication lines
- Capture stakeholder issues and concerns
- Develop an understanding of key stakeholders' requirements for Aqualink Nunawading
- Identify any additional stakeholders.

During the design phase, proposed workshops should aim to review and address stakeholders' feedback on the design to date in order to inform the next stage of design of Aqualink Nunawading.

2.5. Formal or Informal Meetings

These meetings, either formal or informal, assemble the relevant individuals to debate certain issues and problems, and to take decisions that progress the project.

Formal meetings are held at definite times, for a definite duration to follow an agreed upon agenda. Normally these are a regular meeting involving management, such as a project control group and project steering group meeting. Operational meetings will be as required, regular or ad hoc, involving management, necessary consultants and employees, such as a committee meeting, planning meeting or review meeting.

2.6. Level of Engagement

Differing levels of engagement are dependent on the situation requiring engagement, for example the funding bodies as specified in relevant funding agreements which differ between the level of government and type of funding.

2.6.1. Stakeholder Participation Definitions

Informing
To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.

Consulting
To obtain public feedback on analysis alternatives and/or decisions.

Involving
To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.

Collaborating

To partner with the public in each aspect of the decision making including the development of alternatives and the identifying of the preferred solution.

Empowering
To place final decision making in the hands of the public.

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2.6.2. Engagement Deliverables Definitions

Informing

We will keep you informed.

Consulting

We will keep you informed, listen to and acknowledge concerns and provide feedback on how public input influenced the decision.

Involving

We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.

Collaborating

We will look to you for direct advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.

Empowering

We will implement what you decide.

2.6.3. Engagement Methods

	Inform	Consult	Involve	Collaborate	Empower
METHOD	Newspaper Advertisement Printed Information Public Meeting Expert Panels Website Signage Media	Briefing Newspaper Advertisement Printed Information Semi-Structured Interview Round the table discussions Public Meeting Facilitated Workshop Expert Panels On-Line / In-Person Survey	Newspaper Advertisement Round the table discussions Public Meeting Facilitated Workshop Expert Panels	Round the table discussions Public Meeting Facilitated Workshop Steering Committees Advisory Groups Working Groups Expert Panels	Facilitated Workshop Steering Committees Expert Panels Ballots Delegated decisions

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WHEN	When the decision has already been made or there is no opportunity for the community to influence the outcome.	Site specific issues, area improvements or service planning.	Service Planning, policy development, and major projects.	Strategic plans and major projects.	Council elections and community owned projects

2.6.4. Level of Engagement Matrix

HIGH	INVOLVE	COLLABORATE	
MEDIUM	CONSULT	CONSULT	INVOLVE
LOW	INFORM		
	LOW	**MEDIUM**	**HIGH**

Matrix Score Sheet	**LOW**	**MEDIUM**	**HIGH**
Assess the degree of complexity: Is there one clear issue and/or problem that needs to be addressed? (low) Is there more than one issue and/or problems to be resolved? (medium) Is there multiple issues and/or problems and is it unclear how to resolve (high)			
Assess the degree of potential community impact and/or outrage: The project/decision will have little effect on the community and the residents will hardly notice any changes (low). The project/decision will fix a problem that will benefit the community and the change will cause minor inconvenience (medium). The project/decision will create a change that will have an impact on community and the living environment, and the degree of impact/outrage and acceptance will vary (high).			
Assess the degree of political sensitivity: The project has acceptance throughout the community (low**).** There are groups in the community who may see potential in raising the profile of a project to gain attention for their cause (medium). Community expectations about the project are different to those of the decision makers and there is a high potential for individuals and groups to use the uncertainty to gain attention (high).			

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2.6.5. Stakeholder Level of Engagement

	Stakeholder	Level of Engagement	Method
Key Stakeholders	Whitehorse City Council/ELT	Empower	Steering Committee
	Aqualink Members	Consult / Involve	On-Line / In-Person Survey Workshops
	Nunawading Swim Club	Collaborate / Involve	Meetings / Workshops
	Nunawading Water Polo Club	Consult / Involve	Workshops
	Nunawading Triathlon Club	Consult / Involve	Workshops
	Nunawading Orcas Masters Swim Club	Consult	Workshops
	Adult 3K Squad	Consult	Workshops
	Current Aqualink Nunawading visitors (users)	Consult	Meetings
	Local education/school users (pre-school, primary and secondary)	Consult	Meetings
	Adjacent residents to Forest Hill Reserve	Involve	Workshops
	Surrey Park Swimming Club	Consult + Inform	Meetings Website/Site Signage
	Whitehorse Community	Consult + Inform	Meetings On-Line / In-Person Survey Website/site signage
Internal WCC Stakeholders	Infrastructure team including Project Delivery & Asset Management, Major Projects, City Services, Parks and Natural Environments	Consult	Meetings Round the table discussions
	Community Services team including Communities, Engagement and Integrated development; Health and Family Services; Arts and Cultural Services	Consult	Meetings Round the table discussions
	City Development team including Community Safety; Property and Leasing; Engineering and Investment; City Planning and Development	Consult	Meetings Round the table discussions
	Leisure and Recreation Services team; Leisure Strategy and Development	Collaborate / Consult	Meetings Round the table discussions
	Corporate Services team: People & Culture; Strategic Marketing and Communications; Customer Service; Governance and Integrity; Finance; Organisational technology; Contracts and Benefits Realisation	Consult	Meetings Round the table discussions
	Transformation including Change and Continuous Improvement	Consult	Meetings
	Internal WCC Committees: • Whitehorse Sport and Recreation Advisory Group • Whitehorse Youth Connection/Representative Committee • Whitehorse Disability Advisory Committee • Reconciliation Committee • Interfaith Committee • Parkland Advisory Committee	Consult / Involve	Meetings Round the table discussions

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	Stakeholder	Level of Engagement	Method
	• Environment and Sustainability Reference Group		
Other Identified Stakeholders	Commonwealth Government	Inform	Milestone Report (TBC)
	Victorian State Government	Inform	Milestone Report (TBC)
	Sport and Recreation Victoria	Consult	Meetings
	General community (beyond Whitehorse) and current non-users	Inform	Website/Site Signage
	Australian Sports Commission	Inform	If required
	Swimming Australia	Inform	If required
	Swimming Victoria	Inform	If required
	Victorian Institute of Sport	Inform	If required
	Australian Olympic Committee	Inform	If required
	Commonwealth Games Australia	Inform	If required
	Water Polo Australia	Inform	If required
	Eastern Region Group of Councils	Inform	If required
	Adjacent local councils	Inform	If required
	Forest Hill Netball Football Club	Inform	Website/Site Signage
	Forest Hill Cricket Club	Inform	Website/Site Signage
	Leisure providers and facility operators	Inform	Website/Site Signage
	Brentford Square Shopping Centre	Inform	Website/Site Signage
Other Potential Stakeholders	Community Groups - – First Nations, Disability-focus, Scouts, Senior Citizens etc	Inform	Website/Site Signage
	Local businesses and organisations	Inform	Website/Site Signage
	Local schools	Inform	Website/Site Signage
	Residents surrounding the precinct	Inform	Website/Site Signage
	Health networks (Eastern Health, allied health providers)	Inform	Website/Site Signage
	State infrastructure projects (Suburban Rail Loop East, North East Link).	Inform	Website/Site Signage

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3. Engagement Objectives and Key Messages

A vision has been set for this project which will guide the engagement objectives and key messages.

The vision is supported by 5 key pillars and underpinning principle statements:

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4. Project Timeline

The stakeholder engagement process will be undertaken in in four stages, depending on Project phasing.

Most government budget bids are assessed the year prior to the budget announcement in May of any year. Therefore advocacy and lobbying to government representatives, departments and agencies should commence at least 18 months prior (September/October – Stage One) with preliminary submission the following year (Sept/Oct) and finalised submission by Jan/Feb for the highest approval in April/May (Stage 2) and budget confirmation for the following financial year (i.e. from 1 July).

Confirmation of funding will then enable Stages 3 and 4.

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Appendices

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5. Appendix

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Appendix N - Project Program

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AQUALINK NUNAWADING REDEVELOPMENT PROJECT PROGRAM

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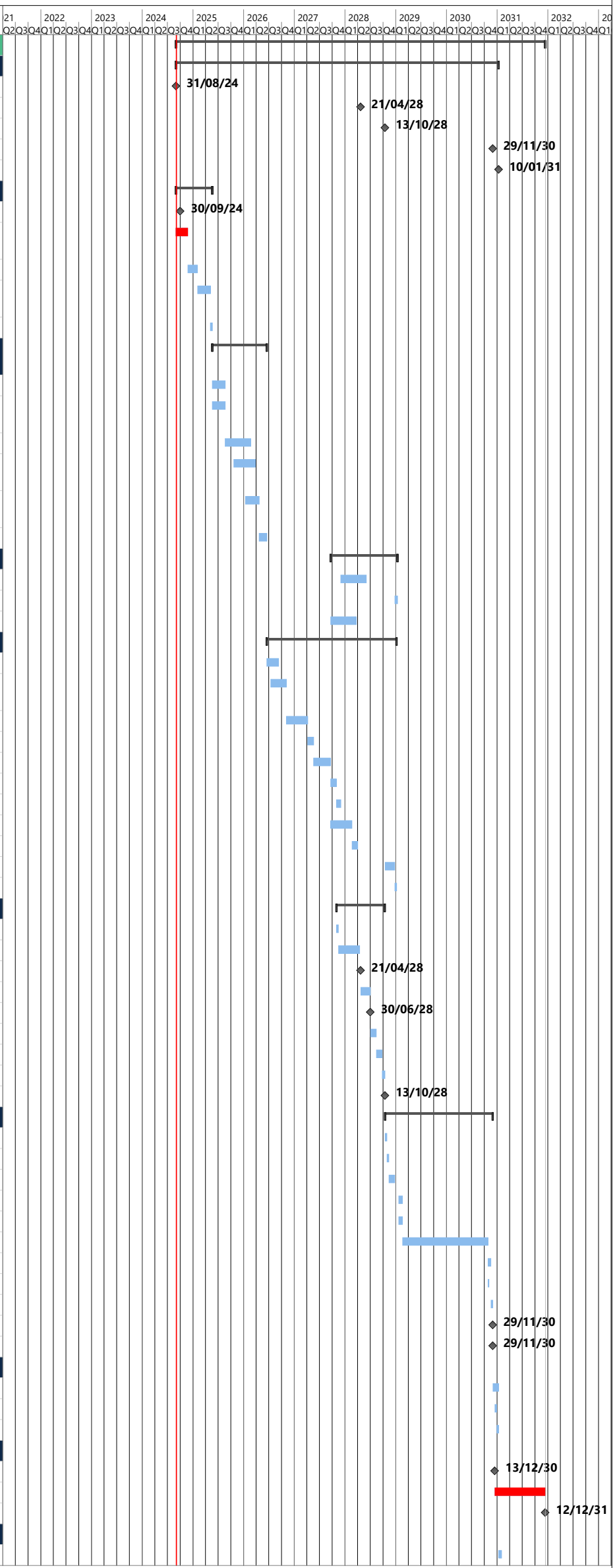
ID	WBS	Task Name	Duration	Start	Finish
1	1	PROJECT NAME	380 wks	Sat 31/08/24	Fri 12/12/31
2	1.1	KEY MILESTONES	332 wks	Sat 31/08/24	Fri 10/01/31
3	1.1.1	Project Commencement	0 days	Sat 31/08/24	Sat 31/08/24
4	1.1.2	D&C Tender Release	0 days	Fri 21/04/28	Fri 21/04/28
5	1.1.3	D&C Contract Award	0 days	Fri 13/10/28	Fri 13/10/28
6	1.1.4	Practical Completion	0 days	Fri 29/11/30	Fri 29/11/30
7	1.1.5	Open New Facility	0 days	Fri 10/01/31	Fri 10/01/31
8	1.2	BUSINESS CASE & INITIAL FUNDING	37.2 wks	Sat 31/08/24	Mon 19/05/25
9	1.2.1	Draft Business Case	0 days	Mon 30/09/24	Mon 30/09/24
10	1.2.2	Council Stakeholder Engagement Process	12 wks	Sat 31/08/24	Fri 22/11/24
11	1.2.3	Present Business Case to Council	10 wks	Mon 25/11/24	Fri 31/01/25
12	1.2.4	Pre Concept Design and Project Proofing Funding Approval	3 mons	Mon 3/02/25	Mon 5/05/25
13	1.2.5	Council Approval	10 days	Tue 6/05/25	Mon 19/05/25
14	1.3	PRE-CONCEPT DESIGN & PROJECT PROOFING	56.2 wks	Tue 20/05/25	Tue 16/06/26
15	1.3.1	Appoint Internal Project Team	3 mons	Tue 20/05/25	Tue 19/08/25
16	1.3.2	Procure and Appoint Pre-Concept Design Team	3 mons	Tue 20/05/25	Tue 19/08/25
17	1.3.3	Stakeholder Engagement	6 mons	Wed 20/08/25	Thu 19/02/26
18	1.3.4	Pre-Concept Design and Project Proofing	5 mons	Wed 22/10/25	Tue 24/03/26
19	1.3.5	Prepare Capital Works Funding Form	14 wks	Wed 14/01/26	Tue 21/04/26
20	1.3.6	Council Report and Approval	8 wks	Wed 22/04/26	Tue 16/06/26
21	1.4	STATUTORY APPROVALS	69 wks	Mon 20/09/27	Fri 12/01/29
22	1.4.1	Planning approval	6 mons	Wed 1/12/27	Thu 1/06/28
23	1.4.2	Building Permits	15 days	Mon 25/12/28	Fri 12/01/29
24	1.4.3	Head works - authorities	6 mons	Mon 20/09/27	Tue 21/03/28
25	1.5	DESIGN	133.6 wks	Wed 17/06/26	Fri 5/01/29
26	1.5.1	Appoint Internal Project Team	12 wks	Wed 17/06/26	Tue 8/09/26
27	1.5.2	Procure and Appoint Lead Design Team	16 wks	Wed 15/07/26	Tue 3/11/26
28	1.5.3	Concept Design	5 mons	Wed 4/11/26	Tue 6/04/27
29	1.5.4	Council Review and Approval	6 wks	Wed 7/04/27	Tue 18/05/27
30	1.5.5	Schematic Design	4 mons	Wed 19/05/27	Fri 17/09/27
31	1.5.6	Council Review and Approval	6 wks	Mon 20/09/27	Fri 29/10/27
32	1.5.7	Town Planning Set	1 mon	Mon 1/11/27	Tue 30/11/27
33	1.5.8	Design Development 90%	5 mons	Mon 20/09/27	Fri 18/02/28
34	1.5.9	Council Review and Approval	6 wks	Mon 21/02/28	Fri 31/03/28
35	1.5.10	IFC Documentation	10 wks	Mon 16/10/28	Fri 22/12/28
36	1.5.11	IFC Review and Approval	2 wks	Mon 25/12/28	Fri 5/01/29
37	1.6	PROCUREMENT	50 wks	Mon 1/11/27	Fri 13/10/28
38	1.6.1	Evaluation Plan	2 wks	Mon 1/11/27	Fri 12/11/27
39	1.6.2	Tender documentation	5 mons	Mon 15/11/27	Fri 14/04/28
40	1.6.3	Tender release	0 days	Fri 21/04/28	Fri 21/04/28
41	1.6.4	Tender Period	10 wks	Mon 24/04/28	Fri 30/06/28
42	1.6.5	Tender Closes	0 days	Fri 30/06/28	Fri 30/06/28
43	1.6.6	Tender Evaluation	6 wks	Mon 3/07/28	Fri 11/08/28
44	1.6.7	Evaluation report and approval	6 wks	Mon 14/08/28	Fri 22/09/28
45	1.6.8	Negotiation	3 wks	Mon 25/09/28	Fri 13/10/28
46	1.6.9	Contract Award	0 days	Fri 13/10/28	Fri 13/10/28
47	1.7	CONSTRUCTION	111 wks	Mon 16/10/28	Fri 29/11/30
48	1.7.1	Mobilise	2 wks	Mon 16/10/28	Fri 27/10/28
49	1.7.2	Procurement	2 wks	Mon 30/10/28	Fri 10/11/28
50	1.7.3	Demolition	6 wks	Mon 13/11/28	Fri 22/12/28
51	1.7.4	Shop Drawings	4 wks	Mon 22/01/29	Fri 16/02/29
52	1.7.5	Construction - Early Works	4 wks	Mon 22/01/29	Fri 16/02/29
53	1.7.6	Construction Main Works	20 mons	Mon 19/02/29	Fri 25/10/30
54	1.7.7	Testing and Commissioning	3 wks	Mon 28/10/30	Fri 15/11/30
55	1.7.8	As Built	1 wk	Mon 28/10/30	Fri 1/11/30
56	1.7.9	Occupancy Permits	2 wks	Mon 18/11/30	Fri 29/11/30
57	1.7.10	Administrative Completion	0 days	Fri 29/11/30	Fri 29/11/30
58	1.7.11	Practical Completion	0 days	Fri 29/11/30	Fri 29/11/30
59	1.8	COMMISSIONING	6 wks	Wed 27/11/30	Tue 7/01/31
60	1.8.1	Operational Commissioning	6 wks	Mon 2/12/30	Fri 10/01/31
61	1.8.2	Staff Training	2 wks	Mon 16/12/30	Fri 27/12/30
62	1.8.3	Open New Facility	2 wks	Mon 30/12/30	Fri 10/01/31
63	1.9	DEFECTS LIABILITY PERIOD	52 wks	Fri 13/12/30	Fri 12/12/31
64	1.9.1	Commence Defects Liability Period	0 days	Fri 13/12/30	Fri 13/12/30
65	1.9.2	Defects Liability Period	52 wks	Mon 16/12/30	Fri 12/12/31
66	1.9.3	Completion	0 days	Fri 12/12/31	Fri 12/12/31
67	1.10	POST COMPLETION REVIEW	3 wks	Wed 8/01/31	Tue 28/01/31
68	1.10.1	Post completion review	3 wks	Mon 13/01/31	Fri 31/01/31



LEGEND: Summary, Task, Split, Progress, Re-occuring meetings, Critical, Milestone, Baseline

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Status: Business Case FINAL
Status Date: 04 Oct 2024

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Appendix O - Project Management Plan

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1. Introduction

1.1. Purpose of this Project Management Plan

The purpose of this Project Management Plan (PMP) is to provide a formal document that establishes guidelines by which the project will be managed throughout its life.

The PMP is a “living document” and should be updated and maintained as a “controlled document” by the responsible Project Manager (PM) throughout the life of the project.

The approval of this document and any subsequent changes will be by the Project Steering Committee (PSC), who will monitor the document.

The following areas are covered by this PMP:

- Project Overview (including Objectives, Background, Project Description, Cost, Time/Schedule and Project Status);
- Management Structure (including Organisation Chart, Project Governance, Committee Membership, Roles & Responsibilities and related job descriptions);
- Project Control Mechanisms (Scope, Cost, Time, Quality, Risk, Delegation); and
- Communication (Strategy, Project Meetings, Reporting, Document Control, Correspondence, Co-ordination Protocols and Stakeholder Consultation).

This document outlines the direct reporting lines and related responsibilities and forms the basis for all formal and informal communication between the major parties to the project.

In planning this project, the following broad phases are proposed:

- Phase 1 - Pre-design & Business Case
- Phase 2 - Functional and Technical Brief Development
- Phase 3 - Schematic Design and Design Development
- Phase 4 - Project Delivery Strategy
- Phase 5 - Tender/Contract Documentation
- Phase 6 - Tender, Award and Project Delivery
- Phase 7 - Construction and Contract Administration.
- Phase 8 – Commissioning, handover and acceptance.

This PMP will be reviewed for each stage.

The phases will in some cases overlap, depending on the agreed works that can be scheduled and completed in order to facilitate the expedient execution of the project.

Such detail will be resolved in the workings of the project by the PM and will specifically include the requirements of the various end users where necessary.

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2. Project Overview

2.1. About the Aqualink Nunawading Redevelopment

The existing Aqualink Nunawading facility is approaching end-of-life, its plant and equipment requiring ever greater levels of maintenance. It is currently at risk of serious failure and complete closure by 2032. Its facilities and functional amenity do not meet the contemporary needs of the community, now a much larger and more diversified population.

Whitehorse City Council plans to demolish the existing facility and deliver a new and contemporary Aqualink aquatic facility that ensures people of all ages and abilities can actively and safely participate in aquatic, sport and wellness activities within their community, balancing the needs of the community. The new facility will also support the growth in community swimming competence through to the elite sport training pathways.

Initial concept plans for the Project are include in **APPENDIX 1**.

2.2. Project Vision

Whitehorse City Council is committed to developing Aqualink Nunawading into a vibrant, inclusive, and sustainable health and aquatic hub. This hub aims to enrich lives, foster connections, and support community wellbeing by providing a highly utilized facility that caters to a broad range of potential user groups. The design and services offered will be guided by community needs and the facility's purpose to drive the desired benefits.

The vision for the Aqualink Nunawading Business Case is supported by five key pillars and underlying principles developed through stakeholder workshops. These workshops helped identify how this project will benefit the community and balance the diverse needs of various stakeholder groups.

The successful delivery of the proposed project is anticipated to deliver the following benefits.

The benefits and associated weightings of importance are:

1. Increase in health and wellbeing outcomes
2. More financially and operationally sustainable Council services
3. Greater water awareness and swimming competence within an increasingly diverse community

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3. Project Context

3.1. Project Objectives

The project will be managed by the PCG in accordance with the PMP. The key objectives for the project are:

- Delivery of the works in accordance with the approved budget;
- Completion of the project in accordance with the approved programme;
- Delivery of the facilities to the satisfaction of the end users and key stakeholders;
- Provision of a completed project that enhances and supports community engagement;
- Delivery of the project with positive communication and consultation strategies;
- Appropriately and effectively manage the project risks during the design, construction and commissioning phases; and
- Provide an environmentally sustainable facility that minimises its impact on climate change.

3.2. Project Benefits

1.1.1. Benefit 1: *Increase in health and wellbeing outcomes.*

This benefit focuses on achieving greater health and wellbeing outcomes through an accessible and inclusive health and aquatic facility. The facility will promote physical activity, community health, mental wellbeing, and social inclusion, making it welcoming to individuals of all ages, abilities, and backgrounds.

1.1.2. Benefit 2: More financially and operationally sustainable Council services

This benefit aims to achieve an ongoing financially and operationally sustainable solution through appropriate and affordable capital investment. The facility will minimise its environmental footprint, conserve resources, and cater to current and future demographics. It will also promote an ongoing social return on investment and help meet the challenges of climate change.

1.1.3. Benefit 3: Greater water awareness and swimming competence within an increasingly diverse community.

This benefit focuses on developing a solution that delights the community, cultivates a sense of place, increases community utilisation, and supports social inclusion, connection, health, and wellbeing. The facility will meet the growing needs and aspirations of the community through collaboration and partnerships, enabling greater water awareness and swimming competence across all community cohorts. A growing cohort of participants will feed the pipeline for future aquatic athletes.

3.3. Agreed Scope

Option 3a Contemporary Hybrid was identified by Council as the the preferred design option.

The preferred option comprises a redeveloped, inclusive and accessible facility of 21,015 sqm (existing facility is 13,183 sqm) and proposes an astute expansion of both aquatic and dry fitness areas with more generously sized, contemporary change and social spaces. The Nunawading Swim Club facilities will be rebuilt and integrated into the new facility. It can accommodate a reasonable number of spectators for swimming competitions and other events yet has the flexibility with additional water spaces to cater to other visitors concurrently. A dedicated learn to swim pool (25m x 12m) enables water education and safety to be provided without conflict with leisure options, which are serviced in a separate pool. It includes a warm water pool for therapeutic and rehabilitation activities and related programs and two spas. By housing dry fitness on an upper level, 24/7 access can be accommodated. Option 3 A includes a larger gym (900sqm) plus

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program rooms. It includes spaces for allied health and consulting/assessment rooms. This option accommodates the needs of the community's stakeholders and includes social spaces.

Mechanical and pool plant is to be all electric and a 6-star Green Star rating is targeted

Finalised concept designs have been developed by Co-Op Architects including an Area Schedule which can be located in **APPENDIX 1.**

Aquatic facilities:

- Entry foyer and reception areas
- 50m 8 lane indoor pool (with concourse), swim wall and ramp
- Spectator seating for 415 people
- 25 x 12m learn to swim pool with ramp
- 100sqm leisure water and toddler pool with concourse
- 20 x 15m warm water pool, spa and ramp
- Sauna and steam rooms
- Wet lounge
- Birthday party/meeting room
- Contemporary change amenities for all members of the community (F/M/Family/Accessible/Changing Places/All-Gender/Group)
- Multiple store rooms to accommodate local club and facility needs
- Dedicated area for Swim Club events marshalling, storage and own change rooms.

Dry areas:

- Lobby / 24/7 separate entry to fitness
- Cardio and strength area (900sqm)
- 4 group fitness rooms
- Allied health and consulting/testing suites
- Quiet/Prayer room
- Community Meeting room
- Café and retail spaces
- Social spaces
- Offices, staff and utility rooms
- Dedicated facilities for Nunawading Swim Club with separate entry (office, administration, storage, strength and conditioning gym)

Other:

- Carparking for 350 cars
- Entry plaza
- Plant and waste management areas

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4. Governance

4.1. Governance Structure

The following is a representation of the governance structure for the project.

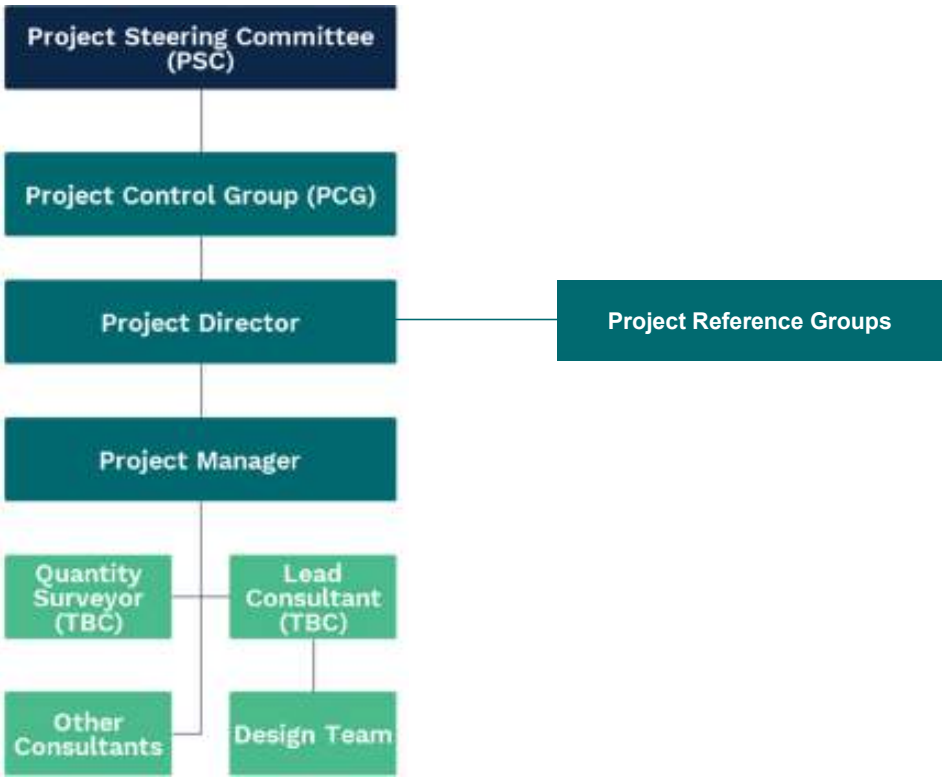
4.2. Project Governance

The general responsibility for decisions in respect to the project and any project changes rests with designated groups with formal delegations.

In order to ensure that all groups with authority or interest in respect to the project have appropriate input, the following groups will operate for the duration of the project:

- Project Steering Committee (PSC)
- Project Control Group (PCG)
- Project Working/Reference Groups (as required).

The project governance works on a bottom-up approach, with the PSC receiving recommendations from the PCG on the development and implementation of the Project.



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4.3. Meeting Structure

During the course of the project, it is anticipated a number of regular meetings will be held to manage and oversee the progress of the works. Listed below is an example of the types of meetings that will be held throughout the project. Additional meetings will no doubt be required on an 'as-needs' basis. The PM is to attend all meeting identified below and any other meetings as required to successfully complete the project.

Project Steering Committee – arranged and minuted by the PM on a monthly basis. The PSC has been established to provide approvals and strategic direction for the project.

The PSC is scheduled to meet on a **4** weekly cycle.

Project Control Group – arranged and minuted by the PM on a fortnightly basis. The PCG has been established to co-ordinate input from the key stakeholders, the consultants and all necessary secondary and specialist consultants on all of the issues necessary to achieve the successful delivery of the project.

The PCG is scheduled to meet on a **2** weekly cycle.

Consultant Team Meeting – arranged and minuted by the PM on a fortnightly basis for the purpose of communication and information transfer, status and resource monitoring and key issue discussions and resolutions.

Design Team Meeting – arranged and minuted by the Architect/PM on a fortnightly basis to review detailed design matters and any other issues as required for the efficient progress of the project.

Community Meetings – arranged and minuted by the Architect/Consultant as required to ensure community "ownership and authorship" of the design outcomes;

Site Meetings – arranged and minuted by the PM and attended by the Design Team as required to oversee the construction phases of the project;

4.4. Project Steering Committee

4.4.1. Membership

The PSC is to consist of X members comprised as follows:

- XXXX
- XXXX

Attendance at the meeting may be delegated to personnel with the equivalent financial delegation and/or authority within the organisation represented if a member is unable to attend.

4.4.2. Roles & Responsibilities

The parties propose that the PSC will oversee the entire Project and provide high level policy advice where considered appropriate.

The PSC has been established to provide approvals and strategic direction for the Project and facilitate the project development to ensure the key objectives are successfully realised.

The role of the PSC includes;

i. ensuring the Project is delivered on time and within the Project budget;
ii. approving and updating the Project Management Plan throughout the life of the Project;
iii. overseeing the project scope through the review and endorsement of the concept, schematic and design development documentation, in addition to the ongoing development of the Functional and Technical Brief;

iv. setting and reviewing the Project budget, including professional services, construction and contingencies;

v. approving any transfers between line items within the Project budget;

vi. ensuring the Project scope and budget align with the requirements of the stakeholder groups;

vii. approving any proposed significant changes to the Project scope;

viii. reviewing and endorsing key procurements for the Project, including but not limited to, the Project Manager, Design Team, [insert role] and [insert role];

ix. approving the application of Project contingency;

x. setting and reviewing the Project program;

xi. approving any changes to the Project program;

xii. delegating approval for any matter which the PSC has responsibility to either the ___ or ___ as project principal;

xiii. seeking advice or recommendations from the PCG where determined by the PSC;

xiv. ensuring probity is maintained throughout the design and delivery of the Project; and

xv. addressing any issues that have major implications for the Project.

4.5. Project Control Group

4.5.1. Membership

The PCG is to consist of x members comprised as follows:

- [insert member]
- [insert member]

Attendance at the meeting may be delegated to personnel with the equivalent financial delegation/and or authority within the organisation represented if a member is unable to attend.

4.5.2. Roles & Responsibilities

The parties propose that the PCG would administer the Project.

The role of the PCG includes:

i. liaising with the Project Manager;

ii. reporting to, and advising the Project Steering Committee (PSC) on, Project issues (including significant variations to the Scope of the Works) as and when necessary;

iii. working to ensure that the Project is delivered on time and within budget;

iv. making requests or recommendations to the PSC for any significant changes in the scope or budget of the Project; and

v. making recommendations to the PSC in respect of the appointment of key consultants for the Project.

4.5.3. Membership

The members of the PCG agree the PCG will meet on a 2-weekly cycle. At the discretion of the PCG Chair, the PCG may be required to have extraordinary meetings or out-of-session meetings to make decisions relating to its terms of reference.

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4.5.4. Secretariat

The secretariat functions for the PCG will be provided by ___ and/or the Project Manager. Papers for consideration at the meeting will be provided at least 5 business days prior to the meeting unless agreed with the PCG Chair prior to the meeting.

Notes of the meeting and actions will be circulated within 5 business days of the meeting. Notes of the meetings and actions will be circulated to members and attendees.

Papers for consideration at the meetings will be circulated to members and delegates.

4.6. Project Reference Groups

Project Reference Groups will be established, as required, to gain input on particular project related matters, relating to areas such as design, operations, staging, community impact, communications etc. Project Reference Groups will:

- Coordinate with design team and provide input to design, scope and functional requirements
- Assist to ensure delivery of project benefits and managing impacts on the local community
- Coordinate with Council and project team on commercial arrangements; and
- Advise on construction and operations interface.

4.7. Project Manager

4.7.1. Project Management Resourcing

Whitehorse City Council will provide internal project management resources to manage the Aqualink project, through the allocation of existing Whitehorse City Council staff and the hire of new staff. The final structure of the Whitehorse City Council internal project management team is to be determined and will be attached to this report as an Appendix when agreed by the PSC.

The internal team may hire some specialist external project management advice if and when required.

4.7.2. Project Management Reporting

Through the project the Project Manager (PM) will provide a regular Project Manager's Report to the PSC for each ordinary meeting which will encompass all aspects of the project. The final structure and make-up of this report is to be agreed.

The PM will verbally update the PCG on the project management but will not provide a Project Manager's Report to these meeting.

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5. Stakeholder Management

5.1. Key Stakeholders (External/Internal/Public)

A communication strategy will be developed for each phase of the project where necessary for PCG approval. The strategy will include:

- Communication protocols
- Communication objectives
- Common Lines' Key messages
- Communication tools
- Timelines.

Once developed, the Stakeholder Management Plan will be incorporated into this PMP as an appendix.

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6. Program

A master programme will be developed by the PM to be approved by the PSC and PCG.

A detailed programme will be provided by the PM to be approved by the PSC and reported against at each PSC meeting.

A summary of the project's progress shall be provided at the PSC meetings.

All changes to the program will require PSC confirmation.

Detailed programmes for the delivery of design services will be required.

A detailed construction programme will be required of the appointed construction contractor and form a basic component of the construction contractor's contractual obligations.

An initial draft master programme has been prepared on the basis of the aspirational milestone and completion dates nominated in the initial project briefing as follows:

- Complete Functional Technical Brief – November / 2025
- Complete Consultant Appointments – December / 2026
- Schematic Design Complete – September / 2026
- 80% Design Development Complete – January / 2027
- Tender/Contract Documentation Complete – May / 2027
- Award Construction Contract – August / 2027
- Complete Construction – May / 2029
- Complete Defects Liability Period – May / 2029
- ***TO BE UPDATED POST PROGRAM ANALYSIS***

The initial draft master programme is attached in **APPENDIX 2.**

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7. Funding and Financial Management

The PSC has endorsed the Project budget of [insert figure].

The parties acknowledge that the State Government's contribution is [$insert figure] and that additional funding is under consideration. If the additional funding is not provided, the parties agree that they will work together in good faith to review the scope of works of the Project.

Funding will be provided by the parties in accordance with an agreed schedule for ____ to disperse in accordance with approved contractual obligations.

The current funding breakdown is nominated as follows:

Party	Amount
	$
	$
	$

The proposed project budget breakdown and structure included in **APPENDIX 3** is to be agreed with the PSC.

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8. Procurement Strategy

The procurement strategy for the project is intended to be assessed through a Delivery Model selection workshop, review and options reporting process.

Following the initial workshop held on [insert date], a draft Delivery Model Selection paper has been prepared and is included in **APPENDIX 4**.

Further analysis and development of the assessed shortlisted options will be provided for consideration and approval of the PSC.

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9. Resourcing

9.1. Consultant Engagement

Design Team

"[insert how many agreed design consultants and when it was agreed]"

Quantity Surveyor

"[insert how many agreed surveyors and when it was agreed]"

Other Consultant Team Members

"[insert other]"

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10. Project Control Mechanisms

This section will be refined for each phase of the project to reflect the level of control and level of risk in each area.

As the project is developed the scope of works will be better understood and the scope noted below updated.

10.1. Scope and Change

During the Project Development Stage the Scope of the project will be developed in the following stages:

- Concept Design - A Concept Design will be developed as an initial scoping document.
- Functional and Technical Brief - A detailed functional and technical brief will be developed based on this development overview. The functional and technical brief is a written description of the elements to be included in the construction of the facility. This brief will be used by the PM and the Design team to develop designs, design documentation, procurement strategy and tender documents for PSC and PCG approval. This functional and technical brief with costings is to be agreed to by the PCG prior to commencing the design phase.
- Schematic Design/Design Development – This outline design will respond to the Functional and Technical Brief. The Schematic Design will be costed and presented for approval by the PSC and PCG. The necessary Town Planning approval process will also need to be resolved at this time.
- Detail Design and Documentation – The approved Schematic Design is to be developed in detail and documented ready for tender. The Detail design will be accompanied by an updated cost plan on a regular basis. The PSC and PCG are to approve the final Design and Documentation in preparation of tender.
- All significant scope changes following Schematic Design will require PCG approval based on advice from the Project Working Group.
- The PM will develop a variation management procedure to ensure agreement is documented for each variation.

10.2. Time

- A master programme will be developed by the PM to be approved by the PSC and PCG;
- A detailed programme will be provided by the PM to be approved by the PSC and reported against at each PSC meeting;
- A summary of the project's progress shall be provided at the PSC and PCG meetings; and
- All changes to the programme will require PSC approval.
- A draft reporting format will be agreed.

10.3. Cost

- A detailed project budget/cost plan will be prepared during the development phase. The PM will provide reports on the project budget/cost plan at each PCG meeting.
- Any significant amendments to the project budget/cost plan previously approved by the PSC will require PSC approval.
- A Project Procedures manual will be developed by the PM, which will establish the approvals process for changes to budget allocations including the approval value for each of the PSC and the PCG.

10.4. Risks & Opportunities

[insert risk management workshop details]

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Process	Responsibility	References	Auditable Output

10.5. Quality Management Plan

A Quality Management Plan will be developed for the project for the approval of the PSC.

Process	Responsibility	References	Auditable Output

10.6. Design Management

Throughout the design phase the PM will coordinate the preparation of monthly reports from the Design Team Leader.

These Reports will outline design status/progress; design risks, opportunities and issues; design decisions; design reviews/approvals; Functional and Technical Brief compliance; scope to budget alignment; statutory and regulatory compliance; satisfaction of masterplan requirements and other matters as required by the PCG.

The PM will monitor design progress relative to the program, identify delays or delay risks and develop and implement strategies to mitigate delays. The PM will also facilitate design reviews and approvals, including scope to budget alignment reviews and will oversee the coordination and quality assurance of design documentation.

The PM and Design Team will coordinate the review and approval of design milestones.

Approval of the project design will be provided by the PSC and PCG.

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11. Key Issues/Decisions

11.1. Issues Management

The Terms of Reference for each of the PSC and PCG will detail the process for the management of project issues, including delated authorities for minor matters and minor expenditure commitment.

11.2. Decision Mapping/Actions Required

Decisions required by the PSC or PCG will be provided as part of the issued pre-meeting reports for consideration of the meetings.

A nominated timeframe, if necessary, will be included with individual decision requests.

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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Appendix 1: Pre-Concept Plans and Area Schedule

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Appendix 2: Draft Master Programme

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Appendix 3: Proposed Budget Breakdown

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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Appendix 4: Draft Delivery Model Selection Report

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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Appendix P - Ecology Report

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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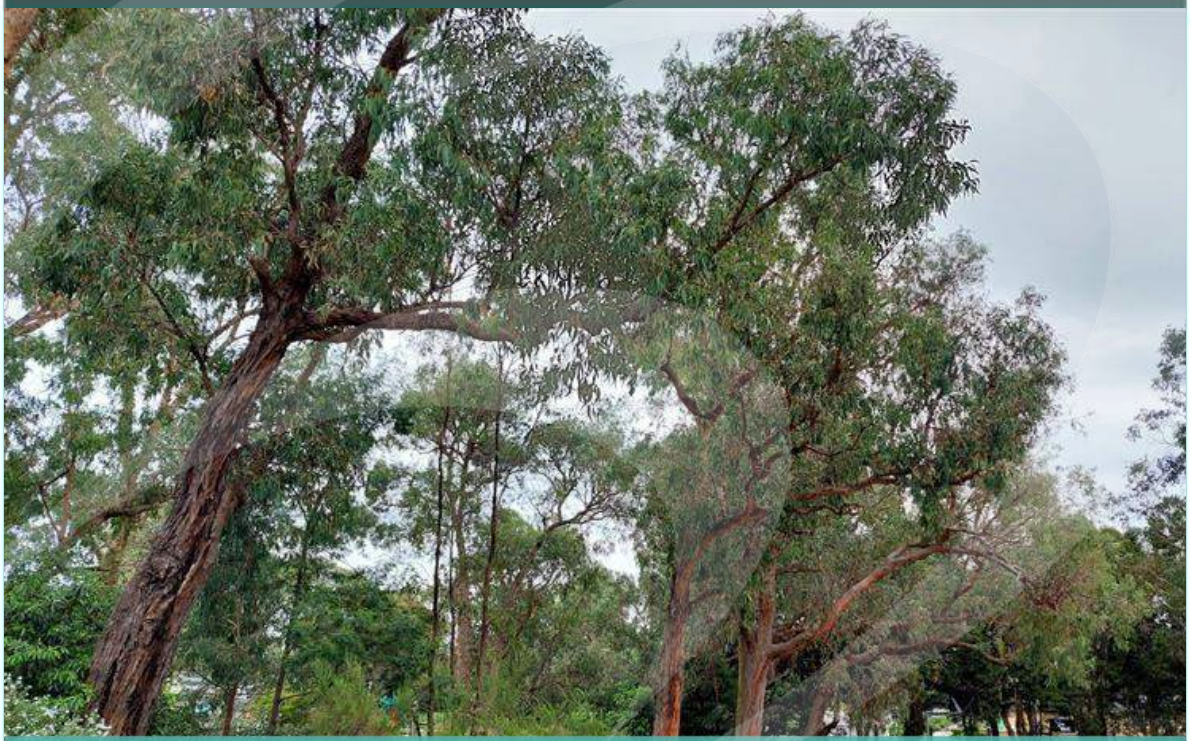
Flora, Fauna and Native Vegetation Impact Assessment for the proposed redevelopment of Aqualink Nunawading



Prepared for: Whitehorse City Council C/- Ontoit

10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

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Cover photo: Valley Heathy Forest (EVC 127) noted from within the study area

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Ecology Australia acknowledges the Traditional Custodians of Country throughout Australia, and we pay our respects to their Elders past, present and future.

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- Lachlan McGregor	Ontoit
- Cassandra Neate	Ecology Australia
- Josie Bailey	Ecology Australia

Executive Summary

Ontoit engaged Ecology Australia Pty Ltd (EA) on behalf of Whitehorse City Council to prepare a Flora, Fauna and Native Vegetation Assessment for public land at 384-400 Canterbury Road, Forest Hill. This assessment is required to support a business case for the proposed redevelopment of Aqualink Nunawading.

The current investigation involved a review of existing biodiversity information, a site assessment and review of three proposed development options being explored by Whitehorse City Council. The broader proposed disturbance footprints for the three development options (confirmed by Ontoit) cover the same area. The information obtained from these sources was used to assess the proposed project's impacts to protected biodiversity values and to determine relevant federal, state and local legislation and policy implications.

Summary of legislation and policy implications

The below table summarises the implications of relevant biodiversity legislation and policies for the proposed project.

Act	Project implications	Report reference
P&E Act	A planning permit would be required under Clause 52.17 of the Whitehorse Planning Scheme to remove, destroy or lop native vegetation. The requirements of Victoria's *Guidelines for the removal, destruction or loping of native vegetation* (see below table for further details). The proposed removal of 0.48 ha of valley heathy forest (EVC 127) patches, seven large trees (scattered or in patched) and 8 small, scattered trees would trigger an offset target of 0.093 GHUs and the protection of seven large trees, with an SBV score of 0.1015, located in the Whitehorse City LGA or Melbourne Water CMA area. These offsets are available for purchase on the Native Vegetation Credit Register, as at 12:36pm 19 September 2024.	Section 6.3
CaLP Act	Declared noxious weeds would need to managed during the construction phase of the project, to prevent outbrakes. The following decl;ared noxious species were recorded in the study area: • Angled onion *Allium triquetrum* (regionally restricted) • Hemlock *Conium maculatum* (regionally controlled) • Montpellier broom *Genista monspessulana* (regionally controlled) • Soursob *Oxalis pes-caprae* (regionally restricted)	Section 6.5

The below table presents a summary of project responses under Victoria's *Guidelines for the removal, destruction or loping of native vegetation*. The project would be assessed under the intermediate assessment pathway, based on the proposed disturbance footprint considered in this assessment.

Number	Application requirements	Section reference
Requirements for all applications		
1	Information about the native vegetation to be removed, including: • The assessment pathway and reason for the assessment pathway. This includes the location category of the native vegetation to be removed. • A description of the native vegetation to be removed that includes: o whether it is a patch or a scattered tree (or both) o the extent (in hectares) o the number and circumference (in centimetres measured at 1.3 metres above ground level) of any large trees within a patch o the number and circumference (in centimetres measured at 1.3 metres above ground level) of any scattered trees, and whether each tree is small or large o the strategic biodiversity value score o the condition score o if it includes endangered Ecological Vegetation Classes o if it includes sensitive wetland or coastal areas. • Maps showing the native vegetation and property in context and containing: o scale, north point and property boundaries o location of any patches of native vegetation and the number of large trees within the patch proposed to be removed o location of scattered trees proposed to be removed, including their size • The offset requirement, determined in accordance with section 5 of the Guidelines, that will apply if the native vegetation is approved to be removed.	Appendix 8
2	Topographic and land information relating to the native vegetation to be removed, showing ridges, crests and hilltops, wetlands and waterways, slopes of more than 20 percent, drainage lines, low lying areas, saline discharge areas, and areas of existing erosion, as appropriate. This may be represented in a map or plan.	Section 2, Figure 2 and Appendix 5
3	Recent, dated photographs of the native vegetation to be removed.	Table 2 (patches) and Appendix 7 (canopy trees)

Number	Application requirements	Section reference
4	Details of any other native vegetation approved to be removed, or that was removed without the required approvals, on the same property or on contiguous land in the same ownership as the applicant, in the five year period before the application for a permit is lodged.	Nil
5	An avoid and minimise statement. The statement describes any efforts to avoid the removal of, and minimise the impacts on the biodiversity and other values of native vegetation, and how these efforts focussed on areas of native vegetation that have the most value. The statement should include a description of the following: • Strategic level planning – any regional or landscape scale strategic planning process that the site has been subject to that avoided and minimised impacts on native vegetation across a region or landscape • Site level planning – how the proposed use or development has been sited or designed to avoid and minimise impacts on native vegetation. • That no feasible opportunities exist to further avoid and minimise impacts on native vegetation without undermining the key objectives of the proposal.	Section 6.3.2
6	A copy of any Property Vegetation Plan contained within an agreement made pursuant to section 69 of the Conservation, Forests and Lands Act 1987 that applies to the native vegetation to be removed.	N/A
7	Where the removal of native vegetation is to create defendable space, a written statement explaining why the removal of native vegetation is necessary. This statement must have regard to other available bushfire risk mitigation measures. This statement is not required when the creation of defendable space is in conjunction with an application under the Bushfire Management Overlay.	N/A
8	If the application is under Clause 52.16, a statement that explains how the proposal responds to the Native Vegetation Precinct Plan considerations at decision guideline 8.	N/A
9	An offset statement providing evidence that an offset that meets the offset requirements for the native vegetation to be removed has been identified, and can be secured in	Section 6.3.3 and Appendix 9

Number	Application requirements	Section reference
	accordance with the Guidelines. A suitable statement includes evidence that the required offset: • is available to purchase from a third party, or • will be established as a new offset and has the agreement of the proposed offset provider, or • can be met by a first party offset.	

Recommendations

Recommendations presented in Section 7 of this report include the following key recommendations to address significant identified biodiversity impacts and/or legislation or policy matters:

- An arborist should be engaged to identify measures which could be employed to protect native trees (scattered or in patches), and to confirm whether this would result in further native vegetation retention.
- Any proposed landscaping should aim to be sensitive to, and augment the existing indigenous vegetation and habitats in the study area.

1 Introduction

Ontoit engaged Ecology Australia Pty Ltd (EA) on behalf of Whitehorse City Council to prepare a Flora, Fauna and Native Vegetation Impact Assessment for public land at Forest Hill Reserve in Forest Hill. This assessment is required to accompany a business case Ontoit is preparing for Whitehorse City Council's proposed Aqualink redevelopment (referred to hereon as 'the proposed development'). Three proposed development options are being explored: Options 2, 3A and 5. This assessment considers relevant federal, state and local legislation and government policies.

The objectives of this report are to:

- describe significant biodiversity values within the study area (described in Section 2)
- assess and compare potential impacts of each of the 3 proposed development options on significant biodiversity values
- identify relevant biodiversity legislation and government policy implications for each of the 3 proposed development options.

This report is presented in the sections outlined below.

Section 2 describes the study area, being the focus of the investigation.

Section 3 presents methods used for the investigation, including any assumptions and limitations.

Section 4 describes the biodiversity values known or potentially occurring in the study area.

Section 5 describes the identified biodiversity impacts from the proposed development.

Section 6 discusses relevant environmental legislation and policy, and their implications for the proposed development.

Section 7 provides recommendations for the proposed development, to ensure compliance with relevant environmental legislation and policies.

Legislation and policy context underpinning the assessment is presented in Appendix 10.

2 Study area

The study area (Figure 1) is a 4.31 hectare area of land owned by Whitehorse City Council, at 384-400 Canterbury Road, Forest Hill 3131 and the abutting Fraser Place road reserve. It is located approximately 17.5 km east of Melbourne's Central Business District. It is located within the Gippsland Plain bioregion, the Melbourne Water catchment management area and the Whitehorse City Council local government area. It currently supports the existing Aqualink Nunawading health and aquatic facility.

The study area is subject to the following planning zones and overlays in the Whitehorse Planning Scheme:

- General Residential Zone (Fraser Place road reserve).
- Public Park and Recreation Zone (PPRZ), including the schedule to the PPRZ (remainder of the study area).
- Development Contributions Plan Overlay and Schedule 1 to this overlay (entire study area).
- Special Buildings Overlay (following and flanking the Forest Hill Drain).

The study area is not a designated bushfire-prone area, while surrounding land supports mainly residential land uses. The study area comprises an undulating landscape supporting mostly pale clay soils of sedimentary origin. Forest Hill Drain occurs immediately north to north-east of the study area. This drain extends approximately 1 km upstream to the north-east where it terminates at an industrial precinct, crossing several roads along its way. The study area generally slopes gently downward towards the drain.

The study area supports remnant indigenous trees (particularly mealy stringybark *Eucalyptus cephalocarpa* s.s. and yellow box *Eucalyptus melliodora*) as well as planted introduced, indigenous and Australian and Victorian native trees. Indigenous, Victorian native and introduced understorey plant species have been planted for amenity in various parts of the study area, often supplementing stands of remnant indigenous trees. Areas of introduced lawn also occur in a few locations amongst and beneath trees.

The following important habitat areas occur within/near the study area:

- Felicia Dale Reserve (approximately 375 m to the north-east of the study area, along Forest Hill Drain), separated from the study area by Canterbury Road.
- Glen Valley Road Reserve (approximately 400 m to the north-west), separated from the study area by Springvale Road, Canterbury Road and commercial buildings.
- Blackburn Lake Sanctuary (approximately 1.2 km to the north-west of the study area), separated from the study area by urban development and the large intersection between Canterbury Road and Springvale Road. A somewhat contiguous tree canopy follows a narrow path from this reserve, through urban backyards and reserves (mainly following the downstream reaches of Forest Hill Drain), to just north-west of the Canterbury Road – Springvale Road intersection.
- Interconnected habitats including Bellbird Dell Reserve, transitioning in Morack public golf course, and into Koomba park (approximately 1.6 km to the south-east), separated from the study area by dense urban development, major roads and freeways. A few small, scattered

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conservation and open space reserves and interspersed amongst the urban development between the Bellbird Dell Reserve/Koomba park and the study area.

- Mullum Mullum Park and associated reserves and environs (approximately 4 km to the north-east), separated from the study area by dense urban development, major roads and freeways. A few small, scattered conservation and open space reserves and interspersed amongst the urban development between the Mullum Mullum Park and the study area.

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10.1 – ATTACHMENT 1. Aqualink Nunawading Business Case

Figure 1 Study area

3 Methods

The current investigation involved:

- a literature and database review
- a site inspection
- assessment of impacts.

Legislation and policy context which underpinned this investigation are presented in Appendix 10.

3.1 Literature and database review

The following information was reviewed:

- Victorian Biodiversity Atlas (VBA) records of flora and fauna within 5 km of the study area (DEECA 2024d).
- MNES (e.g. flora, fauna, ecological communities and Ramsar sites) known or modelled to occur within 5 km of the study area, identified using the Australian government's Protected Matters Search Tool (DCCEEW 2024).
- FFG Act threatened and protected species and communities lists.
- DEECA's online NatureKit (DEECA 2024b) and MapshareVic (MapshareVic 2024) interactive maps, to identify:
    - Modelled pre-1750 and 2005 Ecological Vegetation Class (EVC) mapping of the study area and surrounds
    - Ramsar wetlands
    - Wetlands listed in the Directory of Important Wetlands in Australia
    - DEECA-mapped current wetlands.
- Published EVC benchmarks for relevant bioregional EVCs (DEECA 2024a).
- DEECA's Native Vegetation Reporting Tool (NVR Tool) to determine the assessment pathway of the proposed native vegetation removal and to generate the Native Vegetation Removal (NVR) report (DEECA 2024c).
- Planning property reports for the study area, obtained online via VicPlan (DTP 2024).
- The Victorian Planning Schemes online (DoTP 2023).
- Relevant legislation, government policies and strategies.
- Aerial photography dated 1945, 1951, 1960, 1963, 1970, 1975, 1987 and 2024, provided by Whitehorse City Council via Ontoit.
- Initial proposed Option 2, 3a and 5 development plans and associated disturbance footprints, provided by Ontoit.

- The existing arboricultural report of the study area, titled: *Arboricultural Condition Assessment, Site Address: Aqualink Nunawading, Fraser Place, Forest Hill* (Version 1), prepared by Arbor Survey for Mantric Architecture, dated 26 January 2021.

3.2 Site inspection

A site inspection was undertaken for:

- native vegetation
- terrestrial vascular flora and their habitats
- terrestrial fauna and their habitats.

Native vegetation and any observed threatened species were mapped using a GPS-enabled device to an accuracy of approximately +/- 5 metres and corrected using interpretation of aerial imagery sourced from Google Maps.

Native vegetation and vascular flora

A native vegetation and flora survey was carried out on 5 September 2024 by Davide Coppolino (Senior Botanist), assisted by Cassandra Neate (Research Assistant – Botany).

Weather conditions during the site inspection were mild, with a minimum daily temperature of 13.5°C, a maximum temperature of 23.4°C and a rainfall of 0.6 mm (BoM 2024). Weather conditions in the week preceding were also similar.

During the survey, the study area was inspected on foot, focusing on areas supporting native vegetation and meandering through other areas to cover the range of habitats present. Flora taxonomy presented in the following sections follow the VBA (DEECA 2024d). An indicative species list was recorded for species exclusively observed as part of amenity plantings. All naturally-established species were recorded.

Terrestrial fauna

Terrestrial fauna and habitat inspections were also carried out on 5 September 2024 by Dylan McLean (Zoologist). No aquatic ecology inspections were undertaken as no waterways present on site fall within the study area or intersect with the disturbance footprint of any of the three proposed footprint options. No wetlands are present on site.

3.2.1 Native vegetation

Native vegetation is defined under Clause 73.01 of all Victorian planning schemes as ‘plants that are indigenous to Victoria, including trees, shrubs, herbs, and grasses’. The Guidelines (DELWP 2017) categorise native vegetation into patches, large old trees in patches and scattered trees (large or small) for the purpose of assessment. Native vegetation which had been planted for amenity were not recorded.

Patches

A patch of native vegetation is:

- An area of vegetation where at least 25 per cent of the total perennial understorey plant cover is native, or
- Any area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy, or
- Any mapped wetland included in the Current wetlands map, available in DEECA systems and tools.

Patches of native vegetation are mapped and assessed as habitat zones, each comprising a single bioregion and EVC within a single contiguous patch of native vegetation. A habitat zone must be split when:

- It cannot be reasonably represented by a single VQA because the site condition score (out of 75) varies by at least 15 points, and
- The extent of each resulting habitat zone is greater than one hectare.

During the current assessment, bioregions and EVCs were determined by comparing onsite ecological characteristics against modelled bioregions and 1750 EVCs (DEECA 2024b) and published bioregion and EVC benchmark descriptions (DEECA 2024a). A dated photograph was taken of each habitat zone.

A Vegetation Quality Assessment (VQA) was undertaken for each habitat zone, using the Habitat Hectares assessment method (DSE 2004) as updated by the Assessor's Handbook (DELWP 2018). VQA assessments were undertaken by Davide Coppolino and Cassandra Neate, who both hold a current VQA competency at the time of the site inspection.

Canopy trees

The Guidelines (DELWP 2017) define a native canopy tree as 'a mature tree (i.e. it is able to flower) that is greater than 3 m in height and is normally found in the upper layer of the relevant vegetation type.'. Canopy trees Include standing dead trees with a DBH of at least 40 cm.

Native canopy trees are categorised as **large or small**, and as **patch trees** (large only), **or scattered trees** (large and small).

A scattered tree is defined as a native canopy tree that does not form part of a patch, whereas patch trees occur as part of a patch.

A large tree has a DBH greater than or equal to the large tree benchmark for the relevant bioregional EVC. All other (scattered) trees are small.

The following information was recorded for each scattered tree and (large) patch tree within the study area:

- The trunk location was mapped
- The taxon was recorded (to species or subspecies level, as relevant)
- The trunk circumference or DBH was measured

- Tree Protection Zone was calculated as trunk DBH * 12 (as per the *Assessor's handbook* [DELWP 2018])
- A dated photograph was taken
- Notes on whether the tree:
  - Was dead
  - Supported any observed hollows
  - Supported any observed large raptor nests.

Trees on public land within 15 metres of the study area potentially impacted indirectly by the proposed development were assessed, where access or a sufficient line-of-sight permitted.

Native canopy recorded in the study area were cross-referenced with those listed within the existing arboricultural report, with the tree number from the arborist report provided for each tree (where relevant). Additional trees to those recorded within the arboricultural report were also recorded (due to the larger study area considered for this assessment).

3.2.2 Terrestrial fauna habitats

Habitats observed during the site assessment were delineated and described according to their likely utilisation by fauna groups. Features considered when delineating and describing fauna habitats included:

- general vegetation structure, composition and condition
- presence of hollow-bearing trees
- presence of escarpments, caves, rock features, logs, litter or other potential fauna shelters
- waterways, water bodies and site hydrology
- human-induced disturbances and ongoing site management activities
- connectivity with important/core habitat areas.

Fauna habitats identified in the study area were compared against the requirements of listed threatened and migratory species to determine their likelihood or presence (LOP) in the study area. More details on methods used to determine LOP are provided in Section 3.3.

3.2.3 Threatened ecological communities

Presence of ecological communities listed as threatened under the EPBC Act or FFG Act was determined by comparing site observations of ecological values against community descriptions provided in the following resources:

- Relevant EPBC Act listing advice, conservation advice or recovery plans
- Relevant descriptions of the characteristics of FFG Act listed threatened communities (DEECA n.d.) or relevant FFG Act action statements.

3.3 Species likelihood of presence

Species that are listed as threatened or migratory under the EPBC Act or threatened under the FFG Act were assessed for LOP within the study area. Determining LOP is a subjective process which considers the following:

- Documented habitats and ecological requirements for relevant species
- Presence of suitable habitat within the study area, based on a brief site assessment
- Attributes of suitable habitat, including size, shape, and landscape context
- Known historical and current land use, management and other impacts which could affect species presence
- Number, age, and distribution of previous records, considering the likely survey history in terms of intensity and frequency.

Criteria used to determine LOP ratings during the current assessment are presented in Table 1.

Table 1 Likelihood of presence criteria

Likelihood	Definition
Not Likely	Study area is located outside the known geographic range for the taxon or does not contain necessary landscape features and/or habitats documented for that taxon.
Low	Study area lies within, or on the edge of, the geographic range for the taxon, and supports major habitat elements, but is lacking in one or more critical features, or is located within a landscape that will most likely preclude occupancy or regular use. Historic records may be supported by more recent records within 5 km of the study area.
Moderate	The location and geographic features of the study area match that which is known for the taxon. Habitat shares numerous floristic, structural or physical similarities with documented habitats, but may be limited with regard to one or more known ecological requirements (e.g. size, landscape context or critical resources). Historic and contemporary records occur within 5 km of the study area and/or the broader region.
High	Location of the study area lies within the known range and distribution for the taxon. Habitats present within the study area match that documented for the taxon regarding floristics and/or structure and satisfy the known ecological requirements. Multiple historic and recent records within the surrounding landscape indicate occurrence or regular use of the area.
Known	Taxon recorded within the study area during the current assessment or other recent assessment.

3.4 Assessment of impacts

Direct impacts were assessed by overlaying the proposed disturbance footprint (see Section 3.4.1) with mapped biodiversity values using GIS software. The methods used to assess impacts to different biodiversity values are described in the subsections below.

The species or communities listed as MNES under the EPBC Act were assessed using the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance (DEWHA 2013) if they had a moderate or higher LOP in the study area.

3.4.1 Disturbance footprint

The proposed disturbance footprint for the three proposed development options was confirmed by Ontoit on 12 September 2024. The proposed disturbance footprint is the same for all three proposed development options, and includes:

- proposed building footprints (these footprints are different for each of the three development options)
- the existing entry road (proposed to be resealed)
- a proposed extension to the existing entry road, which circles the proposed building footprint options and links to the north-eastern corner of the existing main, southern carpark
- a new northern carpark, occupying part of the footprint of existing buildings
- proposed landscaping areas between the proposed building footprints and the access roads proposed to circle them
- a 10 m buffer area beyond the outer-bounds of the above areas but limited to the same Council property, to allow for works areas.

3.4.2 Determining native vegetation removal

The following native vegetation removal was considered for the current assessment:

- Proposed native vegetation patch removal
- Likely indirect and assumed impacts to scattered and large canopy trees.

Mapping of the above-listed native vegetation removal was input into DEECA's online NVR Tool to determine the impact assessment pathway for the proposed development and to generate a Native Vegetation Removal report (NVR Report).

Past removal

Past removal is any other native vegetation removed (with or without required approval) within the five-year period before the planning application is lodged for the proposed development. Past removal considers any removal on the same property or on contiguous land in the same ownership but does not include native vegetation removed under an exemption.

The current assessment assumed no past removal, following advice from Ontoit.

Proposed removal

The proposed project disturbance footprint (described in Section 3.4.1) was overlapped with mapped native vegetation to determine the proposed extent of native vegetation removal. Where trees within a patch were considered removed, the impact area encompassed the whole area within the tree's crown drip line. The extent of a scattered tree is mapped as a circle with 15 m radius for a large tree or a 10 m radius for a small tree.

The total extent of native vegetation removal is calculated as the extent of patches (ha) plus the extent of scattered trees (ha), counting overlapping areas once only.

Assumed impacts

Canopy trees where assumed (deemed) to be lost where:

- the proposed disturbance footprint encroached into at least 10% of their Tree Protection Zone (as specified in Australian Standard AS4970-2009), or
- the proposed disturbance footprint encroached into more than one-third of a its crown or of its main stem (determined through interpretation of aerial imagery).

3.4.3 Threatened flora

The extent of impacts to listed threatened flora and floristic ecological communities was determined considering the same development disturbance footprint and indirect impacts outlined above.

3.4.4 Threatened fauna

Information on the ecology of each fauna species with medium or higher likelihood of presence was reviewed. Examples of information used to determine potential impacts from the proposed development included the following:

- Habitat elements and species behaviours (including timing and seasonality) which:
  - are important for survival (e.g. shelter and refugia)
  - are required for a species to complete its lifecycle (e.g. breeding habitat and timing).
- Periods and seasonality of activity (e.g. day and night-time activity, torpor periods).
- Mobility (i.e. ability to escape direct harm).
- Tendency to abandon habitat or breeding attempts if disturbed (e.g. from physical presence or from light/noise/vibration/pollution).

3.4.5 Listed threatening processes

Threatening processes listed under the EPBC Act and FFG Act were reviewed, to determine whether the proposed development has the potential to exacerbate any such processes.

3.5 Assumptions and limitations

The flora survey was carried out in spring, which is the optimal time to capture most flora species. However, some annual and geophytic species may have been undetectable (i.e. only present in the seedbank or dormant underground). Some species may have been lacking flowering/fruiting material required for identification to species or subspecies level. Areas of mown lawn within the study area may also have supported some scattered, introduced grasses which were unable to be identified due to a lack of fertile material. However, these areas generally appeared to be dominated by exotic species along with some scattered, common, indigenous species, so this is unlikely to have significantly altered the outcomes of the survey.

Where a canopy tree could not be directly accessed, its DBH was estimated. Notes on estimated DBHs are provided in Appendix 6.

The presence of many fauna species is difficult to confirm in the absence of targeted survey methods such as camera-trapping or spotlighting. Additionally, the rare or threatened fauna species which form the focus of threatened species legislation cannot always be expected to be detected, particularly outside active seasons or during brief surveys. As such, it is expected that some species which occur within the study area were not able to be recorded by direct or indirect observation (e.g. scats, burrows, feed trees, etc.) during these surveys.

The current investigation did not include independent verification of findings in third-party information sources relied upon for the assessment, except where information was obtained using the abovementioned methods.

4 Results

This section presents the results of the site inspection and supporting literature and database review. Native vegetation, threatened species and threatened ecological communities in the study area are shown in Figure 2.

4.1 Native vegetation

The benchmark descriptions of EVCs modelled to occur within and near the study area are provided below, along with discussion on their status in the study area.

Swampy Riparian Complex (EVC 126) – Endangered

No benchmark is available for this EVC, as is a complex made up of two or more other EVCs.

This EVC is modelled to have occurred along the Forest Hill Drain. The 2005 modelled extent for this EVC shows a small fragment of this EVC remaining in the northern extent of the study area.

No patches of this EVC were recorded in the study area. A few scattered trees just to the north of the study area comprise the remaining canopy elements swampy riparian woodland (EVC 83), which is a component of swampy riparian complex.

Valley Heathy Forest (EVC 127) – Endangered

"*A low, open forest to 15 m tall with a sedgy/grassy understorey with a component of small ericoid shrubs and grass-trees. Soil and moisture factors are critical in delimiting the vegetation.*"

This EVC is modelled to have occurred in all other parts of eth study area. The 2005 modelled extent for this EVC shows remnants of this EVC around the northern extent of the study area.

Six habitat zones comprising this EVCs were recorded in the study area. There locations are shown in Figure 2.

Habitat zones recorded in the study area are and summarised in Table 2 and detailed habitat hectare assessment results are presented in Appendix 5. Details and photos of canopy trees recorded in the study area are provided in Appendix 6 and Appendix 7, respectively.

Some tree species noted in the existing arborist report by Arbor Survey differed to the species observed in the current assessment. The tree details presented in Appendix 6 include cross-references to arborist tree numbers (as best as could be determined).

A significant proportion of the indigenous and Victorian native tree species identified on site were also listed as planted in the arboricultural report. However, based on the site assessment, Ecology Australia botanists considered many of these trees to have been naturally occurring. This position was based on the following:

- No compelling evidence that the trees were planted could be found onsite, though native and indigenous plantings had occurred beneath and amongst many of the indigenous trees.
- The trees:
  - were arranged in a hap-hazard manner
  - occurred in parts of the landscape typical of natural occurrence

- included several quite large and old trees
- generally included mixed age-classes.

- The arborist assessment did not include any details (i.e. methods or cited information) that explained or supported their reasoning as to why they concluded the trees were planted.
- Reviewed historic aerial photography dated between 1945 (predating the development of the existing Aqualink Nunawading facility) and 2024 showed a consistent tree cover in areas where our assessment identified remnant indigenous trees.

Table 2 Summary of habitat zones observed in the study area

Habitat Zone ID	Ecological Vegetation Class	Bioregional conservation status	Area (ha)	Condition score (out of 100)	Description	Representative photo
A	Valley heathy forest (EVC 127)	Endangered	0.097	24	Large trees absent; remaining canopy of moderate health, dominated by mealy stringybark; planted understorey of low indigenous structural and species diversity; spiny-headed mat-rush *Lomandra longifolia* subsp. *longifolia* was a key native understorey species; recruitment not observed; logs absent; weed cover moderate to high and predominantly comprising high threat species.	

Habitat Zone ID	Ecological Vegetation Class	Bioregional conservation status	Area (ha)	Condition score (out of 100)	Description	Representative photo
B	Valley heathy forest (EVC 127)	Endangered	0.123	34	Large trees present and with a canopy of low health; remaining canopy of moderate health, dominated by swamp gum *Eucalyptus ovata* subsp. *ovata*, yellow box and bundy *Eucalyptus goniocalyx* s.s.; understorey of low indigenous structural and species diversity; native understorey species included mostly planted indigenous shrubs; recruitment not observed; logs present; weed cover low, but predominantly comprising high threat species.	
C	Valley heathy forest (EVC 127)	Endangered	0.076	30	Large trees present and with a canopy in good health; remaining canopy of moderate health, dominated by yellow box and mealy stringybark; understorey comprising an introduced lawn with some scattered spiny-headed mat-rush; recruitment not observed; logs not present; weed cover high and predominantly comprising high threat species.	

Habitat Zone ID	Ecological Vegetation Class	Bioregional conservation status	Area (ha)	Condition score (out of 100)	Description	Representative photo
D	Valley heathy forest (EVC 127)	Endangered	0.167	28	Large trees present and with a canopy of moderate health; remaining canopy of moderate health, dominated by yellow box and bundy; understorey of low indigenous structural and species diversity; native understorey elements included mostly planted indigenous shrubs and ground cover species; recruitment not observed; logs present; weed cover high and predominantly comprising high threat species.	
E	Valley heathy forest (EVC 127)	Endangered	0.012	19	Large trees and canopy absent, very low indigenous understorey and structural species diversity; key native understorey species included sword tussock grass *Poa ensiformis* and trailing speedwell *Veronica plebia*; recruitment not observed; logs present (well below benchmark cover); weed cover high and predominantly comprising high threat species.	

Habitat Zone ID	Ecological Vegetation Class	Bioregional conservation status	Area (ha)	Condition score (out of 100)	Description	Representative photo
F	Valley heathy forest (EVC 127)	Endangered	0.042	28	Large trees absent; remaining canopy of good health, dominated by yellow box and narrow-leaf peppermint *Eucalyptus radiata* subsp. *radiata*; understorey of low indigenous structural and species diversity; key native understorey species included slender wallaby-grass *Rytidosperma racemosum* var. *racemosum*; woody species recruitment not observed; logs not present; weed cover moderate and predominantly not high threat.	

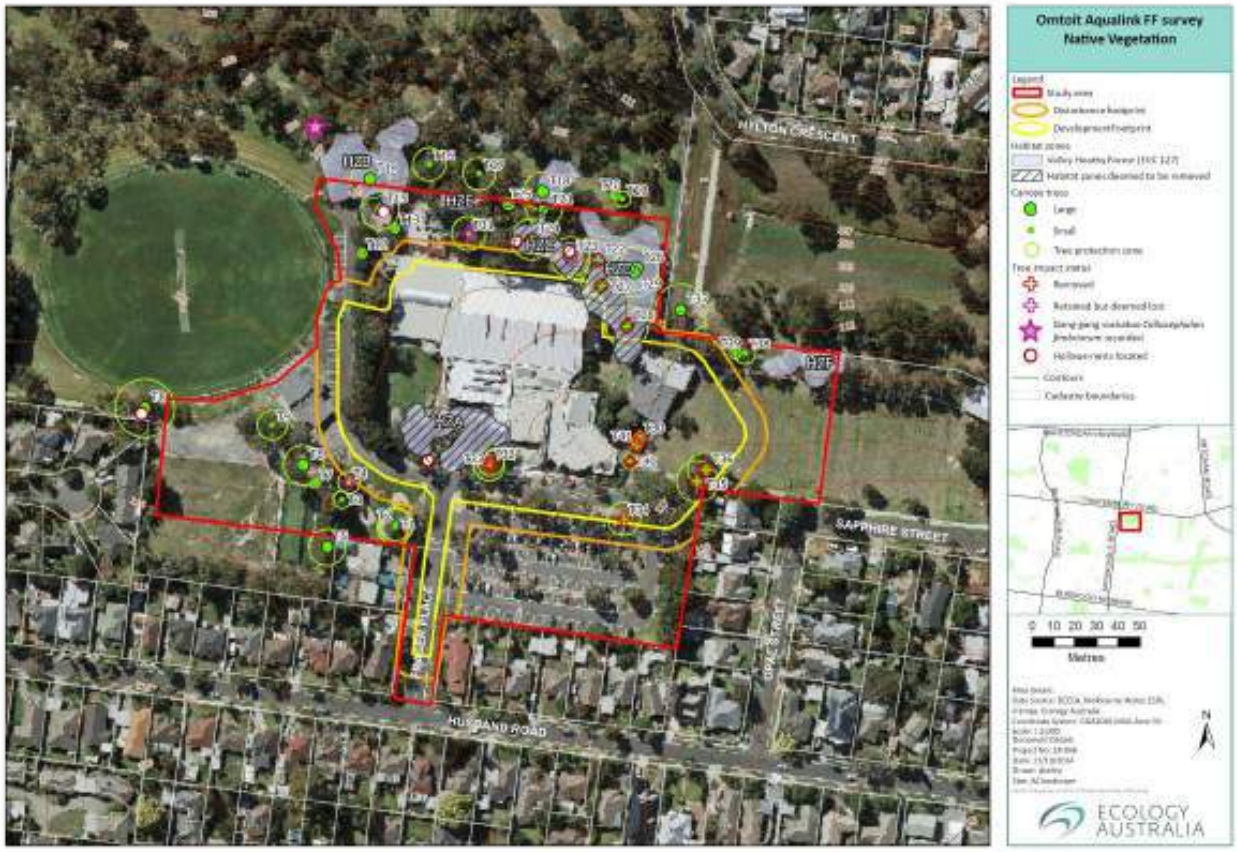

Figure 2 Native vegetation, threatened species and threatened ecological communities in the study area

4.2 Flora

A total of 107 flora taxa were recorded from the study area, 50 (47%) of which were indigenous to the area, 8 (7%) were native to Victoria but were outside their natural range, and 49 (46%) were introduced. Appendix 1 lists all flora taxa recorded during the current site inspection. A total of 21 (20% of the total observed taxa) of the observed indigenous taxa were only observed as planted individuals, leaving 29 (27%) indigenous taxa with at least some plants occurring naturally.

Of the flora taxa recorded, none are listed as threatened under the EPBC Act and five are listed as threatened under the FFG Act. These include:

- Giant honey-myrtle *Melaleuca armillaris* subsp. *armillaris* (FFG Act: endangered)
- Mugga *Eucalyptus sideroxylon* subsp. *sideroxylon* (FFG Act: endangered)
- Snowy river wattle *Acacia boormanii* (FFG Act: endangered)
- Spotted gum *Corymbia maculata* (FFG Act: vulnerable)
- Yarra gum *Eucalyptus yarraensis* (FFG Act: critically endangered).

All except Yarra gum had been planted in the study area.

An analysis of the likelihood of presence of listed threatened flora within the study area is presented in Appendix 3. No additional listed threatened flora species have a moderate or higher likelihood of presence in the study area.

4.3 Fauna habitats

Fauna habitats identified in the study area are described below.

Indigenous trees

Scattered and clustered indigenous trees were present throughout the study site. Beneath the clustered indigenous trees, remnant and planted indigenous understorey was present. Trees are all largely surrounded by manicured open spaces. Three small hollows (Figure 3) were observed within trees throughout the site. Additionally, a medium stick nest, likely from a medium sized raptor was observed within northern portion of the study site boundary (Figure 4). Overall, indigenous trees offer moderate-value habitat for threatened fauna species, who are likely utilising the trees as part of vegetated corridors to move into larger areas of habitat, as well as utilising the treed habitat for foraging opportunities.

Planted non-native trees/shrubs

Planted non-native trees and shrubs were scattered throughout the study site. While these are less favourable than the indigenous trees, they still provide cover and foraging opportunities for a variety of fauna species.

Landscaped garden beds

Landscaped gardens in the study area comprised native plants, shrubs and trees. Landscaped gardens were located to the western extent of the study area, close to the playground and football field. The garden beds had minimal connectivity between them and formed only isolated patches of habitat. None were sufficient to support threatened species' foraging or roosting requirements.

Introduced lawn

Introduced lawn comprised largely mown, introduced grasses. Two main sections of introduced lawn were located on the perimeters of the site, with a large patch in proximity to the cricket nets, as well as a large patch on the far eastern side of the study area. The two habitats were non-contiguous, with a large carpark dividing the two. While these habitats may offer foraging opportunities for bird species, such as parrot species, crested pigeons and magpie larks etc., these habitats will not support foraging mammals or reptiles, with minimal cover and complexity to offer foraging opportunities or refugia for threatened species.

Figure 3 Rainbow lorikeet's *Trichoglossus moluccanus,* pictured using one of three small hollows observed within study site.

Figure 4 Medium sized stick nest, likely from a raptor. Located within site boundary.

4.4 Fauna species

A total of 17 fauna taxa was recorded from the study area. 15 (88%) of which were indigenous to the area, and 2 (11.5%) were introduced. Appendix 2 lists all fauna taxa recorded during the current site inspection. Recorded fauna taxa included, 1 EPBC and FFG Act-listed species: gang-gang cockatoo (Figure 5). Their observed location within the study area is shown in Figure 2.

Figure 5 Gang-gang cockatoo *Callocephalon fimbriatum*, observed just beyond northern perimeter of study site.

A total of 63 threatened and migratory/marine fauna species are known or modelled to occur within 5 km of the study area (DAWE 2020; DELWP 2020a). An analysis of LOP of these species is provided in Appendix 4. The LOP analysis identified the following listed species with moderate or higher LOP in the study area:

- Powerful owl *Ninox strenua* (FFG Act: vulnerable).
- Swift parrot *Lathamus discolor* (FFG Act: Critically endangered).
- Grey-headed flying fox *Pteropus poliocephalus* (FFG Act: vulnerable).
- White-throated needletail *Hirundapus caudacutus (*FFG Act: vulnerable).
- Grey goshawk *Accipiter novaehollandiae (FFG Act: endangered).*

4.5 Threatened ecological communities

No threatened ecological communities were identified in the study area.

Two EPBC Act-listed ecological communities are modelled as potentially occurring within 5 km of the site (DCCEEW 2024):

- Natural Damp Grassland of the Victorian Coastal Plains (critically endangered).
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (critically endangered).

The study area is located within an area which appears to be naturally treed, with no evidence that the site currently or previously supported native grassland vegetation. Therefore, the Natural Damp Grassland of the Victorian Coastal Plains community was considered not present or likely to occur at the site. The White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland community was also considered to be absent, as observed patches of native vegetation were variously missing either the requisite native species cover and/or diversity, or sufficient cover of characteristic lifeforms (e.g. tussock grasses).

The Sedge-rich *Eucalyptus camphora* Swamp Community is modelled to occur in the study area. However, this community was not observed during the site assessment. No other FFG Act listed ecological communities were identified in the study area, nor were any considered likely to occur based on current site conditions.

4.6 Important wetlands

No current, important or Ramsar wetlands occur within or near the study area.

5 Proposed impacts

This section describes biodiversity impacts identified for the proposed development, in line with relevant legislation and policy reporting requirements.

5.1 Native vegetation

Proposed native vegetation removal is shown in Figure 2 and includes 0.48 ha from patches of valley heathy forest (EVC 127), seven large trees (scattered or in patched) and 8 small, scattered trees. Further details of proposed native vegetation removal are presented in the NVR Report in Appendix 8 and discussed in Section 6.3.1.

5.2 Flora

Based on information obtained during the current assessment, no threatened flora species listed under the EPBC Act or FFG Act are expected to be impacted by the proposed development, except a small number of spotted gum *Corymbia maculata* and mugga *Eucalyptus sideroxylon subsp. sideroxylon* occurring as planted amenity trees.

5.3 Fauna

Table 3 assesses the potential for listed threatened and migratory fauna species with moderate of higher likelihood of presence in the study area to be impacted by the proposed development. The assessment considers species' susceptibility to impacts considering their habitat requirements, behaviour and lifecycle requirements. This assessment determined no listed species are susceptible to impacts from the proposed development.

Table 3 Threatened terrestrial fauna species with moderate or higher likelihood of presence with susceptibility to development impacts

Species name	Common name	Listing	Susceptibility to impacts from the proposed development	Assessment of impact potential
Ninox strenua	Powerful owl	FFG Act: vulnerable	Species requires large hollow bearing trees, with large hollows up to 50cm wide, to support nesting and roosting requirements. Three very small hollows were observed on site, only capable of supporting rainbow lorikeets or smaller species (Figure 3). Therefore, the study site is not capable of supporting species nesting/roosting requirements. Powerful owls may utilise area within study site for hunting purposes/passage through to better contiguous habitat to the south-east of site.	Works may remove a very small amount of both foraging and prey habitat for species. However, foraging and prey habitat in study area constitutes a very small proportion of habitat in the broader area. No suitable hollow-bearing trees were observed during the site inspection. Given the above, species are **unlikely to be impacted by the proposed development**.

Species name	Common name	Listing	Susceptibility to impacts from the proposed development	Assessment of impact potential
Lathamus discolor	Swift parrot	FFG Act: Critically endangered	Swift parrots are migratory, breeding in Tasmania, visiting mainland Australia from autumn into winter. Therefore, the species would only use study site for feeding/rest opportunities while on passage to more extensive, contiguous habitat. Small number of winter flowering box iron bark trees on the western portion of the study site may offer suitable feeding opportunities for species.	Works will likely remove a small amount of both foraging and prey habitat for both species. However, foraging and prey habitat in study area constitutes a small proportion of habitat in the broader area. No hollow-bearing trees were observed during the site inspection. Given the above, species are **unlikely to be impacted by the proposed development**.
Pteropus poliocephalus	Grey-headed flying fox	FFG Act: vulnerable	Grey-headed flying foxes are found in a range of habitats, feeding on pollen, nectar, and fruits (DAWE 2021b). There were suitable patches of habitat within the study site, that may offer foraging opportunities for species. Study site is approximately 20 km from known Yarra Bend roost colony. Species is only likely utilising study site for foraging opportunities/cover while travelling the broader area.	The proposed development would remove a small amount of foraging habitat, constituting a small part of habitat in the broader area. Species is highly mobile and would be able to readily escape direct impacts from works. Based on the above, **impacts from the proposed development are likely to be minimal, if the species is present**.
Hirundapus caudacutus	White-throated needletail	FFG Act: vulnerable	This species is almost exclusively aerial in Australia, over wooded and forested areas. Species occasionally flies low to ground, but often flies high >1.8 km, foraging on the wing. Species has been recorded roosting in trees in forests and woodlands. May utilise trees within the study site for roosting opportunities.	The proposed development would remove a small amount of potential roosting habitat, constituting a small part of habitat in the broader area. Species is highly mobile and would be able to readily escape direct impacts from works. Based on the above, **impacts from the proposed**

Species name	Common name	Listing	Susceptibility to impacts from the proposed development	Assessment of impact potential
				development are likely to be minimal, if the species is present.
Accipiter novaehollandiae	Grey goshawk	FFG Act: Endangered	Species occupies tall wet forest and riverine forest, occasionally in woodlands or open habitat (Menkhorst *et al.* 2019). The species relies on mature forests for breeding, seldom using forest regrowth less than 30 years old. Breeding appears to be confined to dense, wet forests, where nest sites are associated with watercourses. Only females and immature birds are known to hunt in urban and agricultural areas (SWIFFT 2014). Patches of suitable hunting habitat, present to north of the study site. Species may utilise study site while on passage/ hunting purposes. Moderate number of recent VBA records (within 5 km of site).	A suitable sized nest was identified within the site boundary (Figure 4). However, species is highly susceptible to disturbance by human presence and may desert nests and young (studies have shown that when nesting, species may tolerate indirect disturbance within 100m of selective logging and road building) (SWIFFT 2014). Site is surrounded by busy freeways just beyond 100m. Therefore, species is only likely utilising study site and broader habitat for hunting purposes. The proposed development would remove a small amount of hunting habitat, constituting a small part of habitat in the broader area. Species are highly mobile and would be able to readily escape direct impacts from works. Nest tree should be left intact (Figure 4) in the unlikely case that species is nesting within the site. Based on the above, **impacts from the proposed development are likely to be minimal, if the species is present**.

5.4 Threatened ecological communities

No threatened ecological communities would be impacted by the proposed development as none were found to occur in the study area during the site assessment.

5.5 Important wetlands

No important or current wetlands would be impacted by the proposed development as none occur within the study area. One small waterway occurs on site, however, this was located outside of both the study area and the proposed disturbance footprint, and is therefore considered as not impacted.

6 Legislation and policy implications for the proposed development

Implications of regulatory requirements relevant to the current investigation on the proposed development are discussed in this section.

6.1 Environment Protection and Biodiversity Conservation Act 1999 (C'wlth)

No MNES are considered likely to be significantly impacted by the proposed development so a referral to DCCEEW under the EPBC Act is not considered to be required.

The following key threatening processes listed under the EPBC Act could be exacerbated by the proposed development, if associated works are not properly managed:

- Land clearance.
- Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants.

Recommendations are provided in Section 7 of this report, to minimise these risks.

6.2 Flora and Fauna Guarantee Act 1988 (Vic.)

A permit to take protected flora would not be required for the proposed development.

The following FFG Act-listed threatened flora species would be impacted proposed development:

- Mugga *Eucalyptus sideroxylon* subsp. *sideroxylon* (FFG Act: endangered)
- Spotted gum *Corymbia maculata* (FFG Act: vulnerable)

A protected flora permit (issued under the FFG Act) is generally required to kill, injure, disturb or collect protected flora on public land or on private land owned by or vested in a public authority. However, an exemption applies to protected flora which has been propagated from flora lawfully obtained and kept (i.e. planted flora sourced from lawfully obtained stock). This exemption would apply to the above species, which both only occur as planted amenity trees.

The following threatening processes listed under the FFG Act could be exacerbated by the proposed development, if associated works are not properly managed:

- Increase in sediment input into Victorian rivers and streams due to human activities.
- Input of toxic substances into Victorian rivers and streams.
- Invasion of native vegetation by Blackberry *Rubus fruticosus* L. agg.
- Invasion of native vegetation by 'environmental weeds'.
- Loss of biodiversity as a result of the spread of Coast Wattle (*Acacia longifolia* subsp. *sophorae*) and Sallow Wattle (*Acacia longifolia* subsp. *longifolia*) into areas outside its natural range.
- Loss of hollow-bearing trees from Victorian native forests.
- Spread of *Pittosporum undulatum* in areas outside its natural distribution.
- Use of *Phytophthora*-infected gravel in construction of roads, bridges and reservoirs.

Recommendations are provided in Section 7 of this report, to minimise these risks.

6.3 Planning and Environment Act 1987 (Vic.)

A planning permit is required under Clause 52.17 to remove, destroy or lop native vegetation, including dead native vegetation. However, the following exemptions relevant to the proposed development apply to some of the native vegetation observed in the study area:

- The requirement to obtain a permit does not apply to native vegetation that is dead. This exemption does not apply to a standing dead tree with a trunk diameter of 40 centimetres or more at a height of 1.3 metres above ground level.
- The requirement to obtain a permit does not apply to native vegetation that is to be removed, destroyed or lopped that was either planted or grown as a result of direct seeding. This exemption does not apply to native vegetation planted or managed with public funding for the purpose of land protection or enhancing biodiversity unless the removal, destruction or lopping of the native vegetation is in accordance with written permission of the agency (or its successor) that provided the funding.

Native vegetation subject to either of the above exemptions is not mapped in Figure 2.

6.3.1 Guideline for the Removal, Destruction and Lopping of Native Vegetation

Native vegetation impacts and assessment pathway

The proposed development would result in the removal of native vegetation comprising:

Location category:	Location 2
Type of vegetation:	Patch; scattered trees, patch trees
Extent of native vegetation:	0.48 ha
Number of large trees	7
Number of small trees	8

As a result, the proposed development will be assessed via the **intermediate** assessment pathway.

6.3.2 Avoidance and minimisation

The study area was not subject to any strategic planning process.

The proposed development footprints and associated proposed disturbance footprint have been sited within and immediately surrounding the footprint of the existing Aqualink facility. This ensures minimum impacts to surrounding native vegetation, particularly to the north, north-east and south-west of the proposed disturbance footprint.

6.3.3 Offsets

The proposed native vegetation removal would trigger the following offset target, according to the NVR Report presented in Appendix 9.

General Habitat Units	0.093
Number of large trees to be protected	7
Minimum SBV score	0.1015
Vicinity	Whitehorse City LGA or Melbourne Water CMA area

A native vegetation credit could be purchased to fulfil the above offset requirements, based on offsets available on the Native Vegetation Credit Register as at 12:36pm 19 September 2024. The required third-party offsets have been identified using DEECA's Native Vegetation Credit Register search tool, and are presented in Appendix 9.

6.4 Environment Effects Act 1978 (Vic.)

A referral under the EE Act would not be required due to biodiversity impacts, as the proposed project does not meet the biodiversity-related referral criteria set out in the *Ministerial guidelines for assessment on environmental effects under the Environment Effects Act 1978* (DTP 2023).

6.5 Catchment and Land Protection Act 1994 (Vic.)

The following declared noxious weeds were recorded in the study area during the site inspection:

- Angled onion *Allium triquetrum* (regionally restricted)
- Hemlock *Conium maculatum* (regionally controlled)
- Montpellier broom *Genista monspessulana* (regionally controlled)
- Soursob *Oxalis pes-caprae* (regionally restricted)

The recommendations provided in Section 7 of this report include noxious weed management measures to consider, to meet the requirements of the CaLP Act during project delivery.

6.6 Wildlife Act 1975 (Vic.)

Once approvals under other Acts are granted for the project, the provisions of the *Wildlife Act 1975* relating to damage, disturbance or destruction of wildlife habitat would not apply.

The recommendations provided in Section 7 of this report include wildlife welfare management measures to consider, to comply with the associated provisions of the Act during project delivery.

7 Recommendations

Below is a list of values identified during the current investigation, which should be prioritised for retention through project design amendments.

- Large trees (scattered or in patches), particularly those supporting hollows (see Figure 2
- Habitat zone D, which is has a higher Strategic Biodiversity Value score, is better connected to other habitat areas, and is generally better-quality habitat compared to other impacted native vegetation patches in the study area. Habitat Zone B should also continue to be retained, for the same reasons.

An arborist should be engaged to identify measures which could be employed to protect native trees (scattered or in patches), and to confirm whether this would result in further native vegetation retention. Any proposed landscaping should aim to be sensitive to, and augment the existing indigenous vegetation and habitats in the study area.

Retention of native vegetation should aim to:

- minimise the extent of removal
- minimise fragmentation (i.e. breaking one contiguous patch into two or more smaller patches)
- maximise the area—perimeter ration of retained areas (i.e. retain a square patch rather than a rectangular/linear patch of the same area.

The below measures should be considered for inclusion in a Construction Environmental Management Plan for the project. These measures include considerations to comply with relevant biodiversity legislation and policies and to achieve appropriate environmental outcomes. The below list is a guide only and does not include an exhaustive list of possible considerations. Final measures adopted for the project would ultimately need to be directed by the requirements set out in project approvals and informed by requirements identified by the contractor/s delivering the project.

Prior to construction

- Areas supporting retained biodiversity values should be marked out by a suitably qualified surveyor and fenced off using highly visible fencing that will effectively exclude all access. 1.8 m high semi-permanent fencing is often required to prevent access. 'No-go Zone' signage should be fixed to the development side of the fencing at regular intervals.
- A suitably qualified zoologist with required permits/licences under the *Wildlife Act 1975* should undertake pre-clearance fauna inspections prior to and within 24 hours of the any area being cleared. Where feasible, any identified fauna should be translocated in accordance with a pre-approved fauna translocation plan. Where translocation is not feasible or will result in prohibited or otherwise significant impacts to fauna (e.g. aborted breeding or young), clearing of the affected area should be postponed until the fauna can leave the site under their own volition.
- Controlling all noxious weeds and other environmental weeds listed on the *Advisory list of environmental weeds in Victoria* (White *et al.* 2022), including but not limited to those listed

below, prior to commencing works to minimise their spread during construction (see Appendix 1 for species known to currently occur on site):

- Coast wattle *Acacia longifolia* subsp. *sophorae* (if it emerges onsite)
- Blackberry *Rubus fruticosus* L. agg. (if it emerges onsite)
- Sweet pittosporum *Pittosporum undulatum* (currently present onsite).

During construction

- Where practicable, the following should be kept away from retained biodiversity values and at least 30 m away from waterways, stormwater channels/inlets and waterbodies:
  - any chemical handling (including refuelling) or machinery containing chemicals (including fuels)
  - material laydown
  - soil and fill stockpiling
  - site offices
  - personnel parking, amenity and rest areas
  - onsite waste disposal points
  - washdown areas (must be as far as possible from waterways and waterbodies)
  - concrete batching areas.
- Where impacts to native vegetation cannot be avoided, vegetation should be removed, lopped or slashed to the minimum extent necessary, as opposed to complete removal.
- Any material from felled trees that is suitable as habitat logs or hollows should be introduced into nearby local council reserves (where appropriate) to provide fauna habitat.
- All construction waste should be immediately disposed of in lidded bins. Areas of retained biodiversity values should be regularly inspected for litter, illegal dumping and opportunities for illegal dumping. Any identified litter should be immediately removed and lawfully disposed. Identified feasible measures to minimise the risk of illegal dumping should be implemented.
- Any outbreaks of declared noxious weeds or other environmental weeds (see Appendix 1 for species known to currently occur on site) should be immediately controlled by a suitably qualified bushland contractor.
- Ensure all machinery and equipment that enters or leaves the site is free of soil and weed seeds.
- Retain vegetation cover across the site as much as feasible by staging and limiting vegetation clearing to only the areas needing to be cleared at a given time.
- Measures should be developed to prevent wildlife from accessing works areas or from falling into or being trapped within open excavations. If any wildlife access the works area, works should be immediately stopped and any barriers to the wildlife leaving the site are to be removed. If the wildlife is not able to leave the works area on its own, a suitably qualified zoologist with required permits/licences under the *Wildlife Act 1975* is to implement

measures to assist the wildlife to leave the site in accordance with a preapproved plan (e.g. translocation plan) or any prior approval by the responsible authority. Works can recommence once the works area is clear of wildlife.

Post-construction (during construction and landscaping maintenance periods)

- Any outbreaks of declared noxious weeds or environmental weeds (see Appendix 1 for species known to currently occur on site) should be immediately controlled by a suitably qualified bushland contractor.
- Stabilise soils (including within open drainage channels) as soon as possible after the completion of works in a given area to minimise erosion and siltation of receiving waterways or waterbodies.

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9 Glossary and abbreviations

Biodiversity	The variety of all life-forms, plants, animals, fungi, protists (including algae) and bacteria, their encoded genes, and the ecosystems of which they form a part
Bioregion	Defined geographical regions of Australia with similar climatic and geophysical characteristics, and which generally contain a suite of distinct ecosystems and species
CaLP Act	Victorian *Catchment and Land Protection Act 1994*
Conservation status	Categorisation of the threat risk to biological assets (plant and animal species, EVCs or plant communities) at a defined scale (e.g. national, state), as determined by specific criteria
Disturbance footprint	The proposed extent of the proposed development as well as any additional areas that would be directly disturbed to deliver the project (including works areas), as advised by Ontoit.
Drip line	The drip line is the outermost boundary of a tree canopy (leaves and/or branches) where the water drips on to the ground (DELWP 2017)
Ecological Vegetation Class (EVC)	A vegetation classification described through a combination of its floristic composition, life form and ecological characteristics, and its association with particular environmental attributes. EVCs may include one or more floristic communities that occur across a biogeographic range, and have similar habitat and ecological processes operating
Endemic	Naturally found only in a defined geographic area (e.g. Murray cod are endemic to the Murray Darling basin)
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
Exotic	Plants, animals, fungi and other organisms that have been introduced (deliberately or accidentally) to Australia or a given area after European settlement
FFG Act	Victorian *Flora and Fauna Guarantee Act 1988*
Floristic	Of or pertaining to plant species, i.e. flora
GIS	Geographic Information System. A digital platform for creating, analysing and viewing maps and other spatially referenced data
Habitat Hectares	A measure of the quality and extent of native vegetation, incorporating attributes including presence of large trees, tree canopy health, understorey structure and diversity, weed cover and landscape context
High threat species	Introduced species (including non-indigenous 'natives') which, as invading species have highly deleterious impacts on indigenous vegetation and faunal habitats
Indigenous	Plant and animal species native to the geographic area of interest

Indigenous vegetation	Vegetation native to the geographic area of interest
Introduced	Deliberately or accidentally brought to Australia or part of Australia, usually by human agency
Life form	An abbreviated description of the habit, growth form and longevity of a plant species (e.g. tree, shrub, vine, annual, submerged aquatic)
Native canopy tree	A native canopy tree is a mature tree (i.e. it is able to flower) that is greater than 3 m in height and is normally found in the upper layer of the relevant vegetation type (DELWP 2017)
Native species	Species occurring naturally in Australia as part of the pre-European flora or fauna
Plant cover	Plant cover is the proportion of the ground that is shaded by vegetation foliage when lit from directly above. Areas that include non-vascular vegetation (such as mosses and lichens) but otherwise support no native vascular vegetation are not considered to be a patch for the purposes of the Guidelines. However, when non-vascular vegetation is present with vascular vegetation, it does contribute to cover when determining the percentage of perennial understorey plant cover (DELWP 2017)
Taxa/Taxon	A taxonomic category such as a species, subspecies or variety of organism, including a particular population where differentiated under relevant legislation (singularly *taxon* or plural *taxa*)
Vegetation community	Term for interacting plant populations forming vegetation. A vegetation community in formal classifications may have characteristic plant species, composition and structure
WONS	Weeds of National Significance

Appendix 1 Vascular plant species recorded during the site inspection

Symbol	Key:
CR	Critically endangered under the EPBC Act
EN	Endangered under the EPBC Act
VU	Vulnerable under the EPBC Act
P	P - Protected flora species under the FFG Act
cr	Critically endangered under the FFG Act
en	Endangered under the FFG Act
vu	Vulnerable under the FFG Act
C	C - Species listed as Regionally Controlled under the CaLP Act
R	R - Species listed as Restricted under the CaLP Act
WONS	WONS - Weeds of National Significance

Flora taxonomy follows VBA standards (DEECA 2024d).

Origin	Scientific name	Common name	Conservation status	Weed status	All observed plants planted
Indigenous	*Acacia acinacea* s.s.	Gold-dust wattle			X
Introduced	*Acacia baileyana*	Cootamundra wattle			
Non-indigenous native	*Acacia boormanii*	Snowy River wattle	en P		X
Indigenous	*Acacia mearnsii*	Black wattle			
Indigenous	*Acacia melanoxylon*	Blackwood			
Indigenous	*Acacia mucronata* subsp. *longifolia*	Narrow-leaf wattle			
Indigenous	*Acacia paradoxa*	Hedge wattle			X
Non-indigenous native	*Acacia pravissima*	Ovens wattle			
Indigenous	*Acacia pycnantha*	Golden wattle			X
Indigenous	*Acaena novae-zelandiae*	Bidgee-widgee			X
Introduced	*Aeonium* spp.	Aeonium			

Origin	Scientific name	Common name	Conservation status	Weed status	All observed plants planted
Introduced	*Aizoon pubescens*	Galenia			
Introduced	*Allium triquetrum*	Angled onion		R	
Introduced	*Anthoxanthum odoratum*	Sweet vernal-grass			
Introduced	*Aphanes arvensis*	Parsley piert			
Introduced	*Arctotheca calendula*	Cape weed			
Introduced	*Arum italicum* subsp. *italicum*	Italian cuckoo-pint			
Introduced	*Bellis perennis*	English daisy			
Indigenous	*Brachyscome multifida*	Cut-leaf daisy			
Indigenous	*Bursaria spinosa*	Sweet bursaria			
Indigenous	*Cassinia aculeata* subsp. *aculeata*	Common cassinia			X
Non-indigenous native	*Cassinia sifton*	Drooping cassinia			
Introduced	*Cenchrus clandestinus*	Kikuyu			
Introduced	*Cerastium glomeratum* s.l.	Common mouse-ear chickweed			
Indigenous	*Chrysocephalum semipapposum*	Clustered everlasting			X
Indigenous	*Clematis microphylla* s.l.	Small-leaved clematis			
Introduced	*Conium maculatum*	Hemlock		C	
Indigenous	*Coprosma quadrifida*	Prickly currant-bush			X
Introduced	*Coprosma repens*	Mirror bush			
Indigenous	*Correa glabra* var. *glabra*	Rock correa			X
Indigenous	*Correa reflexa*	Common correa			X
Introduced	*Corymbia citriodora* subsp. *citriodora*	Lemon-scented gum			X
Non-indigenous native	*Corymbia maculata*	Spotted gum	vu P		X
Introduced	*Cotoneaster glaucophyllus*	Large-leaf cotoneaster			

Origin	Scientific name	Common name	Conservation status	Weed status	All observed plants planted
Introduced	*Cynodon dactylon* var. *dactylon*	Couch			
Introduced	*Dactylis glomerata*	Cocksfoot			
Indigenous	*Dianella admixta*	Black-anther flax-lily			X
Indigenous	*Dianella longifolia* var. *longifolia* s.l.	Pale flax-lily			
Indigenous	*Dianella tasmanica*	Tasman flax-lily			
Indigenous	*Dichondra repens*	Kidney-weed			
Indigenous	*Diplarrena moraea*	White iris			X
Introduced	*Ehrharta erecta*	Panic veldt-grass			
Introduced	*Ehrharta longiflora*	Annual veldt-grass			
Indigenous	*Einadia nutans* subsp. *nutans (*s.s.*)*	Nodding saltbush			
Indigenous	*Enchylaena tomentosa* var. *tomentosa*	Ruby saltbush			
Introduced	*Erigeron sumatrensis*	Tall fleabane			
Indigenous	*Eucalyptus camaldulensis* subsp. *camaldulensis*	River red-gum			
Indigenous	*Eucalyptus cephalocarpa* s.s.	Mealy stringybark			
Indigenous	*Eucalyptus goniocalyx* subsp. *goniocalyx*	Bundy			
Indigenous	*Eucalyptus melliodora*	Yellow box			
Indigenous	*Eucalyptus ovata* subsp. *ovata*	Swamp gum			
Indigenous	*Eucalyptus polyanthemos*	Red box			X
Indigenous	*Eucalyptus radiata* subsp. *radiata*	Narrow-leaf peppermint			
Indigenous	*Eucalyptus rubida*	Candlebark			X
Indigenous	*Eucalyptus sideroxylon* subsp. *sideroxylon*	Mugga	en P		
Indigenous	*Eucalyptus viminalis* subsp. *viminalis*	Manna gum			
Indigenous	*Eucalyptus yarraensis*	Yarra gum	cr P		
Introduced	*Euphorbia peplus*	Petty spurge			
Introduced	*Fraxinus angustifolia*	Desert ash			

Origin	Scientific name	Common name	Conservation status	Weed status	All observed plants planted
Introduced	*Fumaria bastardii*	Bastard's fumitory			
Indigenous	*Gahnia sieberiana*	Red-fruit saw-sedge			
Introduced	*Galium aparine*	Cleavers			
Indigenous	*Galium* spp.	Bedstraw			
Introduced	*Genista monspessulana*	Montpellier broom		C WONS	X
Indigenous	*Goodenia ovata*	Hop goodenia			X
Introduced	*Grevillea 'Poorinda Constance'*	Grevillea 'poorinda constance'			X
Non-indigenous native	*Hardenbergia violacea*	Purple coral-pea			
Introduced	*Hedera helix* s.l.	English ivy			
Introduced	*Helminthotheca echioides*	Ox-tongue			
Introduced	*Hypochaeris radicata*	Flatweed			X
Indigenous	*Indigofera australis* subsp. *australis*	Austral indigo			X
Indigenous	*Juncus* spp.	Rush			
Non-indigenous native	*Kennedia rubicunda*	Dusky coral-pea			
Indigenous	*Kunzea leptospermoides*	Yarra burgan			
Introduced	*Ligustrum lucidum*	Large-leaf privet			
Indigenous	*Lomandra longifolia* subsp. *longifolia*	Spiny-headed mat-rush			
Introduced	*Malus* spp.	Apple			
Introduced	*Malva sylvestris*	Tall mallow			
Introduced	*Medicago arabica*	Spotted medic			X
Non-indigenous native	*Melaleuca armillaris* subsp. *armillaris*	Giant honey-myrtle	en P		X
Introduced	*Melaleuca linariifolia*	Flax-leaf paperbark			X

Origin	Scientific name	Common name	Conservation status	Weed status	All observed plants planted
Introduced	*Vicia sativa*	Common vetch			

Appendix 2 Terrestrial fauna species recoded during the site inspection

Scientific Name	Common Name
Mammals	
Trichosurus vulpecula	Common brush-tailed possum*
Birds	
Gymnorhina tibicen	Australian magpie
Manorina melanocephala	Noisy miner
Trichoglossus moluccanus	Rainbow lorikeet
Corvus mellori	Little raven
Acridotheres tristis	Common myna
Cracticus torquatus	Grey butcherbird
Grallina cyanoleuca	Magpie-lark
Chenonetta jubata	Australian wood duck
Strepera graculina	Pied currawong
Alisterus scapularis	Australian king-parrot
Platycercus eximius	Eastern rosella
Hirundo neoxena	Welcome swallow
Cacatua tenuirostris	Long-billed corella
Ocyphaps lophotes	Crested pigeon
Spilopelia chinensis	Spotted dove
Callocephalon fimbriatum	Gang-gang cockatoo
Amphibians	
Common froglet	*Crinia signifera*

*Denotes observed indirectly by sign (i.e. scat).

Appendix 3 Likelihood of presence of threatened flora species recorded or modelled to occur within 5km of the study area

Symbol	Key:
CR	Critically endangered under the EPBC Act
EN	Endangered under the EPBC Act
VU	Vulnerable under the EPBC Act
P	P - Protected flora species under the FFG Act
cr	Critically endangered under the FFG Act
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C	C - Species listed as Regionally Controlled under the CaLP Act
R	R - Species listed as Restricted under the CaLP Act
WONS	WONS - Weeds of National Significance

Flora taxonomy follows VBA standards (DEECA 2024d).

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Acacia boormanii	Snowy River Wattle		en	VBA	4	2018	Subspecies *boormanii* occurs in rocky areas lining watercourses. Occasionally in areas away from rivers (e.g. populations at Gapsted and Mt Bowen). Mainly in the Snowy River catchment from the NSW border to near Buchan, with outlying occurrences at Gapsted in north-eastern Victoria, and near Mt Bowen near Bonang. There are naturalised populations in Melbourne suburbs and near Meredith, Orbost and Dartmouth (VicFlora 2024). Subspecies gibba occurs in dryish montane to subalpine forest, mostly on rather shallow soils. Restricted to Mt Typo near Chestunt, including Rose River and Bennies-Mt Cobbler Road (VicFlora 2024).	**Known** (all planted)
Acacia howittii	Sticky Wattle		vu	VBA	8	2018	Moist forest. Endemic to Victoria and confined to the east of the state from the upper Macalister River area near Mt Howitt south to near Yarram and east to near Tabberabbera. Widely cultivated and naturalised in areas such as Greater Melbourne, Daylesford and the Dandenong Ranges (VicFlora 2024).	Not Likely

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Acacia rupicola	Rock Wattle		en	VBA	4	2017	Restricted in Victoria to rocky areas around Mt Arapiles and apparently the northern parts of the Grampians. Seedlings have been reported from near at least one planting elsewhere in the state (Wonga Park) (VicFlora 2024).	Not Likely
Acacia stictophylla	Dandenong Wattle		en	VBA	3	2017	Restricted to the Dandenong Ranges where it is often locally common in the riparian zone on hillsides in tall forest and open woodland (VicFlora 2024).	Not Likely
Amphibromus fluitans	River Swamp Wallaby-grass	VU		PMST	NA	NA	Natural and man-made waterbodies, including swamps, lagoons, billabongs and dams (DEWHA 2008a).	Not Likely
Amyema pendula subsp. *longifolia*	Drooping Mistletoe		cr	VBA	1	2021	Very rare in Victoria, where known from a few sites along the Murray River in the far north-west, including Wallpolla Island, west of Mildura, Hattah-Kulkyne National Park and Tooleybuc. There is also a single record from a site between Serendip Sanctuary and You Yangs Regional Park, near Lara. Parasitises to river red-gum *Eucalyptus camaldulensis* (VicFlora 2024).	Not Likely
Austrostipa rudis subsp. australis	Veined Spear-grass		en	VBA	4	2017	Uncommon, mostly in cool areas of southern Victoria. Usually at moderate altitude, in open-forest on sandy or sandstone-derived soils (VicFlora 2024).	Not Likely
Billardiera scandens s.s.	Velvet Apple-berry		en	VBA	8	1989	Dry open-forests and woodlands (VicFlora 2024).	Low
Caladenia concolor	Crimson Spider-orchid	VU	en	PMST	NA	NA	Box-ironbark open forests, usually consisting of long-leaved box *Eucalyptus goniocalyx*, red stringybark *E. macrorhyncha*, red box *E. polyanthemos*, red ironbark *E. sideroxylon*, on well drained, gravelly or stony sand and clay loam. The understorey typically consists of scattered heathy shrubs and grasses such as fringed brachyloma *Brachyloma ciliatum*, handsome flat-pea *Platylobium formosum*, parrot-pea *Dillwynia phylicoides*, erect Guinea-flower *Hibbertia riparia*, and red anther wallaby-grass *Rytidosperma pallidum* (Coates et al. 2002).	Not Likely

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Caladenia flavovirens	Christmas Spider-orchid		cr	VBA	2	1927	Grassy and shrubby woodland and open forest (Backhouse 2023). From coastal to near-coastal habitats through to low altitude mountain forest (e.g. Mt Dandenong area). Formerly common near Portland where now rare and localized, and possibly extinct in the Lorne and Marlo areas. Moderately common in upland forests of north-east Victoria. Grows among shrubs in stunted coastal scrub, often in sandy soils, or in open montane forest with a grassy understorey (VicFlora 2024).	Low
Caladenia fragrantissima	Scented Spider-orchid		cr	VBA	1	1949	Known with certainty in Victoria only from the far south-west, between Nelson and Portland, where it grows in coastal and near-coastal heath or heathy woodland in sandy loam (VicFlora 2024).	Not Likely
Caladenia oenochila	Wine-lipped Spider-orchid		cr	VBA	1	1931	Relatively common in moist, often grassy forest or woodland, often in shaded habitats. Endemic to Victoria where mostly known from the foothills immediately east of Melbourne, but sporadically distributed from Yarram through to Ararat (VicFlora 2024).	Low
Caladenia venusta	Large White Spider-orchid		en	VBA	1	1904	Woodland and heathy woodland on well-drained or moisture-retentive soils. Known locations are west of Port Phillip Bay as well as in eastern to south-eastern Melbourne, usually in coastal or subcoastal areas but also in the Grampians. Isolated records occur in South Gippsland, between Toora and Alberton (VicFlora 2024).	Low
Correa baeuerlenii	Chef's Cap Correa	VU		VBA	1	2017	Damp gullies, on the banks of streams and on rocky slopes within wet eucalypt forest on the New South Wales south coast from the Clyde River near Batemans Bay to Bega, and inland to the foothills of the Great Dividing Range. Grows in associated with trees such as yellow stringybark *Eucalyptus muelleriana*, blue-leaf stringybark *E. agglomerata*, silvertop ash *E. sieberi*, red bloodwood *E. gummifera*, black sheoak *Allocasuarina littoralis* and spotted gum *Corymbia maculata*, and a shrubby understorey including prickly rasp fern *Doodia aspera*, narrow-leaf geebung *Persoonia linearis*, hop goodenia *Goodenia ovata* and trailing Guinea-flower *Hibbertia dentata* (DEWHA 2008b).	Not Likely

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Corymbia gummifera	Red Bloodwood		vu	VBA	4	2018	Lowland forest to coastal heathland and woodland on flats and low hills near the sea, east from around the Thurra River then extending up the east Australian coastline (VicFlora 2024; Brooker and Kleinig 1999). There are also scattered records further west (e.g. around Coleraine, Ballarat and Melbourne), which likely represent planted individuals.	Not Likely
Corymbia maculata	Spotted Gum		vu	VBA	15	2018	Natural range in Victoria is restricted to the Mottle Range, south of Buchan but the species is also widely planted as an ornamental tree (VicFlora 2024).	**Known** (all planted)
Deschampsia cespitosa	Tufted Hair-grass		en	VBA	1	1998	In Victoria, an uncommon grass of damp to wet alpine or subalpine grassland (e.g. Bennison, Bogong, Dargo and Nunniong Plains, Omeo district) with disjunct occurrences near Woodend, Colac and Dartmoor in the far south-west. A 1905 record from Sandringham is of dubious origin. There is an additional disjunct record from Tally Ho, south of Burwood East (VicFlora 2024).	Not Likely

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Dianella amoena	Matted Flax-lily	EN	cr	PMST	NA	NA	Lowland grassland, grassy woodland, valley grassy forest and creeklines of herb-rich woodland, typically on well drained to seasonally wet fertile sandy loams to heavy cracking clays derived from Silurian or tertiary sediments or volcanic geology. The ground layer is usually dominated by kangaroo grass *Themeda triandra*, weeping grass *Microlaena stipoides* var. *stipoides*, common wheat-grass *Anthosachne scabra*, common tussock-grass *Poa labillardierei*, slender wallaby-grass *Rytidosperma racemosum* var. *racemosum*. Associated tree species include blackwood *Acacia melanoxylon*, snow gum *Eucalyptus pauciflora* subsp. *pauciflora*, swamp gum *E. ovata*, river red-gum *E. camaldulensis*, yellow box *E. melliodora*, bundy *E. goniocalyx*, red box *E. Polyanthemos* subsp. *vestita* and red stringybark *E. macrorhyncha*. Commonly associated introduced species include large quaking-grass *Briza maxima*, lesser quaking-grass *B. minor*, Yorkshire fog *Holcus lanatus*, flatweed *Hypochaeris radicata*, ribwort *Plantago lanceolata*, onion grass *Romulea rosea*, sweet vernal-grass *Anthoxanthum odoratum*, cocksfoot *Dactylis glomerata* and Toowoomba canary-grass *Phalaris aquatica* (Department of the Environment 2024a).	Low
Diuris X *palachila*	Broad-lip Diuris		en	VBA	2	1923	Open forests, woodlands and grasslands. Scattered records occur: • in western Victoria • from north-east to east of Melbourne, between St Andrews, Greensborough and Mitcham • in far northern to far eastern Victoria, from around Invergordon to near Yamboon Inlet • in Moe. Thought to be a natural hybrid between golden cowslip *Diuris behrii* and leopard orchid *D. pardina* with which it usually occurs (VicFlora 2024).	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Eucalyptus fulgens	Green Scentbark		en	VBA	2	1989	Occurs on heavy soils over sandstone, east of Melbourne (Centre for Australian National Biodiversity Research 2020). Records occur from north-east of Kinglake (in the north-west), to around Lake Thomson (in the north-east), to Somerville (in the south-west), to inland of Seaspray (in the east) (VicFlora 2024).	Not Likely
Eucalyptus globulus subsp. *globulus*	Southern Blue-gum		en	VBA	1	2012	Wet forests on a range of aspects, often in association with mountain ash *Eucalyptus regnans* or mountain grey-gum *E. cypellocarpa* (DELWP 2021a).	Not Likely
Eucalyptus leucoxylon subsp. *connata*	Melbourne Yellow-gum		en	VBA	1	2011	Skeletal soils around and between Melbourne and Geelong, particularly in the Brisbane Ranges, Bacchus Marsh and Geelong areas. Soils of habitats in Greensborough are derived from Silurian sandstone (VicFlora 2024).	Not Likely
Eucalyptus sideroxylon subsp. *sideroxylon*	Mugga		en	VBA	12	2018	In Victoria confined to the Chiltern area, northern Warby Range and south of Winton (VicFlora 2024). Commonly planted for amenity (e.g. as a street tree and in open space reserves) in many parts of Victoria, particularly around Melbourne (D. Coppolino pers. obs.).	**Known** (all planted)
Eucalyptus yarraensis	Yarra Gum		cr	VBA	14	2018	Endemic to Victoria. Extending west from Glengarry (near Traralgon) to Melbourne and north-west to Daylesford and Ararat. A poorly known species whose distribution appears to have been much fragmented by the clearing of the natural habitat (VicFlora 2024).	**Known**

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Euphrasia collina subsp. *trichocalycina*	Purple Eyebright		vu	VBA	1	1924	Habitat has been described as open or shrubby sclerophyll forest or woodland, heathland and swamps (Barker 1999) as well as rocky upper slopes of exposed summits, spurs, and ridgelines (DELWP 2021b). Rare in Victoria where confined mainly to central and western areas, but with isolated old records from the Woods Point area (Barker 1999).	Low
Geijera parviflora	Wilga		cr	VBA	1	2017	Habitat in Victoria includes dry *Acacia* or eucalypt woodland on heavy soils in the area between Piambie and Kenley, in the north-west. At Major Mitchells Lagoon, plants occur in black box *Eucalyptus largiflorens* riparian woodland. The species is also widespread in western New South Wales, and occurs in north-eastern South Australia and in Queensland. Habitat outside Victoria is variable, usually occurring in areas with calcareous red clay soils, and often in association with Belah *Casuarina pauper* and Cattle Bush *Alectryon oleifolius* (DELWP 2021c). Less common on alluvial soils and on hill slopes with shallow soils (Cunningham et al. 1981). Often planted as an amenity tree in Victoria and New South Wales, and is plausibly locally naturalising (DELWP 2021c).	Not Likely
Gentianella polysperes	Early Forest-gentian		en	VBA	1	1922	Commonly occurring in light forest or woodland communities. Scattered through Victoria, usually in hilly country, e.g. Dandenong Ranges and foothills, Mt Sugarloaf, Mt Macedon (but apparently now rare at these localities), ascending to subalpine areas (e.g. Snowy Range, Mt Benambra, Mt Delusion) in the eastern ranges. Supposedly also collected from the Curdies River near Warnambool (VicFlora 2024).	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Glycine latrobeana	Clover Glycine	VU	vu	PMST	NA	NA	Mainly grasslands and grassy woodlands, less often in dry forests and rarely in heathlands, from see level to around 1,200 m altitude. Occurs in a range of soil types, including alluvium and soils derived from sandstones, mudstones, granite and basalt. Soils are usually clays but may have high loam content. Habitats in specific parts of Victoria are described follows: • Western basalt plains: grasslands dominated by kangaroo grass *Themeda triandra* with varying richness of herbs. • Grampians/Black Ranges area: intermittently flooded yellow gum *Eucalyptus leucoxylon* woodland with scentbark *E. aromaphloia* in the streamlines, and an understorey of mixed grasses and shrubs. • Nunniong Plateau in eastern Victoria: sub-alpine woodlands (c. 1200 m above sea level) on red-brown clays with an overstorey of snow gum E. pauciflora, with scattered small-fruit hakea *Hakea microcarpa* interspersed with grassy species such as kangaroo grass *T. triandra*, tussock grasses *Poa spp*., bent grasses *Deyeuxia spp.*, common wheat-grass *Anthosachne scabra* and various forbs. • Reef Hills State Park in north-eastern Victoria: herb-rich woodland. • Yarra Valley Parklands and Meruka Park near Melbourne: valley grassy forest, dominated by yellow box *E. melliodora*, with scattered hedge wattle *Acacia paradoxa* and a groundlayer of wallaby grasses *Rytidosperma* spp. and various forbs; and Grassy Dry Forest with red box *E. polyanthemos* (Carter and Sutter 2010).	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Lepidium aschersonii	Spiny Peppercress	VU	en	PMST	NA	NA	Periodically wet sites such as gilgai depressions and the margins of freshwater and saline marshes and shallow lakes. Usually on heavy clay soils subject to soil waterlogging or seasonal flooding. Occurs in areas with mean annual rainfall of 500 to 800mm, and freshwater to highly saline conditions (such as at Lake Corangamite and Lake Beeac). In Victoria, the species is associated with annual celery Apium annuum, native orache *Atriplex australasica*, poong'ort *Carex tereticaulis*, spiked centaury *Schenkia australis*, glaucous goosefoot *Chenopodium glaucum*, windmill grass *Chloris truncata*, kidney-weed *Dichondra repens*, Australian salt-grass *Distichlis distichophylla*, common spike-sedge *Eleocharis acuta*, variable willow-herb *Epilobium billardiereanum*, Rainforest crane's-bill *Geranium homeanum*, leafy blown-grass *Lachnagrostis aemula* s.l., coast blown-grass *Lachnagrostis billardierei* s.l., common blown-grass *Lac. filiformis*, creeping cotula *Leptinella reptans* s.l., button immortelle *Leptorhynchos waitzia*, poison lobelia *Lobelia pratiodes*, small loosestrife *Lythrum hyssopifolia*, common tussock-grass *Poa labillardierei*, Australian saltmarsh-grass *Puccinellia stricta*, shining buttercup *Ranunculus glabrifolius*, River buttercup complex *Ran. rivularis* s.l., wiry dock *Rumex dumosus*, creeping brookweed *Samolus repens*, beaded glasswort *Salicornia quinqueflora*, shiny bog-sedge *Schoenus nitens*, Shiny swamp-mat *Goodenia radicans*, annual fireweed *Senecio glomeratus*, native sow-thistle *Sonchus hydrophilus*, coast sand-spurrey *Spergularia media* s.l., austral seablite *Suaeda australis* and round-leaf wilsonia *Wilsonia rotundifolia* (Carter 2010).	Not Likely

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Lepidium hyssopifolium s.s.	Basalt Peppercress	EN	en	VBA	1	1977	Original habitat is not precisely known but probably included eucalypt and/or *Allocasuarina* woodland with a grassy understorey as well as native temperate grasslands. Almost all remaining records occur in heavily modified, non-natural environments, usually amongst exotic pasture grasses and weed species, sometimes with an overstorey of introduced tree species. Soils are light to heavy, often friable, clay loams. Most sites are on roadsides, on fringes of developed agricultural land or occur in small reserves within an agricultural landscape. Relatively open bare ground where there is limited competition (e.g. open grassy sites or under introduced Monterey cypress *Cupressus macrocarpus* and radiata pine *Pinus radiata*) is required for plant establishment. Establishment and survival may be disturbance-driven rather than habitat specific (Tumino 2010).	Not Likely
Melaleuca armillaris subsp. *armillaris*	Giant Honey-myrtle		en	VBA	8	2018	Mainly confined to near-coastal sandy heaths, scrubs slightly raised above saltmarsh, riparian scrubs, rocky coastlines and foothill outcrops eastwards from about Marlo. Occurrences to the west are naturalized from cultivated stock (Spencer 1995).	**Known** (all planted)
Nicotiana suaveolens	Austral Tobacco		en	VBA	1	No reliable date	Often in rocky areas, particularly in drier inland locations (VicFlora 2024).	Not Likely

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Pomaderris vacciniifolia	Round-leaf Pomaderris	CR	cr	PMST	NA	NA	Moist forest and scrub (VicFlora 2024). Endemic to Victoria where it occurs in the middle and upper catchments of the Yarra River, extending marginally north into the headwaters of the Yea River and King Parrot Creek (Department of the Environment 2014).	Not Likely
Prasophyllum colemaniarum	Lilac Leek-orchid	VU		PMST	NA	NA	Shrubby open forest (Backhouse 2023). Grows among grass tussocks and shrubs. Previously recorded from Heathmont and Bayswater in the eastern suburbs of Melbourne, where it was noted to be highly localised. However, no populations are currently known to exist (DEWHA 2008c).	Low
Prasophyllum lindleyanum	Green Leek-orchid		en	VBA	2	1920	More fertile soils of woodland or scrubby heath. Widespread but generally uncommon in near-coastal scrub, dry woodlands further inland and sub-alpine herbfield (VicFlora 2024).	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Prasophyllum spicatum	Dense Leek-orchid	VU	cr	PMST	NA	NA	Coastal and near-coastal heathland and heathy woodland commonly containing coast manna-gum *Eucalyptus viminalis* subsp. *pryoriana*, narrow-leaf peppermint *E. radiata*, brown stringybark *E. baxteri*, heath tea-tree *Leptospermum myrsinoides*, scrub sheoak *Allocasuarina paludosa*, spreading Guinea-flower *Hibbertia procumbens*, sweet bursaria *Bursaria spinosa*, common rice-flower *Pimelea humilis*, milkmaids *Burchardia umbellata*, common fringe-lily *Thysanotus tuberosus*, blue starts *Chamaescilla corymbosa*, common flat-pea *Platylobium obtusangulum*, grass triggerplant *Stylidium graminifolium* and bracken *Pteridium esculentum*, as well as wallaby grasses *Rytidosperma* spp., spear grasses *Austrostipa* spp., tussock grasses *Poa* spp. and sedges *Lepidosperma* spp. Soils are generally sandy, with some sites seasonally waterlogged. Little is known of specific habitat requirements, and some sites have been disturbed by periodic fire or mowing (Duncan 2010a).	Not Likely
Pterostylis chlorogramma	Green-striped Greenhood	VU	en	PMST	NA	NA	Mixed box-stringybark forest dominated by messmate stringybark *Eucalyptus obliqua*, narrow-leaf peppermint *E. radiata*, mealy stringybark *E. cephalocarpa* and mountain grey-gum *E. cypellocarpa*, with a shrubby understorey on sandy or clay loam soils. Bracken Pteridium esculentum is often a major component of the understorey, which also includes furze hakea *Hakea ulicina*, smooth parrot-pea *Dillwynia glaberrima*, rough bush-pea *Pultenaea scabra*, hairpin banksia *Banksia spinulosa*, common heath *Epacris impressa*, narrow-leaf wattle *Acacia mucronata*, coast tea-trea *Leptospermum laevigatum*, prickly broom-heath *Monotoca scoparia* and sweet bursaria *Bursaria spinosa*. Plants appear to be restricted to natural gaps in the shrubby understorey or occur along road/track verges (Duncan 2009).	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Pterostylis cucullata	Leafy Greenhood	VU		PMST	NA	NA	The lowland subspecies *cucullata* occurs in coast tea-tree *Leptospermum laevigatum* or moonah *Melaleuca lanceolata* coastal scrubs on stabilized sand dunes, with an open understorey and grassy and herbaceous groundcover on seasonally damp but well drained humus rich sandy loams. The Mt Eccles population of subspecies *cucullata* occurs in brown stringybark *Eucalyptus baxteri* and manna gum *E. viminalis* forest with a grassy groundcover (Duncan 2010b). Subspecies *sylvicola* occurs along inland water courses among shrubs in tall forests, on rich loamy soils (VicFlora 2024).	Not Likely
Pterostylis pedoglossa	Prawn Greenhood		en	VBA	1	1920	Scattered in coastal and near-coastal heath and grasstree plains east of Melbourne, often on moist peaty soils (VicFlora 2024).	Not Likely
Pterostylis X *ingens*	Sharp Greenhood		vu	VBA	4	1946	Favours moist areas around swamps and stream banks on heavy soils. A sporadic natural hybrid between nodding greenhood *Pterostylis nutans* and sickle greenhood *P. falcata* (VicFlora 2024).	Not Likely
Senecio campylocarpus	Floodplain Fireweed		en	VBA	2	2018	In Victoria mostly throughout central Victoria and in the north-east in loam to clay soils in forest and woodland, usually in seasonally inundated areas (VicFlora 2024).	Low
Senecio macrocarpus	Large-headed Fireweed	VU	cr	PMST	NA	NA	Grassland, sedgeland, shrubland and woodland, generally on sparsely vegetated sites on sandy loam to heavy clay soils, often in depressions that are waterlogged in winter. Habitat in western Victoria includes herb-rich grassland dominated by kangaroo grass *Themeda triandra* on heavy clay soils. Other recorded habitats include: • yellow gum *Eucalyptus leucoxylon* woodland in low, flat areas where there are few other understorey species. • heavy soil on a broad flat along the upper edge of the water level, at a site in Yan Yean • yellow box *Eucalyptus melliodora* woodland with an herbaceous and grassy understory on sedimentary soils (in Dobie).	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Senecio psilocarpus	Swamp Fireweed	VU		PMST	NA	NA	High-quality herb-rich wetlands on plains. During winter, sites can be inundated with up to 60 cm or more of water but are almost dry in summer. The more easterly populations grow in grey to black silty clay soils whereas the westerly populations grow on peatier soils. A tree canopy is absent from most sites. Rarely, river red gum *Eucalyptus camaldulensis* is the overstorey species in woodland formations. The understorey is rich in grasses and sedges, as well as aquatic species. (DEWHA 2008d).	Not Likely
Thelymitra hiemalis	Winter Sun-orchid		cr	VBA	1	1940	Heathland and heathy woodland on well-drained soils. Known from very few records in Victoria including Mt Richmond near Portland, Anglesea, Upper Beaconsfield and Blackburn (VicFlora 2024).	Low
Thelymitra orientalis	Slender Plum-orchid	CR	cr	PMST	NA	NA	Leached white (often peaty) sand, in heathland, damp heathy flats and seepage areas, usually close to sedge-dominated wetlands (DCCEEW 2023a).	Not Likely
Thesium australe	Austral Toad-flax	VU	en	PMST	NA	NA	Grasslands, shrublands, woodlands and herbfields, usually in damp situations (Jeanes 1999; Department of the Environment 2024b). Once widespread across Victoria, but all recent collections are from highland areas in the vicinity of Wulgulmerang and it is believed to have become extinct across most of its Australian range due to grazing and habitat loss (Jeanes 1999). Semi-parasitic on roots of a range of grass species (notably kangaroo grass *Themeda triandra*) (Department of the Environment 2024b).	Not Likely
Westringia glabra	Violet Westringia		en	VBA	1	2017	Frequently occurring in skeletal soils, often on steep rocky slopes, and often associated with river gorges (Conn 1999).	Not Likely

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Xerochrysum palustre	Swamp Everlasting	VU	cr	PMST	NA	NA	Wetlands including sedge swamps and shallow freshwater marshes, often on heavy black clay soils. Commonly associated genera include *Amphibromus*, *Baumea*, *Carex*, *Chorizandra*, *Craspedia*, *Eleocharis*, *Isolepis*, *Lachnagrostis*, *Lepidosperma*, *Myriophyllum*, *Phragmites*, *Themeda* and *Villarsia*. Grows from 1 m water depths (French Island) to more marginal wetland habitats such as seasonally wet areas of native grassland and heath communities. At higher altitudes in NSW, it also grows in sphagnum moss bogs. (Carter and Walsh 2011).	Not Likely

Appendix 4 Likelihood of presence of threatened and migratory fauna species recorded or modelled to occur within 5 km of the study area

Symbol	Key:
CR	Critically endangered under the EPBC Act
EN	Endangered under the EPBC Act
VU	Vulnerable under the EPBC Act
mi	Migratory
ma	Marine
cd	Conservation dependent under the FFG Act
cr	Critically endangered under the FFG Act
en	Endangered under the FFG Act
vu	Vulnerable under the FFG Act
VBA	Victorian Biodiversity Atlas
PMST	EPBC Act Protected Matters Search Tool
LOP	Likelihood of presence

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
MAMMALS								
Mastacomys fuscus mordicus	Broad-toothed rat	EN	vu	PMST	NA	NA	Species requires wet sedge and grass habitats (Strahan *et al.* 2023). Not present within study site. No VBA records for species (within 5 km of study site).	Not Likely
Miniopterus orianae oceanensis	Eastern bent-winged bat		cr	VBA	1	2004	Species roosts in caves, old mine shafts and rock caves. Likely largely undetected due to nocturnal and fast-moving activity. Only one historic VBA record (within 5 km of study site).	Low
Pteropus poliocephalus	Grey-headed flying-fox	VU	vu	VBA	11	2017	Species is found in a range of habitats, feeding on pollen, nectar, and fruits (DAWE 2021b). Study site is approximately 20 km from known Yarra Bend roost colony; Species may utilise eucalypt pollen and flowers within study site for foraging resources. Moderate number of VBA records (within 5 km of study site).	Moderate

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Isoodon obesulus obesulus	Southern brown bandicoot	EN	en	PMST	NA	NA	Southern brown bandicoots favour dry regenerating heathland, with new growth. The species is noted to prefer specific habitat but are efficiently adaptive and inhabit and an array of habitats including: thick scrubby habitat on dry elevations; sclerophyll forests; humid woodlands, heaths; open timbered country, moving into dense scrub; and extents of dense timber. Further, this species is also able to exploit peri-urban settings, such as farmland and rubbish tips, pastures and urban areas (Paull 1992). As such, no suitable habitat is present at the study site to facilitate species requirements. No VBA records (within 5 km of study site).	Low
Petauroides volans	Southern greater glider	EN	en	PMST	NA	NA	Species requires large areas of intact mature forest for denning/breeding and feeding requirements. Site is absent of intact, contiguous mature forest with no large hollow-bearing trees observed. No VBA records for species (within 5 km of study site).	Not Likely
Dasyurus maculatus maculatus	Spot-tailed quoll	EN	en	PMST	NA	NA	Species inhabits a range of habitats, including rainforest, wet and dry sclerophyll forest, coastal heath, scrub, and occasionally red gum forest along rivers (Menkhorst and Knight 2011). Suitable habitat for species occurs within SFB. Species prefers undisturbed forest, with intact vegetation where the species can forage (DECCW 2023). Absent from study site. No VBA records (within 5 km of study site).	Low
Antechinus minimus maritimus	Swamp antechinus	VU	vu	PMST	NA	NA	Species inhabits damp habitats, with large percentage of cover from understory vegetation. Species is recorded in forest, woodland, heathland, tussock grassland and sedgeland (Strahan *et al.* 2023). No suitable habitat characteristics present for species at study site. No VBA records (within 5 km of study site).	Low
Petaurus australis	Yellow-bellied glider	VU	vu	PMST	NA	NA	Species requires large areas of intact mature forest for denning/breeding and feeding requirements. Site was absent of intact, contiguous mature forest with no large hollow-bearing trees observed. No VBA records for species (within 5 km of study site).	Not Likely

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
BIRDS								
Botaurus poiciloptilus	Australasian bittern	EN	cr	PMST	NA	NA	Occupies reedbeds, particularly those dominated by sedges, rushes, reeds or cutting grass (BirdLife Australia 2024). Study site is absent of species habitat requirements. No VBA records (within 5 km of study site).	Low
Spatula rhynchotis	Australasian shoveler		vu	VBA	10	2019	Species prefers permanent, well vegetated wetlands, but will occupy most fresh-water habitats. May utilise frog pond to north of study site on passage but is unlikely to utilise any features on site. Moderate number of recent VBA records (within 5 km of study site).	Low
Ixobrychus dubius	Australian little bittern		en	VBA	1	1994	Species occurs in varied freshwater habitats, largely with tall rushes, reeds, shrub thickets. Unlike Australian Bittern, often inhabits dense wetland vegetation along drains or in small urban lakes. Absent from site. One historic VBA record (within 5 km of site).	Low
Rostratula australis	Australian painted-snipe	EN Mi	cr	PMST	NA	NA	Species occurs in array of shallow, brackish, or freshwater terrestrial wetlands, especially ephemeral wetlands with muddy margins (BirdLife Australia 2024). No suitable habitat available within site. No VBA records (within 5 km of study site).	Low
Falco subniger	Black falcon		cr	VBA	1	1905	Species is largely found along tree-lined watercourses in arid, and semi-arid environments (BirdLife Australia n.d.). Absent from study site. One historic VBA record (within 5 km of study site).	Low
Neophema chrysostoma	Blue-winged parrot	VU		PMST	NA	NA	Species prefers low, open habitat such as grassland, saltmarsh, rough pasture, and weedy areas. Nests in hollows in coastal and subcoastal woodlands and forests. Feeds on a variety of native and introduced shrubs and grasses. Post breeding, species disperses into semi-arid inland (Menkhorst *et al.* 2019). No suitable habitat available for species. No VBA records for species (within 5 km of study site).	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Climacteris picumnus	Brown treecreeper	VU		PMST	NA	NA	Occurs in variety of eucalypt dominated forests, particularly those with grassy understorey and dead or fallen timber (Menkhorst *et al.* 2019). Suitable habitat largely absent at the study site, no dead or fallen timber was observed. No VBA records for species (within 5 km of study site).	Low
Tringa nebularia	Common greenshank	EN Mi	en	PMST	NA	NA	Species is found on coast and inland, in estuaries and mudflats, mangrove swamps and lagoons, billabongs and swamps, sewage farms and flooded crops (BirdLife Australia 2024). No suitable habitat for species on site. No VBA records (within 5 km of study site).	Low
Actitis hypoleucos	Common sandpiper	Mi	vu	PMST	NA	NA	No suitable waterbodies present within study site. No VBA records (within 5 km of study site).	Low
Calidris ferruginea	Curlew sandpiper	CR Mi	cr	PMST	NA	NA	Largely found on intertidal mudflats of estuaries, lagoons, and mangroves, as well as beaches, rocky shores and around salt lakes (BirdLife Australia 2024). No suitable habitat for species within site and no VBA records (within 5 km).	Low
Geopelia cuneata	Diamond dove		vu	VBA	2	1999	Species occurs in dry open savanna and mulga habitat, frequently among spinifex or grasses. Often found in open riparian woodland. No suitable habitat present on site for species. Two historic VBA records present (within 5 km of study site).	Low
Stagonopleura guttata	Diamond firetail	VU	vu	PMST	NA	NA	Diamond firetails generally occur in drier forests and open grassy woodlands (Menkhorst *et al.* 2019). Absent from study site. No VBA records (within 5 km of study site).	Low
Numenius madagascariensis	Eastern curlew	CR Mi	cr	PMST	NA	NA	Migrant species, largely occurring at sites with extensive tidal flats (Menkhorst *et al.* 2019). Absent from study site. No VBA records (within 5 km of study site).	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Ardea alba modesta	Eastern great egret	Mi	vu	VBA	53	2019	Species utilises wetlands, freshwater and tidal habitats, as well as flooded grasslands. Requires waterbodies for foraging, shelter and breeding (Menkhorst *et al.* 2019). As such, there is no suitable habitat within study site to support species. Large number of VBA records (within 5 km of study site).	Low
Stictonetta naevosa	Freckled duck		en	VBA	1	2001	Species may utilise any large wetland, feeding in shallows, around large open lakes (Menkhorst *et al.* 2019). Absent from study site. One older VBA record (within 5 km of study site).	Low
Callocephalon fimbriatum	Gang-gang cockatoo	EN	en	VBA	68	2019	Occupies tall mountain forests and woodlands over the summer, utilising more open forests and woodlands at low altitude during winter. The gang-gang cockatoo nests in hollow-bearing trees and feeds on fruits and seeds. Two males were observed foraging in eucalypts just beyond the permitter of the study site. However, no suitable hollows were observed to fulfil species nesting and roosting requirements. Site is likely utilised as foraging habitat on passage to more suitable roosting/nesting habitat. Species largely feeds on seeds from eucalypts, acacias and introduced trees and shrubs (BirdLife Australia 2024a). Large number of recent VBA records (within 5 km of study site).	Known
Falco hypoleucos	Grey falcon	VU	vu	PMST	NA	NA	Species occurs in arid and semi-arid Australia. Species frequents timbered lowland plains, particularly acacia shrublands that are intersected by tree-lined water courses (Menkhorst *et al.* 2019). Absent from site. No VBA records (within 5 km of study site).	Not Likely
Accipiter novaehollandiae	Grey goshawk		en	VBA	28	2018	Species occupies tall wet forest and riverine forest, occasionally in woodlands or open habitat (Menkhorst *et al.* 2019). The species relies on mature forests for breeding, seldom using forest regrowth less than 30 years old. Breeding appears to be confined to dense, wet forests, where nest sites are associated with watercourses. Only females and immature birds are known to hunt in urban and agricultural areas (SWIFFT 2014). Patches of suitable hunting habitat, present to north of the study site. Moderate number of recent VBA records (within 5 km of site).	Moderate

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Melanodryas cucullata	Hooded robin	EN	vu	PMST	NA	NA	Species is found in lightly timbered woodland, largely dominated by acacia or eucalypts. Little to no suitable habitat for species. No VBA records for species (within 5 km of study site).	Low
Synoicus chinensis	King quail		en	VBA	3	1905	Species occurs in damp and swampy sites with very dense ground-cover, including fernland and heath, also utilising crop habitat (if appropriately dense and weedy) (Menkhorst *et al.* 2019). Habitat characteristics absent from study site. Three historic VBA records (within 5 km of study site).	Low
Gallinago hardwickii	Latham's snipe	VU Mi		PMST	NA	NA	Species utilises freshwater wetlands or coastal areas, generally among dense cover with vegetation surrounding wetlands (Menkhorst *et al.* 2019). Largely absent from study site. No VBA records (within 5 km).	Low
Lewinia pectoralis	Lewin's rail		vu	VBA	1	1905	Species inhabits wetland areas with dense vegetation and river flats, foraging around the water's edge in shallow water and close to cover. Species is most active at dawn and dusk. No suitable habitat present for species within study site. One historic VBA record (within 5 km of study site).	Low
Hieraaetus morphnoides	Little eagle		vu	VBA	4	1999	Occupies wooded habitats over most of Australia. Habitat largely fragmented and non-contiguous at study site. Small number of historic VBA records (within 5 km of study site).	Low
Lophochroa leadbeateri	Pink cockatoo	EN	cr	VBA	1	2006	Species largely inhabits semi-arid areas, in dry woodlands, especially Mallee habitat (BirdLife Australia n.d.). Absent from study site. One historic VBA record (within 5 km of study site).	Low
Biziura lobata	Musk duck		vu	VBA	5	2017	Species inhabits deep freshwater wetlands, with patches of dense aquatic vegetation (Menkhorst *et al.* 2019). Absent from study site. Small number of VBA records (within 5 km of study site).	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Grantiella picta	Painted honeyeater	VU	vu	VBA	1	1905	Species is associated with mistletoe, in open forest and woodlands, largely inland of eastern ranges (Menkhorst *et al.* 2019). Absent from study site. One historic VBA record (within 5 km of study site).	Low
Pycnoptilus floccosus	Pilotbird	VU	vu	PMST	NA	NA	Pilotbirds are small, ground-dwelling birds that inhabit dense forests with heavy undergrowth. Pilotbird usually inhabit wet sclerophyll forest and moist gullies. Pilotbird occasionally inhabit dry, open sclerophyll forest on ridges and slopes dominated by silvertop ash *Eucalyptus sieberi* over a dense low shrub cover. Pilotbirds are also associated with superb lyrebird and often forage in the same habitat (DAWE 2022). Absent from study site. No VBA records (within 5 km of study site).	Low
Pedionomus torquatus	Plains-wanderer	CR	cr	VBA	1	1972	Found on sparsely vegetated native grasslands, with a mixture of 50% bare ground, herbs, and low grasses (Menkhorst *et al.* 2019). No suitable habitat present within study site. One historic VBA record (within 5 km of study site).	Not Likely
Ninox strenua	Powerful owl		vu	VBA	441	2019	Large number of VBA records within 5 km of study site. Species requires large hollow bearing trees, with large hollows up to 50cm wide to support nesting and roosting requirements for the species and of their prey. No large hollow-bearing trees detected capable of supporting species nesting requirements; species may utilise area for hunting purposes.	High

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Anthochaera phrygia	Regent honeyeater	CR	cr	PMST	NA	NA	Species inhabits dry eucalypt forest and is strongly associated with box-ironbark and wet lowland coastal forest (dominated by swamp mahogany or spotted gum) (BirdLife Australia 2023). Seen in blossoming trees and mistletoe. Mistletoe and box-ironbark habitat present at site. Small number of recent VBA records (within 5 km of study site).	Low
Calidris acuminata	Sharp-tailed sandpiper	VU Mi		PMST	NA	NA	Prefers grassy edges of shallow inland freshwater wetlands. No suitable habitat present for species within study site. No VBA records (within 5 km of study site).	Low
Tyto tenebricosa	Sooty owl		en	VBA	1	2008	Sooty owls inhabit tall wet eucalypt forest and temperate to subtropical rainforest, roosting in wet gullies. Sooty owls prefer to roost in dense forest gullies, with large-hollow bearing trees to support roosting/nesting requirements (Menkhorst *et al.* 2019). Habitat requirements absent from study site. One older VBA record (within 5 km of study site).	Low
Aphelocephala leucopsis	Southern whiteface	VU		PMST	NA	NA	Species occupies open forests and woodlands, inland scrubs of mallee, mulga, and saltbush, especially areas with fallen timber, dead trees, and stumps (BirdLife Australia 2024b). Little suitable habitat for species, with, little to no logs/stumps were observed at site. No VBA records (within 5 km of study site).	Low
Pyrrholaemus sagittatus	Speckled warbler		en	VBA	8	1931	Shy and uncommon, species is not often observed. Inhabits dry sclerophyll forests and woodlands, largely seen in grass ground layer when foraging (BirdLife Australia n.d.). No suitable habitat available within study site for species. Small number of historic VBA records (within 5 km of study site).	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Lophoictinia isura	Square-tailed kite		vu	VBA	2	1980	Prefers open woodland (heath/mallee). No suitable habitat to support hunting requirements. 2 historic VBA records (within 5 km of study site).	Low
Lathamus discolor	Swift parrot	CR	cr	VBA	13	2018	Swift parrot utilises eucalypt forests, especially box-ironbark forests and woodlands, as they contain species of winter flowering eucalypts which are a critical food source while on mainland Australia. Species is migratory and breeds in Tasmania (Menkhorst *et al.* 2019) and may utilise winter flowering eucalypts (iron barks) within the proposed study site for foraging purposes while on passage to more extensive, suitable habitat. Moderate number of recent VBA records for species (within 5 km of study site).	Moderate
Haliaeetus leucogaster	White-bellied sea-eagle	Mi	en	VBA	1	1980	One historic VBA record (within 5 km of study site). However, there are no sufficient waterbodies within proximity of the study site that would sufficiently meet species foraging requirements. May occur at site while on passage but would not make significant use of the proposed works site.	Low
Hirundapus caudacutus	White-throated needletail	VU Mi	vu	VBA	45	2019	A migratory species which breeds in Asia, visits southeast Australia from December to April. Species occasionally flies low to ground, but often flies high >1.8 km, foraging on the wing. Species has been recorded roosting in trees in forests and woodlands (Menkhorst *et al.* 2019). Patches of suitable habitat present within study site. Moderate number of recent VBA records (within 5 km of study site).	Moderate
BIRDS (MIGRATORY ONLY)								
Monarcha melanopsis	Black-faced monarch	Mi		PMST	NA	NA	Species is found in rainforest, gallery forest, waterside thickets, wet sclerophyll forest (with medium shrub layer), and occasionally mangroves (Menkhorst *et al.* 2019). Habitat	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
							characteristics absent from study site. No VBA records (within 5 km of study site).	
Apus pacificus	Fork-tailed swift	Mi		PMST	NA	NA	Migrant species from Asia, arriving in Australia from Oct-Nov, departing Australia in April. Found over most terrestrial habitats, often hundreds of metres above the ground or canopy (Menkhorst *et al.* 2019). Not likely to be detected near or below canopy within study area. May occasionally forage in the airspace above riparian areas to north of study site, but would not make significant use of site.	Low
Pandion haliaetus	Eastern osprey	Mi		PMST	NA	NA	Species is found on the coast and terrestrial wetlands, occasionally travelling along inland rivers. No suitable habitat within study site to support species. No VBA records (within 5 km of study site).	Not Likely
Calidris melanotos	Pectoral sandpiper	Mi		PMST	NA	NA	Species utilise shallows or grassy edges of freshwater wetlands but will also utilise fringes of brackish habitat when no freshwater available (Menkhorst *et al.* 2019). No suitable habitat characteristics for species at study site. No VBA records (within 5 km of study site).	Low
Rhipidura rufifrons	Rufous fantail	Mi		PMST	NA	NA	Species prefers dense wet forest/rainforest with deep shade. During migration, may also be found in open habitats and urban areas (BirdLife Australia 2023). Absent from study site. No VBA records (within 5 km of study site).	Low
Myiagra cyanoleuca	Satin flycatcher	Mi		PMST	NA	NA	Species found in tall forests, selecting wetter habitats like heavily forested gullies (Menkhorst *et al.* 2019). Absent from study site. No VBA records (within 5 km of study site).	Low
Motacilla flava	Yellow wagtail	Mi		PMST	NA	NA	No suitable wetland or mangrove habitat at the study site. No VBA records (within 5 km of study site).	Low
REPTILES								
Pseudemoia rawlinsoni	Glossy grass skink		en	VBA	1	1988	Species largely confined to humid microhabitats such as marshlands, margins of creeks, swamps and lakes (Cogger 2014). Absent from site. One historic record (within 5 km of study site).	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Aprasia parapulchella	Pink-tailed worm-lizard	VU	en	PMST	NA	NA	Species has been found in Victoria in box-iron bark habitats within the Bendigo area, utilising rocky outcrops or scattered partly buried rocks, substrate, and ant nests for shelter(Robertson and Coventry 2019), (DCCEEW 2015). No suitable habitat for species within the site. No VBA records of species (within 5 km of study site).	Low
Delma impar	Striped legless lizard	VU	en	PMST	NA	NA	Species is a grassland specialist, found only in areas of native grassland and nearby woodland exotic pasture (DCCEEW 2016). Absent from study site. No VBA records (within 5 km of study site.	Not Likely
Lissolepis coventryi	Swamp skink	EN	en	PMST	NA	NA	Species largely occurs in coastal areas with some inland subpopulations, occupying freshwater and saltwater wetlands (DCCEEW 2023b). No suitable habitat within study site for species. No VBA records (within 5 km of study site).	Low
AMPHIBIANS								
Pseudophryne bibronii	Brown toadlet		en	VBA	4	1956	Occupies a wide variety of habitats, such as dry forests, woodland, shrubland, grassland, coastal swamps, heathland, and sub-alpine areas. Utilises areas with ephemeral inundation, such as gully lines, drainage lines, swamps, shallow depressions, on streambanks, among old mine diggings and edges of dams. Frog pond and Forest Hill drainage line present beyond site boundary of north-western corner of site. However, pond does not meet brown toadlets life history requirements with concrete base (species requires ephemeral depressions) and planted with jute matting. Species requires soft friable soil to dig burrows, with overhanging canopy vegetation to create detritus for foraging tadpoles. No suitable habitat characteristics present for species within site. Four historic VBA records (within 5 km of study site).	Low

Scientific Name	Common Name	EPBC Act	FFG Act	Source	Number of Records	Last Recorded	Habitat Description	LOP
Pseudophryne semimarmorata	Southern toadlet		en	VBA	7	2021	The southern toadlet, is a small, ground-dwelling, terrestrial breeding frog that inhabits damp microhabitats including depressions and soaks, sheltering beneath logs, rocks and amongst leaf litter, within a variety of different habitats. Frog pond and Forest Hill drainage line present beyond site boundary of north-western corner of site. However, pond does not meet southern toadlets life history requirements with concrete base (species requires ephemeral depressions) and planted with jute matting. Species requires soft friable soil to dig burrows, with overhanging canopy vegetation to create detritus for foraging tadpoles. No suitable habitat characteristics present for species on site. Moderate number of recent VBA records for species (within 5 km of study site).	Low
Litoria raniformis	Growling grass frog	VU	vu	PMST	NA	NA	Species occurs in sedges, reeds, and long grass of permanent waterbodies (Cogger 2014). One small frog pond outside of site boundary, in north-western corner, with standing water observed. However, no suitable habitat characteristics present for species within study site. No VBA records for this species (within 5 km of study site).	Low
INVERTEBRATES								
Paralucia pyrodiscus lucida	Eltham copper butterfly	EN	en	PMST	NA	NA	Species is found in dry open woodlands and is closely associated with the presence of sweet bursaria, *Bursaria spinosa* and colonies of *Notoncus* ant colonies (DCCEEW 2023c). Only two individual plants of sweet bursaria observed at the site, with no *Notoncus* ant nests observed. No VBA records (within 5 km of study site).	Low
Synemon plana	Golden sun moth	VU	vu	PMST	NA	NA	Confined to temperate grasslands and grassy woodlands (DAWE 2021a). Limited potentially suitable habitat available, disturbed, and non-contiguous. No VBA records (within 5 km of study site).	Low

Appendix 5 Habitat scores for native vegetation patches within the study area

Habitat Zone			A	B	C	D	E	F
Bioregion			GipP	GipP	GipP	GipP	GipP	GipP
EVC Number			127	127	127	127	127	127
Bioregional Conservation Status			endangered	endangered	endangered	endangered	endangered	endangered
Site Condition	Large Old Trees	/10	0	6	10	9	0	0
	Tree Canopy Cover	/5	5	4	4	4	0	5
	Lack of Weeds	/15	4	7	0	0	0	6
	Understorey	/25	5	5	5	5	5	5
	Recruitment	/10	3	5	5	5	5	5
	Organic Matter	/5	5	3	4	3	5	5
	Logs	/5	0	2	0	0	0	0
	Site condition standardising multiplier*		1.00	1.00	1.00	1.00	1.00	1.00
	Site Condition subtotal		*22*	*32*	*28*	*26*	*15*	*26*
Landscape Context	Patch Size	/10	1	1	1	1	1	1
	Neighbourhood	/10	0	0	0	0	0	0
	Distance to Core	/5	1	1	1	1	1	1
Total Condition Score		**/100**	**24**	**34**	**30**	**28**	**17**	**28**
Condition score out of 1			0.24	0.34	0.30	0.28	0.17	0.28
Total area of Habitat Zone (ha)			0.097	0.123	0.076	0.167	0.120	0.042
Habitat Hectares in Habitat Zone#			**0.023**	**0.042**	**0.023**	**0.047**	**0.020**	**0.012**
Land slope >20%			**No**	**No**	**No**	**No**	**No**	**No**
Saline discharge area			**No**	**No**	**No**	**No**	**No**	**No**
Land subject to erosion or slippage			**No**	**No**	**No**	**No**	**No**	**No**
Harsh environment (e.g. coastal/alpine)			**No**	**No**	**No**	**No**	**No**	**No**

Appendix 6 Details of scattered and large patch trees in the study area

Tree No.	Common name	Scientific Name	DBH (cm)	Size	Patch tree / scattered tree	TPZ Radius (m)	Impact status	Notes
T1	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	68	Small	Scattered tree	8.16	Retained	
T2	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	65	Small	Scattered tree	7.80	Retained	
T3	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	34	Small	Scattered tree	4.08	Retained	
T4	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	42	Small	Scattered tree	5.04	Retained but deemed lost	
T5	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	71	Large	Scattered tree	8.52	Retained	
T6	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	77	Large	Scattered tree	9.24	Retained	
T7	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	3	Small	Scattered tree	2.00	Retained	
T8	Yarra gum	*Eucalyptus yarraensis*	114	Large	Scattered tree	13.68	Retained	Hollow-bearing
T9	Yarra gum	*Eucalyptus yarraensis*	57	Small	Scattered tree	6.84	Retained	
T12	Yellow box	*Eucalyptus melliodora*	12	Small	Scattered tree	2.00	Retained	Arborist tree number 56
T13	Yellow box	*Eucalyptus melliodora*	8	Small	Scattered tree	2.00	Retained	Arborist tree number 60
T14	Yellow box	*Eucalyptus melliodora*	75	Large	Patch tree	9.00	Retained	
T15	Swamp gum	*Eucalyptus ovata subsp. ovata*	75	Large	Patch tree	9.00	Retained	Hollow-bearing; arborist tree number 59
T16	Yellow box	*Eucalyptus melliodora*	64	Small	Scattered tree	7.68	Retained	
T17	Candlebark	*Eucalyptus rubida*	63	Small	Scattered tree	7.56	Retained	
T18	Yellow box	*Eucalyptus melliodora*	74	Large	Scattered tree	8.88	Retained	
T19	Yellow box	*Eucalyptus melliodora*	32	Small	Scattered tree	3.84	Retained	
T20	Swamp gum	*Eucalyptus ovata subsp. ovata*	15	Small	Scattered tree	2.00	Retained	
T21	Yellow box	*Eucalyptus melliodora*	71	Large	Patch tree	8.52	Retained	Arborist tree number 134
T22	Yellow box	*Eucalyptus melliodora*	91	Large	Patch tree	10.92	Retained but deemed lost	Arborist tree number 114
T23	Yellow box	*Eucalyptus melliodora*	77	Large	Patch tree	9.24	Retained but deemed lost	Hollow-bearing; Arborist tree number 132
T24	Yellow box	*Eucalyptus melliodora*	80	Large	Patch tree	9.60	Retained but deemed lost	Arborist tree number 135

Tree No.	Common name	Scientific Name	DBH (cm)	Size	Patch tree / scattered tree	TPZ Radius (m)	Impact status	Notes
T25	Yellow box	*Eucalyptus melliodora*	21	Small	Scattered tree	2.52	Retained	Arborist tree number 144
T26	Yellow box	*Eucalyptus melliodora*	85	Large	Patch tree	10.20	Retained	Arborist tree number 109(?)
T27	Yellow box	*Eucalyptus melliodora*	75	Large	Patch tree	9.00	Removed	
T28	Yellow box	*Eucalyptus melliodora*	82	Large	Patch tree	9.84	Removed	Arborist tree number 98(?)
T29	Yellow box	*Eucalyptus melliodora*	95	Large	Patch tree	11.40	Retained	Arborist tree number 105(?)
T30	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	18	Small	Scattered tree	2.16	Removed	Arborist tree number 80
T31	Yellow box	*Eucalyptus melliodora*	66	Small	Scattered tree	7.92	Retained but deemed lost	Arborist tree number 147(?)
T32	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	51	Small	Scattered tree	6.12	Removed	Arborist tree number 66
T33	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	59	Small	Scattered tree	7.08	Removed	Arborist tree number 66
T34	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	63	Small	Scattered tree	7.56	Removed	Arborist tree number 210
T35	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	80	Large	Scattered tree	9.60	Removed	Arborist tree number 76
T36	Mealy stringybark	*Eucalyptus cephalocarpa s.s.*	71	Large	Scattered tree	8.52	Removed	
T37	Manna gum	*Eucalyptus viminalis subsp. viminalis*	100	Large	Scattered tree	12.00	Retained	No direct access, DHB estimated
T38	Yellow box	*Eucalyptus melliodora*	43	Small	Scattered tree	5.16	Retained	
T39	Yellow box	*Eucalyptus melliodora*	21	Small	Scattered tree	2.52	Retained	
T40	Swamp gum	*Eucalyptus ovata subsp. ovata*	30	Small	Scattered tree	3.60	Removed	Arborist tree number 71
T41	Swamp gum	*Eucalyptus ovata subsp. ovata*	16	Small	Scattered tree	2.00	Removed	No direct access, DHB estimated; arborist tree number 78

Flora taxonomy follows VBA standards (DEECA 2024d).

Appendix 7 Photos of canopy trees in the study area

T1 (right); T3 (left)

T3

T4

T5

T6

T7

T8

T9

T12	T13
T14	T15

T16	T17
T18	T19

T20

T21

T22

T23

T24	T25
	No photo
T26	T27

T28

T29

T30

T31

T32(right) and T33(left)	T34
T35	T36

T37	T38
T39	T40

T41	

Appendix 8 NVR Report

Native Vegetation Removal Report

NVRR ID: 372_20240919_YK3

This report provides information to support an application to remove, destroy or lop native vegetation in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines). This report is **not an assessment by DEECA** of the proposed native vegetation removal. Native vegetation information and offset requirements have been determined using spatial data provided by the applicant or their consultant.

Report details

Date created: 19/09/2024

Local Government Area: WHITEHORSE CITY

Shapefile name:
Aqualink_RemovalPatches.shp
Aqualink_RemovalTrees.shp

Site assessor name: Davide Coppolino

Registered Aboriginal Party: Wurundjeri

Coordinates: 145.17528, -37.83763

Address:
15 SAPPHIRE STREET FOREST HILL 3131
10 FRASER PLACE FOREST HILL 3131
6C FRASER PLACE FOREST HILL 3131
6B FRASER PLACE FOREST HILL 3131
CANTERBURY ROAD FOREST HILL 3131
4 FRASER PLACE FOREST HILL 3131
6 FRASER PLACE FOREST HILL 3131
6A FRASER PLACE FOREST HILL 3131
384-400 CANTERBURY ROAD FOREST HILL 3131

Regulator Notes

Removal polygons are located:

Summary of native vegetation to be removed

Assessment pathway	**Intermediate Assessment Pathway**		
Location category	Location 2 The native vegetation extent map indicates that this area is typically characterised as supporting native vegetation. Additionally, it is modelled as encompassing an endangered Ecological Vegetation Class, sensitive wetland or sensitive coastal area. The removal of less than 0.5 hectares of native vegetation in this area will not require a Species Offset.		
Total extent including past and proposed removal (ha) *Includes endangered EVCs (ha): 0.48*	**0.48**	*Extent of past removal (ha)*	*0*
		Extent of proposed removal - Patches (ha)	*0.211*
		Extent of proposed removal - Scattered Trees (ha)	*0.269*
No. Large Trees proposed to be removed	**7**	*No. Large Patch Trees*	*5*
		No. Large Scattered Trees	*2*
No. Small Scattered Trees	8		

Offset requirements if approval is granted

Any approval granted will include a condition to secure an offset, before the removal of native vegetation, that meets the following requirements:

General Offset amount [1]	**0.093 General Habitat Units**
Minimum strategic biodiversity value score [2]	0.1015
Large Trees	7
Vicinity	Melbourne Water CMA or WHITEHORSE CITY LGA

NB: values within tables in this document may not add to the totals shown above due to rounding

The availability of third-party offset credits can be checked using the Native Vegetation Credit Register (NVCR) Search Tool - https://nvcr.delwp.vic.gov.au

1. The General Offset amount required is the sum of all General Habitat Units in Appendix 1.
2. Minimum strategic biodiversity value score is 80 per cent of the weighted average score across habitat zones where a General Offset is required.
3. The Species Offset amount(s) required is the sum of all Species Habitat Units in Appendix 1.

Application requirements

Applications to remove, destroy or lop native vegetation must include all the below information. If an appropriate response has not been provided the application is not complete.

Application Requirement 1 - Native vegetation removal information

If the native vegetation removal is mapped correctly, the information presented in this Native Vegetation Removal Report addresses Application Requirement 1.

Application Requirement 2 - Topographical and land information

This statement describes the topographical and land features in the vicinity of the proposed works, including the location and extent of any ridges, hilltops, wetlands and waterways, slopes of more than 20% gradient, low-lying areas, saline discharge areas or areas of erosion.

See report

Application Requirement 3 - Photographs of the native vegetation to be removed

Application Requirement 3 is not addressed in this Native Vegetation Removal Report. All applications must include recent, timestamped photos of each Patch, Large Patch Tree and Scattered Tree which has been mapped in this report.

Application Requirement 4 - Past removal

If past removal has been considered correctly, the information presented in this Native Vegetation Removal Report addresses Application Requirement 4.

Application Requirement 5 - Avoid and minimise statement

This statement describes what has been done to avoid and minimise impacts on native vegetation and associated biodiversity values.

See report

Application Requirement 6 - Property Vegetation Plan

This requirement only applies if an approved Property Vegetation Plan (PVP) applies to the property
Does a PVP apply to the proposal?

No

Application Requirement 7 - Defendable space statement

Where the removal of native vegetation is to create defendable space, this statement:

- Describes the bushfire threat; and
- Describes how other bushfire risk mitigation measures were considered to reduce the amount of native vegetation proposed for removal (this can also be part of the avoid and minimise statement).

This statement is not required if, If the proposed defendable space is within the Bushfire Management Overlay (BMO), and in accordance with the 'Exemption to create defendable space for a dwelling under Clause 44.06 of local planning schemes' in Clause 52.12-5.

See report

Application Requirement 8 - Native Vegetation Precinct Plan

This requirement is only applicable if you are removing native vegetation from within an area covered by Native Vegetation Precinct Plan (NVPP), and the proposed removal is not identified as 'to be removed' within the NVPP.
Does an NVPP apply to the proposal?

No

Application Requirement 9 - Offset statement

This statement demonstrates that an offset is available and describes how the required offset will be secured. The Applicant's Guide provides information relating to this requirement.

See report

Next steps

Applications to remove, destroy or lop native vegetation must address all the application requirements specified in the Guidelines. If you wish to remove the mapped native vegetation you are required to apply for approval from the responsible authority (e.g. local Council). This Native vegetation removal report must be submitted with your application and meets most of the application requirements. The following requirements need to be addressed, as applicable.

Application Requirement 3 - Photographs of the native vegetation to be removed

Recent, dated photographs of the native vegetation to be removed **must be provided** with the application. All photographs must be clear, show whether the vegetation is a Patch of native vegetation, Patch Tree or Scattered Tree, and identify any Large Trees. If the area of native vegetation to be removed is large, provide photos that are indicative of the native vegetation.

Ensure photographs are attached to the application. If appropriate photographs have not been provided the application is not complete.

Application Requirement 6 - Property Vegetation Plan

If a PVP is applicable, it must be provided with the application.

Appendix 1: Description of native vegetation to be removed

General Habitat Units for each zone (Patch, Scattered Tree or Patch Tree) are calculated by the following equation in accordance with the Guidelines

General Habitat Units = extent without overlap x condition score x general landscape factor x 1.5, where the general landscape factor = 0.5 + (strategic biodiversity value score/2)

The General Offset amount required is the sum of all General Habitat Units per zone.

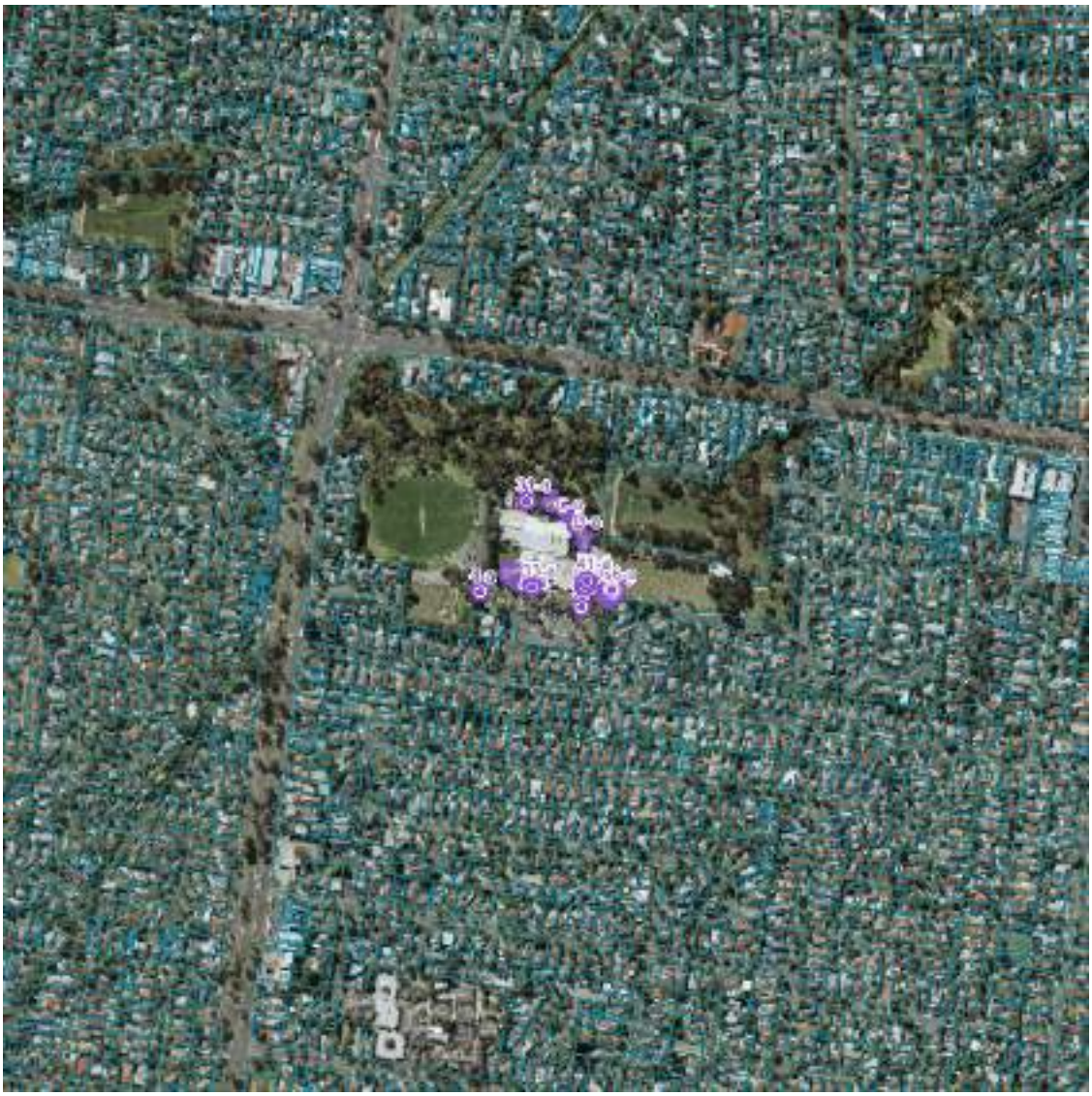
Native vegetation to be removed

Information provided by or on behalf of the applicant							Information calculated by NVR Map				
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Partial Removal**	**Condition score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap (ha)**	**SBV score**	**General Habitat Units**
A-a	Patch	-	GipP0127	Endangered	no	0.240	-	0.097	0.097	0.100	0.019
C-a	Patch	-	GipP0127	Endangered	no	0.300	2	0.050	0.050	0.220	0.014
D-a	Patch	-	GipP0127	Endangered	no	0.280	3	0.064	0.064	0.149	0.015
30-a	Scattered Tree	18	GipP0127	Endangered	no	0.200	-	0.031	0.020	0.100	0.003
31-a	Scattered Tree	66	GipP0127	Endangered	no	0.200	-	0.031	0.031	0.220	0.006
32-a	Scattered Tree	51	GipP0127	Endangered	no	0.200	-	0.031	0.012	0.100	0.002
33-a	Scattered Tree	59	GipP0127	Endangered	no	0.200	-	0.031	0.017	0.100	0.003

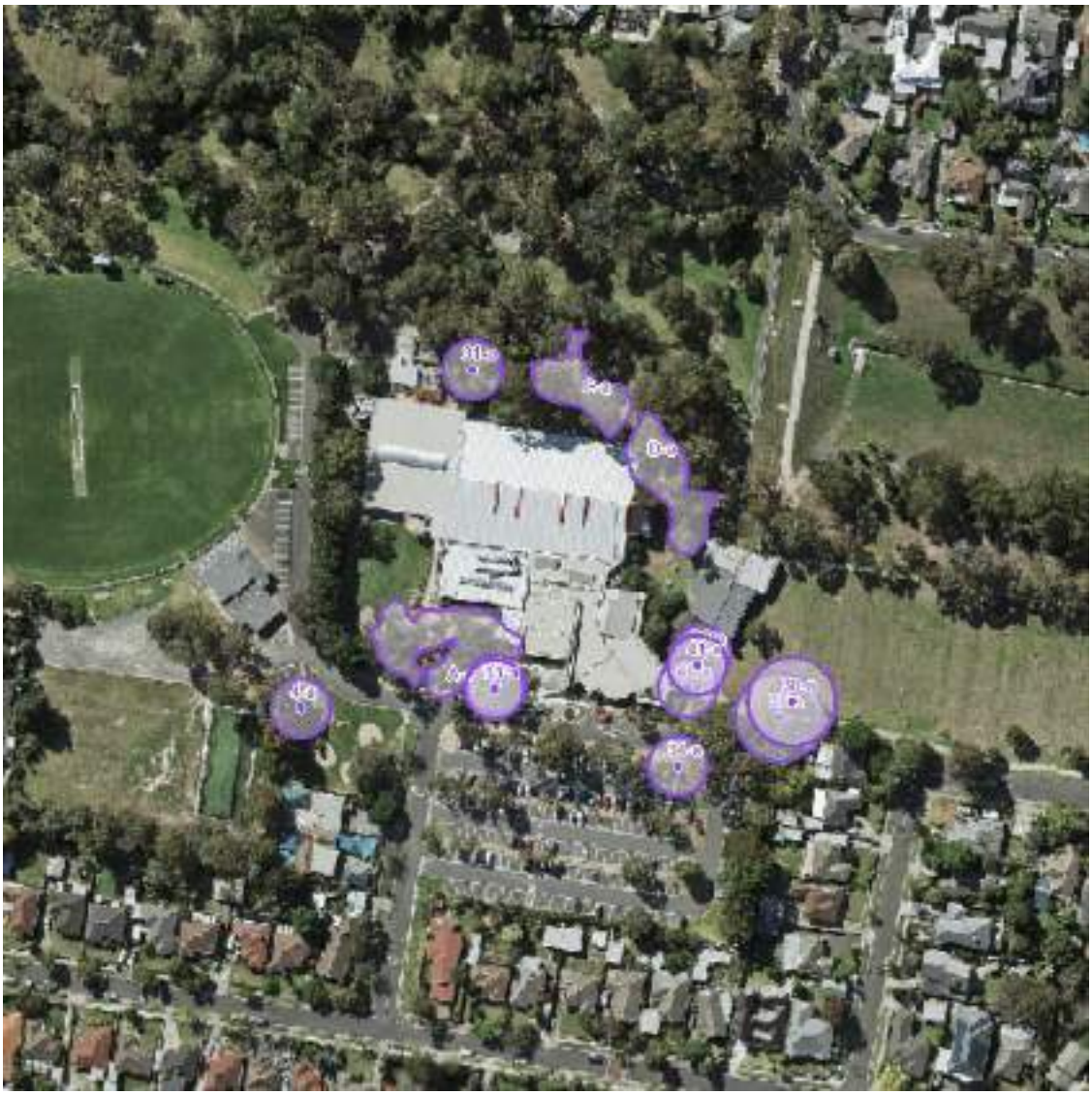
Information provided by or on behalf of the applicant							Information calculated by NVR Map				
Zone	**Type**	**DBH (cm)**	**EVC code**	**Bioregional conservation status**	**Partial Removal**	**Condition score**	**Large Tree(s)**	**Polygon extent (ha)**	**Extent without overlap (ha)**	**SBV score**	**General Habitat Units**
34-a	Scattered Tree	63	GipP0127	Endangered	no	0.200	-	0.031	0.031	0.100	0.005
35-a	Scattered Tree	80	GipP0127	Endangered	no	0.200	1	0.070	0.045	0.100	0.007
36-a	Scattered Tree	71	GipP0127	Endangered	no	0.200	1	0.070	0.045	0.100	0.007
4-a	Scattered Tree	42	GipP0127	Endangered	no	0.200	-	0.031	0.031	0.100	0.005
40-a	Scattered Tree	30	GipP0127	Endangered	no	0.200	-	0.031	0.024	0.100	0.004
41-a	Scattered Tree	16	GipP0127	Endangered	no	0.200	-	0.031	0.012	0.100	0.002

Appendix 2: Images of mapped native vegetation

1. Property in context



2. Aerial photograph showing mapped native vegetation



Proposed Removal
Past Removal
Partial Removal

N

55 m

3. Location Risk Map

4. Strategic Biodiversity Value Score Map

5. Condition Score Map

6. Endangered EVCs

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Appendix 9 Report of available native vegetation credits

Report of available native vegetation credits

This report lists native vegetation credits available to purchase through the Native Vegetation Credit Register.

This report is **not evidence** that an offset has been secured. An offset is only secured when the units have been purchased and allocated to a permit or other approval and an allocated credit extract is provided by the Native Vegetation Credit Register.

Date and time: 19/09/2024 12:36 **Report ID: 26493**

What was searched for?

General offset

General habitat units	Strategic biodiversity value	Large trees	Vicinity (Catchment Management Authority or Municipal district)	
0.093	0.1015	7	CMA	Melbourne Water
			or LGA	Whitehorse City

Details of available native vegetation credits on 19 September 2024 12:36

These sites meet your requirements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
BBA-0277	2.302	442	Melbourne Water	Mornington Peninsula Shire	No	Yes	No	Abezco, Ethos, VegLink
BBA-0670	14.661	105	Melbourne Water	Cardinia Shire	No	Yes	No	Abezco, VegLink
BBA-0677	5.562	1409	Melbourne Water	Whittlesea City	No	Yes	No	Abezco, VegLink
BBA-0678	41.870	2579	Melbourne Water	Nillumbik Shire	No	Yes	No	VegLink
BBA-0678_02	0.562	58	Melbourne Water	Nillumbik Shire	No	Yes	No	Abezco, VegLink
BBA-2789	1.317	14	Melbourne Water	Baw Baw Shire	Yes	Yes	No	Contact NVOR
BBA-2790	2.911	116	Melbourne Water	Baw Baw Shire	Yes	Yes	No	Contact NVOR
BBA-2870	2.544	431	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
BBA-2871	14.355	1642	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
VC_CFL-0838_01	0.184	648	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
VC_CFL-3687_01	0.278	61	Melbourne Water	Baw Baw Shire	Yes	Yes	No	Baw Baw SC
VC_CFL-3708_01	0.193	492	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
VC_CFL-3709_01	0.128	360	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink

VC_CFL-3710_01	6.300	322	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
VC_CFL-3744_01	1.164	349	Melbourne Water	Macedon Ranges Shire	Yes	Yes	No	VegLink

These sites meet your requirements using alternative arrangements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)

There are no sites listed in the Native Vegetation Credit Register that meet your offset requirements when applying the alternative arrangements as listed in section 11.2 of the Guidelines for the removal, destruction or lopping of native vegetation.

These potential sites are not yet available, land owners may finalise them once a buyer is confirmed.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
VC_CFL-3746_01	4.962	563	Melbourne Water	Macedon Ranges Shire	Yes	Yes	No	VegLink

LT - Large Trees *CMA - Catchment Management Authority* *LGA - Municipal District or Local Government Authority*

Next steps

If applying for approval to remove native vegetation
Attach this report to an application to remove native vegetation as evidence that your offset requirement is currently available.

If you have approval to remove native vegetation
Below are the contact details for all brokers. Contact the broker(s) listed for the credit site(s) that meet your offset requirements. These are shown in the above tables. If more than one broker or site is listed, you should get more than one quote before deciding which offset to secure.

Broker contact details

Broker Abbreviation	Broker Name	Phone	Email	Website
Abezco	Abzeco Pty. Ltd.	(03) 9431 5444	offsets@abzeco.com.au	www.abzeco.com.au
Baw Baw SC	Baw Baw Shire Council	(03) 5624 2411	bawbaw@bawbawshire.vic.gov.au	www.bawbawshire.vic.gov.au
Bio Offsets	Biodiversity Offsets Victoria	0452 161 013	info@offsetsvictoria.com.au	www.offsetsvictoria.com.au
Contact NVOR	Native Vegetation Offset Register	136 186	nativevegetation.offsetregister@delwp.vic.gov.au	www.environment.vic.gov.au/native-vegetation
Ecocentric	Ecocentric Environmental Consulting	0410 564 139	ecocentric@me.com	Not avaliable
Ethos	Ethos NRM Pty Ltd	(03) 5153 0037	offsets@ethosnrm.com.au	www.ethosnrm.com.au
Nillumbik SC	Nillumbik Shire Council	(03) 9433 3316	offsets@nillumbik.vic.gov.au	www.nillumbik.vic.gov.au
TFN	Trust for Nature	8631 5888	offsets@tfn.org.au	www.trustfornature.org.au
VegLink	Vegetation Link Pty Ltd	(03) 8578 4250 or 1300 834 546	offsets@vegetationlink.com.au	www.vegetationlink.com.au
Yarra Ranges SC	Yarra Ranges Shire Council	1300 368 333	biodiversityoffsets@yarraranges.vic.gov.au	www.yarraranges.vic.gov.au

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For more information contact the DEECA Customer Service Centre 136 186 or the Native Vegetation Credit Register at nativevegetation.offsetregister@delwp.vic.gov.au

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Obtaining this publication does not guarantee that the credits shown will be available in the Native Vegetation Credit Register either now or at a later time when a purchase of native vegetation credits is planned.

Notwithstanding anything else contained in this publication, you must ensure that you comply with all relevant laws, legislation, awards or orders and that you obtain and comply with all permits, approvals and the like that affect, are applicable or are necessary to undertake any action to remove, lop or destroy or otherwise deal with any native vegetation or that apply to matters within the scope of Clauses 52.16 or 52.17 of the Victoria Planning Provisions and Victorian planning schemes

Appendix 10 Legislation and policy context

Environmental legislation and policies relevant to and considered as part of the current assessment are discussed in this appendix.

Implications of these regulatory requirements on the proposed development are discussed in Section 6.

Environment Protection and Biodiversity Conservation Act 1999 (C'wlth)

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is Australia's legal framework for the protection and management of Matters of National Environmental Significance (MNES). The EPBC Act also protects the environment from actions undertaken on or impacting Commonwealth land, undertaken by an Australian Government agency anywhere in the world, or impacting Commonwealth heritage places overseas.

MNES relevant to the current investigation include:

- Wetlands of international importance (listed under the Ramsar Convention)
- Listed threatened species and ecological communities
- Listed migratory species (protected under international agreements).

Other MNES covered by the EPBC Act (i.e. world heritage areas, national heritage places, listed marine species, Commonwealth marine areas, Great Barrier Reef Marine Park, nuclear actions, and water resources that relate to coal seam gas development and large coal mining development) are not considered as part of this assessment.

A proposed action which will have or is likely to have a significantly impact one or more MNES must be referred to the Commonwealth Department of Climate Change, Energy, Environment and Water (DCCEEW). A person proposing an action may also refer that action to the DoE if they are unsure whether the action will significantly impact MNES, to confirm their legal obligations. If the proposed action is a component of a larger action (e.g. one stage of a larger development), the larger action may need to be referred. Fees apply to referral submissions, except where exemptions apply.

Once a proposed action is referred, the Minister has 20 business days to decide whether the proposed action is a Controlled Action and therefore requires approval under the EPBC Act. The Minister will make one of the following determinations on a proposed action:

- It is unlikely to have a significant impact (i.e. is not a controlled action) and does not require approval
- It is unlikely to have a significant impact (i.e. is not a controlled action) and does not require approval if undertaken in a particular manner
- It is likely to have a significant impact (i.e. is a controlled action) and requires approval
- It will have unacceptable impacts and cannot proceed.

If the action is a controlled action and requires approval, the Minister will advise the public assessment method to be used to assess the action. The assessment method may include assessment:

- on referral information
- on preliminary documentation (with or without extra information)
- by public environment report

- by environmental impact statement (EIS)
- by public inquiry
- under a bilateral or accredited process (e.g. Victorian Environment Effects Statement).

Assessments (regardless of method) are subject to a public exhibition process, inviting anyone to provide comments for the Minister to consider before making a final decision on the controlled action.

The EPBC Act also lists key threatening processes that could potentially threaten biodiversity in Australia. Public authorities are required to manage these key threatening processes when delivering their projects or undertaking their responsibilities.

Flora and Fauna Guarantee Act 1988 (Vic.)

The *Flora and Fauna Guarantee Act 1988* (FFG Act) is Victorian legislation aimed at conserving flora, fauna and ecological communities threatened or requiring protection at the state level, and managing processes that are potentially threatening to the state's biodiversity.

The FFG Act is supported by the *Flora and Fauna Guarantee Amendment Act 2019*, which:

- introduced principles and clarifications to guide the implementation of the FFG Act, including consideration of Traditional Owners rights and interests, climate change and critical habitats
- introduced a requirement for all Victorian government to consider impacts to biodiversity when making decisions and policies
- updated the approach to assessing and listing threatened species to align with a common national assessment method
- strengthened the enforceability of the FFG Act.

The following values are protected under the FFG Act:

- Flora and fauna taxa (species, subspecies or varieties) listed as threatened under the FFG Act.
- Flora and fauna taxa belonging to communities listed as threatened under the FFG Act.
- Flora taxa which are not threatened but require protection for other reasons. For example, some species which are attractive or highly sought after, such as orchids and grass trees, are protected so that the removal of these species from the wild can be controlled.

Under the FFG Act, a licence or permit is required to:

- Take protected flora from public land
- Take protected flora from private land for the purpose of sale, except flora that has been propagated from flora which has been lawfully obtained and kept
- Injure, damage, destroy, possess, keep, display for reward, release into Victorian waters or sell any protected aquatic biota.

The FFG Act also lists processes that could potentially threaten biodiversity in Victoria (e.g. loss of hollow-bearing trees). Public authorities are required to manage these processes when delivering their projects or undertaking their responsibilities.

Planning and Environment Act 1987 (Vic.)

The *Planning and Environment Act 1987* (P&E Act) establishes a framework for planning the use, development, and protection of land, including native vegetation retention controls. The PE Act (1987) allows for the development of planning schemes in Victoria.

The study area is subject to the Whitehorse Planning Scheme. Clauses of the planning scheme relevant to the current investigation are outlined below. No planning zone or overlay permit requirements relevant to this investigation have been identified.

Clause 52.17 (Native vegetation)

Clause 52.17 of all Victorian planning scheme identifies circumstances where a planning permit is required to remove, destroy of lop native vegetation.

Guideline for the Removal, Destruction and Lopping of Native Vegetation

The *Guidelines for the removal, destruction or lopping of native vegetation* (Guidelines) are incorporated into the Victoria Planning Provisions and all planning schemes in Victoria and apply to planning permit applications under Clause 52.17. The Guidelines prescribe a three-step approach for native vegetation removal that must be applied when a permit is required under Clauses 52.16 or 52.17 of planning schemes:

1. **Avoid** the removal, destruction or lopping of native vegetation.
2. **Minimise** impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.
3. Provide an **offset** to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation.

Proposals to remove, destroy or lop native vegetation are assessed through a basic, intermediate or detailed assessment pathway, based on the criteria set out in Table 4. The criteria consider the mapped extent of past and proposed native vegetation removal against its location in relation to DEECA-modelled location categories (1, 2 or 3) representing different risk levels to biodiversity. The assessment pathway determines the level of information required in a planning permit application. Accredited assessors need to conduct a site assessment and produce a report detailing the native vegetation to be removed for applications assessed via the detailed assessment pathway.

Table 4 Criteria for determining the assessment pathway under the Guidelines

Extent of native vegetation removal (past and proposed)	Location 1	Location 2	Location 3
Less than 0.5 hectares and not including any Large Trees	Basic	Intermediate	Detailed
Less than 0.5 hectares and including one or more Large Trees	Intermediate	Intermediate	Detailed
0.5 hectares or more	Detailed	Detailed	Detailed

Offsets for approved native vegetation removal are calculated using DEECA systems and tools, and may include:

- General offsets
- Species specific offsets, if the removal exceeds species offset thresholds
- Protection of large trees, if large trees will be removed.

Environment Effects Act 1978 (Vic.)

The *Environment Effects Act 1978* (EE Act) regulates projects capable of having a significant effect on the Victorian environment.

A new or amended project that could have the potential for a significant effect on the Victorian environment can be referred to the Minister for Planning by project proponents or decision-makers. The *Ministerial guidelines for assessment on environmental effects under the Environment Effects Act 1978* (DTP 2023) sets out criteria used to inform whether a referral is required. Referral criteria relevant to the current investigation are presented in Table 5.

Table 5 EE Act referral criteria relevant to this investigation

Individual referral criteria Individual types of potential effects on the environment that warrant referral of a project.	**Combined referral criteria** A combination of two or more types of potential effects on the environment that warrant referral of a project.
• Potential removal, destruction or lopping of 10 ha or more of native vegetation, that consists of, or comprises a combination of: – an ecological vegetation class (EVC) classified as endangered; or – an EVC that is classified as vulnerable (with a condition score of 0.5 or more) or rare (with a condition score of 0.6 or more); and – that is not authorised for removal under an approved forest management plan or fire protection plan. • Potential clearing of an area determined as 'critical habitat' under the *Flora and Fauna Guarantee Act 1988*. • Potential for loss of a significant proportion (e.g. 1 percent or greater) of known remaining habitat or population of a threatened species within Victoria. • Potential for long-term change to the ecological character of a wetland listed under the Ramsar Convention or in A Directory of Important Wetlands in Australia. • Potential for extensive or major effects on the use and environmental values of water resources due to changes in water quality, water availability, stream flows, water system function, or regional groundwater levels, or the health or biodiversity of aquatic, estuarine or marine ecosystems, over the long term.	• Potential removal, destruction or lopping of 10 ha or more of native vegetation, unless it is authorised for removal under an approved forest management plan or fire protection plan. • Matters listed under the *Flora and Fauna Guarantee Act 1988*: – potential loss of a significant area of a listed ecological community; or – potential loss of a genetically important population of an endangered or threatened species (listed or nominated for listing), including from loss or fragmentation of habitats; or – potentially significant effects on habitat values of a wetland supporting migratory bird species.

Once a referral is submitted to and accepted by the Minister, the Minister will make one of the following decisions, typically within 20 business days:

- An Environment Effects Statement (EES) is needed. Approval decisions are put on hold until the EES process is completed.
- An EES is not needed. Decision makers can go ahead with their approval process.
- An EES is not needed but conditions must be met.

Conditions might relate to the location or dimensions of the project or mitigation measures, or requirements for further studies or consultation.

Catchment and Land Protection Act 1994 (Vic.)

The *Catchment and Land Protection Act 1994* (CaLP Act) provides a legislative framework for the management of land, including the control of declared noxious weeds and pest animals. Each Catchment Management Authority (CMA) region within Victoria has a designated list of declared noxious weeds (control of which is enforceable).

The general duties under the CaLP Act require landowners to take all reasonable steps to:

- Avoid causing or contributing land degradation which may damage another landowner's land
- Conserve soil
- Protect water resources
- Eradicate regionally prohibited weeds
- Prevent the growth and spread of regionally controlled weeds
- Prevent the spread of, and as far as possible eradicate, established pest animals.

Additionally, the following points relevant to the proposed development are offences under the Act, except where a relevant permit has been obtained:

- Removing or causing to be removed, soil, sand, gravel or stone which contains noxious weeds, or comes from land on which noxious weeds grow.
- Depositing on land any noxious weeds of seeds of noxious weed that are apparently capable of germinating.

The CaLP Act is regulated by Agriculture Victoria.

Only biodiversity related criteria are considered in this report. Other criteria (i.e. regarding cultural heritage, major land stability issues, and major social and economic effects) need to be considered to determine whether they trigger the need for a referral under the EE Act

Wildlife Act 1975 (Vic.)

The *Wildlife Act 1975* (Wildlife Act) protects native fauna species and regulates the conduct of any persons engaged in activities concerning or relating to wildlife. The Act establishes procedures to promote the protection and conservation of wildlife, to prevent wildlife taxa from becoming extinct, and the sustainable use of and access to wildlife. It also provides the basis for the majority of wildlife permit/licensing requirements within the state. Under the Act, a person must not hunt, take, or destroy endangered, notable or protected wildlife; this includes all native vertebrate animals, all kinds of deer, non-indigenous quail, pheasants, and partridges, and all terrestrial invertebrate fauna listed under the FFG Act.

The *Wildlife Regulations 2013* provide further detail relating to the act, including that a person is not to damage, disturb, or destroy any wildlife habitat, although this does not apply if the person is authorised to do so under any other Act.

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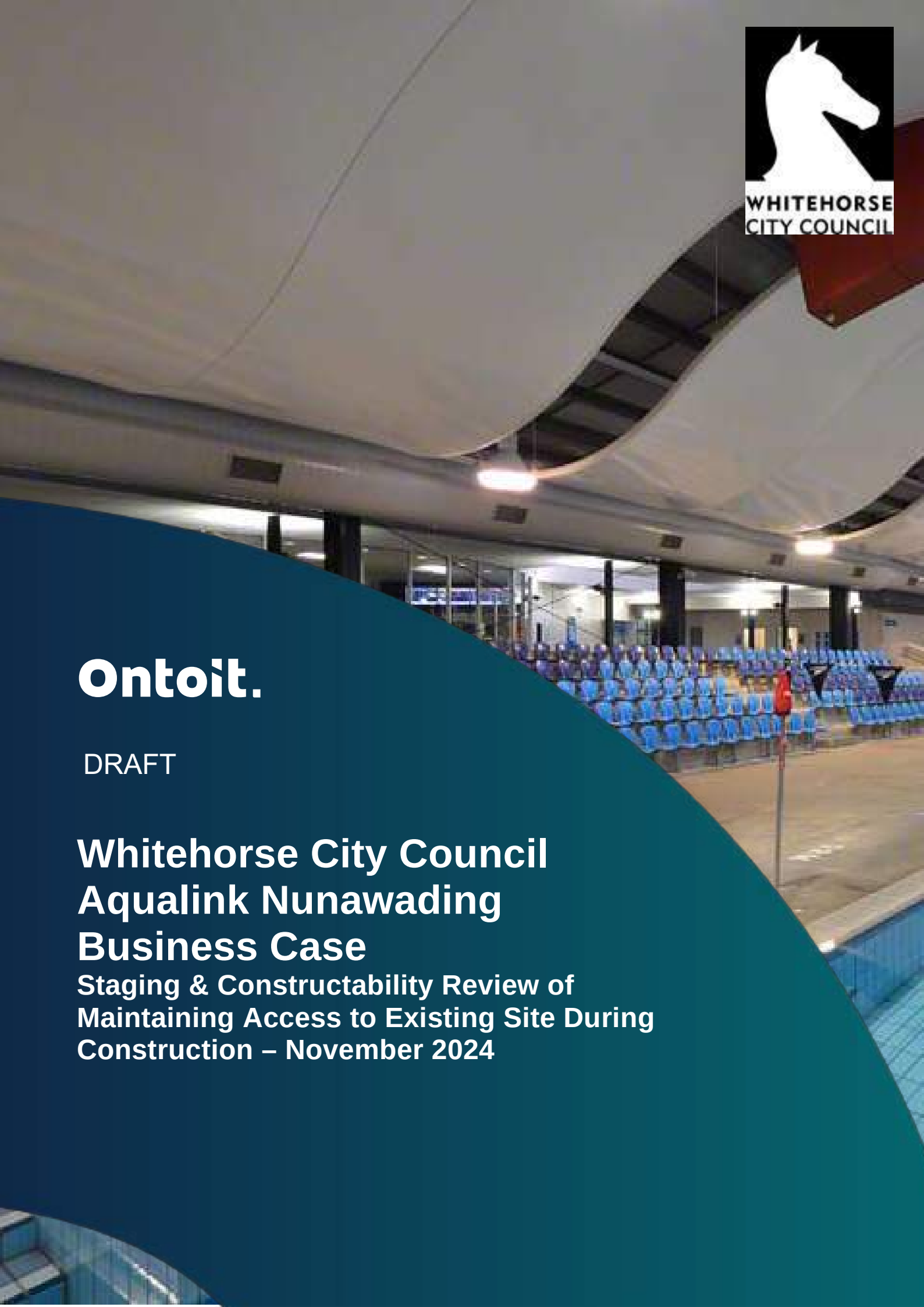
Appendix Q - Staging and Constructibility Review



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DRAFT

Whitehorse City Council Aqualink Nunawading Business Case

Staging & Constructability Review of Maintaining Access to Existing Site During Construction – November 2024

Contents

1. Introduction & Purpose
2. Review Strategy
3. Executive Summary
4. Current Facilities / Service Areas
5. Key Requirements for Ongoing Operations
6. Strategies to Deliver Key Functional Requirements
7. Engineering Services
8. Cost Plan for Temporary Works and Extended Operations
9. Potential Impacts on Construction Contractor and Users
10. Appendices

1. Introduction & Purpose

Over the past few months, Ontoit has progressed stakeholder engagement and concept design for the proposed new facility on the Aqualink Nunawading site, as part of developing a Detailed Business Case to support a funding request. It has been identified that several stakeholders within the Whitehorse City Council (Council) would like to explore the potential to maintain access to the existing Aqualink aquatic facility for the maximum period during the construction phase of the project, with specific focus on access to the 50m pool.

In acknowledgement of this view, current concept designs forming part of the business case are sited in a way to provide Council with the option of extending access to the existing 50m pool during the construction phases, with the site of the existing pool being ultimately replaced with at-grade car parking.

To understand the likely costs, risks, benefits and drawbacks of this idea, Council have requested that Ontoit provide a proposal to Council to review the potential to keep the 50m pool open during the construction phase of the project, for as long a reasonably practical.

The current estimated project program shows an approximate two-year construction period, covering calendar years 2029 and 2030.

2. Review Strategy

Following discussions internally and with the existing services engineering consultants, ADP, the following scope of works and approach has been agreed:

- Site Visit by Ontoit and ADP, together with representatives from Whitehorse City Council (Council). **Site Visit held 28 August 2024.**
- Discuss with Council staff to clearly understand the end-user requirements for the facilities that remain open. **Detailed discussions held 16 September 2024.**
- Examine the likely construction site and lay down areas that might be required by a potential Construction Contractor.
- Consider the expected construction program and any significant likely timing impacts.
- Analysis of any overall project staging requirements resulting from maintaining existing operations.

- The identification of any temporary works required to deliver an appropriate standard of access to the remaining facilities.
- Consider the removal of existing engineering services and Authority assets to clear the proposed construction site and provide the necessary services to the facilities to remain in operation.
- Consider traffic and pedestrian flows during the construction period for the project.
- Provide high-level estimates of any expected costs in relation to keeping the remaining facilities operational. Estimates provided by WT Partnership.
- Consider and evaluate the end-user customer experience that is likely to be delivered at the remaining facilities.
- Consider the key risks associated with maintaining the existing facilities whilst constructing the proposed new buildings.

Prepare a draft report for review and consideration by Council.

Incorporate feedback from Council and prepare/deliver a final report.

The above review strategy is based on Option 3A as the currently preferred option for the new facilities.

Ontoit would like to thank all the key contributors to the preparation of this review and report, including:
- City of Whitehorse representatives.
- John Blias, Operations Manager, Aqualink.
- ADP Consulting P/L
- WT Partnership
- CO.OP Studio; and
- Onemilegrid

3. Executive Summary

Based on the existing concept designs, we believe it is possible to provide safe access to the existing Aqualink Nunawading ground floor aquatic facilities (including the 50m pool), during the two-year construction phase for the new Aqualink Nunawading Project. In order to achieve this outcome, some early works must be undertaken by the selected D&C Contractor including:
- Provision of early works and services diversions
- Provision of power supply
- Management of construction interface along southern boundary of existing pool.
- Provision of suitable and safe separate access pathways for public and construction personnel; and
- Provision of temporary buildings to service patrons (such as entry, reception, admin and change / wet areas).

The cost of these works is estimated at ~$4.8 million. Should Council wish to maintain access to this facility for the entire two-year construction duration, there will be additional costs to retain contractor personnel on site to complete the northern car park and landscaping works. This is estimated at ~$1.5 million over a six-month period. Should Council have some flexibility in this regard, there is a potential to reduce or eliminate this cost.

In addition to this cost, Council is likely to experience an operational loss from continuing to keep the aquatic facilities open. 50m pool facilities operating independently generally do not operate at a surplus. In addition, there is likely to be some additional capital expenditure required to ensure the continue operation of the aquatic facilities for a further two years, noting the age and condition of the existing asset. Together these items could sit between $1 – 2 million over a two year period.

Should Council wish to progress this concept, scope expectations for any prospective D&C Contractor should be clearly identified in any request for tender documentation and appropriate budget allowed for by Council in the total project cost.

4. Current Facilities / Service Areas

Aquanlink Nunwading includes the following key service areas that are currently within the proposed construction site for the new facility and are due for demolition at the commencement of construction activities on site:

- Entry Foyer/Lobby
- Reception
- Administration Area
- Creche
- Program Room 1
- Program Room 2
- Gallery Area
- Gymnasium
- Dry Change Area (Male & Female)
- Wet Change Area (Male & Female)
- Accessible Amenities
- Dry Area Café
- Kitchen/Serve & Storage
- Office Space
- Plant Room
- Basketball Hoop play area
- Swim Club Clubhouse

The following service areas are expected to remain to support the potential continued operation of the 50m Pool and associated facilities:

- 50m Pool, including seating area
- Pool Store & Cleaners Area
- First Aid Room
- Leisure/Toddler Pools/Learn to Swim & associated concourse areas
- Spa
- Showers
- Plant & Storerooms
- Sauna & Steam Rooms
- Pool Filtration & Boiler Plant Room and all associated Equipment

The demarcation line for service areas to be demolished and those to be retained runs east/west generally in line with the back of the seating area for the existing 50m Pool.

5. Key Requirements for Ongoing Operations

Following discussions with Council staff, the following service areas will need to be added to the northern part of the existing facility. This will allow the retained 50m pool and associated areas to continue to operate efficiently and effectively and provide an acceptable experience for ongoing users:

- Wet Change Area (Male & Female)
- Entry Foyer/Lobby and Airlock
- Reception
- Administration Area
- Accessible Amenities
- Baby Change Facilities

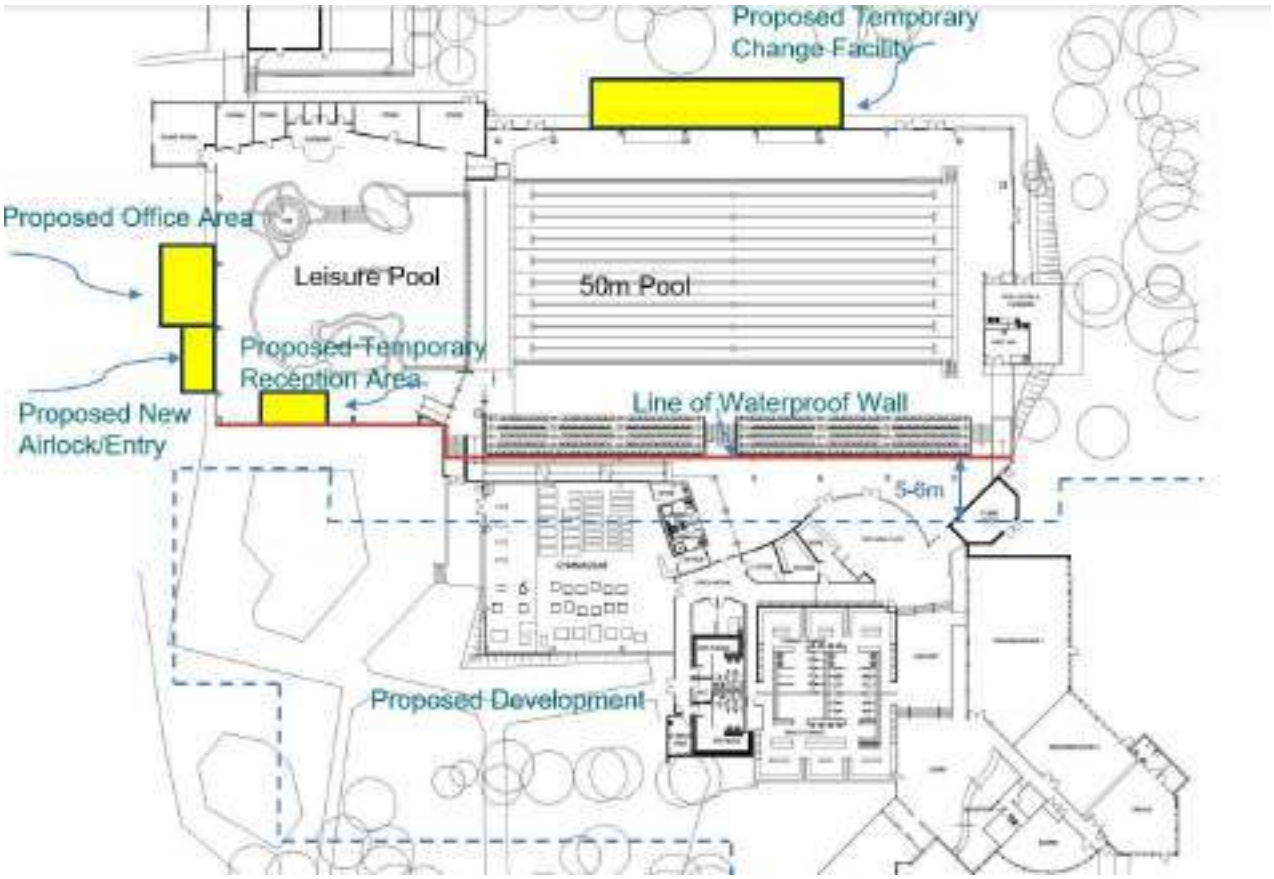
The above areas are currently provided in existing areas to be demolished and therefore need to be temporarily replicated in some form to facilitate the ongoing operation of the 50m Pool during the construction phase.

6. Strategies to Deliver Key Functional Requirements

The table below summarises the strategies to deliver the key requirements for ongoing operation.

No	Requirement	Strategy to Deliver
1	**Wet Change Area (M&F) incl:** *Male:* *Locker space* *Urinal* *Handwash (4)* *Toilets (6)* *Shower Area* *Change Area* *Female:* *Toilets (6)* *Shower Cubicles (8)* *Handwash (10)* *Locker Space*	The existing Male & Female Wet Change facilities total approx. 210m2. The most appropriate and functional area to accommodate this space is to north of the existing pool area. Further information is required regarding the size of this facility, but the requirements could be provided as portable accommodation or built on site. Services including power supply, air conditioning, cold & hot water supply and sewer will need to be provided to these spaces. Egress from the two sets of two double doors along this elevation can be maintained even with these additional facilities being provided in this grassed area to the north. Options for School Group change area to be further explored. Swim Club storage area not provided. **Refer APPENDIX B – Photograph No 3.**
2	**Airlock/Entry**	A new airlock and entry area will be built to the western façade into the leisure pool area. Accessible access pathway will need to be provided for the adjacent road to the west up to the edge of the existing building. **Refer APPENDIX B – Photograph No 2.**
3	**Reception Counter and access Control**	A new temporary fully enclosed reception counter area is to be built along the southern face of the leisure pool area to manage all access to the facility. Power, IT, communication infrastructure/services will be required to this area. Provide for 2 people on reception but 3 desks. Ensure accessibility and air conditioning. **Refer APPENDIX B – Photograph No 5.**
4	**Administration Office Area + Staff Lockers**	Location for office/admin area to be identified. We have proposed a location near the new entry at the western end of the facility. Space required for 8-10 people, close relationship with Reception Area. Not possible to locate the staff off-site.
5	**Accessible Amenities**	To be part of the facility being provided for the Wet Change Area (Item 1 above).
6	**Baby Change Facilities**	To be part of the facility being provided for the Wet Change Area (Item 1 above).

No	Requirement	Strategy to Deliver
7	**Car Parking**	The existing car parking spaces between the existing facility buildings and the football ground can be used by patrons to the swimming facilities, approximately 30 spaces. There are also another 37 spaces in the car park to the south/west of the football pavilion. A significant portion of the existing main car park to the south will still be available for patrons use even if some of this may be identified for use by the Construction Contractor. The total car parking spaces in this area is approximately 200. Patrons who use this car parking area will need to walk from the car park in a westerly direction around what will eventually be a construction site and to the new main entry to the swimming facilities, a safe pathway will need to be provided for pedestrian access. Additional car parking spaces may be available on the eastern side of the access road between the Aqualink facility and the football pavilion.
	Drop off Area	A safe drop off area will need to be provided as part of the vehicular access road between the Aqualink facility and the football ground to the west. **Refer APPENDIX B – Photograph No 1.**
9	**Food and Drink**	There is insufficient space available to replace the café area and this would be an expensive area to replicate in an additional temporary built space. A series of vending machines to be considered to provide food and drink for the staff and patrons. A Food Van service may also be worth consideration particularly for busy times/events etc.



Site plan showing all proposed temporary facilities

7. Engineering Services

In addition to the provision of the above key functional spaces there is a critical need to relocate all existing engineering services out of the proposed construction site prior to the construction contractor taking possession of the site. Some of these services, particularly power and gas are required to be relocated and new supplies provided to service the retention of the existing facilities and services associated with the 50m Pool.

ADP Consulting Engineering were requested to review the existing services infrastructure and provide advice on any required relocations, staging and interim works that might be required to retain the ongoing operation of the 50m Pool Hall and associated facilities during the construction of the new facilities. This advice supplements the previous site summary report provided by ADP to inform the business case process for the new facilities.

It should be noted that As-installed documentation was not available to inform this review and advice.

ADP provided a Consultant Advice Notice (CAN No-G02), dated 4 September 2024 (21 pages) and further information in subsequent Email correspondence from ADP (Luke Shadmand) dated 20 September 2024 (5 pages). The following is a summary of the advice provided by ADP, with the full report found in the **Appendix A**.

A. Mechanical Services

The existing Pool Hall is serviced via two heating only AHU's and gas boilers, the plant 7 equipment is not impacted by the proposed demolition and new construction. No additional mechanical works are envisaged to keep the Pool Hall operational during construction of the new facilities.

B. Security and Communications

To maintain security and communications within the pool area, systems will need to be relocated. A new secure location is to be identified within the Pool Hall area to ensure continuous operation.

There will be a need to submit a relocation application to NBN (early application is recommended). Alternatively, a wireless solution could be considered (bare minimum solution).

C. MATV System (TV Signal)

If required, this system will need to be relocated or re-routed to the Pool Hall. Further investigation is required and agreement on a termination point will be sought. This will be critical to ensure uninterrupted entertainment services.

D. Electrical Infrastructure

The existing pole mounted substation (500KVA) is located within the proposed construction site for the new facilities. This substation needs to be upgraded (1MVA) to meet the likely increase in demand and to be relocated.

A power application will need to be submitted to United Energy for both relocation and upgrade. Application to include demand analysis which will determine whether the upgrade is necessary.

A staged approach is required during demolition and construction to maintain power to the Pool Hall. Critical distribution boards and cabling related to the Pool Hall must remain intact. The Pool Hall switchboards need careful assessment.
If the substation and main switchboard are altered for relocation and upgrade, two additional customers are currently fed from this substation which will complicate the relocation and upgrade process.

It will be critical to coordinate with United Energy to work through and agree a strategy to ensure that all power supply requirements are maintained.
Major electrical infrastructure works will be required. To minimise disruption, it may be necessary to install temporary generators to provide power to the Pool Hall and the construction site.

Alternatively, the power infrastructure works could be carried out as early works and facilitate the upgrade and relocation prior to the proposed construction works commencing.

Further investigation is required of the existing electrical reticulation pathways before a final strategy can be agreed/approved and implemented.

E. Lighting Systems

Careful maintenance of the retained lighting circuits is required to maintain the required lighting to the Pool Hall. Code requirement upgrades are required. Comments regarding Emergency & Exit lighting and Fire Detection System are included in the ADP report.

F. Security Systems

Systems need to remain functional; some devices may need to be relocated. Need to coordinate with security specialists.

G. Domestic Cold Water

Supplied to the site via Fraser Place.

A portion of the existing water main is located under the proposed new building footprint. The water main is to be terminated; however further on-site investigation is required to confirm the remedial work necessary.

Relocate main water meter assembly and upgrade including additional pipework.
Authority approvals will be required.

This termination is required regardless of the Pool Hall remaining open.

H. Natural Gas Service

The Gas Meter is located adjacent to the Main Pool plant.

Gas is provided to the site from Canterbury Road and will remain available to enable the Pool Hall to continue operations.

I. Existing Fire Protection Infrastructure

There are four external hydrants providing coverage which are connected to an underground ring main. Pipe locations are yet to be determined. The existing booster assembly is located adjacent to the main water assembly on Fraser Road.

J. Sewer & Sanitary

A portion of the existing sewer main is located under the proposed new building footprint. A sewer diversion will be required although further on-site investigation is required to confirm the details of the relocation.

Authority approvals will be required.

This diversion is required regardless of the Pool Hall remaining open.

K. Rainwater Re-Use System

Current location does not need to be altered.

L. Existing Pool Plant

In the AQN Stage 1 Feasibility Analysis Report section on Existing Conditions the report from 2023 states “The existing Pool Plant is in a critical condition and in need of immediate replacement”.

The report outlined the likely additional costs required to keep the facility operating until 2032. As such there will be additional capital costs associated with operating the existing aquatic facilities for a further two years past 2028.

8. Cost Plan for Temporary Works and Extended Operations

Cost Estimates for the retention of the pool hall and associated facilities, during the construction phase for the new facilities have been estimated by WTP. A table containing the detailed estimated is outlined in **Appendix D.**

In summary, however, the expected total cost is estimated a $6.3 million comprising:

	Cost Item	**$est (incl contingency)**	**Comments**
1.	Provision of Temporary Buildings	$4.0 m	Wet Change Facilities Air Lock/Entry Reception Counter Admin Offices External Wall to south
2	Early Works Packages incl:	$0.30 m	Assembly Water Main Sewer Diversion Hydrants/Booser
3	Permanent Power Supply Solution	$0.50 m	Permanent Power Solution for Project brought forward
4	Extension of Preliminaries	$1.5 m	Estimate based on extension of construction program

	TOTAL TEMPORARY WORKS COSTS	**$5.8m / $6.3 m**	The $500k permanent power supply solution saves on main works, so net total cost to Council is $5.8m
5	Potential Operating Loss	$1.0	Estimated operating loss for up to two years.
6	Additional capital expenditure	$0.5m - $1.0m	To guarantee service levels over the two-year construction period
	NET COST TO COUNCIL	**$7.3 - $7.8m**	

9. Potential Impacts on Construction Contractor and Users

Key items for consideration:

Timing for Temporary Works to be undertaken.

It is understood that construction of the new facility is not planned to commence on site until 2028, this provides more than adequate time to carry out the due diligence work that is required to scope all the temporary work required to maintain the 50m Pool and associated facilities operational during the construction phase of the new project.

The proposed temporary building works will need to be designed and documented to ensure a quality outcome and that the temporary facilities will be safe and fit for purpose for the proposed construction period of approximately two years.

Relocation of Existing Services

As noted earlier in this report there is a requirement to relocate existing services including Power Supply, Water main and Sewer diversion. Each of these services is required to be relocated to enable the construction site for the new facility to be occupied and for construction work commence. The cost of these relocations is a project related cost, and this work is not required to be carried out for the 50m Pool Hall to remain operational. The exception to this is if the permanent power supply solution is not to be implemented in time, then a temporary solution to the power supply will be required to ensure the Pool Hall remains operational.

It is recommended that these relocations are carried out earlier and in sufficient time to avoid any potential delays and additional risks to the project commencement. The preference should also be to resolve the power issue with a permanent solution rather than a temporary solution which will cost approximately half of the cost of the permanent solution and will come with future disruption and potential risks.

Temporary dividing wall between 50m Pool building and construction site.

As noted earlier in this report it is proposed to construct a weatherproof wall in approximate alignment with the steel columns at the back of the tiered seating to the 50m Pool Hall. This will act as the dividing wall between the retained/operational 50m pool area and the construction site for the new facility.

There are no as-built drawings available for the existing building structures and therefore it is somewhat difficult to ascertain the footing sizes/depths for the existing building. *It would advantageous if as-built drawings could be found to better inform the construction of this proposed temporary wall.*

Without existing condition information, it also makes it impossible to determine the need for any underpinning/temporary works which might be needed to ensure the proposed solution is implementable.

The distance between the proposed temporary wall and the northern face of the new construction has also been difficult to accurately determine. We have used an overlay of the new structure on the

existing site plan prepared by Co-op Studio to determine the expected alignment by scaling & alignment with existing buildings etc. to determine this positioning. It is estimated that there is approximately 5/6m between the temporary wall and the northern face of the proposed new building structure.

We believe this will provide sufficient distance to construct any temporary works to achieve safe working conditions for the new works and provide the space for any temporary works necessary to support/retain the existing structure for the 50m Pool Hall.

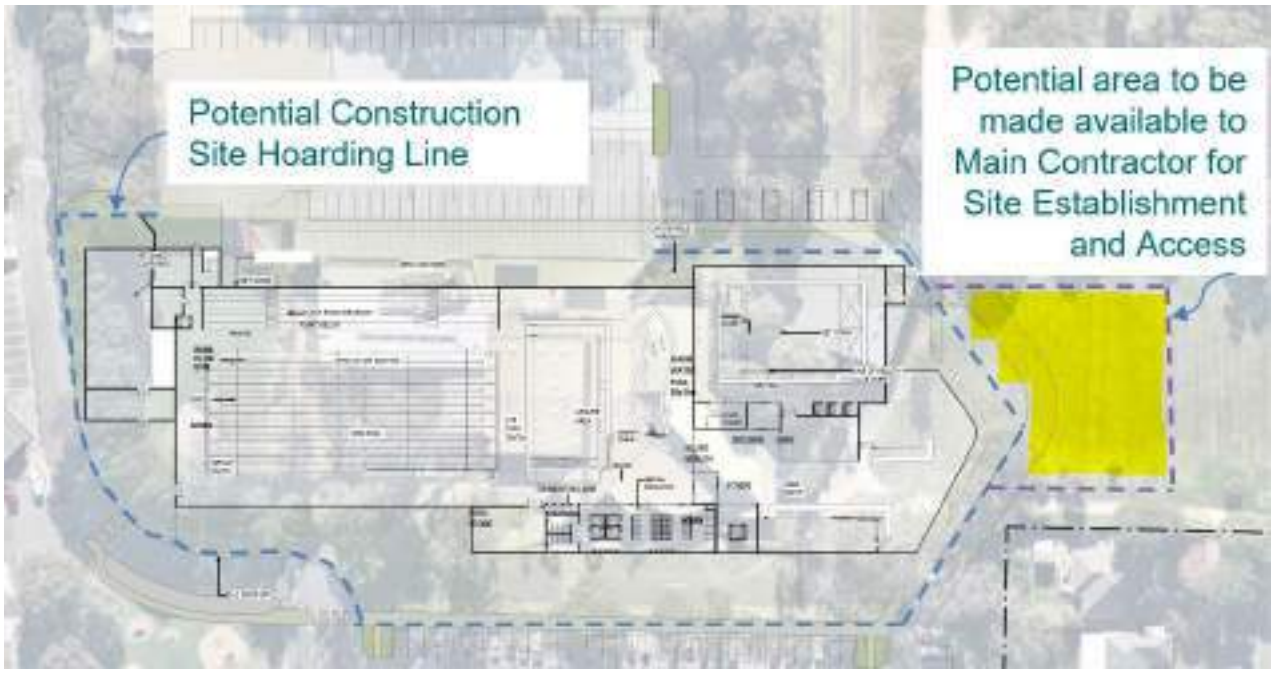
It will be important that at the construction works tender stage this requirement is clearly articulated to the tenderers and that they are challenged to provide, as part of their tender response, an economic/practical and safe resolution to this key issue.

Car Parking, Site Accommodation, Site Sheds / Messing and Storage etc.

It is understood from discussions with Council representatives that there a preparedness from Council to make available an area to the east of the current facilities and adjacent to the proposed new facility for site accommodation and storage of materials etc. This area could be accessed via Opal Street.

This is something that can be negotiated with the Main Contractor at the time of tender. It will be important to make it clear in the tender documentation that the contractor will be required to make good at the end of the construction contract. Existing condition surveys should be carried out before this park area is occupied by the building contractor.

It should also be noted that there is potential area on the construction site to accommodate site shedding etc. Refer Diagram indicating Potential construction site hoarding layout below.



Drawing reflecting site hoarding line.

Access to retained public facilities

It is considered important for the continued operation of the 50m Pool Hall that separation of the public access and construction access is achieved, this will be a key safety issue.

It is therefore recommended that public access be maintained via Husband Road and Fraser Place to the various car parking areas which then provide good access to the new entry point at the western end of the existing Pool Hall. Safe pedestrian access must be maintained from all publicly available car parking areas.

Access to the construction site

In order to reinforce the separation strategy, it is proposed that all construction traffic access to the site be via Husband Road and Opal Street. This route is recommended by the Traffic Engineering Consultant (OneMileGrid) refer **APPENDIX C** for greater detail.

It is understood that some of the existing southern car park, with the anticipated reduced demand, could be made available for construction workers car parking for cars/utes, the number of spaces will vary and could be negotiated with the Main Contractor and could be restricted to the eastern end so as not to take up public/patron's spaces and avoid to much crossover of access requirements.

On site resources could reach between 120 and 150 at the peak activity periods on site

Construction program and potential impacts

The costs quoted earlier in this report assume that the overall project timeframe might be extended by 6 months. This assumes that the new facility is completed and operational. Work then commences on the de-commissioning and demolition of the existing facility and the clearing of the site ready for the construction of the new car park and any other outstanding interface works along the northern face of the new building. This will obviously require the retention of the contractor and staff on site to complete these works.

Costs could be reduced if it was acceptable to have no 50m pool for a period of time towards the end of the construction phase to allow the demolition of the existing Pool Hall to occur prior to the completion of the new facilities and allow the construction of the new car parking/landscaping conclude with the completion of the balance of the project.

This should be an item that is included in the tender documents for negotiation and a proposal from the contractor as part of the tender responses.

Patron Customer Experience

Due to the likely constraints and temporary works on site as outlined herein, it is fair to suggest that Aqualink Nunawading patrons utilising the temporary facilities made available during the temporary, two-year construction phase will be delivered a lower quality customer experience as follows:

- All public patrons accessing the retained aquatic facilities during the construction phase will experience a longer walk from the car park, around the construction site to the new front door of the retained facilities, with greater risk of experiencing inclement weather. The provision of temporary lighting through the pedestrian walking path should be considered.

- Once at the facility, patrons will be limited to accessing the ground floor aquatic facilities, with no dry fitness facilities available. They will also experience temporary style modular change facilities, rather than the existing permanent facilities. This will impact the quality of the customer experience that can reasonably be delivered on site during the two-year construction phase.

10. Appendices

APPENDIX A – Consultant Advice Notice (CAN No-G02), dated 4 September 2024 (21 pages) + subsequent Email correspondence from ADP (Luke Shadmand) dated 20 September 2024 (5 pages).

APPENDIX B – Photographs

1. (133923) – Drop-off area for relocated temporary entry point.
2. (135518) – Proposed entry area to new temporary Airlock/Entry Area.
3. (142621) – Proposed location for construction of temporary Change Room facilities.
4. (JW Photo 1/10) – Existing Interior – showing approximate line of temporary weatherproof wall to be constructed along the column line
5. (JW Photo 1/10) – Existing Interior – showing proposed location of temporary Reception area.

APPENDIX C – Advice from Onemilegrid (Traffic Consultant) dated 9 September 2024 – Regarding access to the project by construction traffic.

APPENDIX D – Cost advice from WTP / ADP

APPENDIX A – ADP Consultant Advice

ADP Consulting : Engineering

ABN 81 139 719 529
adpconsulting.com

Consultant Advice Notice

From	Luke Shadmand	**Advice No.**	CAN No-G02
Project	Aqualink Nunawading Business Case	**Project No.**	MEL4107
Date	4 September 2024	**Pages**	1/21
Subject	Aqualink Staging Constructability Review	**Revision:**	01

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Aqualink Staging Constructability Review

The purpose of this CAN is to provide advice regarding staging of the construction to allow for the main pool hall to remain operational during the construction of the new Aqualink site (based on option 3a). The advice covers building services, structures & civil.

The intention is for this CAN to supplement the previous site summary report provided by ADP.

Limitations

This CAN has been produced based on a non-intrusive site walkthrough and recommendations are based on the available information obtained and the existing site conditions observed. It does not necessarily constitute a full and complete analysis or provide pathways for more robust engineering solutions.

As-Installed documentation was not available for the preparation of this CAN.

Sources of Information

This CAN is based on findings from the previous site summary report & a site inspection which occurred on 28/08/2024

Mechanical Considerations

Pool Hall HVAC

The existing pool hall is served via two heating only AHUs. The heating is provided via gas boilers located within the rooftop AHU plant.

Main plant locations are noted in figure below.

Figure 1 Pool Area HVAC

Figure 2 Gas boiler plant serving pool AHU

Figure 3 Gas boiler plant serving rooftop AHU

Figure 4 Rooftop AHU serving new area of pool hall

From visual inspection of the location of gas boilers, AHUs associated ductwork & pipework, it isn't expected that there will be any additional mechanical works required to keep the pool hall open during the construction of the new Aqualink site

Electrical, Communication, Dry Fire and Security Considerations

Communication Systems

Main Communication System Relocation

The communication system, fed by NBN, is mounted externally at the main entrance of the facility.

To maintain security and communication within the pool hall, this system will need to be relocated. A new secure location on-site, preferably near or within the pool hall area, will ensure continuous operation.

Application Process: Submit an NBN relocation application early to avoid delays. This ensures that the communication network stays operational during the construction period, keeping the pool hall connected and functional.

Alternatively, a wireless solution can be used as a temporary cost solution to provide the bare minimum for communications.

Figure 1 NBN Feed

MATV System (TV Signal)

If TV signal is required in the pool hall post-construction, the MATV system, which feeds the television signal throughout the facility, will also need to be relocated or re-routed to the pool hall.

Next Steps: Investigate the current MATV distribution point and decide on a new termination point within the pool hall. This is critical to ensure uninterrupted entertainment services.

Figure 2 MATV Feeds Out

Electrical Infrastructure

Substation and Power Supply

Existing Substation: A 500kVA pole-mounted substation currently supplies the site. Based on the new site layout and retaining the pool hall, this substation may require upgrading to 1MVA. The need for this upgrade depends on the expected increase in demand, especially if new systems are added and the upgrade equipment from a gas operated system to electrical.

Application to United Energy: A power application should be submitted to United Energy for both the relocation and upgrade of supply to the substation. This application will include a demand analysis based on the projected load from the pool hall and any new electrical requirements.

Figure 3 Pole Mounted Substation 500kVA

High-Level Electrical Demand Assessment

A maximum demand calculation will be needed, which considers all electrical equipment remaining in the pool hall. This will include lighting, communication, security, and other operational systems.

Substation Upgrade: The high-level demand will determine if the substation upgrade is necessary. Early discussions with United Energy during the design phase will help confirm the correct sizing and future location of the substation.

During the site walk, it was discussed that a possible location to be located at the back of the site.

Metering Review: Gather data from the existing metering systems, particularly the pool hall usage, to assess its peak power demand.

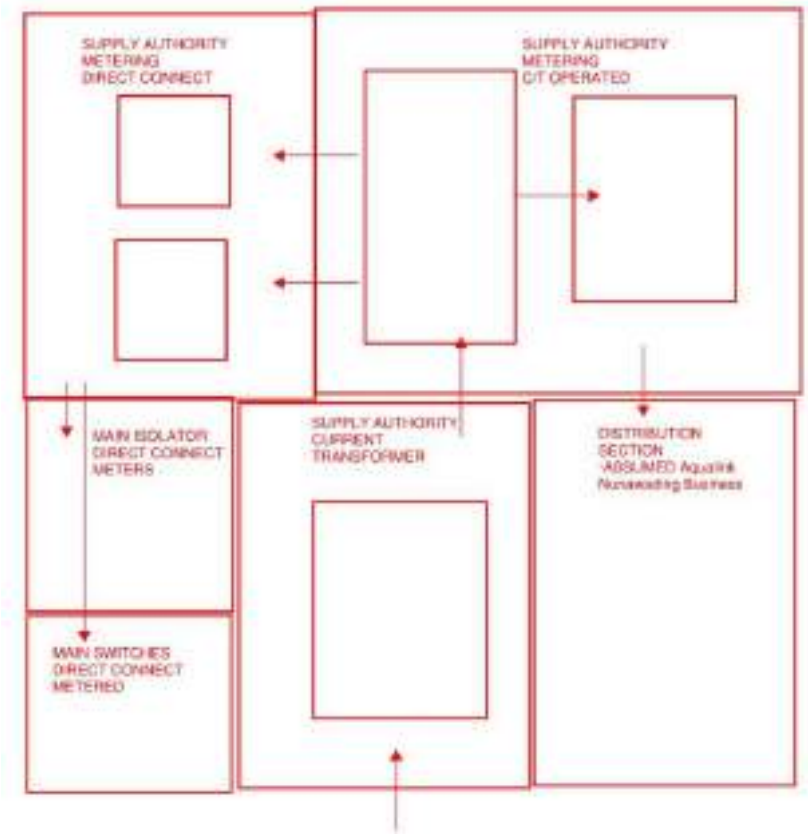
Power Supply During Demolition

Staging: A staged approach is required during demolition to maintain power to the pool hall. Critical distribution boards and cabling related to the pool hall must remain intact. This will require coordination with the demolition team to ensure key electrical pathways are protected or temporarily re-routed.

Switchboards: The pool hall's switchboards, including MSSB1 and MSSB2, need careful assessment. These switchboards might need to be relocated or upgraded, but retaining and protecting them during demolition is key to ensuring uninterrupted operation.

Form 2 Main Switchboard: The main switchboard, which is currently a freestanding Form 2 630A board, requires further inspection. Any modifications to this switchboard will likely necessitate an upgrade to comply with modern standards (AS/NZS 3000).

Figure 4 Current MSB setup



Coordination for Substation Relocation and Temporary Power Supply

Substation Relocation and Impact on Other Customers

If the substation and main switchboard (MSB) are altered for relocation and upgrade (as seen in Figure 4), it is essential to address the fact that two additional customers are currently fed from this substation. This adds complexity to the relocation and upgrade process, as maintaining uninterrupted power supply to these customers must be prioritized.

Coordination with United Energy

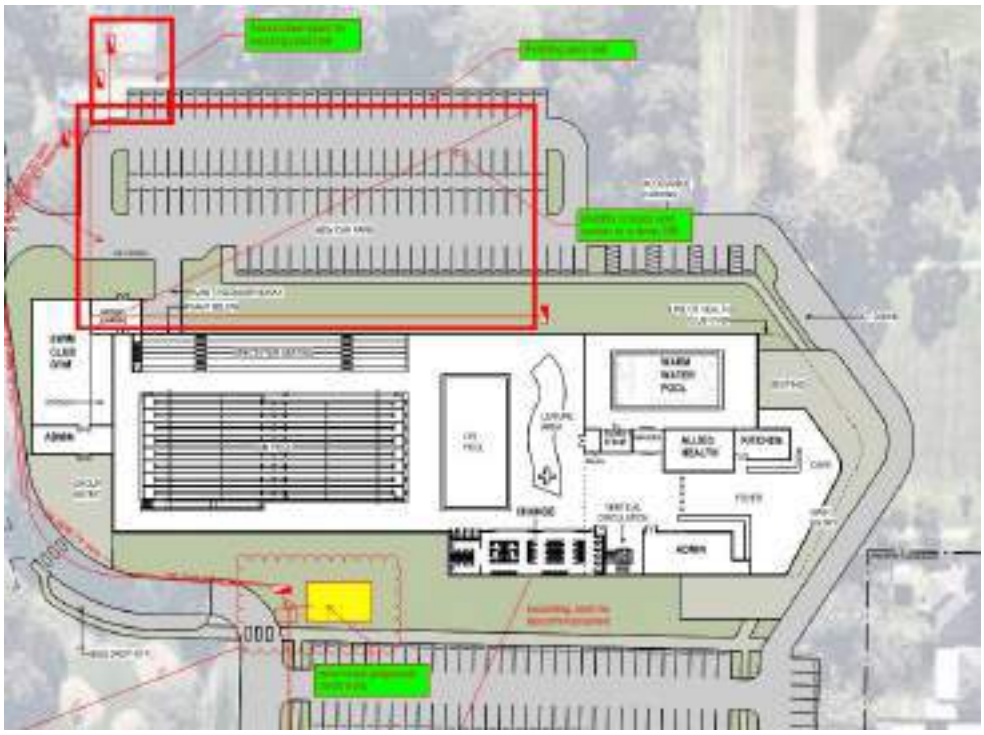
Coordination with United Energy will be critical to determine how the two additional customers will continue to receive power. One possible solution is to explore whether another nearby substation can take over the supply for these customers during construction.

To minimize disruptions, it may also be necessary to install a temporary generator that can supply power to both the construction works and the pool hall during the substation's relocation. This generator can ensure that operations within the pool hall remain unaffected while the site undergoes major electrical infrastructure changes.

Pathway for relocating substation (United Energy Assets)

Seen in figure 5 is the proposed pathway that was discussed on the site walk.

Figure 5 Proposed Pathway for Extension and Substation Location



Reticulation Pathways and Unknown Circuitry

During the site visit, it was observed that the electrical reticulation pathways throughout the facility were unclear. A more thorough investigation is required to determine the routing of cabling, particularly from the main switchboard to the pool hall.

Missing or incomplete documentation might require a combination of intrusive investigation and testing of circuits to ensure the pool hall remains powered while the rest of the site is demolished.

Distribution Boards and Load Assessment

DB1 and DB2 possibly powering the Pool Hall

DB1 Overview: The DB1, rated at 250A with an outgoing MCC rated at 175A, is seen to be connected to the Pool Pump DB. This board services critical systems like filtration, pumps, and potentially some lighting circuits.

DB2 Overview: DB2, connected to key leisure systems such as the UV system, steam generator, and filtration systems, is on a 200A isolator. Each of these systems will need continuous power during the construction process.

Breakers and sub-boards tied to the pool hall should be assessed to ensure they have sufficient capacity to handle any added loads. Also, ensure the boards comply with modern regulations; older boards may lack residual current devices (RCDs), making them non-compliant with AS/NZS 3000 wiring rules.

Figure 6 DB2

Figure 7 Inside DB2

Lighting Systems

Pool Hall Lighting

The majority of the lighting in the pool hall consists of recently upgraded LED fixtures, which is a positive for energy efficiency. However, back-of-house and plantroom lighting appears to have missed the upgrade.

To retain the pool hall, lighting circuits must be carefully maintained. Ensure all emergency lighting, exit lighting, and any other relevant circuits are up to code. Manual switches may need to be updated to automated lighting control systems to meet modern building standards, particularly for areas such as emergency lighting.

Emergency and exit lighting

Exit signs and emergency fittings appear to have been replaced relatively recently (Running Man rather than "EXIT" exit signs generally noted) through most of the spaces. Manual test switches were present in some distribution boards.

Fire Detection System

No smoke detectors or occupant warning system was noted on site.
Some speakers were present which appeared to be connected to the public address system.
As a Class 9B building it is possible that it is not required, for final determination by the building surveyor.
No reference to a fire panel on the evacuation diagram.

Security Systems

Existing Security Systems

Current Setup: The security system features HID card readers for access control and several CCTV cameras, possibly linked to a Tecom Challenger system. During construction, these systems should remain functional to ensure the safety and security of the pool hall.

Relocation: Some security devices may need to be relocated to accommodate changes in access points or demolition activities. Coordination with security specialists will ensure minimal disruption.

Integration with New Systems

Planning: As the new building progresses, it's important to integrate the retained pool hall security system with new infrastructure. Ensure that the security systems in the pool hall are compliant with current standards and can interface seamlessly with future site-wide security systems.

Estimated Costs

Rewiring of pool hall - $100,000

Temporary MSB - $50,000

New LV connection - $65,000

Modification for existing MSB - $35,000

Total - $250,000

Hydraulics & Fire Considerations

Existing Hydraulic Services

Domestic Cold Water

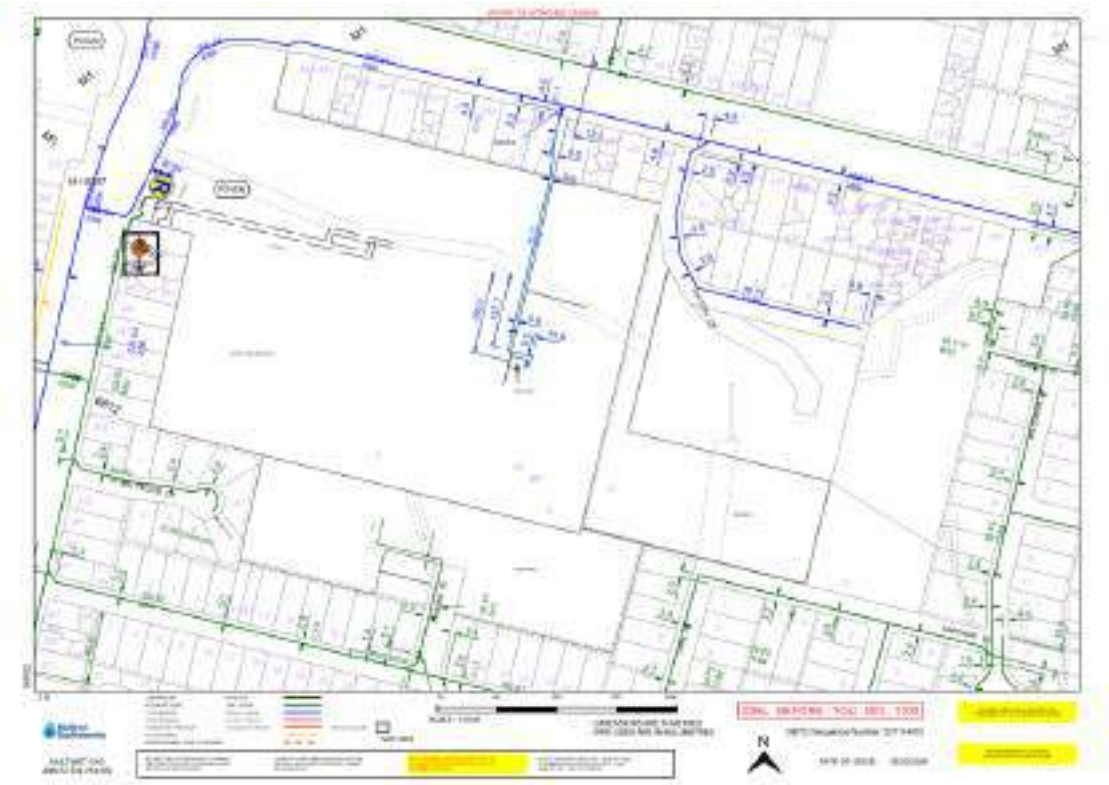
The existing domestic cold-water supply is provided from a Ø65 supply from Fraser Place [1].

Figure 1 – Existing main water meter assembly

Natural Gas Service

Natural Gas is supplied to the site from a High-Pressure gas main in Canterbury Road [2] and is directed to a gas meter located adjacent to the main pool plant [3] [4]. The gas supply is reticulated and utilised for various boilers for pool heating, space heating and domestic water heating.

Figure 2 – Existing gas supply via network asset map



Figures 3 & 4 – Existing gas meter

Existing Fire Protection Infrastructure

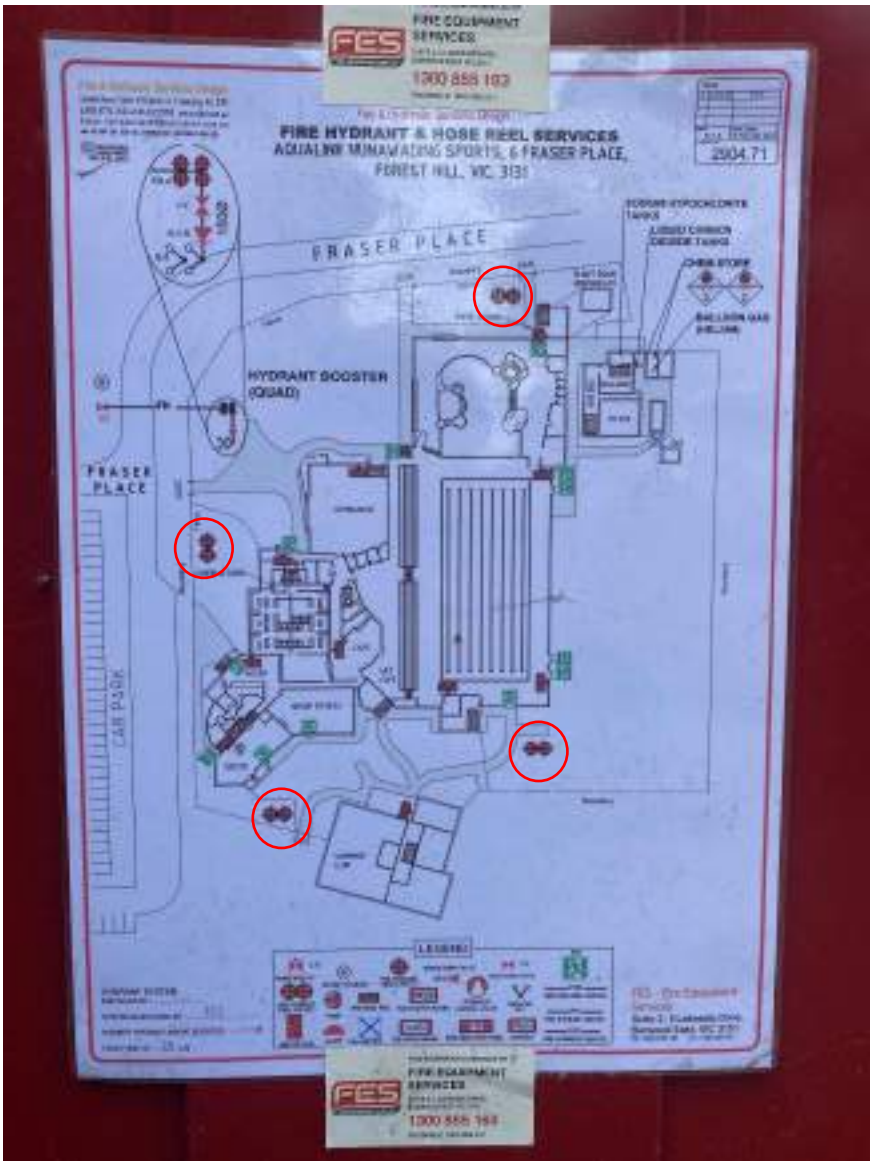
The site is served by the following fire protection systems:

a. Fire Hydrant system
b. Fire Hose Reels
c. Portable fire extinguishers and fire blankets
d. Fire data book at main entrants

External Hydrants

Surrounding the site there are 4 external hydrants providing coverage, as displayed on the block plan [5]. The hydrants are connected to an underground ring-main, however pipe locations are yet to be determined due to insufficient as-built documentation to reference.

Figures 5 – Block Plan diagram located on inside of booster assembly



Booster Assembly

The existing booster assembly is located adjacent to the main water meter assembly on Fraser Place [6], and houses a quad suction and booster [7] which was recently pressure and flow tested in 2022 [8].

Figure 6 – Existing booster assembly location via Google Maps

Figure 7 – Existing quad suction and booster

Figures 8 – Most recent on-site tested pressure and flow test results

Required Retention

To effectively "stage" the build, retaining necessary infrastructure pertaining and surrounding the 50m lap pool is required to be identified.

Prior Works

Existing underground services have been overlaid on a proposed site development and it is believed there is contention with the main sewer and water supply in Fraser Place [9]. Portions of existing sewer and water mains are located under the proposed building footprint. The water main pipe is proposed to be terminated prior to entering the proposed development as it is believed to only be servicing the footy club adjacent to the existing site, and an approximate cost is $50,000 however **further on-site investigation is required**.

A sewer diversion is required to divert the existing sewer main away from the development and reconnect to existing infrastructure. The approximate cost is $2500/linear metre, and the foreseeable distance required to be diverted is 90m ($225,000 total). **further on-site investigation is required.**

It is noted that these works are to occur regardless of pool hall remaining open.

Works pertaining to authority assets are subject to authority approval.

Figures 9 – Existing infrastructure overlaid on proposed development.

Hydraulic Retaining Infrastructure

Natural Gas

The natural gas supply is required to remain to continue to heat the boilers. Upon the new development's requirements and aligning with ESD requirements, a central hot water system and heat pumps will be introduced and the gas supply to the existing site will be sealed and capped coordinating with authority requirements

Domestic Water Meter Assembly

Assuming the water main is to be capped and sealed for the proposed development to commence, the main water meter assembly will be relocated to its final location and upgraded, if required, with additional pipework to be constructed to ensure all works are completed via authority approval.

Sewer & Sanitary

Due to the sewer main diversion, it is recommended that all retained sewer and sanitary plumbing have their pipework, where feasible, collated and relocated aligning with the proposed development with the intention of reuse fixture location to aid in a seamless transition between proposed development and the conclusion of the existing infrastructure.

Rainwater Re-use system

The current location of the rainwater reuse pump and filtration system does not need to be altered. It should be noted that if there is to be non-potable cold water (NPCW) to be used on site that equal square meterage of the current rainwater harvesting, filtering and pump station be considered on the new site. Moreover, considering reusing the existing infrastructure on the new proposed development, and upgrading system elements where required.

Fire Protection Retaining Infrastructure

Existing external fire hydrant and internal fire hose reel systems to remain operational with the assumption that full coverage is achieved from both. Moreover, alteration be made providing coverage taken into consideration during the construction program.

As the proposed development is currently to be less than 12m in effective height, the use of temporary hydrants and hose reels are not required. It is required that no less than one fire extinguisher of Class A, B and C fires and electrical fires must always be provided on each storey adjacent to each required exit, or temporary stairway or exit.

Finally, pressure and flow testing is to be confirmed via field testing, and that any additional requirements for alterations to the existing hydrant system are to follow, in line with additional supplementary requirements of the RBS.

Structural Considerations

With regard to Figure 1 below, the existing pool hall structure could be retained during construction, but the new facility will need to be offset from the existing building to allow for installation.

Civil Considerations

It is expected that the existing pool hall can be retained during construction of the new facility. It is expected that all new inground infrastructure can be proposed to run outside of the existing pool hall and that the existing pool hall can be serviced independently for stormwater capture and discharge. The proposed circulation roads and pavements leading toward the existing pool hall can be temporary modified with turning heads to allow traffic movements. Main consideration is assessing the level difference between the proposed circulation roads and the existing pool hall floor level.

Figure 1 Overlay of existing pool hall and proposed Option 3a new facility

The offset from the existing facility to the new building will be a function of the new ground floor level, overall building height, architectural features etc (subject to future coordination) but as a minimum, the offset should allow for the installation of new structure such as foundations (piling or pads), the pool, concourse slab and superstructure steelwork and mitigate the risk of undermining the existing building or surcharging the new building.

The spoil from the new pool excavation could be stockpiled and used as fill for the existing pool below the new carpark to minimise off-site disposal of materials.

Luke Shadmand
Senior Mechanical Engineer
ADP Consulting Pty Ltd

From: Luke Shadmand
To: Lachlan McGregor
Cc: John Wiles; Chris Hube
Subject: RE: Aqualink Staging Constructability Review
Date: Friday, 20 September 2024 3:12:42 PM
Attachments: image001.jpg
image002.png
image003.png
image004.png
image005.gif
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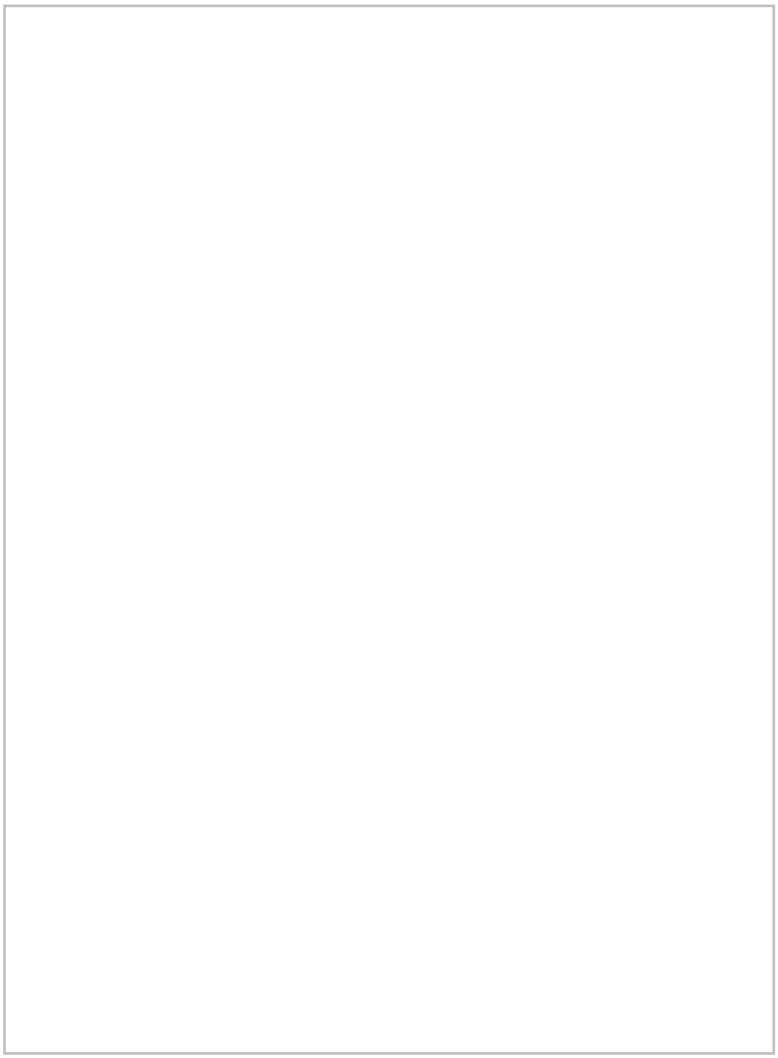
Hi Lachlan,

Regarding the temporary change rooms, I assume the intention is that they won't be the portable type (no sewer infrastructure required) in which case refer advice below:

To connect temporary change room facilities to existing infrastructure and drainage, please refer to the sketch showing existing drainage and proposed connection layout. This can be achieved via a gravity drain or pumped system (pending confirmation of IL of existing drainage). The cost involved will be between ~$30k - ~$50k.

For water, a branch from the existing infrastructure is recommenced, however considering proposed future building footprint we recommend moving the existing water meter assembly to future proposed location (close to boundary) and diverting existing water supply to building around proposed building footprint, to be completed as part of preliminary works. This can cost ~$50k.



Please find our responses to your other queries below.

There's a quite a lot there, let me know if you need clarity on anything.

Also, as I'm sure you are aware, all our cost estimates are of our opinion only based on the limited information we have available (no asbuilts). A cost consultant should review also.

Regards,

Luke Shadmand
Senior Engineer | Mechanical

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W: www.adpconsulting.com
London | Sydney | Melbourne | Brisbane | Adelaide | Gold Coast

From: Lachlan McGregor <Lachlan.McGregor@ontoit.com>
Sent: Wednesday, 18 September 2024 9:32 AM
To: Luke Shadmand <l.shadmand@adpconsulting.com>
Cc: John Wiles <John.Wiles@ontoit.com>; Chris Hube <c.hube@adpconsulting.com>
Subject: RE: Aqualink Staging Constructability Review

Good morning Luke,

Thank you for sending through the report. I have provided a list of questions for your review. Can you please assist with answering these questions.

- What is the anticipated order of costs associated with the relocation and reinstatement of Main Communication System Relocation.
- Indicatively the relocation and reinstatement of the Main Communication System, the below needs to be considered:

  Relocation of Active Equipment

  The active equipment, such as security systems, cameras, and the local network, will require new cabling to maintain functionality in the pool area.

  Estimated Cost:

  For new Cat6a cabling to each active device, you can expect approximately $410 per data outlet. The total cost will depend on the number of outlets required and the length of the runs.

  NBN Asset Relocation and Extension

  Extending the NBN network to the new location may require laying new fibre optic cables. The physical work for extending the fibre connection and any reconfigurations will incur costs. This will be dependent on NBN to price their works.

  Estimated Cost:

  Fibre cabling is typically priced at about $100 per meter.

  Head-End Equipment Relocation

  Relocating the main communication rack and associated equipment will involve skilled labour to ensure the system is properly reinstalled and functional in the new location.

  Estimated Cost: The relocation of the communication rack is expected to cost between $2,500 and $5,000, including labour and necessary adjustments.

  Temporary Wireless Internet Solution

  To keep the pool area operational during the relocation process, a temporary 4G/5G wireless connection will be set up.

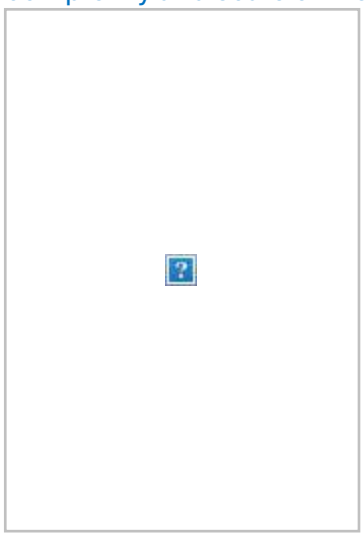
  Estimated Cost: Setup costs for temporary wireless solutions generally range from $1,000 to $1,500, depending on the provider and data requirements.

  In total, the project costs will vary depending on the number of outlets, the length of the fibre runs, and any additional under-cabling that may be required, with an overall estimate ranging from **$10,000 to $20,000** (Infrastructure works).

- What is the anticipated order of costs associated with the relocation and reinstatement

of the MATV System (TV Signal).

The cost implications for relocating the MATV system can vary based on the complexity and scale of the system as shown below.



Antenna Repositioning

Moving or replacing the antenna will involve labour for the repositioning and potentially new mounting equipment. Signal testing and adjustments could also incur additional costs.

Antenna repositioning and installation: $1,000 to $2,000, depending on accessibility and any equipment upgrades.

Coaxial Cabling

The cost of new coaxial cables depends on the length required, with labour costs for rerouting and under-cabling (if necessary). Longer cable runs could also necessitate signal boosters or repeaters to maintain quality.

Estimated Cost:

- Coaxial cabling: Around $2 to $5 per meter.
- Labour for installation: Typically, $60 to $100 per hour.
- Under-cabling (if required): Additional $50 to $100 per meter.

Amplifiers and Splitters

If required to add additional

Estimated Cost:

- Amplifiers: $200 to $500 each.
- Splitters: $50 to $200, depending on the number of outputs.

Headend Equipment Relocation

Depending on the complexity it can vary largely.

Estimated Cost:

- Relocation labour: $1,000 to $3,000, depending on the complexity and the amount of equipment.
- Equipment upgrades (if required): $2,000 to $5,000.

Signal Testing and Commissioning

Estimated Cost:

- Signal testing and commissioning: $500 to $1,500

Depending on the quantity of TV connections required, which determine the cost. For example, relocating the antenna can cost about $4,000. Adding 2 TV connections could cost up to $2000 and testing will be $1000.

Total estimated cost - $10,000

- Please confirm that the costs provided (Temp MSB, New LV Connection & Mods for extg MSB) are part of the temporary solution to minimise disruption and provide power to the Pool Hall and the construction site. Is there also an option to carry out the permanent solution as an early works package to avoid a temp solution and then the permanent works, are there any foreseeable issues with this strategy?

  Temporary Solution (keep pool area running).

  Estimated Cost:

  - Rewiring the Pool Hall: Estimated at approximately **$100,000**, depending on the complexity and scope of the work.
  - Temporary MSB: Estimated at **$50,000** to supply power temporarily to the pool area.
  - New Low Voltage (LV) Connection: Costing approximately $500 per meter. For a connection near the pool area, this could result in a total of around **$65,000**, depending on the exact distance.
  - Modifications to the Existing MSB: Estimated at roughly **$35,000** to make the necessary changes for temporary power supply.

  Total estimated cost for temp connection - **$250,000**

  Permanent Solution (Early Works Package)

  This will consider a MSB capable of feeding the entire site, including the pool area, which spans 6,100 square meters.

  Estimated Cost:

  - A new MSB for a site of this size could range from **$130,000 to $180,000**, depending on the required capacity and specifications (including breaker size, fault ratings, etc.).
  - Depending on the location of the new MSB, the cost of LV cabling could cost **$300,000** depending on trenching or conduit requirements.
  - Testing and Commissioning could range between **$10,000 to $20,000.**

  Total estimated cost for permanent connection - **$400,000 to $500,000**

  This is not including power authority works.

- What is the anticipated order of costs associated with the Security Systems?

  This one is difficult to assess without asbuilt information. We would need to know the security layout of the poolhouse understand the amount of devices that will require to be reconnected.

- What is the likely solution to maintain the required level of protection in relation to the Fire Hydrants/Booster assembly. What is the anticipated order of costs associated with this work?

  Existing infrastructure to remain (external hydrants + hose reels) on the proviso

that full coverage can be achieved, and alterations are to be made providing coverage taken into consideration during the construction program. It is recommended that field pressure and flow testing be performed on site, and that any additional alterations to the existing system are to follow suit to achieve full coverage.

- The water main is to be terminated at a cost of $50k. How is the water supply maintained to the Pool Hall and what are the associated likely costs of maintaining this service to the Pool Hall?
  - The water main alteration is to be approximately **$50,000**. This is to account for the authority fees, works, capping and re-routing, and is required to conclude prior to construction commences. Moreover, to keep the pool hall operational during construction it is likely that rerouting of pipework is required around the construction site to allow the existing pool hall to remain operational. I cannot speak towards the cost of maintenance.
- The Sewer main diversion and reinstatement is included in the $225k cost. Are there any specific costs associated with keeping the Pool Hall operational, temp connections/supply etc?
  - Sewer diversion is approximately **$240,000**. This is to be completed before construction commences and is required regardless of retaining pool hall operation based on option 3a
- Can you confirm whether Figure 1 in the Civil Consideration section (page 20) is accurate in terms of the position of the existing Pool Hall superimposed on the proposed New Pool & Recreation Facility or is this just a diagrammatic representation? We are trying to realistic site boundary/hoarding line to the north of the construction site which will allow the necessary new construction work to proceed unimpeded by the retention of the Pool Hall.

  This is a diagrammatic representation however would expect it to be fairly accurate

I have followed up Aqualink to provide the meter information and should hopefully have this shortly.

With the services to the temp Change Rooms have you had an opportunity to review infrastructure to this location?

Thanks,

Lachlan

From: Luke Shadmand <l.shadmand@adpconsulting.com>
Sent: Thursday, September 12, 2024 5:40 PM
To: Lachlan McGregor <Lachlan.McGregor@ontoit.com>
Cc: John Wiles <John.Wiles@ontoit.com>; Chris Hube <c.hube@adpconsulting.com>
Subject: RE: Aqualink Staging Constructability Review

APPENDIX B – Photographs

Photograph 1: Proposed entry point and drop off area.

Photograph 2: Proposed entry area to new temporary Airlock/Entry Area.

Photograph 3: Proposed location for construction of temporary Change Room facilities.

Photograph 4: Existing Interior – showing approximate line of temporary weatherproof wall to be constructed along the column line

Photograph 5: – Existing Interior – showing proposed location of temporary Reception area.

APPENDIX C – Onemilegrid Consultant Advice

From:	Lachlan McGregor
To:	John Wiles
Subject:	FW: Aqualink-Traffic Engineering Kick-off - P240520-Y
Date:	Tuesday, 10 September 2024 3:38:53 PM
Attachments:	image002.png image003.png image006.png image007.png image008.png image009.png

Hi John,

Below was from the traffic team.

Seems they would prefer trucks to come the shortest paths which is Husband road and Fraser Place. Still need to check swept paths for the big trucks.

Lachy

From: Abbey Leys <abbey.leys@onemilegrid.com.au>
Sent: Monday, September 9, 2024 1:17 PM
To: Lachlan McGregor <Lachlan.McGregor@ontoit.com>
Cc: Ross Hill <ross.hill@onemilegrid.com.au>
Subject: RE: Aqualink-Traffic Engineering Kick-off - P240520-Y

Hi Lachlan,

Regarding vehicle routes, given the area is mostly residential we would ideally aim to minimise the length of travel through the local road network. In this regard, the Springvale Road / Husband Road intersection would be the more direct route, though depending on the size of vehicles, access via Stevens Road would also be feasible for standard passenger vehicles.

Typically, we wouldn't allocate routes for staff and contractors as we expect they would travel in smaller vehicles / vans and take the most convenient route depending on which direction they are coming from. Though we would recommend designating the site access point (ie via Fraser Place or Opal Street) for staff / contractors to the site.

However, for any larger delivery and construction vehicles, we would allocate routes as there would be limitations regarding the geometry of the surrounding roads. For these types of works and considering the extent of construction, these could be vehicles up to a 19m semi-trailer. We do note that there are quite a few tight bends along Stevens Road, and swept paths would be required to test what sized vehicles can turn and manoeuvre via this route. Additionally, we would need to test turning movements into Fraser Place and Opal Street via Husband Road, as these would be rather tight for larger truck access. Similarly though, we would typically aim to minimise the length of the local road network used by these larger delivery vehicles.

Hopefully that gives you a good indication, but if you have information the largest truck you are expecting on-site we can test swept paths as an additional item to our scope of works.

Kind regards,

Abbey Leys (she/her)
Engineer

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p: (03) 9939 8250
e: abbey.leys@onemilegrid.com.au
w: www.onemilegrid.com.au
t: Teams
a: Wurundjeri Woiworung Country; 56 Down Street, Collingwood, VIC 3066

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From: Lachlan McGregor <Lachlan.McGregor@ontoit.com>
Sent: Thursday, September 5, 2024 2:02 PM
To: Abbey Leys <abbey.leys@onemilegrid.com.au>
Cc: Ross Hill <ross.hill@onemilegrid.com.au>
Subject: RE: Aqualink-Traffic Engineering Kick-off - P240520-Y

APPENDIX D – Cost Estimates

WTP's and ADP's Cost Estimates for the retention of the Pool Hall & associated facilities, during the construction of the new facilities.

Item No	Description	Details	Estimated Costs ($ excl GST)	Comments
	TEMPORARY WORKS (Building)		*Building Cost Estimates provided by WTP.*	
1	Provision of Wet Change Facilities to north of existing 50m pool including all necessary engineering services. Including Accessible Amenities and Baby Change facilities.	Assume construction on site of a facility similar in size and amenities to the existing wet change facility (Male & Female). Facility to include toilets, showers and change areas, total area of the existing facility is estimated to be 210m2. Male Change to include: • Change area benches, cloth hanging • Locker space • Urinal • Handwash basins (4) • Toilet cubicle (6) • Shower area Female Change to include: • Toilet cubicles (6) • Shower Cubicles (8) • Handwash basins (10) • Locker space	**1,500,000**	Ensure that the existing Fire Egress pathways are maintained
2	Provision of Air Lock/Entry including external pathways and vehicle drop-off area	AirLock/Entry (glass) to south/west corner of leisure pool area (approx. 6-8m2). Area to include: • GPO emergency power	**35,000**	

		• CCTV ceiling mounted camera's • Recessed floor Mat • Data outlet • Door Release • Intercom • Access Control (ext)) • Etc.		
3	Reception Counter and access Control provisions	Reception area to potential be constructed in the south/west corner of the Leisure pool area. Will need to be airconditioned because of humid climate in the pool areas. Allowance for power, lighting, IT security, accessibility provisions etc. Approx area 25m2 to accommodate 2 people but provide 3 positions/desks. Vending machines to provide food and drinks (Hire machines).	**130,000**	
4	Administration Office Area + Staff Lockers	Temporary building constructed outside, on site to the western end of the Leisure Pool area. To include space for 8-10 staff members, needs to be reasonably close to the reception area. Approximate area 50 - 60m2	**330,000**	Assumes 60m2
5	External weatherproof wall to southern external face of existing area to be maintained as operational (50m Pool and associated services and facilities).	Wall to be constructed to divide 50m Pool Hall from construction site along the column line at the back of the seating to the pool area and extending along the southern façade of the	**360,000**	Assumes wall is 4m high. **Refer APPENDIX B – Photograph No 4.**

		Leisure pool area – approximately 90 m in length. Modifications may also be required to the roofing to ensure adequate weatherproofing, installation/relocation of gutters/downpipes etc.		
6	Other related potential additional costs/allowances.	Design & Documentation, as required. Project Management Costs. Preliminaries, as required. Contingency Client Costs/Attendance etc.	Prelims and margin included. Consult Fees = **240,000** Contingency = **360,000**	
	ENGINEERING SERVICES		*Engineering Cost Estimates provided by ADP*	
7	Provision of services to temporary Change Rooms/facilities.	Sewer – proposed temp connection to existing drainage via gravity drain or pumped system. Water – provide branch from existing infrastructure and relocation of existing water meter assembly to future proposed location. Power Supply – cabling from existing provisions for Power, Lighting and AC Units etc.	**50,000** **50,000** **20,000**	
8	Provision of services to Reception Counter/Access Control/Air lock area.		Incl in above costs	

9	Provision of services to Admin Office/Staff Locker area.		Incl in above costs	
10	Main Communication System Relocation.	Relocation of Active Equipment + NBN Asset Relocation and Extension + Head-End Equipment Relocation + Temporary Wireless Internet Solution.	**20,000**	
11	Relocation and Reinstatement of the MATV System (TV Signal)	Antenna Repositioning + Coaxial Cabling + Amplifiers and Splitters + Head-End Equipment Relocation + Signal Testing & Commissioning	**10,000**	
12	Power Supply – Temporary Solution (keep pool area running)	Rewiring to Pool Hall + Temporary MSB + New Low Voltage (LV) Connection + Modifications to the Existing MSB.	**250,000**	
13	Permanent Power Supply Solution (Early Works Package)	New MSB + LV Cabling + Testing & Commissioning	**500,000**	This does not include Power Authority Works.
14	Security Systems		**50,000**	Security layout needs further review to determine number of devices required and to be reconnected. (allowance by WTP, no details available at this stage).
15	Fire Hydrants/Booster Assembly	Existing infrastructure to remain, alterations as necessary to be made during construction program.	**15,000**	Engineers recommend that field pressure and flow testing be performed on site. (allowance by WTP, no details available at this stage).
16	Water Main (Early Works Package)	Authority Fees, Alteration Works, Capping and re-routing.	**50,000**	To be completed prior to construction of new facilities commence.

17	Sewer Diversion (Early Works Package)	Diversion from construction site and reinstatement. Work required regardless of retaining Pool Hall.	**240,000**	To be completed prior to construction of new facilities commence.
18	Other related additional potential costs/allowances.	Design & Documentation, if required. Project Management Costs. BWIC Preliminaries, if required. Contingency Client Costs/Attendance etc.	On Services Cost Only: Consult Fees = **125,000** Prelims, margin and BWIC = **250,000** Contingency = **200,000**	
	NEW CONSTRUCTION DIRECT IMPACTS			
19	Extension of preliminaries and other construction costs resulting from an extended construction period to demolish the 50m pool building and associated plant and equipment and construct the car parking area following the completion and occupation of the new facilities.		Estimated by WTP at: **200,000** – **300,000** per month: Includes site management (site foreman, CA, safety rep, part time head office staff) plus site sheds and rentals.	Costs could be reduced if it was acceptable to have no 50m pool for a period to allow the demolition of the existing Pool Hall to occur prior to the completion of the new facilities and the construction of the new car parking/landscaping to commence in more parallel with the completion of the new facilities.
	TOTAL COSTS			
A	**Provision of Temporary Buildings incl:** - Wet Change Facilities - Air Lock/Entry - Reception Counter - Admin Offices - External Wall	All these works are required to be carried out and completed, tested & commissioned prior to works commencing on the demolition of the existing facilities and the commencement of construction of the new facility if the existing 50m pool is to remain operational.	**3,980,000**	Includes the following item numbers from above – 1,2,3,4,5,6,7,8,9,10,11,12,14 &18.

	- Other Costs on Buildings - Engineering - Other costs on Engineering	The works could be carried out by a separate 'smaller' main contractor (a contractor that maybe Council have used before) – this work will require close coordination with staff and management at the facility to ensure that it is carried out safely and always facilitates continued operations and is completed in a timely manner. The alternative would be that this work could be priced and programmed as part of the Main Contract works for the new facility. This would extend the overall construction period for the one project and does come with some risk if the early temporary works are delayed by Council / Aqualink and this results in a delay to the main contract works for the new facility.		
B	**Early Works Packages incl:** - Fire Hydrants/Booster Assembly - Water Main - Sewer Diversion	These works are required to be completed prior to the new construction works commence on site. Work could be carried out and completed by an Early Works Contractor or the Main Works Contractor at the commencement of their site possession.	**305,000**	Includes the following item numbers from above – 15,16 &17
C	**Permanent Power Supply Solution**	This item reflects the permanent solution for the power supply being implemented as an early works package and this work being completed prior to the commencement of the main works contract. If	**500,000**	This does not include Power Authority Works. Includes the following item number from above – 13.

		this was implemented it would avoid the cost of the temporary solution above (Item number 12 - $250,000) needing to be installed.		
D	**Extension of Preliminaries**	Assuming an extension of the main Contractors construction period of 6 months.	**Say 1,500,000**	Includes the following item number from above – 19.

Ontoit.

Appendix R - Traffic Report

Aqualink Nunawading

Transport Impact Assessment

240520TIA001F-F.docx

12 November 2024

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Prepared by	AGL	**Reviewed by**	RBH

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EXECUTIVE SUMMARY

General

It is proposed to re-develop the existing Aqualink Nunawading facility to provide a range of new and improved sports, health and aquatic services for the community. Three options are being considered for the development, which vary in the anticipated annual visitations to the site. A total of 328 car parking spaces, inclusive of 8 accessible spaces, will be provided across the existing car parking area to the south of the building, and a newly constructed car park to the north, with an additional 72 parking spaces retained in the adjacent reserve.

Loading

In order to ensure that loading vehicles and buses are accommodated appropriately, specific loading bays and bus pick-up/drop-off facilities should be provided adjacent to the building where appropriate.

Bicycle Parking

It is recommended that a total of at least 8 employee and 43 visitor bicycle parking spaces should be provided on-site for staff and visitor use, to meet or exceed the Planning Scheme requirements.

Car Parking

Car parking survey data indicates that the existing site generates car parking in the order of 3.66 parking spaces per 10,000 annual visitations. Based on the site-specific car parking rate, the proposed supply of 328 spaces would generally meet the projected parking demands for Option A and Option B of the development across the 10-year period. The analysis shows that the parking demands for Option C exceed the supply after the first year of the development, and equates to a shortfall of 27 spaces at the end of the 10-year period.

Furthermore, application of the higher observed parking rate of 4.04 spaces per 10,000 annual visitations for the existing centre (based on the full parking demands for the reserve area), suggests that only Option A will remain below the proposed parking provision over the 10-year period. Whilst the parking demands associated with Option B are expected to be accommodated on Year 1, by Year 2, the demand is expected to exceed the supply.

When increasing the supply of parking to include the parking along and adjacent to the reserve, the increased supply of 400 spaces would meet the parking demands for all three development options across the 10-year period, though noting that the demands are likely to be exceeded when coinciding with a match, training or event at the adjacent football or cricket club.

Overall, based on the site-specific car parking rate, the proposed supply of 328 spaces would generally meet the projected parking demands for the preferred Option B across the first 10-year period. In the scenario that the future car parking demands exceed those presented in the assessment, the proposed supply of 328 spaces could result in a shortfall of parking across the site. In this regard, the initial parking layout could be revised to increase the parking supply across the site to accommodate any additional demands if required.

Traffic

The traffic volume surveys indicate that the Husband Road / Fraser Place intersection is currently operating under excellent conditions during the weekday and weekend peak periods. This intersection is expected to continue operating under excellent conditions for all three development options, during both the weekday and weekend peak hours. Minimal queues and delays are expected at all approaches, with all movements largely unimpacted by the increase in traffic generated by the site.

Under all scenarios for the development (and allowing for background traffic volume growth on Springvale Road), whilst the intersection of Husband Road and Springvale Road is expected to operate within capacity, delays for turning vehicles are expected to increase, and in some cases, exceed 2 minutes. It is noted that the increased delay is also partially as a result of the adopted traffic volume growth, although even without the added growth in Springvale Road, delays are expected to increase to over 1 minute for some movements.

Whilst signalisation of the Springvale Road/Husband Road intersection is not strictly required from a capacity perspective for Option B, upgrades may be considered to improve intersection delays and safety. Alternatively, vehicle delays and intersection performance can be monitored post development to assess whether an intersection upgrade is required based on observed traffic conditions.

Furthermore, in order to negate the potential impacts to residential amenity along Husband Road (or in the surrounding street network), there is the potential that an alternate and direct access to the reserve and Aqualink could be provided from Springvale Road, either as a complimentary access point, or as the sole access point to the reserve.

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1 INTRODUCTION

onemile**grid** has been requested by Ontoit to undertake a Transport Impact Assessment of the proposed redevelopment of Aqualink Nunawading.

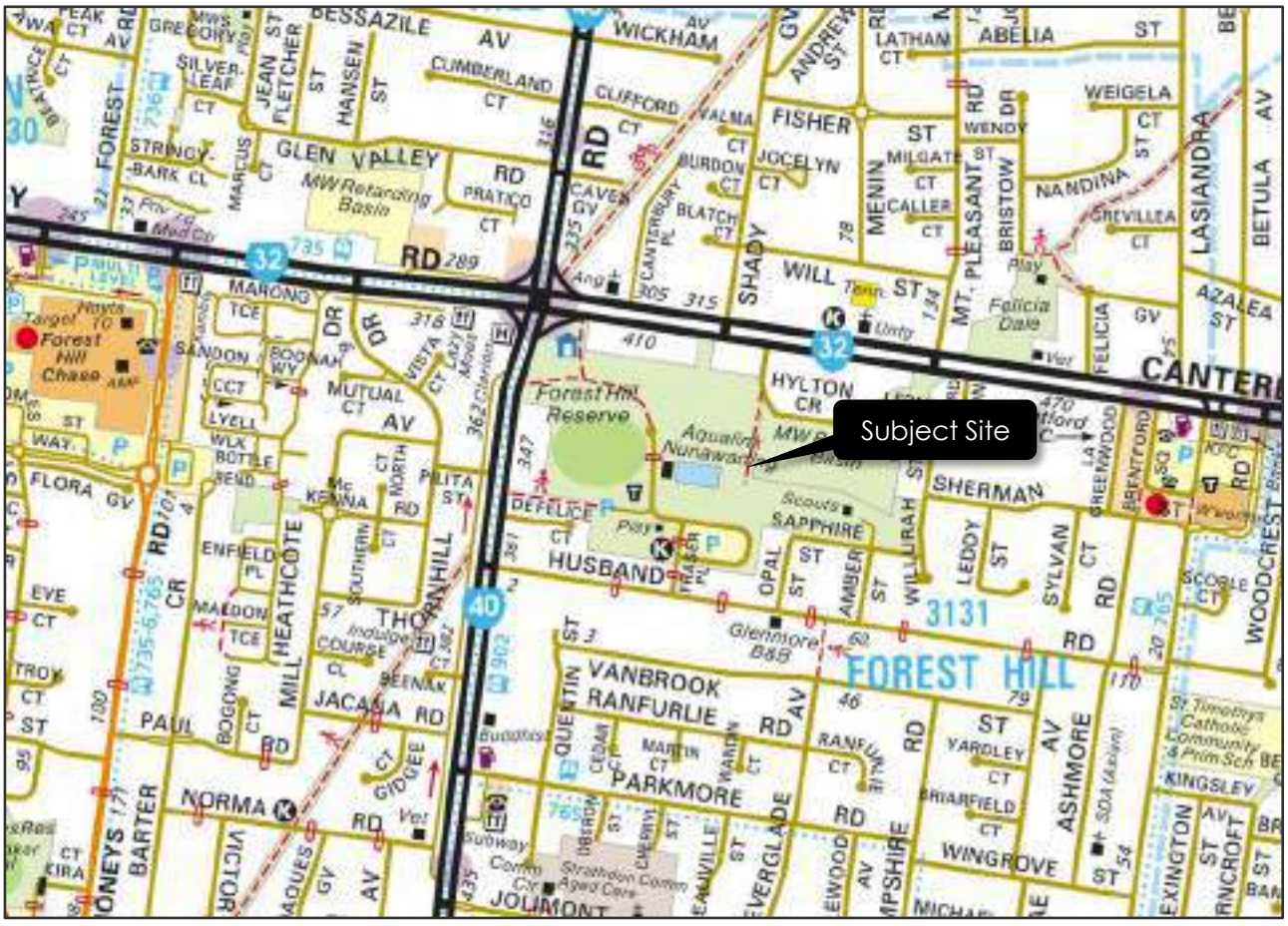
As part of this assessment the subject site has been inspected with due consideration of the development proposal, traffic and parking data has been sourced, and relevant background information has been reviewed.

2 EXISTING CONDITIONS

2.1 Site Location

The subject site is located at the northern end of Fraser Place, approximately 260 metres east of Springvale Road, as shown in Figure 1.

Figure 1 Site Location


Subject Site
FOREST HILL
3131
WICKHAM
BESSAZILE AV
CUMBERLAND CT
CLIFFORD CT
GLEN VALLEY RD
MW Retarding Basin
FISHER ST
ABELIA ST
WEIGELA CT
NANDINA
LASIANDRA
BETULA AV
MARONG TCE
Forest Hill Chase
Forest Hill Reserve
Aqualink Nunawading
HYLTON CR
SHERMAN
SAPPHIRE
HUSBAND
DEFELICE
Scouts
Glenmore B&B
VANBROOK
RANFURLIE RD
PARKMORE
JACANA RD
NORMA
JOLIMONT
WINGROVE ST
ASHMORE
KINGSLEY
THORNHILL
HEATHCOTE
ENFIELD PL
MUTUAL CT
LYELL
FLORA GV
PAUL
BARTER
SANDON
MAROONDAH
SHADY WILL ST
MT. PLEASANT RD
MENIN
JOCELYN
BURDON CT
CANTERBURY
BLATCH CT
CAVEN GV
PRATICO CT
STRINGY BARK CL
SILVER LEAF
JEAN FLETCHER ST
HANSEN ST
FOREST
LATHAN CT
ANDREW ST
WENDY DR
MILGATE ST
CALLER CT
BRISTOW
GREVILLEA CT
AZALEA ST
FELICIA
BRENTFORD
GREENWOOD
WOODCREST
SYLVAN RD
LEDOY ST
WILLIRAH
OPAL ST
AMBER ST
FRASER PL
QUENTIN
MARTIN CT
WARREN CT
YARDLEY CT
BRIARFIELD CT
EVERGLADE
EXINGTON
KIRA
VICTOR
GIDGEE
BOGONG
MILL
MAROONDAH
Strathdon Comm Aged Care
St Timothy's Catholic Community & Prim Sch
Subway
Play
Vet
Unity
Var
Mc KENNA
NORTH
PILITA ST
SOUTHERN
BEENAK
COURSE
CL
TCE
CCT
WAY
WLX
BOTTLE
RD
CR
AV
ST
CT
PL
WY
DR
GV
TROY
EVE
MAROONDAH
Indulge
Budgets
Cinema
Aged Care
Comm
Strathdon
Cherry
Ang
Var
Play
Unity
Term
Scouts
Glenmore
B&B
Aqualink
Nunawading
Forest Hill
Reserve
Forest Hill
Chase
AMP
Target
Myers
Mayfair
Ford
KFC
Woolworths
Subway
Vet
Strathdon
Comm
Aged Care
Cherry

The site currently operates as a recreational facility known as Aqualink Nunawading, which provides a range health and aquatic services to the community. The existing facility operates out of a main leisure centre building located at the northern end of Fraser Place. To the west of the site is Forest Hill reserve, which includes a large oval and pavilion to service community sporting clubs.

Access to the site is provided directly via Fraser Place, which acts as the internal driveway / accessway that runs generally north-south through the car parking areas and along the boundary of Forest Hill Oval.

Car parking across the greater site is largely split between a southern car parking area to the south of the Aqualink facility, and to the west along Forest Hill Oval. A total of 213 car parking spaces, inclusive of 8 accessible spaces, are currently provided within the car parking area to the south of the facility. The parking supply includes 7 drop-off parking spaces along the northern car parking aisle, which are restricted to a 5-minute drop-off zone. Additionally, a bus drop-off zone is located along the northern side of the access aisle, directly south of the building. A further 84 car parking spaces are provided to the west of the building and along the boundary of Forest Hill Oval.

An on-site loading bay is provided along the northern car parking aisle adjacent to the main entrance. A loading area is provided at the rear of the site accessed via the internal driveway.

Land use in the immediate vicinity of the site is generally residential in nature, and includes Forest Hill Oval to the northwest of the site.

An aerial view of the subject site is provided in Figure 2.

Figure 2 Site Context (4th August 2024)

Copyright Nearmap

2.2 Planning Zones and Overlays

It is shown in Figure 3 that the site is located within a Public Park and Recreation Zone (PPRZ). Additionally, the site is located within the Principal Public Transport Network Area.

Figure 3 Planning Scheme Zones

2.3 Road Network

2.3.1 Fraser Place

Fraser Place is a local road generally aligned north-south, running between Husband Road in the south and terminates to become the internal driveway that runs throughout the site.

Fraser Place operates with a 7 metre width, which allows for two-way traffic movements. Both the eastern and western sides of Fraser Place are restricted to 'No Stopping' along its length.

The cross-section of Fraser Place is shown in Figure 4.

Figure 4 Fraser Place, looking north towards the subject site

Image date: September 2024

The default 50 km/h speed limit applies to Fraser Place in the vicinity of the site.

2.3.2 Husband Road

Husband Road is a local road generally aligned east-west, running between Stevens Road in the east, and Springvale Road in the west. Husband Road operates with a width of approximately 7 metres, which allows for two-way traffic movements. Unrestricted kerbside parking is generally provided on the southern side of the road. At the Husband Road / Fraser Place intersection, Husband Road is restricted to 'No Stopping' along both sides of the road.

The cross-section of Husband Road is shown in Figure 5.

Figure 5 Husband Road, looking east from the Husband Rd / Fraser Pl Intersection

Image date: September 2024

The default 50 km/h speed limit applies to Husband Road in the vicinity of the site.

2.3.3 Springvale Road

Springvale Road is an arterial road generally aligned north-south, running between Reynolds Road in the north, and Wells Road in the south. Springvale Road provides three traffic lanes in each direction, separated by a central median, in the vicinity of the site. Kerbside parking is not permitted during Clearway times, 6:30 am to 9:30 am, and 4:00 pm to 6:30 pm, Monday to Friday. Bus Zones operate on either side of the road.

At the Springvale Road / Husband Road intersection, Springvale Road provides a short right-turning lane into Husband Road for northbound traffic, and a U-turn lane for southbound traffic.

No right turns are permitted from Husband Road into Springvale Road.

The cross-section of the Springvale Road / Husband Road intersection is shown in Figure 6.

Figure 6 Springvale Road, looking north from the Springvale Rd / Husband Rd Intersection

Copyright Google (Image date: August 2023)

An 80 km/h speed limit applies to Springvale Road in the vicinity of the site.

2.4 Public Transport

The full public transport provision in the vicinity of the site is shown in Figure 7 and detailed in Table 1.

Figure 7 Public Transport Provision

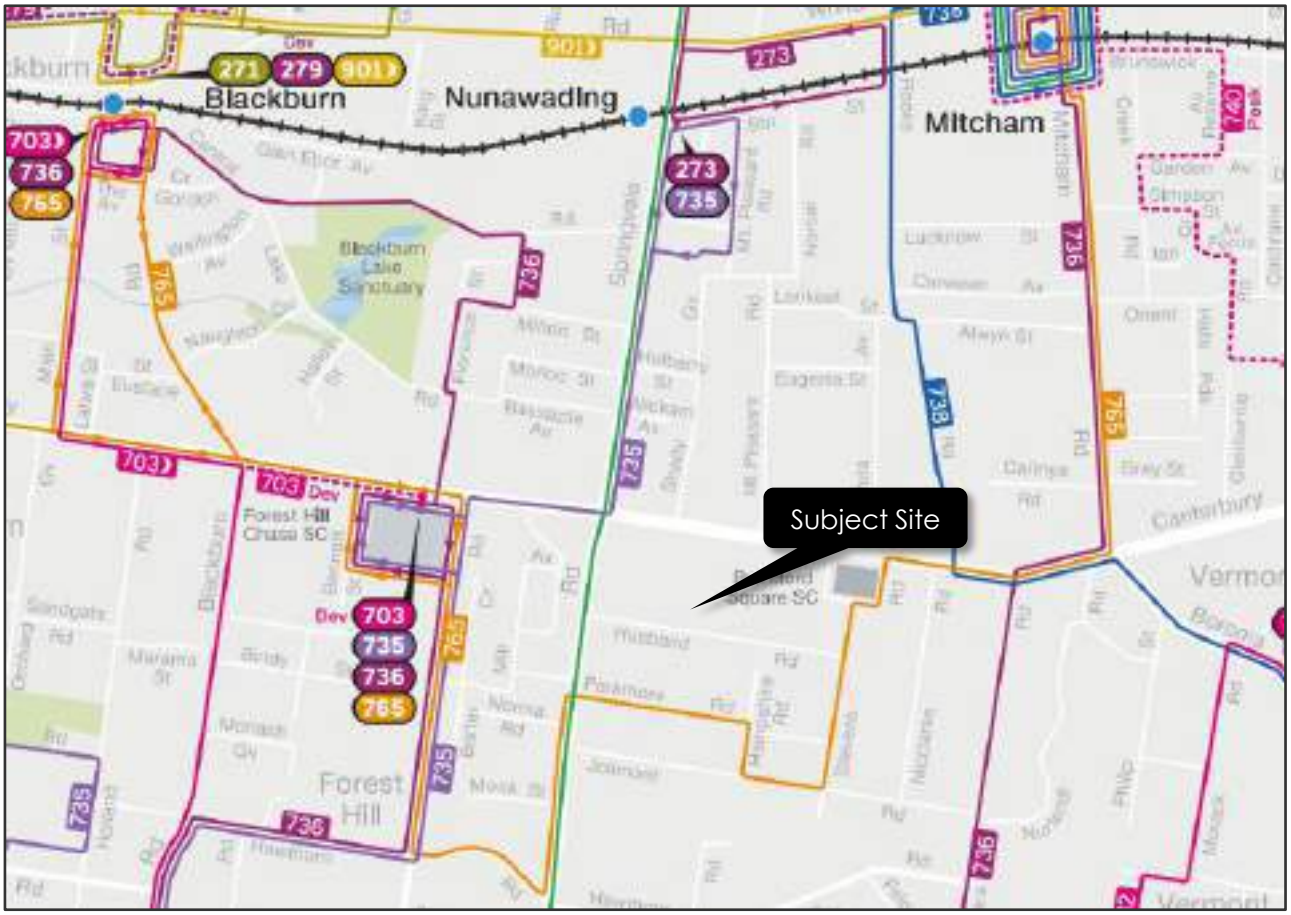


Table 1 Public Transport Provision

Mode	Route No.	Route Description	Nearest Stop/Station
Train		Belgrave Line	Nunawading Station
		Lilydale Line	
Bus	765	Mitcham - Box Hill via Brentford Square & Forest Hill & Blackburn	Woodcrest Rd/ Stevens Rd
	902	Chelsea Railway Station - Airport West Shopping Centre (SMARTBUS Service)	Forest Hill Reserve/Springvale Rd
	735	Box Hill to Nunawading	Caves Gr/Springvale Rd
	738	Mitcham - Knox City via Knox Private Hospital & Wantirna Secondary College	Stairway College/Rooks Rd

It is shown that public transport in the area is limited to bus services, though this includes the Chelsea to Airport West SMARTBUS service along Springvale Road. Furthermore, the site is located approximately 2.2 kilometres from Nunawading train station, providing access to additional train and bus services.

2.5 Existing Facility Operation

Aqualink Nunawading currently provides a range of health and aquatic services across the on-site building, including the following:

- Indoor 8-lane 50m pool;
- Family leisure pool;
- Spa, sauna and steam room;
- Gymnasium;
- Group fitness classes;
- Aqua aerobics;
- Children's birthday parties and holiday programs;
- Nunawading Swimming Club learn-to-swim program; and
- Café.

Aqualink Nunawading operates 7 days a week across the year, between 6:00am and 10:00pm, Monday to Friday, and between 8:00am and 8:00pm on weekends and public holidays.

Additional information provided by Whitehorse City Council indicates that the facility currently operates with 574,000 annual visitations.

2.6 Traffic Volumes

2.6.1 Traffic Volume Surveys

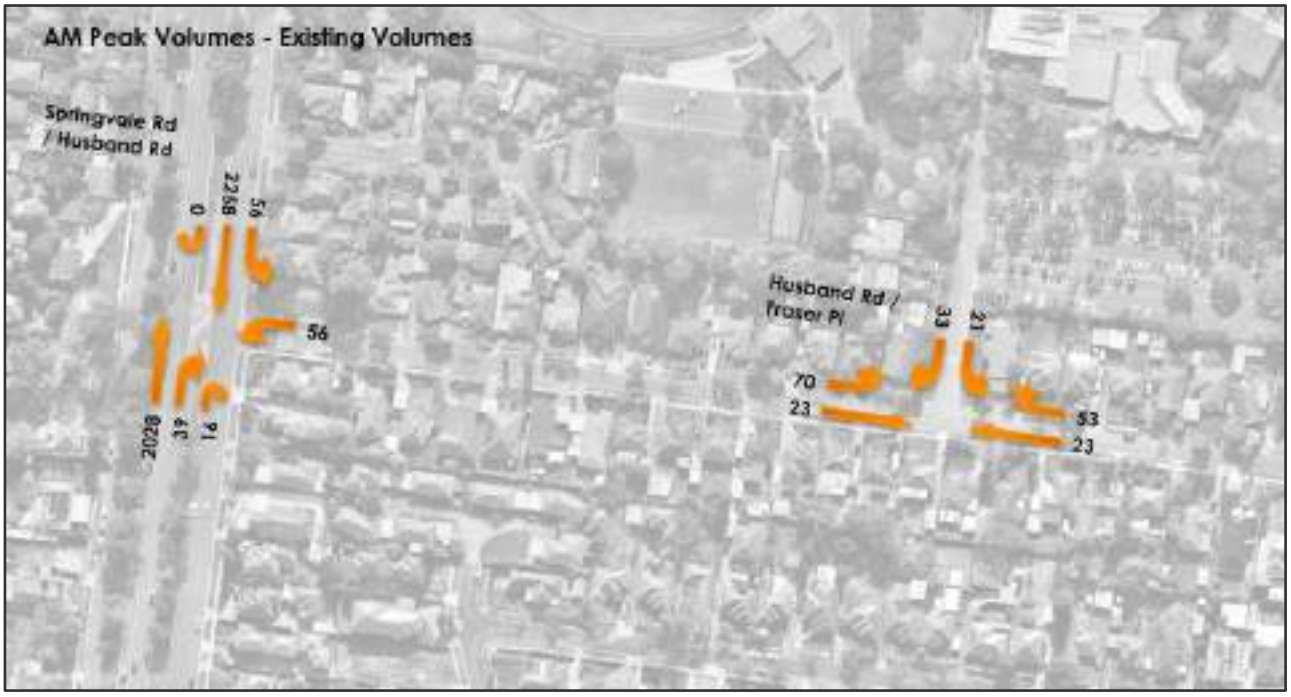
Traffic volume surveys were undertaken by Trans Traffic Survey on behalf of **one**mile**grid** at the intersection of Springvale Road and Husband Road, and Husband Road and Fraser Place on the following periods:

- Thursday 29th August 2024, between 6:30am and 9:30am, and between 2:30pm and 7:00pm; and
- Saturday 31st August 2024, between 9:00am and 6:00pm.

It is noted that there was no football game on at the reserve during the Saturday survey period.

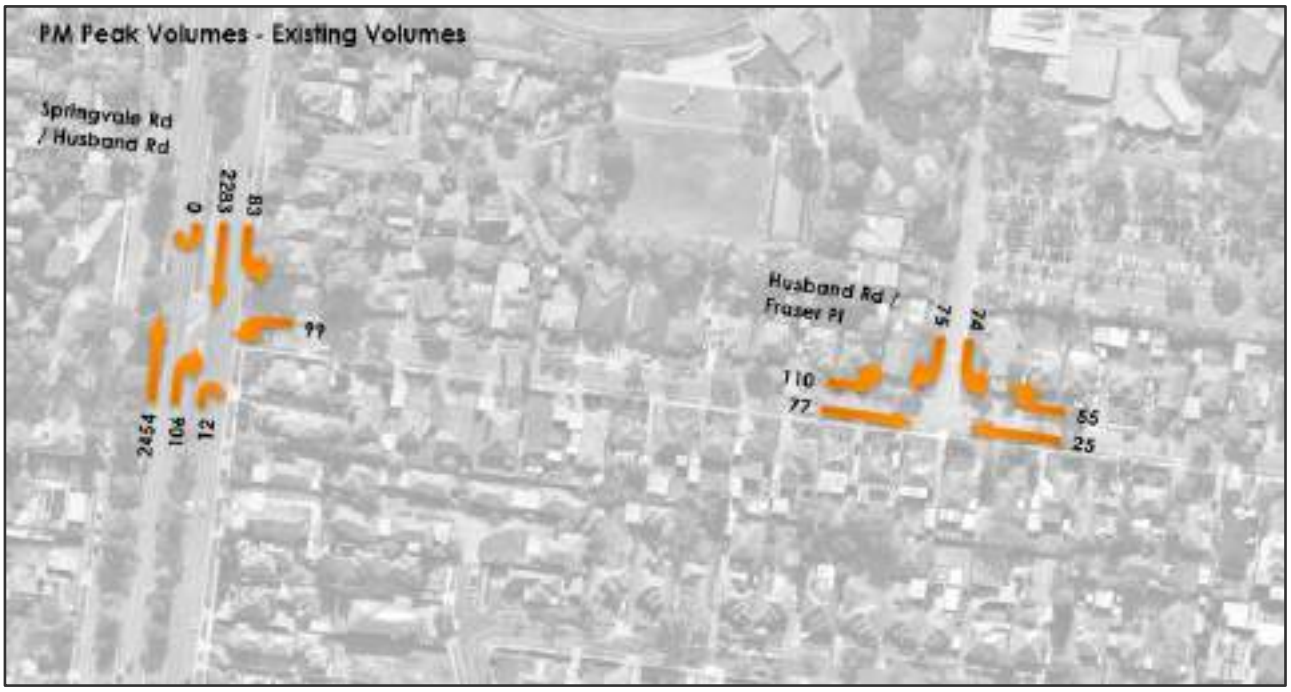
The peak hour results of the surveys are shown in Figure 8, Figure 9 and Figure 10 below.

Figure 8 Existing Traffic Volumes – AM Peak 29th August 2024



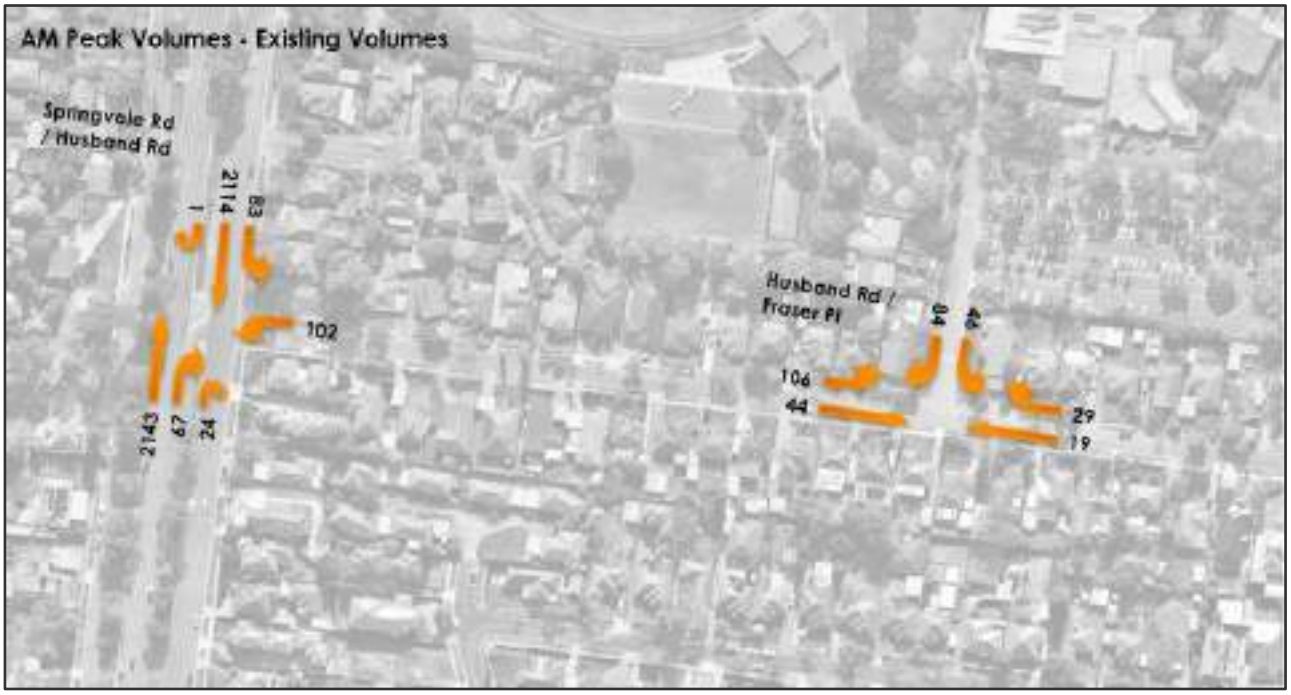
Copyright Nearmap

Figure 9 Existing Traffic Volumes – PM Peak 29th August 2024



Copyright Nearmap

Figure 10 Existing Traffic Volumes – 31st August 2024



Copyright Nearmap

2.6.2 Intersection Capacity Assessment

To assess the operation of the intersections the traffic volumes have been input into SIDRA Intersection, a traffic modelling software package.

The SIDRA Intersection software package has been developed to provide information on the capacity of an intersection with regard to a number of parameters. Those parameters considered relevant are, Degree of Saturation (DoS), 95th Percentile Queue, and Average Delay as described in Table 2.

Table 2 SIDRA Intersection Parameters

<table>
<tr><th>Parameter</th><th>Description</th></tr>
<tr><td>Degree of Saturation (DoS)</td><td>The DoS represents the ratio of the traffic volume making a particular movement compared to the maximum capacity for that particular movement. The value of the DoS has a corresponding rating depending on the ratio as shown below.
<table>
<tr><th>Degree of Saturation</th><th>Rating</th></tr>
<tr><td>Up to 0.60</td><td>Excellent</td></tr>
<tr><td>0.61 – 0.70</td><td>Very Good</td></tr>
<tr><td>0.71 – 0.80</td><td>Good</td></tr>
<tr><td>0.81 – 0.90</td><td>Fair</td></tr>
<tr><td>0.91 – 1.00</td><td>Poor</td></tr>
<tr><td>Above 1.00</td><td>Very Poor</td></tr>
</table>
It is noted that whilst the range of 0.91 – 1.00 is rated as ‘poor’, it is acceptable for critical movements at an intersection to be operating within this range during high peak periods, reflecting actual conditions in a significant number of suburban signalised intersections.</td></tr>
<tr><td>Average Delay (seconds)</td><td>Average delay is the time delay that can be expected for all vehicles undertaking a particular movement in seconds.</td></tr>
<tr><td>95th Percentile (95%ile) Queue</td><td>95%ile queue represents the maximum queue length in metres that can be expected in 95% of observed queue lengths in the peak hour</td></tr>
</table>

The value of the average delay and Level of Service for a sign-controlled intersection has a corresponding rating, as shown in Table 3 below.

Table 3 Rating of Delay

Rating	Delay	Level of Service
Excellent	≤ 10 seconds	A
Very Good	10 – 15 seconds	B
Good	15 – 25 seconds	C
Fair	25 – 35 seconds	D
Poor	30 – 50 seconds	E
Very Poor	50+ seconds	F

The results of the analysis are provided in Table 4 and Table 5 below.

Table 4 Springvale Road / Husband Road – Existing Conditions

Approach	Movement	DoS	Avg. Delay (sec)	Queue (m)	Level of Service
AM Peak					
Springvale Rd (South)	Through	0.371	0.1	0.0	LOS A
	Right	0.194	18.4	3.6	LOS C
	U-Turn	0.194	20.2	3.6	LOS C
Husband Rd (East)	Left	0.129	14.1	3.3	LOS B
Springvale Rd (North)	Left	0.424	7.1	0.0	LOS A
	Through	0.424	0.1	0.0	LOS A
	U-Turn	0.097	217.8	1.2	LOS F
PM Peak					
Springvale Rd (South)	Through	0.449	0.1	0.0	LOS A
	Right	0.550	27.8	12.6	LOS D
	U-Turn	0.550	40.5	12.6	LOS E
Husband Rd (East)	Left	0.224	14.5	6.1	LOS B
Springvale Rd (North)	Left	0.433	7.1	0.0	LOS A
	Through	0.433	0.1	0.0	LOS A
	U-Turn	0.297	409.1	4.0	LOS F
Saturday Peak					
Springvale Rd (South)	Through	0.392	0.1	0.0	LOS A
	Right	0.437	24.9	8.6	LOS C
	U-Turn	0.437	27.5	8.6	LOS D
Husband Rd (East)	Left	0.209	13.4	5.6	LOS B
Springvale Rd (North)	Left	0.403	7.0	0.0	LOS A
	Through	0.403	0.1	0.0	LOS A
	U-Turn	0.137	300.2	1.6	LOS F

It is noted that preliminary intersection analysis suggested that the existing intersection was operating well above capacity, with particular regard to the right turn movement into Husband Road, and the left turn movement out of Husband Road. Utilising video footage captured during the survey periods, to review the delays and queuing experience during the peak periods, the analysis presented above has been calibrated to existing conditions.

As shown above, the Springvale Road / Husband Road intersection generally operates under fair conditions across both a weekday and weekend period. Right-out and U-turn movements from Springvale Road are critical.

It is acknowledged that U-turning movements from the Springvale Road north approach are shown with relatively high delays, though it is noted that no vehicle movements were recorded undertaking this movement during the weekday survey periods. During the weekend peak period, one vehicle was observed undertaking this movement, and a review of the survey video indicates that the delay experienced was minimal.

Table 5 Husband Road / Fraser Place – Existing Conditions

Approach	Movement	DoS	Avg. Delay (sec)	Queue (m)	Level of Service
AM Peak					
Husband Rd (East)	Through	0.047	0.3	1.5	LOS A
	Right	0.047	5.7	1.5	LOS A
Fraser Place (North)	Left	0.044	5.6	1.1	LOS A
	Right	0.044	5.9	1.1	LOS A
Husband Road (West)	Left	0.052	5.6	0.0	LOS A
	Through	0.052	0.0	0.0	LOS A
PM Peak					
Husband Rd (East)	Through	0.053	0.6	1.7	LOS A
	Right	0.053	6.1	1.7	LOS A
Fraser Place (North)	Left	0.126	5.8	3.4	LOS A
	Right	0.126	6.4	3.4	LOS A
Husband Road (West)	Left	0.105	5.6	0.0	LOS A
	Through	0.105	0.0	0.0	LOS A
Saturday Peak					
Husband Rd (East)	Through	0.030	0.4	1.0	LOS A
	Right	0.030	5.9	1.0	LOS A
Fraser Place (North)	Left	0.110	5.7	2.8	LOS A
	Right	0.110	6.0	2.8	LOS A
Husband Road (West)	Left	0.084	5.6	0.0	LOS A
	Through	0.084	0.0	0.0	LOS A

As shown above, the Husband Road / Fraser Place intersection is currently operating under excellent conditions during the weekday and weekend peak periods, with minimal queues and delays experienced by motorists.

2.7 Car Parking Surveys

An aerial view of the site, shown below in Figure 11, identifies the existing car parking areas directly south of the site, and to west around Forest Hill Oval.

Off-street car parking occupancy surveys of the car parking areas shown below were undertaken by Trans Traffic Survey on behalf of onemilegrid on the following periods:

- Thursday 29th August 2024, between 9:00am and 12:00pm, and between 3:00pm and 8:00pm;
- Saturday 31st August 2024, between 8:00am and 4:00pm; and
- Sunday 1st September 2024, between 8:00am and 4:00pm.

Figure 11 Car Parking Areas

As shown above, parking across the greater site is largely split between areas 4-8 to the south of the Aqualink facility, and areas 1-3 along Forest Hill Oval to the west. The surveys identified a constant supply of 213 spaces across surveys areas 4-8 throughout the survey period, and 84 spaces located along the boundary of Forest Hill Oval.

In this regard, it can be generally assumed that the southern car park (areas 4-8) mostly services the Aqualink facility and that the remaining parking along Forest Hill Oval is utilised by patrons / visitors for the sporting clubs. It is noted that there was no football game during the weekend parking surveys.

Noting the above, the survey data for parking areas 4-8 have been extracted and assessed separately to establish site-specific parking occupancy profiles. The parking occupancy profiles for the Thursday, Saturday and Sunday survey periods are shown below in Figure 12, Figure 13 and Figure 14 respectively.

Figure 12 Site-specific Car Parking Occupancy – 29th August 2024

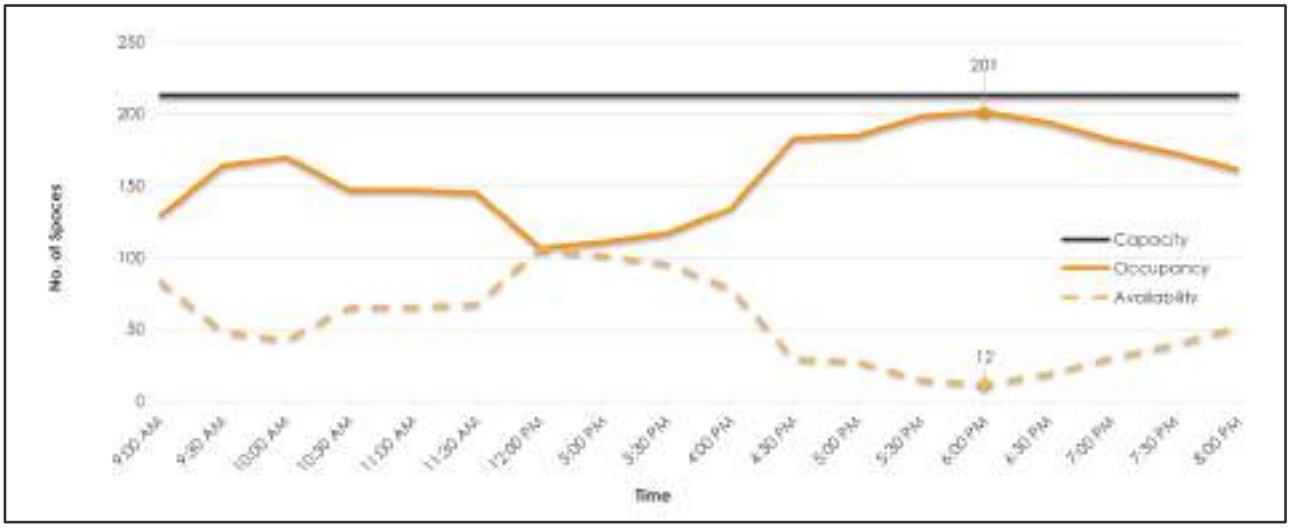


Figure 13 Site-specific Car Parking Occupancy – 31st August 2024

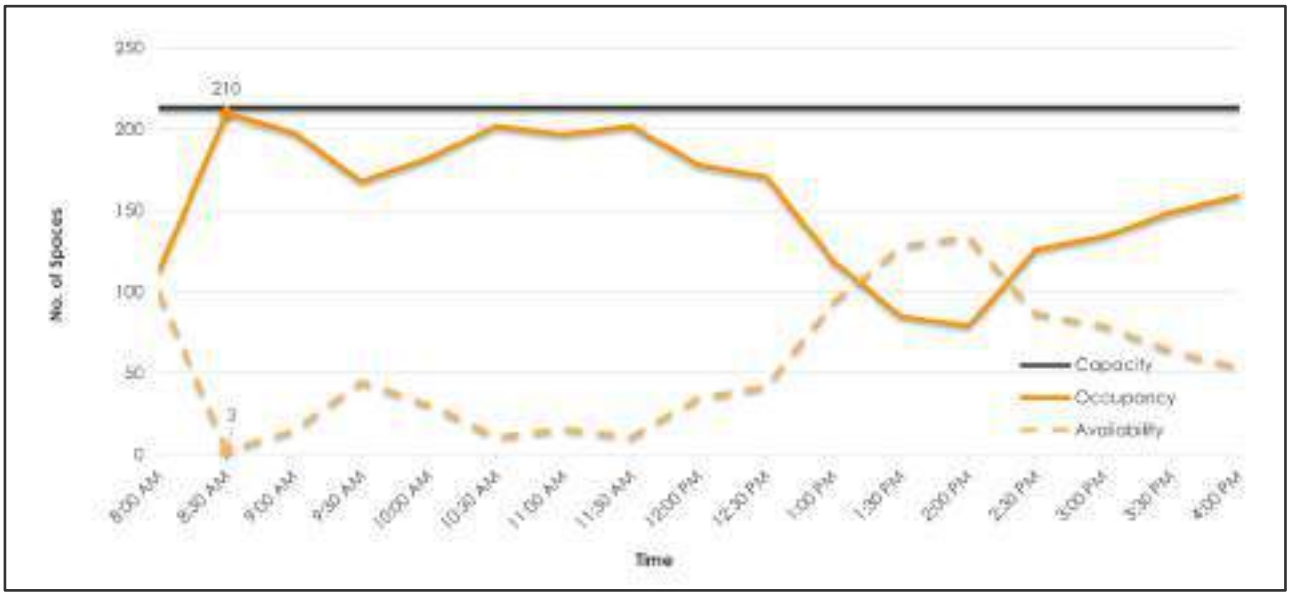
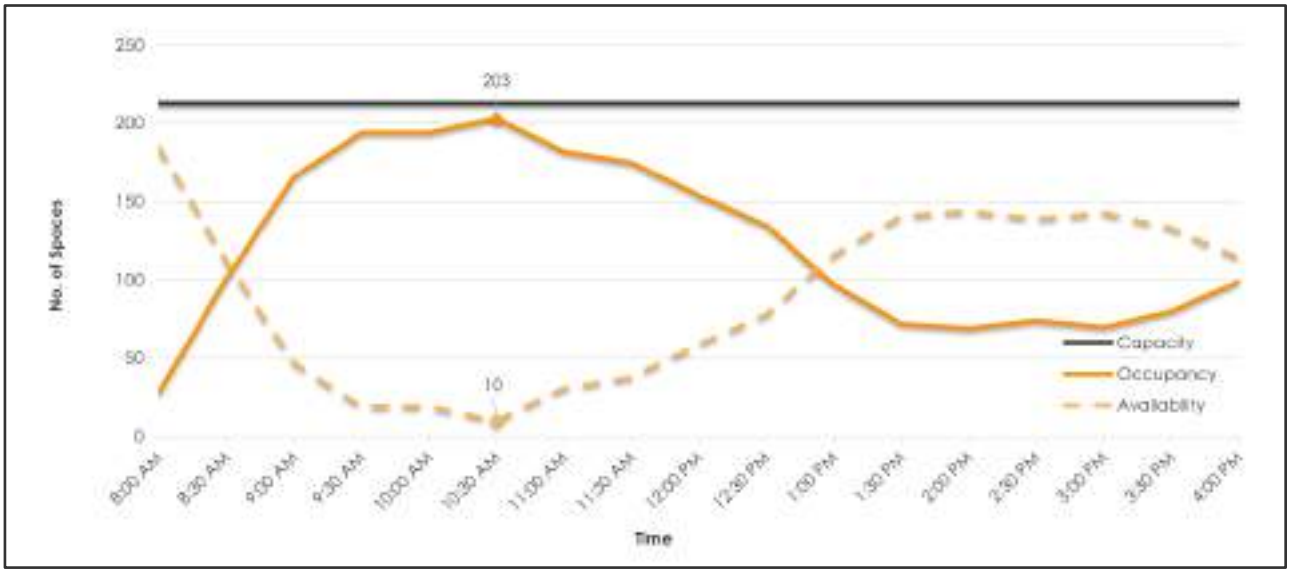


Figure 14 Site-specific Car Parking Occupancy – 1st September 2024



Additionally, a review of the survey data for car parking areas 1-3 has been undertaken and the respective parking profiles are shown below in Figure 15, Figure 16, Figure 17 respectively.

Figure 15 Reserve Car Parking Occupancy – 29th August 2024

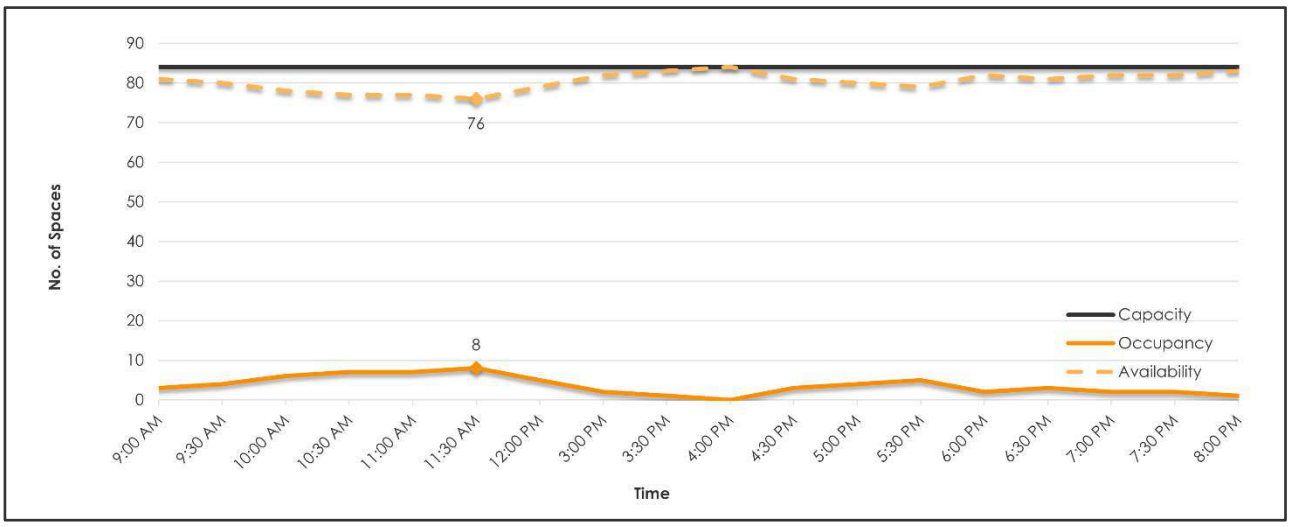


Figure 16 Reserve Car Parking Occupancy – 31st August 2024

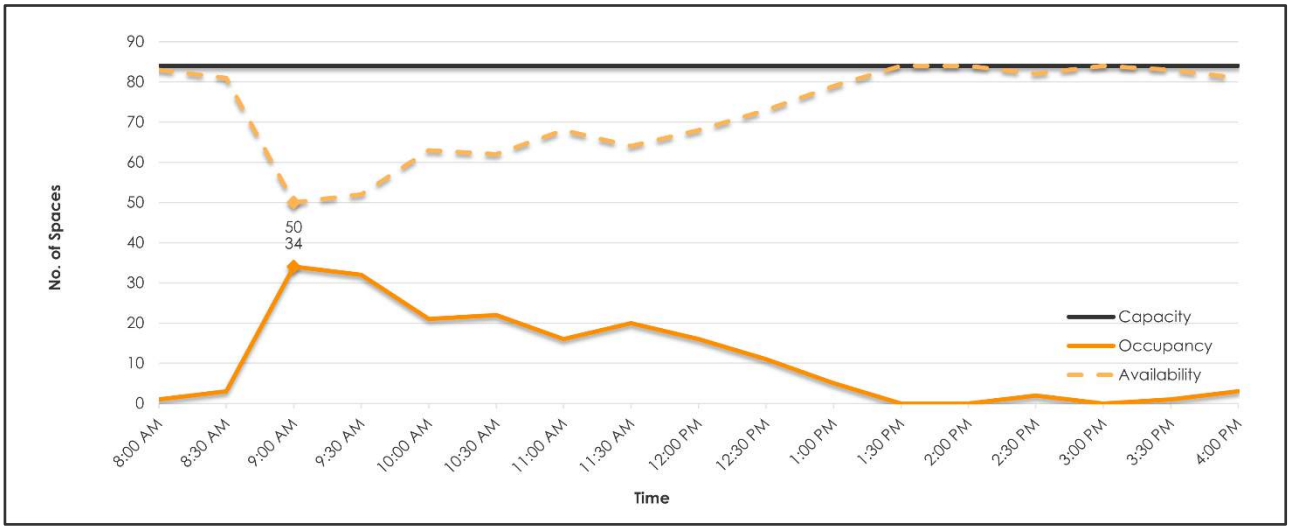
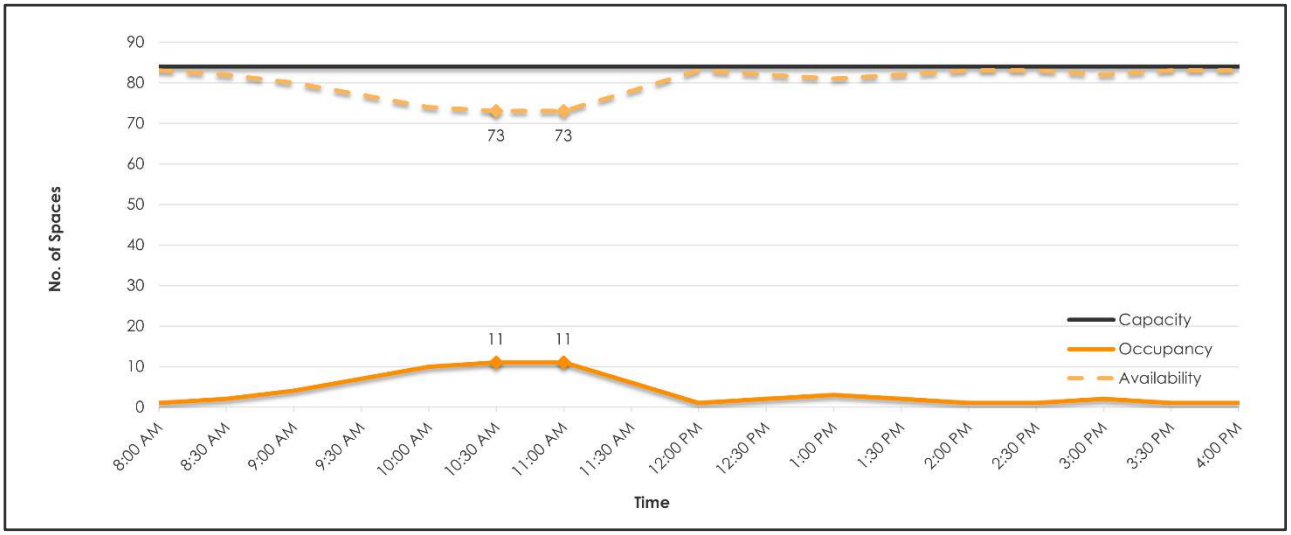


Figure 17 Reserve Car Parking Occupancy – 1st September 2024



A summary of the survey results across both the weekday and weekend peak periods are shown below in Table 6.

Table 6 Peak Occupancy Parking Profiles

Day	Peak Occupancy			
	Time	Occupancy	Availability	Parking Utilisation Range (% Capacity)
Aqualink Parking (Areas 4-8)				
Thursday	6:00pm	201	12	94% to 50%
Saturday	8:30am	210	3	99% to 37%
Sunday	10:30am	203	10	95% to 13%
Reserve Parking (Areas 1-3)				
Thursday	11:30am	8	76	10% to 0%
Saturday	9:00am	34	50	40% to 0%
Sunday	10:30am	11	73	13% to 1%
All Parking (Areas 1-8)				
Thursday	6:00pm	203	84	68% to 38%
Saturday	9:00am	232	65	78% to 27%
Sunday	10:30am	214	83	72% to 10%

As shown above, the Aqualink parking areas recorded a maximum demand for 210 car parking spaces, occurring on the Saturday period. Based on the annual visitation number of 574,000 recorded for the existing facility, and a peak demand for 210 car parking spaces across the site, a site-specific car parking rate for the existing Aqualink facility has been calculated to be 3.66 spaces per 10,000 annual visitations.

Furthermore, it is shown above that peak occupancy across the greater site occurred at similar times on the Saturday and Sunday. On the Thursday, peak occupancy for the Aqualink parking occurred at 6:00pm, whereas peak occupancy of the parking areas along the reserve occurred at 11:30am. This suggests that on a weekday there is no clear overlap in the peak utilisation of the Aqualink and reserve parking areas.

When including the full car parking demand observed in the reserve area (Areas 1 – 8), of 232 spaces, and assuming all parking demand is associated with the existing Aqualink facility, the car parking rate for the existing facility has been calculated to be 4.04 spaces per 10,000 annual visitations. This is considered to be highly conservative, noting that a portion of parking within the reserve parking areas (1-3) is expected to be as a result of users of the remaining areas of the reserve, including the adjacent oval and recreational facilities.

A further analysis of the car parking surveys was undertaken for the short-term pick-up/drop-off area adjacent to the existing building (Parking Area 4 from Figure 11).

The survey results indicate parking availability at all times within the short-term parking area (a maximum demand for 6 of the 7 spaces occurred at 5:30pm on the Thursday survey period), other than after 6:30pm on the Thursday survey period, when the parking restrictions end and the parking spaces are unrestricted.

3 DEVELOPMENT PROPOSAL

3.1 General

It is proposed to re-develop the existing Aqualink Nunawading facility to provide a range of new and improved sports, health and aquatic services for the community.

There are three options being investigated for the proposed development, which include variations to the annual visitation numbers across a 10-year period, as summarised in Table 7.

Table 7 Projected Annual Visitations

Option	Year (Annual Visitations)									
	1	2	3	4	5	6	7	8	9	10
Option A – Like for Like	632,021	654,653	660,437	666,278	672,178	678,137	684,155	690,234	696,373	702,574
Option B - Hybrid	803,841	828,065	835,456	842,921	850,460	858,075	865,766	873,534	881,380	889,304
Option C - Aspirational	875,431	902,504	910,569	918,715	926,943	935,253	943,645	952,122	960,684	969,331

It is noted that a considerable increase in patronage is expected for each of the potential redevelopment options, including the 'Like for Like' Option A.

It is understood that Option B is the preferred option.

No change to the operational hours for the existing facility are proposed as a part of the development.

3.2 Car Parking and Vehicular Access

It is proposed to construct a new car parking area to the north of the building, to provide approximately 127 car spaces inclusive of 8 accessible car spaces. The existing car parking area to the south of the Aqualink building is proposed to be largely retained providing 201 car spaces, with minor modifications to allow for vehicular circulation through the site. As such, a total of 328 car parking spaces, inclusive of 8 accessible spaces, will be provided directly to the north and south of the building, assumed to largely service the Aqualink facility.

The existing access arrangements are proposed to be retained, with entry and exit movements provided via Fraser Place to the south of the site. Internally, circulation is provided throughout the site, retaining the existing accessways to the south and west of the building. Vehicle access and circulation has been designed / modified to accommodate both passenger, loading and emergency vehicles.

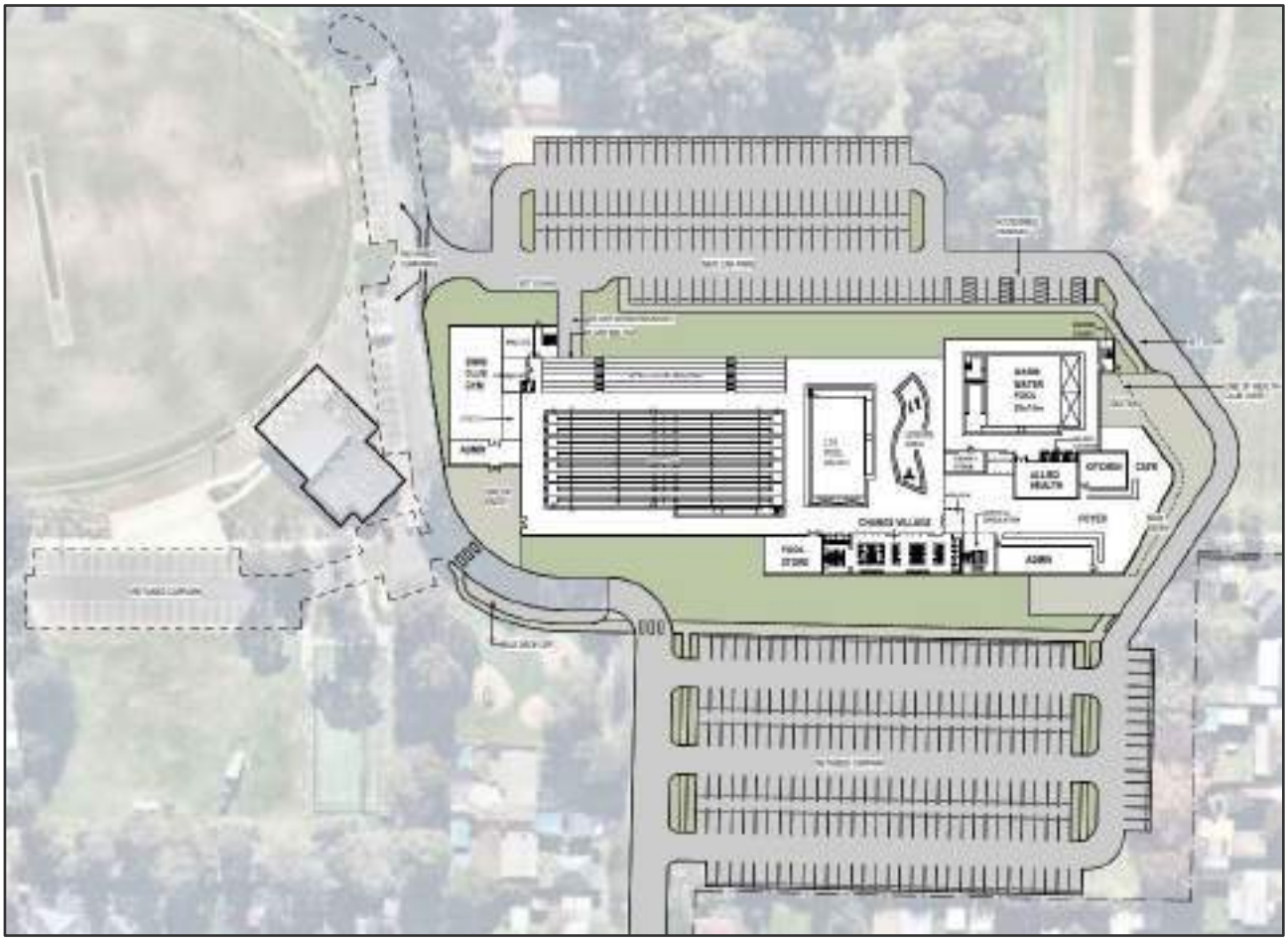
To allow for the construction of the new building, 12 car parking spaces along the eastern side of the existing driveway (east of the oval) will be removed. As such, the car parking areas to the west of the building, along the reserve, will supply 72 car spaces along the boundary and to the south of Forest Hill Oval.

The design includes opportunity to provide a bus drop-off zone in the southwest corner of the building.

Additionally, it is proposed to provide an on-site loading bay/plant-room access at the rear of the building.

A summary of the potential car parking arrangements across the site are summarised below, and shown below in Figure 18.

Figure 18 Site Layout – Option B



4 LOADING

Clause 65 (Decision Guidelines) of the Whitehorse Planning Scheme identifies that "*Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate: The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.*"

In order to ensure that loading vehicles and buses are accommodated appropriately, specific loading bays and bus pick-up/drop-off facilities should be provided adjacent to the building where appropriate.

5 BICYCLE PARKING

The bicycle parking requirements for the subject site are typically identified in Clause 52.34 of the Whitehorse Planning Scheme, which specifies the following requirements for the different components for the development.

It is understood that the site largely operates as a minor sports and recreation facility, and as such the bicycle parking requirements for this use have been adopted. Information provided by Ontoit indicates that the site will operate with 30 employees during peak periods. A total floor area of 8,600 m² has been adopted for the building floor area.

Table 8 Clause 52.34 – Bicycle Parking Requirements

Component	*No/Area*	*Requirement*	*Total*
Minor sports and recreation facility	30 employees 8,600 m²	1 space per 4 employees for employees 1 space per 200 m² for visitors	8 43

Furthermore, where 5 or more employee bicycle spaces are required, employee facilities are required in accordance with Clause 52.34 of the Whitehorse Planning Scheme, as identified in Table 9 below.

Table 9 Clause 52.34 – Bicycle Facility Requirements

Facility	*Employee Bicycle Spaces*	*Requirement*	*Total*
Showers	8 spaces	1 shower for the first 5 employee bicycle spaces; plus 1 to each 10 employee bicycle spaces thereafter	1

Showers must have access to a communal change room, or combined shower and change room

A total of 8 employee and 43 visitor bicycle parking spaces would be required for the site, in addition to 1 shower for employee use.

Given the provision of communal change rooms, including locker and shower spaces, for the development, the provision of bicycle facilities meets the requirements of the Planning Scheme, and is therefore considered appropriate.

It is recommended that bicycle parking spaces are provided across the site to meet or exceed the requirements above.

6 CAR PARKING

6.1 Statutory Car Parking Requirements

The car parking requirements for the subject site are typically identified in Clause 52.06 of the Whitehorse Planning Scheme.

Noting that the development includes modifications to the existing car parking areas across the site, an assessment of the entire site's car parking requirements has been undertaken.

It is noted that no rate is listed within the clause for a gymnasium use (nor the broader Minor Sports and Recreation Facility land use). In this regard, Clause 52.06 states:

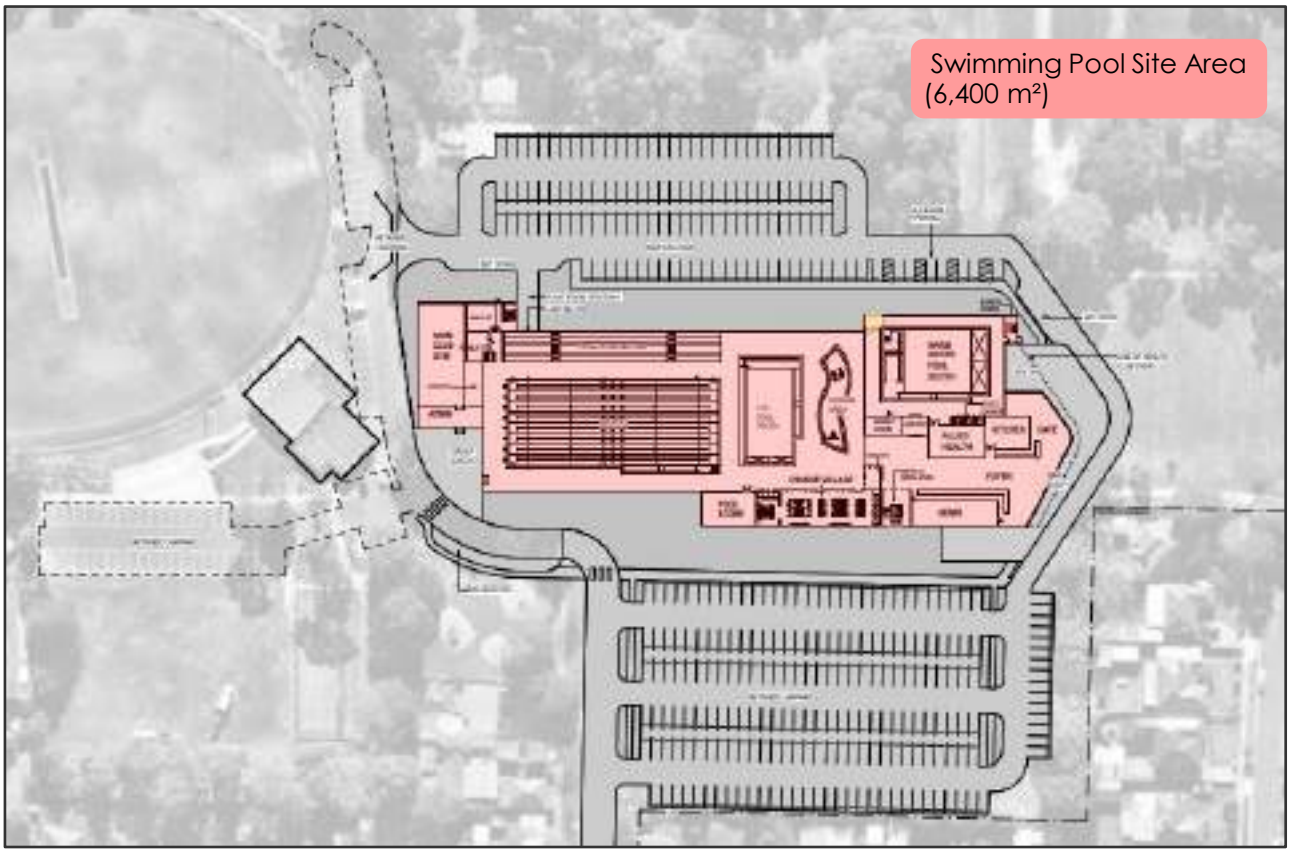
"Where a use is not specified in Table 1 or where a car parking requirement is not specified for the use in another provision of the planning scheme or in a schedule to the Parking Overlay, before a new use commences or the floor area or site area of an existing use is increased, car parking spaces must be provided to the satisfaction of the responsible authority."

In relation to the swimming pool use, the Planning Scheme rates are based on "site area", and does not strictly identify whether this includes car parking, landscaping and external areas. For sites of this nature, being mixed-use with gym / wellness facilities and a part of a greater site (Forest Hill Reserve), the "site" boundaries for the swimming pool use are largely undefined.

For the purposes of presenting a parking requirement, the 'site area' for the swimming pool use is assumed to be best represented by the total footprint of the Aqualink building. A site area of approximately 6,400 m² has been adopted for the parking analysis, which coincides with the building footprint for Option B (Hybrid), as shown below in Figure 19.

It is noted that the level 1 floor area has been excluded, as this area is associated with the gym use, and is separate to the 'swimming pool' use for the site.

Figure 19 Building Footprint Area – Option B (Hybrid)



Additionally, the site is located within Public Transport Network Area, and therefore, the Column B rates apply, as shown in Table 10 below.

Table 10 Clause 52.06 – Car Parking Requirements

Use	*Area*	*Rate*	*Car Parking Measure*	*Total*
Swimming pool – other than in conjunction with a dwelling	6,400 m²	5.6	to each 100 m² of the site	358

Based on the above calculations, a total of 358 parking spaces would be required for the swimming pool (assuming a site area equivalent to the ground floor building footprint), plus those required for the gym use.

As previously noted, it is assumed that the car parking areas to the north and south of the building largely service the Aqualink site. In this regard, the development seeks to provide 328 parking spaces, inclusive of 8 accessible spaces, across these two parking areas.

In order to verify the suitability of the proposed parking provision, a Car Parking Demand Assessment is undertaken below.

6.2 Car Parking Demand Assessment

6.2.1 General

A review of existing and likely parking demands generated to the precinct has been undertaken below in order to confirm the suitability of the proposed parking provision to support the Aqualink Nunawading redevelopment.

Aqualink will continue to include a swimming pool and activities to facilitate ongoing programs, such as learn-to-swim, and targeted programs to meet specific community health needs. It is noted that the site will continue to provide services largely in line with those of the existing, and therefore the operation and nature of the site is considered comparable to the current nature of the site.

6.2.2 Site-Specific Car Parking Rate

As previously detailed in Section 2.7, off-street car parking occupancy surveys were undertaken by Trans Traffic Survey on behalf of **one**mile**grid** within the on-site and reserve car parking areas across both a weekday and weekend period. The survey data indicates a site-specific car parking rate for the existing Aqualink facility of between 3.66 and 4.04 spaces per 10,000 annual visitations.

For comparative purposes, **one**mile**grid** has undertaken a review of parking surveys undertaken by other consultancies at suburban aquatic centres. These indicate peak parking rates varying between 2.94 and 5.3 spaces per 10,000 annual attendees as summarised in Table 11 below.

Table 11 Aquatic Centre Parking Demands

Location	*Peak Parking Demand (spaces / 10,000 annual visitations)*
East Keilor	5.30
Eltham	2.94
Mill Park	3.03
Thomastown	3.61
Ashburton	3.12
Average	**3.00**

As shown above, the site-specific car parking rate of 3.66 spaces per 10,000 annual visitation is higher than the peak parking demand observed at all of the comparable aquatic centres other than the East Keilor Leisure Centre, and very similar to the rate observed at Thomaston Recreation & Aquatic Centre. Given this, it is expected that the observed rate of 4.04 spaces per annual visitation (based on the total Reserve parking demand) would over-estimate the actual aquatic centre demands, and therefore the rate of 3.66 spaces per 10,000 annual visitations is expected to provide a more realistic estimate of the actual parking demand for the aquatic centre.

6.2.3 Seasonal Variation

Aqualink is an all-year-round leisure facility, with a range of services for a broader section of the community.

It is expected that a level of seasonal variation could occur throughout the year depending on the weather conditions. During the summer period, in particular related to very hot days on the weekend, the site may generate a higher visitor parking demands due to the warmer weather conditions, which could increase the utilisation of the on-site swimming pool. This is expected to occur only occasionally throughout the year.

Nonetheless, based on the information provided for the site, it is understood that Aqualink generally operates with consistent scheduling of swimming programs, gym facilities and timetabling, and as such the car parking demands are likely to remain relatively constant across typical months outside of absolute peak summer weekends.

6.2.4 Initial Peak Demands

It can be expected that demands during the initial opening period of the proposed facility will experience an abrupt increase from those utilising the facility prior to the redevelopment works taking place, as patrons are drawn to the new facilities. The level of patronage increase is somewhat dependent upon the degree of marketing and social media that occurs prior to the opening, and can be managed somewhat by Council prior the opening period (i.e. a soft opening may occur prior to a formal opening event to help disperse patrons, or social media and marketing may slowly increase after the opening).

These initial peak demands are expected to gradually reduce over the following weeks and revert to more typical patronage numbers.

It should be noted that the projected patronage numbers shown in Table 7 (even for the 'Like for Like' Option A) include a considerable increase in patronage (between 10% and 53%), therefore the patronage projections make some allowance for the additional patronage generated simply as a result of the attraction of the new centre, regardless of the level of additional facilities provided.

6.2.5 Pick-up and Drop-off

Aqualink Nunawading offers numerous programs and activities for school aged students, and consequently, parents may be likely to pick-up and drop-off their children, instead of parking on-site. In this regard, the parking demands for the site would comprise a portion of short-term parking associated with pick-up/drop-off.

As identified previously, the parking surveys identified capacity within the short-term parking area at all times, though regardless, it is recommended that a small number of short-term parking spaces (approximately equal to the existing 7 spaces) are provided in close proximity to the building entrance, to accommodate pick-up/drop-off.

6.2.6 Reserve Parking Opportunities

Forest Hill Oval is located directly to the west of the Aqualink site and includes car parking along the boundary and south of the oval.

It is understood that across the year, Aqualink Nunawading will operate concurrently with the use of Forest Hill Oval by the Forest Hill Cricket Club in the summer season and Football Club in the winter season. It is acknowledged that the survey data was obtained outside of the summer and winter sporting seasons, and therefore did not entirely capture the parking demands associated with these uses.

Nonetheless, in the instance that reserve parking is available, typically outside of the training and game times for the sporting clubs, parking along and adjacent to the oval can provide a level of parking for visitors to the Aqualink site.

In this regard, a review of the survey data for car parking areas 1-3 has been undertaken to assess parking availability along and adjacent to Forest Hill Oval. As shown in Section 2.7, the review suggests that a minimum of 50 parking spaces were available across the car parking areas directly adjacent and along Forest Hill Oval. As such, the review indicates that there is car parking availability to accommodate some additional parking demands associated with the adjacent sporting clubs, though it is also noted that a reduction in the existing parking supply within these adjacent car parking areas is expected (approximately 12 spaces).

Parking demands associated with football and cricket clubs can vary considerably, depending on the number of members, the success of the club, and the grade of competition. Peak car parking demands of between 50 and 80 parking spaces are typically observed for a single oval facility, although for high profile football clubs, demands of up to 120 parking spaces can be generated.

Noting the reduction in parking proposed surrounding the oval, and the potential for the peak operation of both the adjacent sporting clubs and the Aqualink facility to coincide, it is recommended that the peak demands for Aqualink are provided entirely within the car parking areas to the north and south of the Aqualink building.

6.2.7 Anticipated Parking Demand

Noting that the site includes a range of uses including swimming pools, community and gym facilities, the site-specific rate for the site is considered appropriate to capture the unique combination of parking demands for the uses across the site. Based on the case study data presented, the site-specific parking generation rate of approximately 3.66 spaces per 10,000 annual visitations is considered appropriate to adopt is assessing the future parking demands for the Aqualink site.

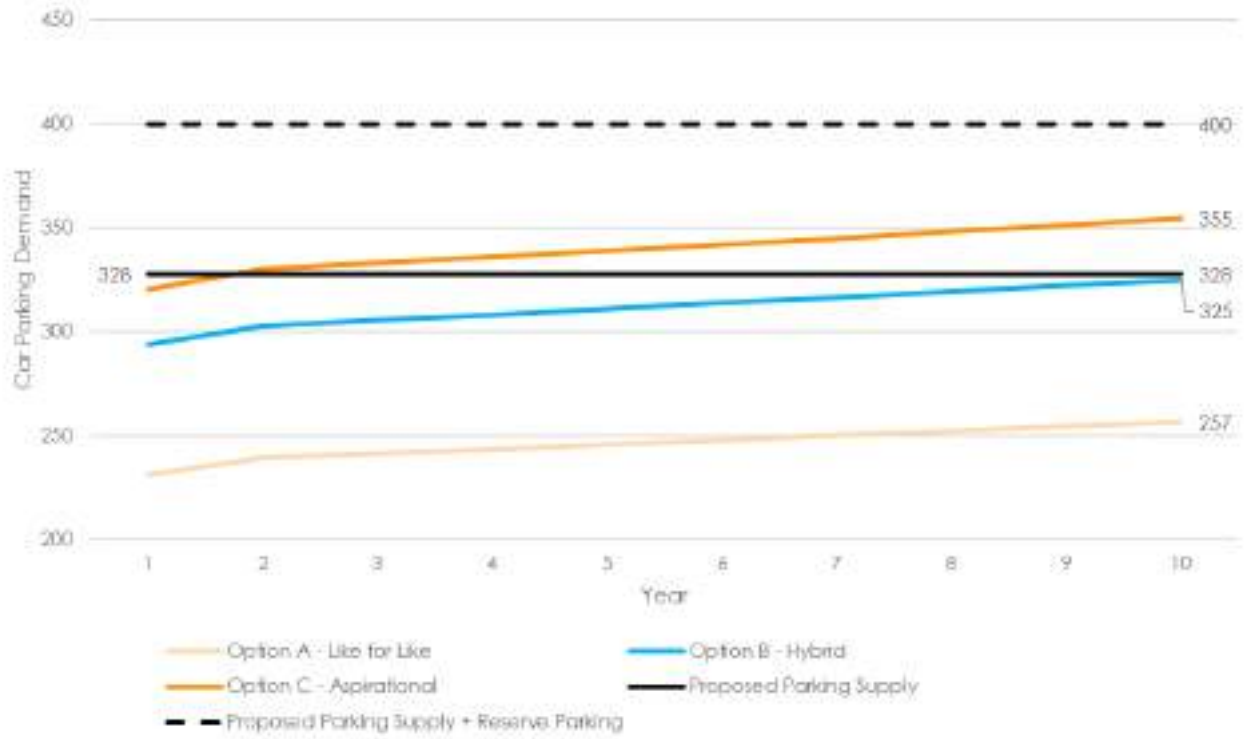
Adopting the site-specific parking rate of 3.66 spaces per 10,000 annual visitations generates the following parking demands for each of the three options, including the expected parking shortfall or surplus, as summarised in Table 12.

Table 12 Yearly Car Parking Demand Comparison

Option	Measure	Year									
		1	2	3	4	5	6	7	8	9	10
Option A – Like for Like	Parking Demand	231	240	242	244	246	248	250	253	255	257
	Surplus / Shortfall	**97**	**88**	**86**	**84**	**82**	**80**	**78**	**75**	**73**	**71**
Option B - Hybrid	Parking Demand	294	303	306	308	311	314	317	320	322	325
	Surplus / Shortfall	**34**	**25**	**22**	**20**	**17**	**14**	**11**	**8**	**6**	**3**
Option C - Aspirational	Parking Demand	320	330	333	336	339	342	345	348	351	355
	Surplus / Shortfall	**8**	**-2**	**-5**	**-8**	**-11**	**-14**	**-17**	**-20**	**-23**	**-27**

A comparison of the car parking supply for each of the three development options is shown below in Figure 20. As previously mentioned, parking along and adjacent to the oval can provide a level of parking for visitors to the Aqualink site, and as such, this total supply (400 spaces), has also been shown below for the purposes of a comparative analysis.

Figure 20 Car Parking Demand Comparison

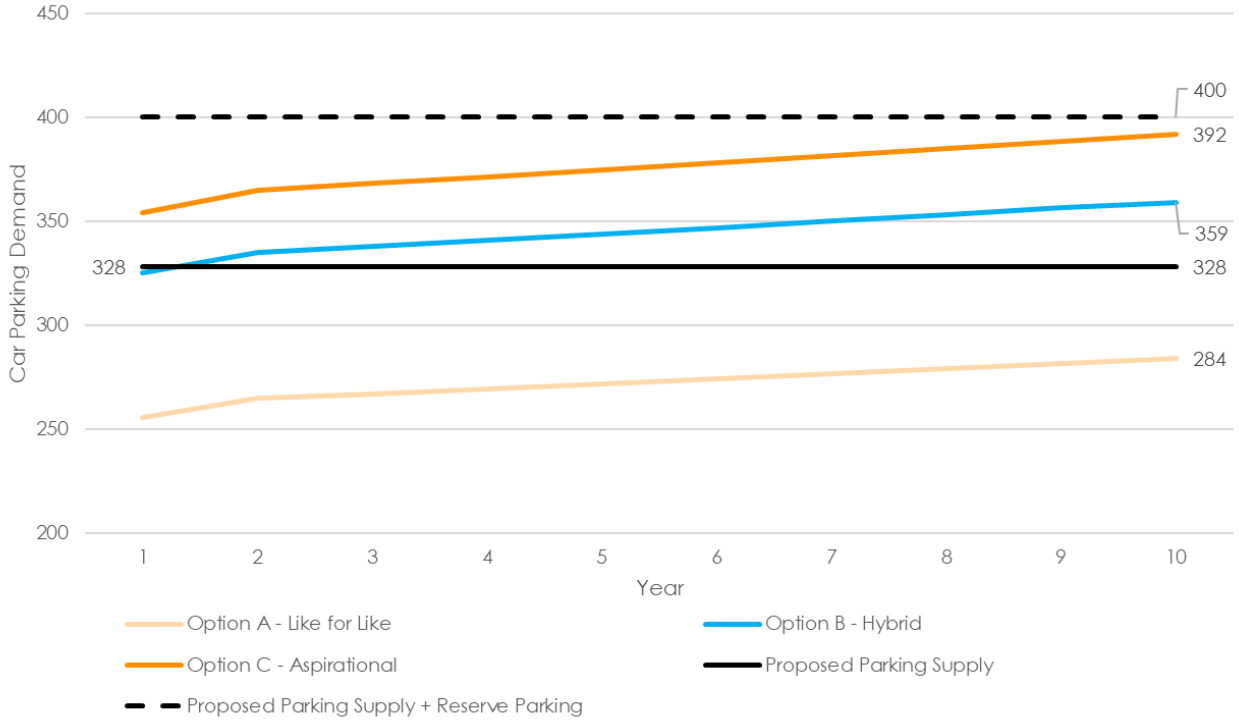


As shown above, the proposed supply of 328 spaces would generally meet the projected parking demands for Option A and Option B of the development across the 10-year period. The analysis shows that the parking demands for Option C exceed the supply after the first year of the development, and equates to a shortfall of 27 spaces at the end of the 10-year period.

The above assessment assumes a supply of 328 spaces to accommodate the Aqualink parking demands across the northern and southern parking areas. In this regard, the assessment does not account for parking spaces directly to the west of the site, along the boundary and to the south of Forest Hill Oval. Nonetheless, the above analysis shows that the total supply of 400 spaces across all parking areas would comfortably meet the demands for all three options.

Furthermore, to provide a conservative assessment of the potential future parking demands, additional analysis has been undertaken based on the total observed parking rate for the reserve of 4.04 spaces per 10,000 annual visitations, with the results summarised below.

Figure 21 Car Parking Demand Comparison – Upper Limit



As shown above, application of the higher observed parking rate for the existing centre (based on the full parking demands for the reserve area) to the proposed development options suggests that only Option A will remain below the proposed parking provision over the 10-year period. Whilst the parking demands associated with Option B are expected to be accommodated on Year 1, by Year 2, the demand is expected to exceed the supply.

Moreover, it is shown above that when considering a total supply of 400 spaces across the site (including the reserve parking), the parking demands for all three development options could be accommodated across the 10-year period, though noting that the demands are likely to be exceeded when coinciding with a match, training or event at the adjacent football or cricket club.

Nonetheless, based on the site-specific car parking rate, the proposed supply of 328 spaces would generally meet the projected parking demands for the preferred Option B across the first 10-year period. In the scenario that the future car parking demands exceed those presented in the assessment, the proposed supply of 328 spaces could result in a shortfall of parking across the site.

In this regard, the initial parking layout could be revised to increase the parking supply across the site to accommodate any additional demands if required, as detailed in section 6.3 below.

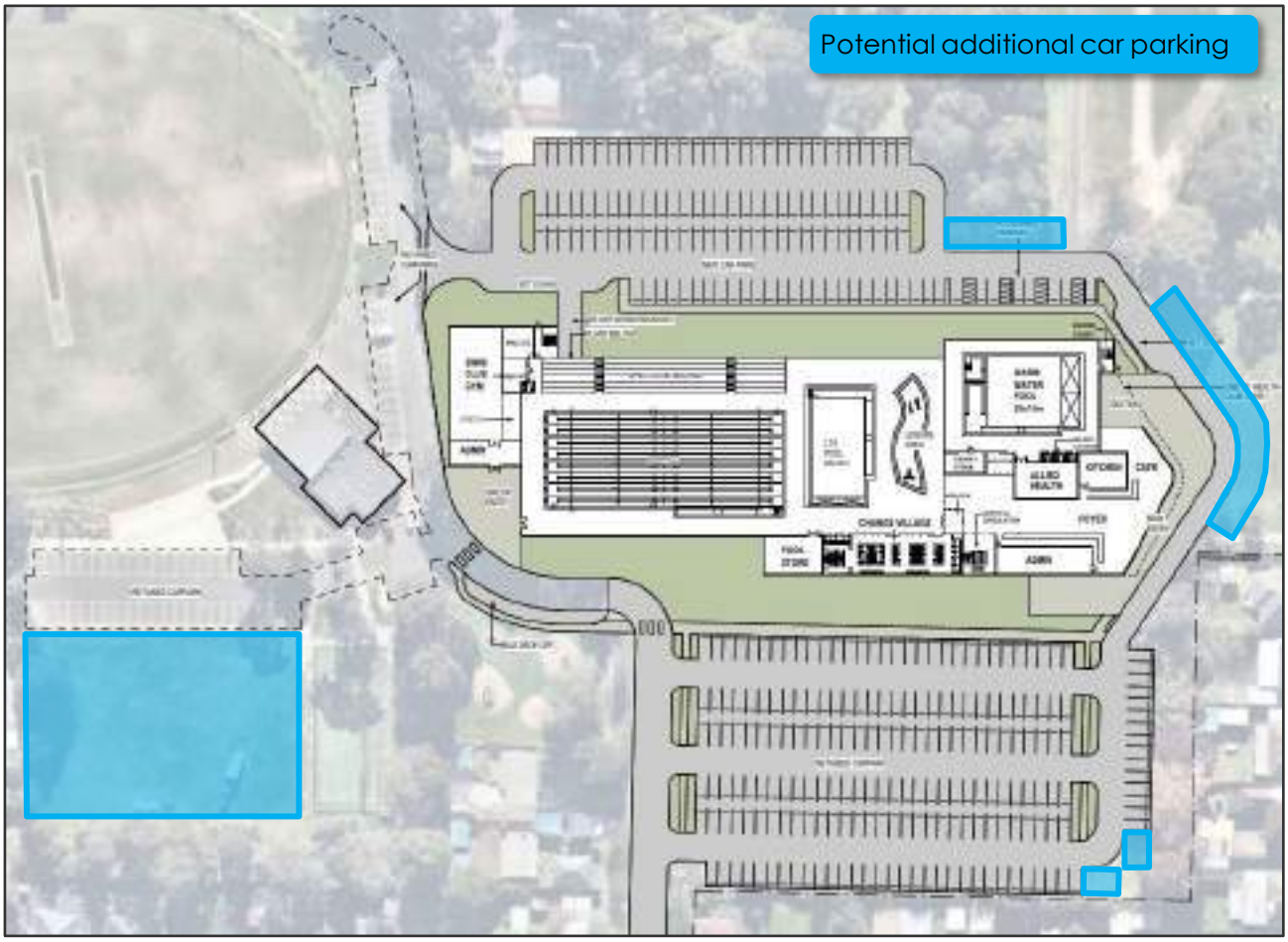
6.3 Potential for Additional Parking

Considering the above analysis, there is the potential that the parking demand may exceed the proposed supply under a variety of scenarios, such as:

- Option C is adopted;
- The parking rate for the proposed redevelopment exceeds the adopted car parking rate;
- The parking demand generated by the football or cricket club exceeds the supply of parking in the remainder of the reserve;
- As a result of seasonal variations (such as a very hot day over summer); or
- As a result of initial peak demands.

A review of the preliminary design indicates that additional parking spaces could be provided across the site to accommodate additional demands if necessary, in particular adjacent to the existing reserve parking to the south-west. Some potential areas for car park expansion are identified below.

Figure 22 Potential Car Park Expansion



With regard to the area south of the reserve parking (or potentially the area east of the Aqualink building) this could initially be provided as informal overflow parking, used only on specific occasions when overflow parking may be generated (managed by the centre and accessed via a locked gate).

In this regard, the initial parking layout could be revised to increase the parking supply across the site to accommodate any additional demands if required.

6.4 Accessible Car Parking

The National Construction Code specifies the minimum requirements for provision of accessible car parking.

The proposed swim school / gymnasium, classified as a Class 9B building, requires provision of one accessible car space for every 50 car parking spaces or part thereof for the first 1,000 spaces, and then 1 space per 100 car parking spaces or part thereof in excess of 1,000 spaces.

Noting the proposed provision of 328 car spaces on-site, the National Construction Code (NCC) requires at least 7 accessible car spaces on-site.

The proposed provision of 8 accessible spaces thus exceeds the NCC requirements.

7 TRAFFIC

7.1 Traffic Generation

The traffic survey data for the Husband Road / Fraser Place intersection has been assessed in order to establish a site-specific traffic generation rate for the site. This survey data includes the traffic movements generated by the Aqualink site, in addition to the traffic movements generated by the adjacent reserve, as shown below in Table 13.

Table 13 Traffic Generation (Husband Road / Fraser Place) – Movements per Hour

Period	Inbound			Outbound		
	Husband Rd (East)	Husband Rd (West)	Total	Husband Rd (East)	Husband Rd (West)	Total
Thursday AM Peak	53	70	123	21	33	54
Thursday PM Peak	55	110	165	74	75	149
Saturday Peak	29	106	135	46	84	130

As shown above, the highest traffic generation rates were mostly observed across the Thursday PM peak period, with the exception of that for outbound movements to Husband Road (West).

Utilising this data, in addition to the existing annual visitations for the site (574,000), a site-specific traffic generation rate of up to 5.47 movements per hour per 10,000 annual visitations was observed on the Thursday PM Peak, with 3.08 and 4.62 movements per hour per 10,000 annual visitations observed for the Thursday AM Peak and Saturday Peak respectively.

Application of the above rates to the proposed development options, for the 10 year modelling period, suggests the following future traffic generation.

Table 14 Expected Traffic Generation – Movements per Hour

Period	Option A	Option B	Option C
Thursday AM Peak	208	263	287
Thursday PM Peak	369	467	508
Saturday Peak	311	394	429

7.2 Expected Traffic Volume Growth

In assessing the operation of the Springvale Rd / Husband Rd intersection under future conditions, it is considered appropriate to include potential future traffic volume growth. For the purposes of the analysis, growth rates of 1% per year (compound) have been applied to the existing traffic volumes on Springvale Road over a 10-year period, equivalent to a 11% increase in traffic volumes. For an existing and sometimes congested road network in an established area, this is considered to be a conservatively high estimate of the likely future growth.

7.3 Resultant Future Traffic Volumes

Based on the site-specific traffic rates and traffic generation shown in Table 14, and accounting for traffic volume growth, the resultant traffic volumes have been calculated for each of the three development options. More generally, as the annual visitation number for the site increases, the traffic generated and distributed across the surrounding road network increases. In this regard, Option A and Option C result in the lowest and highest traffic generation for the site respectively.

7.4 Traffic Impact

7.4.1 Intersection Capacity Assessment

Given that the Husband Road / Fraser Place intersection is currently operating under excellent conditions, with significant spare capacity, it is expected that the relatively low increase in traffic generated by the development is expected to be easily absorbed by this intersection.

Additionally, it is noted that the Springvale Road / Husband Road intersection is located approximately 380 metres south of the Springvale Road / Canterbury Road intersection. Given the relatively close proximity of these two intersections, large gaps in traffic are generally provided due to traffic bunching along Springvale Road. In this regard, it is commonly observed that larger gaps than those generated by traffic modelling software are typically provided in reality.

To assess the operation of both intersections the resultant traffic volumes have been input into SIDRA Intersection, a traffic modelling software package. All three options for the development have been assessed across both the weekday and weekend peak periods to provide for a robust assessment.

The results of the analysis are provided in the tables below.

Table 15 Husband Road / Fraser Place – Future Conditions (Option A)

Approach	Movement	DoS		Avg. Delay (sec)		Queue (m)		Level of Service	
		Existing	Future	Existing	Future	Existing	Future	Existing	Future
AM Peak									
Husband Rd (East)	Through	0.047	0.053	0.3	0.3	1.5	1.7	LOS A	LOS A
	Right	0.047	0.053	5.7	5.8	1.5	1.7	LOS A	LOS A
Fraser Place (North)	Left	0.044	0.053	5.6	5.6	1.1	1.3	LOS A	LOS A
	Right	0.044	0.053	5.9	6.0	1.1	1.3	LOS A	LOS A
Husband Road (West)	Left	0.052	0.059	5.6	5.6	0.0	0.0	LOS A	LOS A
	Through	0.052	0.059	0.0	0.0	0.0	0.0	LOS A	LOS A
PM Peak									
Husband Rd (East)	Through	0.053	0.060	0.6	0.7	1.7	2.0	LOS A	LOS A
	Right	0.053	0.060	6.1	6.2	1.7	2.0	LOS A	LOS A
Fraser Place (North)	Left	0.126	0.149	5.8	5.8	3.4	4.1	LOS A	LOS A
	Right	0.126	0.149	6.4	6.5	3.4	4.1	LOS A	LOS A
Husband Road (West)	Left	0.105	0.115	5.6	5.6	0.0	0.0	LOS A	LOS A
	Through	0.105	0.115	0.0	0.0	0.0	0.0	LOS A	LOS A
Saturday Peak									
Husband Rd (East)	Through	0.030	0.034	0.4	0.5	1.0	1.1	LOS A	LOS A
	Right	0.030	0.034	5.9	6.0	1.0	1.1	LOS A	LOS A
Fraser Place (North)	Left	0.110	0.129	5.7	5.7	2.8	3.4	LOS A	LOS A
	Right	0.110	0.129	6.0	6.1	2.8	3.4	LOS A	LOS A
Husband Road (West)	Left	0.084	0.095	5.6	5.6	0.0	0.0	LOS A	LOS A
	Through	0.084	0.095	0.0	0.0	0.0	0.0	LOS A	LOS A

Table 16 Husband Road / Fraser Place – Future Conditions (Option B)

Approach	Movement	DoS		Avg. Delay (sec)		Queue (m)		Level of Service	
		Existing	Future	Existing	Future	Existing	Future	Existing	Future
AM Peak									
Husband Rd (East)	Through	0.047	0.065	0.3	0.4	1.5	2.1	LOS A	LOS A
	Right	0.047	0.065	5.7	5.9	1.5	2.1	LOS A	LOS A
Fraser Place (North)	Left	0.044	0.087	5.6	5.6	1.1	2.2	LOS A	LOS A
	Right	0.044	0.087	5.9	6.2	1.1	2.2	LOS A	LOS A
Husband Road (West)	Left	0.052	0.072	5.6	5.6	0.0	0.0	LOS A	LOS A
	Through	0.052	0.072	0.0	0.0	0.0	0.0	LOS A	LOS A
PM Peak									
Husband Rd (East)	Through	0.053	0.073	0.6	0.8	1.7	2.4	LOS A	LOS A
	Right	0.053	0.073	6.1	6.2	1.7	2.4	LOS A	LOS A
Fraser Place (North)	Left	0.126	0.186	5.8	5.8	3.4	5.3	LOS A	LOS A
	Right	0.126	0.186	6.4	6.7	3.4	5.3	LOS A	LOS A
Husband Road (West)	Left	0.105	0.127	5.6	5.6	0.0	0.0	LOS A	LOS A
	Through	0.105	0.127	0.0	0.0	0.0	0.0	LOS A	LOS A
Saturday Peak									
Husband Rd (East)	Through	0.030	0.041	0.4	0.6	1.0	1.3	LOS A	LOS A
	Right	0.030	0.041	5.9	6.1	1.0	1.3	LOS A	LOS A
Fraser Place (North)	Left	0.110	0.168	5.7	5.7	2.8	4.6	LOS A	LOS A
	Right	0.110	0.168	6.0	6.3	2.8	4.6	LOS A	LOS A
Husband Road (West)	Left	0.084	0.114	5.6	5.6	0.0	0.0	LOS A	LOS A
	Through	0.084	0.114	0.0	0.0	0.0	0.0	LOS A	LOS A

Table 17 Husband Road / Fraser Place – Future Conditions (Option C)

Approach	Movement	DoS		Avg. Delay (sec)		Queue (m)		Level of Service	
		Existing	Future	Existing	Future	Existing	Future	Existing	Future
AM Peak									
Husband Rd (East)	Through	0.047	0.070	0.3	0.4	1.5	2.3	LOS A	LOS A
	Right	0.047	0.070	5.7	5.9	1.5	2.3	LOS A	LOS A
Fraser Place (North)	Left	0.044	0.074	5.6	5.6	1.1	1.9	LOS A	LOS A
	Right	0.044	0.074	5.9	6.2	1.1	1.9	LOS A	LOS A
Husband Road (West)	Left	0.052	0.077	5.6	5.6	0.0	0.0	LOS A	LOS A
	Through	0.052	0.077	0.0	0.0	0.0	0.0	LOS A	LOS A
PM Peak									
Husband Rd (East)	Through	0.053	0.081	0.6	0.9	1.7	2.7	LOS A	LOS A
	Right	0.053	0.081	6.1	6.4	1.7	2.7	LOS A	LOS A
Fraser Place (North)	Left	0.126	0.213	5.8	5.8	3.4	6.2	LOS A	LOS A
	Right	0.126	0.213	6.4	6.8	3.4	6.2	LOS A	LOS A
Husband Road (West)	Left	0.105	0.143	5.6	5.6	0.0	0.0	LOS A	LOS A
	Through	0.105	0.143	0.0	0.0	0.0	0.0	LOS A	LOS A
Saturday Peak									
Husband Rd (East)	Through	0.030	0.045	0.4	0.7	1.0	1.5	LOS A	LOS A
	Right	0.030	0.045	5.9	6.2	1.0	1.5	LOS A	LOS A
Fraser Place (North)	Left	0.110	0.184	5.7	5.7	2.8	5.1	LOS A	LOS A
	Right	0.110	0.184	6.0	6.4	2.8	5.1	LOS A	LOS A
Husband Road (West)	Left	0.084	0.122	5.6	5.6	0.0	0.0	LOS A	LOS A
	Through	0.084	0.122	0.0	0.0	0.0	0.0	LOS A	LOS A

As shown above, the Husband Road / Fraser Place intersection is expected to continue operating under excellent conditions for all three development options, during both the weekday and weekend peak hours. Minimal queues and delays are expected at all approaches, with all movements largely unimpacted by the increase in traffic generated by the site.

Table 18 Springvale Road / Husband Road – Future Conditions (Option A)

Approach	Movement	DoS		Avg. Delay (sec)		Queue (m)		Level of Service	
		Existing	Future	Existing	Future	Existing	Future	Existing	Future
AM Peak									
Springvale Rd (South)	Through	0.371	0.410	0.1	0.1	0.0	0.0	LOS A	LOS A
	Right	0.194	0.282	18.4	23.4	3.6	5.3	LOS C	LOS C
	U-Turn	0.194	0.282	20.2	25.4	3.6	5.3	LOS C	LOS D
Husband Rd (East)	Left	0.129	0.164	14.1	15.7	3.3	4.1	LOS B	LOS C
Springvale Rd (North)	Left	0.424	0.468	7.1	7.1	0.0	0.0	LOS A	LOS A
	Through	0.424	0.468	0.1	0.1	0.0	0.0	LOS A	LOS A
	U-Turn	0.097	0.170	217.8	306.0	1.2	2.1	LOS F	LOS F
PM Peak									
Springvale Rd (South)	Through	0.449	0.496	0.1	0.1	0.0	0.0	LOS A	LOS A
	Right	0.550	0.831	27.8	53.4	12.6	23.0	LOS D	LOS F
	U-Turn	0.550	0.831	40.5	73.3	12.6	23.0	LOS E	LOS F
Husband Rd (East)	Left	0.224	0.291	14.5	16.8	6.1	8.5	LOS B	LOS C
Springvale Rd (North)	Left	0.433	0.479	7.1	7.1	0.0	0.0	LOS A	LOS A
	Through	0.433	0.479	0.1	0.1	0.0	0.0	LOS A	LOS A
	U-Turn	0.297	0.664	409.1	948.8	4.0	9.4	LOS F	LOS F
Saturday Peak									
Springvale Rd (South)	Through	0.392	0.433	0.1	0.1	0.0	0.0	LOS A	LOS A
	Right	0.437	0.644	24.9	36.5	8.6	13.3	LOS C	LOS E
	U-Turn	0.437	0.644	27.5	40.0	8.6	13.3	LOS D	LOS E
Husband Rd (East)	Left	0.209	0.267	13.4	15.2	5.6	7.8	LOS B	LOS C
Springvale Rd (North)	Left	0.403	0.445	7.0	7.1	0.0	0.0	LOS A	LOS A
	Through	0.403	0.445	0.1	0.1	0.0	0.0	LOS A	LOS A
	U-Turn	0.137	0.234	300.2	313.8	1.6	3.1	LOS F	LOS F

As shown above, the Thursday PM peak period experiences higher queues and delays when compared to the Thursday AM and Saturday peak periods. U-turning movements from the Springvale Road south approach remain critical across the peak periods, with delays ranging between 25.4 and 73.3 seconds for the southern approach. Right-turn movements from the southern approach remain under one minute across all peak periods.

Additionally, as through movements along Springvale Road continue to be afforded priority, the north and south approaches continue to generally operate under excellent conditions. The Husband Road east approach operates under good conditions across the weekday and weekend peak periods.

Table 19 Springvale Road / Husband Road – Future Conditions (Option B)

Approach	Movement	DoS		Avg. Delay (sec)		Queue (m)		Level of Service	
		Existing	Future	Existing	Future	Existing	Future	Existing	Future
AM Peak									
Springvale Rd (South)	Through	0.371	0.410	0.1	0.1	0.0	0.0	LOS A	LOS A
	Right	0.194	0.331	18.4	24.4	3.6	6.3	LOS C	LOS C
	U-Turn	0.194	0.331	20.2	26.9	3.6	6.3	LOS C	LOS D
Husband Rd (East)	Left	0.129	0.240	14.1	16.2	3.3	6.6	LOS B	LOS C
Springvale Rd (North)	Left	0.424	0.471	7.1	7.1	0.0	0.0	LOS A	LOS A
	Through	0.424	0.471	0.1	0.1	0.0	0.0	LOS A	LOS A
	U-Turn	0.097	0.170	217.8	306.0	1.2	2.1	LOS F	LOS F
PM Peak									
Springvale Rd (South)	Through	0.449	0.496	0.1	0.1	0.0	0.0	LOS A	LOS A
	Right	0.550	0.919	27.8	70.2	12.6	32.4	LOS D	LOS F
	U-Turn	0.550	0.919	40.5	91.5	12.6	32.4	LOS E	LOS F
Husband Rd (East)	Left	0.224	0.331	14.5	17.2	6.1	10.2	LOS B	LOS C
Springvale Rd (North)	Left	0.433	0.480	7.1	7.1	0.0	0.0	LOS A	LOS A
	Through	0.433	0.480	0.1	0.1	0.0	0.0	LOS A	LOS A
	U-Turn	0.297	0.664	409.1	948.8	4.0	9.4	LOS F	LOS F
Saturday Peak									
Springvale Rd (South)	Through	0.392	0.433	0.1	0.1	0.0	0.0	LOS A	LOS A
	Right	0.437	0.762	24.9	43.4	8.6	17.5	LOS C	LOS E
	U-Turn	0.437	0.762	27.5	47.7	8.6	17.5	LOS D	LOS E
Husband Rd (East)	Left	0.209	0.324	13.4	15.6	5.6	10.3	LOS B	LOS C
Springvale Rd (North)	Left	0.403	0.448	7.0	7.1	0.0	0.0	LOS A	LOS A
	Through	0.403	0.448	0.1	0.1	0.0	0.0	LOS A	LOS A
	U-Turn	0.137	0.234	300.2	313.8	1.6	3.1	LOS F	LOS F

Option B results in higher vehicle queues and delays for right and U-turning movements when compared to Option A above. Delays range between 24.4 and 70.1 seconds for right-turning movements from the southern approach. The Husband Road approach is expected to operate under good conditions across the peak periods.

Table 20 Springvale Road / Husband Road – Future Conditions (Option C)

Approach	Movement	DoS		Avg. Delay (sec)		Queue (m)		Level of Service	
		Existing	Future	Existing	Future	Existing	Future	Existing	Future
AM Peak									
Springvale Rd (South)	Through	0.371	0.410	0.1	0.1	0.0	0.0	LOS A	LOS A
	Right	0.194	0.350	18.4	24.8	3.6	6.7	LOS C	LOS C
	U-Turn	0.194	0.350	20.2	26.8	3.6	6.7	LOS C	LOS D
Husband Rd (East)	Left	0.129	0.197	14.1	15.6	3.3	5.1	LOS B	LOS C
Springvale Rd (North)	Left	0.424	0.472	7.1	7.1	0.0	0.0	LOS A	LOS A
	Through	0.424	0.472	0.1	0.1	0.0	0.0	LOS A	LOS A
	U-Turn	0.097	0.170	217.8	306.0	1.2	2.1	LOS F	LOS F
PM Peak									
Springvale Rd (South)	Through	0.449	0.641	0.1	1.5	0.0	46.9	LOS A	LOS A
	Right	0.550	1.039	27.8	119.4	12.6	70.2	LOS D	LOS F
	U-Turn	0.550	1.039	40.5	142.1	12.6	70.2	LOS E	LOS F
Husband Rd (East)	Left	0.224	0.366	14.5	17.4	6.1	11.8	LOS B	LOS C
Springvale Rd (North)	Left	0.433	0.483	7.1	7.1	0.0	0.0	LOS A	LOS A
	Through	0.433	0.483	0.1	0.1	0.0	0.0	LOS A	LOS A
	U-Turn	0.297	0.995	409.1	1328.5	4.0	13.0	LOS F	LOS F
Saturday Peak									
Springvale Rd (South)	Through	0.392	0.433	0.1	0.1	0.0	0.0	LOS A	LOS A
	Right	0.437	0.812	24.9	48.0	8.6	20.0	LOS C	LOS E
	U-Turn	0.437	0.812	27.5	52.6	8.6	20.0	LOS D	LOS F
Husband Rd (East)	Left	0.209	0.343	13.4	15.7	5.6	11.2	LOS B	LOS C
Springvale Rd (North)	Left	0.403	0.450	7.0	7.1	0.0	0.0	LOS A	LOS A
	Through	0.403	0.450	0.1	0.1	0.0	0.0	LOS A	LOS A
	U-Turn	0.137	0.234	300.2	313.8	1.6	3.1	LOS F	LOS F

As shown above, the intersection generally operates under fair conditions based on the traffic generation of Option C. Right and U-turning movements from the southern approach experience delays of approximately 2 minutes during the weekday PM peak, and less than 1 minute during the weekend peak.

The Husband Road approach is expected to operate under good conditions across all peak periods.

Summarising the above, whilst under all scenarios, the intersection of Husband Road and Springvale Road is expected to operate within capacity, delays for turning vehicles is expected to increase, and in some cases, exceed 2 minutes. At delays of this magnitude, drivers may take additional risks, accepting lower than typical gaps, or turning into the kerbside lane of Springvale Road whilst cars occupy the other lanes. This has the potential to cause accidents, and reduces the intersection safety.

It is noted that the increased delay is also partially as a result of the adopted traffic volume growth, although even without the added growth in Springvale Road, delays are expected to increase to over 1 minute for some movements.

Therefore, whilst upgrades to the Springvale Road/Husband Road intersection are not considered to be required from a capacity perspective, upgrades may be considered to improve intersection safety, particularly for Option B and Option C (the expected increases in delay for Option A are relatively minor, and primarily as a result of the background traffic growth).

Potential upgrades are likely limited to signalising the intersection of Springvale Road and Husband Road. This may include the potential to reinstate the right turn exit movement from Husband Road into Springvale Road.

Noting the lane configuration of Springvale Road at the Canterbury Road intersection to the north (retaining three through traffic lanes in each direction), it is expected that sufficient capacity will be available on Springvale Road to accommodate a signalised intersection at Husband Road.

Signalisation of the intersection would significantly increase overall intersection delays, given the impact on Springvale Road traffic, which is currently a priority movement, though would improve intersection safety, due to the control of all movements.

Whilst signalisation of the Springvale Road/Husband Road intersection is not strictly required from a capacity perspective for Option B, upgrades may be considered to improve intersection delays and safety. Alternatively, vehicle delays and intersection performance can be monitored post development to assess whether an intersection upgrade is required based on observed traffic conditions.

It is also noted that the primary site access is currently provided via Husband Road, which is a local residential street. Increases in traffic volumes along Husband Road (or in the surrounding street network) as a result of the proposed redevelopment will therefore impact residential amenity for abutting and adjacent dwellings, both east and west of Fraser Place. This is particularly the case for Option C, where traffic volumes are expected to increase by approximately 70% at the end of the 10-year period.

Considering that the overall reserve has direct access to Springvale Road, there is the potential that an alternate and direct access to the reserve and Aqualink could be provided from Springvale Road, either as a complimentary access point, or as the sole access point to the reserve. This would alleviate the majority the residential amenity concerns, though will need to consider the following:

- Impacts on existing vegetation and landscape;
- Potential grading issues through the reserve;
- Intersection design and configuration at Springvale Road; and
- Potential re-distribution of traffic currently accessing from Husband Road east of Fraser Place.

8 CONCLUSIONS

It is proposed to re-develop the existing Aqualink Nunawading facility to provide a range of new and improved sports, health and aquatic services for the community. Three options are being considered for the development, which vary in the anticipated annual visitations to the site. Additionally, it is proposed to construct a new car parking area in the northern portion of the site to service the facility.

Considering the analysis presented above, it is concluded that:

- A total of 8 employee and 43 visitor bicycle parking spaces should be provided on-site for staff and visitor use, to meet the Planning Scheme requirements;
- The car parking survey data indicates that the existing site generates car parking in the order of 3.66 spaces per 10,000 annual visitations;
- Based on the site-specific car parking rate, the proposed supply of 328 car parking spaces is considered appropriate to accommodate the anticipated demands for Option A and Option B;
- The anticipated traffic volumes generated by the development are not expected to have a significant impact on the operation of the Husband Road / Fraser Place intersection; and
- The Springvale Road/Husband Road intersection is expected to operate within capacity for the Option B (the preferred option), though allowance for upgrades may be considered to improve intersection delays and safety.

Ontoit.

Appendix S - Cultural Heritage Report

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Cultural Heritage Due Diligence Assessment

Aqualink Aquatic and Leisure Facility, Nunawading

1 Introduction

This report has been prepared on behalf of Ontoit with regard to the implications of the *Aboriginal Heritage Act 2006* (Vic) (hereafter 'the Act') and *Aboriginal Heritage Regulations 2018* (Vic) (hereafter 'the Regulations') for the construction of a new aquatic and leisure facility in the City of Whitehorse. The proposed facility will be constructed within 6 Fraser Place, Forest Hill (Figure 1) and replace the existing Aqualink Aquatic Centre on site. At the time of this reports preparation the applicant is considering three design options. These options are identified by the applicant as Option 2, Option 3A and Option 5. In this instance, the specific requirement to prepare either a Cultural Heritage Permit (CHP) or a Cultural Heritage Management Plan (CHMP) for works within 6 Fraser Place, Forrest Hill, is considered in detail.

The advice provided in this report is based on:

1. Plans and tender documentation provided to Andrew Long and Associates by Ontoit on 17 January 2024 and 19 July 2024
2. A review of the Aboriginal Cultural Heritage Register and Information System (ACHRIS), which was accessed on 2 April 2024 (access no. 13365)
3. *Aboriginal Heritage Act 2006* (Vic)
4. *Aboriginal Heritage Regulations 2018* (Vic)

2 Findings

Irrespective of which project design option is adopted by the applicant, the proposed works are considered to be a high impact activity under Regulation 46 of the Regulations. However, no areas of cultural heritage sensitivity are located within study area. Therefore, in accordance with Regulation 7 of the Regulations, the mandatory preparation of a CHMP is not required in this instance, irrespective of which project design option is adopted.

Should the applicant wish to manage the risk of affecting Aboriginal cultural heritage during the activity, the applicant may either voluntarily attain a CHP, or voluntarily prepare a CHMP under Section 45 of the Act.

3 Study area

For context, the study area is presented in Figure 1. The study area is an irregular shaped block of land located at the south-eastern corner of Canterbury Road and Springvale Road, Forest Hill (Figure 1). The northern and eastern ends of the project area are defined by lightly wooded parkland, with the Forest Hill Drain also running through the northern section in an east-western orientation. The existing Aqualink aquatic centre, a single storey structure encompassing two swimming pools, a gym, a café, a spa, a sauna and a steam room, exists near the centre of the project area, with access provided from Fraser Place to the south. A sealed carpark also encompasses a large section of the project area to the south of the aquatic centre and east of Fraser Road. A playground and cricket nets occupy the section of the project area to the south-east of the aquatic centre. Finally, a cricket oval, clubroom and associated parking lots occupy the western section of the Forest Hill project area.

Figure 1: Location and extent of the potential Forest Hill Reserve project area, as provided by Ontoit on 17 January 2024

4 Activity description

The applicant is considering three design options (Option 2, Option 3A and Option 5) with relation to the redevelopment of the existing aquatic sports facilities within the study area. Plans of the proposed delivery

options are presented in Appendix 1 (Option 2), Appendix 2 (Option 3A) and Appendix 3 (Option 5). Collectively, the delivery of each of these options will result in the delivery of:

1. a new aquatic centre building of three levels (sports and recreation facility)
2. a new sealed car park to the north
3. a new sealed driveway around the eastern side of the new building
4. a new bus stop on the southwest side of the building

The new aquatics building will include a gym, change rooms, indoor swimming pools of varying dimensions and a café. Options 3A and 5 will also include an Allied Health office space on the ground level, and several additional rooms for an as yet unspecified purpose on level 1 of the new building. Notwithstanding the additional rooms that may be delivered under Options 3A and 5, the primary difference between each of the delivery options (with respect to assessing impacts to Aboriginal cultural heritage) pertains to the footprint of the new aquatic centre building.

The Option 2 building footprint is the smallest, affecting an area of about 5,000 m^2. Option 3A is slightly larger, affecting an area of about 6,300 m^2, and Option 5, which will result in the construction of the biggest building, will affect and area of about 6,900 m^2. It is likely that construction impacts (excavation and digging) will be greatest within the footprint of the new aquatic centre building.

Irrespective of which building option is chosen by the applicant, the area to be affected by the construction of the new aquatic centre, inclusive of the surrounding car parking, driveways, bus stop and landscaping, is anticipated to be about 16,900 m^2. The footprints of the respective new aquatic centre building, with respect to the area considered likely to be affected by the new works, and the study area as a whole, is presented in Figure 2.

Figure 2: The location of the study area, land likely to be impacted by the proposed activity with relation to the new aquatic centre building footprint options

5 When is a CHP required?

Under Section 36(c) of the Act the proponent of an activity that will, or is likely to, harm Aboriginal cultural heritage, may apply for a CHP in order to manage any cultural heritage that may be affected by the respective activity. However, as set out under Section 37(2), a CHP must not be granted for an activity for which a CHMP is required under the Act. Thus, the discussion set out below considers whether the proposed works require the mandatory preparation of a CHMP under the Act.

6 When is a CHMP required?

The circumstance in which a mandatory cultural heritage management plan (CHMP) is required for a proposed activity is set out in Section 46 of the Act. Section 46 of the Act is clear in indicating that there are only five legislative pathways through which a mandatory CHMP can be required. Those pathways are as follows:

a) the regulations require the preparation of a CHMP (s.47);
b) the Minister directs the preparation of a CHMP (s.48); or
c) the CHMP is required if an Environmental Effects Statement must be prepared (s.49)
d) the CHMP is required if an impact management plan or comprehensive impact statement must be prepared (49A); or

e) the findings of a Preliminary Aboriginal Heritage Test determine that an activity requires the preparation of a CHMP, and the Secretary certifies that the findings of the Preliminary Aboriginal Heritage Test are correct.

It is unlikely, in the current instance, that the Minister will require a CHMP to be prepared and similarly an EES, impact management plan or comprehensive impact statement will not be required and, as such, these pathways are not considered relevant for this report. Similarly, the applicant has not pursued the preparation of a Preliminary Aboriginal Heritage Test (PAHT) in this instance.

With regard to Section 46(a), Section 47 of the Act states:

> ***47. Regulations may require plan***
>
> *The regulations may specify the circumstance in which a cultural heritage management plan is required for an activity or class of activity.*

Regulation 7 of the Regulations thus specifies:

> *A cultural heritage management plan is required for an activity if-*
>
> *a) All or part of the activity area for the activity is an area of cultural heritage sensitivity; and*
> *b) All or part of the activity is a high impact activity.*

The implications of Regulation 7 are considered in further detail below.

7 Does the activity area include an area of cultural heritage sensitivity?

For the purpose of this report, and as defined in Regulation 5 of the Regulations, an activity area means the area or areas to be used or developed for an activity. For the purpose of this report, the study area, as defined by Ontoit (see Figure 1) is considered to be the activity area with respect to the application of the Regulations. The following discussion considers whether the defined activity area includes an area of cultural heritage sensitivity.

Division 3 of the Regulations defines areas of cultural heritage sensitivity for the purpose of establishing whether a CHMP is required. In order to establish whether the activity area includes an area of cultural heritage sensitivity, a review of the Aboriginal Cultural Heritage Register and Information System (ACHRIS)[1] was undertaken on 2 April 2024 (Access No. 13365). In this instance, the activity area does not include an area of cultural heritage sensitivity as defined in Division 3 of the Regulations. Furthermore, there are no areas of cultural heritage sensitivity or previously registered Aboriginal cultural heritage places within 200 m of the activity area (Figure 3).

For context, the closest area of cultural heritage sensitivity to the study area is situated about 1.4 km to the northwest of the study area. This area of cultural heritage sensitivity relates to the discovery of a single Aboriginal stone artefact during the preparation of CHMP 12168. The artefact was subsequently registered as VAHR 7922-1292. There is no risk that the proposed activity will affect VAHR 7922-1292.

In addition to the above, it should be noted that the activity area has not been subject to any prior archaeological assessments for the purpose of Aboriginal cultural heritage.

[1] https://achris.vic.gov.au/#/dashboard - accessed 2 April 2024.

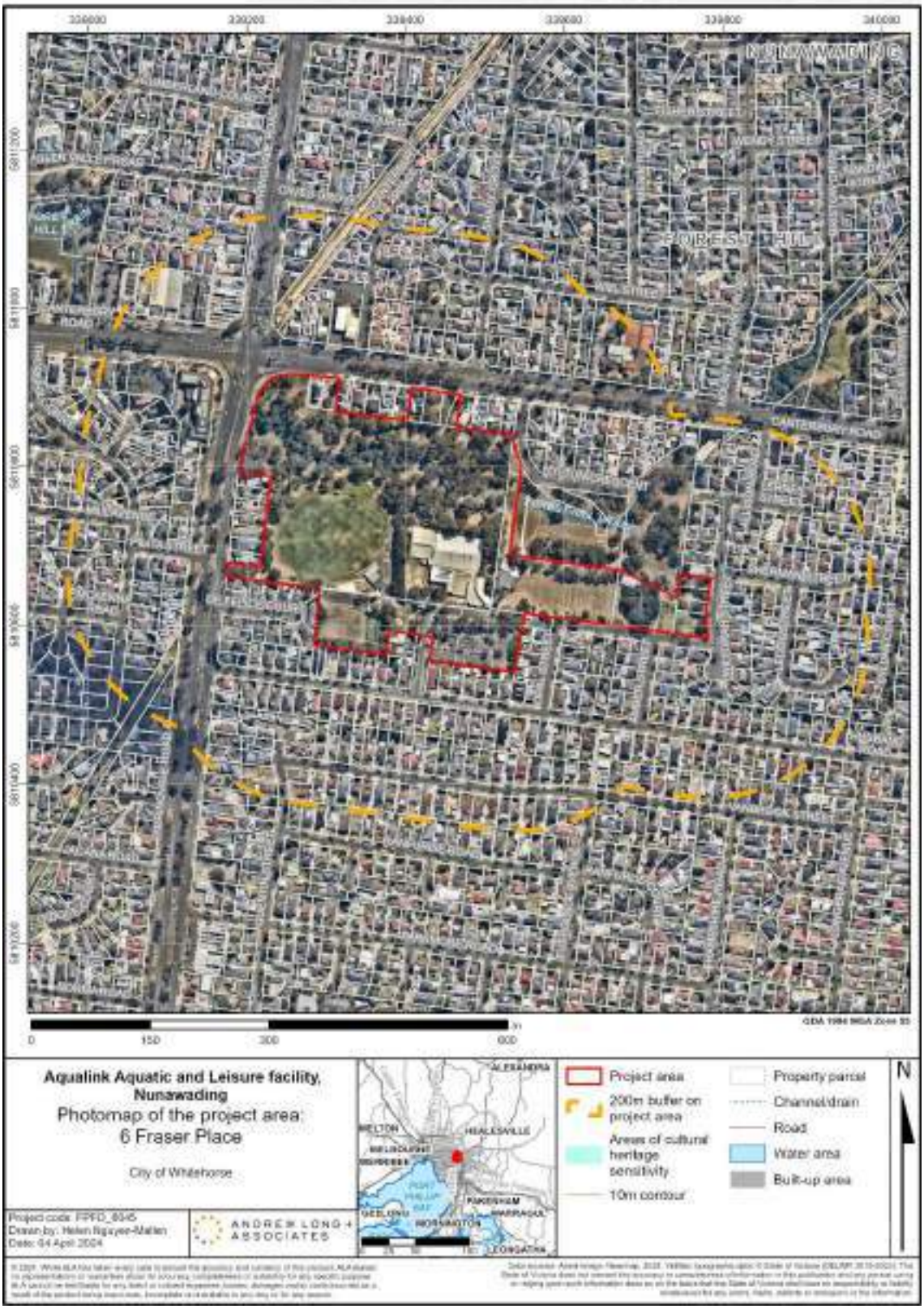


Figure 3: Photomap of the potential 6 Fraser Place project area, showing the absence of areas of cultural heritage sensitivity or previously registered VAHR places within 200 m

8 Is the activity a high impact activity?

High impact activities are defined in Division 5 of the Regulations. As set out under Section 4 of this report, the proposed activity will comprise the construction of a new aquatic building with surrounding car parking, driveway, bus stop and landscaping. The applicant is currently considering three aquatic building delivery options. Irrespective of which particular delivery option is considered, it is possible to state that the activity will include use of the land, as defined in the Victorian Planning Provisions (Clause 73.03) for:

1. Construction of a minor sports and recreation facility;
2. Construction of a car park
3. Construction of a road (driveway)

It is also possible that provision for the Allied Health office (delivery Option 3A and Option 5), and café (each delivery option), may constitute use of the land as a retail premises.

On the basis of the intended works the regulations which merit further consideration are presented below.

Regulation 46 (buildings and works for specified uses) of the Regulations states:

1) The construction of a building or the construction or carrying out of works on land is a high impact activity if the construction or carrying out of the works-

a) Would result in significant ground disturbance; and

b) Is for, or associated, with the use of the land for any one or more of the following purposes-

…

iii. a car park;

xv. a minor sports and recreation facility;

xxiii. a retail premises

2) The terms used in subregulation (1)(b) have the same meanings as they have in the VPP

Regulation 47 (constructing specified items of infrastructure) also states that:

1) The construction of any one or more of the following is a high impact activity if the construction would result in significant ground disturbance –

f. A roadway with a length exceeding 100 metres;

With regard to Regulation 46, it is evident that, at a minimum, the activity will result in the construction of a new car park and a minor sports and recreation facility, and is therefore a high impact activity for the purpose of Regulation 7. It is also noted that should some of the anticipated uses of the building (such as consideration for the inclusion of a cafe) are likely further the land uses of the proposed activity to include retail premises. This is also considered to be a high impact activity for the purpose of Regulation 46.

Finally, and with regard to Regulation 47, the construction of the new driveway (roadway) may also be a high impact activity, albeit the length of the new driveway is currently estimated to be only about 95 m.

On the basis of the prior discussion, it has been established that the activity, which at a minimum constitutes the construction of a new minor sports and recreation facility and car park, is, in accordance with Regulation 46, a high impact activity for the purpose of Regulation 7. This conclusion is applicable to each of the design options being contemplated by the applicant.

9 Is a CHMP required?

On the basis of the criteria and definitions outlined above, a mandatory CHMP is not presently required for the activity. While the proposed activity is considered to be a high impact activity under regulation 46 of the Regulations, no areas of cultural heritage sensitivity, as defined under Division 3 pf the Regulations, intersect with the study area. As such, the study area does not include an area of cultural heritage sensitivity for the purpose of Regulation 7, and accordingly, the preparation of a mandatory CHMP is not required in this instance by the Regulations. This finding is applicable to each of the three design options currently being contemplated by the applicant.

10 Disclaimer

This assessment does not constitute a CHMP as defined in Division 1 of the *Aboriginal Heritage Act 2006* (Vic). It should also be noted that this assessment does not imply that Aboriginal cultural heritage places are not present elsewhere within the study area or are not at risk of impact from the proposed activity.

Although the proponent of the proposed works is not required to prepare a mandatory CHMP under Section 46 of the Act, a CHMP can be voluntarily prepared for the proposed activity under Section 45 of the Act should the proponent of the proposed activity wish to manage the risk of impacting Aboriginal cultural heritage that may be present within the activity area.

In addition to the above, the advice provided in this report is based on a review of statutory registers at the indicated times. The content of these registers may change at any time. In order to ensure that the works are compliant with the requirements of the *Aboriginal Heritage Act 2006 (Vic)*, we recommend that the proponent of intended works review the relevant statutory registers prior to commencing works to ensure that the advice provided above is consistent with the content of the respective registers at the commencement of works.

Further to the above, the advice provided in this report assumes that the activity area for the proposed works by the sponsor includes all the land required to undertake the activity, as per the definitions set out in Regulation 5 of the Regulations.

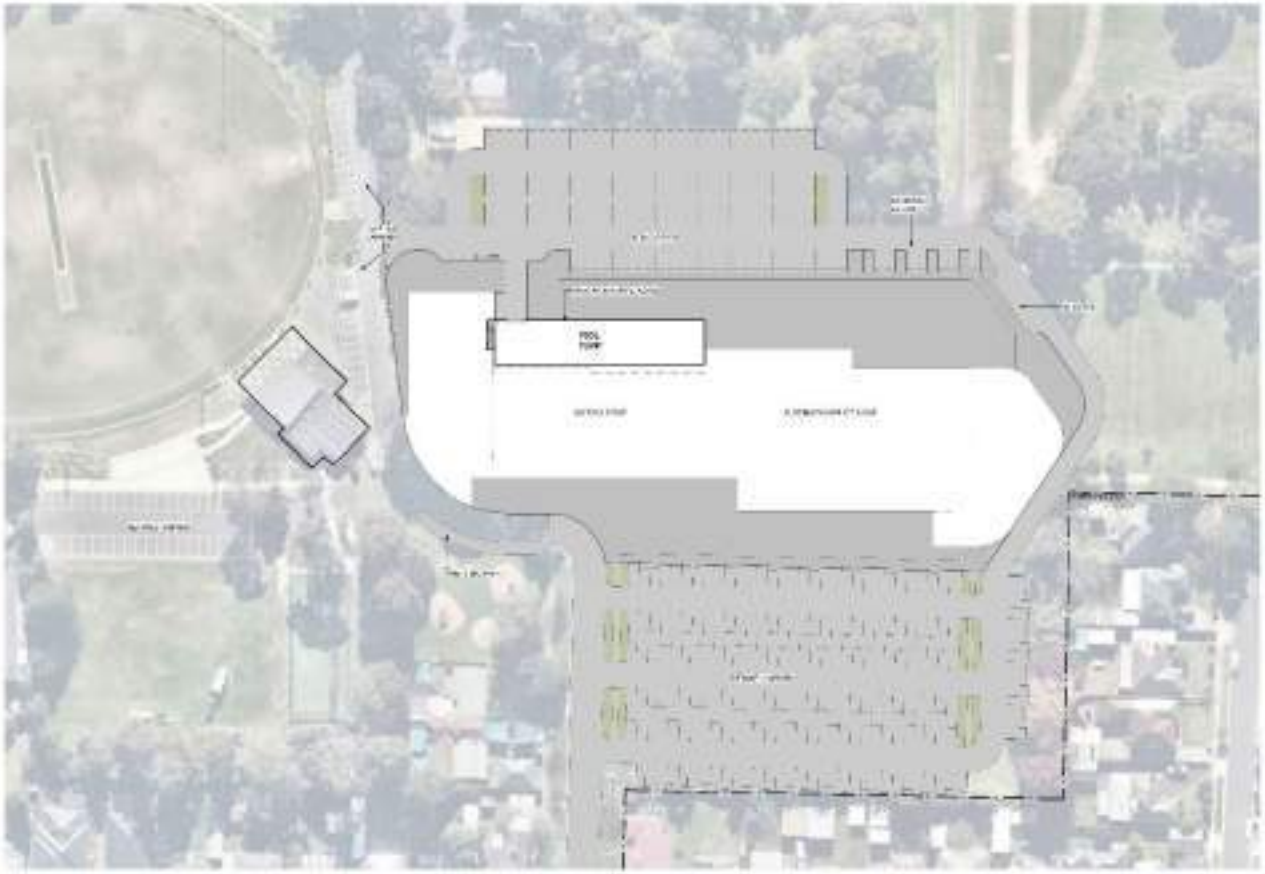
11 Legislation

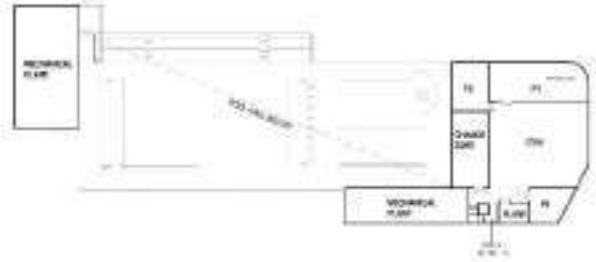
Aboriginal Heritage Act 2006 (Vic)

Aboriginal Heritage Regulations 2018 (Vic)

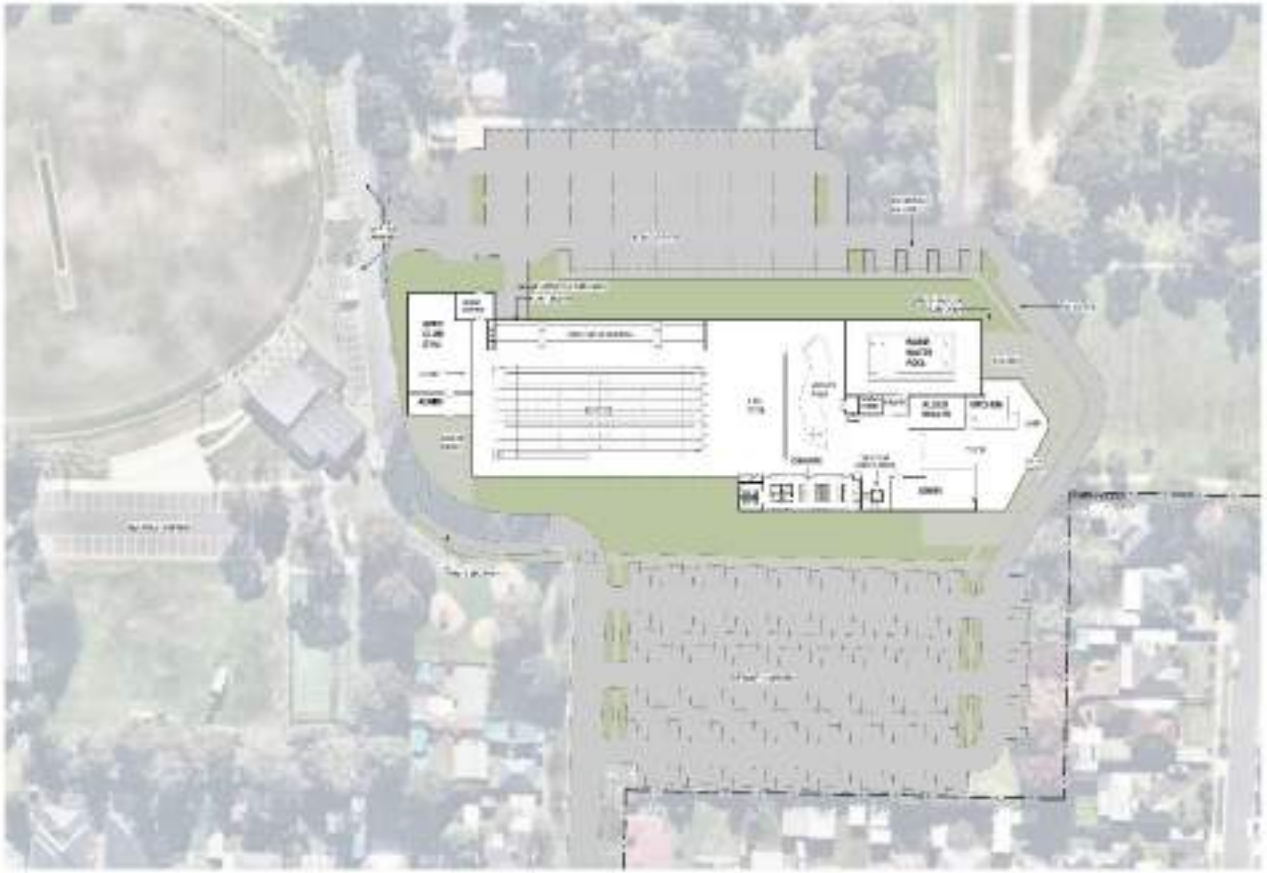
Appendix 1: Design Option 2

ANDREW LONG + ASSOCIATES





Appendix 2: Design Option 3A



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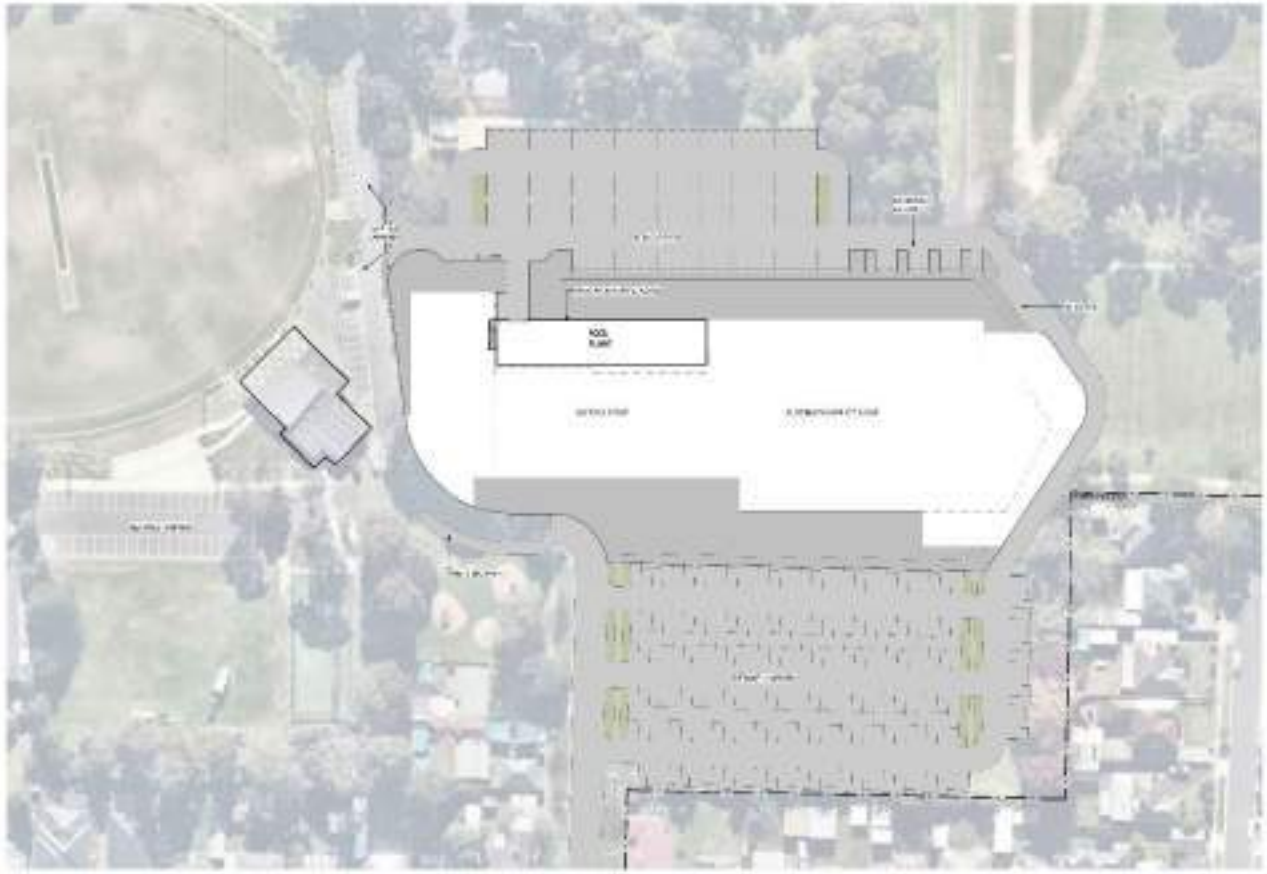

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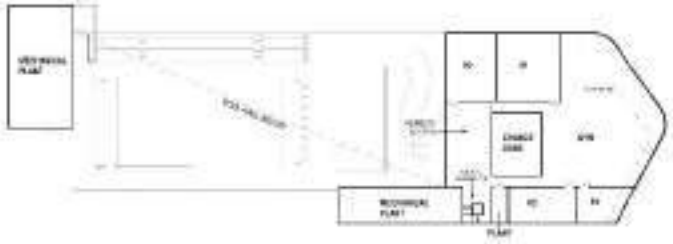
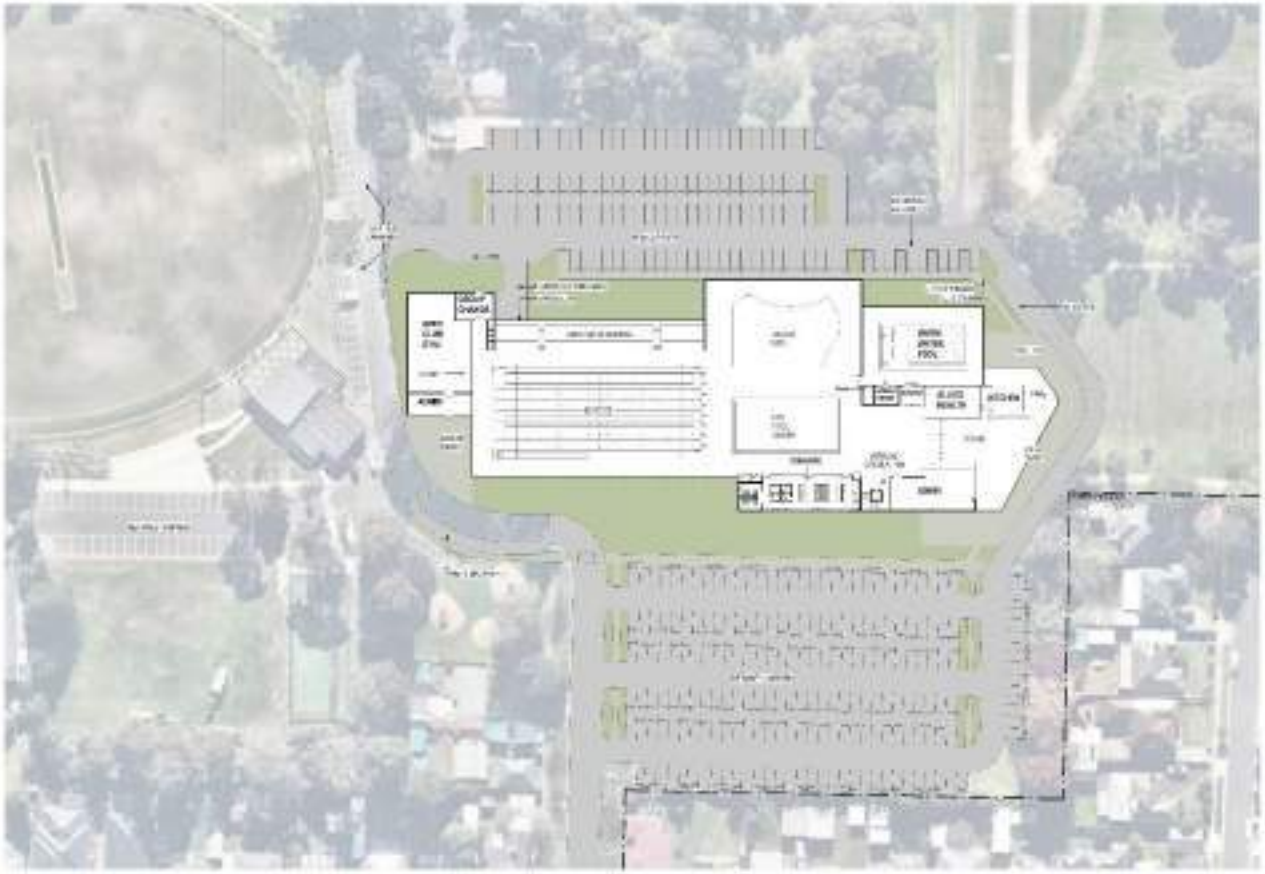


Appendix 4: Design Option 5

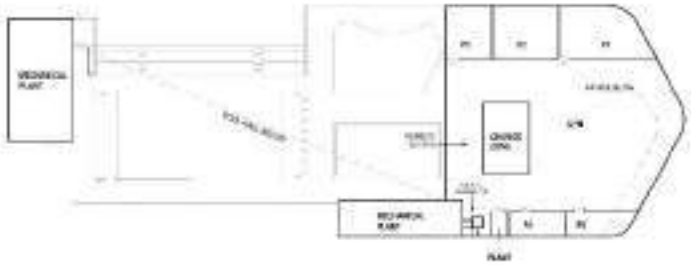
ANDREW LONG + ASSOCIATES



ANDREW LONG + ASSOCIATES

CO.OP

ANDREW LONG + ASSOCIATES



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WHITEHORSE CITY COUNCIL

Aqualink Nunawading Business Case Redevelopment Options Summary

Council Report 02 February 2026

Attachment 2

10.1 – ATTACHMENT 2. Aqualink Nunawading Redevelopment Options

WHITEHORSE CITY COUNCIL

Business Case Options

Option 1

Base Case

Business as usual/do nothing. Operate the facility until the point of closure.

Option 2

Like-for-like

A like for like option that replaces the facility with a contemporary, compliant, inclusive and accessible facility.

Option 3

Contemporary with a stronger social dimension

A new facility that offers expanded flexible social and program areas and amenity that encourages a range of activities. Also supports activities of both local clubs.

Option 4

Contemporary with a stronger aquatic and health focus

A new facility that offers multiple wet and dry facilities that cater to health and fitness activities and supports local sport club training alongside social spaces.

Option 5

Aspirational

A facility with leading edge wet and dry facilities alongside expansive, flexible social and program areas and amenity. Ability to host competitions for up to 500 visitors and offers regional focus to health and aquatic activities.

Three Project Options plus the Base Case have been modelled

Option 1

Base Case

Option 2

Like-for-like

Option 3A

Contemporary Hybrid

Option 5

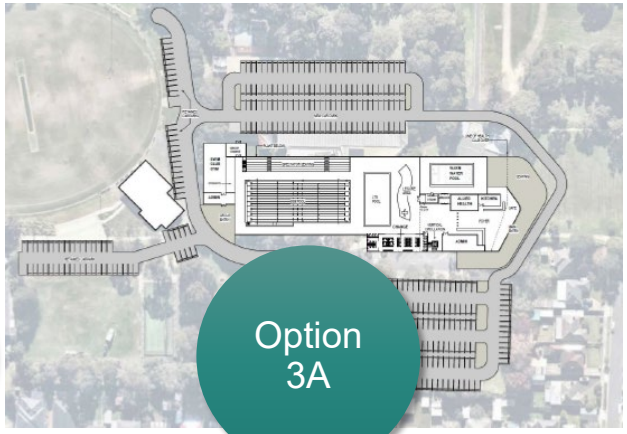
Aspirational

10.1 – ATTACHMENT 2. Aqualink Nunawading Redevelopment Options

WHITEHORSE CITY COUNCIL

Option Costing

All costs are in 2024 costs



Option 1

Base Case

approx. $16M – Demolish at end of life and return to parkland

Option 2

Like-for-like

$80,135,539

- 50m 8 lane indoor pool
- 525sqm Learn-to-swim pool
- 500sqm Leisure water + toddler pool
- No Warm Water Pool
- 405sqm gym
- 3 x group fitness rooms
- Swim club facilities
- Café

Option 3A

Contemporary Hybrid

$106,796,536

- 50m 8 lane indoor pool
- 800sqm Learn-to-swim pool
- 250sqm Leisure water + toddler pool
- 750sqm Warm Water Pool
- 900sqm gym
- 4 x group fitness rooms
- Swim club facilities
- Café
- Allied Health spaces

Option 5

Aspirational

$129,828,705

- 50m 8 lane indoor pool
- 900sqm Learn-to-swim pool
- 1,200 Leisure water + toddler pool
- 750sqm Warm Water Pool
- 1,400sqm gym
- 5 x Group Fitness rooms
- Swim club facilities
- Café
- Allied Health spaces

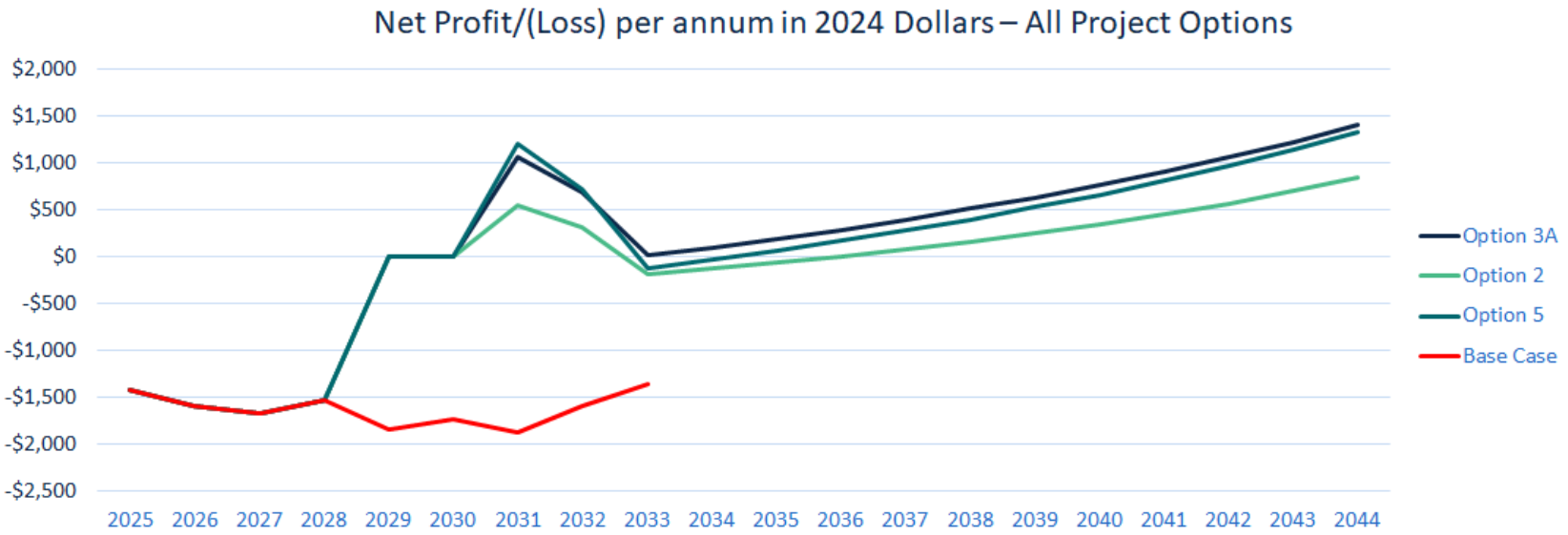
- For further details refer to the full Business Case attached as Appendix 1

10.1 – ATTACHMENT 2. Aqualink Nunawading Redevelopment Options

WHITEHORSE CITY COUNCIL

Annual Summary of Operating Phase for all Options

- A graphical summary of the annual financial forecast for the Options is set-out:



10.1 – ATTACHMENT 2. Aqualink Nunawading Redevelopment Options

WHITEHORSE CITY COUNCIL

High-Level Summary–Operating Financials All Project Options

The financial modelling demonstrates that the Option 3A (Contemporary Hybrid) is forecast to perform better financially than Option 2 (Like-for-Like) or Option 5 (Aspirational)

$0.16m

OPTION 2

Operational New Facility Average Net Profit pa (2031 – 2044)

The lower forecast visitation and revenue outweighs any reduction in operational, R&M and asset lifecycle costs from a smaller building.

$0.40m

OPTION 3A

Operational New Facility Average Net Profit pa (2031 – 2044)

The recommended business case option is forecast to deliver the best financial return WCC.

$0.35m

OPTION 5

Operational New Facility Average Net Profit pa (2031 – 2044)

The forecast increase in revenue does not cover the increase in operational, R&M and asset lifecycle costs from a larger building.

All numbers above and throughout this presentation expressed in 2024 Dollars, unless otherwise specified.

10.2 Leisure Strategy - Optimised In-house Management Model for Aqualinks

Attachment 1 Leisure Services Optimisation Report

Attachment 2 Consultant Report Leisure Optimisation

10.2 – ATTACHMENT 1. Leisure Services Optimisation Report

LEISURE SERVICES OPTMISATION REPORT FEBRUARY 2026

Leisure and Recreation Services
WHITEHORSE CITY COUNCIL

10.2 – ATTACHMENT 1. Leisure Services Optimisation Report

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1. BACKGROUND

Current Management Model and Purpose of the Review

In 2022, an Aquatics Service Review was undertaken to assess Council's role in delivering aquatic services, the investment required to maintain ageing assets, and the most effective operating model. The review considered community outcomes, financial sustainability, and operational feasibility. It identified pressures including high labour costs under the 2022 Enterprise Agreement, sub-optimal returns from learn-to-swim programs, limited operational agility, and fragmented service delivery impacting customer experience.

Following the review, in February 2023 Council resolved to develop a tender for a third-party provider to manage a package of aquatic, leisure, and recreation facilities. By August 2025, recognising improvements in financial performance and further operational opportunities, Council resolved to discontinue the tender process and commit to an optimised in-house management model for the Aqualink facilities, and that Councillors would be further briefed on matters that address operational and service delivery findings from the Aquatic Service Review and subsequent industry expert observations to support the delivery of an optimised in-house management model and consider recommendations for enhancements as part of the 2026/27 Annual Budget.

Consultant Engagement and Methodology

To support the assessment of optimisation, Warren Green Consulting (WGC) was engaged to benchmark operational performance against industry standards and identify opportunities to improve service delivery. The review included:

- Analysis of financial and attendance data, fees and charges, operating hours, staffing structures, and catchment demographics
- Internal consultation with the Project Control Group, project team, and Aqualink leadership
- Benchmarking against other metropolitan aquatic and leisure facilities
- Documentation of findings and recommendations

Working Groups and Report Development

Key Aqualink leaders and organisational subject matter experts (SMEs) participated in working groups to review the WGC findings, provide additional analysis, and develop actions addressing identified gaps or shortfalls. The working groups encompassed:

- Strategy, planning and reporting
- Leadership and capability building
- Community, access and utilisation
- Marketing and communications

- Facility maintenance
- Asset management and equipment renewal
- Facility cleaning

The benefits of incorporating internal subject matter insights into the consultant findings included the deep organisational knowledge, more practical and integrated focus and the stronger ownership and accountability that they brought. Internal insights also helped to balance 'one size fits all' approaches that consultants may utilise for multiple organisations.

In some instances, the working groups identified areas of opportunity that were able to be addressed immediately.

Alignment and Purpose of this Report

This report draws on the WGC findings, organisational insights, and industry research to provide a framework for optimising the in-house management of Council's sport, recreation and leisure facilities, while also ensuring alignment with Council's Integrated Plan and relevant strategies. It establishes the rationale for proposed investment, operational enhancements, and improved service delivery, providing a foundation for consideration of associated budget allocations in 2026/27.

While informed by the work undertaken by WGC, this report reflects a broader strategic approach, focusing on optimisation and alignment with Council objectives, rather than responding to each consultant recommendation individually.

2. CASE FOR CHANGE – OPTIMISING COUNCIL'S IN-HOUSE MANAGEMENT MODEL

Optimisation, in the context of this report, refers to the deliberate strengthening of Council's in-house management of sport, recreation and leisure facilities to achieve outcomes that are consistent with industry standards, community expectations and the performance that would reasonably have been expected if some of the facilities transitioned to external management.

Optimisation therefore focuses on closing identified gaps, addressing risks, and putting in place the structures, processes and investment required to deliver high-performing, contemporary facility management over the long term.

Current Performance

Whitehorse's leisure facilities continue to perform strongly despite the challenges identified throughout this report, with high membership and visitation growth achieved across all sites. Recent performance highlights include:

- An increase of 2,350 members since July 2023
- Membership revenue growth of 28%, equating to approximately $1.4 million
- Customer satisfaction averaging 82% across both Aqualink facilities

Notwithstanding this strong performance, Council has assessed current delivery against industry benchmarks and the service standards that would typically apply under an external management model. This comparison has identified several gaps that inform the optimisation opportunities outlined in this report.

Importantly, these gaps do not reflect the performance or commitment of current staff. Rather, they highlight broader structural and operational constraints inherent in managing a complex, multi-site leisure portfolio within a Council-operated environment and reinforce the need for the targeted improvements proposed through this Optimisation Report.

Drivers for Change

Several factors make the optimisation of in-house management timely:

Population growth and increased demand: Whitehorse's population grew by 11.6% between 2014 and 2024, while facility memberships increased by 25%, placing greater demand on existing assets.

Community expectations: Members and casual users seek contemporary, flexible, and accessible facilities that support diverse programs and activities.

Industry evolution: Emerging trends, such as tailored health and fitness programs, technology-enabled participation, and functional and group training, require responsive and agile management.

Social and economic value: Aquatic and leisure facilities generate a social return on investment of $5.46 for every $1 spent (Royal Life Saving Australia 2025), reflecting health, social, and economic benefits. It is essential that Council maximises this return through effective, responsive, and strategically aligned in-house management, ensuring investments in facilities deliver optimal benefit to the community.

Without targeted optimisation, opportunities to enhance community engagement, grow participation, and improve operational efficiency may be missed.

Why Change is Required

Council's sport, recreation and leisure facilities play a critical role in supporting community health, wellbeing, social connection and inclusion. They are also significant public assets that require substantial and ongoing investment. As such, it is essential that their operation delivers strong community benefit, is financially

responsible, and aligns with industry standards for performance, presentation and customer experience.

While Council's in-house management model has delivered positive outcomes, recent assessment and benchmarking indicate that there are material gaps between current performance and contemporary industry practice, particularly when compared with the standards typically delivered by specialist external operators. These gaps are not the result of individual performance issues, but rather reflect investment, structural, policy and system constraints that limit agility, accountability and continuous improvement.

Optimisation is therefore not about correcting failure, it is about lifting performance, strengthening governance and ensuring Council realises the full value of its investment in sport, recreation and leisure facilities.

Evidence-Based Assessment of Current Performance

As part of Council's commitment to evidence-based decision making, Warren Green Consulting (WGC) was engaged to benchmark the operational and service delivery performance of Council's leisure facilities against industry standards and comparable metropolitan facilities.

This assessment, together with internal analysis and working group input, identified areas where performance, systems or outcomes fall short of what would typically be expected under an externally managed model. These gaps relate to:

- Strategic planning and performance reporting
- Operational agility and decision-making
- Financial optimisation and commercial performance
- Customer experience and facility presentation
- Asset lifecycle planning and maintenance
- Workforce capability, structure and accountability

Importantly, these findings were consistent with insights from Council officers and organisational subject matter experts who experience these constraints in practice. Collectively, they demonstrate that without targeted optimisation, Council's in-house model risks under-performing relative to both community expectations and industry benchmarks.

Optimisation as a Value Proposition

Council's February 2023 resolution to explore external management was grounded in the need to improve financial performance, operational efficiency and customer experience. While the tender process was later discontinued, the underlying expectations remain valid.

Optimisation provides a pathway to achieve these outcomes within an in-house model, provided there is a clear strategic framework, strengthened accountability and appropriate investment.

This aligns with the principles outlined in Royal Life Saving Australia's 'State of Australian Aquatic Facilities 2025' report which emphasises the importance of:

- Protecting and maximising returns on Council investment
- Ensuring services are financially sustainable over the long term
- Reinvesting revenue to deliver improved outcomes for the community

Given the scale of Council's investment in leisure facilities, it is essential that returns both financial and community, are maximised through deliberate, disciplined and transparent management.

A Structured Response to Identified Gaps

The Optimisation Report presents actions based on the opportunities identified through consultant benchmarking, working groups and officer analysis. The strategic outcomes, as outlined in Section 3 of this report, did not originate from the consultant's report but were developed to encourage focused exploration by working groups and to provide a clear structure for analysis and action.

The strategic outcome areas reflect the key areas where change is required to lift performance and deliver an industry-leading in-house model, and they form the foundation for the actions set out later in this report.

These are introduced solely to demonstrate that the proposed actions are:

- *Targeted,* responding directly to identified gaps
- *Evidence-based*, informed by benchmarking and operational experience
- *Strategic,* rather than ad hoc or reactive

Why Action Is Required Now

Maintaining the status quo would limit Council's ability to:

- Improve customer experience and participation
- Respond quickly to changing community needs
- Optimise financial performance and manage cost pressures
- Protect the long-term condition and value of assets
- Clearly demonstrate accountability for performance and outcomes

By contrast, implementing a structured optimisation program creates an opportunity to embed stronger governance, clearer accountability and more contemporary operating practices — ensuring Council's in-house model is robust, transparent and sustainable.

The actions outlined in this report represent a deliberate and measured response to the gaps identified. They are designed to strengthen Council's management of leisure facilities while maintaining alignment with Council plans, financial strategies and community expectations.

Implementation Context

The actions described throughout this report are presented as a coordinated and integrated program of work, rather than as standalone items requiring individual approval. Some actions can be implemented administratively or through Executive Leadership Team endorsement, while others will be progressed following the endorsement of this Report.

3. STRATEGIC OUTCOMES AND ACCOUNTABILITY FRAMEWORK

Following Council's decision to adopt an optimised in-house management model, a clear set of strategic outcomes has been developed to guide actions, prioritise investment and strengthen accountability.

These outcomes provide a practical bridge between the case for change and the actions outlined later in this report. They describe what Optimisation is intended to achieve for the community, Council and the organisation, rather than prescribing how individual actions must be delivered.

Importantly, the outcomes are not standalone aspirations. Each outcome is supported by specific actions and a strengthened performance framework to ensure progress can be monitored and reported transparently.

Measures of success outlined below are intended to reflect the progression towards each Strategic Outcome, however, will be further developed in response to the Active Whitehorse Strategy once endorsed.

Strategic Outcomes

Outcome 1: Strong Customer and Community Outcomes

Council's sport, recreation and leisure facilities maximise participation, utilisation and community benefit, delivering welcoming, inclusive and high-quality experiences across all facilities, including Aqualink Box Hill and Nunawading, Sportlink and Council's leased and licensed sport, recreation and leisure assets.

This outcome recognises that these facilities are essential community infrastructure, supporting physical health, mental wellbeing, social connection and inclusion. Optimisation focuses on improving how facilities are experienced day-to-day, particularly during peak periods and for diverse user groups.

Measures of success include:

- Maintain overall customer satisfaction ≥82% (bi-annual survey)
- Maintain a Net Promoter Score (NPS) ≥42 (bi-annual survey)
- Facility utilisation and visitation growth: 1,800,000 for combined Aqualink sites
- Facility utilisation and visitation growth: 2,300,000 including Aqualinks, Sportlink and Nunawading Community Hub
- Maintain "Staff Services" customer satisfaction measure ≥ 88%
- Aqualink membership attrition maintained below 4% each month
- Total followers across leisure social channels increased by 10% in 2026/27
- Frequency of brand and marketing exposure on alternate social media channels, including WeChat and RedNote, increased by 200%
- Participation by priority and underrepresented groups: CALD community participation at our leisure facilities over 17%

Outcome 2: A Capable, Supported and Future-Focused Workforce

Council invests in leadership capability, workforce skills and organisational structure to support strong service delivery, innovation and continuous improvement.

A capable and supported workforce is central to delivering high-quality facilities and services. Strengthening leadership depth, clarity of roles and professional development enables teams to operate more confidently, respond to change and contribute to innovation across the service.

This outcome also supports succession planning and organisational resilience, ensuring knowledge and capability are retained over time for the benefit of the community.

Measures of success include:

- Staff engagement and retention:
    - ≥90% annual retention of Active Whitehorse Facilities Leadership Team
- Leadership capability metrics and internal progression
    - ≥80% of leaders participate in a structured leadership or capability program annually.
    - Maintain annual budget training hours allocation per FTE per year
    - Succession planning: ≥50% of direct service role vacancies filled internally

Outcome 3: Agility and Innovation as Enablers

Council's facilities operate with the agility and innovation required to respond to community needs, adopt contemporary practices and continuously improve performance.

Agility and innovation are not outcomes in isolation, but enablers across all outcomes. This includes the ability to adjust programs, action procurement and operating models efficiently, informed by data, community feedback and industry trends.

Innovation is broader than technology and includes new programming models, partnerships, service design, pricing approaches and more flexible ways of working that improve both customer experience and financial performance.

Measures of success include:

- Time taken to implement program or service changes: 20% improvement on historical projects and actions
- Introduction of new or refreshed programs aligned to community need
- Improved commercial performance of key service areas: Individual area KPIs to be set upon finalisation of Budget
- Uptake of industry-leading practices and partnerships: KPI to be determined once the Outreach Program is established
- Continuous improvement participation: Minimum two projects completed per annum

Outcome 4: Well-Maintained, Safe and Fit-for-Purpose Assets

Council's leisure facilities are maintained and renewed in a way that protects asset value, supports safety and accessibility, and delivers facilities the community is proud to use.

This outcome focuses on proactive asset management, planned renewal and improved facility presentation, recognising the direct link between asset condition, customer experience and long-term financial sustainability.

It also acknowledges the need for appropriate short- and medium-term investment at Aqualink Nunawading while longer-term redevelopment options are considered.

Measures of success may include:

- Reduction in reactive maintenance and unplanned downtime:
    - % of downtime less than 10% of available operating time
- Improved facility presentation and condition audit outcomes:
    - Facility maintenance rating of ≥80%
    - Cleanliness and presentation rating ≥77%
- Alignment between asset condition, funding and renewal planning: ≥95% adherence to asset SLAs agreed internally

Outcome 5: Financial Sustainability, Performance and Accountability

Council's in-house management model delivers improved financial performance, transparent reporting and clear accountability for community, operational and commercial outcomes.

This outcome ensures that optimisation is underpinned by a clear strategy, defined performance expectations and regular reporting. Financial sustainability is treated as a core enabler of community benefit, ensuring facilities can be maintained, renewed and improved over time.

Stronger accountability provides confidence to Council that performance is being actively managed and that investment decisions are informed by evidence.

Measures of success include:

- Net operating result:
    - Achieve budget for Active Whitehorse Facilities
    - Achieve cost neutral outcome for Aqualinks (therefore $0 subsidy)
- Utilisation: Number of visits as a proportion of WCC population ≥9.24
- Revenue growth across key programs and memberships:
    - 16% increase in membership revenue for 26/27 budget
    - 9% increase in revenue overall for 26/27 budget

Accountability and Reporting Framework

To support these outcomes, optimisation includes the introduction of a strengthened accountability and reporting framework. This framework will consolidate performance reporting across community, operational and financial domains, providing a clearer line of sight between actions, outcomes and results.

As set out in Action 5.1, this approach ensures that optimisation is not a one-off exercise, but an ongoing commitment to transparency, performance and continuous improvement.

Link to Actions

The actions outlined in the report are grouped under these strategic outcomes as shown on the following table. This structure ensures that each action clearly contributes to an agreed outcome, supports accountability and allows Council to assess progress holistically, rather than as individual or disconnected initiatives. Many actions support multiple strategic outcomes, and the breadth of such impact is noted.

10.2 – ATTACHMENT 1. Leisure Services Optimisation Report

Alignment of Optimisation Actions to Strategic Outcomes

Strategic Outcomes / Optimisation Actions	Strong Customer and Community Outcomes	A Capable, Supported and Future-Focused Workforce	Agility and Innovation as Enablers	Well-Maintained, Safe and Fit-for-Purpose Assets	Financial Sustainability, Performance and Accountability
1.1 Community Outreach	√		√		√
1.2 Customer Satisfaction, Loyalty and Recommendation Research	√		√	√	√
1.3 Optimise Aqualink operating hours	√		√		√
1.4 Employ daytime cleaners for Aqualink facilities	√			√	√
1.5 Adopt renewal principles for gym equipment	√		√	√	√
1.6 Attendance Monitoring Technology	√		√	√	√
2.1 Enact 'Active Whitehorse' leadership structure	√	√	√		√
2.2 New Leisure Facilities team uniform		√			
3.1 Broaden scope of Leisure Facilities Team	√	√	√		√
3.2 Enhance team agility and empowerment	√	√	√		√
3.3 Increase marketing resourcing for Leisure Facilities	√	√	√		√
3.4 Shared Services and regional collaboration	√	√	√		√
4.1 Service Level Agreements for Leisure Facilities Maintenance	√			√	√
4.2 10-Year Capital and Asset Planning for Leisure Facilities	√		√	√	√
4.3 Immediate Capital Investment for Aqualink Facilities	√			√	√
5.1 Clear performance monitoring, reporting and accountability	√	√	√		√
5.2 Develop 'Active Whitehorse' Strategy	√	√	√		√
5.3 Membership and pricing strategy	√		√		√

4. INTRODUCING ACTIVE WHITEHORSE

Council is set to transition Leisure and Recreation Services (LARS) to Active Whitehorse, establishing a clearer and more contemporary departmental identity that reflects Council's broader commitment to physical activity, wellbeing, access and community participation. This Leisure Services Optimisation Report ('Optimisation Report') builds on that change by defining how Active Whitehorse is applied in practice to Council's sport, recreation and leisure facilities portfolio.

A key outcome of organisation review and proposed structure is the formal establishment of the Active Whitehorse Facilities Team as the specialist operational and strategic unit responsible for the management, activation and optimisation of all Council sport, recreation and leisure facilities. This includes Aqualink Box Hill and Nunawading, Sportlink, Nunawading Community Hub, and Council's leased and licensed sport and recreation assets. The report sets out a strengthened, integrated framework for how these facilities are planned for, operated and activated, ensuring a consistent focus on community outcomes, customer experience, asset stewardship and financial sustainability.

The Active Whitehorse Facilities Team also provides the foundation for building a strong and recognisable facilities-focused identity that resonates with both the workforce and the community. Over time, this enables the development of coordinated supporting resources for the community, such as clearer community-facing communications, digital platforms and promotional materials and strategies.

Importantly, the establishment of the Team directly supports the development of the Active Whitehorse Strategy and the enhanced accountability and reporting framework outlined in this report, ensuring that facility investment, activation and performance are guided by clear direction, measurable outcomes and ongoing transparency to Council.

The Active Whitehorse Facilities Team also provides the foundation for building a strong and recognisable facilities-focused identity that resonates with both the workforce and the community. Over time, this enables the development of coordinated supporting resources such as clearer community-facing communications, digital platforms and promotional materials. Importantly, the establishment of the Facilities Team directly supports the development of the Active Whitehorse Strategy and the enhanced accountability and reporting framework outlined in this report, ensuring that facility investment, activation and performance are guided by clear direction, measurable outcomes and ongoing transparency to Council.

5. FINANCIAL AND RESOURCE CONSIDERATIONS

Council's decision to retain and optimise an in-house management model is supported by the considerable improvement in the financial performance of the leisure facilities over recent years. These improvements demonstrate the underlying strength of the current model and provide a sound platform for continued growth.

The focus of this report is not to correct poor performance, but to reinvest strategically to protect recent gains, address known gaps and ensure the facilities continue to operate at a high standard in an increasingly competitive and cost-pressured environment.

Improved Financial Performance and the Case for Reinvestment

The improved operating position of the leisure facilities has been driven by a combination of:

- Strong visitation and membership demand
- Market tested learn to swim returns
- Improved pricing and revenue management
- More disciplined operational controls
- Endorsed of Enterprise Agreement 2025 (commencement date 13 August)

While these results are positive, they also place increased pressure on assets, staff and systems. Without targeted reinvestment, there is a risk that current performance levels cannot be sustained, and that opportunities to further grow revenue and participation will be missed.

The proposed actions therefore focus on protecting and growing revenue, improving efficiency, and ensuring that facilities remain attractive, safe and commercially viable over the long term.

Investment Focus Areas

The financial impacts and benefits associated with the optimisation actions outlined in this report are summarised below:

Financial Investment for Leisure Optimisation Actions Implementation

Item / Action	Gross Cost ($)	Offsets ($)	Budget Impact ($)
1.3 Optimise Aqualink Operating Hours	$53,000 Per annum	$115,000 Revenue uplift per annum	($62,000) Per annum
1.4 Daytime cleaning of the Aqualink facilities	$101,500 Per annum	$0	$101,500 Per annum
1.5 Capital renewal of Gym Equipment *	$435,000 2026/27	$435,000 Future funding brought forward	$0
1.6 Attendance monitoring technology *	$15,000 2026/27	$0	$15,000 2026/27
2.2 New Active Whitehorse uniforms *	$70,000 2026/27	$20,000 Current budget	$50,000 2026/27
3.3 Increased marketing resourcing	$104,000 Per annum	$65,000 Current budget	$39,000 Per annum
4.3 Immediate capital investment for Aqualink facilities *	$492,000 2026/27	$492,000 Future funding brought forward	$0
5.2 Active Whitehorse strategy *	$90,000 2026/27	*$40,000 (potential funding LSIF)*	$90,000 2026/27
5.3 Membership Pricing Strategy	$0	$108,000 Revenue uplift per annum	($108,000) Per annum

* One-off expenditure within 2026/27 year

People and Capability
Targeted investment in staffing, leadership capacity and specialist roles (including marketing and cleaning) to support service quality, customer experience and operational consistency.

Asset Maintenance and Renewal
Increased and more transparent maintenance and renewal funding to:

- Reduce reactive and costly repairs
- Improve facility presentation and reliability
- Protect the long-term value of Council-owned assets
- Support customer satisfaction and retention

Service Optimisation and Revenue Protection
Investments that support improved utilisation, retention and modest, sustainable revenue growth, including:

- Opening hours optimisation
- Pricing and membership adjustments
- Program alignment with community demand

Planning, Reporting and Accountability
Resourcing to strengthen performance monitoring, asset planning and reporting, ensuring Council can clearly see how investment translates into outcomes.

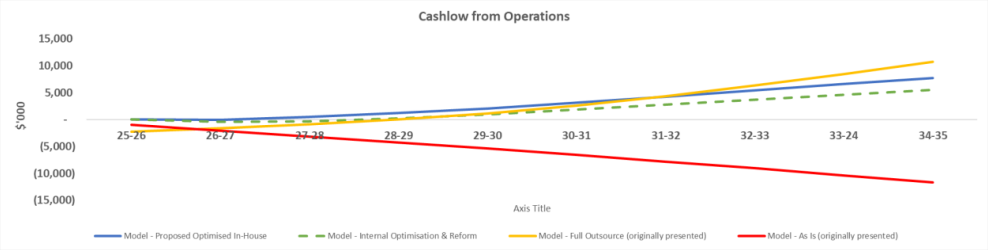
Financial Sustainability and Return on Investment
Financial sustainability is a core outcome of optimisation. Investment in leisure facilities is not viewed as a cost in isolation, but as a mechanism to:

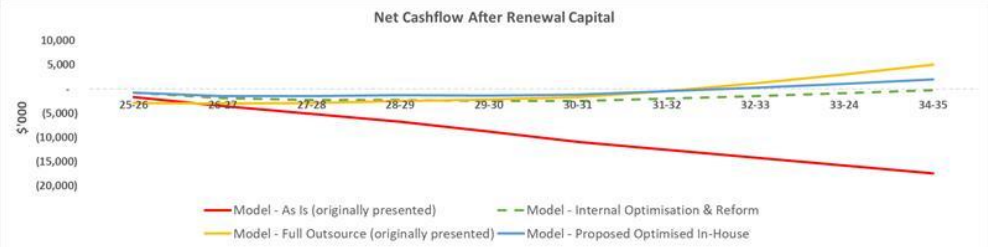
- Maintain and grow a strong revenue base
- Avoid higher long-term costs associated with asset failure or service decline
- Maximise the social and economic return generated by community leisure infrastructure

As outlined earlier in this report, industry evidence consistently demonstrates that well-managed aquatic and leisure facilities generate significant returns for communities in health, wellbeing and economic value. Optimisation ensures that Council is well positioned to maximise this return through its own management of facilities.

Financial Modelling
At the August 2025 Council Meeting, it was demonstrated that recent initiatives and operational changes had improved the projected 10-year financial performance of the Aqualink facilities by approximately $17.3 million when compared to historic in-house management performance. The Optimisation Report identifies where a portion of these savings should be strategically reinvested to protect and grow revenue, improve service quality, and ensure assets remain fit-for-purpose.

Updated financial modelling, incorporating the investment required to implement the Actions outlined in this report, indicates that the improved financial performance is now projected to be $19.3 million under the proposed optimised in-house model. The $2.3 million positive variance reflects reduced strategic investment requirements when compared to the August model (internal optimisation and reform), together with the application of the pricing strategy and revenue generation actions proposed in this report.





6. ACTIONS BY STRATEGIC OUTCOME

Strategic Outcome 1: Customer and Community Value

Maximise customer experience, utilisation and community benefit across all Council sport recreation and leisure facilities, including Aqualink Box Hill and Nunawading, Sportlink, and leased and licensed sport, recreation and leisure assets.

Why This Outcome Matters

Council's sport, recreation and leisure facilities are a core part of the City's social and wellbeing infrastructure. Strong visitation and membership growth demonstrate the value these facilities provide to the community. However, increased demand also places pressure on facilities, services and staff, particularly during peak periods.

Optimisation under this outcome focuses on maintaining and building on Council's strong market position and community activation impact by improving consistency, utilisation and experience. The intent is to retain existing members, support modest and sustainable growth, and ensure all facilities continue to meet the needs of a diverse and growing community.

1.1 Community Outreach

Action: **That Council establishes a Community Outreach Program to maximise off-peak access to Aqualink facilities, improve equity of participation, and enhance community activation across the municipality.**

Budget Requirement: Nil (delivered within existing resources)

Aqualink facilities continue to experience strong participation, with peak periods operating at or near capacity due to sustained membership growth and record attendance. As is the norm for large aquatic and leisure centres, utilisation patterns vary across the day and week, resulting in surplus capacity during off-peak times. While targeted marketing can help attract additional patrons during these periods, it is anticipated that some level of underutilisation will remain.

This availability presents an opportunity for Council to enhance equitable access to leisure and aquatic services by activating unused capacity for community members who would otherwise face barriers to participation. Benchmarking and best-practice research highlight several successful outreach and community engagement models, including:

- Peninsula Leisure's Community Outreach Program, which partners with local agencies to identify individuals who would benefit from subsidised or ongoing access. The program has operated for over a decade, providing more than $1 million in community benefit across gym, warm water, aquatics and learn-to-swim programs.
- Boroondara Leisure's Community Activation Plan, offering a comprehensive annual program of services and events to support participation by older adults, Culturally and Linguistically Diverse (CALD) communities, youth, socially isolated groups, disadvantaged community members, and people living with disability, chronic illness or additional needs.
- Whitehorse's Migrant Swimming Program, which already provides free access to swimming programs for vulnerable or recently arrived community groups, delivered in partnership with swimming clubs and community organisations.

Building on these examples, there is an opportunity for Whitehorse City Council to establish a formalised and strategically aligned Community Outreach Program designed to activate off-peak capacity and improve community wellbeing outcomes.

The proposed model would involve partnering with local community organisations to identify and refer eligible community members who would benefit from subsidised or free access to Aqualink facilities, with consideration to other facility and service access over time. Access may take the form of a short-term membership or participation in specific programs. Partner organisations would support ongoing monitoring of participation and outcomes and assist Council in reassessing eligibility over time.

The financial implications for Council are expected to be minimal, as the program utilises existing facility capacity without displacing fee-paying members. Over time, the program could evolve to include tailored programs for specific cohorts, but its initial focus would be on establishing referral partnerships and providing structured support for participants.

Expected Benefits

- Increased utilisation of Aqualink facilities during off-peak periods.
- Enhanced health and wellbeing outcomes for vulnerable, disadvantaged, isolated and CALD community members.
- Improved social inclusion and community connectedness by reducing financial, cultural and social barriers to participation.
- Strengthened partnerships with local service providers, community organisations and culturally diverse communities.
- Greater alignment with Council's strategic priorities, including health and wellbeing, equity of access, social cohesion and community activation.
- Enhanced reputation of Aqualink and Whitehorse City Council as leaders in inclusive community service provision.
- More efficient use of existing Council assets, improving value for ratepayers.

1.2 Customer Satisfaction, Loyalty and Recommendation Research

Action: **That Council extends the partnership with Swinburne University to the end of 2027, to continue and expand the Customer Satisfaction, Loyalty and Recommendation Research Program across Council leisure facilities, providing ongoing, independent and evidence-based insight to inform service improvement, accountability and customer experience outcomes.**

Budget Requirement: Nil (delivered within existing resources)

Whitehorse City Council participates in an established, industry-leading customer research program delivered by Swinburne University, which has been operating across the leisure and aquatic sector for more than a decade. The program was developed and is administered by Swinburne University and provides Council with access to high-quality, independent research that is widely recognised as best practice within the industry.

The research delivers six-monthly surveys of both casual users and members of the Aqualink facilities and consistently achieves strong participation, with an average of more than 1,000 responses per survey cycle. This provides a robust and reliable evidence base to understand customer perceptions, behaviours and priorities over time.

A key strength of the program is the ability to benchmark results against comparable leisure and aquatic facilities, enabling Council to assess its performance relative to industry standards and peers. This benchmarking capability strengthens confidence in the findings and supports informed, evidence-based decision-making.

The research examines core customer equity drivers and identifies the factors that influence satisfaction, loyalty and positive recommendation. It provides structured analysis across three key areas:

1. *Customer experience drivers*: Identifying the factors that most strongly influence satisfaction, loyalty and advocacy among members and casual users.
2. *Service improvement insights:* Highlighting areas of strong performance and identifying priority areas for improvement, aligned with Council's strategic priorities and operational objectives.
3. *Performance measurement and tracking:* Establishing, implementing and monitoring a consistent set of core customer experience and customer behaviour measures that support engagement, retention and continuous improvement.

Survey responses are reviewed and analysed by Council officers, with a clear commitment to action. Outcomes, insights and proposed responses are communicated back to the Aqualink community within eight weeks of each survey cycle, reinforcing transparency, responsiveness and trust.

Feedback from the Swinburne research has directly informed a number of actions contained within this report, including those relating to cleanliness, operating hours, asset presentation and service responsiveness. The program will continue to underpin the accountability framework, providing validated KPIs and performance measures to support reporting on customer, operational and commercial outcomes.

As part of this action, it is proposed that the scope of the research program be expanded in 2026/27 to include Nunawading Community Hub and Sportlink, ensuring a consistent approach to customer experience measurement across Council's core leisure facilities. Subject to review and resourcing, consideration may also be given beyond 2026/27 to extending the program to other key sport, recreation and leisure facilities to further strengthen Council-wide benchmarking and insight.

Expected Benefits

- Access to independent, industry-leading customer research and benchmarking.
- Ability to compare Council's performance against industry and best practice.
- Improved understanding of customer satisfaction, loyalty and advocacy drivers.
- Evidence-based identification of service improvement priorities aligned to strategic outcomes.

- Consistent and reliable CX and customer behaviour KPIs across leisure facilities.
- Enhanced transparency and accountability through regular community feedback and reporting.
- Stronger customer trust, engagement and retention, protecting Council's strong market position.
- Informed decision-making that supports sustainable service delivery and continuous improvement.

1.3 Optimise Aqualink Operating Hours

Action: **That Council adjusts the operating hours of Aqualink facilities to better meet community needs and demand, resulting in a net increase of 5 weekly gym hours, which is projected to result in an additional $53k in casual wages, which will be positively offset by increased membership revenue.**

Budget Requirement: Nil. $62,000 positive variance to current budget

Aqualink's operating hours have remained unchanged for more than a decade, despite significant shifts in population size, leisure participation patterns, and membership growth across the municipality. Between 2014 and 2024, the population of Whitehorse increased by 11.6%, while combined membership at Aqualink grew by 25%, demonstrating increased demand and a broader, more diverse user base.

The consultant's review considered a range of operating hours options, including maintaining the existing hours, extending hours, reducing hours, and seasonal closure of the outdoor pool. The consultant undertook benchmarking of the Aqualink centres against six comparable metropolitan facilities. The benchmarking showed that Aqualink's general entry hours (104 hours per week) are broadly consistent with the peer average (105.25 hours per week), however these comparisons did not fully account for the unique patterns of local utilisation, recent population growth, or the scale of user feedback obtained through Council's consultation processes.

Community feedback forms a significant component of the justification for revising hours. More than 2,500 people participated in the 2024 engagement process, with 30% of respondents indicating dissatisfaction with current operating hours—a substantial cohort equating to more than 750 respondents. Specifically:

- 15% of all respondents requested earlier weekend opening (6am).
- 7% requested earlier weekday opening (before 6am).
- Additional qualitative feedback collected in November 2024 (600+ respondents) and August 2025 (1,800+ respondents) reinforced support for earlier opening times.

The Consultant recommended a moderate uplift in operating hours based on the benchmarking evidence alone. However, when combined with local attendance patterns, customer demand, utilisation data, and population projections, there is a strong case for a targeted adjustment to the gym operating hours to improve accessibility and better disperse peak utilisation.

The proposed adjustments result in a net increase of 5 hours per week for the gym with minimal operational risk and a favourable financial outcome.

It is noted that the proposed gym operating hours differ from the aquatic operating hours. This is an industry-wide trend as facilities seek to implement purposeful and data driven operating hours that respond to the specific usage patterns in different parts of the facilities. Tailored operating hours can serve to respond to community needs, reduce customer congestion and improve safety while also considering financial sustainability.

Proposed Operating Hours Changes

Gym Hours

Day	Current	Proposed	Weekly Hours +/-
Mon–Thu	6am–10pm	5:30am–10pm	+2
Friday	6am–10pm	5:30am–9:30pm	0
Saturday	8am–8pm	6am–8pm	+2
Sunday	8am–8pm	7am–8pm	+1
Public Holidays	8am–8pm	8am–8pm	0

Rationale for Changes to Gym Hours

- *Earlier weekday opening (5:30am):*
  High utilisation between 6:00–6:30am (197 entries across both sites) demonstrates strong and increasing early-morning demand. Allowing a 5:30am start provides more flexibility for working residents and accommodates the growing number of members who prefer to complete workouts before 7am.

- *Earlier Saturday opening (6am):*
  Approximately 20% of weekend gym users enter during the first hour of

opening. Saturday morning visitation is around 20% higher than Sunday, indicating a clear demand for earlier access and a need to reduce peak congestion across equipment, changerooms and parking.

- *Earlier Sunday opening (7am):*
  Consistent with Saturday patterns, an earlier opening time improves access and reduces early-morning pressure on the facility.

- *Slightly earlier closing on Fridays*:
  This period is comparatively underutilised. A 30-minute earlier close partially offsets the staffing cost of extended hours while having minimal impact on users.

Financial Impact

To support the increased operating hours requires an increase in staffing costs by approximately $53,000 per annum. We expect that these costs will be fully offset by projected increases in total memberships of 1% and increased member retention of 0.5%, generating approximately $115,000 per annum (subject to the approval of Action 5.3 i.e. Membership and Pricing Strategy) and resulting in a net positive financial outcome, while simultaneously improving community access and service quality.

Expected Benefits

- Improved accessibility and flexibility for a growing and diverse membership base.
- Better alignment with demonstrated community demand, particularly early-morning users.
- Reduced peak congestion, leading to improved user experience and more efficient facility operations.
- Support for the municipality's increasing population, ensuring facilities remain responsive and fit-for-purpose.
- Positive financial outcomes, with increased revenue exceeding the cost of extended hours.
- Enhanced reputation and community satisfaction, demonstrating Council's responsiveness to feedback and commitment to active, healthy lifestyles.

Alternate Option A: Winter Closure of Aqualink Box Hill Outdoor Pool

Alternative operating models were explored, such as proposing a seasonal reduction in operating hours for the Aqualink Box Hill outdoor pool during winter. The option involved closing the outdoor pool from 6:00pm to the existing closing hours between 1 May and 31 August, aiming to reduce operational costs during periods of lower seasonal demand.

The proposed closure would generate an estimated $19,000 in staff cost savings over the 19-week period, primarily through reduced lifeguard hours. However, core operational requirements, including water quality management, temperature maintenance, and daily system checks, would continue irrespective of reduced public access. Any additional energy savings from extended use of pool covers are projected to be minimal.

This option presents significant service and reputational risks. Evening users during the proposed closure period include key user groups such as Surrey Park Squad and Surrey Park Masters Seahorse, alongside regular lane swimmers. Member usage during these hours is high, with approximately 85% of users being Aqualink members, and an average of 63 swimmers on weeknights and 17 across weekend evenings.

Restricting access would likely lead to reduced member satisfaction and perceived value, potentially undermining confidence in Aqualink's reliability and service quality. Modelling indicates that even a conservative impact on member retention over the winter period would result in an estimated $38,000 revenue loss, producing an overall net loss of $19,000 per annum once savings are offset.

1.4 Employ Daytime Cleaners for Aqualink Facilities

Action: **That Council directly employs casual daytime cleaners at Aqualink Box Hill and Aqualink Nunawading, at a net cost of $101.5k to cover high-traffic periods, while retaining overnight cleaning contractors with a reduced scope.**

Budget Requirement: $101,500 allocation to the 2026/27 Budget.

Cleaning is a frequent source of customer complaints at the Aqualink facilities, particularly during high-traffic periods, where delayed response times and visible cleanliness gaps negatively impact the customer experience.

The Aqualink customer survey (December 2024) noted widespread dissatisfaction with the cleanliness and hygienic standards across various parts of the leisure centre. Especially the cleanliness of bathrooms, showers, saunas and pool. Many comments point to a perceived lack of thoroughness or frequency in cleaning.

The most recent survey confirms that cleanliness is the most frequent theme that impacts customer experience, with 7% of all members stating that it is the reason that they would not positively refer others to the facilities. Members consistently report the need for:

- Improved cleanliness of changerooms, showers, toilets
- Improved cleanliness of floors, carpets, gym areas and wellness rooms
- More proactive and proactive cleaning schedules

- More staff presence to maintain cleanliness

Both Aqualink sites experience high patronage, with over 1 million annual visits at Box Hill and 620,000 at Nunawading, necessitating daytime cleaning coverage to maintain hygiene and facility presentation that meets community expectations. Other Council leisure facilities, including Sportlink and Nunawading Community Hub, have lower visitation (approx. 275K–300K annually) and fewer amenities, allowing daytime cleaning to be effectively managed by existing operational staff.

The current model relies on overnight contractors to complete comprehensive cleaning. During operational hours, staff such as Duty Managers and Lifeguards are required to perform spot cleaning, often interrupting their primary duties. Staff are not professionally trained cleaners, resulting in inconsistent standards, particularly during peak times.

Industry benchmarking indicates that daytime cleaning is standard practice in high-volume leisure facilities. Case studies from Peninsula Leisure, Cardinia Leisure, and Casey Leisure demonstrate that employing daytime cleaners improves cleanliness standards, customer satisfaction, and operational efficiency.

- Direct employment of daytime cleaners provides control over standards and responsiveness.
- Overnight contractor cleaning remains essential for comprehensive cleaning when the facilities are closed, avoiding operational disruption and addressing recruitment challenges for overnight staff.

A hybrid cleaning model is recommended for Whitehorse:

- Daytime cleaning delivered by directly employed casual staff.
- Overnight cleaning retained through existing contractors, with a proposed 10% reduction in scope due to tasks now undertaken during daytime.

The daytime cleaning roster will initially be flexible, employing casual staff to assess efficiency and coverage needs. Proposed staffing at Band 1 includes 89 hours per week across both Aqualink sites:

- Weekdays: 13 hours per day (3 x 3-hour shifts + 1 x 4-hour shift)
- Weekends: 12 hours per day (3 x 4-hour shifts)

This model ensures coverage during mid-morning through to early evening, with additional staffing during peak usage periods to maintain high standards.

The total projected cost in Year 1 is $174,000, inclusive of on-costs and increasing annually in line with EBA provisions. Savings of approximately $51,500 from reduced overnight contract scope partially offset costs, resulting in a net cost of $101,500 per annum.

Expected Benefits

- Improved facility presentation and hygiene during peak periods.
- Enhanced customer satisfaction and experience, reducing complaints related to cleanliness.
- Operational efficiency, reducing reliance on operational staff to perform cleaning tasks.
- Cost efficiency through partial offset of existing overnight cleaning contracts.
- Flexibility to adjust staffing and rosters as required to optimise outcomes.
- Alignment with industry best practice, supporting Whitehorse's reputation for high-quality leisure facilities.

Alternate Option – Utilising External Cleaning Contractors for Day Cleaning

An alternate option considered was the use of external cleaning contractors to deliver daytime cleaning services at the Aqualink facilities, rather than directly employing Council staff. Under this model, daytime cleaning coverage would mirror the recommended service levels, providing 89 hours per week across both Aqualink sites to address cleanliness during high-traffic operational periods.

The proposed contractor-based model would deliver cleaning services at an assumed contract rate of $52.94 per hour (exclusive of GST), with coverage structured as follows:

- Weekdays: 13 hours per day (three 3-hour shifts and one 4-hour shift)
- Weekends: 12 hours per day (three 4-hour shifts)

This model would ensure consistent coverage from mid-morning through to early evening, with additional cleaning capacity during peak periods to maintain hygiene and presentation standards.

The total projected cost of this option is approximately $244,000 (ex GST) in Year 1, with costs expected to increase annually in line with contract escalation provisions. While a reduction in the overnight cleaning contract would deliver savings of approximately $51,500 per annum, the resulting net cost of $192,500 per annum is materially higher than the recommended Council-employed daytime cleaning model.

1.5 Adoption of Renewal Principles and Plan for Gym Equipment

Action: **Implement a structured gym equipment renewal program at Aqualink facilities, renewing cardio equipment every four years and strength equipment every eight years, with renewal cycles aligned across both sites to streamline procurement and enhance customer experience.**

Budget Requirement: Strength equipment investment in 2026/27FY will require funding to be brought forward, where currently it is allocated across the period from 2026/27FY to 3031/32FY. Aqualink Box HIll - $220k, and Aqualink Nunawading - $215k. Therefore, no additional budget required, however an update in the timing of delivery.

A structured approach to gym equipment renewal is essential to maintaining a contemporary, competitive and reliable fitness offering across the Aqualink facilities. The current mix of equipment ages, conditions and brands has resulted in inconsistency between sites, diminishing user experience and reducing the facilities' ability to meet industry expectations. Feedback from the December 2025 customer survey noted that *"gym equipment is often described as outdated or neglected"*, reinforcing the need for a more disciplined and strategic approach.

Current State and Issues

- *Strength equipment:* Approximately half of all strength equipment across both Aqualink sites is more than 12 years old. The variation in age and manufacturer contributes to an inconsistent and outdated user experience.

- *Cardio equipment:* At Aqualink Nunawading, most cardio equipment was replaced in November 2025 (excluding spin bikes, now 6.5 years old). At Aqualink Box Hill, cardio equipment averages 3.5 years, while spin bikes are 8 years old. Delays in renewal reduce opportunities to incorporate new technologies and innovations that support a modern fitness environment.

This variability impacts customer satisfaction, limits competitiveness, and creates inefficiencies due to staggered procurement and replacement cycles.

Optimised Renewal Approach
To support a consistent and contemporary fitness offering, a structured and proactive renewal program is recommended. This framework allows equipment to be maintained to industry standards, renewals to be timed for maximum customer and operational benefit, and procurement processes to be streamlined.

Under this approach:

- Cardio equipment will be renewed every four years, ensuring access to modern technology and an enhanced experience.
- Strength equipment will be renewed every eight years, consistent with industry expectations for lifespan and performance.
- Renewal cycles will be aligned across both sites, enabling coordinated procurement, improved negotiating power, and consistent presentation and experience for customers.

This replaces the current ad hoc model, which leads to fragmented upgrades, inconsistent quality, and an inability to leverage purchasing efficiencies.

Expected Benefits

- Provides a consistent and high-quality health and fitness offering across Aqualink facilities.
- Enhances customer experience, supporting member attraction and retention.
- Improves operational efficiency through coordinated procurement and planning.
- Ensures equipment remains safe, reliable and accessible for all users.
- Aligns with industry best practice and the optimisation intent to modernise service delivery.

1.6 Attendance Monitoring Technology

Action: **That Council installs people-counting camera technology at Sportlink and Nunawading Community Hub to enable accurate attendance tracking, strengthen evidence-based decision-making and improve operational planning across non-membership leisure facilities, with future consideration for expansion to Morack Public Golf Course and other suitable venues.**

Budget Requirement: $15,000 (one-off)

Sportlink and Nunawading Community Hub are high-use community facilities that are not membership-based or pay-to-enter, meaning attendance is currently estimated rather than accurately recorded. This limits Council's ability to fully understand how these facilities are used, identify peak demand periods, and quantify the true level of community participation occurring within these venues.

The installation of people-counting camera technology would provide accurate, reliable and ongoing data on facility usage, aligning with Council's broader shift toward data-driven decision-making. This approach is consistent with the extension of independent customer research (via Swinburne University) to non-membership facilities and supports a more complete picture of how Council's leisure assets are accessed and experienced.

Accurate attendance data would enable improved rostering and operational planning, better forecasting of consumables and cleaning requirements, and stronger justification for operational budget variations. Over time, this information will support

more informed investment, service design and activation decisions, ensuring Council resources are aligned with actual community use and demand.

Expected Benefits

- Accurate measurement of attendance in facilities and areas where usage is currently estimated, including Sportlink, Nunawading Community Hub and Aqualink Box Hill Stadium.
- Improved understanding of community usage patterns, particularly at Nunawading Community Hub where participation levels are not currently well quantified.
- Enhanced rostering efficiency and operational planning based on real usage data.
- Better forecasting of consumables, cleaning and operational requirements.
- Stronger evidence base to support budget planning, service adjustments and future investment decisions.
- Alignment with Council's commitment to data-driven performance, accountability and continuous improvement.

Outcome 2: A Capable, Supported and Future-Focused Workforce

Build a workforce with the capability, leadership depth and structure required to deliver high-quality sport, recreation leisure facility services and support continuous improvement.

Why This Outcome Matters
A capable and supported workforce is central to delivering strong customer experiences and reliable operations. Decisions made during earlier planning assumed a transition to external management, resulting in reduced leadership capacity at a time of increasing visitation, complexity and community expectations.

Optimisation under this outcome focuses on strengthening leadership depth, clarifying roles and investing in staff capability so teams can operate confidently, respond to change and contribute to innovation. This also supports succession planning and organisational resilience, ensuring knowledge and expertise are retained for the long-term benefit of the community.

2.1 Active Whitehorse Facilities Structure

Action: **That Council implements a fit-for-purpose Active Whitehorse Facilities Team structure to increase capability and capacity across key focus areas.**

Budget Requirement: The additional investment required to deliver a fit-for-purpose Active Whitehorse Facilities Team has been considered as part of the organisation

structure review and will be accommodated within the operational budget constraints.

Decisions informing the current Facilities Team structure since the commencement of Whitehorse's transformation have assumed that the Aqualink facilities would be externally managed from 2026. Following Council's February 2023 resolution to explore an external management model, there has been a reduction in senior leadership (-2 EFT) within the Leisure and Recreation Services (LARS) and Leisure Facilities Teams, reflecting the anticipated transition. This reduction has coincided with significant growth in Aqualink visitation and membership, creating additional operational and strategic pressure on the remaining leadership team.

With the proposed expansion of the Facilities Team scope (refer Action 3.1) to manage all sport, recreation, and leisure facilities, including those under lease, license, or direct operational management, there is a clear need to strengthen leadership depth, capability, and resilience. This ensures the Team can:

- Reduce dependency on a single Centre Manager.
- Increase focus on strategic development and implementation, including the Active Whitehorse Strategy (Refer to Action 5.2).
- Build effective succession planning to secure operational continuity.
- Drive operational excellence in community development, partnerships, marketing, customer experience, and special project delivery.
- Respond proactively to opportunities for facility activation, innovation, and revenue generation.

The broader scope of the Facilities Team, as proposed in Action 3.1, provides justification for the inclusion of additional specialist resources in the structure. These positions support not only operational delivery, but also strategic oversight across Council's entire sport, recreation and leisure facility portfolio.

To inform the proposed structure, benchmarking was undertaken against industry best practice and peer Councils, including Maroondah, Knox, Stonnington, and Geelong, as well as leading facility operators such as Peninsula Leisure, Boroondara Leisure, Western Leisure, and Glen Eira Leisure Centres. This research reinforced the need for dedicated leadership roles across community engagement, customer experience, marketing, and project delivery to ensure facilities are both well-managed and strategically activated.

Proposed Structure and Investment

The proposed Facilities Team structure introduces three new leadership positions, while consolidating and streamlining existing roles to improve efficiency.

New positions include:

- *Active Whitehorse Facilities Manager*: Provides overall leadership and strategic oversight across all Council-managed, leased, and licensed facilities, ensuring alignment with the Active Whitehorse Strategy (refer Action 5.2).

- *Coordinator, Community Facilities*: Focuses on the operational delivery of Sportlink and Nunawading Community Hub, as well as strategic planning and implementation relating to the activation of the leased and licensed facilities.

- *Coordinator, Customer Experience and Special Projects*: Will lead the delivery of high-quality, inclusive, and responsive customer service across all Council-managed sport, recreation, and leisure facilities. Additional championing customer insight initiatives to guide evidence-based service improvements across leisure facilities

Expected Benefits

- Strengthened leadership capacity and depth, reducing single-point dependencies.
- Improved strategic oversight of all Council leisure and recreation facilities.
- Enhanced operational performance, including customer experience, bookings, and program delivery.
- Greater ability to implement community activation and partnership initiatives.
- Support for broader organisational goals, including financial sustainability, facility utilisation, and alignment with the Active Whitehorse Strategy.

2.2 New Leisure Facilities Team Uniform

Action: **That Council introduces a new and contemporary uniform for the Active Whitehorse Facilities Team (from 1 July 2026), with a scheduled refresh and renewal every five years to maintain alignment with brand and operational requirements.**

Budget Requirement: The projected one-off additional budget for 2026/27 is $50k.

The current leisure facilities staff uniform has been in place for over seven years after being introduced in 2019 and no longer reflects the modern, professional image of Active Whitehorse.

Staff uniforms are often the first impression for customers and the last element they remember upon leaving. They communicate brand identity, professionalism, and the quality of service even before staff interaction begins.

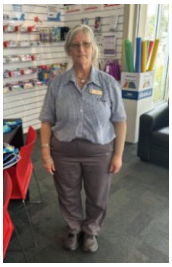
Uniforms also significantly influence staff experience. Modern, comfortable, and appropriately styled uniforms enhance staff pride, morale, and wellbeing, particularly following periods of organisational change, including the recent enterprise agreement process and the current proposed restructure of the Facilities Team.

Regular renewal of uniforms is essential to:

- Reflect evolving brand identity, colours, and professional standards.
- Maintain professional appearance as fabrics age, colours fade, and styles change.
- Signal to staff and the community a renewed strategic focus, reinforcing their critical role in delivering high-quality leisure services.
- Promote consistency and professionalism across all Council-managed and contracted facilities.

A contemporary uniform provides a tangible symbol of recognition, investment, and organisational pride. It also supports the broader strategic direction of the Active Whitehorse Facilities Team by visually reinforcing the Team's importance in achieving Council's objectives for community engagement, activation, and service excellence.

The projected cost of the new uniform for 2026/27 is $70,000 which includes tracksuits, polos, shorts, jackets and corporate uniform items provided in the same quantity and manner as the existing uniforms. This investment is offset by the provision for uniforms already included in the current budget (approximately $20,000), resulting in a net cost of $50,000. This represents a relatively small investment to demonstrate appreciation, align with the refreshed Active Whitehorse brand, and strengthen staff engagement.



Current uniforms

Expected Benefits

- Enhanced staff pride, morale, and engagement through modern, high-quality uniforms.
- Clear visual alignment with the Active Whitehorse brand across all facilities.
- Stronger first impressions and customer experience, reinforcing professionalism and quality.
- Tangible recognition of staff contribution, supporting retention and satisfaction.
- Signals organisational commitment to the strategic development and future direction of the Facilities Team.

Outcome 3: Agility and Innovation as Enablers

Enable agile, innovative operations that allow Council's facilities to respond efficiently to community needs, industry trends and emerging opportunities.

Why This Outcome Matters
Leisure facilities operate in a fast-moving, customer-driven environment where responsiveness is critical. While Council systems provide strong governance, they are not always designed for the operational pace required in leisure settings, particularly for recruitment, procurement and program delivery.

Optimisation under this outcome focuses on removing unnecessary barriers while maintaining appropriate oversight. Innovation is understood broadly, including new programs, pricing approaches, partnerships, service models and ways of working that improve both customer experience and financial performance. Agility and innovation are key enablers that support all other outcomes.

3.1 Broaden Scope of the Leisure Facilities Team

Action: **That Council broadens the scope of the Leisure Facilities Team to include management oversight, activation and strategic accountability for all sport, recreation and leisure facilities across the municipality.**

Budget Requirement: Nil (delivered within existing resources)

There is an opportunity for Council to broaden the remit of the current Leisure Facilities Team to encompass the activation, oversight and optimisation of all sport, recreation and leisure facilities within the municipality, irrespective of whether facilities are directly managed by Council or operated under lease or licence arrangements.

At present, the Leisure Facilities Team is responsible for the operational management of Aqualink Box Hill, Aqualink Nunawading, Sportlink and the Nunawading Community Hub. The Team has developed strong operational capability in facility management. However, responsibility for activating leased and licensed facilities currently sits across multiple business areas, including Program and Customer Service, and the Active Communities Team. This fragmentation presents challenges in coordinating activation efforts, ensuring consistent community access standards, and maximising utilisation and return on Council's investment.

To address this, it is proposed that Council develop an Active Whitehorse Strategy, providing a unified and proactive approach to activating the full suite of sport, recreation and leisure assets. To support this strategic direction, the current team would be renamed the Active Whitehorse Facilities Team, with an expanded scope that includes both directly managed facilities and those delivered via leases, licences and management agreements.

Leased facilities include Morack Public Golf, the recently endorsed Box Hill City Oval, tennis clubs, bowls clubs and various community sport venues. Under the proposed model, lease arrangements would be strengthened to include clearer expectations regarding community access, activation, reporting and performance outcomes. The Active Whitehorse Facilities Team would be responsible for monitoring compliance, supporting lessees, and ensuring community benefit is realised.

Seasonally licensed facilities (ovals and pavilions) will remain operationally managed and allocated by the Active Communities Team; however, responsibility for driving broader community access, increasing casual utilisation, and aligning activation outcomes will sit with the Active Whitehorse Facilities Team.

Major contracts and leases, including Morack Public Golf and emerging regional-scale developments such as Nunawading Basketball, Nunawading Gymnastics and Regional Table Tennis where management models are yet to be determined will also be coordinated under this expanded remit. A structured facility management and lease oversight framework has been developed to support consistent contract management, strengthen relationships with partner organisations, and ensure Council's investment delivers measurable community outcomes.

Expected Benefits:

- Enhanced organisational capability through a consolidated, expert team responsible for activation and oversight of all leisure, sport and recreation assets.
- Improved financial sustainability, supported by optimised utilisation of directly managed facilities, increased casual bookings, and more robust and community-focused lease and contract terms.

- Stronger strategic alignment across Council, with facility activation, planning, leasing and reporting guided by the Active Whitehorse Strategy.
- Greater community access and equity, enabled by consistent expectations across all facilities, regardless of management model.
- More effective stakeholder and tenant relationships, supported by a clear framework for accountability, performance monitoring and collaborative problem-solving.
- Optimised use of Council assets, ensuring ratepayer-funded facilities provide maximum community benefit.
- Future scalability, enabling the team's expertise to support other Council services and facilities as organisational needs evolve.
- Improved readiness for major capital projects, ensuring new or redeveloped facilities enter operation with clear management models, activation plans and community benefit targets.

3.2 Enhance Team Agility & Empowerment

Action: **That Council undertake a review of leisure facilities delegated authority, policy and procedure to identify and remove inhibitors to operational agility, and establish an enabling framework that supports timely recruitment, procurement and implementation of new programs within the Active Whitehorse Facilities Team.**

Budget Requirement: Nil (delivered within existing resources)

The Consultant Report identified that Council's current systems and processes, while robust and designed for whole-of-organisation governance, lack the agility required for the dynamic, customer-driven environment in which leisure facilities operate. This limits the ability of the Active Whitehorse Facilities Team to respond quickly to operational needs, emerging opportunities and community expectations, and often results in delays, inefficiencies and, in some cases, lost opportunities to enhance customer experience or increase revenue.

Under an external management model, contractors typically operate with industry-specific processes that enable rapid decision-making, flexible purchasing, timely recruitment and responsive program design. In contrast, Council systems, designed for scale, mean that risk management and rigorous oversight, can inadvertently constrain leisure operations where responsiveness and agility are essential for safe, high-quality, continuous service delivery.

Key operational processes requiring review include recruitment, procurement, and the development of new programs. Each of these areas has a direct and immediate

impact on the ability of Council's leisure facilities to meet community need, maintain service quality and deliver financially sustainable outcomes.

Recruitment

Current Council recruitment processes require completion of a Vacancy Assessment Form (VAF-3) for all positions, including casual roles that are fully budgeted and essential for day-to-day operations. The VAF process requires multiple layers of approval, including Department Manager and Director endorsement, and can take up to four weeks before advertising even commences. Historical evidence shows end-to-end recruitment timeframes of six weeks to four months, which is significantly longer than industry norms where external operators (e.g. YMCA) typically advertise operational roles within one week.

This timeline is particularly challenging in the context of a highly casualised, dynamic workforce where staffing levels fluctuate frequently and often unpredictably. Delays impact service delivery, place increased pressure on leaders to fill rosters manually, and reduce the time available to focus on quality, safety and customer experience.

There is a strong rationale to grant delegated authority to the Facilities Team for the recruitment of casual and part-time operational staff where roles are within budget and essential to maintain baseline service delivery.

Procurement

Similar constraints exist within procurement processes. Leisure facilities require frequent, often unplanned procurement of essential goods and services, such as chemicals, safety equipment, program materials, minor maintenance items and replacement consumables, to maintain compliance, safety standards and uninterrupted operations.

Under current policy, multiple layers of approvals are often required even for low-value or business-critical purchases. This can result in:

- delays to program delivery and service continuity
- increased operational risk (e.g., delayed acquisition of essential pool chemicals or safety equipment)
- lost commercial opportunities (e.g., inability to trial or implement new technology or program enhancements in a timely manner)
- increased staff time diverted to administrative follow-up rather than operational service

A revised procurement framework, with clear thresholds and delegated authority for the Active Whitehorse Facilities Team, would maintain appropriate controls while significantly improving operational responsiveness.

New Program Introductions

New program development is central to the responsiveness and financial sustainability of leisure operations. Currently, introducing new programs requires adherence to lengthy approval and processes. This reduces the Team's ability to:

- Respond to shifts in community interest
- Introduce innovative programs to improve health and wellbeing outcomes
- Meet industry trends and expectations
- Pilot or test new program formats quickly

Empowering designated officers within the Leisure Facilities structure to introduce new programs (within agreed strategic parameters) would enable agile, community-responsive programming while maintaining oversight through enhanced reporting.

Expected Benefits

- Faster, more responsive recruitment of casual and part-time operational staff, ensuring rosters remain stable and service delivery is uninterrupted.
- Reduced risk of service gaps, particularly in essential, safety-critical roles across aquatics, customer service and program delivery.
- More efficient and timely procurement, ensuring facilities can maintain compliance, adapt to operational needs and implement minor service innovations without unnecessary delay.
- Greater flexibility in programming, enabling the Team to respond to emerging community needs and market opportunities, increasing participation and revenue.
- Strengthened accountability, with delegated authority accompanied by clear KPIs, reporting and governance controls.
- Enhanced staff ownership and leadership, fostering a culture of empowered, agile decision-making within the framework of Council's expectations.
- Improved customer experience, with faster implementation of service improvements, program innovations and operational adjustments.

3.3 Increase Marketing Resourcing

Action: **That Council employs an additional Marketing Officer, at a cost of $39k and 0.8 additional FTE, dedicated to Active Whitehorse facilities, to support strategic, data-driven marketing and retention initiatives, strengthen engagement with members and casual users, and maintain and protect visitation across Aqualink, Nunawading Community Hub, Sportlink, and Morack Public Golf.**

Budget Requirement: An additional budget allocation of $39,000 is required to deliver this role.

There is an opportunity to strengthen connection with the community and existing members through targeted, data-informed leisure marketing initiatives. These initiatives are critical to maintaining Whitehorse's strong position in the local leisure market, protecting current membership levels, and supporting modest, conservative growth across all facilities.

The marketing vision for leisure facilities is to remain current, competitive, and locally connected, delivering targeted, commercially aware communications while remaining accessible and community-focused, including translated content for culturally and linguistically diverse audiences.

While visitation is strong during peak periods, there remains untapped potential to increase engagement and utilisation during non-peak periods. Achieving this requires close alignment between programming and marketing, and adequate dedicated resources to deliver consistent, timely, and data-driven campaigns.

Key considerations include:

- Recent results demonstrate positive outcomes following the consolidated Leisure Marketing approach under the Communications, Advocacy and Investment (CAI) restructure:
- Memberships increased by 814 members.
- Acquisition campaigns generated 1,237 new member sign-ups.
- Social media following increased by 333.
- Retention rate maintained at 57% despite growth.
- Opportunity for further growth:
- New communication channels (e.g., Instagram) have been introduced, requiring dedicated management to maximise reach, engagement, and relevance.
- Current Leisure Marketing support of 0.8 EFT is significantly below comparable industry benchmarks, which are up to four times higher. See below table
- Aqualink's social media presence remains smaller than peer facilities (5.8k Facebook, 529 Instagram followers), highlighting opportunities to strengthen digital presence, community engagement, and awareness.

Facility	Marketing FTE	Marketing Budget	Facebook	Instagram
Whitehorse Aqualink, Sportlink & Nunawading Hub	0.8 FTE	$160,000	5.8k Followers	529 Followers
Council #1	3 FTE	$200,000	16k Followers	5.5k Followers
Council #2	1.8 FTE	$339,000	20k Followers	4k Followers
Council #3	2.0 FTE	$167,000	13k Followers	3k Followers

The proposed solution is to employ an additional Marketing Officer, dedicated to all leisure facilities including Aqualink Box Hill and Nunawading, Nunawading Community Hub, Sportlink, and Morack Public Golf. The role will operate at Band 7, 0.8 FTE, with an annual cost of $104,000. Funding will be partly reallocated from the existing Leisure Marketing budget ($65,000), with the remaining $39,000 drawn from the endorsed in-house leisure operational model.

The position will report into CAI within Council's Marketing and Communications team, aligning with Council's centralised marketing approach while ensuring strong collaboration with the Leisure Facilities Team. The officer will spend dedicated workdays across all sites and the Civic Centre to provide both strategic marketing oversight and on-the-ground operational support, ensuring campaigns are responsive, targeted, and effectively executed.

Expected Benefits

- Member retention and casual user attraction: Targeted campaigns support the maintenance of current membership levels and encourage modest growth in non-peak periods.
- Enhanced community engagement: More frequent, targeted communications improve awareness, inclusion, and participation across diverse community groups.
- Operational efficiencies: Dedicated in-house expertise reduces reliance on external contractors and improves responsiveness.
- Data-informed marketing decisions – Enhanced tracking, reporting, and analysis inform ongoing strategy and resource allocation.

- Strategic alignment – Directly supports Council's objectives for facility activation, community participation, and brand consistency.

Alternate Option Outsourced marketing contractor/agency

An outsourced marketing option could also be considered. The projected cost for a marketing contractor is approximately $150 per hour and approximately $218,000 per annum.

The benefits of an outsourced option would be flexibility in personnel and agency options and the ability to scale up when required.

The disadvantages of an outsourced option include that the contractor would have limited access to operational on-the-ground teams. This makes it difficult to design marketing and retention activities which consider operational impacts (e.g administration time for new members, roll-out of activations, membership peaks). An outsourced model also has limited access to Council's channels. For example, a contractor could not publish directly on Council's social media or web channels. This would create duplicate in work and still require Council Officer time to manage the external contractor and manage publication of materials.

3.4 Shared Services Partnerships & Regional Collaboration

Action: **The Active Whitehorse Facilities Team to identify, assess and implement shared services and joint procurement opportunities for sport, recreation and leisure facilities. This resources and focus can be accommodated within the proposed resourcing as outlined in Action 2.1.**

Budget Requirement: Nil (delivered within existing resources)

In its 2025–2029 Strategic Plan the Eastern Region Group of Councils (ERG) reaffirmed its commitment to building shared services with a Memorandum of Understanding (MOU) recently signed to advance shared services initiatives under the ERG's regional Shared Services (ERSS) program, commencing in 2026.

This regional collaboration framework provides an important opportunity for Whitehorse to leverage efficiencies, reduce duplication, and enhance service delivery across sport, recreation and leisure facilities, particularly under the expanded scope of the in-house "Active Whitehorse" operating model.

Engaging in shared service arrangements with ERG partners and others could offer a range of benefits for our leisure facilities portfolio, such as:

- *Joint procurement and cost savings*: shared purchasing of goods and services (e.g., maintenance, equipment, cleaning), leveraging economies of scale.

- *Resource and staffing efficiencies*: pooling specialist staff, training, or maintenance/contractor resources across neighbouring Councils to manage peak demand or specialised functions, reducing per-Council overhead.
- *Access to broader expertise and best practice*: drawing on regional experience for program development, asset renewal, compliance, and facility management standards.
- *Improved facility utilisation and cross-Council access*: enabling residents across ERG municipalities to access facilities, broadening user base and improving return on investment.
- *Enhanced grant and funding opportunities*: demonstrating regional collaboration may strengthen applications for external funding, State grants or capital investment opportunities for shared recreation infrastructure.

Given these potential benefits, it is recommended that the Facilities Team incorporate a dedicated focus to explore and assess shared services opportunities for sport, recreation and leisure facilities.

Expected Benefits

- Cost efficiencies and potential savings through joint procurement and shared resourcing.
- Enhanced capacity to deliver high-quality services and programming despite increasing cost pressures.
- Improved operational resilience and flexibility through access to broader regional resources.
- Strengthened regional collaboration consistent with ERG objectives and demonstrated commitment to inter-Council cooperation.
- Potential for improved community access, facility utilisation and long-term sustainability of leisure services.

Outcome 4: Well-Maintained, Safe and Fit-for-Purpose Assets

Ensure Council's leisure facilities are maintained and renewed in a way that protects asset value, supports safety and accessibility, and delivers facilities the community is proud to use.

Why This Outcome Matters

The condition and presentation of leisure facilities have a direct and measurable impact on customer experience, participation and long-term financial sustainability. Customer feedback consistently shows that ageing infrastructure, amenity quality

and responsiveness of maintenance influence perceptions of value, satisfaction and willingness to recommend facilities to others.

Optimisation under this outcome focuses on strengthening proactive asset management, improving alignment between condition, funding and renewal planning, and ensuring maintenance and capital investment decisions are evidence-based. This includes recognising the need for appropriate short- and medium-term investment at Aqualink Nunawading while longer-term redevelopment options continue to be considered.

4.1 Service Level Agreements for Leisure Facilities Maintenance

Action: **Establish Service Level Agreements (SLAs) internally to guide maintenance planning, prioritisation, performance monitoring and budget alignment for our major leisure facilities.**

Budget Requirement: Nil, however, the process will influence future maintenance and capital works submissions.

Establishing Service Level Agreements (SLAs) between Council's Active Whitehorse and Facilities Maintenance teams will ensure collaboration, clear service expectations, performance measures and reporting for leisure facilities to improve planning, coordination, responsiveness and transparency of work across teams.

Current maintenance arrangements do not consistently consider leisure specific service expectations supported by detailed shared planning and tailored performance reporting. As a result, there are opportunities to improve the timeliness of non-urgent repairs, achieve more consistent presentation outcomes, and strengthen visibility of progress across leisure facilities.

The SLAs will introduce a structured and accountable framework for maintenance delivery, informed by condition audits, customer and staff feedback, Asset Management Plans (where available), and historic expenditure patterns.

SLAs will clarify service standards, response times, priorities and reporting expectations, ensuring leisure facilities are not disadvantaged by competing demands across Council's broader asset portfolio.

Importantly, this process will inform annual budget submissions, ensuring funding more accurately reflects the true cost of proactive and reactive maintenance for high-use leisure assets.

Key SLA Components include:

- Annual maintenance allocations informed by condition audits, customer feedback and historic spend

- Clear work programs and priorities for each reporting period
- Defined response times, quality standards and performance KPIs
- Quarterly reporting of reactive, planned and capital-related maintenance spend
- Bi-monthly review meetings to monitor performance and address emerging issues

Expected Benefits

- Clearer expectations, accountability and performance oversight
- Improved timeliness and consistency of maintenance outcomes
- Better alignment between funding, asset condition and customer expectations
- Reduced risk of leisure facilities being deprioritised relative to unrelated assets
- Stronger budget discipline and continuous improvement in maintenance delivery

4.2 10-Year Capital and Asset Planning for Leisure Facilities

Action: **Develop and maintain 10-year capital plans for all major leisure facilities, supported by progressive asset management planning and annual review.**

Budget Requirement: To be considered through future capital planning and budget processes

At present, capital renewal funding across major leisure facilities is primarily reactive. The condition of Aqualink Box Hill against industry leading aquatic and recreation centres demonstrates how quickly facilities of a similar age can fall behind industry best practice without structured renewal planning.

The December 2024 customer survey noted, ‘feedback regarding the physical state of the infrastructure (and equipment), frequently noting that facilities appear outdated, tired and are poorly maintained’.

A structured and adequately funded capital program is essential to:

- Maintain safety, accessibility, and service standards for all users.
- Protect the long-term value of Council-owned assets.
- Reduce reactive maintenance costs through planned interventions.
- Sustain community confidence and participation by ensuring facilities remain modern, clean, and fully operational.

Currently, while some funding exists for pool plant, sauna and steam room upgrades, and furniture and equipment, critical areas such as flooring, carpeting, painting, lighting, and change room renewal are not prioritised in the context of the overall Council building portfolio and therefore are underfunded or not funded at all. Without increased investment, these areas will continue to age, leading to diminished user experience, lower satisfaction, and potential safety concerns.

A site visit to Peninsula Aquatic and Leisure Centre (PARC), redeveloped around the same time as Aqualink Box Hill, highlighted the impact of ongoing capital investment. PARC demonstrates refreshed gym equipment, flooring, tiling, painting, and change room tiling renewal, whereas Aqualink Box Hill presents aged in comparison.

Aqualink Changerooms

This action establishes a consistent planning framework to ensure appropriate funding is identified in Council's 10-Year Capital Works Program, informed by asset condition, service demand, customer feedback and operational risk. Where formal Asset Management Plans are not yet available, the annual SLA review cycle will inform interim planning and prioritisation.

Asset Management Plans will be progressively developed for key sites to strengthen long-term decision-making:

- Sportlink (2027/28)
- Nunawading Community Hub (2028/29)
- Morack Public Golf Course (2028/29)
- Aqualink Nunawading (upon delivery of the redeveloped facility)

Customer survey feedback identifying ageing changerooms, flooring, equipment and presentation issues will continue to be a key input into prioritisation.

Expected Benefits

- Proactive, planned and evidence-based asset renewal
- Greater certainty in long-term capital funding requirements
- Reduced reliance on reactive repairs and emergency interventions
- Improved customer experience and service continuity
  Alignment with industry best practice and peer facility standards

4.3 Immediate Capital Investment for Aqualink Facilities

Action: **Allocate an additional $237,000 in 2026/27 to deliver targeted capital improvements at Aqualink facilities, subject to Council direction on redevelopment priorities for Aqualink Nunawading.**

Budget Requirement: $237,000 brought forward into 2026/27, with current draft funding allocations sufficient to cover the proposed capital works outlined below. No net increase in capital required to fund these projects.

Investment in asset and equipment renewal is a fundamental responsibility of Council as owner and operator of aquatic and leisure facilities. Customer feedback continues to highlight that Aqualink facilities appear tired and outdated in key areas, impacting satisfaction and perceived value.

While some funding exists for plant and equipment, critical customer-facing areas such as flooring, lighting, painting and changerooms have been underfunded for many years. Comparative benchmarking with facilities such as Peninsula Aquatic and Leisure Centre (PARC) highlights the importance of ongoing capital reinvestment to maintain contemporary, welcoming and safe environments.

This investment is intended to address priority renewal gaps in the short term, while longer-term planning and redevelopment options are developed. It does not resolve all asset challenges but is necessary to protect customer experience, safety and operational integrity in the interim.

Aqualink Nunawading remains a critical focus. Although the facility is being considered for major redevelopment within the next five years (earliest possible redevelopment timeline suggests June 2029), its current presentation and asset condition are not aligned with community expectations or Council's service standards. Key areas; including 20-year-old changeroom fixtures and deteriorating concrete concourse surfaces, require immediate renewal to ensure the facility remains safe, functional and welcoming during the lead-up to any future redevelopment.

Deferring investment until redevelopment is confirmed would expose Council to increased risk, higher reactive maintenance costs, and declining customer

experience. Targeted short- and medium-term upgrades are therefore both necessary and responsible, preserving the facility's operational integrity and ensuring it continues to deliver high-quality community outcomes.

Proposed Works 2026/27:

Aqualink Nunawading

- Leisure Pool Change Area: $120k
- Lighting Replacement: $35k
- Gym Floor Replacement: $77k
- Strength equipment replacement: $215k (funding allocation for 2026/27 to 2031/32 brought forward)
- Male Changerooms: $100k
- Female Changerooms: $100k

Aqualink Box Hill

- Main Studio Floor Replacement: $60k
- Strength equipment replacement: $220k (funding allocation for 2026/27 to 2031/32 brought forward)

Expected Benefits

- Improved facility presentation and customer satisfaction
- Reduced risk and unplanned downtime
- Preservation of Council's asset value
- Safer, more accessible and reliable facilities
- Stronger confidence in Council's stewardship of community assets

Outcome 5: Financial Sustainability, Performance and Accountability

Deliver a financially sustainable in-house management model supported by clear performance expectations, transparent reporting and strong accountability.

Why This Outcome Matters
Financial sustainability is a core enabler of community benefit. Without strong financial performance, Council's ability to maintain, renew and improve leisure facilities over time is further constrained.

Optimisation under this outcome ensures that improved performance is supported by a clear strategy, defined targets and regular reporting across community, operational and commercial outcomes. Stronger accountability provides confidence to Council that performance is actively managed and that investment decisions are informed, transparent and evidence based.

5.1 Clear Performance Monitoring, Reporting and Accountability

Action: **That Council implements a strengthened Accountability and Performance Reporting Framework for leisure facilities, including a defined set of core KPIs (reported on each quarter) and an annual performance presentation to Council, to ensure clear accountability for community, operational and financial outcomes.**

Budget Requirement: Nil (delivered within existing resources)

The optimisation of Council's in-house leisure facilities management model requires a clear and transparent framework that demonstrates how actions translate into outcomes, and how performance is monitored over time. A strengthened accountability and reporting framework is therefore critical to ensuring confidence in delivery, continuous improvement and effective stewardship of Council-owned assets.

The proposed framework will consolidate performance reporting across community, operational and financial domains, providing a clear line of sight between strategic outcomes, actions and measurable results. It responds directly to the need for greater transparency and assurance that optimisation is delivering tangible benefits for both the community and Council.

Key elements of the framework include:

- A defined and consistent set of core KPIs aligned to the agreed Strategic Outcomes, as set out in Section 3 of this report, drawing on existing data sources including customer research, operational metrics and financial reporting.
- Regular internal performance monitoring to support informed decision-making, early identification of issues and timely corrective action.
- An annual performance presentation to Council, providing a consolidated and accessible overview of leisure facilities performance, including:
    - Community outcomes, participation and customer experience
    - Financial performance, sustainability and revenue trends
    - Asset condition, maintenance and capital investment outcomes
    - Key improvements delivered, risks managed and emerging opportunities

The framework is designed to be practical and embedded into business-as-usual operations, rather than an additional reporting burden. It will leverage existing data and reporting systems, including the Swinburne University customer research program, financial systems and asset management processes, to ensure performance is evidence-based and comparable over time.

Importantly, this approach ensures optimisation is not treated as a one-off project, but as an ongoing commitment to performance, transparency and continuous improvement. It provides Councillors with confidence that investment decisions are informed, outcomes are monitored, and accountability is clear.

Expected Benefits

- Clear accountability for delivery of community, operational and financial outcomes.
- Improved transparency and confidence for Council through regular, consolidated reporting.
- Stronger alignment between strategic outcomes, actions and measurable results.
- Earlier identification of risks, emerging issues and opportunities for improvement.
- Consistent performance monitoring that supports continuous improvement over time.
- Enhanced organisational discipline in linking investment to outcomes and results.

5.2 Active Whitehorse Strategy

Action: **That Council, in the 2026/27 financial year and in consultation with the community, develop and seek endorsement of the Active Whitehorse Strategy at a projected cost of $90k, establishing a unified framework to guide activation, investment and performance across all sport, recreation and leisure facilities.**

Budget Requirement: $90,000 one off expense to engage a consultant and engage the community

The Consultant Report highlighted a significant strategic gap: the absence of a dedicated leisure-focused strategy to guide decision-making, prioritisation and performance management for Council's leisure facilities.

While the *Whitehorse Recreation Strategy* (expired 2024) provided broad direction for recreation assets, it did not offer the detailed operational and strategic framework required for facilities such as Aqualink and Sportlink. As a result,

decisions relating to leisure facilities have not consistently been guided by a single, contemporary strategic document aligned to the Integrated Council Plan.

With Council's ongoing commitment to in-house management of leisure facilities, the development of a comprehensive and integrated Active Whitehorse Strategy is essential. The strategy will ensure that decisions are informed, consistent and transparent; that resources are directed toward agreed priorities; and that the Active Whitehorse Facilities Team operates under a clear mandate that strengthens accountability for both community and financial outcomes.

Given the proposed expansion of the Team's remit to include leased and licensed assets, previously covered under the expired Recreation Strategy, a combined leisure and recreation strategy will provide substantial value. A single strategy will establish a unified vision for all Council-owned sport, recreation and leisure assets, and will guide how facilities are activated, programmed and managed to maximise community benefit.

The strategy will leverage the significant work already undertaken by LARS, for example the Indoor Sports Plan, and facility-specific service reviews, ensuring that facility development, renewal and activation are aligned with long-term community need and organisational direction. This integrated approach will also ensure that new and redeveloped facilities are designed to deliver on Council's strategic intent, including improved community access and shared use across both sport and non-sport user groups.

A review of Victorian local government examples identified the City of Greater Dandenong's "Make Your Move" Physical Activity Strategy 2020–2030 as a strong model, providing a clear strategic bridge between organisational priorities and major capital developments. This type of approach demonstrates the impact a well-crafted leisure and recreation strategy can have in guiding major decisions and supporting transparent, accountable delivery.

Expected Benefits

- A clear and actionable strategic plan that ensures all facility assets, both directly managed and leased, are activated and optimised for community access, inclusion and wellbeing.
- Robust decision-making and prioritisation, with resourcing, programming and policy development all guided by an endorsed Council strategy.
- Stronger governance and accountability, including measurable KPIs, enhanced performance reporting, and clearer expectations of the Active Whitehorse Facilities Team.
- Improved financial performance, supported by consistent strategic direction, more informed investment decisions, and better alignment between community need and service delivery.

- Enhanced transparency for Councillors and the community, with a clear framework that explains how and why decisions are made, and how outcomes will be monitored and evaluated.
- A unified vision and direction, integrating all sport, recreation and leisure assets under a single evidence-based strategy that strengthens organisational capability and consistency.

Alternate Option: In-house Development of the Active Whitehorse Strategy

An alternate option considered was the development of the Active Whitehorse Strategy using internal Council resources rather than engaging an external consultant. While this approach would retain full ownership of the strategy development process, it was assessed as challenging within current resourcing constraints. The development of a comprehensive leisure and recreation strategy requires extensive stakeholder and community engagement, detailed analysis of existing strategic work, benchmarking, facilitation, drafting, and validation, all of which would place significant additional pressure on existing teams already managing operational delivery and optimisation activity.

Delivering the strategy in-house would require the allocation of a dedicated internal resource with specialist skills in strategy development, engagement and facilitation. It is estimated that a minimum of 0.6 EFT at Band 7 for a 12-month period would be required to deliver the strategy to an appropriate standard, at an estimated minimum cost of $76,800. This resourcing would need to be redirected from existing priorities or funded as an additional position, with associated risks to delivery timelines and operational capacity.

5.3 Membership and Pricing Strategy

Action: **That Council adopts Year 2 of the Aqualink Membership Pricing Strategy which is projected to increase revenue by $108k in 2026/27, including:**

- **Implementation of a 4.5% annual increase on all membership types (3% for FAB Living) effective 1 July 2026 and 1 July 2027.**
- **Endorsement of structural adjustments previously not approved, specifically:**

  a. Removal of outdated memberships (gym-only and group-fitness-only).

  b. Phasing out family discounts while grandfathering existing members.

  c. Simplification of the membership model in line with the original proposal.

Budget Requirement: Nil (delivered within existing resources)

In 2024/25, Officers undertook a comprehensive review of the Aqualink Membership Pricing Strategy to refine pricing structures, improve market competitiveness, and support the long-term financial sustainability of the facilities. This review identified two key issues:

Under-pricing relative to market
Benchmarking indicated that Aqualink's memberships averaged 11% below comparable competitors. While this approach historically promoted accessibility, it now limits financial sustainability, operational efficiency, and the capacity to invest in future facility improvements.

Complex membership model
The current offering includes 51 membership types, resulting in administrative burden, customer confusion, and inefficiencies in sales, onboarding, and service delivery.

A structured three-year pricing adjustment and membership optimisation strategy was presented to Councillors in March 2025. The phased approach was designed to:

- Align with industry pricing trends,
- Generate additional revenue,
- Maintain customer retention, and
- Simplify the membership offering.

Council partially endorsed the strategy for Year 1 (2025/26) but did not approve several key structural elements intended for Years 2 and 3, which remain critical to the delivery of an optimised pricing model, which will continue to provide value for all our community.

Proposed Action	**Status**
Introduce a premium membership fee including Reformer Pilates (Total Fitness Plus)	Endorsed
Apply 4.5% annual increase on all membership types (3% for FAB Living) over 3 years	Endorsed for 2025/26 only
Remove outdated industry memberships (gym-only, group-fitness-only)	Not endorsed
Phase removal of family discounts (grandfather existing members)	Not endorsed

Standardise concession membership pricing to 10% of adult membership	Endorsed

The elements that remain “Not endorsed” are critical to delivering the intended simplification, operational efficiency, and long-term sustainability. Further rationale includes:

- *Financial sustainability:* Full adoption of the three-year pricing increase (4.5% from 1 July 2026) aligns fees with industry benchmarks, ensuring the long-term viability of Aqualink and its services.
- *Simplification of membership model:* Removing legacy and outdated membership types reduces administrative complexity, improves customer understanding, and streamlines enrolment and service delivery.
- *Equity and fairness:* Phasing out family discounts while grandfathering existing members balances fairness with the need for a sustainable pricing structure.
- *Optimising complementary measures:* The introduction of premium memberships and concession pricing is more effective when implemented alongside structural simplification.
- *Market alignment:* Updates ensure Aqualink remains competitive and continues to meet evolving community expectations.

Expected Benefits

- Improved financial sustainability of Aqualink through modernised pricing.
- Streamlined administrative processes and reduced operational inefficiencies.
- Clearer, more understandable membership offerings for the community.
- Enhanced customer retention and satisfaction.
- Better alignment with industry standards, supporting competitive positioning.
- Support for future investment in facilities, programs, and services.

7. RISK MANAGEMENT

Key Risks of Implementation

Risk	Description	Mitigation
Staff Transition and Change Management	Introducing new structures, roles, and responsibilities may cause uncertainty or resistance among staff.	Early and transparent communication, engagement with staff through working groups, clear induction and training plans, and support for professional development.
Financial Exposure	Investment in staffing, marketing, programs, and asset renewal carries upfront costs.	Detailed budget planning, and monitoring ROI through KPIs and financial reporting.
Community Expectations	Changes in programs, pricing, or access may not align immediately with all community preferences.	Proactive consultation, clear communication of benefits, and responsive adjustments based on feedback.
Policy and Procedural Alignment	Delegated authority for procurement, recruitment, and program introduction may conflict with existing Council processes.	Review and update relevant policies, establish clear governance, and maintain oversight through reporting mechanisms.

Key Risks of Non-Implementation

Risk	Description	Mitigation / Consequence
Stagnation and Inefficiency	Facilities remain constrained by current systems, processes, and structures, limiting agility, innovation, and service improvements.	Potential loss of competitive positioning and missed opportunities for revenue, participation, and community benefit.
Customer Dissatisfaction	Failure to modernise programming, pricing, opening hours, and customer experience may reduce engagement and retention.	Ongoing dissatisfaction and erosion of community trust, potentially impacting visitation and memberships.

Underutilisation of Assets	Without proactive management and activation, leased and licensed facilities may not achieve their full community and financial potential.	Reduced return on investment and less efficient use of Council assets.
Workforce Capability Gaps	Current staff may be unable to fully deliver against industry-standard expectations without additional support and skill development.	Increased operational risk, potential staff burnout, and inability to implement strategic initiatives effectively.
Deferred Maintenance and Asset Deterioration	Lack of planned investment and renewal increases risk of facility degradation, higher long-term costs, and service interruptions.	Reduced facility lifespan and increased capital costs in the future.

8. STAKEHOLDER ENGAGEMENT & COMMUNICATIONS

Targeted internal and external engagement has informed the development of the Optimisation Report to ensure recommendations are practical, evidence-based and aligned with organisational priorities.

Internal working groups were established to provide specialist input and operational insight from across Council, including representation from:

- Leisure and Recreation Services (LARS) leadership
- Aqualink facility management
- Integrated planning
- Financial planning and reporting
- Facilities maintenance

External engagement included the commissioned review undertaken by Warren Green Consulting, providing independent benchmarking and industry expertise. In addition, ongoing six-monthly surveys of Aqualink members and casual users have been a key input to the report. Survey results and emerging trends have been regularly monitored and analysed, with findings used to inform service improvements, customer experience initiatives and the actions outlined in this report.

10.2 – ATTACHMENT 1. Leisure Services Optimisation Report

APPENDICES

1. Open Hours Benchmarking
2. Fees and Charges Benchmarking

10.2 – ATTACHMENT 1. Leisure Services Optimisation Report

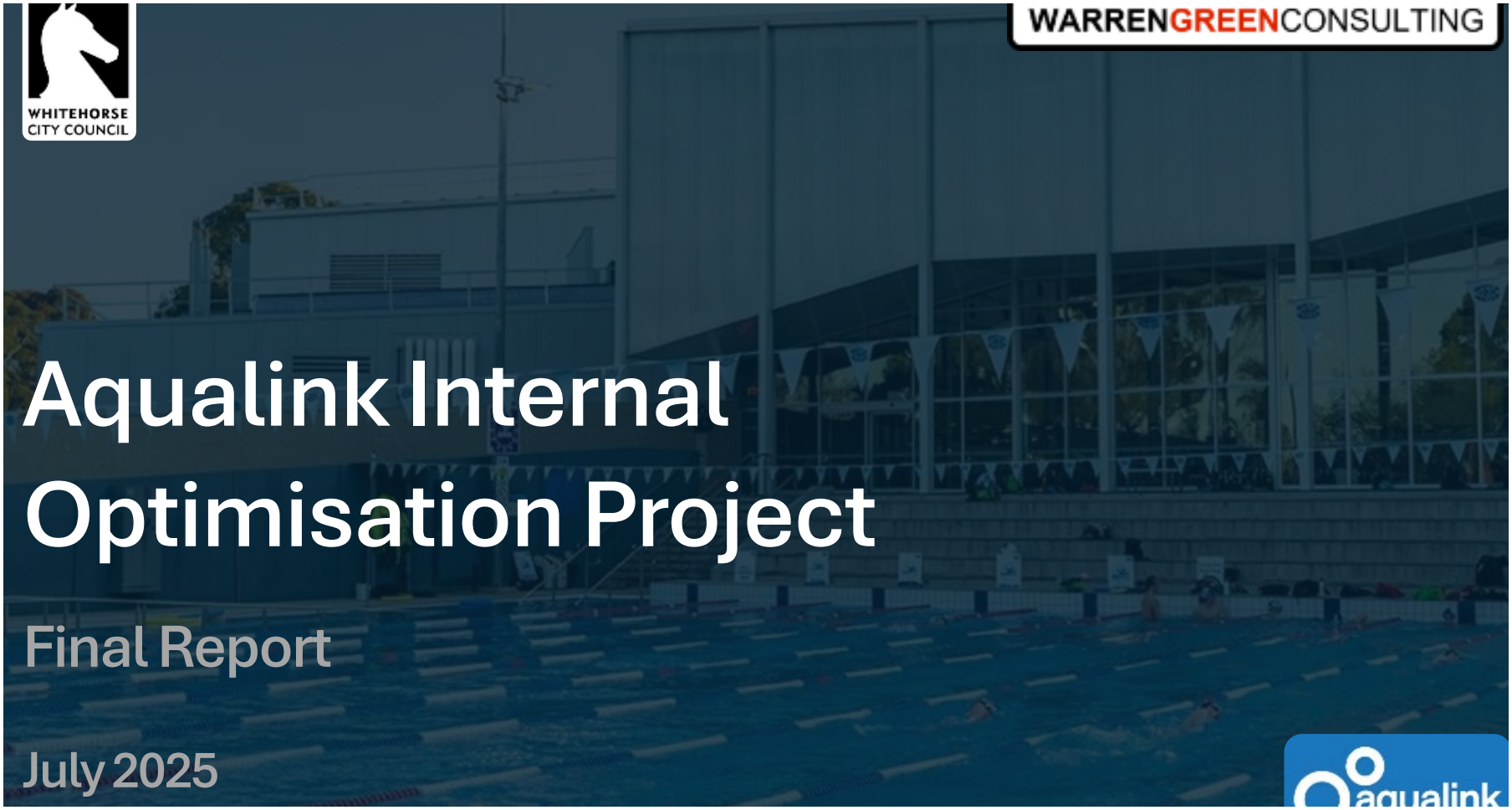
Neighbouring LGA Facilities	Centre Opening Hours (Staffed)	Aquatic / Pool Hours	Gym / Group Fitness Hours	Notes
Maroondah - Aquanation / Aquahub	Mon to Thurs: 5:30am - 10pm Fri: 5:30am - 9pm Sat: 7am - 7pm Sun: 8am - 7pm	Lap pool, warm water pool: Mon to Thurs: 5:30am - 9pm Fri: 5.30am - 8.30pm Sat: 7am - 7pm Sun: 8am - 7pm Leisure Pool: Mon to Fri: 8.45am - 7pm Weekends: 8am - 6pm	Mon to Thurs: 5:30am - 10pm Friday: 5:30am - 9pm Sat: 7am - 7pm Sun: 8am - 7pm	Public swim reduced during lessons Public holidays: 8am - 6pm
Boroondara - Boroondara Sports Complex	Mon to Thurs: 5:30am - 10.30pm Friday: 5:30am - 11pm Sat: 6am - 10.30pm Sun: 8am - 10pm	Mon to Fri: 5:30am - 8.30pm Sat: 6am - 8pm Sun: 8am - 8pm	Mon to Thurs: 5:30am - 10.30pm Friday: 5:30am - 11pm Sat: 6am - 10.30pm Sun: 8am - 10pm	Dive Pool and Learners Pool are seasonal only
Boroondara - Hawthorn Aquatic and Leisure Centre	Mon to Fri: 6am - 9.30pm Sat: 7am - 8pm Sun: 8am - 8pm	Pools close 15 mins before centre close	Mon to Fri: 6am - 9.30pm Sat: 7am - 8pm Sun: 8am - 8pm	
Boroondara - Ashburton Pool and Recreation Centre	Mon to Fri: 6am - 10pm Weekends: 8am - 8pm	Indoor: Mon to Fri: 6am - 9.45pm Weekends: 8am - 7.45pm Outdoor: Mon to Fri: 6am - 8pm Weekends: 8am - 7pm	Mon to Fri: 6am - 10pm Weekends: 8am - 8pm	Outdoor pool is closed 12pm-4pm during winter months of June, July and August
Manningham - Aquarena	Mon to Thurs: 5:30am–10pm Fri: 5:30am - 8pm Sat: 7am - 8pm Sun: 8am - 8pm	Pools close 15 mins before centre close	Mon to Thurs: 5:30am–10pm Fri: 5:30am - 8pm Sat: 7am - 8pm Sun: 8am - 8pm	Public holidays: 8am - 6pm
Monash - Monash Aquatic and Recreation Centre	Mon to Fri: 5:45am–9pm Sat - Sun: 8am–7pm	Pools close 15 mins before centre close	Mon to Fri: 5:45am–9pm Sat - Sun: 8am–7pm	Lap pool booking variations Public Holidays: 9am - 6pm
Knox - Knox Leisure Works	Mon to Fri: 5.30am - 9.15pm Sat: 6.30am - 7.45pm Sun: 8am - 5.45pm	Mon to Fri: 5.30am - 9.15pm Sat: 6.30am - 7.45pm Sun: 8am - 5.45pm	24/7 for eligible members Gym staffed hours: Mon to Fri: 8am - 8pm Sat: 9am - 12pm	Hours may be extended on hot days
Stonnington - Harold Holt Swim Centre	Mon to Thur: 5.45am - 9pm Fri: 5.45am - 8pm Sat: 6am - 7pm Sun: 7am - 7pm	Pools close 15 mins before centre close	Mon to Thur: 5.45am - 9pm Fri: 5.45am - 8pm Sat: 7am - 7pm Sun: 8am - 7pm	Public Holidays: Generally 8am - 6pm Gym opens one hour later than pools on weekends
Glen Eira - GESAC	Mon to Thurs: 5:45am - midnight Fri: 5:45am - 8pm Weekends: 7am - 7pm	Indoor: Mon to Thur: 5:45am - 9pm Fri: 5:45am - 8pm Fri Weekends: 7am - 6:30pm Outdoor 50m: Mon to Thur: 5:45am - 8.30pm Fri: 5:45am - 8pm Weekends: 7am - 6:30pm	Mon- Thurs: 5:45am - midnight Fri: 5:45am - 8pm Weekends: 7am - 7pm	Indoor/outdoor/leisure pools differ Last entry to gym 11:30pm Public holidays: 8am - 6pm
Other LGAs				
Northcote - NARC	Mon to Fri: 5:15am–10pm Sat: 5:15am - 8pm Sun: 8am - 8pm	Mon to Fri: 6am - 9:45pm Sat: 6am - 7:45pm Sun: 8am - 7:45pm 50m pool closes 15 mins earlier than other pools	Mon to Fri: 5:15am–10pm Sat: 5:15am - 8pm Sun: 8am - 8pm	50m pool closes 15min earlier Public holidays: 8am - 8pm
Banyule - WaterMarc	Mon to Fri: 6am–10pm Weekends: 7am - 8pm	Lap pool and warm water pool: Mon to Fri: 6am - 9.30pm Weekends: 6am - 7:30pm Leisure and toddler pools: Mon to Fri: 8.30am - 9.30pm Weekends: 8am - 7.30pm	Mon to Fri: 6am–10pm Weekends: 7am - 8pm	
Brimbank - Brimbank Aquatic	Mon to Fri: 6am–9pm Weekends: 8am–7pm	Mon to Fri 6am–8:30pm Weekends: 8am - 6:30pm	24/7 gym access	Slides and splash park are seasonal Public holidays: 9am - 5pm
Frankston - Peninsula Aquatic (PARC)	Mon - Fri: 5am - 9pm Weekends: 7am - 7pm	Within centre hours	Mon - Fri: 5am - 9pm Weekends: 7am - 7pm	Public holidays: generally 7am - 7pm
Mornington - YAWA	Mon to Fri: 6am–9pm Weekends: 8am–7pm	Pools close 15 mins before centre close LTS pool operates 9am - 7pm	24/7 gym access	Public holidays: 8am - 4pm

10.2 – ATTACHMENT 1. Leisure Services Optimisation Report

Facility	Debit frequency	Premium Membership Includes multi site and/or specialist program access	Full Membership Full access to single site, excluding specialist programs	Aquatics Membership Access to pools, spa, steam, warm water pool	Joining Fee Standard fee, may be waived during promotions	Concession Discount May not be available for all membership types
Whitehorse - Aqualinks	Fortnightly	$65.00	$50.60	$32.70	$49.00	10%
Neighbouring LGA Facilities						
Maroondah - Aquanation / Aquahub	Fortnightly	$86.00	$55.00	$42.00	$99.00	15%
Boroondara Leisure & Aquatic Facilities	Fortnightly	$64.70	N/A	$38.76	$99.00	20%
Manningham - Aquarena	Fortnightly	$80.00	$52.00	$37.30	$150.00	15%
Monash Aquatic	Fortnightly	N/A	$54.70	$46.50	$0.00	10%
Knox Leisureworks	Weekly *	$99.90	$54.20	$36.90	$65.00	10%
Stonnington - Harold Holt	Fortnightly	N/A	$51.20	$38.50	$50.00	10%
Glen Eira - GESAC	Weekly *	N/A	$59.90	$41.00	$99.00	10%

* Weekly fees converted to fortnightly for comparison purposes

Facility	Older Adult Membership	Teen Membership	Family Membership	Gym Only Membership	Group Fitness Membership	Swim Only Membership
Whitehorse	Yes	Yes	Yes	Yes	Yes	Yes
Neighbouring LGA Facilities						
Maroondah	Yes	Yes	Premium only	No	No	No
Boroondara	Yes	Yes	No	No	No	No
Manningham	Concession rate	Yes	No	No	No	No
Monash	Yes	Yes	No	Yes	Yes	No
Knox	Yes	Yes	No	Yes (Gym plus GF - excluding aquatics)		No
Stonnington	Concession rate	Yes	No	Yes	No	No
Glen Eira	Yes	Yes	No	No	No	No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CITY COUNCIL
WARRENGREENCONSULTING
Aqualink Internal
Optimisation Project
Final Report
July 2025
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10.2 – ATTACHMENT 2. Consultant Report Leisure Optimisation

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Executive Summary

Background

The Aqualink Leisure Facilities comprise comprise the Aqualink Box Hill and Aqualink Nunawading Facilities, which are owned and operated by the Whitehorse City Council (Council) under an in-house model.

Following a recent expression of interest process for the outsourcing of the learn-to-swim services for both Aqualink Box Hill (AQBH) and Aqualink Nunawading (AQN), Council's next phase of procurement has focused on a request for tender process to outsource the remaining services of the Aqualink Facilities, scheduled for release in October 2025.

In parallel, as part of its due diligence, Council is revisiting the options for the future management of Aqualink Facilities. While the current management model is in-house, one key option under consideration is the optimisation of the current in-house model with targeted improvements.

Project Overview

An Internal Optimisation Project (Project) has been commissioned by Council, engaging Warren Green Consulting (Consulting Team), to assess where current facility management and service delivery standards may fall short of best practice or anticipated outsourcing standards, and to identify opportunities required to address these gaps.

The Project provides Council with a timely opportunity to assess the current service delivery model, examine the performance of Aqualink Facilities, and identify opportunities to improve operational outcomes and community value, based on industry insights and benchmarked performance.

The Executive Summary outlines the scope, key findings and recommendations arising from the Project.

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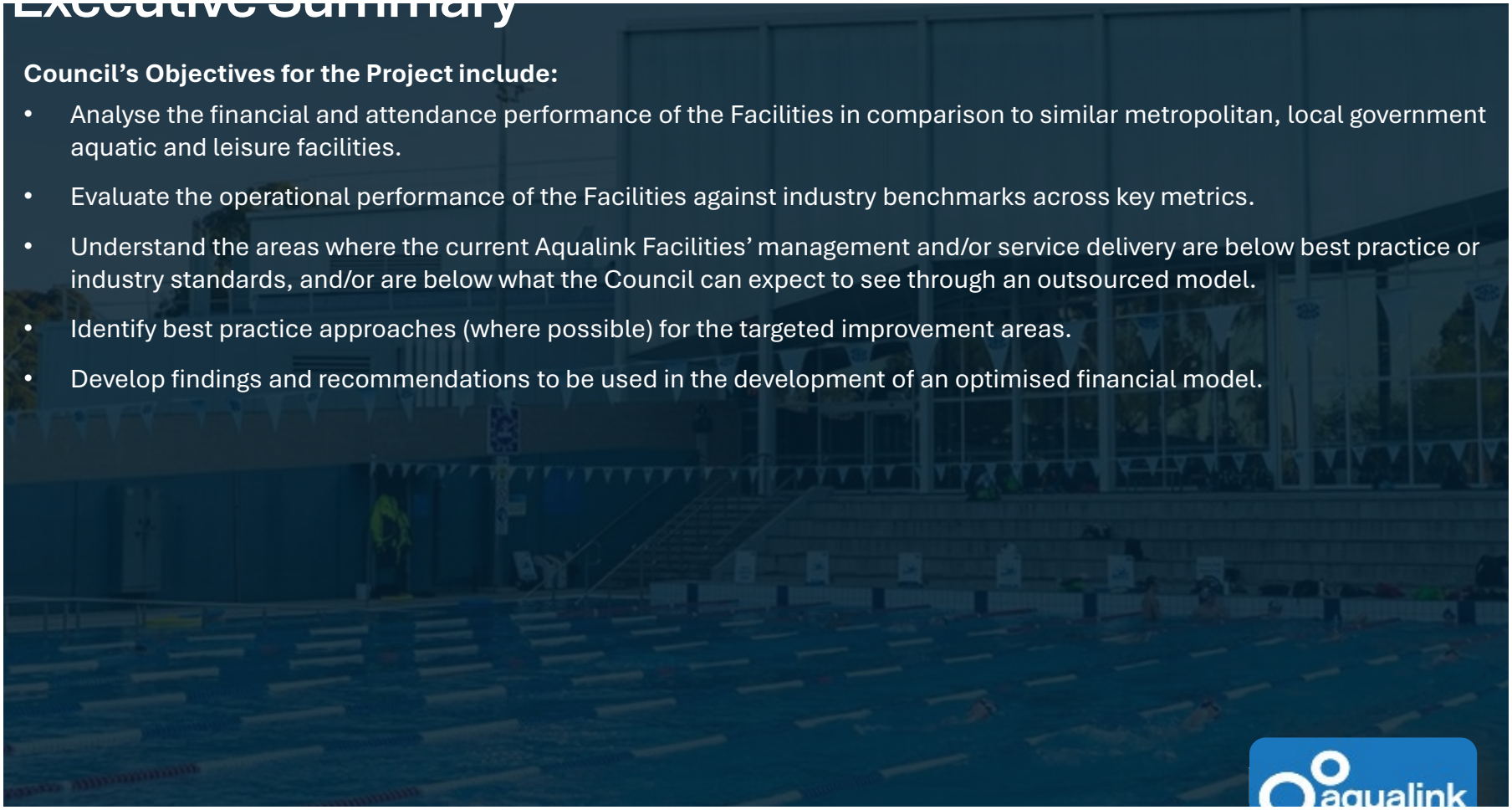

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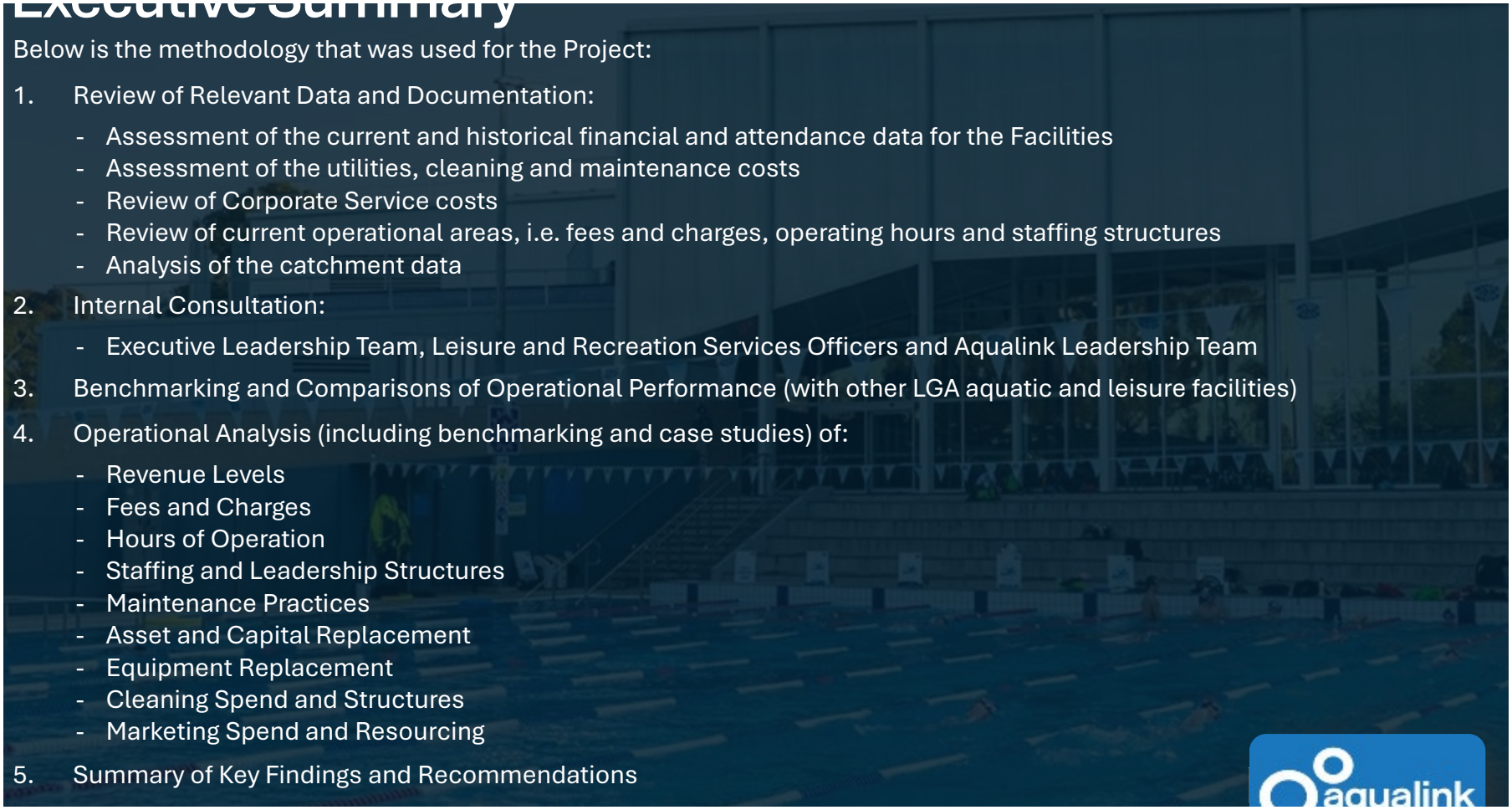

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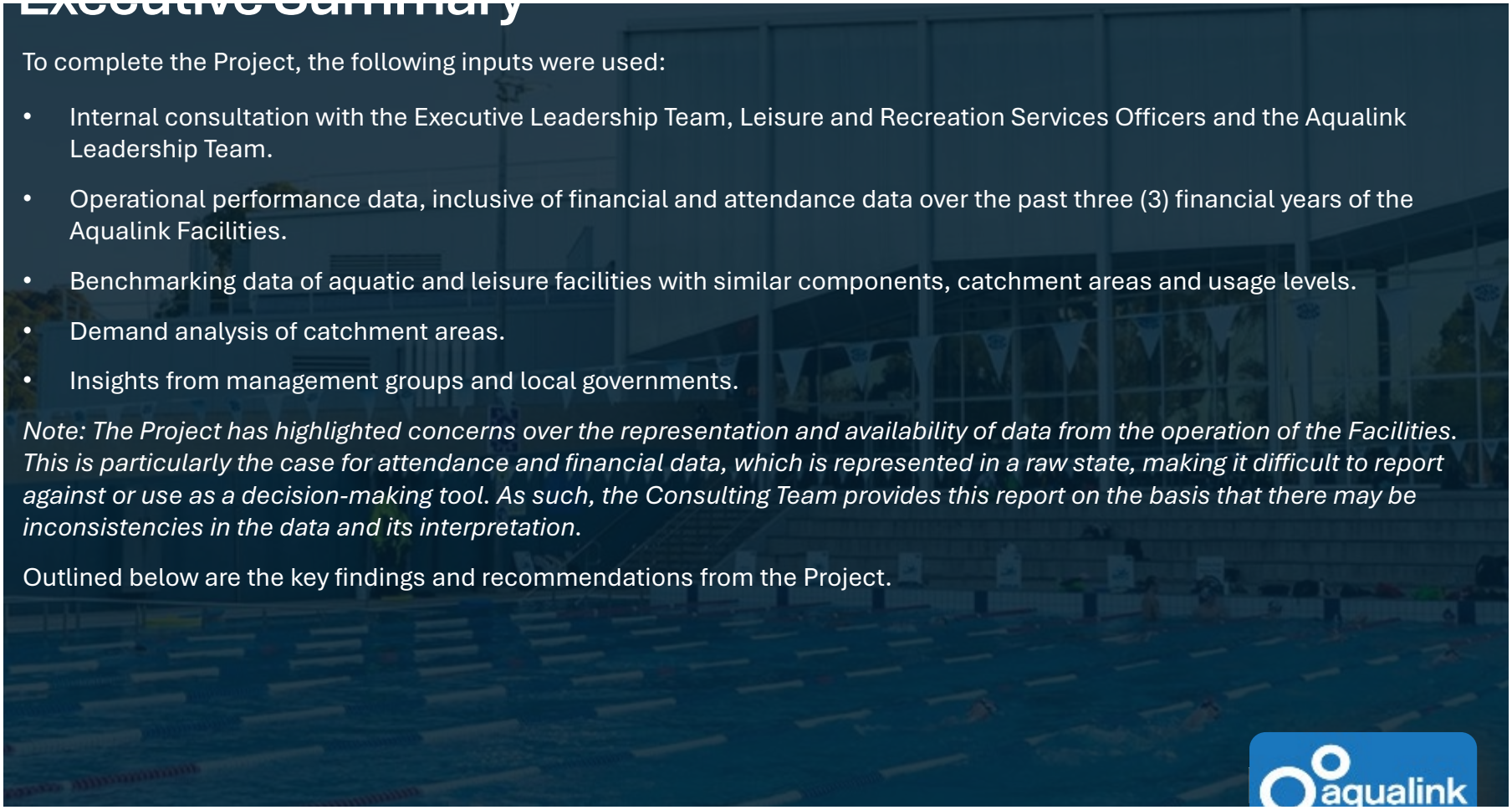

Executive Summary

To complete the Project, the following inputs were used:

- Internal consultation with the Executive Leadership Team, Leisure and Recreation Services Officers and the Aqualink Leadership Team.
- Operational performance data, inclusive of financial and attendance data over the past three (3) financial years of the Aqualink Facilities.
- Benchmarking data of aquatic and leisure facilities with similar components, catchment areas and usage levels.
- Demand analysis of catchment areas.
- Insights from management groups and local governments.

Note: The Project has highlighted concerns over the representation and availability of data from the operation of the Facilities. This is particularly the case for attendance and financial data, which is represented in a raw state, making it difficult to report against or use as a decision-making tool. As such, the Consulting Team provides this report on the basis that there may be inconsistencies in the data and its interpretation.

Outlined below are the key findings and recommendations from the Project.

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Key Findings and Recommendations

Key Findings

Outlined below are the key findings from the Project, based on the identified phases undertaken:

Consultation Process

1. The consultation process identified that the in-house model provides direct control over operations, allowing for strong alignment and connection with the community, as well as allowing for greater flexibility in adjusting services, programming, and facility improvements without the delays associated with contract amendments.
2. The operational staff were described as highly committed and well-connected to the community. The model was identified as providing a strong opportunity to leverage other departments within Council to have deeper levels of community engagement and have greater strategic alignment with Council's objectives.
3. The consultation also highlighted that Council's internal systems and processes often limit the Facilities' ability to respond quickly to changing community needs, with measured decision-making and cost-driven approaches hindering innovation and progress. Uncertainty about the future management model has also affected strategic momentum.
4. Operational support functions for the Facilities, such as maintenance, cleaning, and IT, were identified as areas of concern for customers and staff. Concerns were raised regarding delayed maintenance responses, a lack of clarity with responsibilities, and the lack of after-hours technology support, all of which negatively impact the customer experience. The marketing and communications area was also seen as under-resourced and insufficiently tailored to local needs.

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Key Findings

Operational Performance

5. The assessment of the financial and attendance performance identified significant challenges in interpreting and analysing the available data, particularly the profit and loss statements and membership data. Equally, the absence of detailed periodic reporting (monthly, quarterly or annually) for the Facilities impacts the ability to make operational decisions and to compare the performance of the Facilities without undertaking an in-depth assessment.
6. A review of the current and past performance of the Aqualink Facilities identified that the Facilities have shown a strong financial recovery in 2024/25 (interim results), with a combined operational improvement of $1.25M compared to the previous year and a $631K better-than-budget result. This recovery reflects the impact of full-year operations, excluding facility closures, and increased income, particularly from user fees.
7. An assessment of the financial performance of the Facilities, including an allocation for Corporate Service Costs (average of $2.1M), significantly distorts the net financial picture for the Facilities. Based on benchmarking of other in-house models, the Corporate Service Costs should be approximately $1.2M and $1.4M for a service of the scale of the Aqualink Facilities.
8. Despite this financial uplift, a clear performance gap exists between AQBH and AQN. AQBH outperformed AQN across all key operational metrics, including income per visit ($1.15 higher), subsidy per visit ($1.07 lower), and visitations per head of population (0.74 higher). AQBH's financial result of 2024/25 (interim) was $841K better than AQN's performance for the equivalent period.
9. A review of the attendance data identified that the forecasted total attendance in 2024/25 is expected to be 251K visits (15.3%) higher than the previous year. AQBH alone is forecasted to increase by 185K visits, reversing a prior-year decline due to facility closures. Membership growth for both Facilities also reflects positive growth, with AQBH and AQN increasing by 1,300 and 787 members, respectively, since mid-2022.

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Key Findings

Performance Benchmarking

10. The performance benchmarking revealed that AQBH is performing strongly relative to benchmarked facilities (excluding learn to swim), with an operating deficit $347K below the benchmark average and attendances approximately 299K higher. Despite an income per visit that is $0.82 below the average, AQBH had a lower subsidy per visit ($0.62 less), reflecting strong financial efficiency. It also recorded 926 more aquatic memberships than the average, although gym membership penetration remains slightly below expected levels.

11. In contrast, AQN significantly underperformed across most metrics. Its operating deficit was $633K higher than the benchmark, with income per visit $2.50 below average and subsidy per visit $0.96 higher. AQN also recorded lower visitation per head of population (1.52 visits below benchmark) and had 1,322 fewer gym members and 142 fewer aquatic members than average. These results highlight underutilisation and revenue underperformance, likely driven by the facility's aging condition and limited appeal in a competitive market.

12. When learn-to-swim figures were included, both AQBH and AQN were below benchmark net performance, by $112K and $954K respectively. AQN's income was $3.1M below the benchmark, compared to a $62K shortfall at AQBH. Both Facilities underperformed in terms of gym membership penetration and visits per head within a 15-minute drive, although AQBH's strong aquatic membership and attendance base confirmed its positive performance compared to the benchmarked facilities. The findings confirm AQBH as a high-volume operation, while AQN requires strategic intervention and upgrades to lift performance.

Operational Analysis – Fees and Charges

13. The fees and charges analysis found that while Aqualink's casual visit prices align with industry averages, several aspects of its membership pricing structure are less competitive and potentially exclusionary. Aquatic membership joining fees are $49.00, which is $19.30 above the benchmark average, while youth health and fitness memberships are priced $3.64 higher than comparable facilities.

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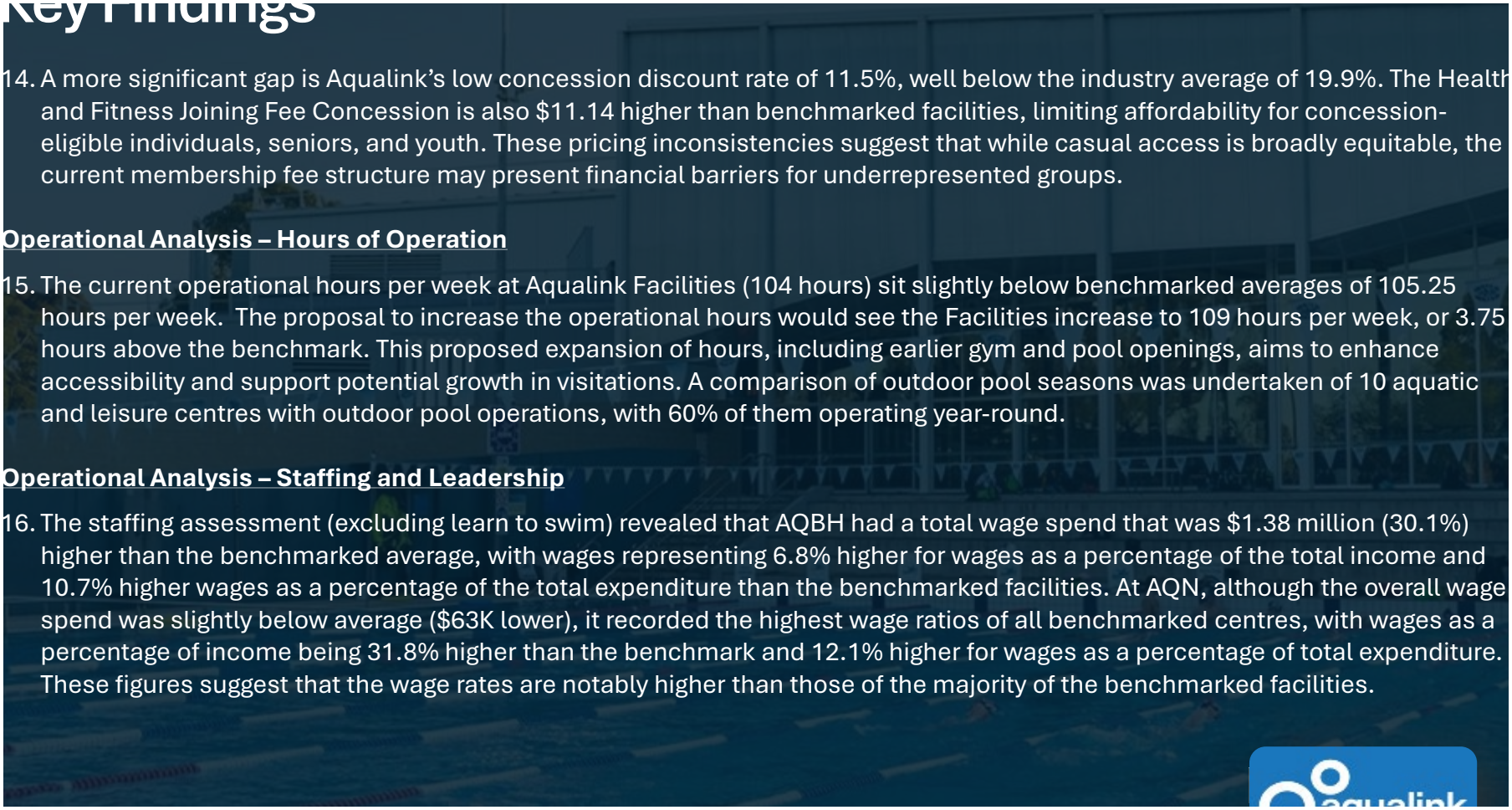

14. A more significant gap is Aqualink's low concession discount rate of 11.5%, well below the industry average of 19.9%. The Health and Fitness Joining Fee Concession is also $11.14 higher than benchmarked facilities, limiting affordability for concession-eligible individuals, seniors, and youth. These pricing inconsistencies suggest that while casual access is broadly equitable, the current membership fee structure may present financial barriers for underrepresented groups.

Operational Analysis – Hours of Operation

15. The current operational hours per week at Aqualink Facilities (104 hours) sit slightly below benchmarked averages of 105.25 hours per week. The proposal to increase the operational hours would see the Facilities increase to 109 hours per week, or 3.75 hours above the benchmark. This proposed expansion of hours, including earlier gym and pool openings, aims to enhance accessibility and support potential growth in visitations. A comparison of outdoor pool seasons was undertaken of 10 aquatic and leisure centres with outdoor pool operations, with 60% of them operating year-round.

Operational Analysis – Staffing and Leadership

16. The staffing assessment (excluding learn to swim) revealed that AQBH had a total wage spend that was $1.38 million (30.1%) higher than the benchmarked average, with wages representing 6.8% higher for wages as a percentage of the total income and 10.7% higher wages as a percentage of the total expenditure than the benchmarked facilities. At AQN, although the overall wage spend was slightly below average ($63K lower), it recorded the highest wage ratios of all benchmarked centres, with wages as a percentage of income being 31.8% higher than the benchmark and 12.1% higher for wages as a percentage of total expenditure. These figures suggest that the wage rates are notably higher than those of the majority of the benchmarked facilities.

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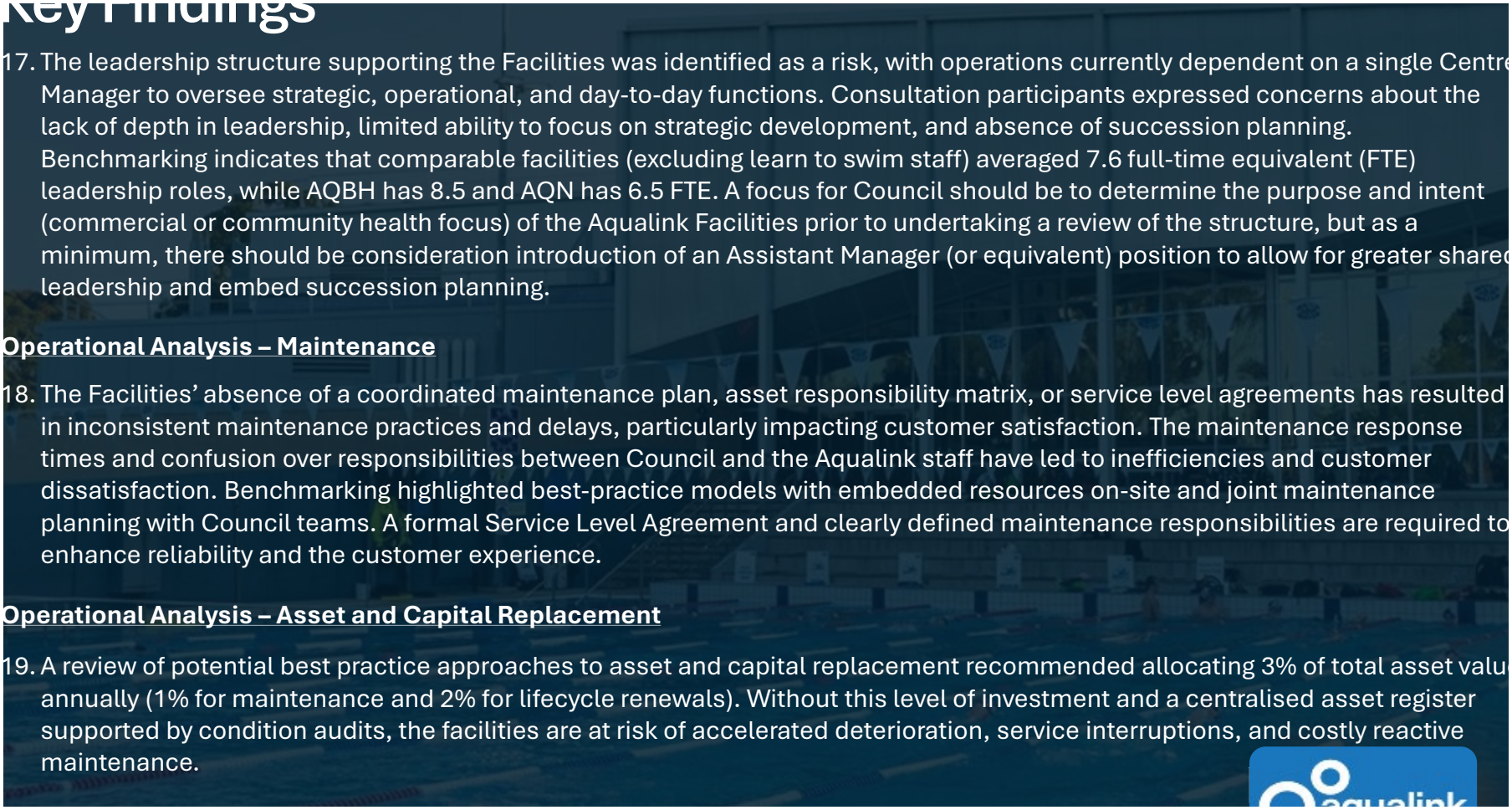

Key Findings

17. The leadership structure supporting the Facilities was identified as a risk, with operations currently dependent on a single Centre Manager to oversee strategic, operational, and day-to-day functions. Consultation participants expressed concerns about the lack of depth in leadership, limited ability to focus on strategic development, and absence of succession planning. Benchmarking indicates that comparable facilities (excluding learn to swim staff) averaged 7.6 full-time equivalent (FTE) leadership roles, while AQBH has 8.5 and AQN has 6.5 FTE. A focus for Council should be to determine the purpose and intent (commercial or community health focus) of the Aqualink Facilities prior to undertaking a review of the structure, but as a minimum, there should be consideration introduction of an Assistant Manager (or equivalent) position to allow for greater shared leadership and embed succession planning.

Operational Analysis – Maintenance

18. The Facilities' absence of a coordinated maintenance plan, asset responsibility matrix, or service level agreements has resulted in inconsistent maintenance practices and delays, particularly impacting customer satisfaction. The maintenance response times and confusion over responsibilities between Council and the Aqualink staff have led to inefficiencies and customer dissatisfaction. Benchmarking highlighted best-practice models with embedded resources on-site and joint maintenance planning with Council teams. A formal Service Level Agreement and clearly defined maintenance responsibilities are required to enhance reliability and the customer experience.

Operational Analysis – Asset and Capital Replacement

19. A review of potential best practice approaches to asset and capital replacement recommended allocating 3% of total asset valu annually (1% for maintenance and 2% for lifecycle renewals). Without this level of investment and a centralised asset register supported by condition audits, the facilities are at risk of accelerated deterioration, service interruptions, and costly reactive maintenance.

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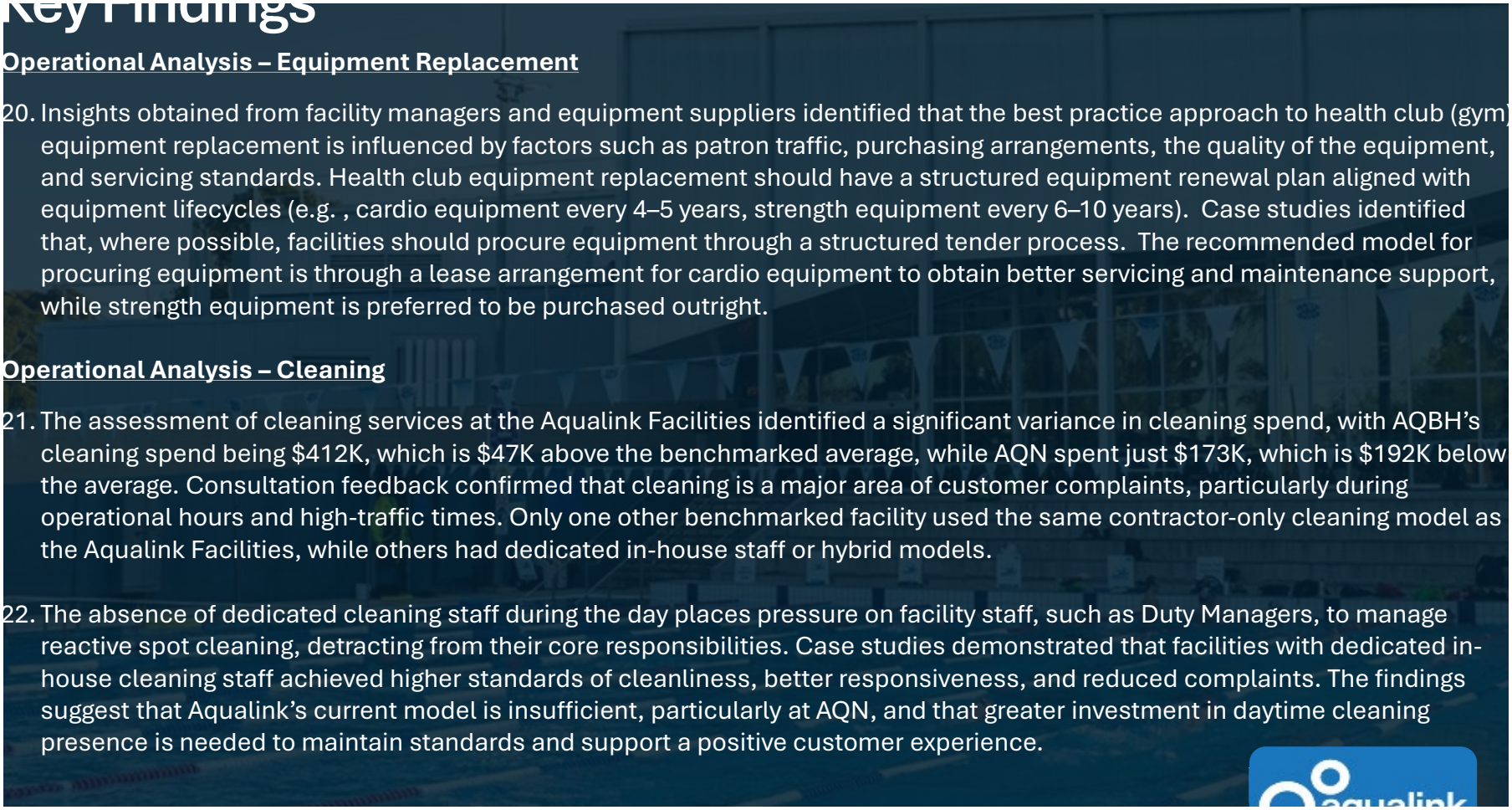

Key Findings

Operational Analysis – Equipment Replacement

20. Insights obtained from facility managers and equipment suppliers identified that the best practice approach to health club (gym) equipment replacement is influenced by factors such as patron traffic, purchasing arrangements, the quality of the equipment, and servicing standards. Health club equipment replacement should have a structured equipment renewal plan aligned with equipment lifecycles (e.g. , cardio equipment every 4–5 years, strength equipment every 6–10 years). Case studies identified that, where possible, facilities should procure equipment through a structured tender process. The recommended model for procuring equipment is through a lease arrangement for cardio equipment to obtain better servicing and maintenance support, while strength equipment is preferred to be purchased outright.

Operational Analysis – Cleaning

21. The assessment of cleaning services at the Aqualink Facilities identified a significant variance in cleaning spend, with AQBH's cleaning spend being $412K, which is $47K above the benchmarked average, while AQN spent just $173K, which is $192K below the average. Consultation feedback confirmed that cleaning is a major area of customer complaints, particularly during operational hours and high-traffic times. Only one other benchmarked facility used the same contractor-only cleaning model as the Aqualink Facilities, while others had dedicated in-house staff or hybrid models.

22. The absence of dedicated cleaning staff during the day places pressure on facility staff, such as Duty Managers, to manage reactive spot cleaning, detracting from their core responsibilities. Case studies demonstrated that facilities with dedicated in-house cleaning staff achieved higher standards of cleanliness, better responsiveness, and reduced complaints. The findings suggest that Aqualink's current model is insufficient, particularly at AQN, and that greater investment in daytime cleaning presence is needed to maintain standards and support a positive customer experience.

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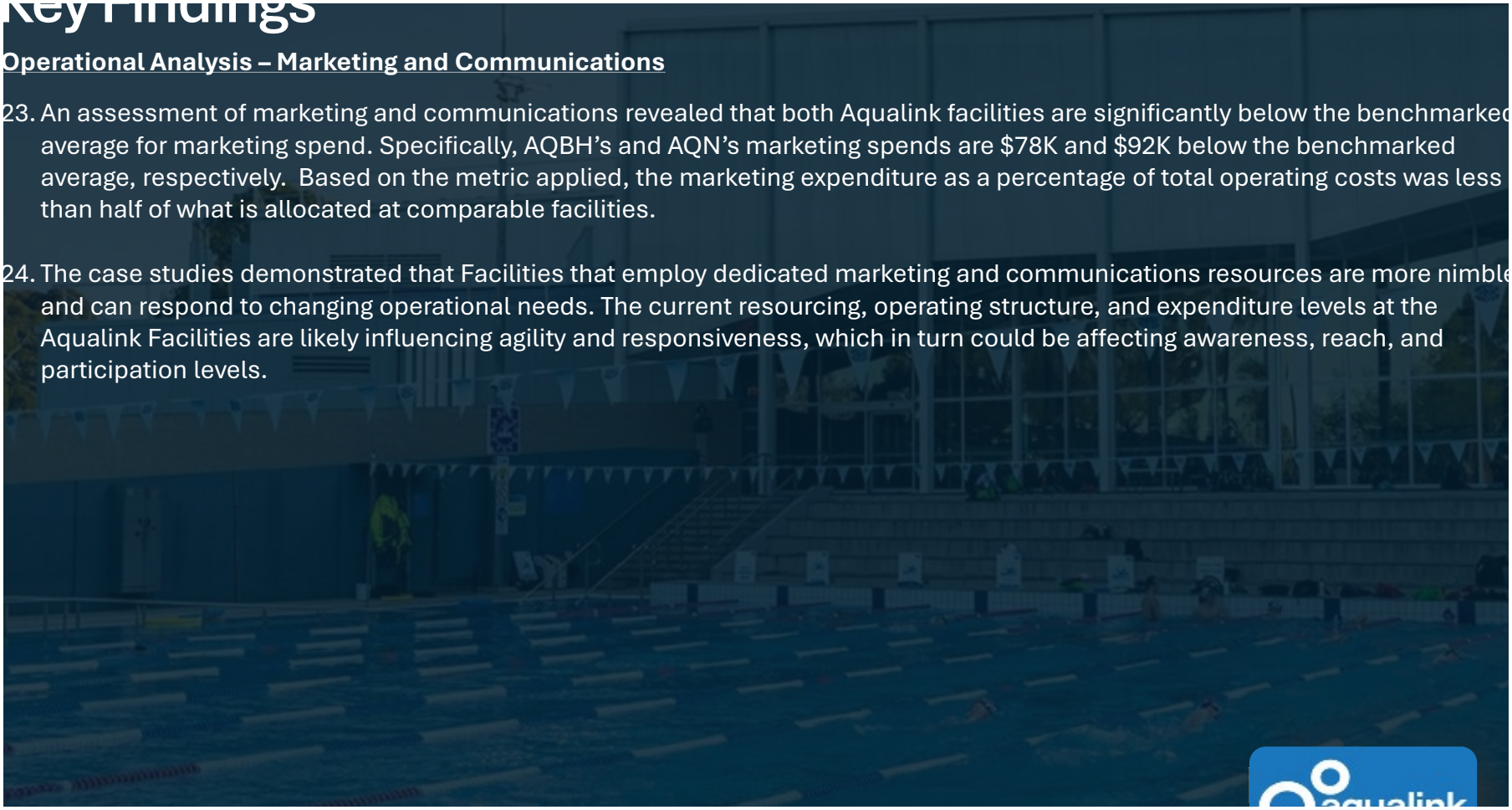

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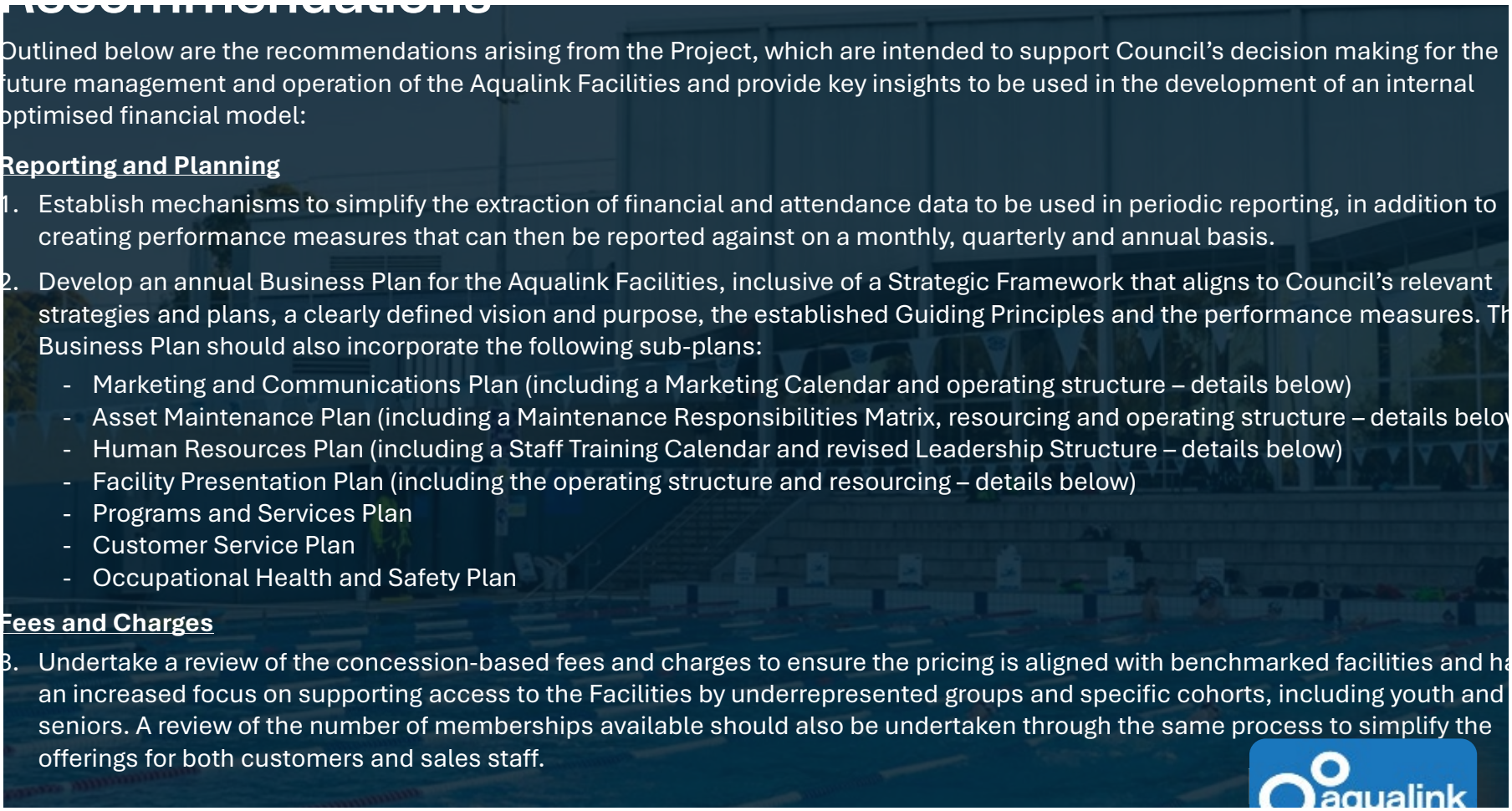

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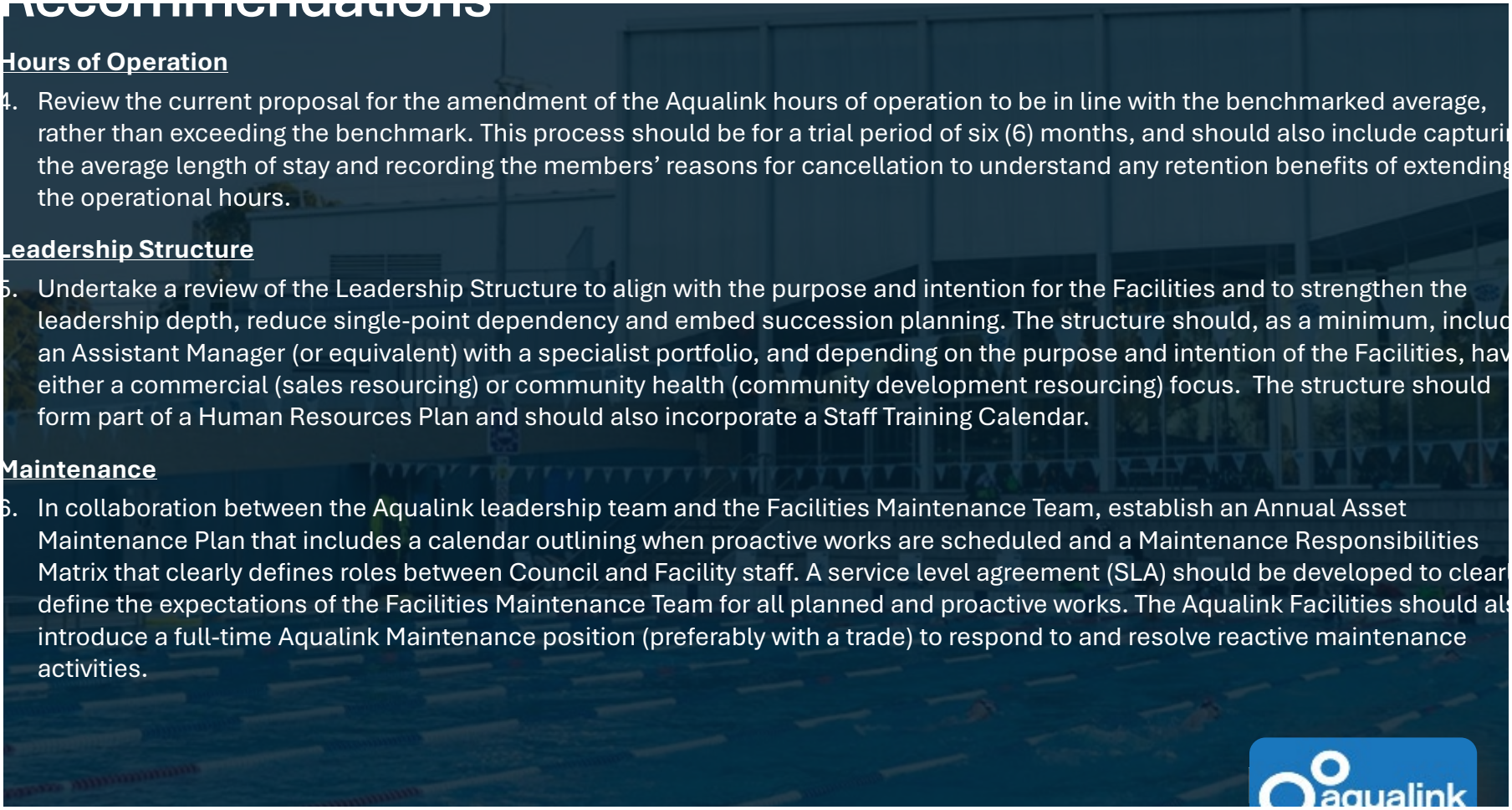

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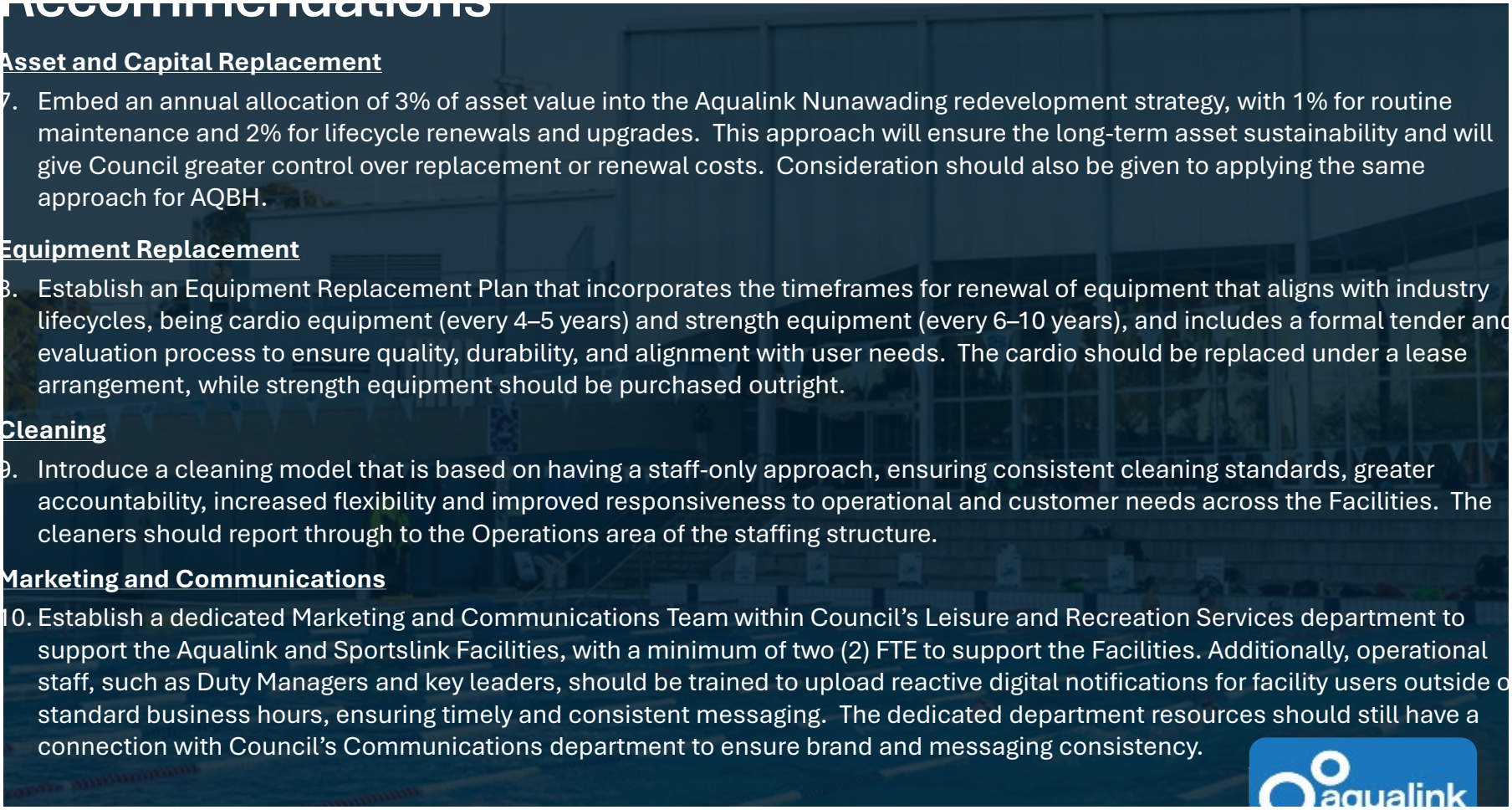

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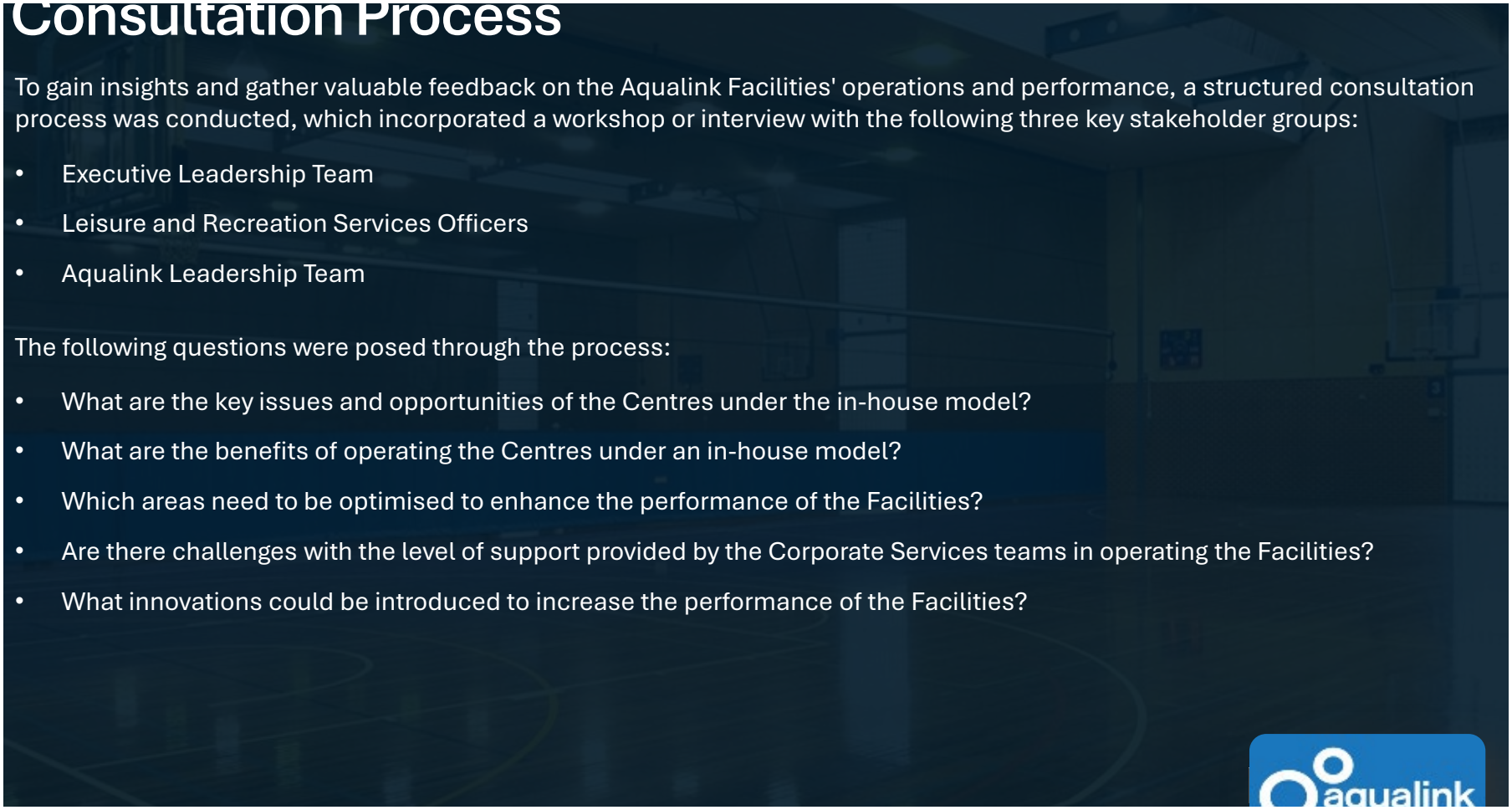
Consultation Process
To gain insights and gather valuable feedback on the Aqualink Facilities' operations and performance, a structured consultation process was conducted, which incorporated a workshop or interview with the following three key stakeholder groups:
• Executive Leadership Team
• Leisure and Recreation Services Officers
• Aqualink Leadership Team
The following questions were posed through the process:
• What are the key issues and opportunities of the Centres under the in-house model?
• What are the benefits of operating the Centres under an in-house model?
• Which areas need to be optimised to enhance the performance of the Facilities?
• Are there challenges with the level of support provided by the Corporate Services teams in operating the Facilities?
• What innovations could be introduced to increase the performance of the Facilities?
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Consultation Process

Outlined below is a summary of the combined feedback received for the questions posed through the consultation process:

What are the key issues and opportunities of the Centres under the in-house model?

Issues

- Council policies and processes limit the facilities' ability to respond quickly to trends and changing needs.
- Operating the facilities with a commercial focus is not Council's core strength.
- Decision-making is primarily cost-driven, and the slow pace of change hinders operational responsiveness.
- Uncertainty around the long-term management model has stalled progress and affected strategic momentum.
- Council's embedded systems are not fully compatible with facility operations, including point-of-sale integration.
- Recruitment processes are slow due to the requirement for formal approvals, such as vacancy assessments.
- There are ongoing challenges in attracting and retaining high-quality staff and leaders.
- The maintenance approach is reactive and inconsistent, impacting facility reliability and customer satisfaction.

Opportunities

- The new Enterprise Bargaining Agreement (EBA) is expected to reduce staffing costs.
- The team is committed and well-regarded by the community, providing an opportunity for deeper community engagement.
- Learning from other in-house operated facilities provides an opportunity to enhance the Aqualink Facilities' operations.
- The opportunity to implement formal service level agreements to improve accountability and corporate support.
- Data reporting and utilisation should be improved to better inform decision-making and monitor operational performance.
- Contemporary technology solutions could be introduced to enhance the customer experience.

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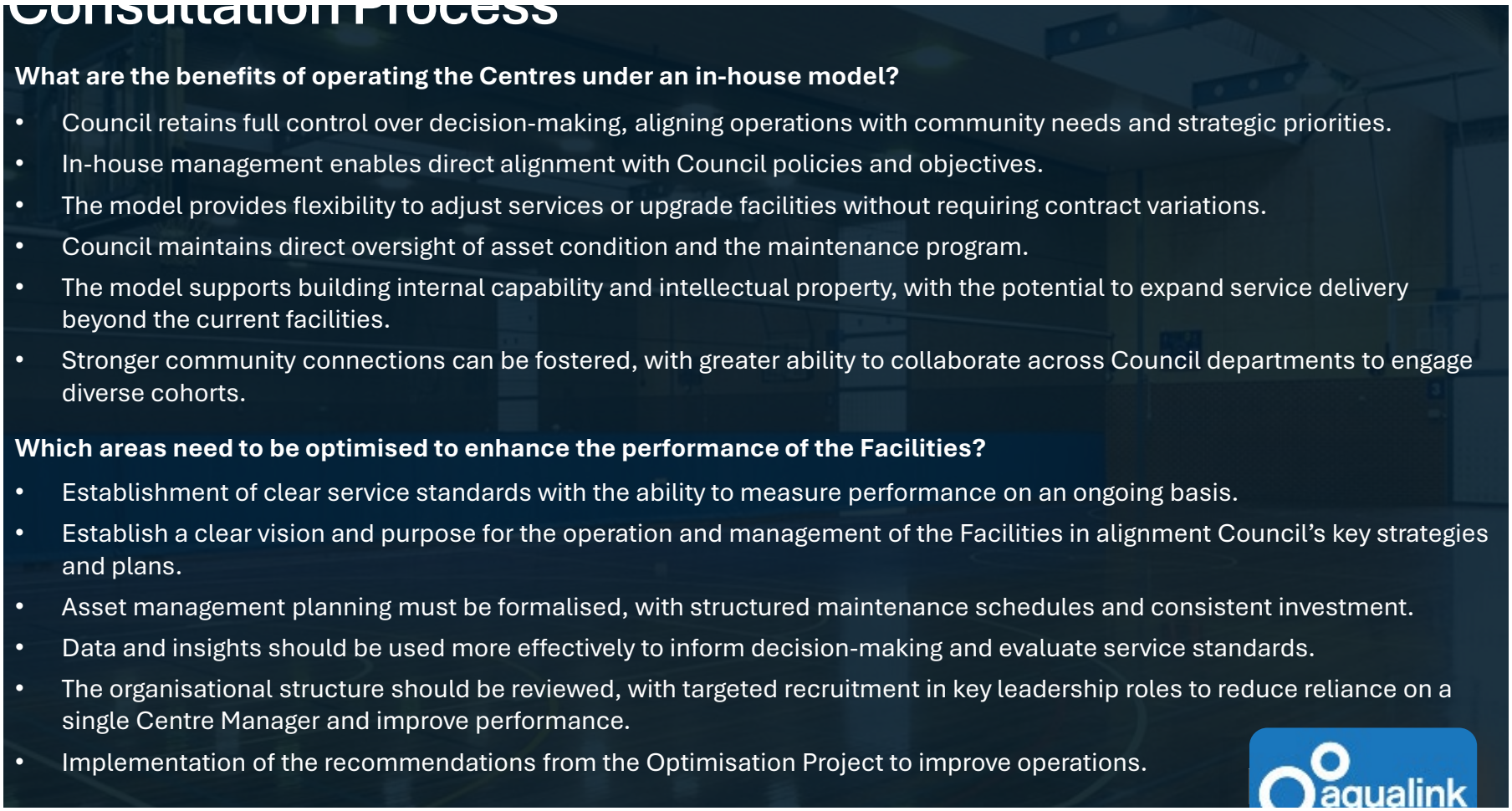

Consultation Process

Are there challenges with the level of support provided by the Corporate Services teams in operating the Facilities?

- Corporate Services support in some departments is under-resourced and lacks the capacity to support driving innovation and growth.
- Limited cross-departmental collaboration and strategic oversight result in ad hoc decisions that lack alignment with a long-term vision.
- Maintenance and cleaning are the most frequent sources of customer complaints, with delayed response times negatively impacting user experience.
- The absence of after-hours technology support creates operational risks when systems such as point-of-sale fail.
- Marketing and Communications require additional resourcing to meet the demands of the Facilities.

What innovations could be introduced to increase the performance of the Facilities?

- Formal service level agreements and prioritisation systems should be introduced for facility maintenance to improve accountability and responsiveness.
- A clear vision and purpose statement are needed to guide future investment and decision-making in line with projected population growth.
- Centres should broaden their focus beyond physical facilities to include new service models and community outreach initiatives.
- New technology solutions, such as body scanners, fitness applications, automatic invoicing, and drowning prevention systems, could enhance customer experience and safety.
- Adjustments to operating hours could attract new customer segments and increase visitation.

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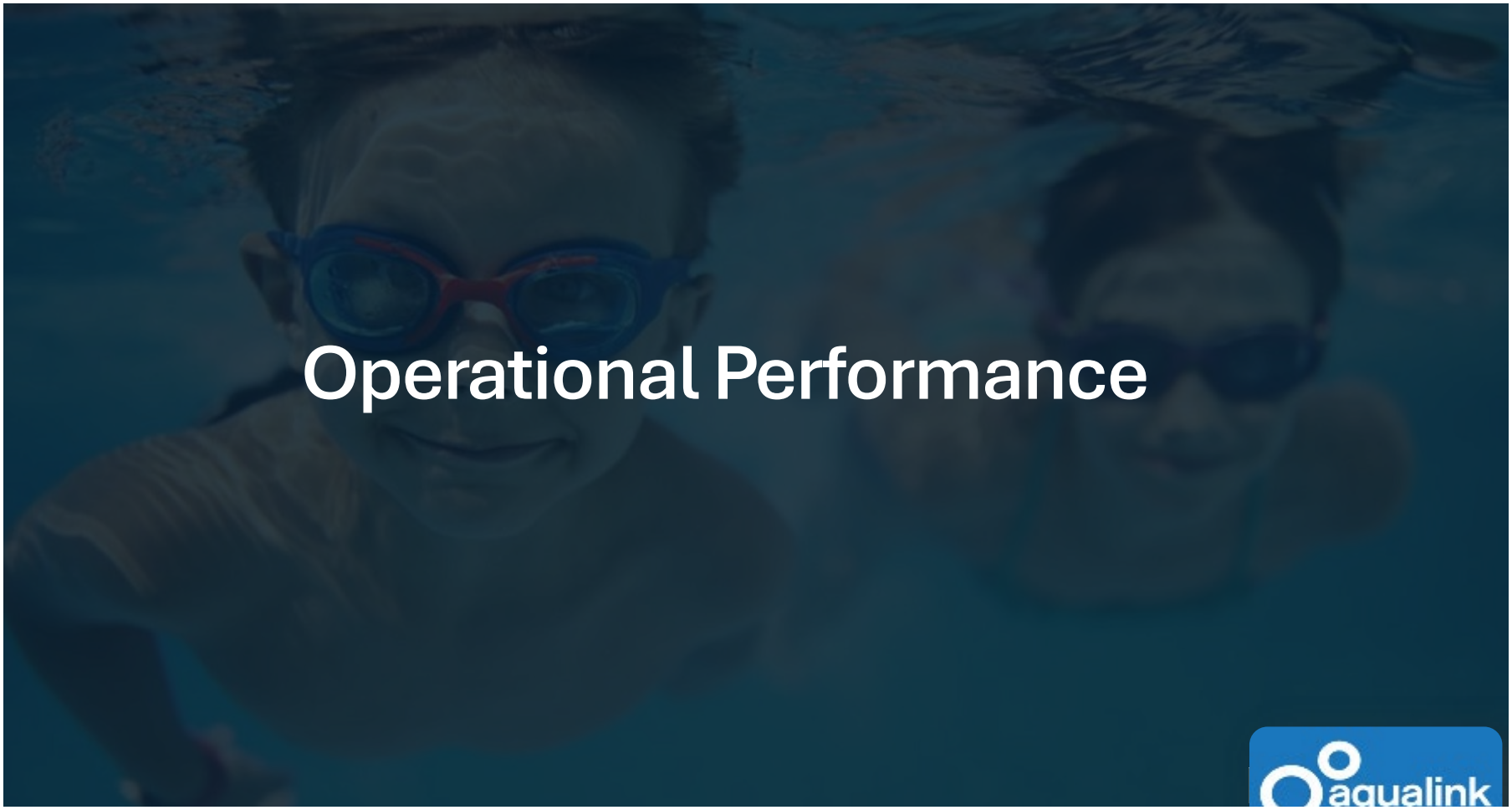

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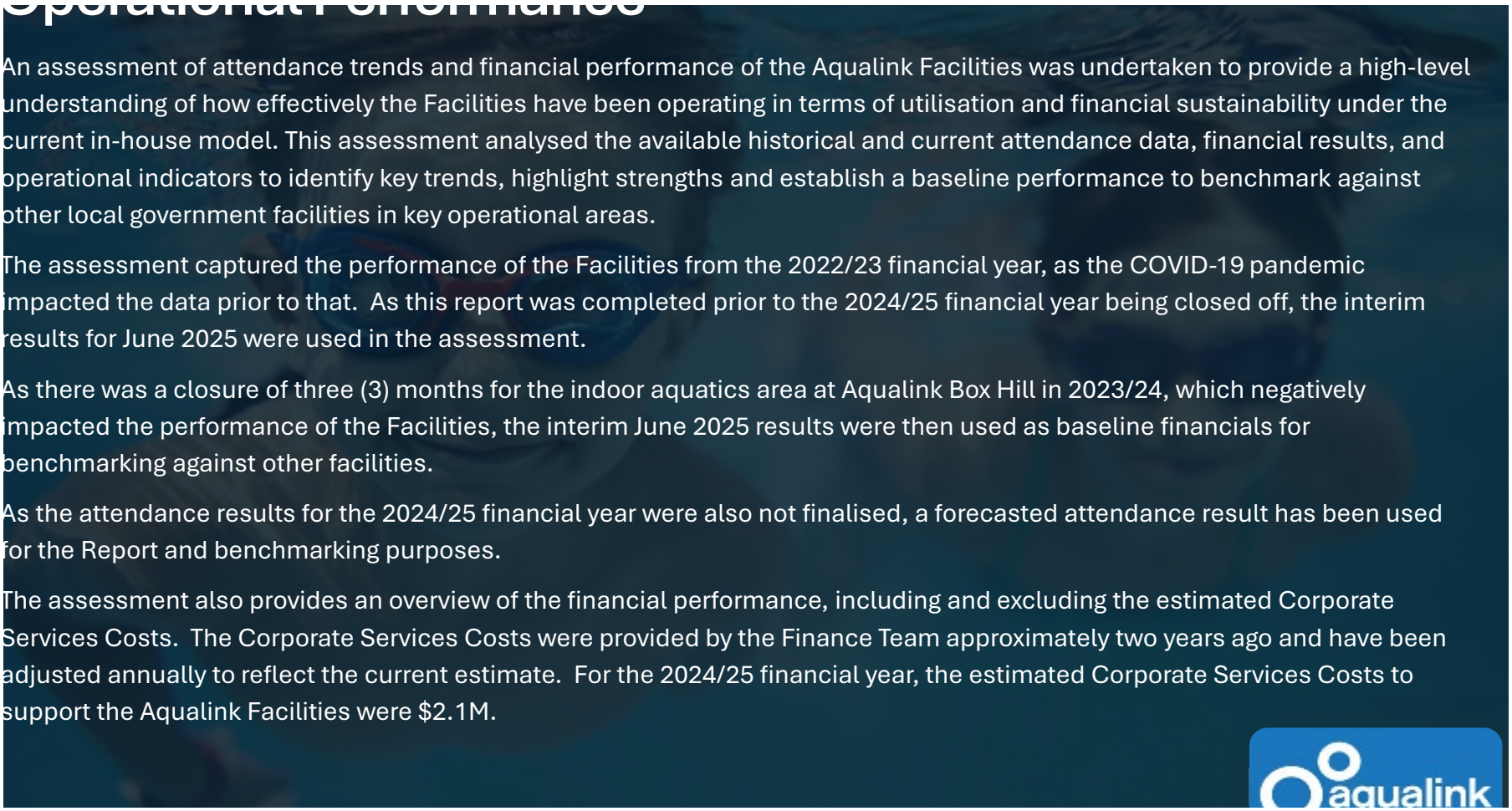

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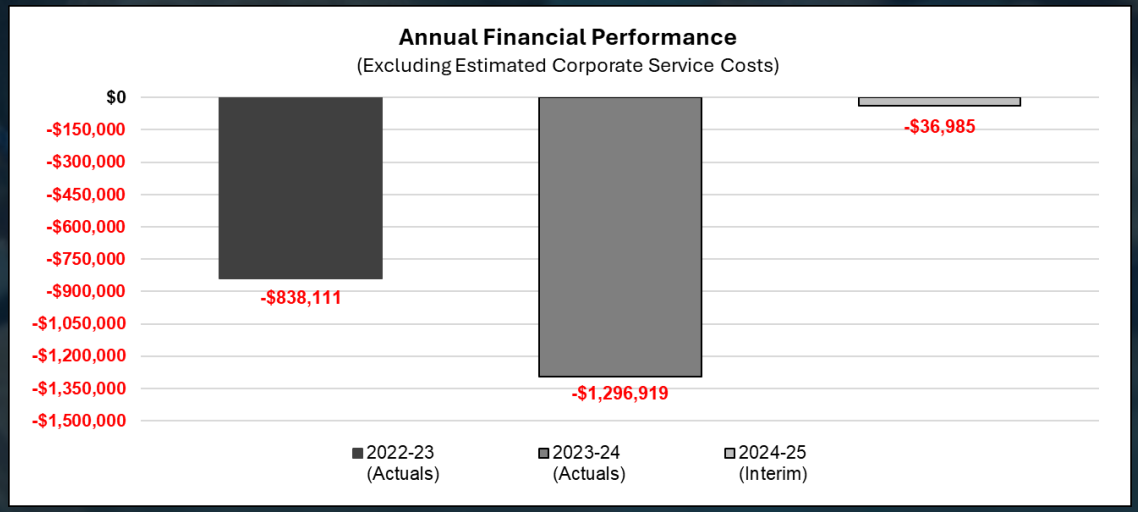
Financial Performance

The graph below demonstrates the Aqualink Facilities' annual financial performance over the past three (3) years, excluding the estimated Corporate Service Costs. Actual results are provided for the first two years, while 2024/25 is based on the interim result for June 2025.



- The 2024/25 interim result represents a significant operational improvement of $1.259M compared to the 2023/24 financial year, and a $631K better-than-budget result for the 2024/25 budgeted deficit of $667K.
- The 2023/24 financial year incorporated a major closure of the indoor pool at AQBH of three (3) months and the closure of the outdoor pool in 2022/23, which had notable impacts on the income levels, but both Facilities have had uninterrupted operations in 2024/25, which has seen a considerable uplift in the financial performance.

Financial Performance

The following tables outline the financial performance for both Aqualink Facilities over the past three (3) years, demonstrating the income, expenditure and net deficit or surplus.

Aqualink Box Hill

AQBH Financial Performance	2022/23	2023/24	2024/25 (Budget)	2024/25 (Interim)	2024/25 (Interim) Variance to Budget
Total Income	$6,151,294	$5,542,326	$6,521,162	$7,102,859	**$581,697**
Total Expenditure	$6,311,376	$6,369,511	$6,497,681	$6,700,194	**-$202,513**
Net Operating Result	**-$160,082**	**-$827,186**	**$23,481**	**$402,665**	**$379,184**

- The income between the 2023/24 and 2024/25 (interim results) financial years has risen by approximately $1.56M or 22%, with the indoor pools impacting the 2023/24 income. In comparison to the budget for 2024/25, AQBH is expected to be $581K ahead of the budget.
- To support the income growth, there has been an increase of $202K in expenditure for 2024/25 (interim) compared to the budget. When compared to the expenditure in 2022/23 ($6.31M), the 2024/25 result represents a 6.1% increase over the two years, which is below the consumer price index (CPI) allocation for that period.
- The net variance from 2023/24 to the 2024/25 (interim) net result equates to an improvement of $1.22M, while the forecasted $379K better than the budget for the year.

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Financial Performance

Aqualink Nunawading

AQN Financial Performance	2022/23	2023/24	2024/25 (Budget)	2024/25 (Interim)	2024/25 (Interim) Variance to Budget
Total Income	$3,458,097	$3,698,411	$3,713,705	$4,060,909	**$347,204**
Total Expenditure	$4,136,127	$4,168,144	$4,404,212	$4,500,560	**-$96,347**
Net Operating Result	**-$678,030**	**-$469,734**	**-$690,507**	**-$439,650**	**$250,857**

- The income for AQN increased by $362K or 9.1% from 2023/24 to 2024/25 (interim). Compared to the budget, the income for the Facility has grown by $ 347K.
- The expenditure in 2024/25 (interim) has increased by 7.9% ($332K) compared to the 2023/24 financial year, which is predominantly in Employee Costs and Materials and Services.
- The net result of AQN in 2024/25 (interim) was approximately $250K better than the budgeted deficit of $690K and approximately a $30K improvement on the 2023/24 deficit.

Financial Performance - Income

The following tables outline the annual income for the two Facilities separated by income categories:

Aqualink Box Hill

Aqualink Box Hill Income by Category				
Visit Type	**2022/23**	**2023/24**	**2024/25** (Interim Results)	**Total (3-Years)**
User Fees	$5,437,836	$5,409,581	$6,353,223	**$17,200,640**
Licence Fees Swim School	$614,674	$66,936	$654,901	**$1,336,511**
Leases and Rental	$98,784	$65,808	$94,735	**$259,327**
Totals	**$6,151,294**	**$5,542,326**	**$7,102,859**	**$18,796,478**

- The income of AQBH has fluctuated notably over the three-year period, principally due to the closure of the indoor pools in 2023/24 and a strong operating performance in 2024/25. The income declined from 2022/23 to 2023/24 by approximately $1.18M (or 17.6%), while increasing in 2024/25 (interim) by approximately $1.59M compared to the 2023/24 income levels.
- The main reduction in the income in 2023/24 was the 'Licence Fees for Swim School' (approx. $548K) due to the pool closure
- The major contributing factor in the significant growth in income in 2024/25 has been the 'User Fees', incorporating memberships, recreational swimming and casual access, which has increased by $933K or 14.9% compared to 2023/24.

Financial Performance - Income

Aqualink Nunawading

Aqualink Nunawading Income by Category				
Visit Type	**2022/23**	**2023/24**	**2024/25 (Interim)**	**Total (3-Years)**
User Fees	$2,725,095	$2,949,475	$3,230,555	**$8,905,126**
Licence Fees Swim School	$669,907	$708,581	$792,594	**$2,171,082**
Leases and Rental	$47,719	$40,342	$37,760	**$125,821**
Totals	**$3,442,721**	**$3,698,399**	**$4,060,909**	**$11,202,029**

- The income of AQN has continued to increase over the three-year period realising 15.2% in growth between the 2022/23 and 2024/25 financial years.
- The main areas of growth have been in the 'User Fees' and 'Licence Fees Swim School', which have both increased by over 15% compared to 2022/23, while the 'Leases and Rental' area has declined by $28% over the equivalent period.
- Based on the agreements established with the Swim Clubs for the 2025/26 financial year, the income for AQBH and AQN combined will be approximately $2.31M, compared to $1.44M from the 2024/25 financial year.

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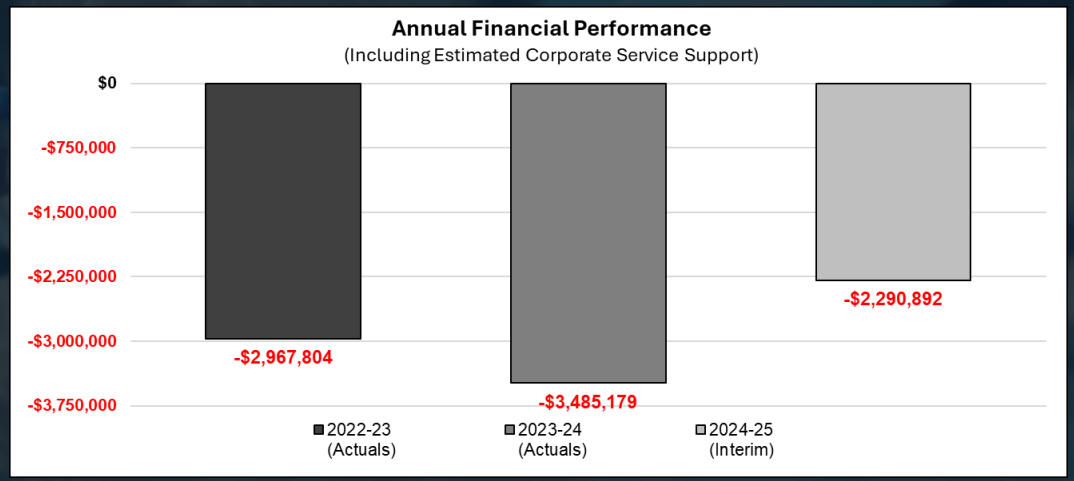
Financial Performance – Cost of Service

The graph below demonstrates the Aqualink Facilities' annual financial performance, including the annual estimates for Corporate Service Costs (Cost of Service) over the past three (3) years. The Cost of Service is the Facilities' net results plus the Corporate Service Costs, excluding depreciation.



- The Corporate Service Costs increase the annual deficit by an average of $2.1M over the three-year period, which is considered extremely high for the support of the two Aqualink Facilities.
- The 2024/25 (interim) result represents a reduction in the deficit of approximately $1.19M compared to the 2023/24 financial year. Based on similar in-house models and Council Company operations, the Corporate Services Costs would normally be between $1.2M and $1.4M for a service of the scale of the Aqualink Facilities.

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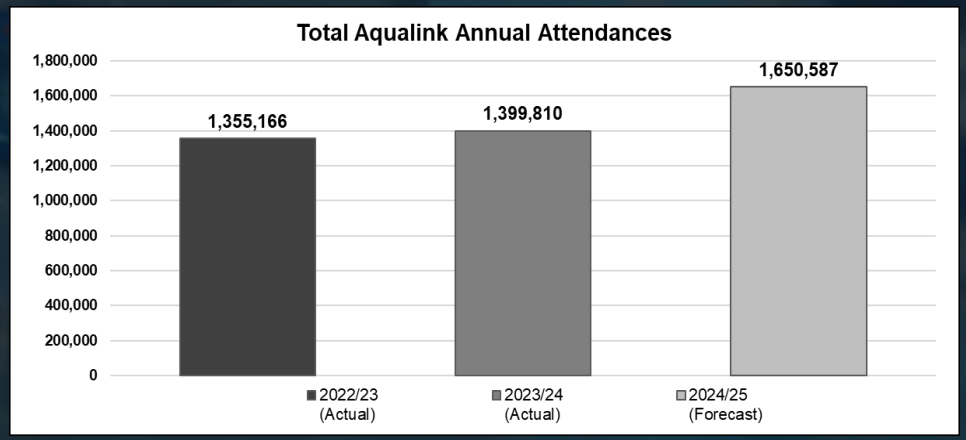
Attendance Summary

The attendance assessment below outlines the annual attendance performance of the Facilities for the actual results for the 2022/23, 2023/24 financial years and the forecasted attendance for 2024/25 financial year (forecast). As the attendance data for was not finalised at the point of completing this Report, an assumption was applied to calculate the 2024/25 (forecast) attendance, which was based on the average of last two (2) months of the two previous financial years plus the 10 months of actual attendances for 2024/25.



- The total attendances for 2023/24 were approximately 44K (or 3.2%) higher than that of 2022/23. The closure of the indoor pool at AQBH is the major contributing factor to the limited growth.
- The forecasted attendance for 2024/25 is projected to be 251K (or 15.3%) higher than the 2023/24 result, primarily driven by strong growth at AQBH.

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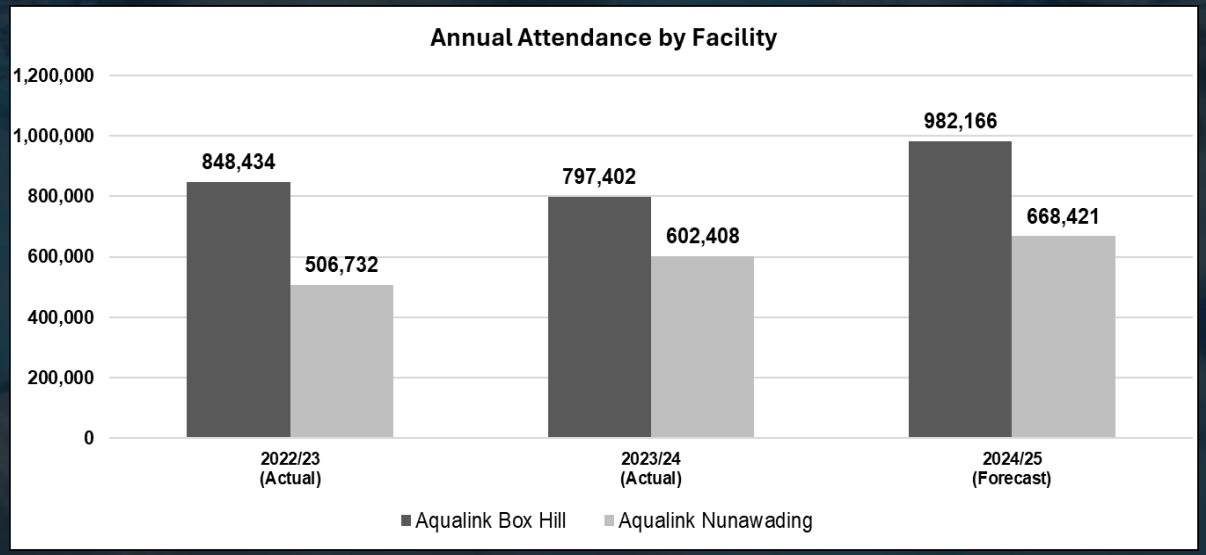
Attendance Summary

The graph below captures the annual attendance (actuals, and forecast) separated by Facility over the three (3) year period:



- The total attendance for AQBH declined by 51K in 2023/24, compared to the previous year, because of the indoor pool closure. The forecasted attendance for 2024/25 is expected to increase by 185K attendances compared to the 2023/24 result.
- The AQN has increased annually, with the forecasted attendance for 2024/25 expected to be 66K higher than the previous year, and a 24.3% increase over the three-year period.

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Attendance Summary

The tables below provide an overview of the attendance type by Facility, inclusive of the actual results for 2022/23 and 2023/24, and the forecasted figures for 2024/25:

Aqualink Box Hill

Aqualink Box Hill Attendances by Type				
Visit Type	**2022/23**	**2023/24**	**2024/25 (Forecasted)**	**Totals**
Recreational Swimming	255,716	232,171	266,324	**754,211**
Membership	115,193	114,787	125,237	**355,217**
Casual	106,102	87,145	105,988	**299,235**
Multi-Visit Pass	34,104	30,064	34,955	**99,123**
Other	337,636	333,235	449,662	**1,120,533**
Totals	**848,751**	**797,402**	**982,166**	**2,628,319**

- The attendance for AQBH declined in all attendance types in 2023/24, compared to 2022/23, with the most notable reductions being in Recreational Swimming (approximately 9.1%) and Casual visits (approximately 18.1%).
- The forecasted attendance AQBH for 2024/25 is expected to realise higher attendances than the 2022/23 financial year in all areas except Casual visits, although the variance is minimal.

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Attendance Summary

Aqualink Nunawading

Visit Type	2022/23	2023/24	2024/25 (Forecasted)	Totals
Recreational Swimming	164,513	176,058	221,745	**562,316**
Membership	86,114	95,578	102,142	**283,834**
Casual	53,637	53,960	51,800	**159,397**
Multi-Visit Pass	24,620	21,977	29,704	**76,301**
Other	177,848	254,835	263,030	**695,713**
Totals	**506,732**	**602,408**	**668,421**	**1,777,561**

- The attendance for AQN has increased for all areas across the three (3) financial years, excluding Casual visits in 2024/25 and a reduction in 2023/24 for Multi-Visit Passes.
- The major increases forecasted in 2024/25 compared to the 2023/24 period are in Recreational Swimming (approximately 20.4%) and Memberships (approximately 6.9%).

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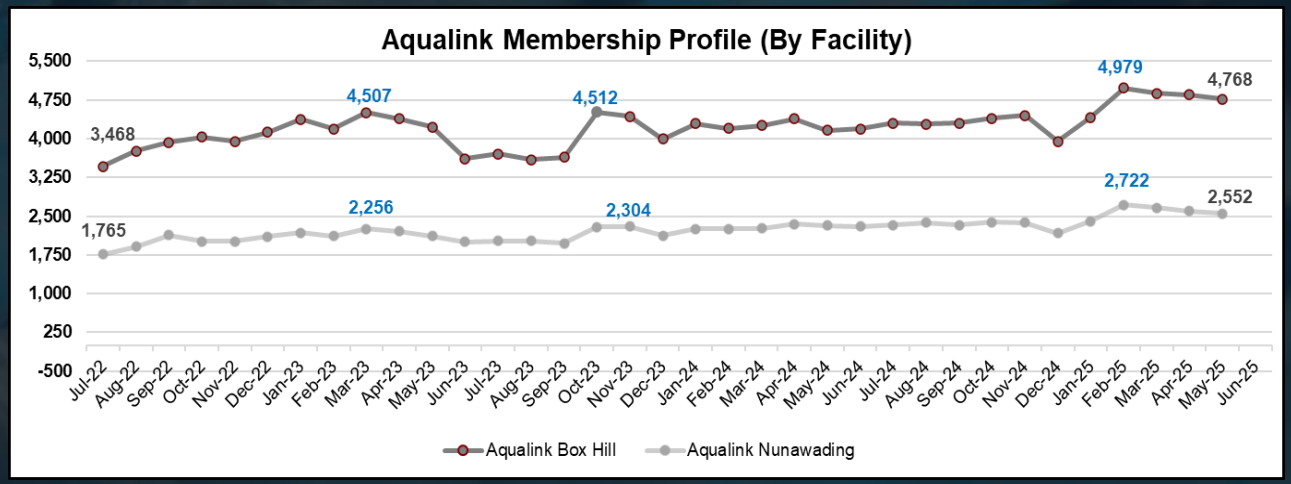
Membership Profile

An assessment was undertaken of the key business driver of memberships at the Aqualink Facilities. The graphs below demonstrate the month-by-month growth and/or decline (including annual peaks in blue) for AQBH and AQN over the past three (3) financial years:



- Since July 2022 to May 2025, there has been an increase of 1,300 memberships (or 27.3%) at AQBH, while AQN has increased by 787 memberships (or 30.1%) over the equivalent period.
- The peak membership numbers over the three-year period for AQBH and AQN were both experienced in February 2025 (4,979 and 2,722, respectively).
- Combined, the memberships have increased by 2,087 members over the three-year period.

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Key Metrics – Operational Performance

To establish a baseline performance level for comparison with other local government aquatic and leisure facilities, an assessment of key performance metrics has been undertaken for the Aqualink Facilities using the 2024/25 financial year interim results and the forecasted attendance results. Based on the financial and attendance information, an assessment of the income per visitation (total income ÷ total attendance), the subsidy per visitation (operating deficit ÷ total attendance) and the visits per head of catchment population (5km catchment population ÷ total attendance) was undertaken for both Facilities.

Key Metrics Analysis - 2024/25 (Interim)								
Centres	5km Catchment Population	Total Attendances	Total Income	Total Expenditure	Total Deficit / Surplus	Income Per Visit	Subsidy Per Visit	Visits Per Hea of Populatior
Aqualink Box Hill	221,479	982,166	$7,102,859	$6,700,194	**$402,665**	$7.23	$0.41	4.4
Aqualink Nunawading	181,233	668,421	$4,060,909	$4,500,560	**-$439,650**	$6.08	-$0.66	3.6

- Based on the key metrics AQBH is performing notably better than AQN, with approximately 314K more visitations, a greater income per visit level ($1.15 per visit higher), a positive subsidy per visit of $0.41 ($1.07 less than AQN) and 0.74 more visits per head of population.
- Considering the metrics and an operational surplus, AQBH provides the best value to Council and the community.

Note: It should be noted that the results do not include Corporate Service Costs (Cost of Service) allocations, as the allocation for Facilities is extremely high. If the Cost of Service was included, the combined deficit would $2.29M, significantly impacting the metrics.

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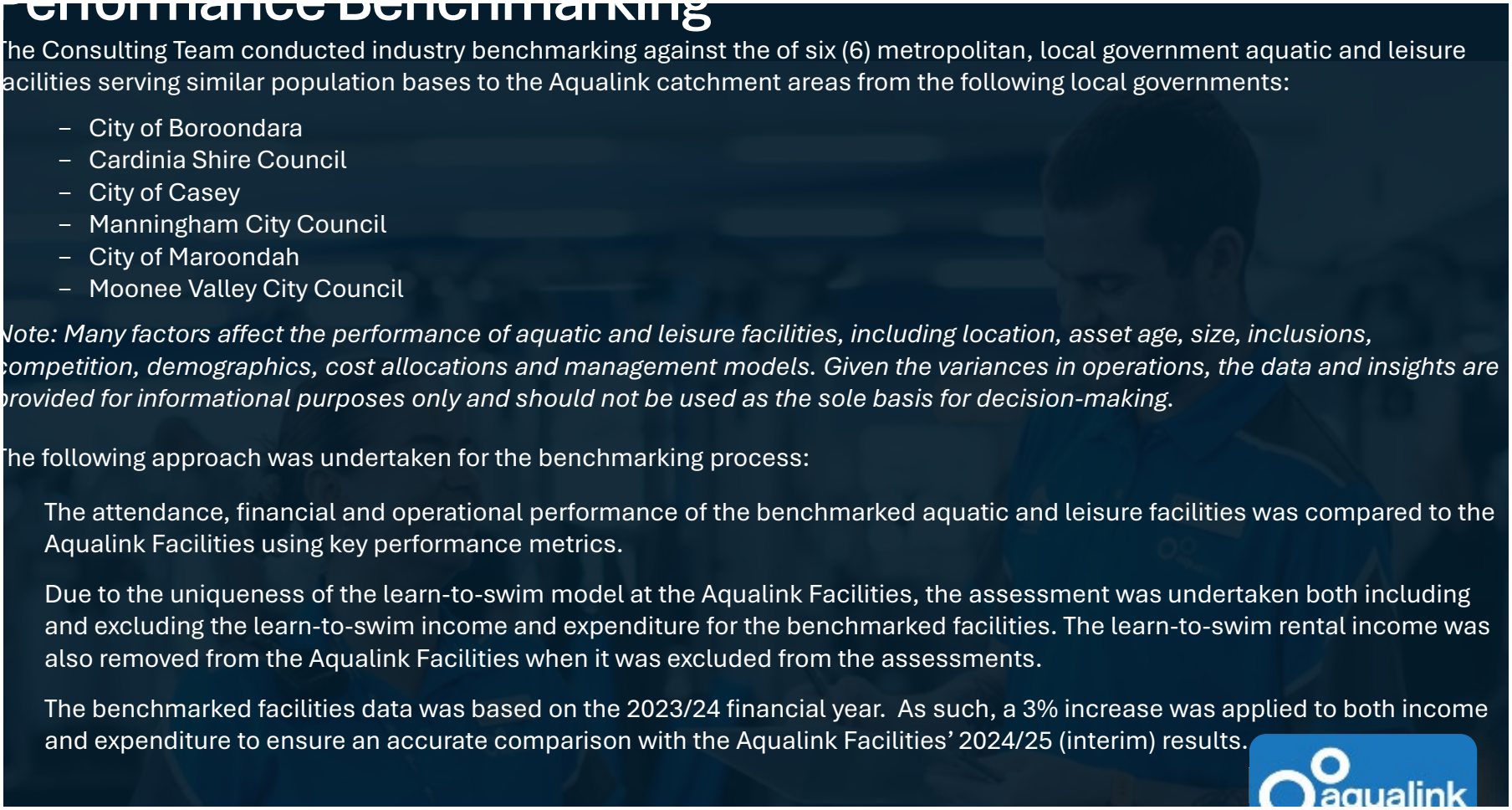

Performance Benchmarking

The Consulting Team conducted industry benchmarking against the of six (6) metropolitan, local government aquatic and leisure facilities serving similar population bases to the Aqualink catchment areas from the following local governments:

- City of Boroondara
- Cardinia Shire Council
- City of Casey
- Manningham City Council
- City of Maroondah
- Moonee Valley City Council

Note: Many factors affect the performance of aquatic and leisure facilities, including location, asset age, size, inclusions, competition, demographics, cost allocations and management models. Given the variances in operations, the data and insights are provided for informational purposes only and should not be used as the sole basis for decision-making.

The following approach was undertaken for the benchmarking process:

The attendance, financial and operational performance of the benchmarked aquatic and leisure facilities was compared to the Aqualink Facilities using key performance metrics.

Due to the uniqueness of the learn-to-swim model at the Aqualink Facilities, the assessment was undertaken both including and excluding the learn-to-swim income and expenditure for the benchmarked facilities. The learn-to-swim rental income was also removed from the Aqualink Facilities when it was excluded from the assessments.

The benchmarked facilities data was based on the 2023/24 financial year. As such, a 3% increase was applied to both income and expenditure to ensure an accurate comparison with the Aqualink Facilities' 2024/25 (interim) results.

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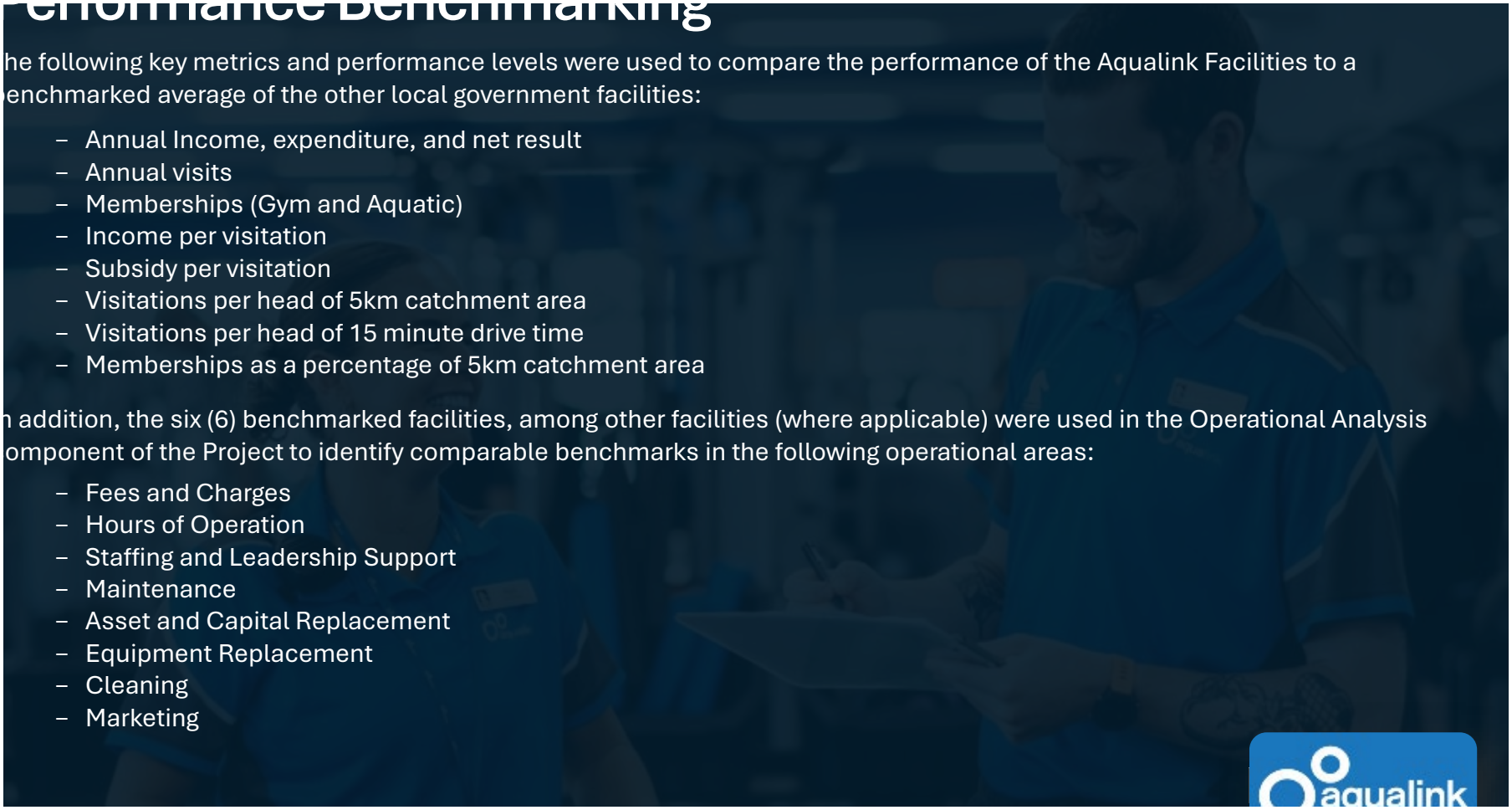

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Benchmarking – Key Metrics

The Table below outlines the key metrics of income per visit, subsidy per visit and visits per head of the 5km catchment population, as well as comparing attendances and financial performance. The average of the metrics from the benchmarked facilities is then compared to the Aqualink Facilities. The comparison excludes all learn-to-swim income and expenditure for all facilities.

Key Metric Comparison (Excluding Learn to Swim Income and Expenditure)								
Centre	5km Population Catchment	Annual visits	Income	Expense	Net position	Income Per Visit	Subsidy Per Visit	Visits Per Head of Population
Facility A	148,985	814,215	$6,968,230	$7,378,395	-$410,165	$8.56	-$0.50	5.47
Facility B	161,294	761,890	$7,285,775	$9,020,845	-$1,735,070	$9.56	-$2.28	4.72
Facility C	246,561	385,250	$3,212,691	$3,638,050	-$425,359	$8.34	-$1.10	1.56
Facility D	65,389	720,016	$3,565,609	$4,089,017	-$523,408	$4.95	-$0.73	11.01
Facility E	124,830	736,360	$4,210,666	$4,805,540	-$594,874	$5.72	-$0.81	5.90
Facility F	267,395	680,456	$4,915,240	$4,823,216	$92,024	$7.22	$0.14	2.54
Benchmarked Average	**169,076**	**683,031**	**$5,026,368**	**$5,625,844**	**-$599,475**	**$7.39**	**-$0.88**	**5.20**
Aqualink Box Hill	**221,479**	**982,166**	**$6,447,958**	**$6,700,194**	**-$252,236**	**$6.57**	**-$0.26**	**4.43**
Aqualink Nunawading	**181,233**	**668,421**	**$3,268,315**	**$4,500,560**	**-$1,232,244**	**$4.89**	**-$1.84**	**3.69**

- The operating deficit for the AQN was approximately $633K more than the benchmarked average and the second highest of all facilities. The income per visit ($2.50 lower), the subsidy per visit ($0.96 higher), and the number of visits per head of population (1.52 visits lower) were all considerably below the benchmarked average. The attendance for AQN was similar to the average.
- The AQBH's operating deficit was approximately $347K less than the benchmarked average. The income per visit was $0.82 lower and the number of visits per head of population (0.77 visits lower) than the average, while the subsidy per visit ($0.62 less was below the benchmarked average. The attendance for AQBH was approximately 299K more than the average.
- This information indicates that AQBH is performing well compared to the average, and AQN is behind the average in all metrics.

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Benchmarking – Key Metrics and Catchments

The table below captures the previous metrics (excluding learn to swim) as well as peak membership (health and fitness and aquatic) numbers, and the visitations per head of 15-minute drive time, as well as the memberships as a percentage of the catchment population.

Catchment Benchmarking (Excluding Learn to Swim Income and Expenditure)											
Item	Facility A	Facility B	Facility C	Facility D	Facility E	Facility F	AQBH	AQN	Benchmark Average	AQBH Variance to Average	AQN Variance to Average
5km Catchment	148,985	161,294	246,561	65,389	124,830	267,395	221,479	181,233	169,076	181,158	178,528
15 min Drive Time Catchment	384,036	266,725	312,048	106,918	307,568	251,833	336,792	303,932	271,521	263,647	273,702
Annual visits	814,215	761,890	385,250	720,016	736,360	680,456	982,166	668,421	683,031	299,135	-14,610
Annual Income	$6,968,230	$7,285,775	$3,212,691	$3,565,609	$4,210,666	$4,915,240	$6,447,958	$3,268,315	$5,026,368	$1,421,590	-$1,758,053
Annual Expenditure	$7,378,395	$9,020,845	$3,638,050	$4,089,017	$4,805,540	$4,823,216	$6,700,194	$4,500,560	$5,625,844	-$1,074,350	$1,125,284
Net	-$410,165	-$1,735,070	-$425,359	-$523,408	-$594,874	$92,024	-$252,236	-$1,232,244	-$599,475	$347,240	-$632,769
Health & Fitness Members (Peak)	4,355	3,091	3,005	1,037	2,397	3,051	2,766	1,501	2,823	-57	-1,322
Aquatic Members (Peak)	1,188	1,030	720	106	1,208	536	1,855	787	929	926	-142
Income per Visit	$8.56	$9.56	$8.34	$4.95	$5.72	$7.22	$6.57	$4.89	$7.39	-$0.83	-$2.50
Subsidy per Visit	-$0.50	-$2.28	-$1.10	-$0.73	-$0.81	$0.14	-$0.26	-$1.84	-$0.88	$0.62	-$0.96
Visits per Head of 5km Pop.	5.5	4.7	1.6	11.0	5.9	2.5	4.4	3.7	5.2	-0.8	-1.5
Visits per Head of 15min Drive Pop.	2.1	2.9	1.2	6.7	2.4	2.7	2.9	2.2	3.0	-0.1	-0.8
H&F Members per Head of 5km Pop.	2.2%	1.4%	0.8%	1.3%	1%	1%	0.9%	0.6%	1.3%	-0.4%	-0.7%
Aqua Members per Head of 5km Pop.	2.7%	2.4%	1.2%	0.4%	2.9%	1.0%	3.3%	1.6%	1.8%	1.5%	-0.2%

- The health and fitness memberships (gym) for AQN (47% or 1,322) and AQBH (2.1% or 57) were both lower than the benchmarked average, while the aquatic memberships for AQN were 16% or 142 below the average, and AQBH was almost double the average (926 above).
- The visits per head of 15-minute drive time for AQBH and AQN were lower than the average (-0.1 and -0.8, respectively), while the gym members were behind the average for members per head of population (-0.4% and -0.7% respectively). The aquatic members were notably above the average for AQBH (1.5%) and below for AQN (-0.2%).
- This indicates that the membership base of the Facilities should be higher for the catchment areas.

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Benchmarking – Key Metrics and Catchments

he table below incorporates all the previous metrics but includes the allocations of income and expenditure for learn to swim, cluding the learn to swim rental for the Aqualink Facilities.

Catchment Benchmarking (Including Learn to Swim Income and Expenditure)											
Item	Facility A	Facility B	Facility C	Facility D	Facility E	Facility F	AQBH	AQN	Benchmark Average	AQBH Variance to Average	AQN Variance to Average
5km Catchment	148,985	161,294	246,561	65,389	124,830	267,395	221,479	181,233	169,076	181,158	178,528
15 min Drive Time Catchment	384,036	266,725	312,048	106,918	124,830	251,833	336,792	303,932	241,065	233,191	247,596
Annual visits	814,215	761,890	385,250	720,016	736,360	680,456	982,166	668,421	683,031	299,135	-14,610
Annual Income	$10,195,220	$9,157,945	$5,053,507	$5,379,789	$6,636,143	$6,566,784	$7,102,859	$4,060,909	$7,164,898	-$62,039	-$3,103,989
Annual Expenditure	$8,890,543	$10,040,338	$4,483,518	$4,937,360	$5,919,897	$5,628,530	$6,700,194	$4,500,560	$6,650,031	-$50,163	$2,149,471
Net	$1,304,677	-$882,393	$569,989	$442,429	$716,246	$938,254	$402,665	-$439,650	$514,867	-$112,202	-$954,517
Health & Fitness Members (Peak)	4,355	3,091	3,005	1,037	2,397	3,051	2,766	1,501	2,823	-57	-1,322
Aquatic Members (Peak)	1,188	1,030	720	106	1,208	536	1,855	787	929	926	-142
Income per Visit	$12.52	$12.02	$13.12	$7.47	$9.01	$9.65	$7.23	$6.08	$10.63	-$3.40	-$4.56
Subsidy per Visit	$1.60	-$1.16	$1.48	$0.61	$0.97	$1.38	$0.41	-$0.66	$0.81	-$0.40	-$1.47
Visits per Head of 5km Pop.	5.5	4.7	1.6	11.0	5.9	2.5	4.4	3.7	5.2	-0.8	3.7
Visits per Head of 15min Drive Pop.	2.1	2.9	1.2	6.7	5.9	2.7	2.9	2.2	3.6	-0.7	2.6
H&F Members per Head of 5km Pop.	2.2%	1.4%	0.8%	1.3%	1%	1%	0.9%	0.6%	1.3%	-0.4%	-0.7%
Aqua Members per Head of 5km Pop.	2.7%	2.4%	1.2%	0.4%	2.9%	1.0%	3.3%	1.6%	1.8%	1.5%	-0.2%

- The inclusion of the learn to swim income and expenditure for all facilities results in both AQBH and AQN being below the benchmark net performance ($112K and $954K, respectively). Equally, the income is also behind the average for AQBH ($62K) and AQN ($3.1M).
- The expenditure for AQBH was slightly over the benchmark ($50K), with AQN being notably below the benchmark ($2.14M). Th income per visit for AQBH (-$3.40) and AQN (-$4.66) was below the benchmark, while the subsidy per visit was also below the benchmark (-$0.40 and -$1.47, respectively).
- Under the new learn to swim arrangement, there will be approximately a $870K improvement in the

Benchmarking Snapshot

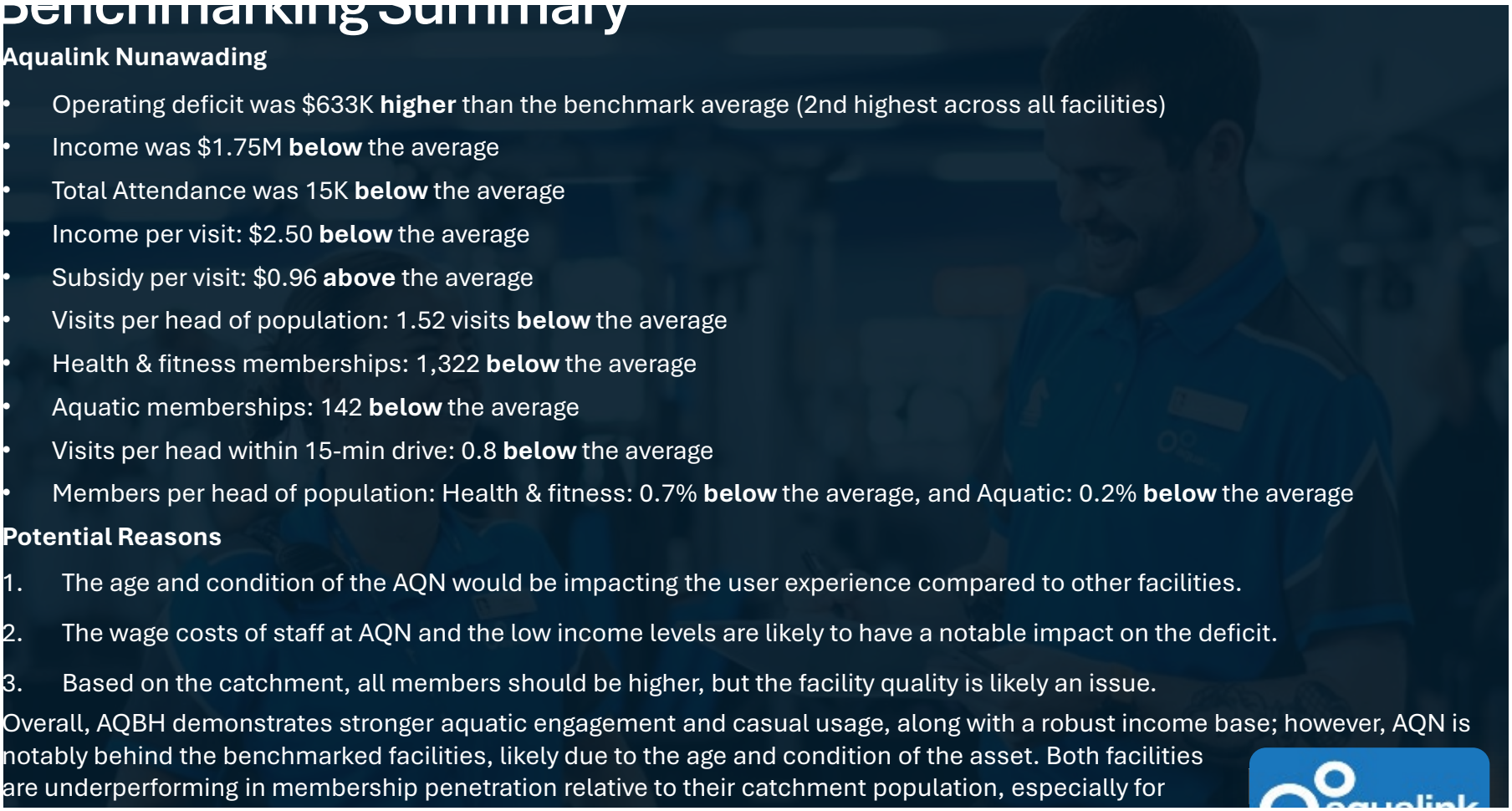
Outlined below is a summary of the benchmarking for each Facility (excluding the learn to swim income and expenditure):

Aqualink Box Hill

- Operating deficit was $347K **lower** than the benchmark average
- Income was $1.42M **above** the average
- Total attendance was 299K **above** the average
- Income per visit: $0.82 **below** the average
- Subsidy per visit: $0.96 **below** the average
- Visits per head of population: 0.77 **below** the average
- Health & fitness memberships: 57 **below** the average
- Aquatic memberships: 926 **above** the average (almost double)
- Visits per head within 15-min drive: 0.1 visits **below** the average
- Members per head of population: Health & fitness: 0.4% **below** the average and Aquatic: 1.5% **above** the average

Potential Reasons

1. The AQBH's income is performing strongly with a high level of casual access and membership income, particularly aquatic members.
2. The high level of attendance is likely capturing the swim club entries in the total attendance figures.
3. Based on the catchment, the gym members should be higher, but may be impacted by competitors.


Benchmarking Summary
Aqualink Nunawading
• Operating deficit was $633K higher than the benchmark average (2nd highest across all facilities)
• Income was $1.75M below the average
• Total Attendance was 15K below the average
• Income per visit: $2.50 below the average
• Subsidy per visit: $0.96 above the average
• Visits per head of population: 1.52 visits below the average
• Health & fitness memberships: 1,322 below the average
• Aquatic memberships: 142 below the average
• Visits per head within 15-min drive: 0.8 below the average
• Members per head of population: Health & fitness: 0.7% below the average, and Aquatic: 0.2% below the average
Potential Reasons
1. The age and condition of the AQN would be impacting the user experience compared to other facilities.
2. The wage costs of staff at AQN and the low income levels are likely to have a notable impact on the deficit.
3. Based on the catchment, all members should be higher, but the facility quality is likely an issue.
Overall, AQBH demonstrates stronger aquatic engagement and casual usage, along with a robust income base; however, AQN is notably behind the benchmarked facilities, likely due to the age and condition of the asset. Both facilities are underperforming in membership penetration relative to their catchment population, especially for

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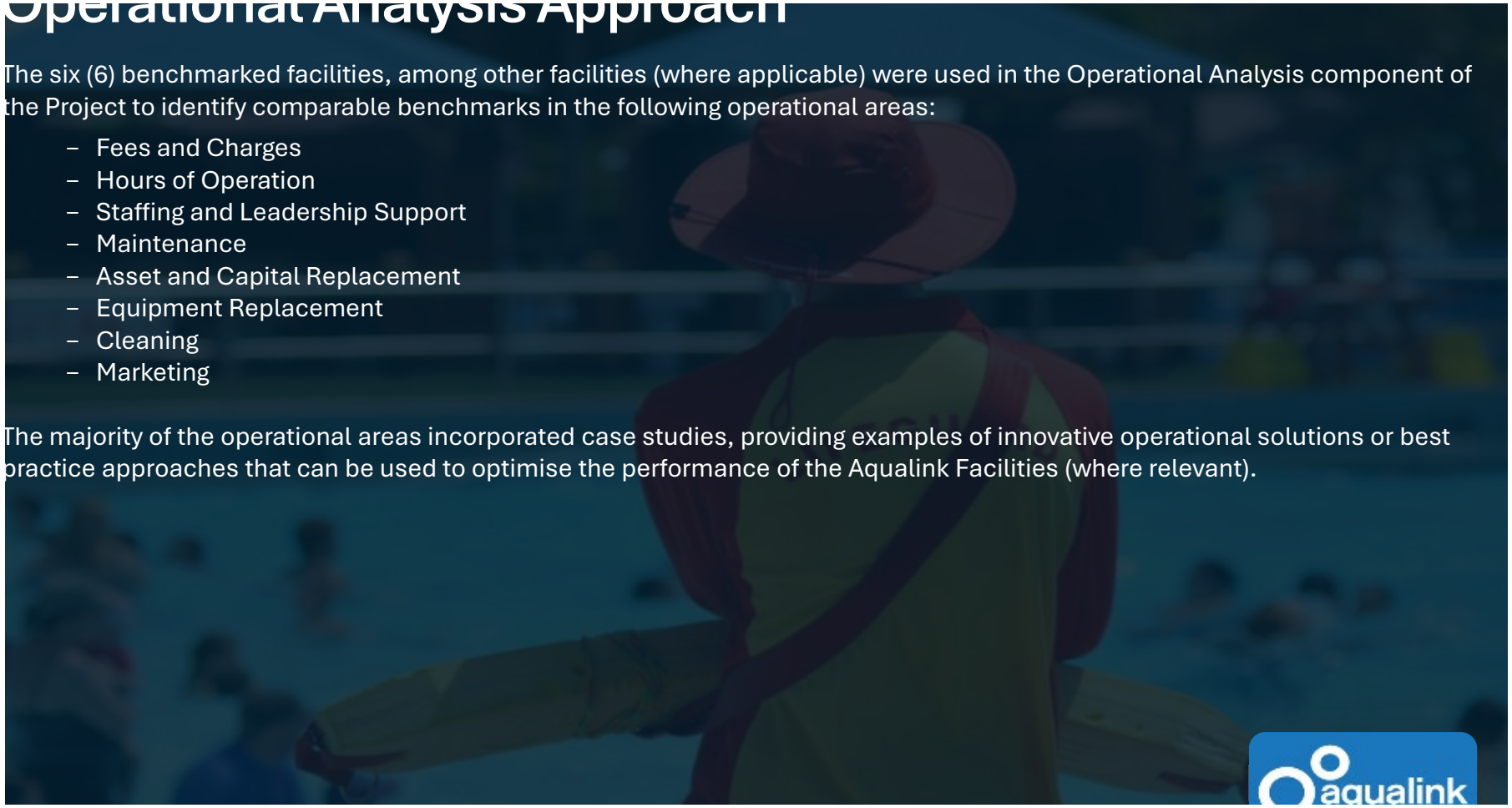

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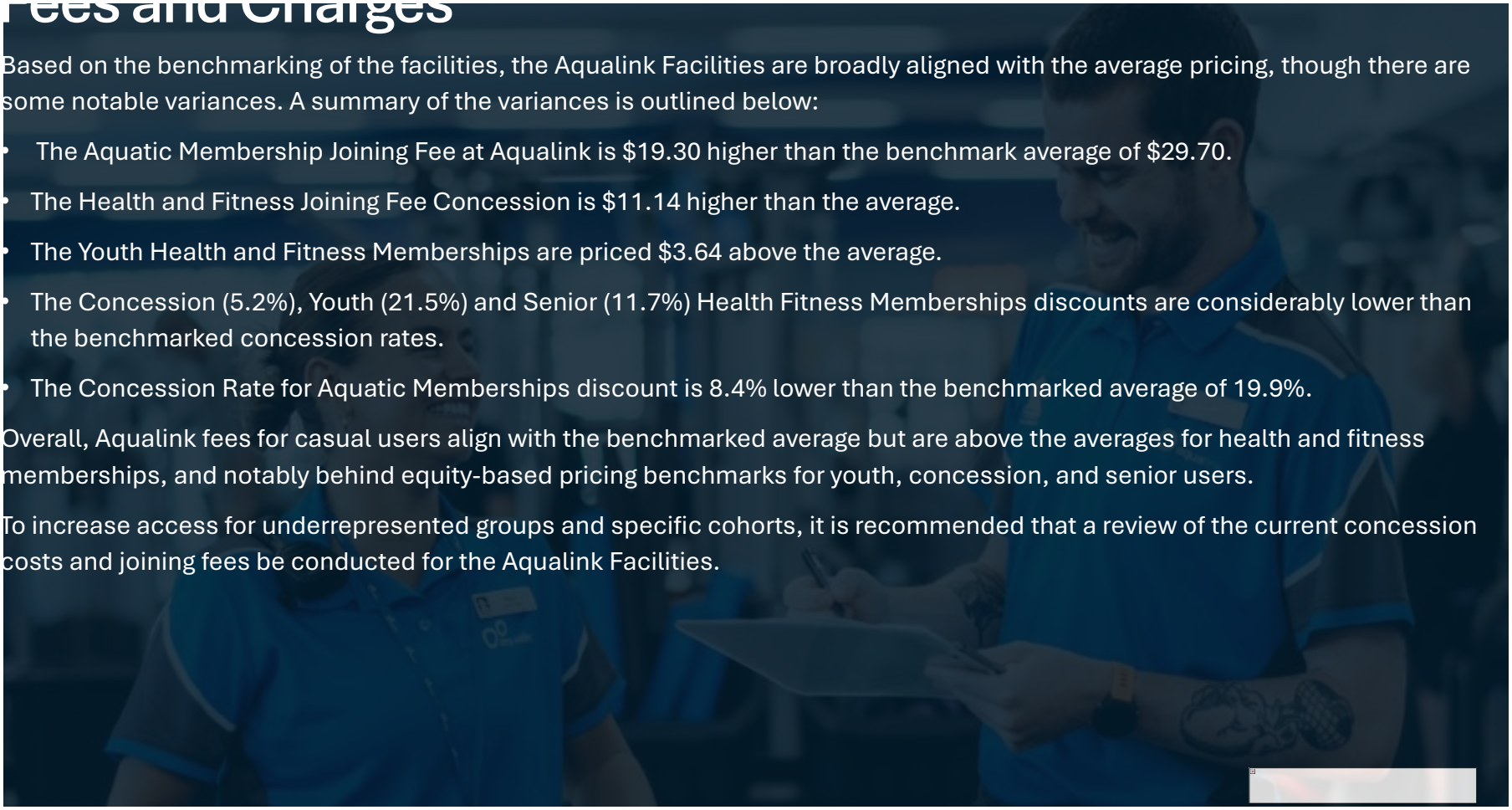
Fees and Charges

A review of the fees and charges for 2024/25 was undertaken for 11 aquatic and leisure facilities to compare them with those of Aqualink Facilities. The review incorporated casual visits, memberships, and the application of concession rates compared to the full-paying options. The fees and variances between the Aqualink Facilities and the benchmarked average are outlined below:

Metro Melbourne Pricing Benchmarking														
	Aqualink Sites	Splash (Hume)	Brimbank Aquatic & Wellbeing Centre	Northcote Aquatic & Recreation Centre	Watermarc	AquaPulse	Brunswick Baths	Hawthorn Aquatic and Leisure Centre	Ascot Vale	Aquarena	Yawa (Mornington Peninsula)	Aquanation	Benchmarked Average	Variance to Average
Casual Visit (Recreational Swimming)														
Adult	**$9.00**	$8.90	$8.50	$8.00	$9.20	$11.50	$8.10	$8.20	$8.10	$10.40	$8.90	$10.00	**$9.07**	**$0.07**
Concession	**$6.80**	$4.35	$6.80	$6.40	$7.30	$9.80	$6.00	$6.55	$5.75	$8.80	$7.10	$8.50	**$7.01**	**$0.21**
Child (5 to 15 years)	**$6.80**	$5.70	$6.40	$6.20	$6.90	$9.80	$5.10	$6.55	$5.75	$7.70	$5.30	$8.50	**$6.73**	**-$0.08**
Family	**$24.80**	$22.40	$22.40	$22.90	$28.30	$39.30	$20.50	$29.40	$21.85	$29.60	$23.10	$28.50	**$26.09**	**$1.29**
Health and Fitness Memberships (Per Week)														
Joining Fee	**$49.00**	$54.00	$0.00	$0.00	$0.00	$0.00	$85.90	$99.00	$0.00	$0.00	$140.00	$99.00	**$43.45**	**-$5.55**
Joining Fee Concession	**$49.00**	$54.00	$0.00	$0.00	$0.00	$0.00	$64.45	$99.00	$0.00	$0.00	$100.00	$99.00	**$37.86**	**-$11.14**
Adult - Full Paying	**$24.20**	$27.00	$18.45	$27.90	$26.00	$23.00	$26.25	$31.55	$26.80	$25.20	$26.40	$27.50	**$25.85**	**$1.65**
Adult Concession	**$20.50**	$13.50	$18.45	$22.40	$22.10	$19.50	$19.20	$25.25	$19.20	$21.35	$21.10	$23.37	**$20.49**	**-$0.01**
Youth	**$20.50**	$17.55	$7.90	$20.25	$18.20	$19.50	$15.40	$18.93	$18.45	$13.30	$15.80	$16.50	**$16.86**	**-$3.64**
Senior	**$20.50**	$13.50	$18.45	$20.25	$17.70	$19.50	$16.15	$20.50	$19.20	$21.35	$15.80	$23.37	**$18.86**	**-$1.64**
Aquatic Memberships (Per Week)														
Joining Fee	**$49.00**	$54.00	$0.00	$0.00	$0.00	$0.00	$53.70	$50.00	$0.00	$70.00	$0.00	$99.00	**$29.70**	**-$19.30**
Adult - Full Paying	**$15.65**	$17.00	$12.65	$20.25	$18.40	$17.20	$16.05	$18.90	$19.10	$17.95	$18.20	$21.00	**$17.70**	**$2.05**
Adult Concession	**$13.85**	$8.50	$12.65	$16.25	$14.60	$14.60	$12.05	$15.15	$13.85	$15.30	$14.60	$17.75	**$14.10**	**$0.25**
Concession Rate - Casual Visits														
Concession (% of Full Casual)	**24%**	51%	20%	20%	21%	15%	26%	20%	29%	15%	20%	15%	**22.9%**	**1.5%**
Child (% of Full Casual)	**24%**	36%	25%	23%	25%	15%	37%	20%	29%	26%	40%	15%	**26.4%**	**-2.0%**
Concession Rate - Health and Fitness Membership														
Concession (% of Full Paying Membership)	**15%**	50%	0%	20%	15%	15%	27%	20%	28%	15%	20%	15%	**20.5%**	**-5.2%**
Youth (% of Full Paying Membership)	**15%**	35%	57%	27%	30%	15%	41%	40%	31%	47%	40%	40%	**36.8%**	**-21.5%**
Senior (% of Full Paying Membership)	**15%**	50%	0%	27%	32%	15%	38%	35%	28%	15%	40%	15%	**27.0%**	**-11.7%**
Concession Rate - Aquatic Memberships														



Fees and Charges

Based on the benchmarking of the facilities, the Aqualink Facilities are broadly aligned with the average pricing, though there are some notable variances. A summary of the variances is outlined below:

- The Aquatic Membership Joining Fee at Aqualink is $19.30 higher than the benchmark average of $29.70.
- The Health and Fitness Joining Fee Concession is $11.14 higher than the average.
- The Youth Health and Fitness Memberships are priced $3.64 above the average.
- The Concession (5.2%), Youth (21.5%) and Senior (11.7%) Health Fitness Memberships discounts are considerably lower than the benchmarked concession rates.
- The Concession Rate for Aquatic Memberships discount is 8.4% lower than the benchmarked average of 19.9%.

Overall, Aqualink fees for casual users align with the benchmarked average but are above the averages for health and fitness memberships, and notably behind equity-based pricing benchmarks for youth, concession, and senior users.

To increase access for underrepresented groups and specific cohorts, it is recommended that a review of the current concession costs and joining fees be conducted for the Aqualink Facilities.

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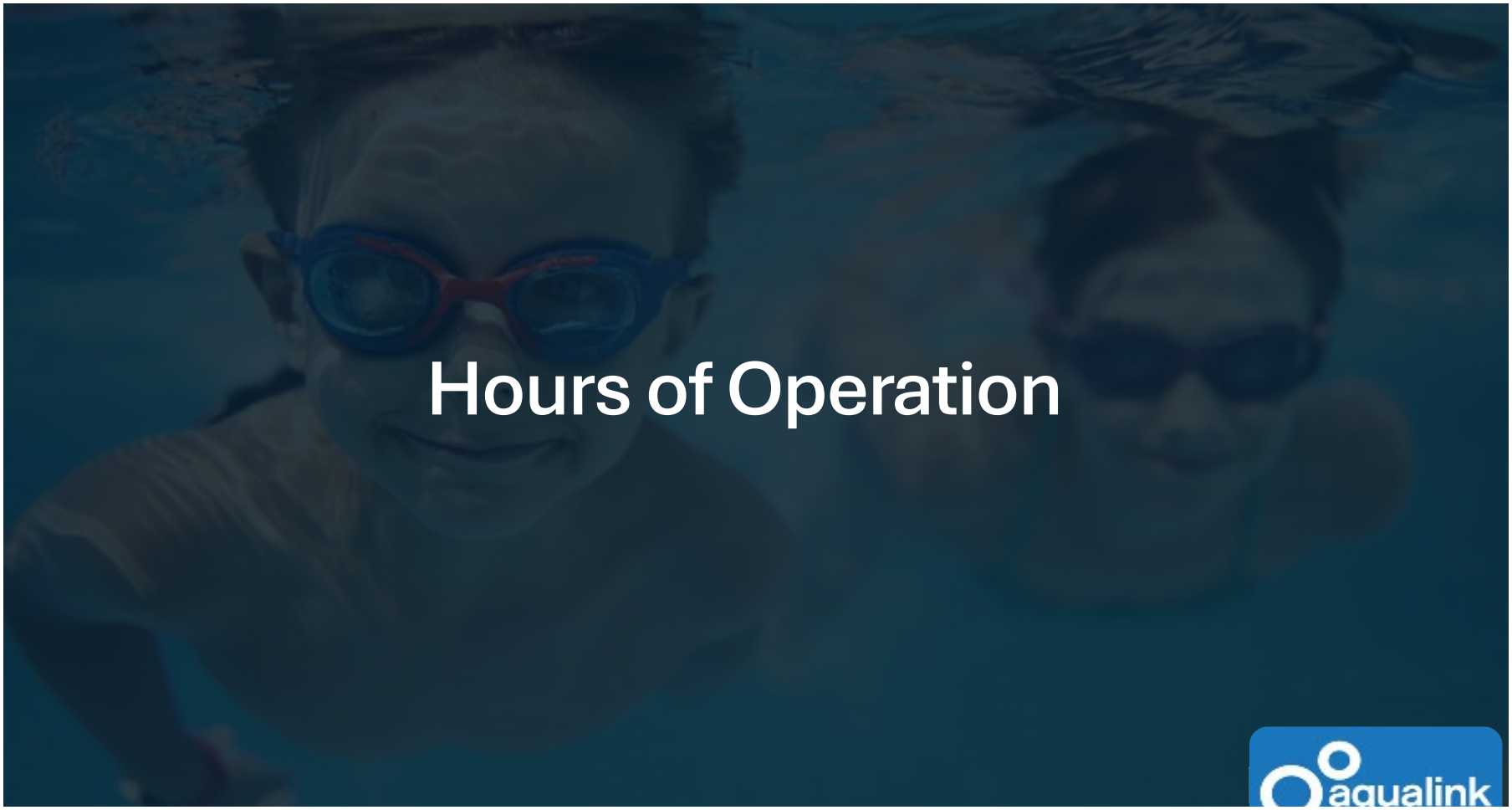

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Hours of Operations

The tables below outline the current and proposed operational hours of the Aqualink Facilities, separated by general entry, gym, and pool-based hours, as well as the weekly hours for each area. The current general entry weekly hours for the Facilities are **104 hours,** while the proposed hours recommended by the Aqualink Leadership Team result in earlier opening hours for the Facilities and the gyms, while the pools would open earlier Fridays and Sundays. The proposed general entry weekly hours for the Facilities would be **109 hours.**

Aqualink Facilities Current Operational Hours					
Facility	**Mon–Thu**	**Friday**	**Saturday**	**Sunday**	**Weekly Hours**
General Entry	6:00 AM – 10:00 PM	6:00 AM – 10:00 PM	8:00 AM – 8:00 PM	8:00 AM – 8:00 PM	**104**
Gym	6:00 AM – 10:00 PM	6:00 AM – 10:00 PM	8:00 AM – 8:00 PM	8:00 AM – 8:00 PM	**104**
Pools	6:00 AM – 10:00 PM	6:00 AM – 10:00 PM	8:00 AM – 8:00 PM	8:00 AM – 8:00 PM	**104**

Aqualink Facilities Proposed Operational Hours					
Facility	**Monday–Thursday**	**Friday**	**Saturday**	**Sunday**	**Weekly Hours**
General Entry	5:30 AM – 10:00 PM	5:30 AM – 9:30 PM	6:00 AM – 8:00 PM	7:00 AM – 8:00 PM	**109**
Gym	5:30 AM – 10:00 PM	5:30 AM – 9:30 PM	6:00 AM – 8:00 PM	7:00 AM – 8:00 PM	**109**
Pools	6:00 AM – 10:00 PM	6:00 AM – 9:30 PM	8:00 AM – 8:00 PM	7:00 AM – 8:00 PM	**104.5**

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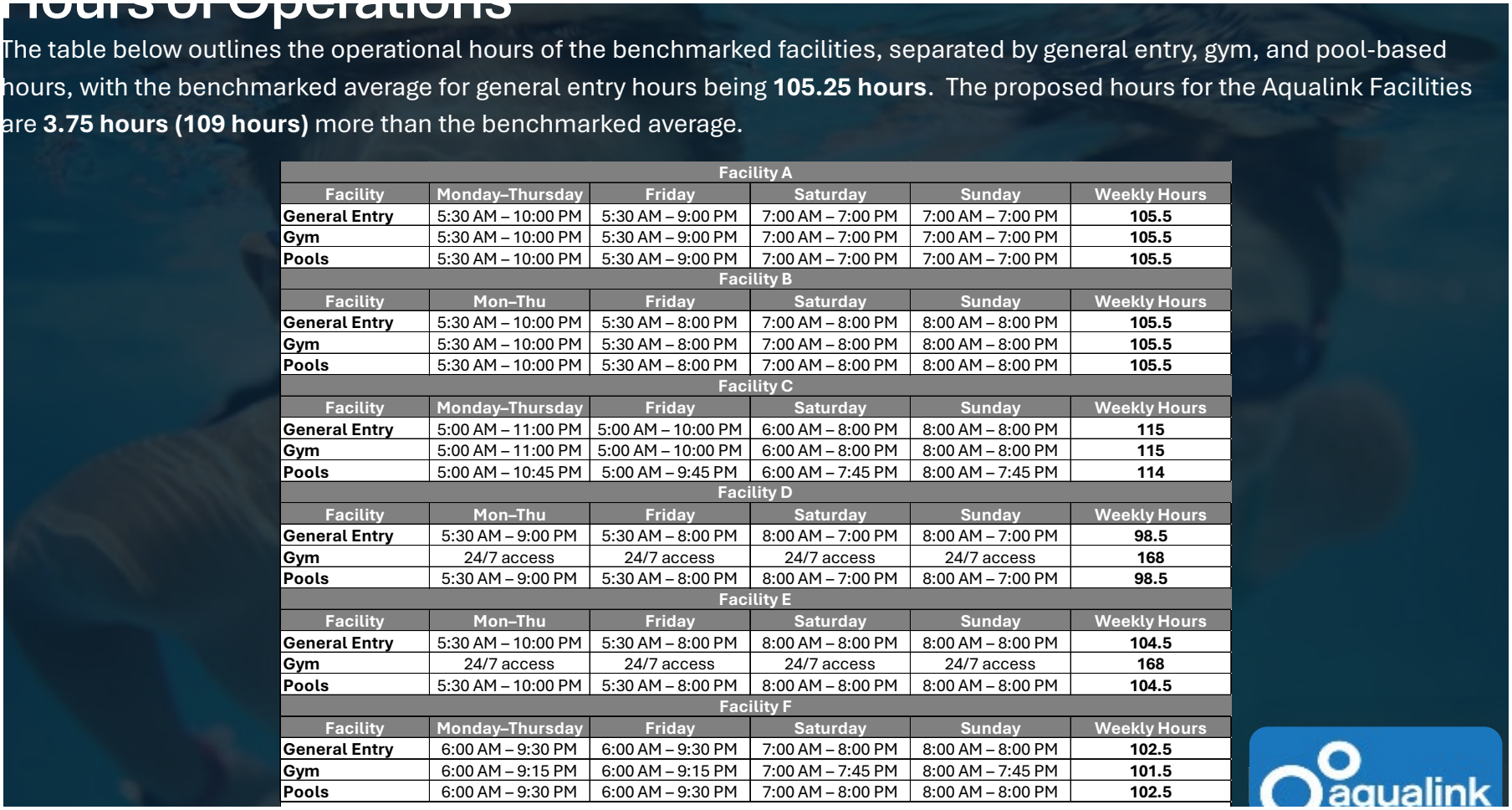

Hours of Operations

The table below outlines the operational hours of the benchmarked facilities, separated by general entry, gym, and pool-based hours, with the benchmarked average for general entry hours being **105.25 hours**. The proposed hours for the Aqualink Facilities are **3.75 hours (109 hours)** more than the benchmarked average.

Facility A					
Facility	**Monday–Thursday**	**Friday**	**Saturday**	**Sunday**	**Weekly Hours**
General Entry	5:30 AM – 10:00 PM	5:30 AM – 9:00 PM	7:00 AM – 7:00 PM	7:00 AM – 7:00 PM	**105.5**
Gym	5:30 AM – 10:00 PM	5:30 AM – 9:00 PM	7:00 AM – 7:00 PM	7:00 AM – 7:00 PM	**105.5**
Pools	5:30 AM – 10:00 PM	5:30 AM – 9:00 PM	7:00 AM – 7:00 PM	7:00 AM – 7:00 PM	**105.5**
Facility B					
Facility	**Mon–Thu**	**Friday**	**Saturday**	**Sunday**	**Weekly Hours**
General Entry	5:30 AM – 10:00 PM	5:30 AM – 8:00 PM	7:00 AM – 8:00 PM	8:00 AM – 8:00 PM	**105.5**
Gym	5:30 AM – 10:00 PM	5:30 AM – 8:00 PM	7:00 AM – 8:00 PM	8:00 AM – 8:00 PM	**105.5**
Pools	5:30 AM – 10:00 PM	5:30 AM – 8:00 PM	7:00 AM – 8:00 PM	8:00 AM – 8:00 PM	**105.5**
Facility C					
Facility	**Monday–Thursday**	**Friday**	**Saturday**	**Sunday**	**Weekly Hours**
General Entry	5:00 AM – 11:00 PM	5:00 AM – 10:00 PM	6:00 AM – 8:00 PM	8:00 AM – 8:00 PM	**115**
Gym	5:00 AM – 11:00 PM	5:00 AM – 10:00 PM	6:00 AM – 8:00 PM	8:00 AM – 8:00 PM	**115**
Pools	5:00 AM – 10:45 PM	5:00 AM – 9:45 PM	6:00 AM – 7:45 PM	8:00 AM – 7:45 PM	**114**
Facility D					
Facility	**Mon–Thu**	**Friday**	**Saturday**	**Sunday**	**Weekly Hours**
General Entry	5:30 AM – 9:00 PM	5:30 AM – 8:00 PM	8:00 AM – 7:00 PM	8:00 AM – 7:00 PM	**98.5**
Gym	24/7 access	24/7 access	24/7 access	24/7 access	**168**
Pools	5:30 AM – 9:00 PM	5:30 AM – 8:00 PM	8:00 AM – 7:00 PM	8:00 AM – 7:00 PM	**98.5**
Facility E					
Facility	**Mon–Thu**	**Friday**	**Saturday**	**Sunday**	**Weekly Hours**
General Entry	5:30 AM – 10:00 PM	5:30 AM – 8:00 PM	8:00 AM – 8:00 PM	8:00 AM – 8:00 PM	**104.5**
Gym	24/7 access	24/7 access	24/7 access	24/7 access	**168**
Pools	5:30 AM – 10:00 PM	5:30 AM – 8:00 PM	8:00 AM – 8:00 PM	8:00 AM – 8:00 PM	**104.5**
Facility F					
Facility	**Monday–Thursday**	**Friday**	**Saturday**	**Sunday**	**Weekly Hours**
General Entry	6:00 AM – 9:30 PM	6:00 AM – 9:30 PM	7:00 AM – 8:00 PM	8:00 AM – 8:00 PM	**102.5**
Gym	6:00 AM – 9:15 PM	6:00 AM – 9:15 PM	7:00 AM – 7:45 PM	8:00 AM – 7:45 PM	**101.5**
Pools	6:00 AM – 9:30 PM	6:00 AM – 9:30 PM	7:00 AM – 8:00 PM	8:00 AM – 8:00 PM	**102.5**

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Hours of Operation – Outdoor Pool Season

An assessment of 10 metropolitan Melbourne aquatic and leisure facilities with outdoor pools was conducted as a comparator for the AQBH outdoor pool season. Of the facilities, 60% operate year-round outdoor pools, with the remaining averaging 212 days a year.

Metropolitan Melbourne Aquatic and Leisure Facilities with Outdoor Pools	Season Dates	Number of Days
Keilor East Leisure Centre	21st September to 19th April	211
Carlton Baths	1st October to 30th April	212
Oak Park Leisure Centre	1st October to 30th April	212
Brunswick Bath	1st October to 30th April	212
Glen Eira Sports and Aqatic Centre	Year-round	363
Harold Holt Swim Centre	Year-round	363
Ashburton Park Aquatic and Recreation Centre	Year-round	363
Aquarena Aquatic and Leisure Centre	Year-round	363
Hawthorn Aquatic and Leisure Centre	Year-round	363
Northcote Aquatic and Recreation Centre	Year-round	363

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taffing Assessment

n assessment was conducted to compare Aqualink's staffing spend with that of benchmarked facilities. The assessment ncorporated facilities that are operated in-house and outsourced, thereby having varying wage costs. The table below captures the otal wage spend (excluding learn-to-swim) and the wages as a percentage of the total income and total expenditure in comparison o the Aqualink Facilities:

Key Metric Comparison (Excluding Learn to Swim Income and Expenditure)					
Centre	Total Wages (Excluding LTS)	Income (Excluding LTS)	Expenditure (Excluding LTS)	Wages as a % of Income	Wages as a % of Expenditure
Facility A	$5,091,093	$6,968,230	$7,378,395	73.1%	69.0%
Facility B	$4,069,885	$7,285,775	$9,020,845	55.9%	45.1%
Facility C	$2,150,982	$3,212,691	$3,638,050	67.0%	59.1%
Facility D	$2,378,856	$3,565,609	$4,089,017	66.7%	58.2%
Facility E	$3,160,894	$4,210,666	$4,805,540	75.1%	65.8%
Facility F	$2,363,951	$4,915,240	$4,823,216	48.1%	49.0%
Benchmarked Average	**$3,202,610**	**$5,026,368**	**$5,625,844**	**64.3%**	**57.7%**
Aqualink Box Hill	**$4,586,085**	**$6,447,958**	**$6,700,194**	**71.1%**	**68.4%**
Aqualink Nunawading	**$3,139,560**	**$3,268,315**	**$4,500,560**	**96.1%**	**69.8%**

- The wage spend at AQBH was considerably higher than the benchmarked average ($1.38M or 30.1% higher), while the wages as a percentage of income and wages as a percentage of expenditure were both above the benchmark (6.8% and 10.7% higher, respectively).
- The total wages for AQN were slightly lower than the average ($63K lower), but the wages as a percentage of income and expenditure were the highest of all facilities (31.8% and 12.1% higher, respectively.
- The high wage costs are likely to reduce under a new EBA, which will reduce the variance in the metrics.

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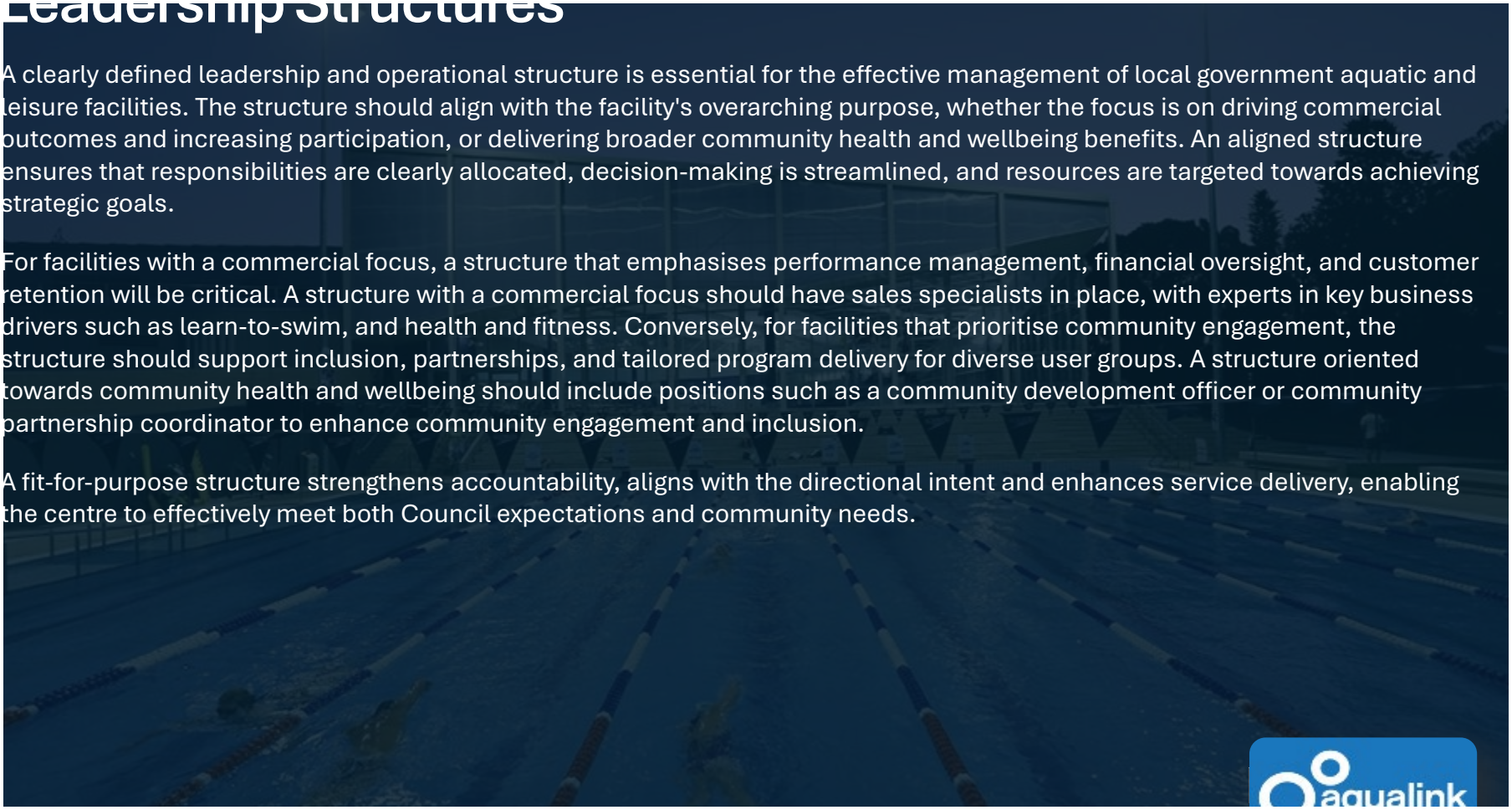
Leadership Structure - Benchmarking

A benchmarking exercise was conducted for six (6) metropolitan aquatic and leisure centres to assess full-time equivalent (FTE) allocations for permanent roles overseeing key areas of the facilities. The benchmark included medium to large scale centres with aquatics (excluding learn-to-swim), health and fitness, indoor sports, a kiosk or café, and a creche.

Leadership Team FTE Benchmarking (Excluding LTS)						
Facilities	**FTE**	**Aquatics (Ex. LTS)**	**Health & Fitness**	**Indoor Sports**	**Café/Kiosk**	**Creche**
Facility A	**9.8**	✓	✓	×	✓	✓
Facility B	**8.4**	✓	✓	×	✓	✓
Facility C	**6.8**	✓	✓	✓	✓	✓
Facility D	**7.0**	✓	✓	×	✓	✓
Facility E	**7.6**	✓	✓	×	✓	✓
Facility F	**5.7**	✓	✓	×	✓	✓
Current AQBH Structure	**8.5**	✓	✓	✓	✓	×
Current AQN Structure	**6.5**	✓	✓	×	✓	×
Benchmarked Average and Total Allocations	**7.6**	**6**	**6**	**1**	**6**	**6**

- Based on the benchmarking, the allocation of facility components and the number of attendances, the structures AQBH and AQN are appropriate, particularly given that AQBH has indoor sports.
- The average for the benchmarked facilities with the learn to swim included is 9.5 FTE.


Leadership Structures
A clearly defined leadership and operational structure is essential for the effective management of local government aquatic and leisure facilities. The structure should align with the facility's overarching purpose, whether the focus is on driving commercial outcomes and increasing participation, or delivering broader community health and wellbeing benefits. An aligned structure ensures that responsibilities are clearly allocated, decision-making is streamlined, and resources are targeted towards achieving strategic goals.
For facilities with a commercial focus, a structure that emphasises performance management, financial oversight, and customer retention will be critical. A structure with a commercial focus should have sales specialists in place, with experts in key business drivers such as learn-to-swim, and health and fitness. Conversely, for facilities that prioritise community engagement, the structure should support inclusion, partnerships, and tailored program delivery for diverse user groups. A structure oriented towards community health and wellbeing should include positions such as a community development officer or community partnership coordinator to enhance community engagement and inclusion.
A fit-for-purpose structure strengthens accountability, aligns with the directional intent and enhances service delivery, enabling the centre to effectively meet both Council expectations and community needs.
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Leadership Structures - Aqualink Facilities

A focus for Council should be to determine the purpose and intent of the Aqualink Facilities prior to undertaking a review of the structure. As a minimum, there should be consideration that the current structure is heavily reliant on one (1) Centre Manager to provide operational and any strategic direction. The introduction of an Assistant Manager (or equivalent) with a specialist focus, such as health and fitness or customer experience, will enable greater shared leadership and facilitate succession planning. Below is the current structure for the Facilities:

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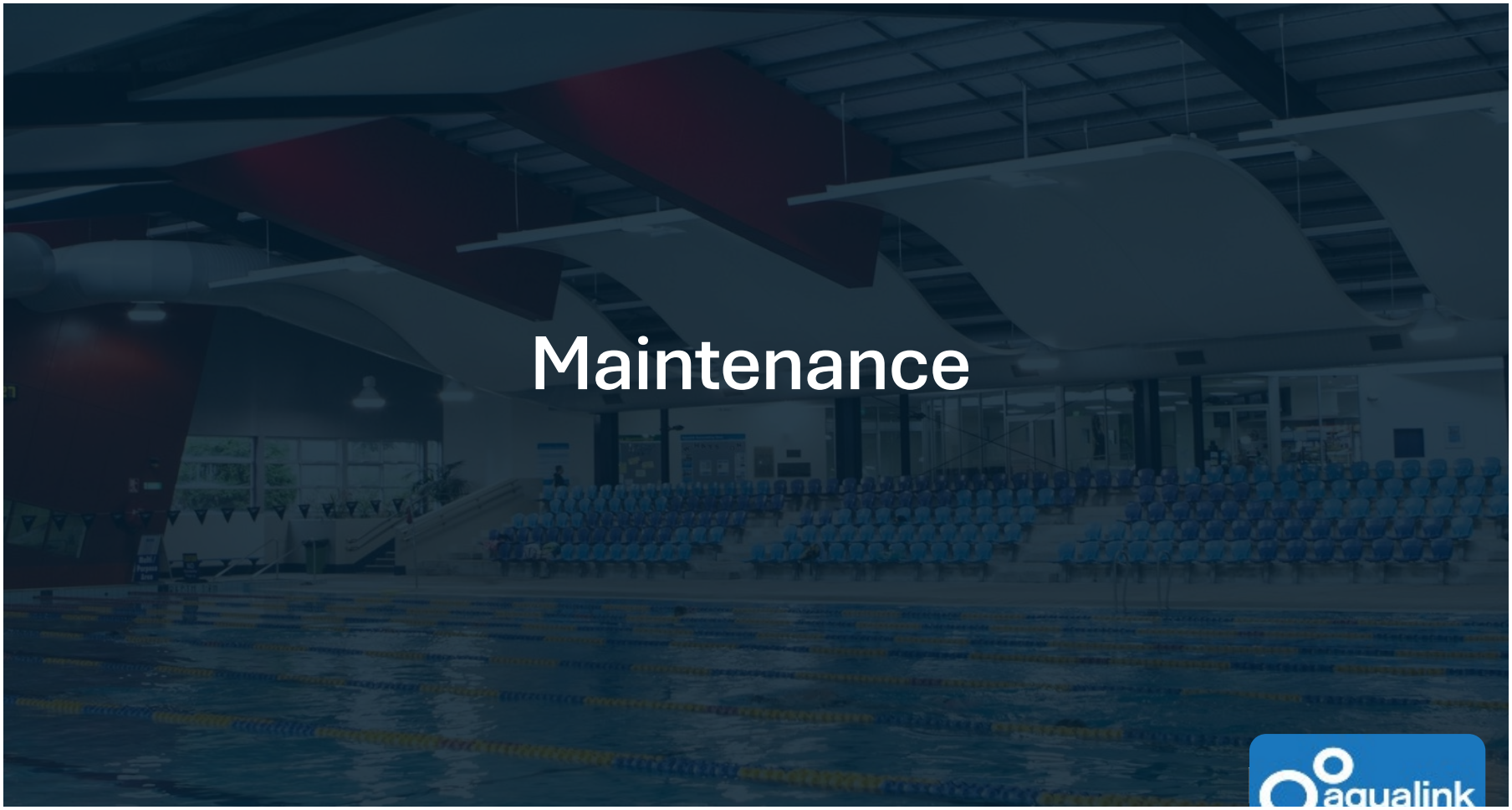

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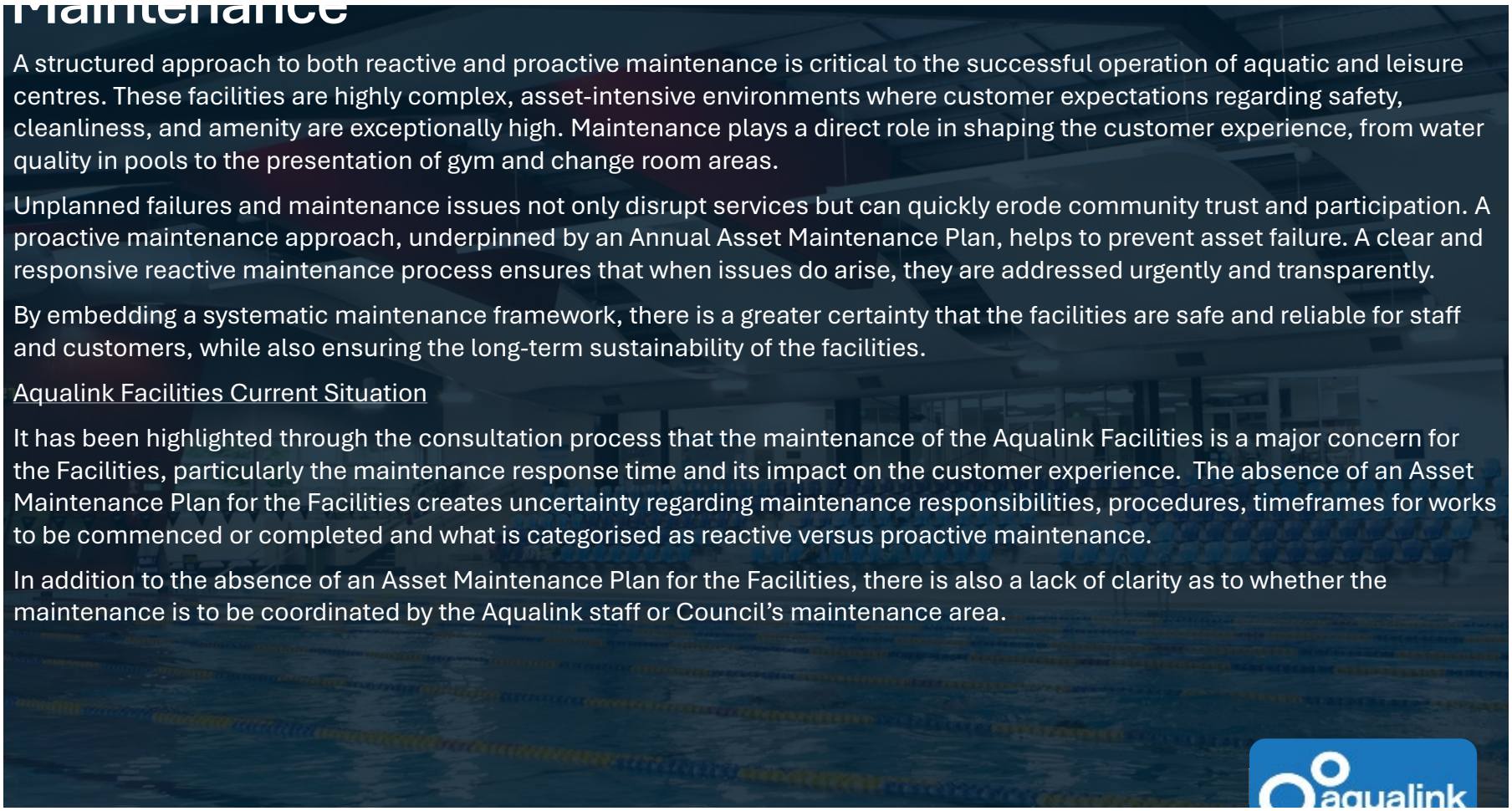
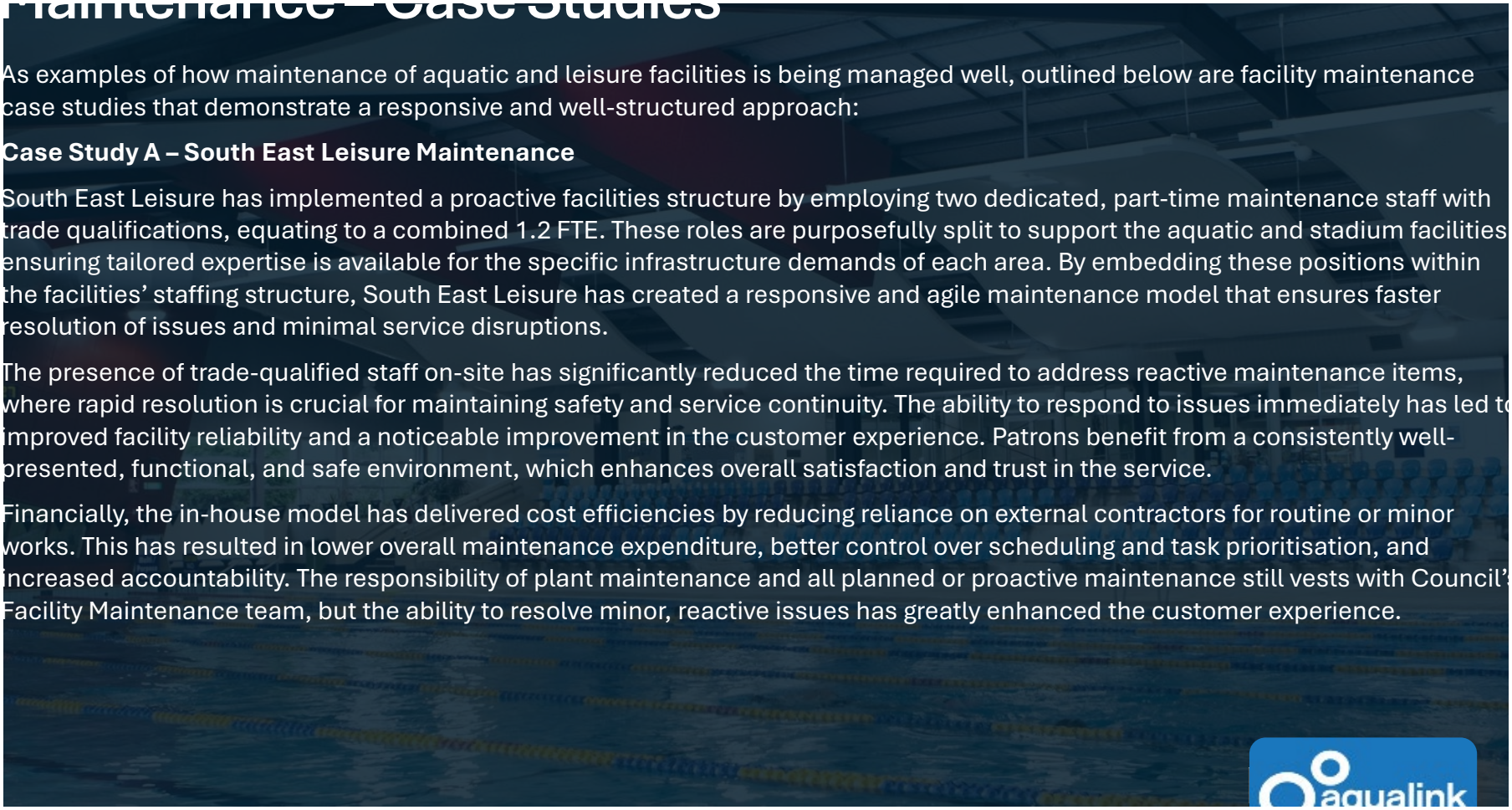


Maintenance

An assessment of the maintenance spend for the benchmarked facilities was undertaken, which captures the costs allocated to the profit and loss statements only. As the facilities include both in-house and outsourced models, the cost allocations vary significantly, and the type of maintenance allocated to the facilities or costed to other departments within councils, such as proactive, reactive, and grounds maintenance, also varies. As such, the following table is provided for informational purposes only, due to the variability in how maintenance costs are treated:

Maintenance Benchmarking			
Centre	**Annual Marintenance Spend**	**Total Expenditure Including LTS**	**Maintenance Spend as a Percentage of Total Expenditure**
Facility A	$408,965	$8,890,543	4.60%
Facility B	$533,803	$10,040,338	5.32%
Facility C	$165,338	$4,483,518	3.69%
Facility D	$97,767	$4,937,360	1.98%
Facility E	$356,180	$5,919,897	6.02%
Facility F	$169,898	$5,628,530	3.02%
Benchmarked Average	**$288,658**	**$6,650,031**	**4.10%**
Aqualink Box Hill	**$364,927**	**$6,700,194**	**5.45%**
Aqualink Nunawading	**$200,538**	**$4,500,560**	**4.46%**


Maintenance – Case Studies
As examples of how maintenance of aquatic and leisure facilities is being managed well, outlined below are facility maintenance case studies that demonstrate a responsive and well-structured approach:
Case Study A – South East Leisure Maintenance
South East Leisure has implemented a proactive facilities structure by employing two dedicated, part-time maintenance staff with trade qualifications, equating to a combined 1.2 FTE. These roles are purposefully split to support the aquatic and stadium facilities ensuring tailored expertise is available for the specific infrastructure demands of each area. By embedding these positions within the facilities' staffing structure, South East Leisure has created a responsive and agile maintenance model that ensures faster resolution of issues and minimal service disruptions.
The presence of trade-qualified staff on-site has significantly reduced the time required to address reactive maintenance items, where rapid resolution is crucial for maintaining safety and service continuity. The ability to respond to issues immediately has led to improved facility reliability and a noticeable improvement in the customer experience. Patrons benefit from a consistently well-presented, functional, and safe environment, which enhances overall satisfaction and trust in the service.
Financially, the in-house model has delivered cost efficiencies by reducing reliance on external contractors for routine or minor works. This has resulted in lower overall maintenance expenditure, better control over scheduling and task prioritisation, and increased accountability. The responsibility of plant maintenance and all planned or proactive maintenance still vests with Council's Facility Maintenance team, but the ability to resolve minor, reactive issues has greatly enhanced the customer experience.
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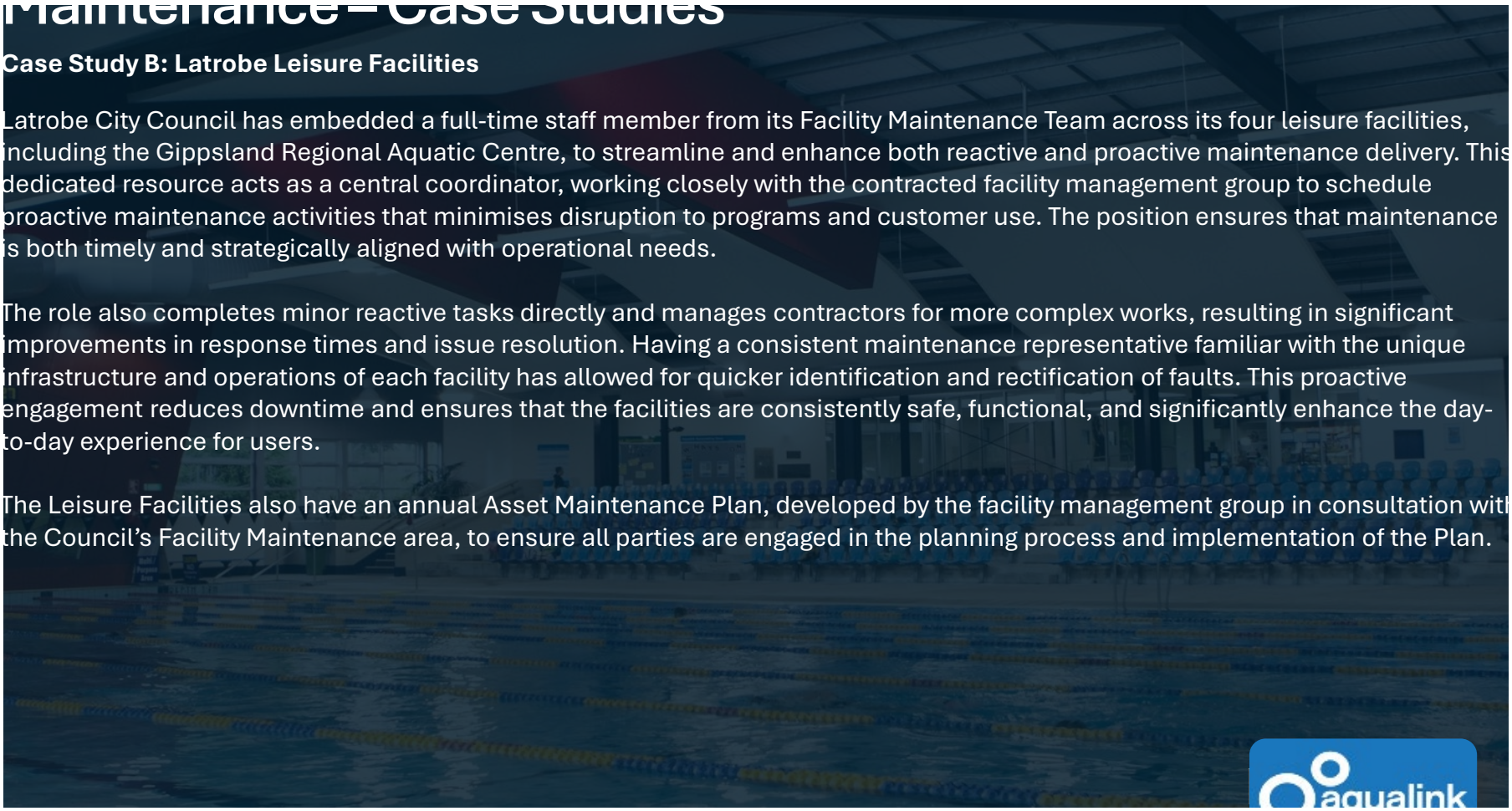
Maintenance – Case Studies
Case Study B: Latrobe Leisure Facilities
Latrobe City Council has embedded a full-time staff member from its Facility Maintenance Team across its four leisure facilities, including the Gippsland Regional Aquatic Centre, to streamline and enhance both reactive and proactive maintenance delivery. This dedicated resource acts as a central coordinator, working closely with the contracted facility management group to schedule proactive maintenance activities that minimises disruption to programs and customer use. The position ensures that maintenance is both timely and strategically aligned with operational needs.
The role also completes minor reactive tasks directly and manages contractors for more complex works, resulting in significant improvements in response times and issue resolution. Having a consistent maintenance representative familiar with the unique infrastructure and operations of each facility has allowed for quicker identification and rectification of faults. This proactive engagement reduces downtime and ensures that the facilities are consistently safe, functional, and significantly enhance the day-to-day experience for users.
The Leisure Facilities also have an annual Asset Maintenance Plan, developed by the facility management group in consultation with the Council's Facility Maintenance area, to ensure all parties are engaged in the planning process and implementation of the Plan.
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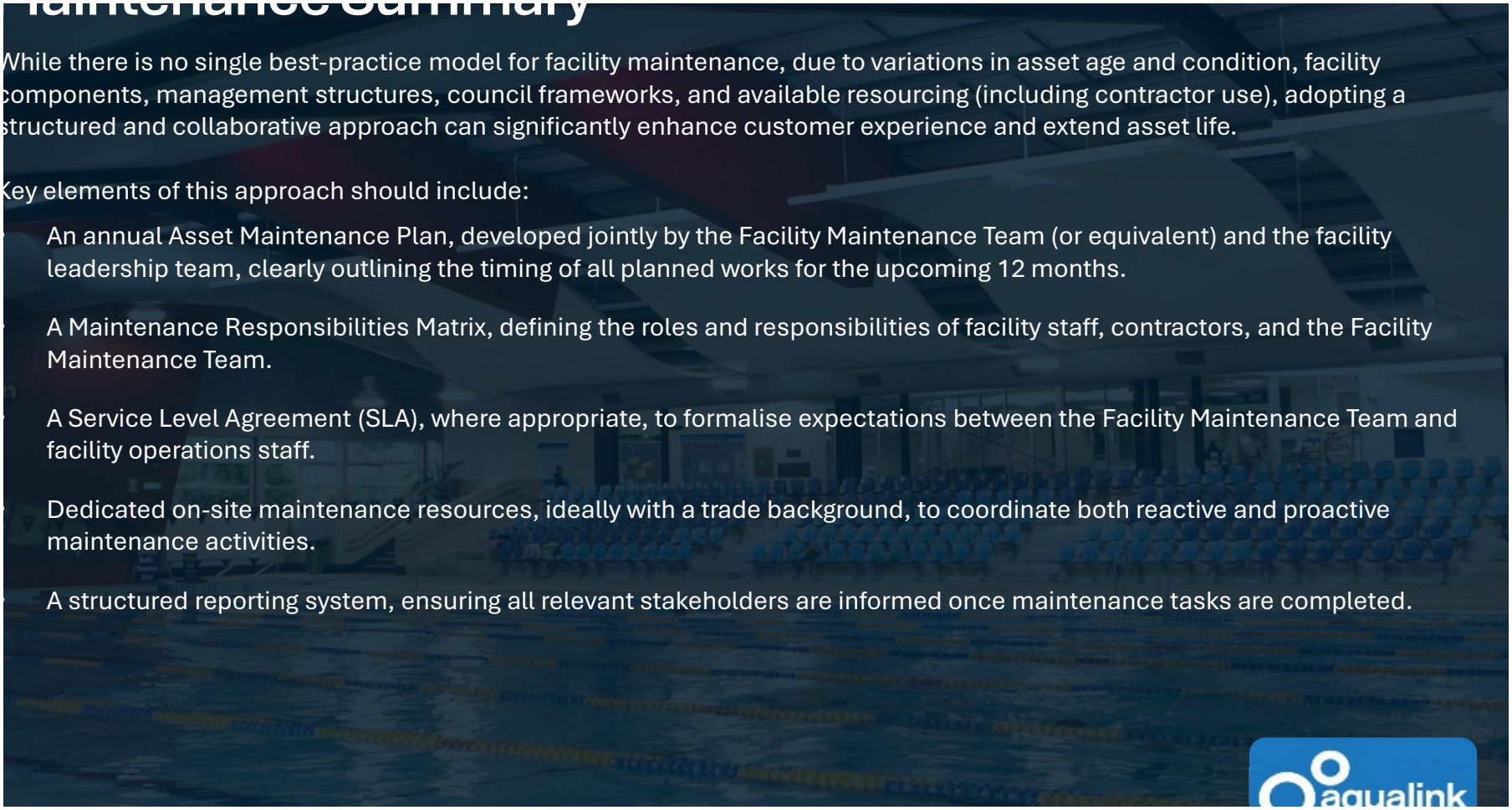

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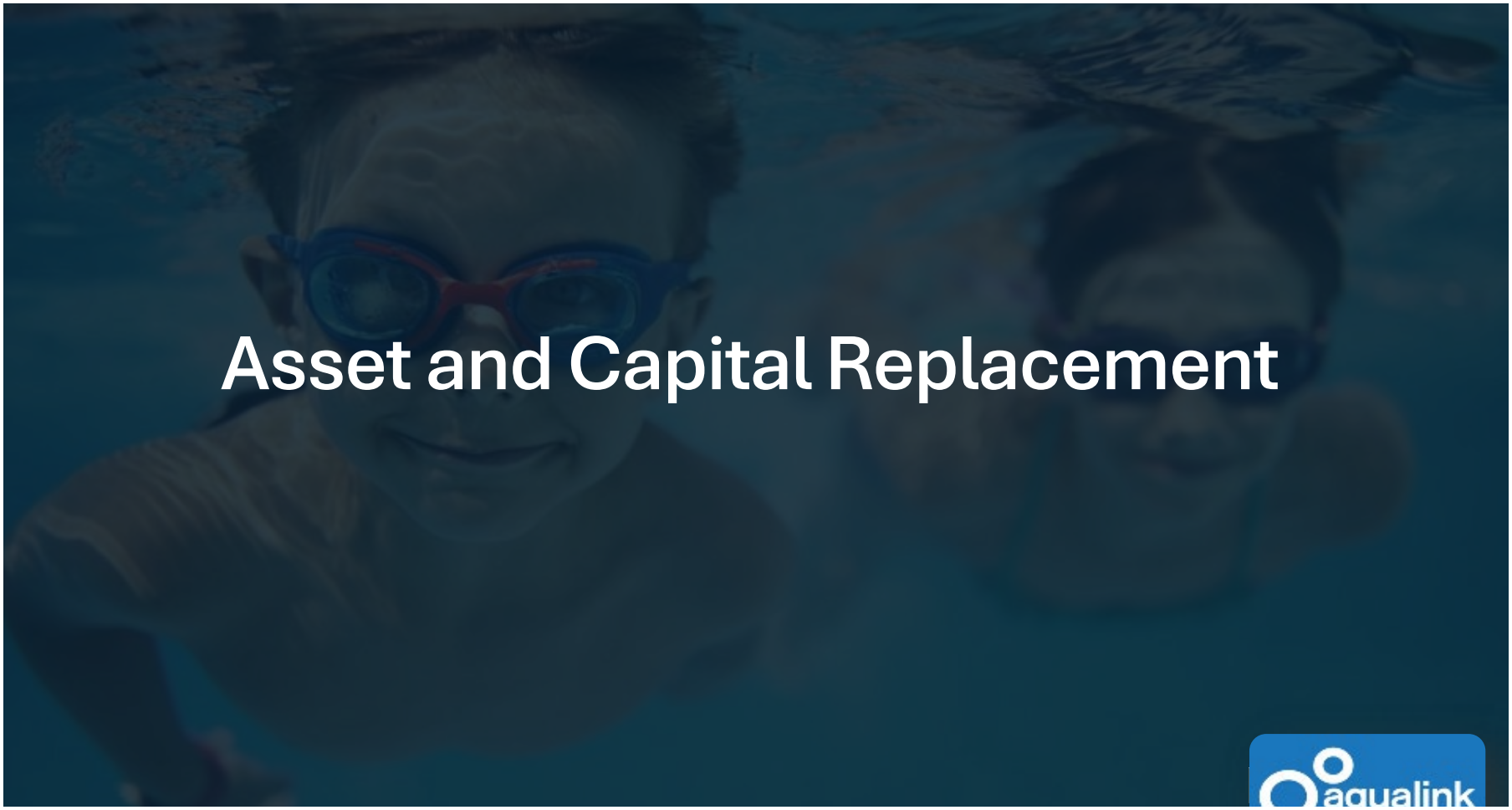

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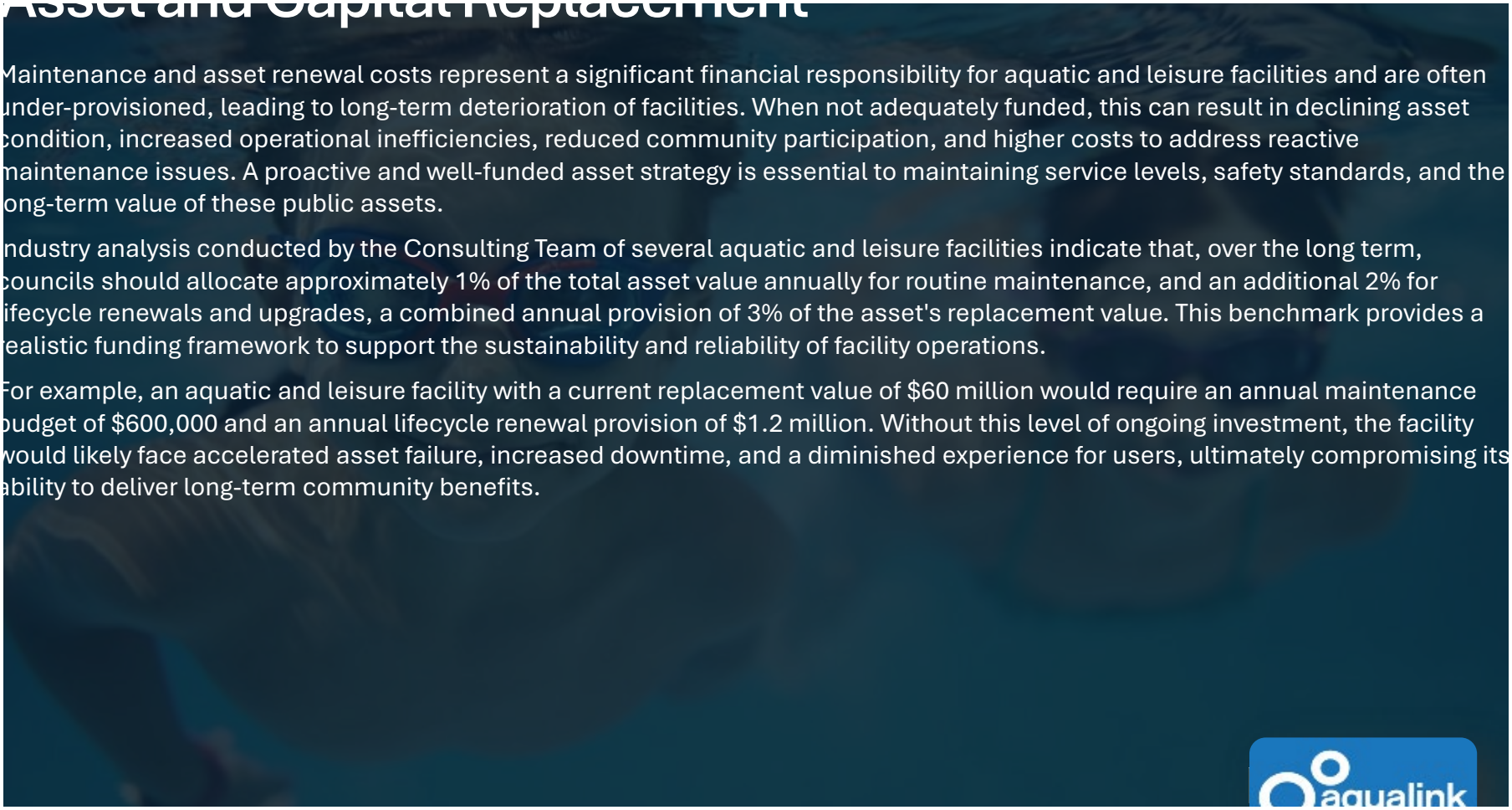

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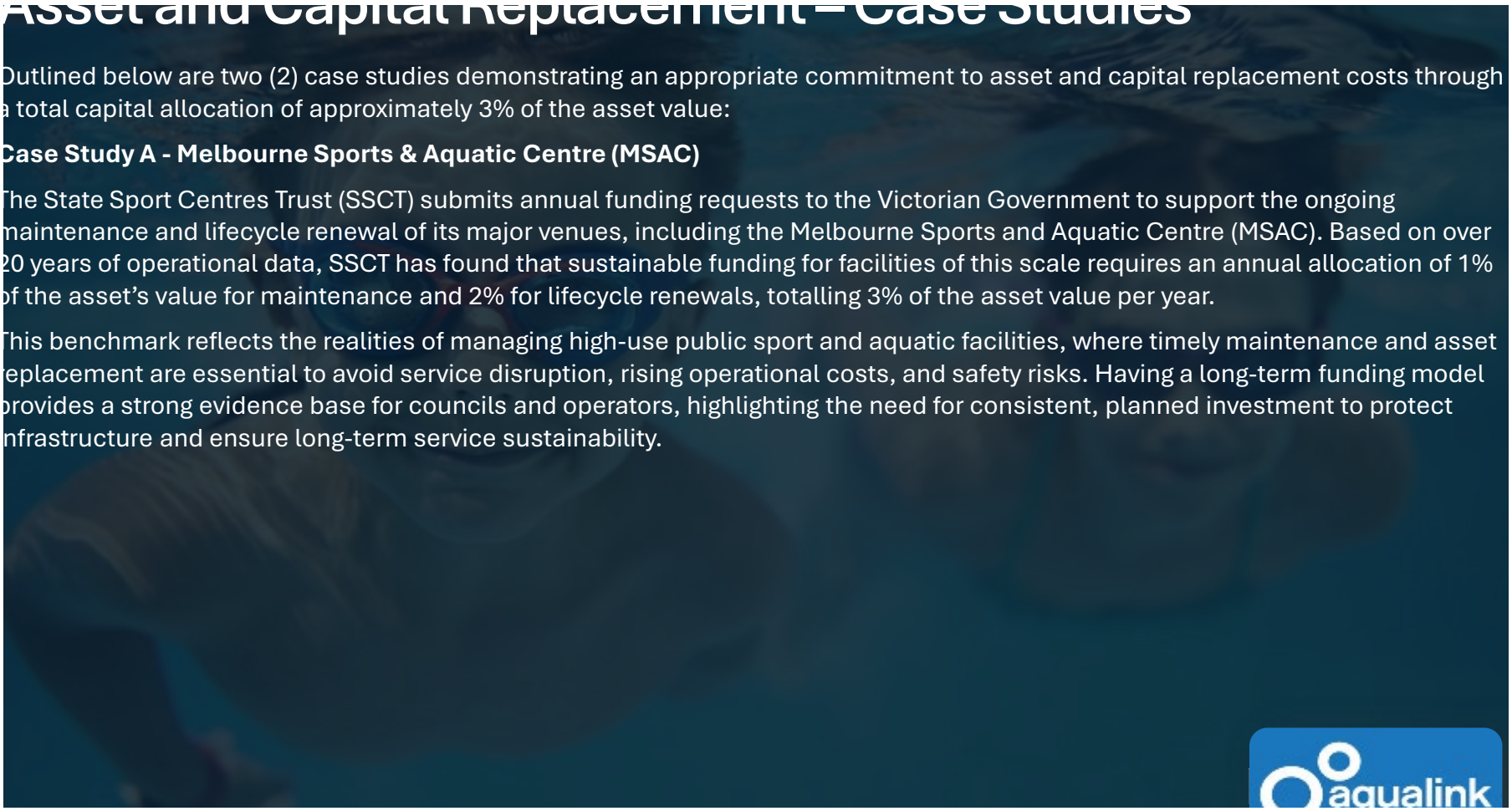

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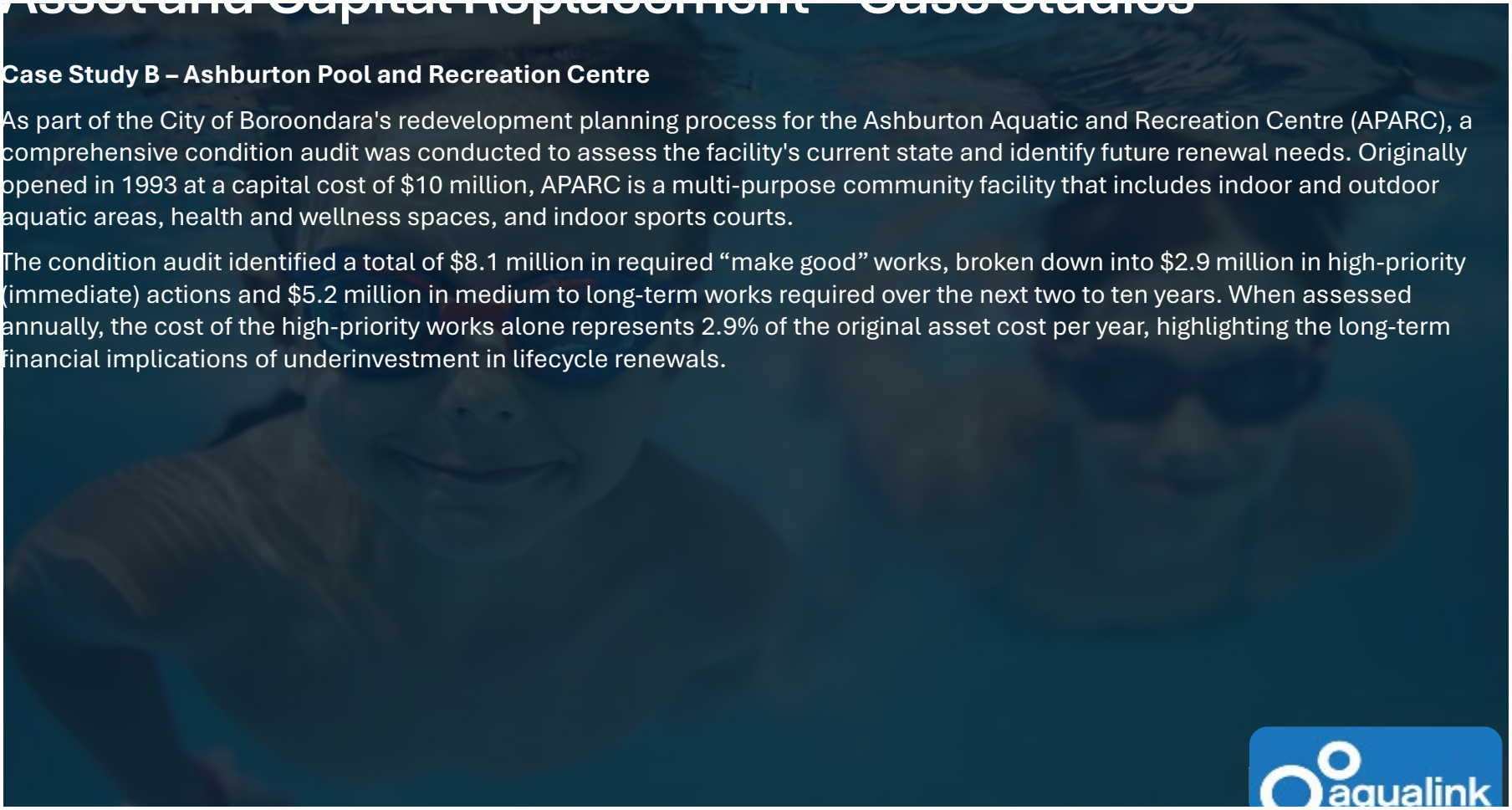

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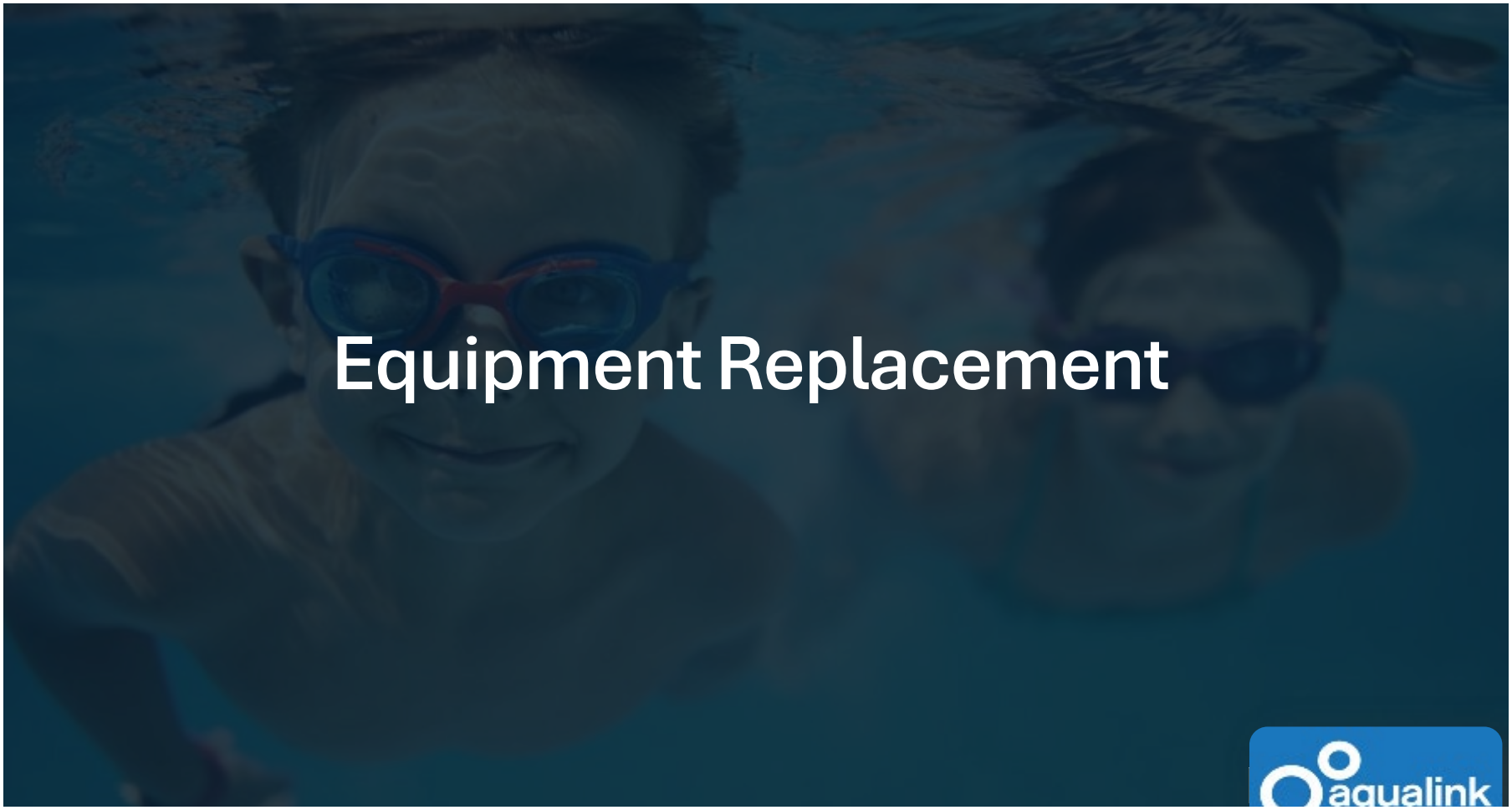

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Equipment Replacement – Case Studies
Outlined below are two (2) case studies that demonstrate alternate approaches to health club equipment procurement:
Case Study A – Moonee Valley Equipment Procurement Process
As part of the launch of the Keilor East Leisure Centre in 2021, Moonee Valley City Council engaged a member of the Consulting Team to support a comprehensive tender process for the equipment fit-out of both the Keilor East and Ascot Vale Leisure Centres. Council developed an Equipment Replacement Plan that included detailed tender documentation outlining purchasing arrangements, floor plans of the gym and program areas, and servicing requirements. Tenderers were required to submit proposals based on a five-year lease model for all cardio equipment and the outright purchase of strength equipment and spin bikes. Submissions also needed to include proposed equipment layouts, as well as comprehensive servicing, maintenance, and replacement strategies.
In addition to managing the tender process, the consultant developed an evaluation tool to assess the quality, durability, technology integration, user functionality, and informational features of the proposed equipment. Suppliers identified reference sites within other local government aquatic and leisure centres, which the consultant visited and assessed as part of the evaluation. This process enabled the Council to select equipment that delivered the best value for both the organisation and the community, was of the highest quality and durability, while meeting user expectations. The leasing arrangement for cardio equipment allows for a full refresh after five years, while strength equipment can be assessed for longevity and replaced incrementally through resale and reinvestment.
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Equipment Replacement – Case Studies

Although the case study below is for an outsourced management model, the approach undertaken demonstrates the Council's commitment to providing high-quality equipment across its health clubs.

Case Study A – City of Casey Health Club Equipment Procurement Approach

As part of the tender process for the City of Casey's Leisure Facilities, Council undertook a comprehensive equipment replacement program across its three major facilities: Casey ARC, Casey RACE, and Endeavour Hills Leisure Centre. This initiative ensures that all health club equipment was replaced at the commencement of the initial contract term, addressing inconsistencies in equipment brands, capability, and condition that previously impacted member experience. Under a clearly structured partnership model, Council retains ownership and control of the asset replacement strategy while leveraging the contractor's procurement expertise and supplier networks.

Through the arrangement, the Contractor is responsible for the procurement, delivery, installation, servicing, and activation of all new equipment, with Council maintaining decision-making authority and approval at each stage of a structured tender process. The approach guarantees best value through competitive sourcing, requiring a minimum of three quotes per item, ensuring the equipment meets high standards in terms of durability, technology integration, and servicing support. The purchasing arrangement was for all cardio equipment to be leased for four (4) years, while the strength equipment was purchased by the Contractor, within the allocated equipment budget, and all items were expensed through the contract. The purchased strength equipment also included the option to trade in or resell the old equipment, minimising asset waste and generating a return to the Council.

This collaborative procurement and project management model offers significant benefits, delivering a consistent and enhanced user experience, ensuring alignment with community needs, and supporting long-term operational sustainability. Additionally, it gives Council flexibility and oversight to adjust the procurement approach in the future, while avoiding unnecessary financial risk.

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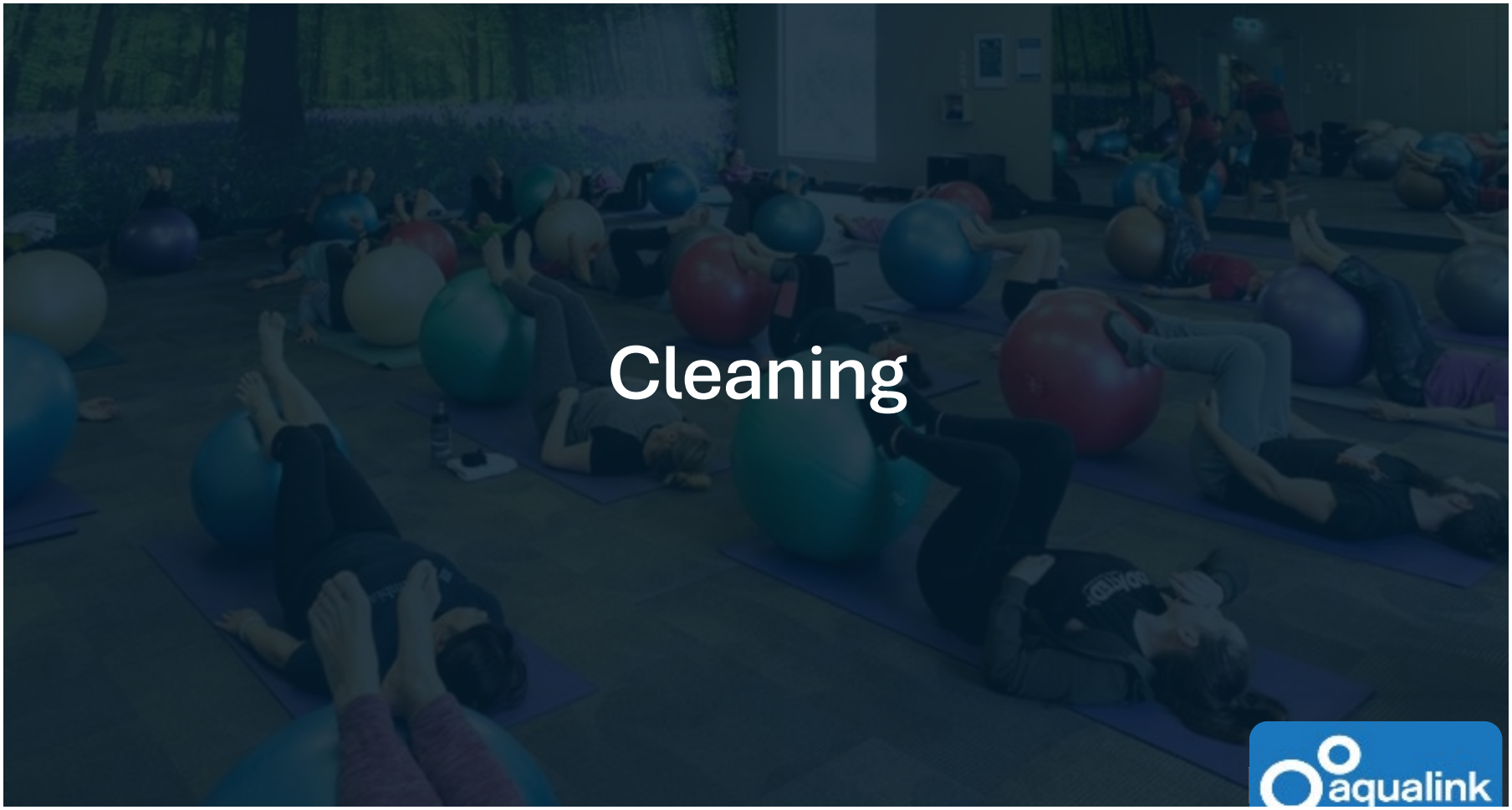
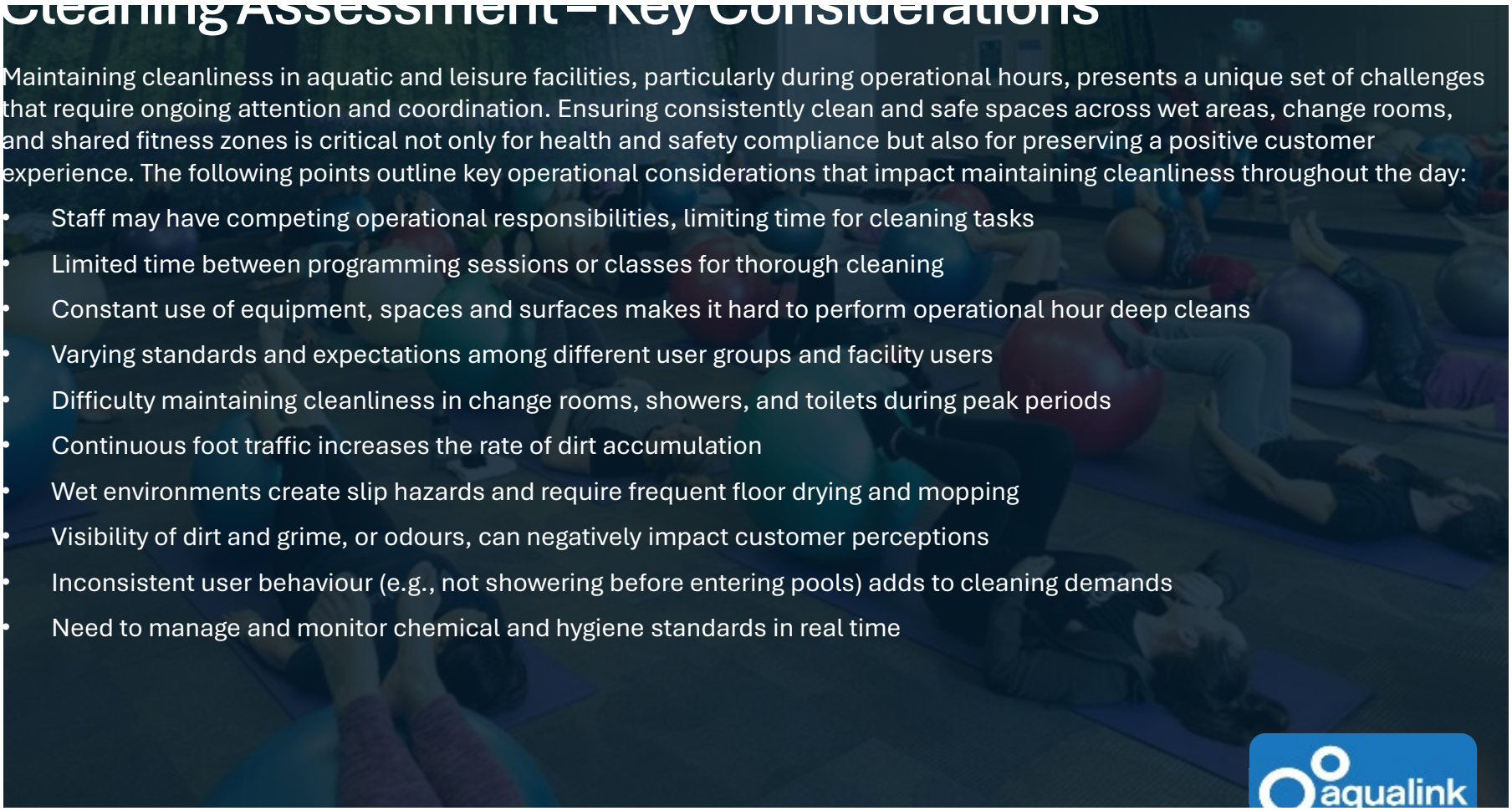


Cleaning Assessment

An assessment was conducted to compare the facility cleaning models with those of other benchmarked facilities, as well as to outline and include case studies of best practice cleaning approaches. The assessment included reviewing the total cleaning spend (contractors and/or staff and consumables) and the type of cleaning model employed, being contractors, staff, or a combination of both. The table below summarises the assessment in comparison to the Aqualink Facilities:

Facility Cleaning Benchmarking (Model and Expenditure)				
Centre	Annual Cleaning Spend	Contract Cleaners	Cleaning Staff	Contract Cleaners & Cleaning Staff
Facility A	$434,789	-	-	✓
Facility B	$492,970	✓	-	-
Facility C	$313,104	-	-	✓
Facility D	$375,097	-	✓	-
Facility E	$355,776	-	✓	-
Facility F	$222,954	-	-	✓
Benchmarked Average and Allocation	**$365,781**	**1**	**2**	**3**
Aqualink Box Hill	**$412,162**	✓	**-**	**-**
Aqualink Nunawading	**$173,173**	✓	**-**	**-**

- The cleaning spend is considerably higher at AQBH than AQN and also above the benchmarked average of $365K ($47K higher). AQN was more than half the cleaning spend of the benchmarked average ($192K below).
- There was only one other facility with the same cleaning model as the Aqualink Facilities, while two (2) facilities had only cleaning staff and three (3) facilities had a combination of staff and contractors.


Cleaning Assessment – Key Considerations
Maintaining cleanliness in aquatic and leisure facilities, particularly during operational hours, presents a unique set of challenges that require ongoing attention and coordination. Ensuring consistently clean and safe spaces across wet areas, change rooms, and shared fitness zones is critical not only for health and safety compliance but also for preserving a positive customer experience. The following points outline key operational considerations that impact maintaining cleanliness throughout the day:
• Staff may have competing operational responsibilities, limiting time for cleaning tasks
• Limited time between programming sessions or classes for thorough cleaning
• Constant use of equipment, spaces and surfaces makes it hard to perform operational hour deep cleans
• Varying standards and expectations among different user groups and facility users
• Difficulty maintaining cleanliness in change rooms, showers, and toilets during peak periods
• Continuous foot traffic increases the rate of dirt accumulation
• Wet environments create slip hazards and require frequent floor drying and mopping
• Visibility of dirt and grime, or odours, can negatively impact customer perceptions
• Inconsistent user behaviour (e.g., not showering before entering pools) adds to cleaning demands
• Need to manage and monitor chemical and hygiene standards in real time
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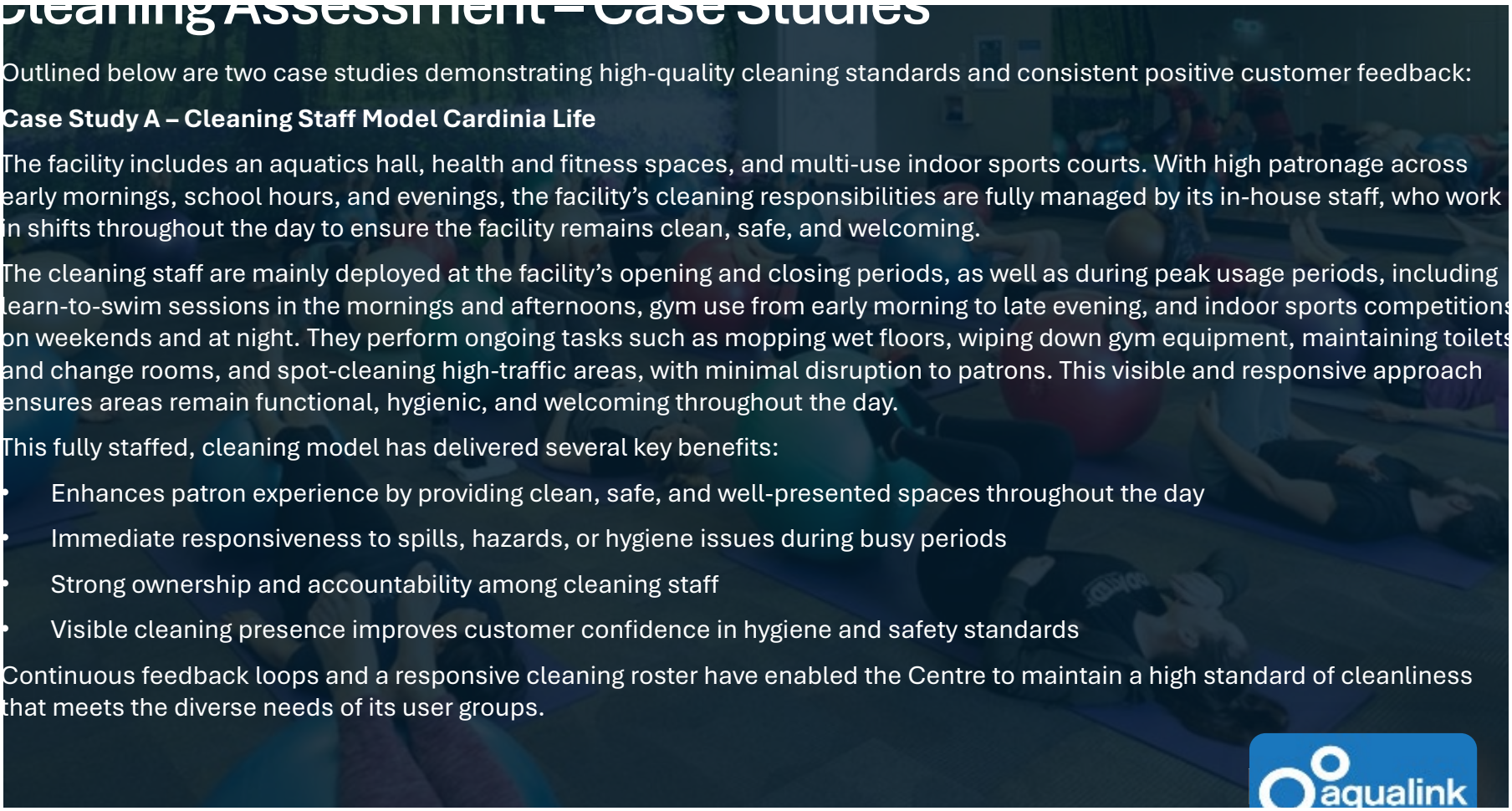
Cleaning Assessment – Case Studies
Outlined below are two case studies demonstrating high-quality cleaning standards and consistent positive customer feedback:
Case Study A – Cleaning Staff Model Cardinia Life
The facility includes an aquatics hall, health and fitness spaces, and multi-use indoor sports courts. With high patronage across early mornings, school hours, and evenings, the facility's cleaning responsibilities are fully managed by its in-house staff, who work in shifts throughout the day to ensure the facility remains clean, safe, and welcoming.
The cleaning staff are mainly deployed at the facility's opening and closing periods, as well as during peak usage periods, including learn-to-swim sessions in the mornings and afternoons, gym use from early morning to late evening, and indoor sports competitions on weekends and at night. They perform ongoing tasks such as mopping wet floors, wiping down gym equipment, maintaining toilets and change rooms, and spot-cleaning high-traffic areas, with minimal disruption to patrons. This visible and responsive approach ensures areas remain functional, hygienic, and welcoming throughout the day.
This fully staffed, cleaning model has delivered several key benefits:
• Enhances patron experience by providing clean, safe, and well-presented spaces throughout the day
• Immediate responsiveness to spills, hazards, or hygiene issues during busy periods
• Strong ownership and accountability among cleaning staff
• Visible cleaning presence improves customer confidence in hygiene and safety standards
Continuous feedback loops and a responsive cleaning roster have enabled the Centre to maintain a high standard of cleanliness that meets the diverse needs of its user groups.
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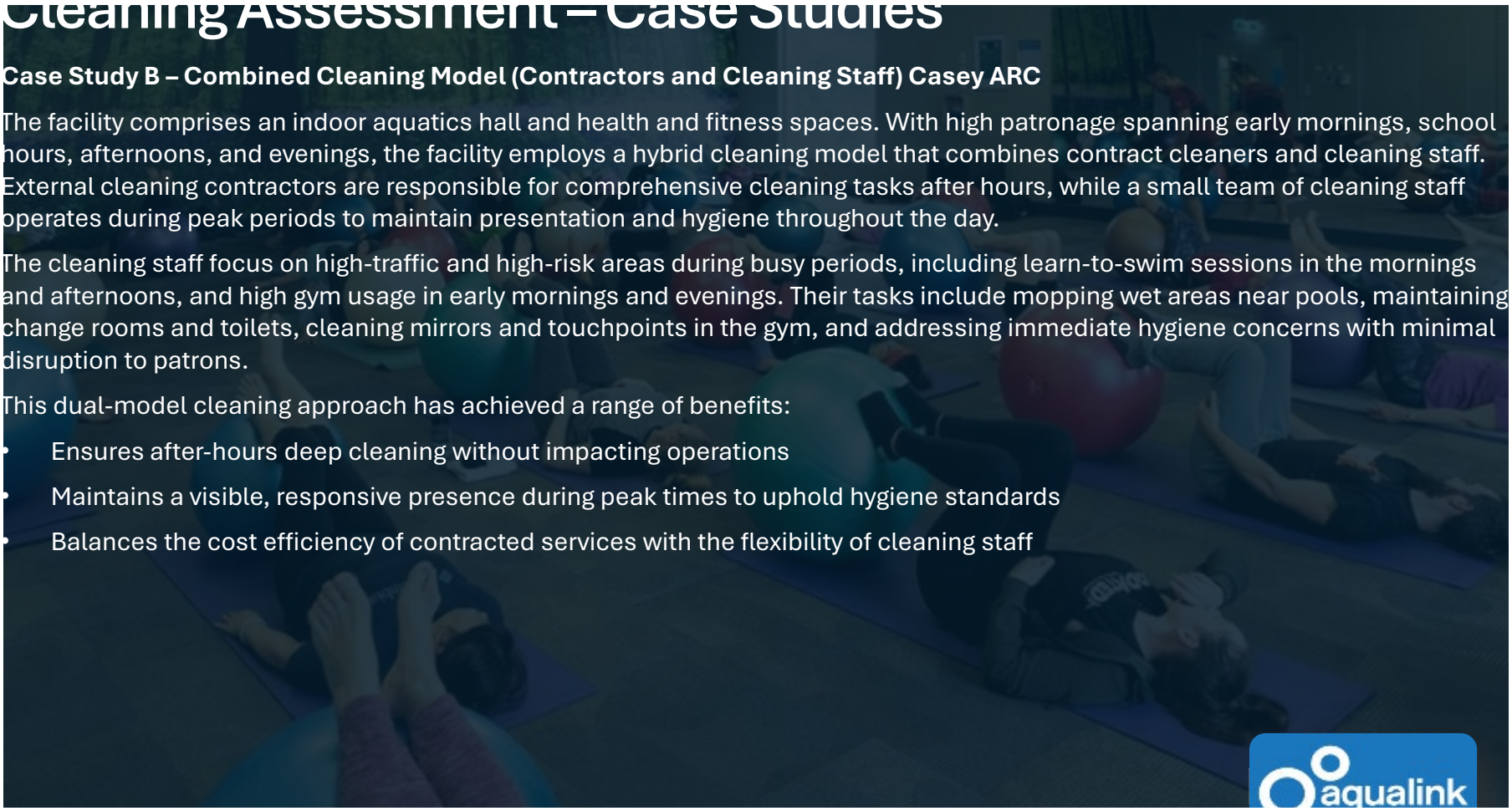
Cleaning Assessment – Case Studies
Case Study B – Combined Cleaning Model (Contractors and Cleaning Staff) Casey ARC
The facility comprises an indoor aquatics hall and health and fitness spaces. With high patronage spanning early mornings, school hours, afternoons, and evenings, the facility employs a hybrid cleaning model that combines contract cleaners and cleaning staff. External cleaning contractors are responsible for comprehensive cleaning tasks after hours, while a small team of cleaning staff operates during peak periods to maintain presentation and hygiene throughout the day.
The cleaning staff focus on high-traffic and high-risk areas during busy periods, including learn-to-swim sessions in the mornings and afternoons, and high gym usage in early mornings and evenings. Their tasks include mopping wet areas near pools, maintaining change rooms and toilets, cleaning mirrors and touchpoints in the gym, and addressing immediate hygiene concerns with minimal disruption to patrons.
This dual-model cleaning approach has achieved a range of benefits:
• Ensures after-hours deep cleaning without impacting operations
• Maintains a visible, responsive presence during peak times to uphold hygiene standards
• Balances the cost efficiency of contracted services with the flexibility of cleaning staff
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Cleaning Assessment Summary

The assessment of the cleaning structures identified the following:

- There are considerable challenges in having a 'Contactor Only' cleaning model, whereby the deep clean is completed outside of operational hours and the facility staff, such as Duty Managers or lifeguards, need to spot clean reactively during peak operation periods. This approach requires the facility staff to step away from their normal functions to respond to the cleaning issue. The lack of dedicated cleaners during operational hours, particularly during peak periods, often results in increased customer complaints and negatively impacts the customer experience.
- The combined model of having contractor cleaners for after-hours and dedicated cleaning staff during certain periods of the day is a cost-effective method to reduce the impact on customers, but based on the limited coverage from the cleaning staff, there is still a need for facility staff (i.e. Duty Manager) to undertake spot cleaning where required.
- The model of having only dedicated cleaning staff, and not having contract cleaners, can be the most costly depending on the level of coverage of hours but provides the most benefits operationally, such as a reduction in customer complaints, utilisation the cleaners to support irregular bookings or events, ensures sports courts are consistently cleaned, as well as the ability to trai the cleaners in other areas of the business, i.e. lifeguards, to provide additional resourcing support.

Based on the assessment, the recommended model would be to have dedicated cleaning staff only.

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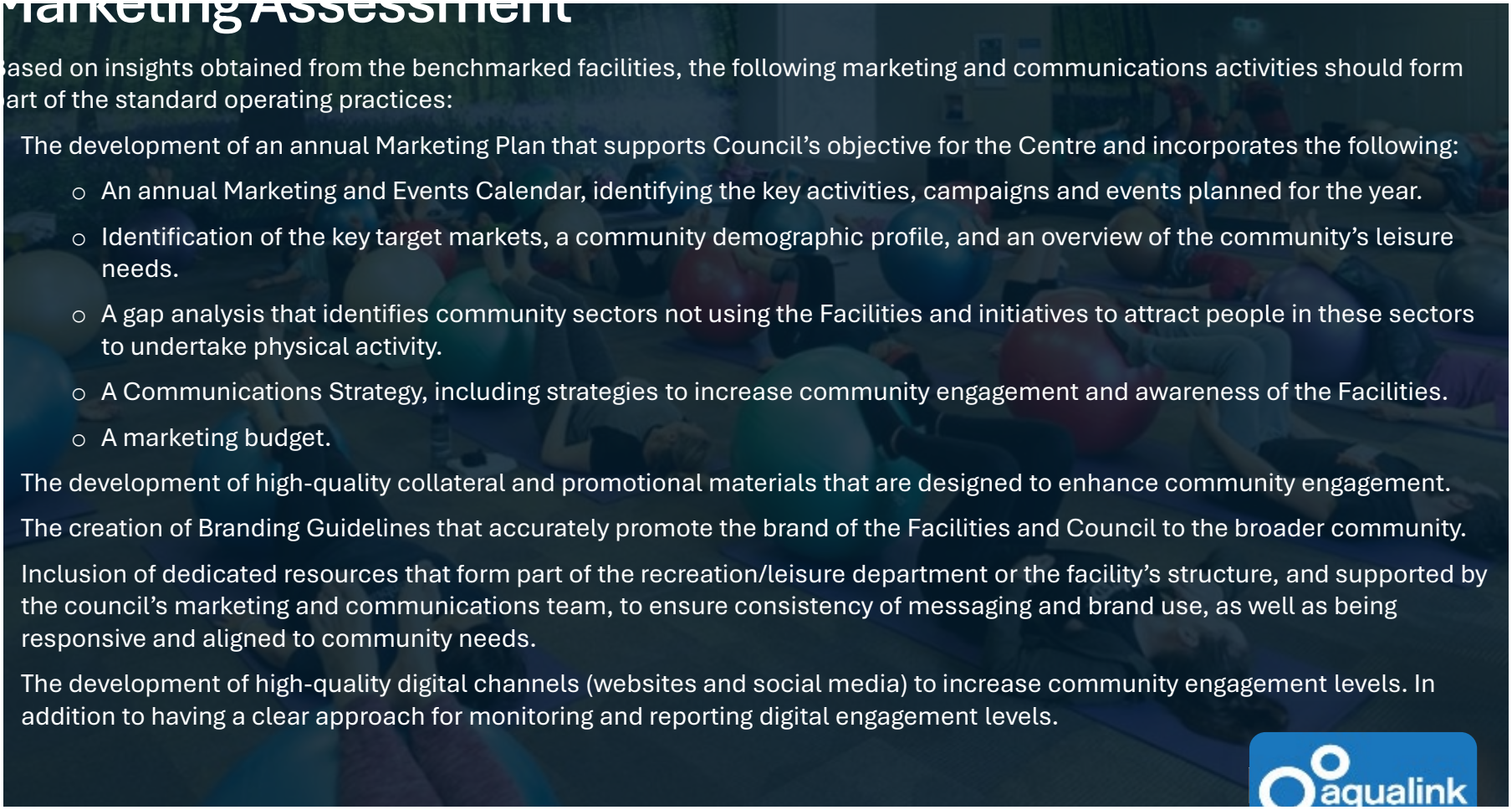
Marketing Assessment

An assessment of marketing and communications expenditure across benchmarked facilities was undertaken to compare cost allocations and identify best-practice models for supporting aquatic and leisure centres. This assessment reviewed total marketing spend, the delivery model used (e.g., facility-based resources, centralised corporate support, or a hybrid approach) and a metric of total marketing spend as a percentage of total expenditure (including learn to swim). The table below summarises the assessment in comparison to the Aqualink Facilities:

Marketing and Communication Benchmarking (Model and Expenditure)						
Centre	Annual Marketing Spend	Total Expenditure Including LTS	Marketing Spend as a Percentage of Total Expenditure	Facility/Unit Based Resources	Central Marketing Support	Facility/Unit Based Resources & Central Marketing Support
Facility A	$217,132	$8,890,543	2.44%	✓	-	-
Facility B	$122,653	$10,040,338	1.22%	-	✓	-
Facility C	$128,256	$4,483,518	2.86%	✓	-	-
Facility D	$96,862	$4,937,360	1.96%	-	✓	-
Facility E	$109,408	$5,919,897	1.85%	-	-	✓
Facility F	$124,801	$5,628,530	2.22%	-	✓	-
Benchmarked Average and Allocation	**$133,185**	**$6,650,031**	**2.09%**	**2**	**3**	**1**
Aqualink Box Hill	**$55,234**	**$6,700,194**	**0.82%**	**-**	✓	**-**
Aqualink Nunawading	**$41,263**	**$4,500,560**	**0.92%**	**-**	✓	**-**

The assessment highlighted a considerable variance between the current marketing spend for AQBH and AQN and the benchmarked average ($78K and $92K, respectively). Equally, the percentage of the total expenditure for the Aqualink Facilities was less than half that of the other facilities' allocations.

The current marketing model for the Aqualink Facilities is a centralised model, which is aligned to the most common model as it is seen as cost-effective, but does not often provide a nimble and customised service.


Marketing Assessment
Based on insights obtained from the benchmarked facilities, the following marketing and communications activities should form part of the standard operating practices:
The development of an annual Marketing Plan that supports Council's objective for the Centre and incorporates the following:
An annual Marketing and Events Calendar, identifying the key activities, campaigns and events planned for the year.
Identification of the key target markets, a community demographic profile, and an overview of the community's leisure needs.
A gap analysis that identifies community sectors not using the Facilities and initiatives to attract people in these sectors to undertake physical activity.
A Communications Strategy, including strategies to increase community engagement and awareness of the Facilities.
A marketing budget.
The development of high-quality collateral and promotional materials that are designed to enhance community engagement.
The creation of Branding Guidelines that accurately promote the brand of the Facilities and Council to the broader community.
Inclusion of dedicated resources that form part of the recreation/leisure department or the facility's structure, and supported by the council's marketing and communications team, to ensure consistency of messaging and brand use, as well as being responsive and aligned to community needs.
The development of high-quality digital channels (websites and social media) to increase community engagement levels. In addition to having a clear approach for monitoring and reporting digital engagement levels.
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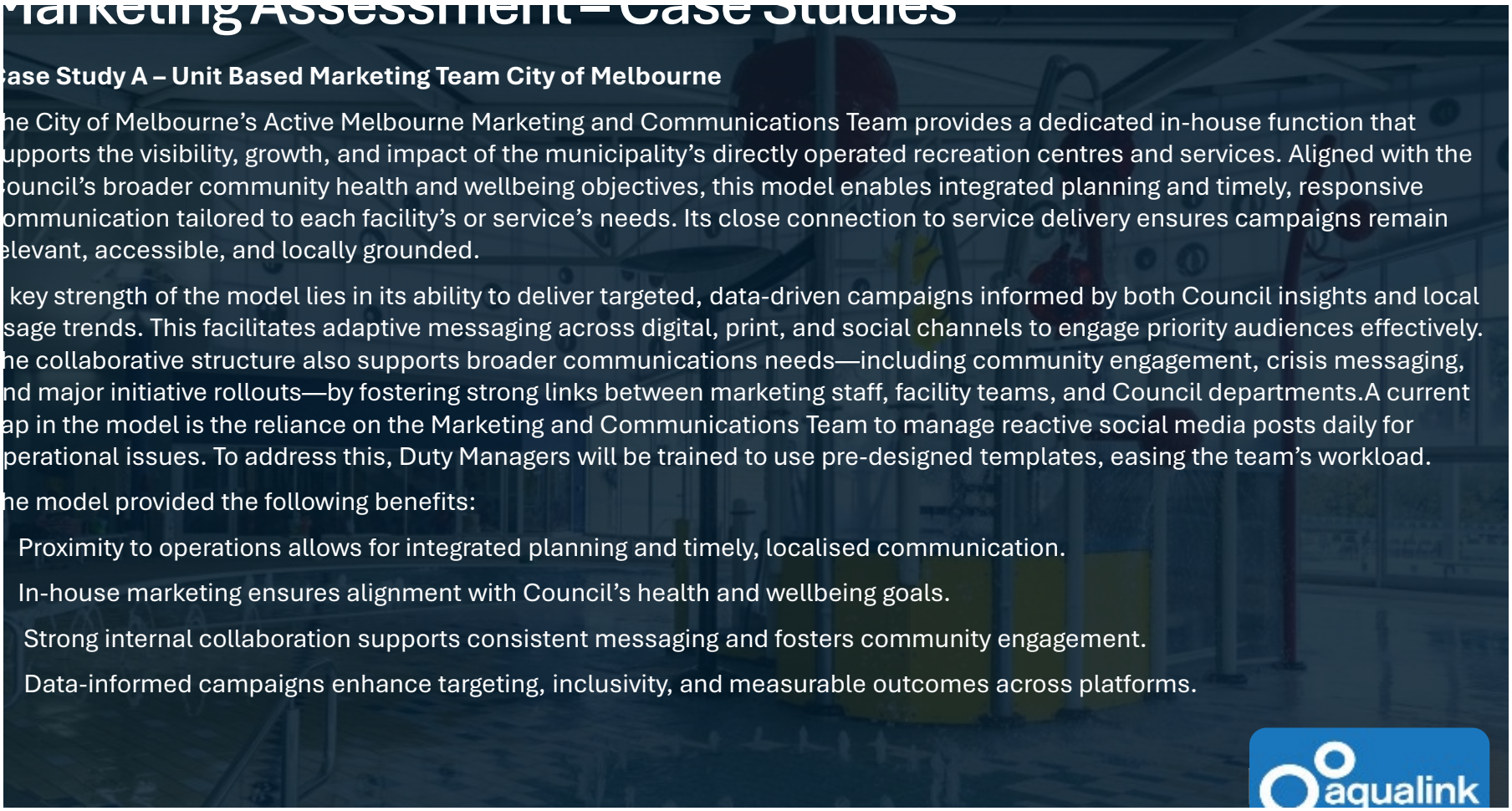
Marketing Assessment – Case Studies
Case Study A – Unit Based Marketing Team City of Melbourne
The City of Melbourne's Active Melbourne Marketing and Communications Team provides a dedicated in-house function that supports the visibility, growth, and impact of the municipality's directly operated recreation centres and services. Aligned with the Council's broader community health and wellbeing objectives, this model enables integrated planning and timely, responsive communication tailored to each facility's or service's needs. Its close connection to service delivery ensures campaigns remain relevant, accessible, and locally grounded.
A key strength of the model lies in its ability to deliver targeted, data-driven campaigns informed by both Council insights and local usage trends. This facilitates adaptive messaging across digital, print, and social channels to engage priority audiences effectively. The collaborative structure also supports broader communications needs—including community engagement, crisis messaging, and major initiative rollouts—by fostering strong links between marketing staff, facility teams, and Council departments.A current gap in the model is the reliance on the Marketing and Communications Team to manage reactive social media posts daily for operational issues. To address this, Duty Managers will be trained to use pre-designed templates, easing the team's workload.
The model provided the following benefits:
Proximity to operations allows for integrated planning and timely, localised communication.
In-house marketing ensures alignment with Council's health and wellbeing goals.
Strong internal collaboration supports consistent messaging and fosters community engagement.
Data-informed campaigns enhance targeting, inclusivity, and measurable outcomes across platforms.
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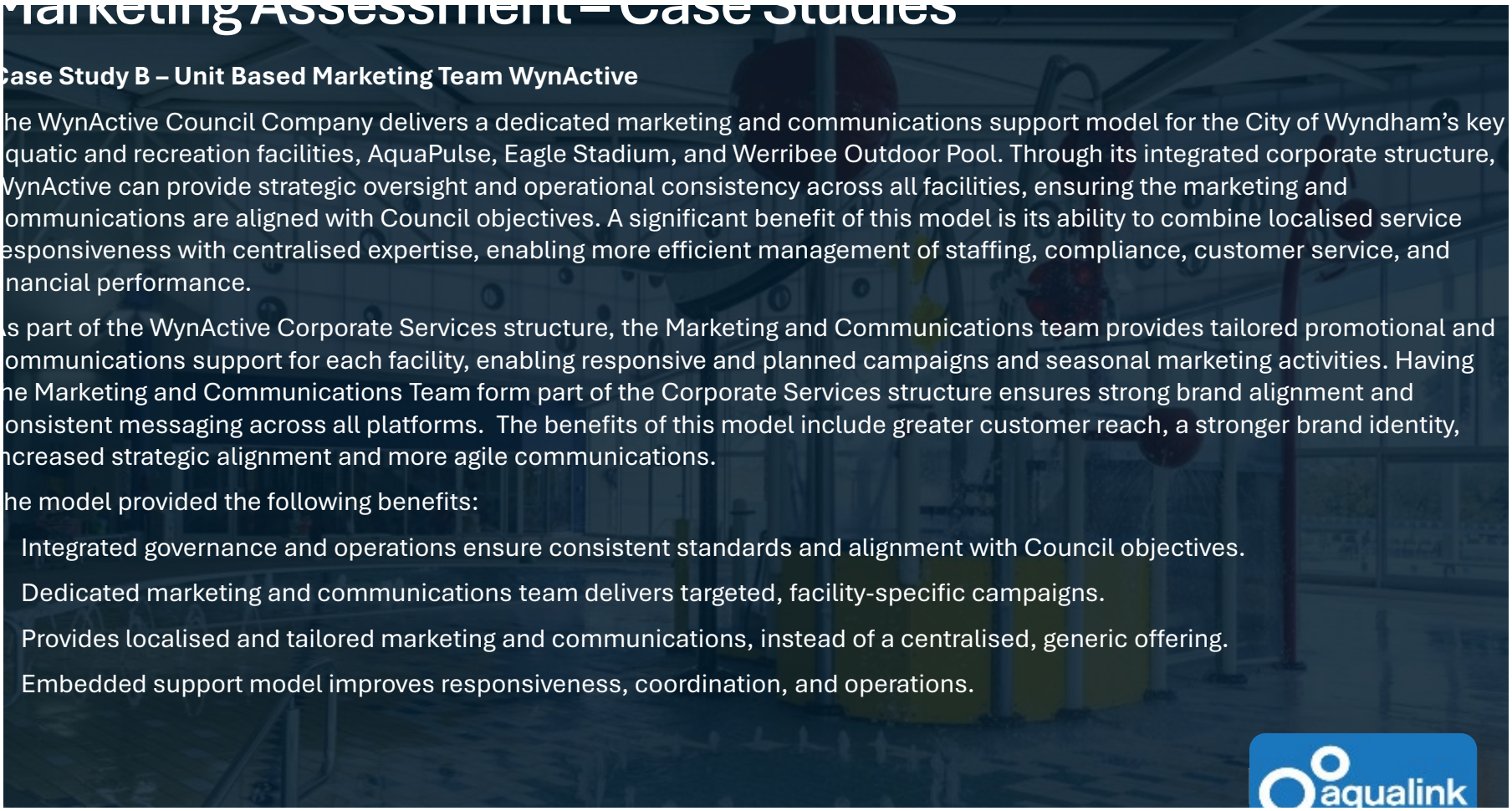
Marketing Assessment – Case Studies
Case Study B – Unit Based Marketing Team WynActive
The WynActive Council Company delivers a dedicated marketing and communications support model for the City of Wyndham's key aquatic and recreation facilities, AquaPulse, Eagle Stadium, and Werribee Outdoor Pool. Through its integrated corporate structure, WynActive can provide strategic oversight and operational consistency across all facilities, ensuring the marketing and communications are aligned with Council objectives. A significant benefit of this model is its ability to combine localised service responsiveness with centralised expertise, enabling more efficient management of staffing, compliance, customer service, and financial performance.
As part of the WynActive Corporate Services structure, the Marketing and Communications team provides tailored promotional and communications support for each facility, enabling responsive and planned campaigns and seasonal marketing activities. Having the Marketing and Communications Team form part of the Corporate Services structure ensures strong brand alignment and consistent messaging across all platforms. The benefits of this model include greater customer reach, a stronger brand identity, increased strategic alignment and more agile communications.
The model provided the following benefits:
Integrated governance and operations ensure consistent standards and alignment with Council objectives.
Dedicated marketing and communications team delivers targeted, facility-specific campaigns.
Provides localised and tailored marketing and communications, instead of a centralised, generic offering.
Embedded support model improves responsiveness, coordination, and operations.
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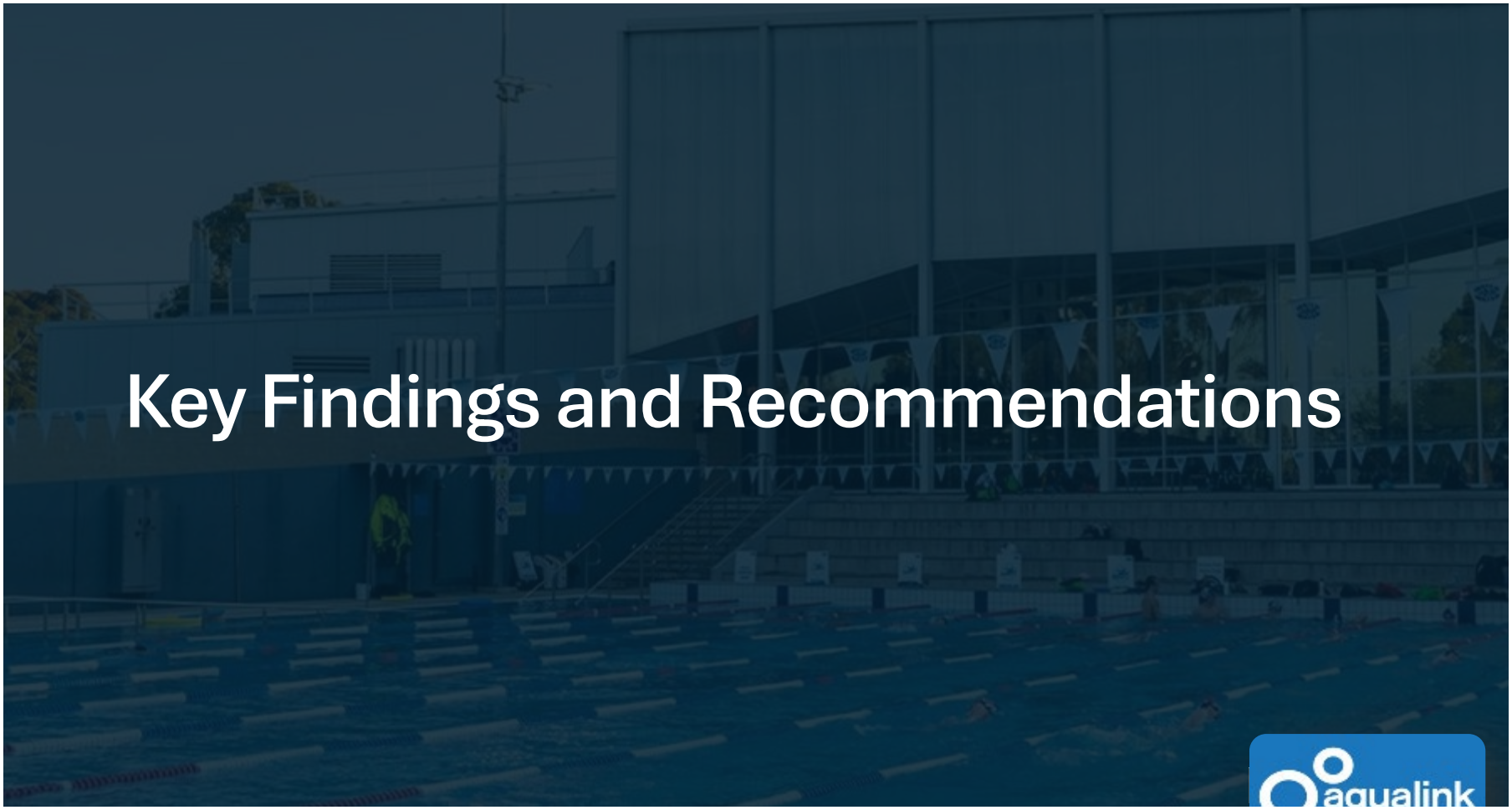

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Key Findings and Recommendations

Key Findings

Outlined below are the key findings from the Project, based on the identified phases undertaken:

Consultation Process

1. The consultation process identified that the in-house model provides direct control over operations, allowing for strong alignment and connection with the community, as well as allowing for greater flexibility in adjusting services, programming, and facility improvements without the delays associated with contract amendments.
2. The operational staff were described as highly committed and well-connected to the community. The model was identified as providing a strong opportunity to leverage other departments within Council to have deeper levels of community engagement and have greater strategic alignment with Council's objectives.
3. The consultation also highlighted that Council's internal systems and processes often limit the Facilities' ability to respond quickly to changing community needs, with measured decision-making and cost-driven approaches hindering innovation and progress. Uncertainty about the future management model has also affected strategic momentum.
4. Operational support functions for the Facilities, such as maintenance, cleaning, and IT, were identified as areas of concern for customers and staff. Concerns were raised regarding delayed maintenance responses, a lack of clarity with responsibilities, an the lack of after-hours technology support, all of which negatively impact the customer experience. The marketing and communications area was also seen as under-resourced and insufficiently tailored to local needs.

Key Findings

Operational Performance

5. The assessment of the financial and attendance performance identified significant challenges in interpreting and analysing the available data, particularly the profit and loss statements and membership data. Equally, the absence of detailed periodic reporting (monthly, quarterly or annually) for the Facilities impacts the ability to make operational decisions and to compare the performance of the Facilities without undertaking an in-depth assessment.
6. A review of the current and past performance of the Aqualink Facilities identified that the Facilities have shown a strong financial recovery in 2024/25 (interim results), with a combined operational improvement of $1.25M compared to the previous year and a $631K better-than-budget result. This recovery reflects the impact of full-year operations, excluding facility closures, and increased income, particularly from user fees.
7. An assessment of the financial performance of the Facilities, including an allocation for Corporate Service Costs (average of $2.1M), significantly distorts the net financial picture for the Facilities. Based on benchmarking of other in-house models, the Corporate Service Costs should be approximately $1.2M and $1.4M for a service of the scale of the Aqualink Facilities.
8. Despite this financial uplift, a clear performance gap exists between AQBH and AQN. AQBH outperformed AQN across all key operational metrics, including income per visit ($1.15 higher), subsidy per visit ($1.07 lower), and visitations per head of population (0.74 higher). AQBH's financial result of 2024/25 (interim) was $841K better than AQN's performance for the equivalent period.
9. A review of the attendance data identified that the forecasted total attendance in 2024/25 is expected to be 251K visits (15.3%) higher than the previous year. AQBH alone is forecasted to increase by 185K visits, reversing a prior-year decline due to facility closures. Membership growth for both Facilities also reflects positive growth, with AQBH and AQN increasing by 1,300 and 787 members, respectively, since mid-2022.

10.2 – ATTACHMENT 2. Consultant Report Leisure Optimisation

Key Findings

Performance Benchmarking

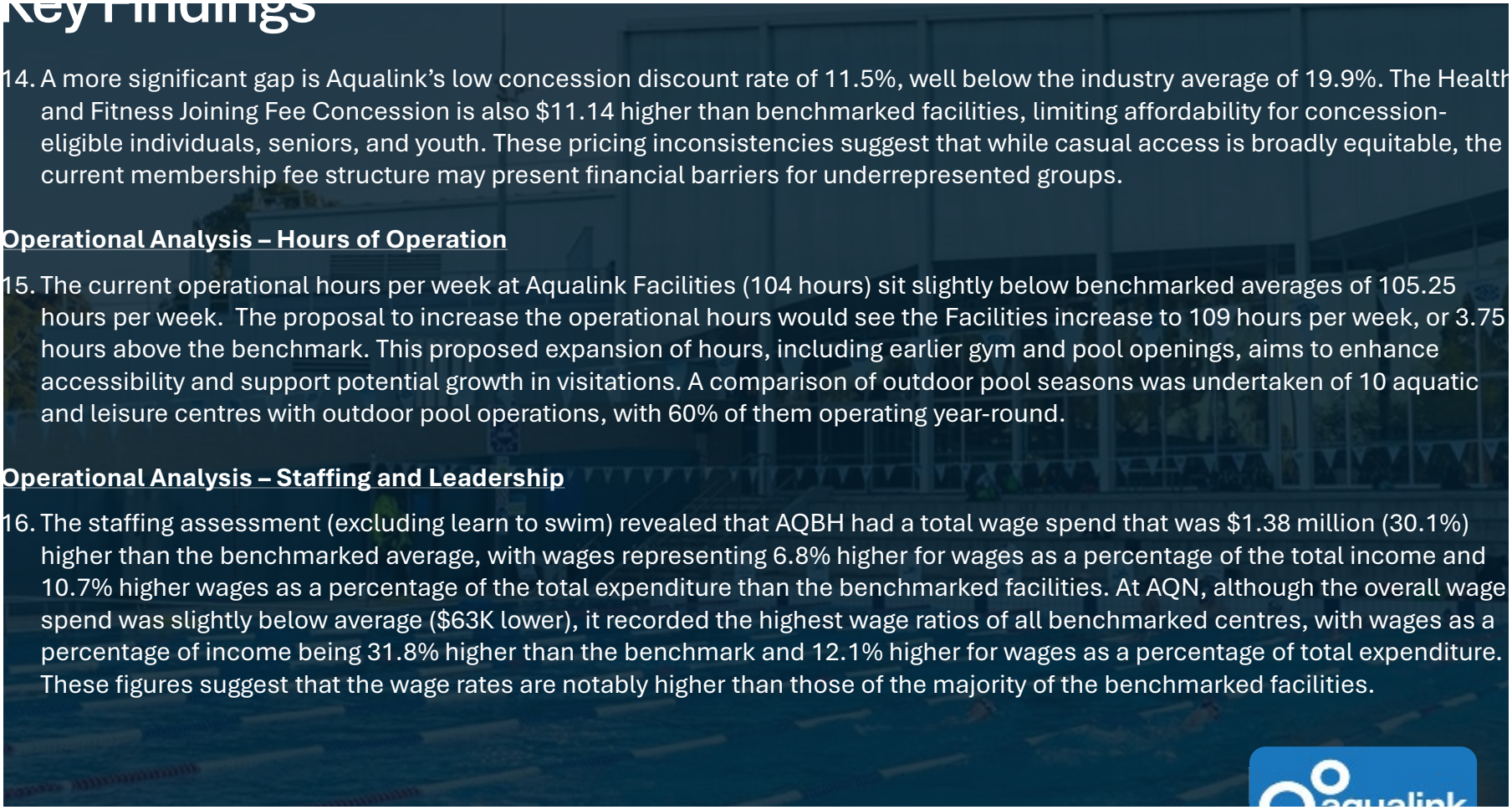
10. The performance benchmarking revealed that AQBH is performing strongly relative to benchmarked facilities (excluding learn to swim), with an operating deficit $347K below the benchmark average and attendances approximately 299K higher. Despite an income per visit that is $0.82 below the average, AQBH had a lower subsidy per visit ($0.62 less), reflecting strong financial efficiency. It also recorded 926 more aquatic memberships than the average, although gym membership penetration remains slightly below expected levels.

11. In contrast, AQN significantly underperformed across most metrics. Its operating deficit was $633K higher than the benchmark, with income per visit $2.50 below average and subsidy per visit $0.96 higher. AQN also recorded lower visitation per head of population (1.52 visits below benchmark) and had 1,322 fewer gym members and 142 fewer aquatic members than average. These results highlight underutilisation and revenue underperformance, likely driven by the facility's aging condition and limited appeal in a competitive market.

12. When learn-to-swim figures were included, both AQBH and AQN were below benchmark net performance, by $112K and $954K respectively. AQN's income was $3.1M below the benchmark, compared to a $62K shortfall at AQBH. Both Facilities underperformed in terms of gym membership penetration and visits per head within a 15-minute drive, although AQBH's strong aquatic membership and attendance base confirmed its positive performance compared to the benchmarked facilities. The findings confirm AQBH as a high-volume operation, while AQN requires strategic intervention and upgrades to lift performance.

Operational Analysis – Fees and Charges

13. The fees and charges analysis found that while Aqualink's casual visit prices align with industry averages, several aspects of its membership pricing structure are less competitive and potentially exclusionary. Aquatic membership joining fees are $49.00, which is $19.30 above the benchmark average, while youth health and fitness memberships are priced $3.64 higher than comparable facilities.



Key Findings

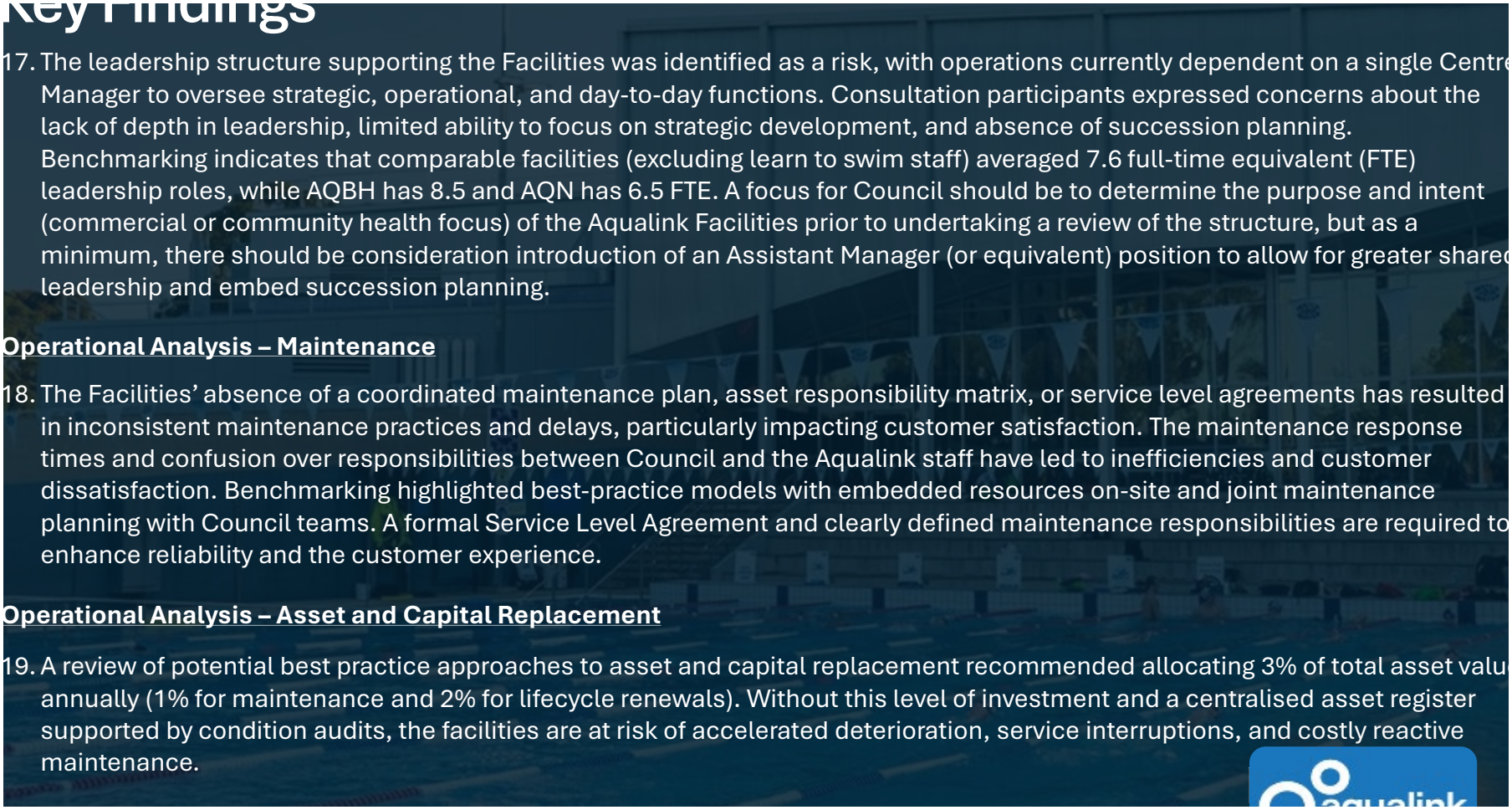
14. A more significant gap is Aqualink's low concession discount rate of 11.5%, well below the industry average of 19.9%. The Health and Fitness Joining Fee Concession is also $11.14 higher than benchmarked facilities, limiting affordability for concession-eligible individuals, seniors, and youth. These pricing inconsistencies suggest that while casual access is broadly equitable, the current membership fee structure may present financial barriers for underrepresented groups.

Operational Analysis – Hours of Operation

15. The current operational hours per week at Aqualink Facilities (104 hours) sit slightly below benchmarked averages of 105.25 hours per week. The proposal to increase the operational hours would see the Facilities increase to 109 hours per week, or 3.75 hours above the benchmark. This proposed expansion of hours, including earlier gym and pool openings, aims to enhance accessibility and support potential growth in visitations. A comparison of outdoor pool seasons was undertaken of 10 aquatic and leisure centres with outdoor pool operations, with 60% of them operating year-round.

Operational Analysis – Staffing and Leadership

16. The staffing assessment (excluding learn to swim) revealed that AQBH had a total wage spend that was $1.38 million (30.1%) higher than the benchmarked average, with wages representing 6.8% higher for wages as a percentage of the total income and 10.7% higher wages as a percentage of the total expenditure than the benchmarked facilities. At AQN, although the overall wage spend was slightly below average ($63K lower), it recorded the highest wage ratios of all benchmarked centres, with wages as a percentage of income being 31.8% higher than the benchmark and 12.1% higher for wages as a percentage of total expenditure. These figures suggest that the wage rates are notably higher than those of the majority of the benchmarked facilities.



Key Findings

17. The leadership structure supporting the Facilities was identified as a risk, with operations currently dependent on a single Centre Manager to oversee strategic, operational, and day-to-day functions. Consultation participants expressed concerns about the lack of depth in leadership, limited ability to focus on strategic development, and absence of succession planning. Benchmarking indicates that comparable facilities (excluding learn to swim staff) averaged 7.6 full-time equivalent (FTE) leadership roles, while AQBH has 8.5 and AQN has 6.5 FTE. A focus for Council should be to determine the purpose and intent (commercial or community health focus) of the Aqualink Facilities prior to undertaking a review of the structure, but as a minimum, there should be consideration introduction of an Assistant Manager (or equivalent) position to allow for greater shared leadership and embed succession planning.

Operational Analysis – Maintenance

18. The Facilities' absence of a coordinated maintenance plan, asset responsibility matrix, or service level agreements has resulted in inconsistent maintenance practices and delays, particularly impacting customer satisfaction. The maintenance response times and confusion over responsibilities between Council and the Aqualink staff have led to inefficiencies and customer dissatisfaction. Benchmarking highlighted best-practice models with embedded resources on-site and joint maintenance planning with Council teams. A formal Service Level Agreement and clearly defined maintenance responsibilities are required to enhance reliability and the customer experience.

Operational Analysis – Asset and Capital Replacement

19. A review of potential best practice approaches to asset and capital replacement recommended allocating 3% of total asset valu annually (1% for maintenance and 2% for lifecycle renewals). Without this level of investment and a centralised asset register supported by condition audits, the facilities are at risk of accelerated deterioration, service interruptions, and costly reactive maintenance.

10.2 – ATTACHMENT 2. Consultant Report Leisure Optimisation

Key Findings

Operational Analysis – Equipment Replacement

20. Insights obtained from facility managers and equipment suppliers identified that the best practice approach to health club (gym) equipment replacement is influenced by factors such as patron traffic, purchasing arrangements, the quality of the equipment, and servicing standards. Health club equipment replacement should have a structured equipment renewal plan aligned with equipment lifecycles (e.g. , cardio equipment every 4–5 years, strength equipment every 6–8 years). Case studies identified that, where possible, facilities should procure equipment through a structured tender process. The recommended model for procuring equipment is through a lease arrangement for cardio equipment to obtain better servicing and maintenance support, while strength equipment is preferred to be purchased outright.

Operational Analysis – Cleaning

21. The assessment of cleaning services at the Aqualink Facilities identified a significant variance in cleaning spend, with AQBH's cleaning spend being $412K, which is $47K above the benchmarked average, while AQN spent just $173K, which is $192K below the average. Consultation feedback confirmed that cleaning is a major area of customer complaints, particularly during operational hours and high-traffic times. Only one other benchmarked facility used the same contractor-only cleaning model as the Aqualink Facilities, while others had dedicated in-house staff or hybrid models.

22. The absence of dedicated cleaning staff during the day places pressure on facility staff, such as Duty Managers, to manage reactive spot cleaning, detracting from their core responsibilities. Case studies demonstrated that facilities with dedicated in-house cleaning staff achieved higher standards of cleanliness, better responsiveness, and reduced complaints. The findings suggest that Aqualink's current model is insufficient, particularly at AQN, and that greater investment in daytime cleaning presence is needed to maintain standards and support a positive customer experience.

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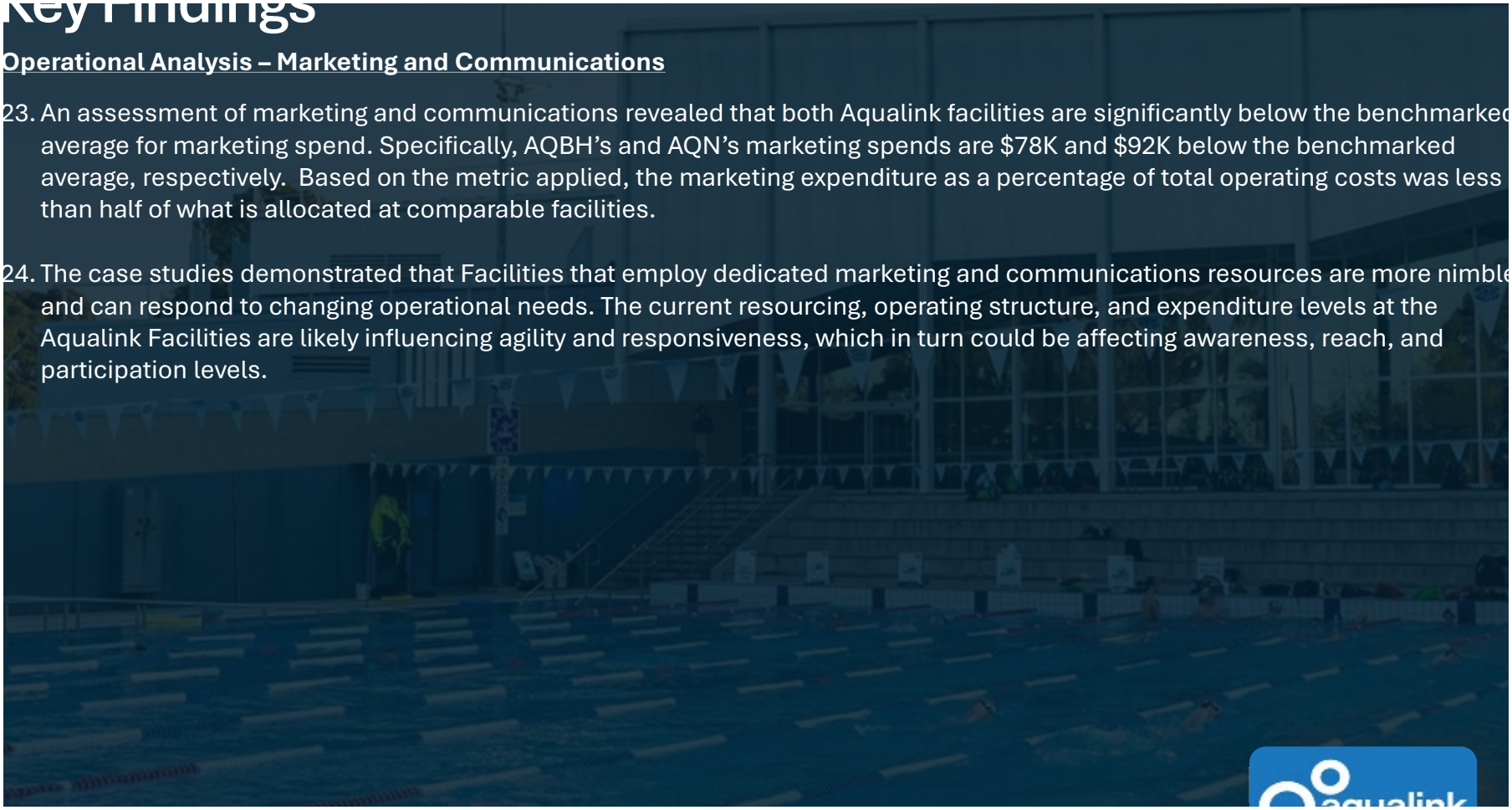

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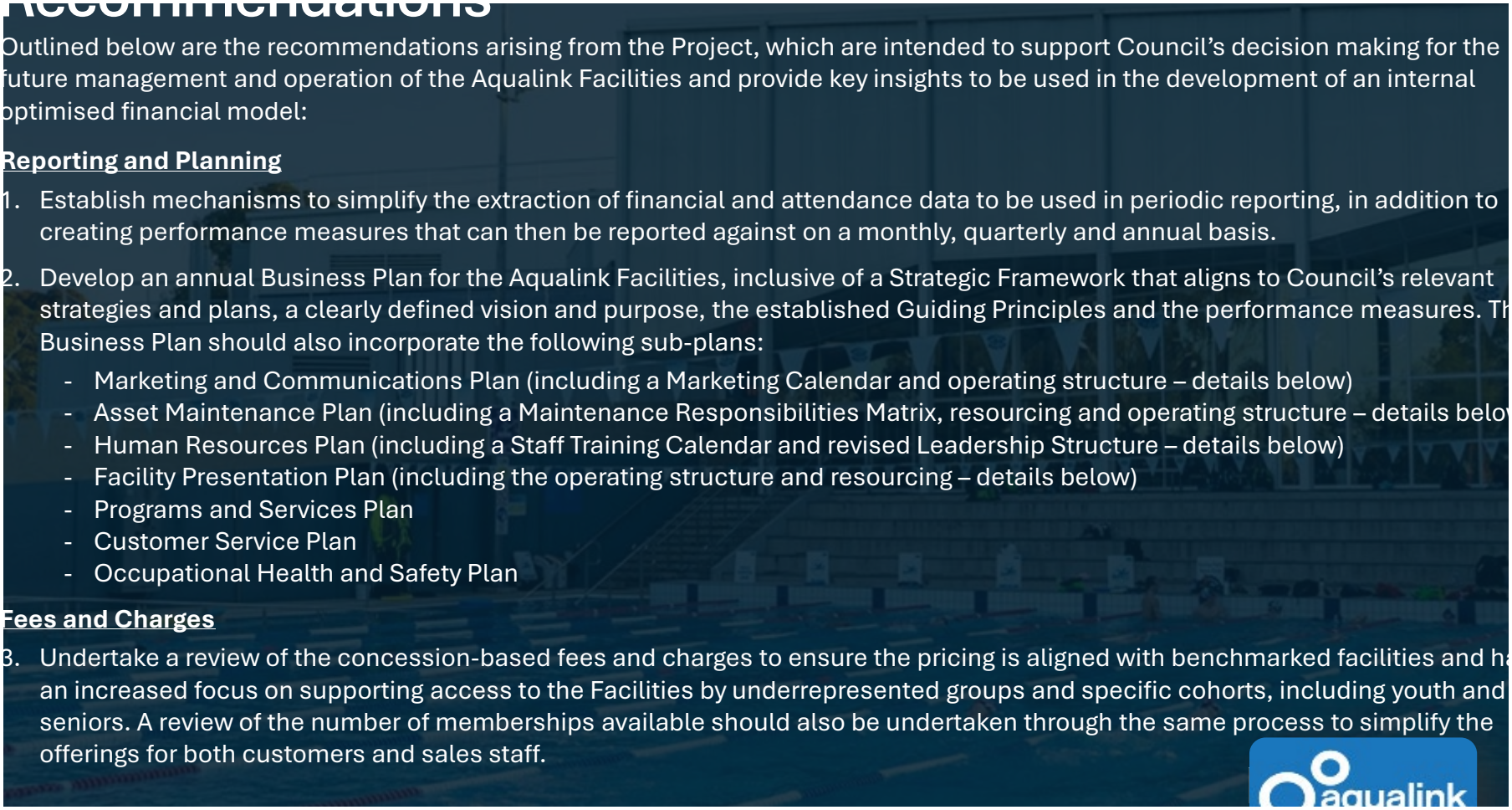

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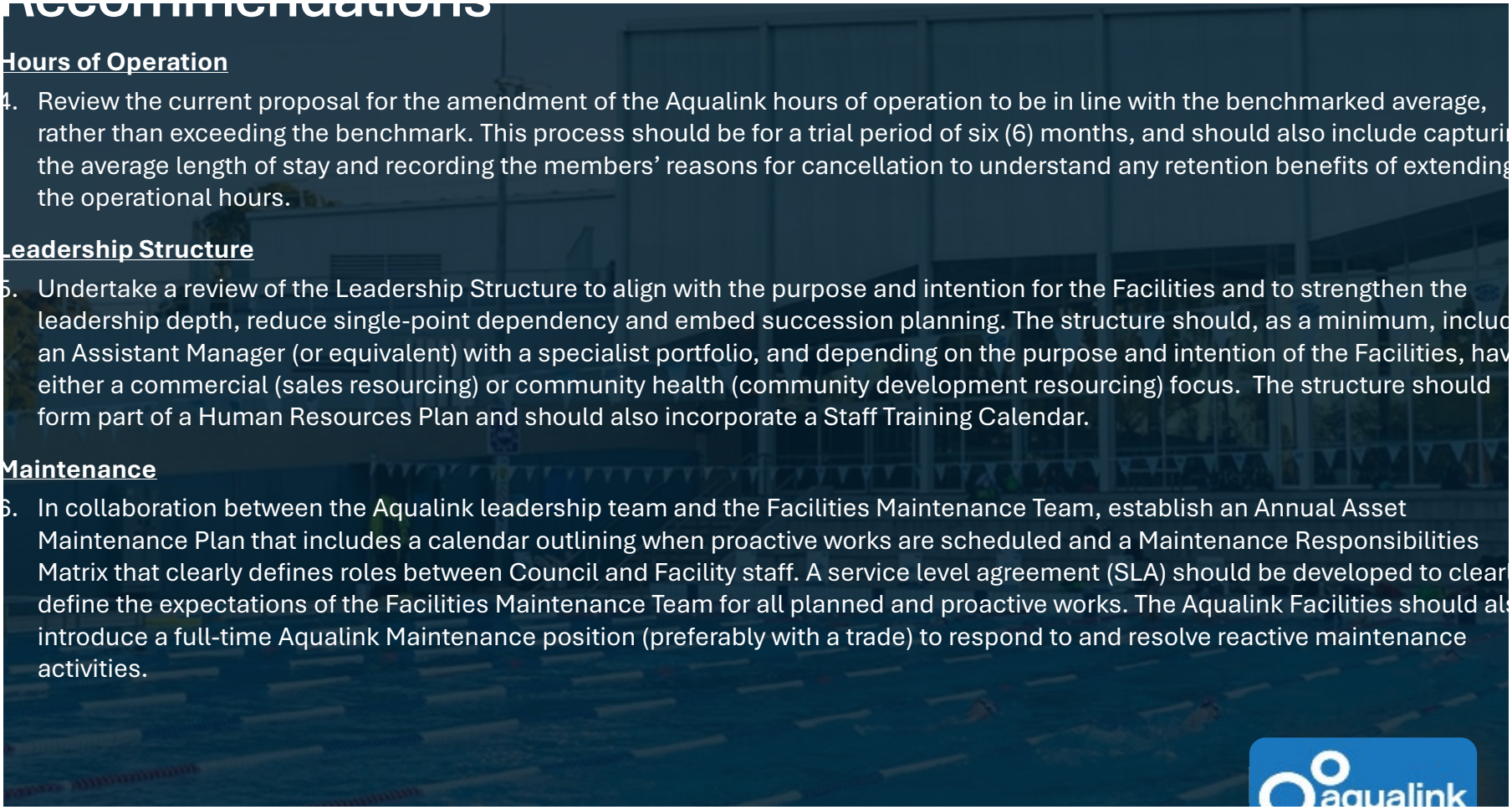

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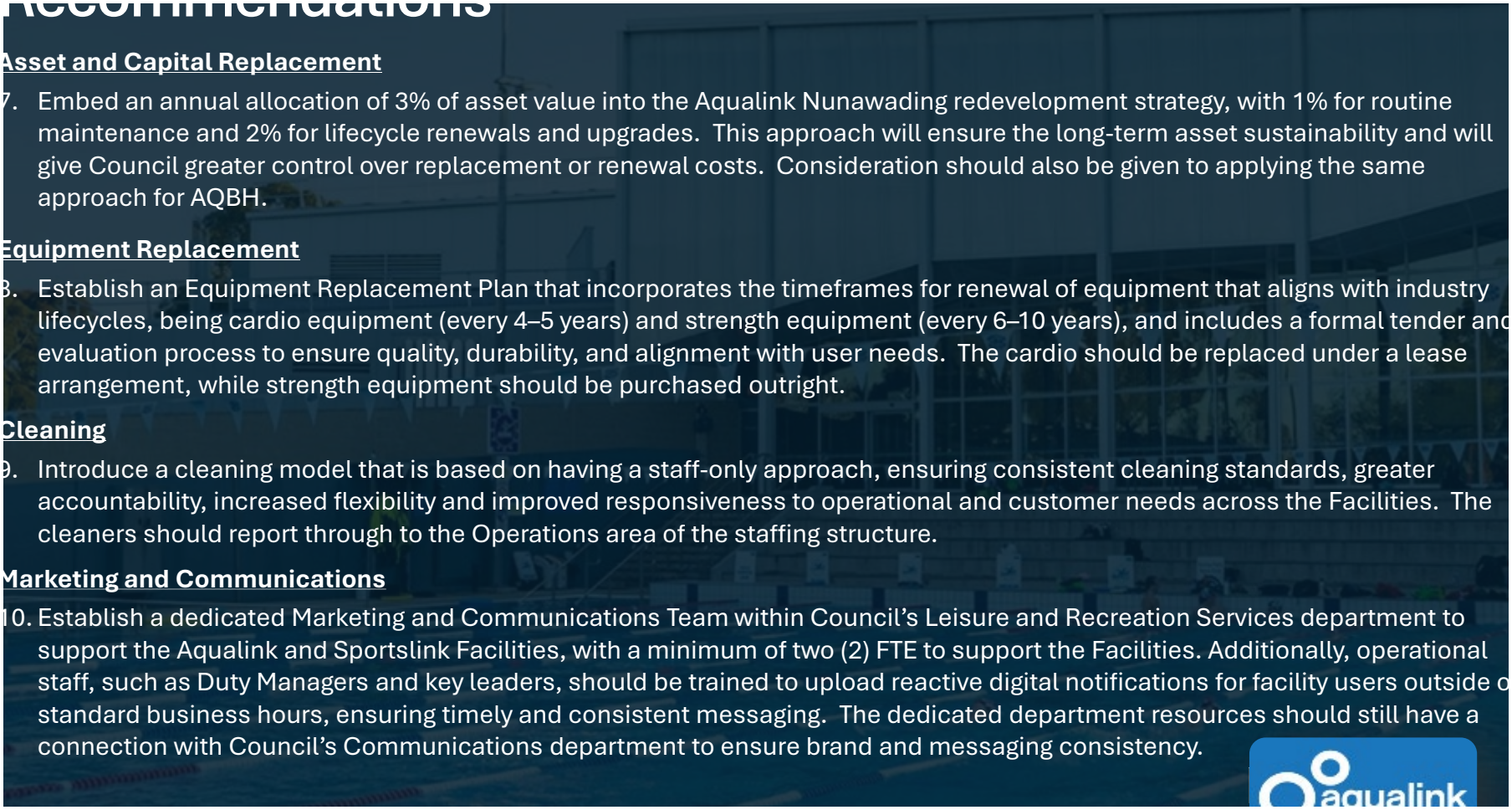

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10.3 Whitehorse Thematic Environmental History

Attachment 1 City of Whitehorse, Thematic Environmental History (Consolidated), Final Draft, GJM Heritage,14 July 2023

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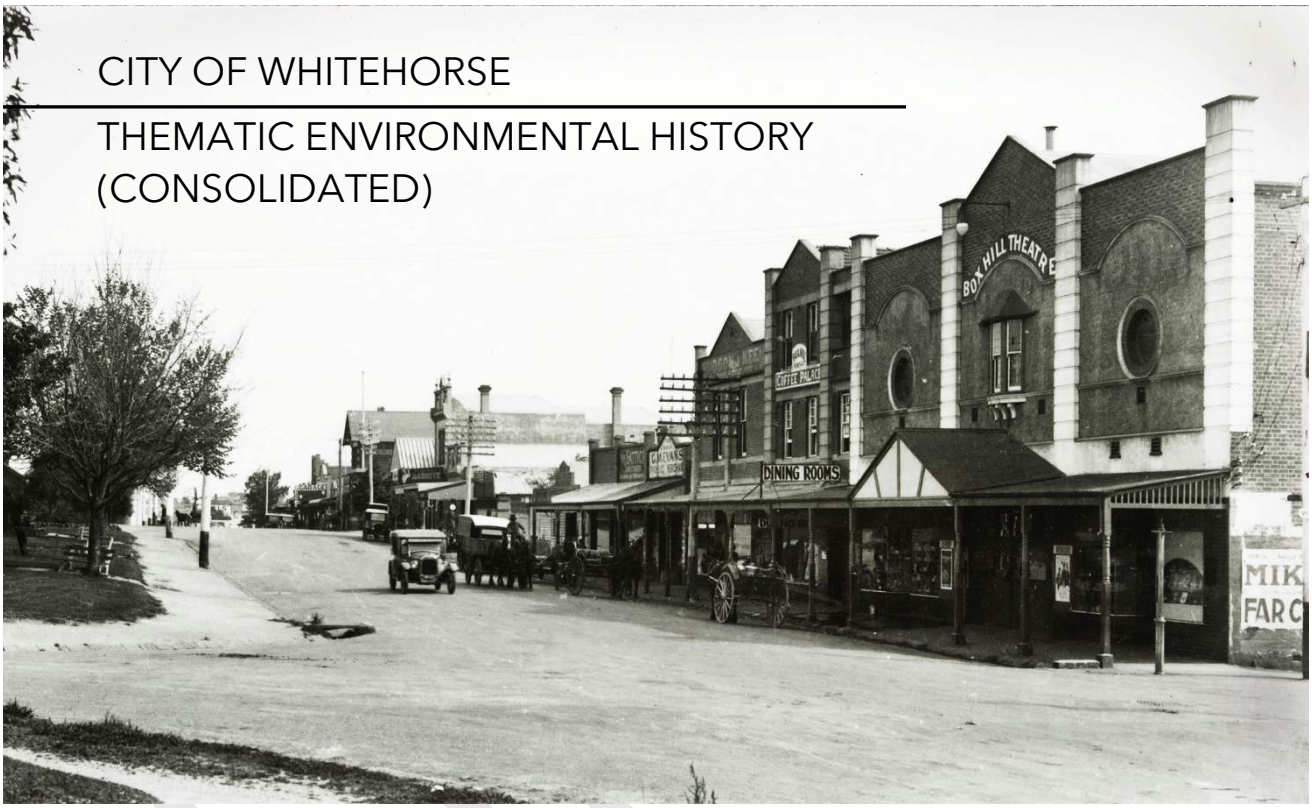
CITY OF WHITEHORSE

THEMATIC ENVIRONMENTAL HISTORY (CONSOLIDATED)



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The Wurundjeri-Balluk people are the traditional custodians of the land on which the City of Whitehorse is located. The traditional language of the people is Woi-wurrung, and the Traditional Owners of this land are now known as the Wurundjeri Woi-wurrung[1]. This Thematic Environmental History generally focusses on the post-contact history of the area as it is this phase of the land's history that has largely created the landscape we see today. Nonetheless, we acknowledge the Wurundjeri Woi-wurrung People as the Traditional Owners of the land and pay our respects to their Elders past, present and emerging.

Cover page image:

Whitehorse Road, Box Hill in c 1920-35 (State Library of Victoria, ID 1683798)

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[1] From https://www.whitehorse.vic.gov.au/aboriginal-heritage-whitehorse

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INTRODUCTION

The *City of Whitehorse Thematic Environmental History (Consolidated)* (hereafter referred to as the TEH) has been prepared to document and illustrate how various historical themes have shaped the environment and culture of the City of Whitehorse. In this way, the TEH provides a context for heritage places that have been – and will be – identified within the municipality.

The City of Whitehorse comprises the suburbs of Blackburn (incorporating Laburnum), Blackburn North, Blackburn South, Box Hill, Box Hill North (incorporating Kerrimuir), Box Hill South, Burwood East, Forest Hill, Mitcham, Mont Albert, Mont Albert North, Nunawading, Vermont, Vermont South, and parts of the suburbs of Balwyn North, Burwood (incorporating Bennettswood) and Surrey Hills.

The role of this consolidated TEH is not to provide a comprehensive history of the municipality. It is instead a concise document that identifies broad patterns to explain how the local environment has been shaped over time. As noted by Thom Blake, historian and author of the Queensland thematic framework[2], a thematic history:

> *… differs from traditional approaches to history by focussing on key historical and cultural processes rather than topics or a chronological treatment. It provides a means of developing a comprehensive and thorough framework by attempting to identify the key human activities that have shaped the built environment.*

Arranged thematically and drawing on *Victoria's Framework of Historical Themes,* this TEH sets out the key themes that have influenced the historical development of the City of Whitehorse. It represents a consolidation of two existing TEHs that were prepared as key components of heritage studies completed for the City of Whitehorse in 1999 and 2016. The information contained within these two TEHs has been supplemented by additional research where appropriate to address any under-represented themes.

Background

This consolidated TEH is an outcome of the *Whitehorse Heritage Framework Plan 2020* (the Framework Plan), which was prepared by Council to provide a framework for the ongoing assessment and management of heritage places in the City of Whitehorse. One of the key recommendations of the Framework Plan was to update the existing TEHs to assist in improving the identification, protection, management and promotion of heritage assets within the municipality and to assist in identifying and prioritising future heritage work.

As outlined in the Framework Plan:

[2] Cited in Context Pty Ltd & Heritage Victoria, 'Victoria's Framework of Historical Themes', Final Report, vol. 1, September 2007 (draft format).

Contemporary heritage planning requires the preparation of a Thematic Environmental History to provide the underlying framework to assist in the identification and classification of heritage places. A Thematic Environmental History assists in the comparative analysis of places of similar type and how they demonstrate particular aspects of the historical growth and development of the municipality.

Two Thematic Histories have been prepared for the City of Whitehorse, one by Allom Lovell in 1999 for the City of Whitehorse Heritage Review, and another covering the post-WW2 period, by Built Heritage for the City of Whitehorse Post-1945 Heritage Study.

The earlier Thematic Study sets out the themes in a format developed by the consultants specifically for the municipality. It covers the broad themes from first European settlement through to the Post-War Building Boom. The Thematic Environmental History prepared by Built Heritage, is more focused on the Post-1945 period, and is based on the themes set out in Victoria's Framework of Historical Themes, prepared by Heritage Victoria in 2010. It is now an expectation of Panels Victoria that assessments of heritage places be prepared with regard to the context set out in Victoria's Framework of Historical Themes.

The objectives of this project have therefore been to:

- Provide a revised and consolidated TEH, prepared in accordance with *Victoria's Framework of Historical Themes,* which identifies the key themes and sub-themes in the historical development of the City of Whitehorse;
- Explain how these themes have influenced settlement and development patterns within the study area; and
- Provide a clear context for the identification, assessment and on-going management of places of heritage significance in the municipality.

Brief

It was recommended in the Council's Heritage Framework Plan that a consolidated TEH be completed in accordance with *Victoria's Framework of Historical Themes* to create a common document for the ongoing assessment and evaluation of heritage places in the City of Whitehorse. GJM Heritage was subsequently commissioned by Whitehorse City Council to undertake a review of Council's two existing TEHs and to prepare a TEH that consolidates the following two documents:

- *City of Whitehorse Heritage Review, Vol 1: Thematic History* (Allom Lovell, 1999)
- *Whitehorse Post-1945 Heritage Study* (Built Heritage, 2016).

The intent of the project has been to ensure that Council has a single TEH, referencing *Victoria's Framework of Historical Themes*, that can be used to support any future gap studies for the municipality.

Methodology

Review of existing TEHs

GJM Heritage undertook a high-level review of the existing TEHs to determine the most appropriate approach to the project. The review confirmed that consolidation of the two existing TEHs into one cohesive document represented the soundest outcome. This would involve reformatting the 1999 TEH using *Victoria's Framework of Historical Themes* and condensing the Post-1945 TEH to bring the consolidated TEH up-to-date and in line with current best practice.

The high-level review also noted which themes and sub-themes (drawn from *Victoria's Framework of Historical Themes*) were adequately covered by the existing TEHs, which ones required expansion or updating, and which ones were not covered and would require the preparation of new written content.

Reformatting the 1999 TEH

A new document was created that transposed the text verbatim from the 1999 TEH under each relevant theme drawn from *Victoria's Framework of Historical Themes.* The text remained largely unedited at this stage, with errors in grammar, spelling and formatting corrected where required.

The TEH was divided into the following historic themes, drawn from *Victoria's Framework of Historical Themes*, and adapted to reflect the municipal context:

1.0 Shaping Whitehorse's natural environment
2.0 Peopling Whitehorse
3.0 Connecting Whitehorse
4.0 Transforming and managing the land
5.0 Building Whitehorse's industries and workforce
6.0 Creating Whitehorse's suburbs
7.0 Governing Whitehorse
8.0 Building community life
9.0 Shaping Whitehorse's cultural and creative life
10.0 Protecting and preserving Whitehorse's heritage

Consolidating the Post-1945 TEH

The Post-1945 TEH comprises a very detailed analysis of the post-World War II history of the City of Whitehorse. To ensure that equal weight would be afforded to both the pre- and post-1945 developmental history of Whitehorse, a review of the Post-1945 TEH was undertaken. The editing process included the deletion of detailed references to specific places and the condensing of sub-themes. This review process allowed for a broader overview of the post-World War II history of the City of Whitehorse.

The 2016 Post-1945 TEH remains as a Background Document in the Whitehorse Planning Scheme and can be accessed if further detail on specific places is required.

draft

Consolidating the 1999 and Post-1945 TEHs and identifying gaps

Text from the condensed Post-1945 TEH was inserted into the reformatted 1999 TEH under the corresponding themes and sub-themes. Following consolidation, a review was undertaken to identify and address any remaining gaps in the document. This review also ensured that the consolidated TEH adopted a consistent tone.

Additional research

The process of adding additional text to expand on the existing themes and sub-themes, and to address gaps, occurred through a review of primary sources available online – such as digitised newspaper collections, maps, plans and photographs – and published secondary sources. Sources that were not available at the time of the publication of the 1999 TEH and 2016 TEH were also utilised to expand on the various themes and sub-themes. These sources also assisted in bringing the information provided in the consolidated TEH up to the present day.

Relevant historical images

The consolidated TEH incorporates historical images to illustrate the various themes and sub-themes and to provide greater context to the municipality's historical development. Several images from the 1999 TEH have been incorporated; however, with greater access to online repositories and picture collections, historical images are now more readily available. A number of additional images have therefore been incorporated into the consolidated TEH to supplement the earlier documentation.

The post-1945 TEH did not include historical images. Historical images, largely provided by the Box Hill Historical Society and Whitehorse Historical Society, have been incorporated to illustrate the various post-World War II themes and sub-themes.

Related places

Following each sub-theme, the TEH includes examples of places and objects included in the Heritage Overlay to provide connections between the identified historical themes and heritage places and objects located in the City of Whitehorse.

Nomenclature

The names of suburbs within what is now the City of Whitehorse have been subject to change over time. For example, Burwood was established in 1854 as the township of Ballyshanassay, while Nunawading was originally known as Tunstall and Vermont as L L Vale.

This consolidated TEH uses original suburb names where they are considered chronologically appropriate, with the present-day counterpart in brackets.

Draft

SOME KEY HISTORICAL EVENTS

Timeline

1840s	Early contact between Wurundjeri Woi-wurrung and Europeans
1840	Parish of Nunawading named by Robert Hoddle
1840	Elgar's Special Survey authorised
1850	First Crown land sales
1851	Colony of Victoria established
1852	Survey of Nunawading area
1853	First hotel in the municipality, the White Horse, erected
1854	Parish of Nunawading first counted in census;
	First township in the Parish of Nunawading – Ballyshanassy – established
1857	Nunawading District Road Board established
1861	Box Hill Township proclaimed
1872	Shire of Nunawading established
1873	Box Hill Cemetery gazetted
1882	Railway extended from Camberwell to Lilydale
1884	First brickworks established in Federation Street for Box Hill Brick Company
1888	Blackburn Lake created
1889	Publication of the municipality's first newspaper, *The Reporter* (later the *Box Hill Reporter)*
	Opening of Australia's first electric tramway from Box Hill to Doncaster
1890	Gas street lighting first appeared in Box Hill
1894	Water supply reached the Shire of Nunawading
1917	Wattle Park opened to the public
1919	Manual telephone exchange established in Box Hill
1921	City of Box Hill declared a Dry Area

Draft

10.3 – ATTACHMENT 1. City of Whitehorse, Thematic Environmental History (Consolidated), Final Draft, GJM Heritage,14 July 2023

1923	Railway electrified between Box Hill and Ringwood
1925	Severance of Shire of Nunawading and creation of Shire of Blackburn and Mitcham and Borough of Box Hill
1927	Borough of Box Hill becomes City of Box Hill
1928	Sewering of the City of Box Hill and Shire of Blackburn and Mitcham commenced
1930	Box Hill's first automatic telephone exchange opened
1935	Box Hill Town Hall opened
1945	Shire of Blackburn and Mitcham became City of Nunawading
1950	Nunawading (later Eastbridge) Migrant Hostel built
1954	First drive-in cinema in Australia opened in Burwood
1956	Box Hill and District Hospital opened
1965	Channel O (later Channel 10) Television Studios opened in Forest Hill
1968	Nunawading Civic Centre opened
1969	Australia's first Kmart department store opened in Burwood East
1985	Nunawading Arts Centre (later Whitehorse Performing Arts Centre) opened
1994	City of Whitehorse established by the merger of the Cities of Box Hill and Nunawading
1997	Extension of Eastern Freeway from Doncaster Road to Springvale Road
2008	Final stage of Eastern Freeway extension constructed
2023	Whitehorse Performing Arts Centre redeveloped into 'The Round'

Draft

1 SHAPING WHITEHORSE'S NATURAL ENVIRONMENT

1.1 Natural landscapes and waterways

The land within what is now known as the City of Whitehorse was largely formed 400 million years ago during the Middle Silurian period. Part of the Anderson Creek formation, the land comprises massive siltstones, interbedded with thin sandstones with occasional bunches of massive, laminated and current bedded greywackes, conglomerates and clast beds. [3] Koonung Creek flows along Whitehorse's northern boundary on its way to the Yarra River while Mullum Mullum Creek – a tributary of the Yarra – forms part of the municipality's north-east boundary and Dandenong Creek flows along the south-eastern boundary.[4] Gardiners Creek and its tributaries runs through the municipality from Blackburn to Box Hill South and Burwood before continuing on to Hawthorn where it meets the Yarra.[5]

The municipality's watercourses generally date from the Quaternary period (the last two million years), while parts of the south-west of the municipality comprise Red Bluff Sands (fine to coarse sands, with minor poorly sorted gravels, poorly consolidated) also dating from the Tertiary period. [6] A small area in Box Hill North comprises part of the Dargile formation of laminated and current bedded sandstones, interbedded with massive siltstones and shales, dating from the Silurian period.[7]

The gently undulating land ranges from approximately 60 to 120 metres above sea level, with the highest points of the municipality being at Mitcham and Vermont.[8]

1.2 Flora and fauna

Prior to European settlement, about three quarters of Whitehorse was covered by heath and forest, comprising canopies of Red Stringybark, Silver Leaf Stringybark, Messmate Stringybark, Yellow Box, Long Leaf Box and Common Peppermint; a middle storey of species such as Black Wattle, Cherry Ballart, Sweet Bursaria and Victorian Christmas Bush; and an understorey of shrubs, sedges and grasses such as Common Heath and Kangaroo Grass. Flowering plants included Chocolate lily, Tasman Flax-lily and a variety of orchids, creepers and climbers. [9] Some of these species can still be found in Blackburn Lake Sanctuary and the Mullum Mullum Valley

[3] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 4.
[4] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 4.
[5] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 4.
[6] Geological Survey of Victoria, Melbourne Sheet SJ55-1, Ringwood No. 849 Zone 7, Department of Lands and Survey, 1974.
[7] Geological Survey of Victoria, Melbourne Sheet SJ55-1, Ringwood No. 849 Zone 7, Department of Lands and Survey, 1974.
[8] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 4.
[9] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, pp 4-5; Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 16.

while river red gums and Manna Gum continue to grow along the banks of Whitehorse's creeks.[10]

The western part of the municipality (which receives slightly less rainfall than the rest of the municipality) was once characterised by Grassy Forest and Grassy Woodland, where the forest was less dense and fewer shrubs grew. Remnants of the Grassy Woodland communities – which include Manna Gum, Red Stringybark, Swamp Gum and Black Wattle – are still evident at Wattle Park in Burwood. [11]

The diverse flora throughout the municipality supported a wide variety of animal life, including marsupials, birds, fish, reptiles and insects.[12] The numbers of fauna species present in the municipality has dwindled substantially due to loss of habitat over time. There are however small pockets within Whitehorse – including at Blackburn Lake Sanctuary and the Mullum Mullum Valley – where animal life is protected.[13]

Figure 1. Blackburn Lake Sanctuary in 1945 (State Library of Victoria, ID H91.50/858)

[10] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, pp 4-5; Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 16.
[11] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 5.
[12] Gary Presland, Jane Calder & Malcolm Calder, 'Natural Environment, *eMelbourne*, https://www.emelbourne.net.au/biogs/EM00526b.htm, accessed 9 November 2022.
[13] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 5.

2 PEOPLING WHITEHORSE

2.1 Living as Australia's earliest inhabitants

The Wurundjeri Woi-wurrung are the traditional custodians of the land on which the City of Whitehorse is located. Woi-wurrung is the language of the Traditional Owners with Woi-wurrung country extending from the Werribee River to the west, Mount Baw Baw to the east, the Great Dividing Range near Lancefield to the north and the Yarra River to the south.[14] The Wurundjeri Woi-wurrung named parts of the local area *Namenarren* or *Nunawading.* [15].

Wurundjeri is made up of two words, *wurun* meaning white (or manna) gum and *jeri*, a tasty grub that lives in the bark of the gum.[16] The manna gum grew in abundance along the banks of the Yarra River and its tributaries, including Koonung, Mullum Mullum and Gardiners creeks within Whitehorse. Historically, the Wurundjeri would camp along the banks of these creeks and archaeologists have identified at least one camp site by an artefact scatter – comprising a collection of stone tools and hunting implements – on the banks of Gardiners Creek in Box Hill.[17]

The diverse flora and fauna throughout *Namenarren* provided the Wurundjeri with an abundance of food sources. Creeks teemed with fish, ducks and yabbies, and local plants, including yam daisies (a staple of the Koorie diet) and Chocolate lily could be sourced locally. Natural resources were also utilised for making clothing, baskets and weapons. For example, grass trees provided nectar and resin for hafting spears and axes, while the tough fibrous leaves of the Tasman Flax-lily were used to weave baskets.[18] Bark from trees, such as Red Gum and Box, was stripped to make canoes and food containers; two scarred trees have been found in Whitehorse – in Blackburn and the Dandenong Creek Parklands.[19]

2.2 The first European surveys

In 1840 the Colonial Office in England extended the system of 'Special Survey' – which had been in place in South Australia for a number of years – to Port Phillip. To encourage immigration, wealthy capitalists could purchase a block of 5,120 acres (2,112 hectares) from England, for £1 an acre. The surveyed land had to be at least five miles from Melbourne, and the Crown reserved a right to run a road through it. In the former Parish of Nunawading, Henry Elgar authorised a Special Survey by draftsman Thomas Nutt and purchased the area approximately bounded by Burke, Canterbury and Elgar Roads, and the Koonung Creek.[20] The deed was issued to Elgar in August 1841.[21] Most of Elgar's Special Survey ended up in the Parish of Boroondara following an application to resurvey the land in 1844 although a substantial portion did remain in the Parish of Nunawading. Although Elgar's Special

[14] https://www.wurundjeri.com.au/
[15] https://www.wurundjeri.com.au/
[16] 'History of Wurundjeri Walk', *Wurundjeri Walk,* https://wurundjeriwalkhistory.wordpress.com/pre-1930/, accessed 20 December 2022.
[17] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 9.
[18] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 9.
[19] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 9.
[20] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 23-24.
[21] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 16.

Survey ultimately brought few settlers to the area, it still exerted a strong influence on the pattern of roads and settlements in the future City of Whitehorse.[22]

The land acquired by Elgar in his Special Survey was subdivided and sold in advance of Crown land sales. The initial buyers of the land (which Elgar had never visited), were A Dyce, R Town, J Campbell, R Campbell, J Dacre (Elgar's agent), W G McCarthy, R Brooks and H Sea.

The remaining land in the Parish of Nunawading was surveyed by Clement Hodgkinson, District Surveyor of Victoria, in the 1850s. As part of his favoured 'survey before selection' policy, a detailed survey of all the area east of Middleborough Road was carried out before any land could be selected and farmed.[23] This policy was supposed to ensure a fairer distribution of potentially valuable agricultural land amongst would-be settlers, although this requirement was eventually abandoned in favour of a more liberal selection policy.[24]

During the survey, it was noted that the area was not of much value for agricultural purposes, despite the relatively hilly topography and a number of watercourses, including Koonung Koonung (now Koonung) and Gardiner's creeks.[25] The area was described as being heavily forested, with such tree species as stringybarks and box gums. Hodgkinson himself noted that the land appeared 'barren'.[26]

Figure 2. Plan of Elgar's Special Survey in the parishes of Boroondara and Nunawading, 1841 (Public Record Office Victoria, VPRS 8168 P2 Unit SS2A)

[22] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 16.
[23] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 31.
[24] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 33.
[25] Country lands in the Parish of Nunawading, County of ourhe, Surveyor Generals Office Melbourne, 12 September 1855, VPRS 8168 P2 SALE38, Public Record Office Victoria.
[26] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 33.

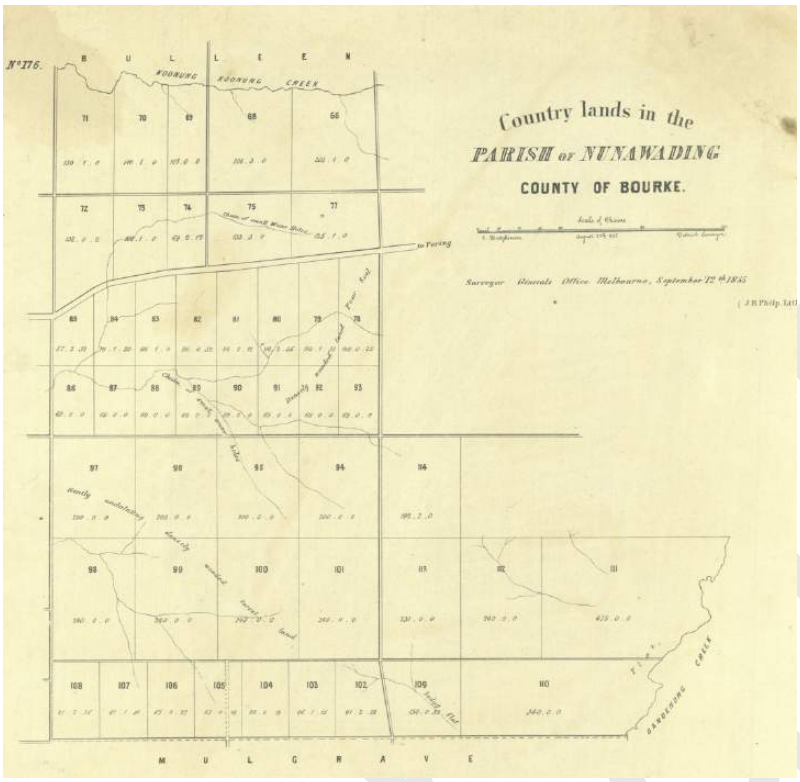

Figure 3. Country lands in the Parish of Nunawading as surveyed by Clement Hodgkinson, 1855 (Public Record Office Victoria, VPRS 8168 P2 SALE38)

2.3 Early European settlement

Early European settlement in the City of Whitehorse largely centred on the western part of the then Parish of Nunawading as the forested hills to the east were largely unsuitable for grazing.[27]

Box Hill's first landholder was London-born Tasmanian, Arundel Wrighte. Since the late 1830s, he had occupied the Government Paddock on the banks of the Koonung Creek, running upwards of 600 sheep which he had brought with him across Bass Strait. After several moves, Wrighte and his wife settled on the banks of Bushy Creek, in what is now Box Hill North.[28] Another early settler was Thomas Toogood, who had established a dairy on the Koonung Creek to the north-west of Wrighte's farm, from as early as 1840. He lived there with his wife, Edith and their children.[29] Irish-born Denis Delany, who had migrated to Victoria with his wife, Mary, in 1841, bought a 100-acre block of land opposite the future Wattle Park.[30]

Gardiner's Creek was another preferred site for settlement in the 1840s. Several pastoralists settled along the creek during this time, including Mr Eyton in Box Hill,

[27] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 15.
[28] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 13.
[29] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 15.
[30] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 15.

James Farmer and James McAlpine in Box Hill South, and brothers George and William Bennett to the south of present-day Burwood Road.

2.4 Crown land sales

The first sale of freehold land in the City of Whitehorse occurred in 1850, when a series of large lots along the boundary of Elgar's Special Survey were offered for sale.[31] This sale was not a resounding success, although several early settlers, including Arundel Wrighte and the Bennet brothers, were able to purchase the land that they had previously leased. Later that year, further portions of Box Hill North were surveyed and sold at the next sale in 1851. During 1852, the remaining parts of present-day Box Hill were surveyed. These blocks were smaller than those in the earlier surveys, ranging from 19 to 45 acres. Land sales were held again in late 1853 and early 1854, and virtually all of Box Hill south of Whitehorse Road was sold at these two sales.[32]

Until the late 1850s, the Nunawading area had only been surveyed as far as Hunt's Lane (now Springvale Road).[33] Most of the land north of Whitehorse Road had been purchased by Patrick Riley. In 1861, German immigrant August Schwerkolt purchased some of Riley's land on the banks of Deep Creek in Mitcham.[34] The discovery of gold in Warrandyte in the 1850s made land in the Nunawading area attractive, not least of all because the *Grant Act* allowed that land, up to 80 acres in area, could be selected within 10 miles of a goldfield. Many took advantage of this, and 80-acre blocks were soon taken up by Francis Ainger in Mitcham, John McClelland in Tunstall (now the suburb of Nunawading), and Abraham Rooks in Forest Hill.[35] The latter area was then known as Scotsmans' Hill, after early Scottish settlers like David Boyle, who purchased land there in 1862.

In Burwood East and Vermont, land was sold in larger blocks, mostly about 200 acres. These were purchased by William Morton, Nelson Polak and others.[36] The most prominent landholder in this area was Dr L L Smith, who had purchased 119 acres off Canterbury Road in 1858, and a further 146 acres in the mid-1870s. Smith established an experimental farm, and although he never resided permanently on his property, he became well-known to the point that Vermont was known for many years as L L Vale.[37]

This pattern of early land ownership in the City of Whitehorse – small blocks in Box Hill and Burwood, larger blocks in Blackburn, and the largest lots in Vermont, Burwood East and Mitcham – is clearly evident in a parish survey map from the early 1860s.

[31] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 14.
[32] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 15.
[33] Niall Brennan, *This is Nunawading,* Melbourne, 1972, p 22.
[34] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 47.
[35] Niall Brennan, *This is Nunawading,* Melbourne, 1972, p 56.
[36] Tim Shambrook, *This is Vermont,* Blackburn, 1989, p 10.
[37] Tim Shambrook, *This is Vermont,* Blackburn, 1989, p 17.

10.3 – ATTACHMENT 1. City of Whitehorse, Thematic Environmental History (Consolidated), Final Draft, GJM Heritage,14 July 2023

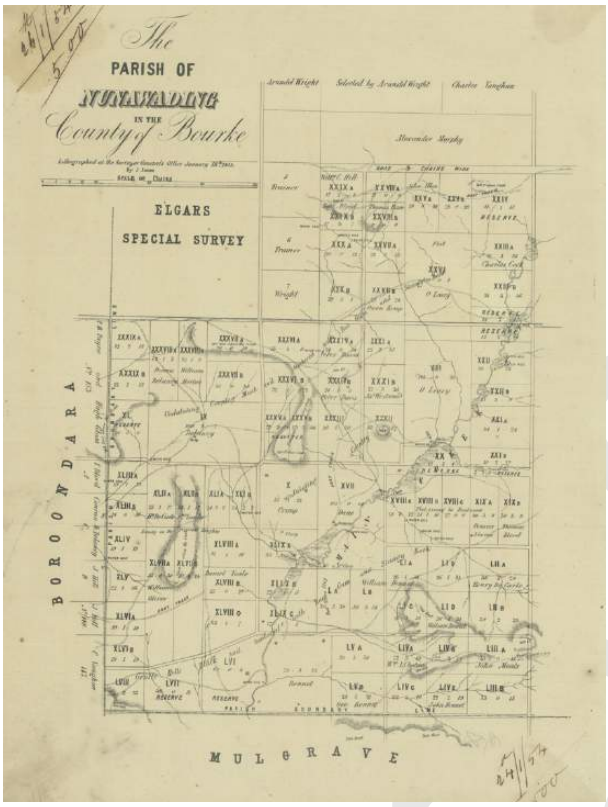

Figure 4. Crown land sales in the Parish of Nunawading, 18 January 1853 (Public Record Office Victoria, VPRS 8168 P2 SALE271)

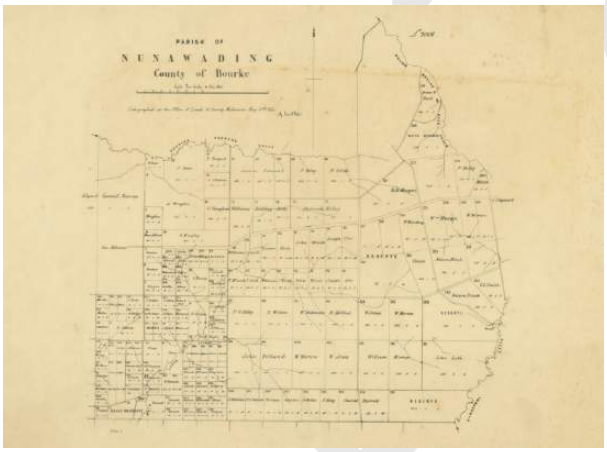

Figure 5. Parish plan of Nunawading, 1864 (State Library of Victoria, ID 2014959)

Related heritage places

HO30 – Schwerkolt's Cottage, 2-10 Deep Creek Road, Mitcham

HO64 – House, 27 Morley Crescent, Mont Albert North

HO99 – Former Wesleyan Chapel, 147 Woodhouse Grove, Box Hill North

2.5 Migrating to a new land

The majority of early immigrants in the City of Whitehorse were of British origin. German migrants – many coming to Australia to escape religious persecution in their homeland – also took up land in the Parish of Nunawading in the mid-to-late nineteenth century, though no distinctive German community formed. Early German settlers included the Prussian Schwerkolt family who settled in the Mitcham area, and the Fankhauser family, who established farms and orchards in East Burwood.[38]

Migration in the City of Whitehorse boomed in the post-World War II era when the Australian Government initiated a scheme to provide subsidised or free passage to Australia to British nationals. The programme was expanded two years later to include migrants from mainland Europe.[39] New arrivals were initially accommodated in a reception camp north of the Exhibition Buildings before being transferred to one of several outer suburban migrant hostels, including one at Nunawading that opened in 1950. The Nunawading Migrant Hostel was originally intended for unmarried British migrants, but ultimately accommodated many families, both from Britain and Europe.[40] The hostel was upgraded in the mid-1960s.[41] Rebadged as the Eastbridge Migrant Hostel, the upgraded facility continued to function for another two decades. During this period, the demographic shifted from British and European migrants to south-east Asian refugees. The hostel was closed in 1987 when the Commonwealth-owned property was earmarked as the location for a new mail sorting centre.

Many former residents of the Nunawading Migrant Hostel – attracted by the availability of employment in the large factories that appeared in the area, and by the promise of plentiful land for housing – settled in the municipality following their time at the hostel. It has been noted that British nationals represented the largest group of migrants to settle in the former City of Box Hill in the 1950s, followed by Latvians, Poles and Dutch.[42] In the former City of Nunawading, British and Dutch migrants were the most common, along with a number of Hungarians.[43] A small Italian community developed in Box Hill in the 1950s and 1960s, and an even smaller one in Nunawading.[44] By 1971, the proportion of migrants in Box Hill's population was 18%; of those that had arrived in the past decade, more than half were British, with smaller numbers of Italians, Greeks and Eastern Europeans.[45] During the 1970s, Greek families began to move out to Burwood East, while the large influx of Indo-Chinese migrants was drawn to Box Hill, Mitcham and Nunawading.[46] This trend has continued into the twenty-first century and by 2021, 41.5% of the population in Whitehorse were born overseas compared to 35.7% for Greater Melbourne. The

[38] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 27.
[39] Heritage Alliance, *Survey of Post War Built Heritage in Victoria: Stage One,* Volume 1, p 9.
[40] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 149.
[41] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 150.

[42] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 200.
[43] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, pp 157, 162.
[44] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 162.
[45] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 217.
[46] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, pp 165, 201.

largest country of birth is China where 13% of the population was born (compared to 3.4% in Greater Melbourne).[47]

Figure 6. Eastbridge Migrant Hostel, c. 1940s (Courtesy of the Whitehorse Historical Society Inc, no NP1861)

Figure 7. Eastbridge Migrant Hostel (Courtesy of the Whitehorse Historical Society Inc, no NP4489)

[47] 'Community Profile', City of Whitehorse, https://profile.id.com.au/whitehorse/birthplace?WebID=10, accessed on 25 May 2023.

3 CONNECTING WHITEHORSE

3.1 Roads

3.1.1 Creating roads

The municipality's first roads consisted of rough tracks that were mainly used by timber cutters and farmers. By the 1850s, these rough tracks began to appear on maps. These included an approximation of Mont Albert Road, which existed as a track from Barkers Road in the west, extending east to Elgar Road.[48]

By 1863, the Nunawading District Road Board had overseen the establishment of the roads now known as Whitehorse Road, Canterbury Road and Burwood Highway.[49] By 1879, north-south roads – including the present Elgar Road, Station Street, Middleborough, Springvale, Mitcham and Heatherdale Roads – had been formed, formalising the municipality's present network of primary roads.[50] The opening of the railway in 1882, and the subsequent beginnings of suburban subdivision, saw the first residential streets laid out, commencing near Mont Albert and Box Hill railway stations, and stretching eastward along the railway line, although these were sparse east of Middleborough Road.[51]

Into the first decades of the twentieth century, the railway, not the road network, remained the primary catalyst for suburban development of the area. By the mid-1920s few residents had cars, and asphalting of main roads did not begin until later that decade.[52] It was not until the 1950s and 1960s that true suburban development was reflected in the street patterns of the municipality as a whole. The inter-war period had seen the road patterns of Surrey Hills and most of central Box Hill virtually finalised, but by 1945 the predominance of agricultural land use meant that most of the south-east of the municipality generally retained the road patterns of the 1910s.[53]

[48] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 6.
[49] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, p 20.
[50] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, p 20.
[51] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, pp 20-21.
[52] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, p 19.
[53] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, pp 21-22.

10.3 – ATTACHMENT 1. City of Whitehorse, Thematic Environmental History (Consolidated), Final Draft, GJM Heritage,14 July 2023

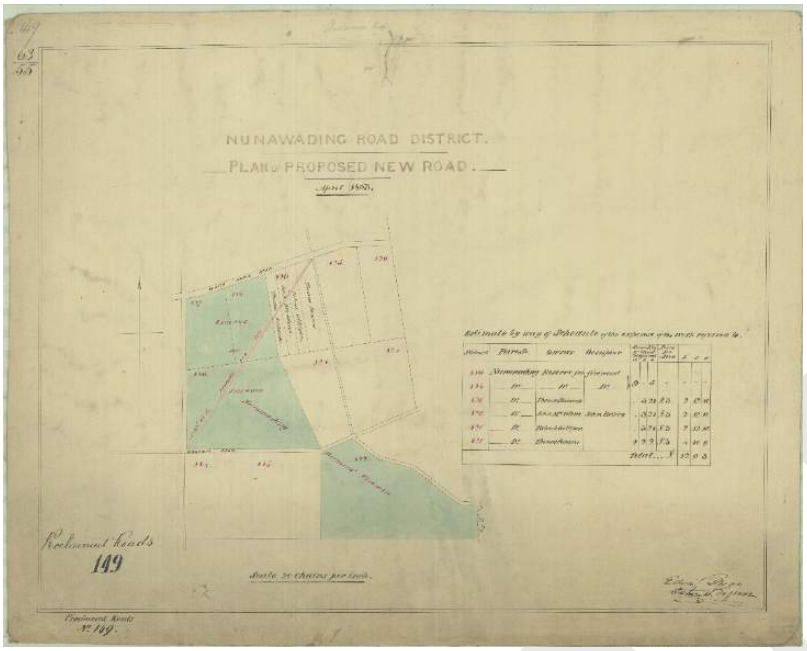

Figure 8. Plan of proposed new road in the Parish of Nunawading, April 1863 showing White Horse Road and Delany's (now Canterbury) Road (Public Record Office Victoria VPRS8168 P4 Plan 149)

Figure 9. Blackburn Road in 1912 (Courtesy of the Whitehorse Historical Society Inc, no NP23)

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Figure 10. L L Road, Vermont in the early 1900s (Courtesy of the Whitehorse Historical Society Inc, no NP3644)

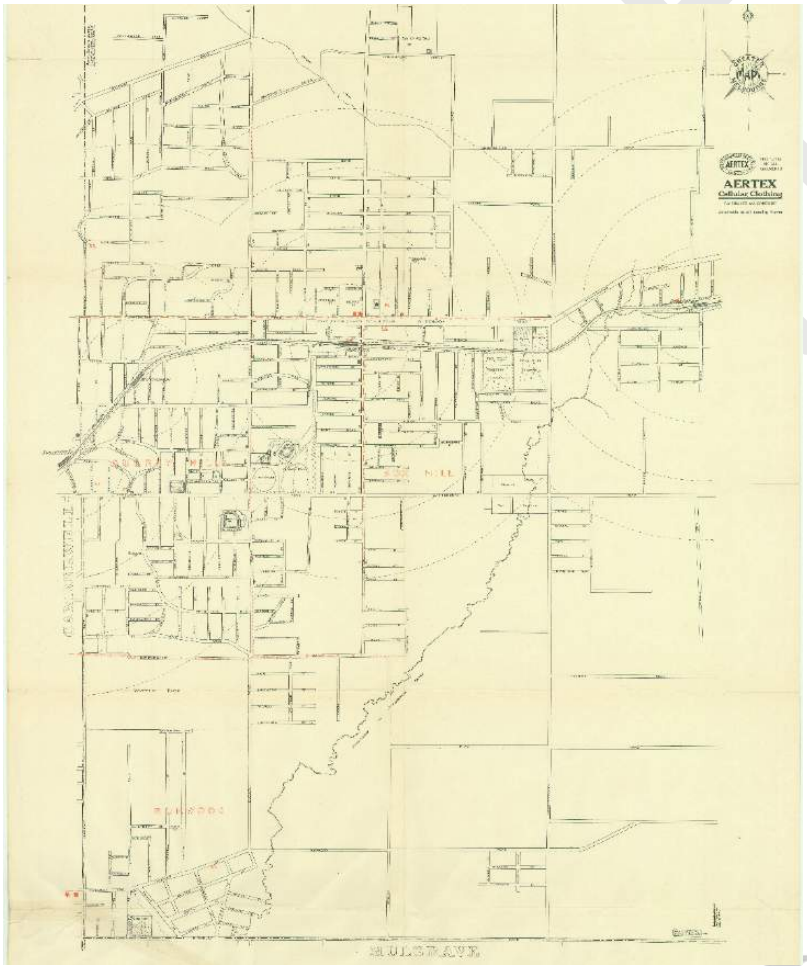

Figure 11. Map of Nunawading showing the road system in 1921 (State Library of Victoria ID686892)

3.1.2 Twentieth century improvements

The burgeoning local automotive industry, followed by the abolition of petrol rationing in 1950, saw the number of motor registrations in Melbourne treble between 1947 and 1954.[54] This was reflected in the municipality, where Box Hill's first traffic lights were unveiled in December 1948 at the corner of Whitehorse Road and Station Street.[55] Parking meters were also first installed in the same area in 1957, only two years after they had been introduced in central Melbourne.[56] Meanwhile, motor traffic along major roads increased dramatically. In 1959, the Country Roads Board calculated that 16,000 cars travelled along Whitehorse Road, between Station Street and Middleborough Road; by 1964, this figure had boomed to 20,000.[57] During the intervening years, it was deemed necessary to construct a new road bridge over the Koonung Creek at Middleborough Road.[58]

Figure 12. White Horse Road (as then named), Mitcham in the late nineteenth century (Courtesy of the Whitehorse Historical Society Inc, no NP2893)

Figure 13. White Horse Road (as then named), Mitcham in the 1940s (Courtesy of the Whitehorse Historical Society Inc, no NP3315)

[54] Heritage Alliance, *Survey of Post War Built Heritage in Victoria: Stage One, Volume 1,* 2008, p 12.
[55] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 193.
[56] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 203.
[57] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 207.
[58] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 207.

From the early 1950s, the number of local service stations also increased, with new American-style single-branded facilities replacing the older style independent motor garages of the pre-war era.[59] Inevitably, most of these appeared along the district's principal thoroughfares; in 1953, one was erected on the south-west corner of the prominent intersection of Whitehorse and Elgar Road.[60] By 1962, new service stations had been built on three of the four corners of Whitehorse and Springvale Roads in Nunawading. The increasing use of motor vehicles in the municipality was otherwise reflected by the opening of a drive-in cinema at Burwood – the first in Australia – in 1954.

Away from the district's major thoroughfares, the most pressing car-related issue for ratepayers in the 1950s and 1960s was the sealing of unmade roads in residential areas. Prior to 1956, the City of Box Hill had managed to construct only about five streets per year.[61] However, in 1960, the council secured a bank loan that, in the words of one Councillor, meant that 'the end of the era of unmade streets in this City is now in the foreseeable future'. At that time, some forty miles (64 kilometres) of road was still unsealed in the municipality. This, however, had dropped to only nine miles (14 kilometres) by 1964. Two years later, 'only a miscellaneous group of short streets' remained unmade in the City of Box Hill. Much the same progress took place in the City of Nunawading, where, by 1967, only 10% of the municipality's roads had not been sealed.[62] Moreover, those that remained unsealed were at the specific request of residents, such as parts of the Bellbird Estate in Blackburn. By the 1980s, the present road network within the City of Whitehorse was almost completely established.

In 1997, the character of the municipality's northern boundary was substantially changed by the extension of the Eastern Freeway from Doncaster Road to Springvale Road. Its infrastructure included new road bridges at Elgar Road, Station Street, Middleborough Road and Blackburn Road, and several footbridges. Two particularly distinctive footbridges, at Koonung Road and Cabena Street in Nunawading, were designed by Gazzard Sheldon Architects.[63] The final stage of the freeway, connecting Springvale Road to the Frankston Freeway via the Eastlink tunnel (just outside the boundaries of the City of Whitehorse), was completed in 2008.

Related heritage places

HO23 – Australian Road Research Board, 500 Burwood Highway, Vermont South

HO196 – Service station, 683 Canterbury Road, Surrey Hills

HO281 – Burwood Skyline Drive-In Cinema, Burwood Highway, Burwood

HO296 - 'Minamere', 42-48 Glenburnie Road, Mitcham

[59] Heritage Alliance, *Survey of Post War Built Heritage in Victoria: Stage One, Volume 1*, 2008, p 12.
[60] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 191.
[61] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 204.
[62] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 135.
[63] *Constructional Review,* February 1997, pp 16-21.

3.2 Rail

3.2.1 The Melbourne to Lilydale railway

In 1880, the *Railways Construction Bill* was introduced into the Legislative Assembly. The Bill provided for the construction of 23 new railway lines throughout the State of Victoria, including linking Hawthorn with the distant township of Lilydale. The Hawthorn-Camberwell section of the new line opened for service in April 1882; by June the line had reached Box Hill; and on 1 December of that year, the line to Lilydale opened.[64] The Melbourne to Lilydale line originally provided ten new stations along its route, spaced at long intervals – Glenferrie, Auburn, Camberwell, Canterbury, Box Hill, Blackburn, Mitcham, Ringwood, Warrandyte (renamed Croydon in 1884) and Lilydale. The long distance between stations on the line was reduced with the establishment of Surrey Hills Station in 1883, Mooroolbark in 1887-8, Tunstall (Nunawading) in 1888 and Mont Albert in 1890.[65]

The opening of the Camberwell to Lilydale railway on 1 December 1882 stimulated an extraordinary wave of large speculative subdivisions in Box Hill and Surrey Hills, and to a lesser extent Blackburn, in the 1880s. The railway, which ran approximately parallel to Whitehorse Road, the municipality's main east-west road, was integral to the advertising of new housing estates, and to lure businesses to the east. The original 1880s railway stations at Mont Albert, Box Hill, Blackburn, Tunstall (Nunawading) and Mitcham all attracted some degree of building development near them.

The railway was also the reason for the flourishing tourism industry in the Victorian and Edwardian periods. The opening of the railway line to Lilydale in 1882 brought excursionists to the region. Later, visitors changed railways at Lilydale to travel on to Healesville (1889-1981) and Warburton (1901-1965). From 1889 access to the Dandenong Ranges was facilitated when sections of the Belgrave line opened with an extension from Ringwood. Initially terminating at Upper Ferntree Gully, the arrival of the railway line brought more visitors to the foothills of Mount Dandenong and by the early twentieth century, Ferntree Gully and Belgrave were resort destinations.[66]

[64] Mark Fiddian, *Commuters, Shoppers and Scholars: A History of the Melbourne-Lilydale Railway*, Pakenham, 1988, p 8.
[65] Mark Fiddian, *Commuters, Shoppers and Scholars: A History of the Melbourne-Lilydale Railway*, Pakenham, 1988, p 13.
[66] 'Lilydale', 'Belgrave' and 'Ferntree Gully', *Victorian Places*, https://www.victorianplaces.com.au/, accessed on 11 July 2023.

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Figure 14 and 15. Advertisements for the Box Hill Railway Station Reserve and Box Hill Township Estate, 1880s (State Library of Victoria, ID 1844743 & ID 1432447)

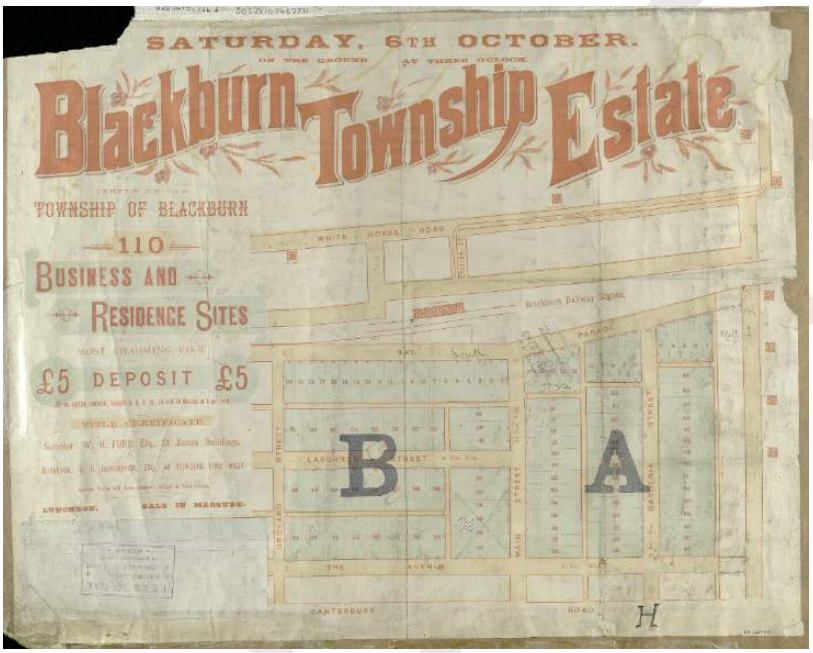

Figure 16. Advertisement for the Blackburn Township Estate, c1880s (State Library of Victoria, ID 2239306)

Figure 17. Box Hill Railway Station in c1918 (Courtesy of the Whitehorse Historical Society Inc, no NP519)

3.2.2 Improvements in the twentieth and twenty-first centuries

Real improvement to the train service came at the same time that Council was acknowledging the need to seal roads. The railway was electrified between Box Hill and Ringwood in 1923, whilst the construction of two additional stations – Laburnum and Heatherdale – in 1958 reflected the demands of post-war commuters.[67] A significant improvement to the local railway network was the construction of a third track between East Camberwell and Box Hill in 1971.

In early 1973 the State Government announced that, on the recommendation of the Metropolitan Transportation Committee, Box Hill's railway station was to be redeveloped as a major regional transport interchange, which would involve placing the station underground.[68] Slated to commence in 1975 and be completed to coincide with the opening of the new city rail loop in 1977, the project was repeatedly delayed. Construction did not begin until 1979, and the Box Hill Central shopping centre, incorporating the new underground railway station and rooftop bus interchange was eventually opened by Premier John Cain in November 1984.[69]

More recently the railway line has seen extensive changes due to level crossing removal projects. In 2013-14 a new station was built at Mitcham as part of a VicRoads grade separation of the Mitcham and Rooks roads level crossings. In 2017, as part of the Victorian Government's Level Crossing Removal Project to remove Melbourne's most dangerous level crossings, the level crossing at Heatherdale Station was removed by lowering the rail line under the road and a new station rebuilt on the east side of Heatherdale Road. In 2020, it was announced that the level crossing at Union Road, Surrey Hills would also be removed as part of the Level Crossing Removal Project. Construction works involving the demolition of the Surrey Hills Railway Station, the relocation of the Mont Albert Railway Station building,

[67] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, p 19.
[68] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 224.
[69] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 212.

lowering of the railway line, and construction of the new Union Station were completed in 2023.

The first stage of the Victorian Government's Suburban Rail Loop (SRL) East project linking Cheltenham to Box Hill commenced in 2022 and is due for completion in 2035. Within the City of Whitehorse, the project includes the construction of an underground station at Box Hill and realignment of Whitehorse Road between Nelson Road and Linsley Street to create a pedestrian promenade.[70] The City of Whitehorse engaged with the government on ways to minimise the impacts of the SRL project on heritage places in the municipality. This includes buildings in Box Hill covered by a Heritage Overlay, in particular the Colonial Gas Association building at 942-946 Whitehorse Road (HO91), protection of heritage structures and monuments; and land associated with the site of the Burwood Drive-in Cinema (HO281).

Related heritage places

HO27 – Mont Albert Railway Station, 7 Windsor Crescent, Mont Albert

HO91 – Colonial Gas Association Building, 942-946 Whitehorse Road

HO281 – Burwood Drive-in Cinema, Burwood Highway, Burwood

3.3 Trams

3.3.1 Early tramways

The City of Whitehorse was the location of Australia's first electric tramway. The tram, operated by the Box Hill and Doncaster Tramway Co. from October 1889 until January 1896, ran along Station Street from Whitehorse Road to Doncaster Road.[71] The establishment of tram services in the west of the municipality came 20 years later, at the time of Melbourne's second wave of tramway development in the 1910s. The first tram service proper to reach within the Shire's boundaries was the Riversdale Road route. Integral to its establishment was the establishment of Wattle Park, which was used to justify the extension of the Riversdale Road tram to Warrigal Road in March 1917, and then to its present Elgar Road terminus in June 1928.[72]

While tram routes were laid out through the contiguous suburbs of Balwyn, Surrey Hills and Camberwell during the 1920s and 1930s, these stopped short of what was then the City of Box Hill. The Whitehorse Road tram, for example, terminated at Union Road, and the Burwood Road tram at Warrigal Road. The sole exception was Riversdale Road where, in the mid-1920s, the tramline was extended from Warrigal Road to Elgar Road in Box Hill South.

[70] Victoria's Big Build, Suburban Rail Loop East, https://bigbuild.vic.gov.au/projects/suburban-rail-loop/srl-east, accessed on 11 July 2023.
[71] Andrew Ward & Associates, *City of Box Hill Heritage and Conservation Study,* Volume 1, p 55.
[72] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 139, 159.

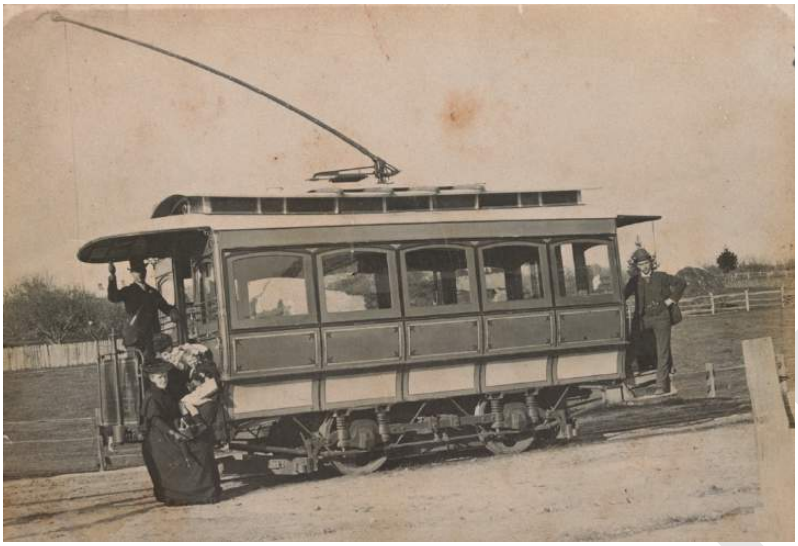

Figure 18. The electric tramway that ran between Box Hill and Doncaster, undated (State Library of Victoria, ID 1723374)

Figure 19. Advertisement for Australia's first electric tram, running between Box Hill and Doncaster, undated (State Library of Victoria, ID 599153)

3.3.2 Expansion in the post-war period

Expansion of the tramway network further into the municipality was on the agenda as early as 1946, when Box Hill's Town Clerk appeared before a Parliamentary Committee to urge 'in the strongest terms' that the Whitehorse Road tram route be extended at least as far as Station Street, in order to assist those who had recently settled in the area.[73] While the committee agreed, the government did not and no extension occurred at this time. Such decisions, however, did not stop canny

[73] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 185.

property developers from using the possible future extension of tram routes as a lure for potential purchasers.[74]

It was not until the early 1970s that there was a resurgence of interest in the expansion of the tram network, when the district's original tramline along Riversdale Road – then one of the last remaining stretches of single tram track left in Melbourne – was duplicated.[75] In 1973, the Melbourne & Metropolitan Tramways Board (MMTB) began extending the Toorak Road tramline from its terminus at Warrigal Road along Burwood Highway as far as Middleborough Road – the project was completed in 1978.[76] The route was subsequently extended even further, initially to Blackburn Road (early 1990s) and then as far as Vermont South (2005).[77] The Whitehorse Road tramline was also extended from Union Road all the way to Box Hill Central shopping centre.[78] This new line, constructed at a cost of $28 million, opened in June 2003.

Related heritage places

VHR H0904/HO4 – Wattle Park, 1012 Riversdale Road, Burwood

3.4 Bus services

Bus services first served the Shire of Nunawading in the early 1920s. The Mitcham and Vermont Community Bus, established in 1923 by Councillor Norman Armstrong, provided a link to the railway line for residents of Vermont,[79] and in the following decades private bus routes gradually made the outlying parts of the municipality accessible to prospective residents. From 1937, Burwood, without its own fixed rail route, was served by a bus to Box Hill via Box Hill South.[80] By the 1970s an extensive network of bus routes had been established throughout the municipality to connect commuters with railway stations.

3.5 Communications

3.5.1 Establishing postal services

Postal services in the municipality were established by the early 1860s, with the first post offices at Ballyshanassy township and in Box Hill.[81] A post office was established in Forest Hill in 1874. In 1881 a post office, originally named L L Vale, opened in the Vermont district. This was renamed the Vermont Post Office in 1890 after residents petitioned Council for a name change. The Tunstall Post Office commenced operations at the newly opened railway station in 1889. Mitcham's first post office also operated from the local railway station.[82]

Purpose-built post offices were erected at Box Hill in 1910 and Mitcham in 1924. The service in Nunawading meanwhile, was accommodated in temporary premises until

[74] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 156.
[75] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 225.
[76] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 156.
[77] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 210.
[78] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 217.
[79] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 65.
[80] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 173.
[81] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 121.
[82] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 121-22.

1954, when it was relocated to a prefabricated aluminium building at the corner of Springvale Road and Silver Grove.[83] In December 1951, Blackburn's postal service transferred to similarly temporary premises in Chapel Street.[84] In 1954, a post office opened at Bennettswood and, the following year, two more began operation in Box Hill's developing northern fringe – one at Kerrimuir and another in Box Hill North.

Figure 20. L L Vale Post Office, 1889 (Courtesy of the Whitehorse Historical Society Inc, no NP7636)

Figure 21. Mitcham Post Office, c1924 (Courtesy of the Whitehorse Historical Society Inc, no NP816)

In Blackburn South, the new post office was accommodated in a portable building on Canterbury Road that had been relocated from the Olympic Village in Heidelberg.[85] Another opened in Vicki Street in 1960. Around the same time, Blackburn's temporary post office on Chapel Street was replaced by a new flat-roofed building on the same site, which opened on 12 September 1960. In 1961, the old fibro-cement shed was relocated from Blackburn to Nurlendi Road in Vermont,

[83] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 122.
[84] Robin da Costa, *Blackburn: a picturesque history,* Lilydale, 1978, p 17.
[85] O S Green, *From orchard to brick veneer: Malcolm Street, Blackburn & Environs, 1955-1985,* Blackburn, 1987, p 7.

where it continued to serve as a post office well into the 1970s.[86] In November 1962, a post office opened at Laburnum. Meanwhile, the prefabricated aluminium post office at Nunawading was replaced by a large two-storey brick building in 1970.[87] Four years later, a post office opened at Vermont South. In 1975, a new mail sorting centre was established in Blackburn.[88] This was in turn replaced by the new Eastern Mail Centre, erected in 1992 on the former site of the Eastbridge Migrant Hostel in Rooks Road, Nunawading.[89]

Figure 22. Blackburn Post Office in 1960 (Courtesy of the Whitehorse Historical Society Inc, no NP376)

Related heritage places

HO161 – Mitcham Post Office, 528 Whitehorse Road, Mitcham

3.5.2 Developing electronic means of communication

Telegrams were reportedly first issued from Box Hill on 12 May 1888.[90] Not long after, *The Reporter* newspaper expressed its surprise that 'telephonic communication' had not yet been established between Box Hill and Melbourne considering 'the importance of Box Hill and the large amount of business that is daily transacted with the city'[91] and by the end of the nineteenth century, proposals had been put forward to extend Melbourne's telephone service to Box Hill.[92] In 1899, postmaster Mr W H G Ellingworth had established a telephone bureau within the Box Hill post office.[93]

[86] Robin da Costa, *Blackburn: a picturesque history,* Lilydale, 1978, p 17.
[87] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 122.
[88] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 224.
[89] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 208.
[90] *Box Hill Reporter,* 1 July 1927, p 4.
[91] *The Reporter,* 4 December 1891, p 2.
[92] *Argus,* 26 July 1898, p 6.
[93] *The Reporter,* 17 November 1899, p 2.

In 1907, calls began for a telephone exchange to be established at Box Hill. At the time, Box Hill and the surrounding area was connected to the Canterbury exchange. This was seen as inconvenient and expensive, with messages seldom relayed in reasonable time.[94] A manual exchange was finally established in 1919, though frequent delays and disconnections were a source of frustration for residents.[95]

Box Hill's first automatic telephone exchange opened in May 1930 at the north-west corner of Whitehorse Road and Station Street. [96] Designed by the Commonwealth Department of Works and Railways to meet the increasing telephone requirements of the Box Hill District, it was trunked to a parent exchange at Hawthorn.[97] The large Hawthorn facility supported several other branch exchanges, including those at Kew East (1941) and Camberwell (1946). These branches were collectively designated as the W Group, each having a different prefix for the telephone numbers of its subscribers. The code for the Box Hill exchange was WX, which remained the telephone number prefix for residents from Mont Albert to Mitcham well into the 1950s. While some residents of Nunawading also had telephone numbers starting with WX, others had the prefix WU, which referred to the branch exchange at nearby Ringwood.

A branch exchange was established in the City of Nunawading in 1959, erected alongside St John's Anglican Church on Whitehorse Road, Mitcham. With the introduction of a new six-digit telephone number system, Box Hill's area code became 89. In 1961, following the introduction of the 88 prefix, the capacity of the Box Hill branch exchange was doubled to 20,000 phone lines.

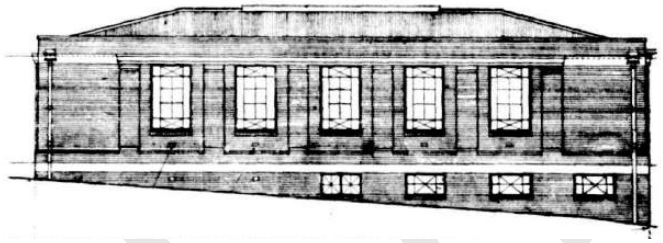

Figure 23. Design of the automatic telephone exchange, Box Hill, 1927 (Herald, 9 November 1927, p 14)

The early 1960s saw significant development in telecommunications technology in the City of Whitehorse. In July 1961, the Postmaster General's Department announced that an elevated site in Canterbury Road, Surrey Hills, would be the site for a new microwave radio repeater station to transfer signals from the City West Telephone Exchange to other suburban stations. Taking advantage of what was one of the highest points in the metropolitan area, the station comprised a tall tower and what was described at the time as 'a contemporary styled building designed to blend with the surrounding area enhanced by a landscaped setting'.[98]

Another technological development in the municipality was the Aussat Earth Satellite Station – the first of its kind in Australia – which commenced operation in

[94] *The Reporter,* 23 August 1907, p 2.
[95] *The Reporter,* 19 September 1919, p 2; *The Reporter,* 24 December 1920, p 5.
[96] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 168.
[97] *Herald,* 9 November 1927, p 14.
[98] Quoted in Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 208-209.

the mid-1980s on an elevated site to the rear of what was then the ABC building on Highbury Road.[99]

3.5.3 Making, printing and distributing newspapers

The publication of Box Hill's first newspaper, *The Reporter,* launched in June 1889 at the height of Victoria's land boom.[100] The paper was established by S B Cumpston and managed by two brothers, Thomas and George Bright.[101] *The Reporter* (later called the *Box Hill Reporter*) dominated the local press and was still going strong at the end of the World War II.

As the district's population increased in the early post-war era, rival publications began to appear. This included the *Box Hill Community News* (1951), the *Eastern Times* (1953), the *Box Hill Gazette* (1953) and the *Balwyn & Box Hill Observer* (1954). While some of these were relatively short-lived ventures, they were sufficient to challenge the monopoly that the *Box Hill Reporter* had maintained on newspaper advertising. The *Box Hill Reporter* eventually ceased publication in 1968.

In 1959, the *Box Hill Observer* merged with the *Burwood Observer* and, four years later, the *Eastern Times* joined the *Box Hill Gazette* to create the *Eastern Times Gazette*. The latter was renamed the *Box Hill Gazette* in 1967, and remained in publication until it was absorbed into the *Progress Press* in 1978. That same year, Melbourne's largest publisher of local newspapers, the *Leader* Community Newspapers, established a presence when it took over the former Cottee's cordial factory in Whitehorse Road, Blackburn, as its new printing headquarters.[102] The building was demolished in 2009.

Figure 24. Offices of The Reporter in Main Street, Box Hill, c 1890s (Box Hill Historical Society, no B2990)

[99] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, pp 209-10.
[100] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 93.
[101] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 93.
[102] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 208.

The principal local newspaper in the former City of Nunawading was the pre-war *Blackburn & Mitcham Reporter*, which, following the municipality's change of name and status in 1945, was re-badged as the *Nunawading Reporter*. Published under that name until 1964, when it became the *Nunawading Gazette*, the newspaper finally ceased publication in 1995. That same year, the *Whitehorse Post* was formed from a merger of two other local newspapers, the *Box Hill Post* and the *Nunawading Post*, reflecting the recent council amalgamation.

3.5.4 Broadcasting in the municipality

Television studios for Channel 0 (later Channel Ten) were built in Forest Hill in 1965. In 1992 the television station relocated its administrative functions to the Como Centre in South Yarra but continued to use the Forest Hill studios for the filming of many programmes, including the long-running soap opera *Neighbours*. The complex is now known as Global Television Studios.

In 1971 the Australian Broadcasting Commission (ABC) acquired land in Burwood East for its new administrative centre.[103] The modern multi-storey building at the site was completed a decade later. Originally, it was proposed that the new centre would accommodate all the ABC's administrative functions, which were then based in the city. Due to internal opposition however, only the staff of Radio Australia was transferred to Burwood East. The service commenced broadcasting from its new location in 1982.[104] It remained there until 1994, when the ABC consolidated its administrative functions in a new building at the redeveloped Southbank precinct.[105]

Related heritage places

HO22 – Former ATV-O Television Studios, 104-168 Hawthorn Road, Forest Hill

[103] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 224.
[104] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 224.
[105] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 209.

4 TRANSFORMING AND MANAGING THE LAND

4.1 Timber and charcoal

Until the first Crown land sales of 1850, the eastern portion of the City of Whitehorse was known primarily as a source of timber and charcoal. Timber-felling within five miles of Melbourne's city centre was banned, so wood from outlying areas was in demand for fuel and building timber, and procurement of timber was only lightly regulated. Some wood-cutters burnt wood to produce charcoal as it was easier to transport. The charcoal was bagged and sold as fuel.[106] Various 'splitters huts' occupied the area in the 1840s and even after several farms had been established in the 1850s and 1860s, ongoing drought forced many farmers back into wood carting as a basic source of income.[107]

4.2 Farming

Before early European settlers realised the potential of orchards, agriculture was the main occupation in the former Parish of Nunawading and by 1861 cattle and sheep grazing, dairying and crop growing dominated the municipality.[108] The establishment of agriculture however was hampered by dry, often drought, conditions in the 1850s and 1860s; by 1862, "less than ten percent of the land in the parish was under crop, and of this half was hay and a good proportion of the rest potatoes. There were thirteen acres of vineyard, 116 of market garden, and only thirteen acres of orchards".[109] The 1863 Rate Books showed a small number of unusual small industries, including Pierce Boardmans' distillery, which produced eucalyptus, peppermint, caraway and melaleuca oils, and W H Slater's distillery which produced poppy and rose oils for perfumes.[110] Early settlers in the area included the Schwerkolt family in Mitcham, who established a farm beside the Mullum Mullum Creek in the 1860s.[111]

Figure 25. Third Schwerkolt cottage, built after the 1905 bushfires (Courtesy of the Whitehorse Historical Society Inc, no NP1779)

[106] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 30-31.
[107] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 31; Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 17.
[108] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 28-29.
[109] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 29.
[110] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 31.
[111] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, p 6.

Figure 26. The Schwerkolt family's stone cottage, built in 1884-85 (Courtesy of the Whitehorse Historical Society Inc, no NP1779)

Despite the lack of arable land, promotion of the area for agriculture went ahead, led by Dr L L Smith, of L L Vale (later becoming known as Vermont). Substantial agricultural infrastructure developed too. A bull paddock adjacent to the gasworks on the corner of Elgar and Whitehorse Roads was closed in 1910, when a Council-owned abattoir was opened in Woodhouse Grove, Box Hill North, where it existed until 1924.[112] T R B Morton opened a livestock market adjacent to the Box Hill railway station in July 1895, and this continued to operate until 1930.[113] The municipality even had its own Agricultural Show, organised by the Box Hill Progress Association and Doncaster Fruit-growers' Association at the market and adjoining Recreation Hall from 1901 until 1921.[114]

Poultry farming also thrived in the municipality and in 1946 the newly-formed Victorian Egg & Pulp Board opened an egg grading depot in a disused warehouse at Box Hill. This depot closed in 1954 and the following year a huge poultry farm on the south side of Canterbury Road at Forest Hill was sold off for the construction of Nunawading High School.

Notwithstanding technological improvements, local farmers of all kinds inevitably found that they could not compete with the encroaching suburban development of the 1950s and 1960s. By the mid-1970s, local poultry farming had long since disappeared, with the sole remaining example in the City of Box Hill – on Highbury Road in Burwood – closing in 1968. The Goold family's 36-acre market garden, also on Highbury Road, remained in operation until as late as 1983 – the last of the Burwood farms, and one of the last in the entire municipality before being converted for surburban development.

[112] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 121, 131.
[113] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 110, 149.
[114] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 117.

Related heritage places

HO30 – Schwerkolt's Cottage, 2-10 Deep Creek Road, Mitcham

HO62 – Willowbank, 29 Moore Road, Vermont

HO107 – Greenways, 142 Boronia Road, Vermont

4.3 Orchards and market gardens

By the early 1860s, there was a major increase in land under cultivation, mostly due to orchards. Relatively small land holdings could generate much greater income from orcharding instead of grazing, and apple, plum and pear trees were seen to enhance the previously deforested landscape. Between 1871 and 1881, the area under orchards increased from 284 to 664 acres. These were generally concentrated in the northern parts of Box Hill and Blackburn.[115] By 1886, this figure had reached 100 acres, making it the Victorian shire with the third largest acreage of orchards, surpassed only by Echuca and Bulleen.[116] The orchard boom of the late nineteenth and early twentieth centuries was reflected in the construction of cool stores for fruit, built in Blackburn and Mitcham in the late 1910s.[117] The orchard industry was boosted by soldier settlement schemes in the district.[118]

Market gardens co-existed with orchards and from the early days vegetable growing was a common sideline for many farmers, although lack of transport to markets in Melbourne was a hindrance to success.[119] Flower growing was also prevalent in the area. The Adult Deaf and Dumb Society, which had established itself on a large site at Blackburn Lake in 1908, was one of several suppliers of cut flowers, including dahlias, gladioli and roses.[120] Other local families specialised in particular species: the Albers with daffodils in Burwood, and the Chandlers with Boronia in Blackburn South.[121]

By the 1930s, several co-operative cool storage facilities were established. The most successful of these ventures was the Blue Moon Fruit Co-operative, formed in Blackburn in 1930, which grew into one of Australia's largest fruit exporters, opening other branches in Victoria, Tasmania and Western Australia.[122] The orchard industry was affected by the pressure of suburban development from the 1940s as orchards and farmlets were gradually subdivided.

In Blackburn, Gill's orchard was sold off for residential subdivision as early as 1950. In 1956, a portion of Pearce's orchard in Blackburn North was similarly redeveloped for a new high school, while the remaining portion later became the site of a small retail development (1967) that, in homage to the land's former use, took on the name of the Old Orchard Shopping Centre. During the 1960s, the Matheson family of Forest Hill donated part of their orchard for the Strathdon Home for the Aged; the

[115] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 55.
[116] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 88.
[117] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, p 6.
[118] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, p 6.
[119] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 54.
[120] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 85, 88, 99.
[121] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 99.
[122] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, p 6.

remaining six acres were later presented to the City of Nunawading for preservation as a living museum of local orcharding, although this did not eventuate.[123]

Such was the decline of orcharding in the post-war period that the Blue Moon company's cool stores in Blackburn began to store fruit grown from outside the municipality, as there was not enough local produce to sustain it. In 1974, the facility finally ceased storing fruit altogether, and was adapted for the storage of meat and egg products.[124]

Figure 27. The Adult Deaf and Dumb Society flower farm (Courtesy of the Whitehorse Historical Society Inc, no NP2507)

Figure 28. Blue Moon packing shed, 1960 (Courtesy of the Whitehorse Historical Society Inc, no NP746)

[123] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 209.
[124] Robin da Costa, *Blackburn: a picturesque history,* Lilydale, 1978, p 118.

Figure 29. Aerial showing orchards in Box Hill, 1953 (State Library of Victoria, H2010.91/289)

Related heritage places

HO98 – Glendale, 63 Woodhouse Grove, Box Hill North

HO113 – Strathdon, 449-465 Springvale Road, Forest Hill

HO221 – 115 Shannon Street, Box Hill North

4.4 Brick and tile manufacturing

High-quality clays in the Box Hill and Nunawading areas had been identified as early as the 1850s, with a number of clay workers and potteries opening from the 1850s to the 1870s.[125]

The railway-led land boom of the 1880s prompted the expansion of the brickmaking industry with suburban development creating a high demand for building materials. In Box Hill, the Box Hill Brick Company established its works in Federation Street in 1884, and prospered until the Depression hit in 1892, at which time the works was closed.[126] Other major brick, pipe and tile works of this period included the Blackburn Brickworks (established 1885, closed 1895) the Walker family's Australian Brick Pipe

[125] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, p 6.
[126] VHR citation, Former Standard Brickworks.

and Tessellated Tile Company in Mitcham (established 1886), and the Geal Brothers works in Springvale Road, Forest Hill, which made pots and pipes for orchardists from 1903.[127]

By the mid-1910s, the Box Hill Brickworks site had been re-established by the Standard Brickworks[128]. In 1916, brick and tile making had joined fruit growing as a leading industry in the area, and by the 1920s and 1930s, the area was known as Victoria's major tile-producing region. It was at this time that Wunderlich established its site in Vermont; Daniel Robertson Bros., established its Tunstall brickworks; and Vitclay, established its complex at Blackburn South, which had been the site of a pottery operated by the White Brothers since the 1860s.[129] The New Northcote Company purchased 40 acres of land in Middleborough Road in Burwood to establish a secondary clay pit at this time too.

While virtually all of the local brickworks were forced to close down for the duration of World War II, they experienced renewed vigour in the 1950s and 1960s as the demand for building materials increased with the post-war housing boom.[130] The Standard Brickworks in Box Hill re- opened in 1946 and its machinery was electrified in 1952.[131] When the former New Northcote Brick Company works in Middleborough Road re-opened in 1948, it boasted new wire-cut brick making machinery and the first bricks bearing the Burwood stamp became available in 1950.[132] Eight years later, the company installed Australia's first tunnel kilns, and added more in 1961. The company also released the 'Nubrick' brand brick from c1960, which became a common building material for housing in the developing eastern suburbs.[133] The Blackburn works of Brick & Pipe Industries (formerly Commonwealth Pottery) were similarly upgraded with tunnel kilns in 1969 and further expanded through the acquisition of adjoining land owned by orchardist Vic Lawford.

During this period, several local manufacturers embraced demand for new products. The Daniel Robertson works in Mitcham expanded in the 1950s to manufacture textured bricks. Brick & Pipe Industries began manufacturing clay sewerage pipes for local authorities and, by 1971, claimed to be the largest manufacturer of these products in the southern hemisphere. The 1960s was also characterised by consolidation as smaller manufacturers were acquired by larger ones. Brick Industries Ltd in Burwood took over the Standard Brickworks in Box Hill, the Commonwealth Pottery site in Blackburn and the premises of the Blackburn Tile Company, eventually becoming Victoria's largest brick company.[134]

Ironically, while the post-war housing boom prompted a huge demand for building materials, it was the resulting encroachment of suburbia that led to the closure of local brick and tile manufacturers as new residents complained about the noise and the pollution. At the same time, local clay deposits were beginning to run out. As manufacturers started to source raw materials from outside the locale, the

[127] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, p 9.
[128] VHR citation, Former Standard Brickworks.
[129] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, p 9; Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 85, 88, 99; Information received from Nunawading Historical Society.
[130] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 137.
[131] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 184.
[132] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 139.
[133] 'Burwood Brickworks', *Bricks in Victoria,* <bricksinvictoria.blogpost.com>, accessed 14 December 2022.
[134] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 139.

justification for maintaining factories in their present locations was becoming more tenuous.

The Australian Tessellated Tile Company in Mitcham, latterly taken over by Rocla, closed down in 1965. By 1977, only five clay product manufacturers were still operating in the municipality: two in Nunawading and one each in Vermont, Burwood and Blackburn.[135] The Standard Brickworks in Box Hill ceased production in 1988 and the Nubrick (former Brick Industries Ltd) site in Burwood in the early 1990s.[136] The last remaining brickworks in the municipality, operated by Daniel Robertson in Mitcham, ceased production in the early 2010s. The buildings on the Nubrick site were demolished in the late 1990s. In 2019, 'the world's most sustainable shopping centre'[137] opened on the site as Burwood Brickworks[138] and the Daniel Robertson site is currently being developed as 'Tunstall Village', a residential development.

Figure 30. Employees at the Australian Tesselated Tile Works, Mitcham (Courtesy of the Whitehorse Historical Society Inc, no NP3324

[135] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 140.
[136] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 207.
[137] 'Press release, 24 April 2021', *Burwood Brickworks,* <burwoodbrickworks.shopping>, accessed 14 December 2022.
[138] *Whitehorse Leader*, 19 August 2019.

Figure 31. Australian Tesselated Tile Works, Mitcham, c 1930s (State Library of Victoria, ID 1761532)

Figure 32. Daniel Robertson brickworks, 2000 (Courtesy of the Whitehorse Historical Society Inc, no NP2045)

Related heritage places

VHR H0720/HO3 – Former Standard Brickworks, 14 Federation Street, Box Hill

HO5 – Wunderlich/Monier Terracotta Roof Tiles Complex, 656 Mitcham Road, Vermont

HO78 – Daniel Robertson Brickworks, 58 Station Street, Nunawading

5 BUILDING WHITEHORSE'S INDUSTRIES AND WORKFORCE

5.1 Manufacturing

A small number of factories, including Harvey's agricultural implements foundry and Tully and Russell's motor spray works, opened in Box Hill before World War I. [139] Sewering of the municipality, which began in 1928, was another attractor for industry, but the growth which did occur in the 1930s was reversed or slowed by wartime shortages and demands in the 1940s.[140]

Decentralisation of industry was a significant theme in the early post-war era, with many of Melbourne's pre-war manufacturers, already well-established in the inner suburbs, looking eastward for expansion opportunities.[141] While the municipalities of Box Hill and Nunawading were both subject to major industrial expansion from the late 1940s, large tracts of vacant land were especially plentiful in the latter.[142] In 1948, clothing manufacturers Holeproof began building a new factory along Whitehorse Road at Box Hill.[143] It was soon followed by the new premises of art pottery manufacturers E G Greenway Pty Ltd, which relocated from small premises in Fitzroy to a large architect-designed factory on Whitehorse Road in Blackburn. Many other manufacturers were attracted to sites along Whitehorse Road, including Cottee's cordials at Blackburn (1950), Turner Industries at Nunawading (1951) and K G Luke Pty Ltd at Mitcham (1952).[144] Befitting their prominent positions along the district's principal commercial thoroughfare, many of these factories were attractive buildings that challenged the traditional notion of the utilitarian factory.[145]

During the 1950s, several other large factories were established on comparably isolated sites. In 1954, architect John Rivett was reported as preparing a scheme for a factory complex on 3½ acres (1.4ha) at Highbury Road, Burwood, which provided staff recreation facilities including a swimming pool, tennis courts, squash courts and playground.[146] Five years later, paper manufacturers Bowater Scott established a vast new factory on thirty acres off Middleborough Road at Box Hill South, overlooking the Gardiners Creek. During the 1960s, these areas developed into recognisable industrial precincts. For example, the Baekert factory in Joseph Street, Blackburn North, was joined by the new Dominion Press printing works (designed by architects Rosman, Hastings & Sorel in 1965) and later by the premises of Aubedal Pty Ltd and others. In Burwood, the portion of Highbury Road to either side of Gardiners Creek attracted numerous large factories, with many smaller ones being built in the side-streets extending north towards Burwood Road. Similar development also spread north of the Bowater Scott factory in Box Hill South, with smaller factories extending as far as Canterbury Road.

[139] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 131.
[140] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 182.
[141] Heritage Alliance, *Survey of Post War Built Heritage in Victoria: Stage One,* Volume 1, p 15.
[142] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 146.
[143] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 184.
[144] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 150.
[145] *Argus,* 20 July 1954, p 18.
[146] *Herald,* 28 January 1955, p 10.

Elsewhere in the City of Whitehorse, comparable precincts of industrial development remained focused on Whitehorse Road. The well-established Luke & Singer complex on the corner of Cook Street expanded with the construction of a new administration block in the late 1950s as several other factories appeared either alongside or fronting Cook Street, including the new premises of the Terry Engineering Company, designed by architects Meldrum & Partners in 1960. The most dominant local industrial precinct was that between Whitehorse Road and the railway line, extending from Railway Road in Blackburn to Rooks Road in Nunawading.

The 1960s and 1970s was a period of consolidation for industry in Whitehorse. During that time, many of the manufacturers that had been based there since the early 1950s including Baekert Australia, Cottees and Turner Industries were taken over by overseas corporations. By 1977, there were still more than sixty factories operating in the City of Nunawading.[147] But, as new offshore owners consolidated their facilities around the world, many factories in the area eventually became surplus to requirements and were closed.

Figure 33. K G Luke factory in Mitcham, 1959 (Courtesy of the Whitehorse Historical Society Inc, no NP3801)

[147] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 151.

5.2 Retailing

The first shopping district in the City of Whitehorse was established along Whitehorse Road and Station Street, Box Hill. By 1876, businesses were being operated by blacksmith Robert Sutton, Silas Padgham (general store and post office), butcher George Cockroft and bootmaker John Ragg. There was also a general store run by Alfred Serpell, and the Railway Hotel.[148] Further east, small timber buildings housing general stores began to appear in the late 1870s: Blackburn's first shop was built around 1878,[149] and Vermont's in 1881.[150]

Figure 34. Silas Padgham's general store and post office, Box Hill, c1860s (Box Hill Historical Society, no B0408)

Figure 35. Pannam's General Store, Vermont (Courtesy of the Whitehorse Historical Society Inc, no NP2096)

[148] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 52.
[149] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 123.
[150] Tim Shambrook, *This is Vermont,* Blackburn, 1989, pp 10-11, 20.

Although the municipality's only official government-surveyed township, Ballyshanassy, had existed since 1854, commercial development in Burwood centred on the Boroondara side of Warrigal Road, and only a few shops appeared on the Nunawading side in the 1800s. Walter Clarke, storekeeper, baker and postmaster in Ballyshanassy, also became a banker when the Post Office Savings Bank opened in his premises in April 1879.[151]

A 1905 photograph shows Box Hill's commercial centre had developed substantially by the turn of the century, with the modest timber single-storey shop buildings joined by larger double-storey Italianate shops.[152] The years immediately preceding World War I saw the first major wave of retail development in the municipality. It was at this time that many of Box Hill's major commercial buildings were erected, including the new post office, J R Ellingworth's real estate agency, and two large banks.[153]

In Mont Albert, although the Phoenix Park Estate had been subdivided in 1887, the first shops in Hamilton Street, adjacent to the railway station did not appear until 1912, and most of the shops date from the 1920s.[154] Blackburn's shopping centre also grew substantially in the inter-war period, and there are remnants of 1920s shops in Mitcham and Nunawading, which also underwent expansion in the 1920s.

Figure 36. Whitehorse Road, near the Station Street intersection, in the 1860s (Box Hill Historical Society, no B0644)

[151] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 55-56.
[152] Eleanor Findlay & Marjorie Morgan, *The Days before Yesterday: a picture book of early Box Hill,* Box Hill, 1993, p 9.
[153] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 130-131.
[154] M S Webster, *The history of Mont Albert Shopping Centre 1887-1985,* Box Hill, 1986.

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Figure 37. Looking south west across Whitehorse Road, Box Hill from the fire station tower, 1905 (Box Hill Historical Society, no B0915)

Figure 38. Whitehorse Road, Box Hill in the 1950s (Box Hill Historical Society, no B0147)

Figure 39. Hamilton Street, Mont Albert in c 1920s (Public Record Office Victoria, VPRS 12800 P3 ADV 0458)

The enormous post-war growth in the municipality gave rise to a massive proliferation of shopping centres of all sizes. Many housing estates incorporated rows of four or five shops, often on corner sites, and shopping strips along major arterials grew. In 1954, the Melbourne and Metropolitan Board of Works (MMBW) master plan identified Box Hill's commercial hub as one of several in the metropolitan area that warranted upgrading to include larger shops and department stores along with adequate car-parking and public transport interchanges.[155] While this proposal met with some local criticism, it was otherwise instrumental in attracting several larger retailers to the area.[156] The smaller pre-war retail centres at Surrey Hills, Blackburn, Nunawading and Mitcham were all similarly upgraded during this period.

At Forest Hill, one of Melbourne's first American-style shopping centres was opened in 1964.[157] Australia's first K-Mart department store was built in Burwood East in April 1969. In Box Hill, Whitehorse Plaza was constructed on the site of the old market in 1974, whilst the Box Hill Central shopping centre and public transport interchange was completed in 1983.[158] The new transport interchange opened in November 1984, and the retail centre – known as the Market Street Mall – in January 1985.

The Forest Hill Shopping Centre, which had already been enlarged in 1974, underwent even more radical transformation from 1987, when the original strip mall portion was demolished and replaced by a new three-storey block, providing space for several large chain stores and a Hoyts multiplex cinema. The centres at both Forest Hill and Box Hill have each been considerably enlarged and refurbished since then, as has the K-mart complex at Burwood East.

Other medium-scale developments included shopping centres at Vermont South, Brentford Square (Forest Hill), Burwood East, and North Blackburn Square. Major retailers were also attracted to the Whitehorse Road corridor in particular in Nunawading, the location of one of Melbourne's largest bulk goods retail strips and homemaker centres known as MegaMile by 2008.[159]

Figure 40. Australia's first Kmart, Burwood (Courtesy of the Whitehorse Historical Society Inc, no NP4491)

[155] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 202.
[156] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 194.
[157] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 168.
[158] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 221.
[159] City of Whitehorse, *Nunawading MegaMile Major Activity Centre and Mitcham Neighbourhood Activity Centre Structure Plan*, 2008, p. 19.

Related heritage places

HO92 – Former Railway Hotel, 950-956 Whitehorse Road, Box Hill

HO103 – Mont Albert Shopping Centre Precinct, Mont Albert

HO115 – Former Ellingworth's Estate Agency and Shops, 580 Station Street, Box Hill

HO116 – Former State Savings Bank, 953 Whitehorse Road, Box Hill

HO244 – Box Hill Commercial Area

HO290 – Former ES&A Bank, 153-155 Springvale Road, Nunawading

5.3 Banking and finance

In October 1883 a branch of the ES&A bank opened in Station Street, Box Hill.[160] A bank was also opened in Mitcham by 1892.[161] In 1911, the State Savings Bank commenced construction of new premises in Box Hill on a site next to the post office in Whitehorse Road.[162] The two-storey building was designed by architects Billing, Son and Peck.[163] At the same time, the Bank of Victoria negotiated for purchase of a building site in Station Street, Box Hill and erected a permanent building in 1912.[164] The Box Hill branch originally opened in February 1910 in temporary premises.

By 1927, the Blackburn Progress Association was agitating for a branch of the ES&A bank to be established in the suburb. Meanwhile, a branch of the State Savings Bank opened in Blackburn in 1930 opposite the railway station.[165] Mont Albert's first bank, a branch of the State Savings Bank, opened in 1930.[166] A grand two-storey bank building for the State Savings Bank – designed by architects Sydney, Smith, Ogg and Serpell – opened in Mitcham the same year.[167] A new ES&A bank was also constructed in Mitcham in 1930 to provide more commodious accommodation for the local branch.[168]

Changes in legislation, namely the *Banking Act 1947*, brought about the nationalisation of private trading banks and the establishment of savings bank subsidiaries. The result was a boom in the establishment of branch banks, with the government-run State Savings Bank of Victoria expanding its own facilities to keep up with the growth of the private banks.

While many of these banks engaged the services of noted architects in the post-war era, it was the ES&A Bank that represented what has been described as 'the leading patron of modern bank architecture'.[169] This was evident in the municipality from 1951, when architect Horace Tribe designed new manager's residences for the

[160] *Kew & Hawthorn Express,* 12 October 1883.
[161] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 63.
[162] *The Reporter,* 11 August 1911, p 4.
[163] *The Reporter,* 11 August 1911, p 4.
[164] *The Reporter,* 21 April 1911, p 4.
[165] *Box Hill Reporter,* 28 February 1930, p 3.
[166] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 167.
[167] *Herald*, 5 February 1930, p 13.
[168] *Box Hill Reporter,* 7 March 1930, p 9.
[169] Heritage Alliance, *Survey of Post War Built Heritage in Victoria: Stage One, Volume 1*, 2008, p 18.

existing branches at Blackburn and Mitcham. An entirely new branch at Blackburn, designed by architects Barlow, van Rompaey & Kerr, was subsequently erected in 1956. A particularly striking example at 153-55 Springvale Road, Nunawading, dating from the late 1950s, was designed by the ES&A Bank's in-house architect Stuart McIntosh, a resident who lived in a house of his own design in Mont Albert North.

Figure 41. State Savings Bank at Mitcham, c1970 (Courtesy of the Whitehorse Historical Society Inc,no NP16)

Related heritage places

HO116 – Former State Savings Bank, 953 Whitehorse Road, Box Hill

HO290 – Former ES&A Bank, 153-155 Springvale Road, Nunawading

5.4 Hospitality

The first hotel in Whitehorse gave rise to the municipality's name. In 1853, Patrick Trainor erected a two-storey brick hotel, which he named the White Horse, on what was then known as the Great Gipps Land Road. The hotel enjoyed a monopoly until Dennis Delaney opened the Royal Hotel in 1856, on the corner of present-day

Canterbury and Broughton Roads, Surrey Hills.[170] By 1858, the Harkaway Inn had been built on the corner of Blackburn and Highbury Roads in Burwood East, and this was followed by several other hotels in the Burwood area, including the Tally-Ho, the Thornecombe, the Boundary, and the Burwood Family.[171] The first hotel in Blackburn was the Traveller's Rest, erected on Whitehorse Road in 1861 as a changing station for horses on the Cobb and Co. coach service from Melbourne to Lilydale.[172] It was followed in 1868 by the King George Hotel at Blackburn Creek. In Mitcham, the Hill Hotel and the Reserve Hotel were built on opposite comers at the intersection of Mitcham and Whitehorse Roads.[173]

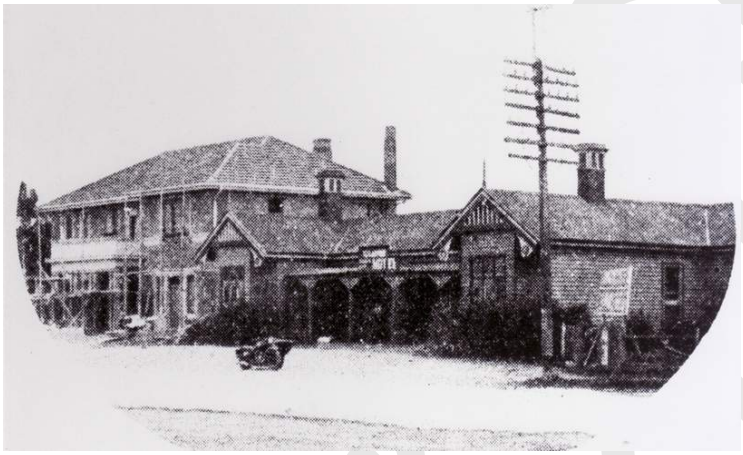

Figure 42. Traveller's Rest Hotel, Blackburn in 1929 (Courtesy of the Whitehorse Historical Society Inc, no NP1562)

Figure 43. The Hill Hotel in Mitcham (Courtesy of the Whitehorse Historical Society Inc, no NP1329)

[170] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 17, 21.
[171] *Sands and McDougall's Victorian Directory,* 1885, 1901.
[172] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 138.
[173] Niall Brennan, *This is Nunawading,* Melbourne, 1972, p 54.

Figure 44. The Reserve Hotel in Mitcham, c 1920 (Courtesy of the Whitehorse Historical Society Inc, no NP3196)

Historian Andrew Lemon has noted that Box Hill's earliest hotels were 'a mixed bag, and none of them seemed to have been very profitable'.[174] Many that were built failed to see out the century. The Harvest Home Hotel in Mitcham, which operated from the front room of John McGlone's house in Whitehorse Road, closed in 1889.[175] The King George Hotel in Blackburn ceased operating in 1905, and most of the hotels in Burwood had also closed by that time. However, the two oldest hotels in the area, the White Horse and the Royal, thrived and both were completely rebuilt in the late 1880s.[176] The new Railway Hotel was erected in 1882 on the prominent corner of Station Street and Whitehorse Road in Box Hill, and was extensively remodelled in 1911.

The Temperance movement, which had always had a strong presence in the Box Hill area, was further strengthened by Prohibition in the United States. In 1920, a fervent anti-liquor campaign was begun by local politician E W Greenwood.[177] At that time, hotel licensing legislation had a Local Option clause, so voters in any district could support prohibition without forcing it onto other districts who were not in favour.

Following a state-wide referendum in 1921, the City of Box Hill became one of two municipalities in Victoria (along with the adjacent City of Camberwell) that declared itself as a Dry Area, where existing hotels and other licensed premises were closed and no new ones permitted.[178] Box Hill's three hotels, along with two in Burwood and seven in Camberwell, were closed on New Year's Day, 1921.[179] Most were subsequently demolished, although the Railway Hotel was remodelled as a shop and coffee palace, and the eponymous White Horse Hotel reopened as a boarding house. When the latter was demolished in 1934, an enterprising citizen obtained the White Horse statue and the original doorway on which it stood. They were offered to the Council for re- erection, and John Gawler, architect and Box Hill Councillor, designed a setting on the reserve in the middle of Whitehorse Road. The statue has since been replaced by a replica, and the original placed on display in the Box Hill Town Hall.

[174] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 33.
[175] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 25.
[176] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 89.
[177] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 145-48.
[178] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 189-90.
[179] Alyssa Clarkson, *Ballyshanassy: a history of the Burwood District,* Burwood, 1991, p 20.

Figure 45. The White Horse Hotel in Box Hill prior to demolition, c 1933 (State Library of Victoria, H4841a)

Figure 46. Looking south along Station Street, Box Hill, with the Railway Hotel to the right of the image (Box Hill Historical Society, no B9108)

In the early post-war period, several attempts were made to break Box Hill's Dry Area. In 1951, a company purchased land on the southwestern corner of Whitehorse and Elgar Roads with the intent of erecting a new hotel, although public opposition prevented this from proceeding. A subsequent proposal to establish a licensed club premises in Dorking Road was similarly overturned. Not long afterwards, Dry Areas were abolished following a 1954 revision to the Licensing Act. However, an amendment to the Act required that any new licensed premises in former Dry Areas still required a poll of electors living in the immediate vicinity of the site. The first venue to take advantage of this was the Box Hill Golf Club which, in 1956, became the first licensed premises to operate in the City of Box Hill for over thirty years.[180] Soon afterwards, two local grocery stores were also granted liquor licenses. In the mid-1990s, there were only four licensed premises in the former City of Box Hill – the clubrooms of the Returned & Services League (RSL) and golf club, the Tudor Motel, and a restaurant at Box Hill TAFE set up for the training of hospitality students.[181] In 1999, residents voted to allow licensed restaurants, but not hotels.

[180] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 176.
[181] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 218.

No hotels have been built in the Box Hill Dry Area since the liquor ban, although they have appeared elsewhere in the municipality. In 1929, the Traveller's Rest Hotel in Blackburn was rebuilt as the Blackburn Hotel, which was demolished in the 1980s for the present hotel.[182] The Reserve Hotel in Mitcham, although considerably altered, remains as one of the earliest surviving hotels in the municipality. Two completely new hotels were erected in the 1960s – the Burvale in East Burwood (1969), and the Whitehorse Hotel, on the corner of Whitehorse and Moncrieff Roads, Nunawading.[183] The latter, like its famous namesake, has since been demolished.

The Motel Maroondah at 768 Whitehorse Road, Box Hill, which opened in 1963, was the first example of a modern American-style motel in the City of Whitehorse. Following the opening of the much-heralded Burvale Hotel-Motel in 1969, several other motels emerged on or near Burwood Highway over the next few years, including the Sunstrip Motel (now Box Hill Motel) (c1971) and the Burwood East Motel on Blackburn Road. During the 1980s, these were supplemented by venues geared towards commercial travellers rather than casual holidaymakers, offering motel-style accommodation with licensed restaurants and facilities for conferences or receptions. Mostly located along Whitehorse Road, these new-generation motels include the Tudor in Box Hill, the Nunawading Motor Inn and the Quality Hotel Manor in Mitcham.

The first of Box Hill's many Chinese restaurants was the Yang-Tse Café on Whitehorse Road, which opened as early as 1961.[184] By the end of that decade, several others had followed including the Dragon Palace in Blackburn. This anticipated the boom of Asian migration over the remainder of that decade, which saw innumerable Asian restaurants appear along the retail strip of Station Street and the adjacent parts of Whitehorse Road.

Similar development took place in both Nunawading and Mitcham, where Asian restaurants were established both in retail strips and as purpose-built freestanding buildings. The latter were sometimes designed in a pseudo-oriental manner, such as Emperor Court in Mitcham Road (c1980) and the later Formosa House in Springvale Road.

Related heritage places

HO92 – Former Railway Hotel, 950-956 Whitehorse Road, Box Hill

5.5 Office and commercial development

Non-retail commercial development is a relatively recent theme in the history of the municipality, and it has only really been from the 1970s that major office developments have appeared in the area. Commercial developments which preceded this boom include Agfa-Gevaert, which established headquarters in Nunawading in 1957, and the Channel 0 (later Channel 10) studios, built in Forest Hill in 1965. The latter, designed by architects Hassell McConnell & Partners, was

[182] Information provided by Nunawading Historical Society.
[183] Niall Brennan, *This is Nunawading,* Melbourne, 1972, p 49.
[184] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 212.

awarded a medal in the General Buildings category at the 1965 RAIA Awards. The complex is now known as Global Television Studios.

Office buildings became more ubiquitous in the municipality from the early 1970s, when demand increased for commercial premises near major retail centres such as Box Hill. The impact of the growing trend towards decentralisation, which saw city-based companies starting to relocate their headquarters to the eastern suburbs, was also apparent. As early as 1974, Hewlett Packard erected a new office block in Joseph Street, Blackburn North – an area previously associated with industrial development.[185] From the late 1970s, as work progressed on the redevelopment of Box Hill's central commercial and transport hub, identifiable corporate precincts emerged along nearby streets including Prospect Road, Carrington Road, Rutland Road and Ellingworth Parade.[186] Dating from the mid-1980s, the first of many new office buildings along Prospect Road was the premises of a local legal firm, which was officially opened by Melbourne's Anglican Archbishop.[187] A three storey example at 20 Prospect Road, completed in 1988, represented an early application of tilt-up concrete slab construction in office building design in Melbourne.[188] Telecommunications, water, gas and electricity providers also maintain a corporate presence in the municipality.

Factors which have influenced the change in land use of many large sites in the City of Whitehorse include the closure of welfare institutions and schools, and the selling-off or subdivision of agricultural properties. A case in point was the subdivision of land in Burwood East, formerly occupied by the Tally Ho Boys' Farm. A commercial estate, initially known as the Tally Ho Technology Park, was developed by the Lend Lease Corporation, with its first new building (for Phillips Australia) opening in 1988. Subsequent additions to the estate included the new headquarters of World Vision (Lawrence Harkin & Ziersch, 1992) and the Eastern Regional office of VicRoads (Synman Justin Bialek, 1997). The remainder of the site was developed for housing.

Figure 47. Aerial view of Tally Ho Technology Park in Burwood East, 1995 (Courtesy of the Whitehorse Historical Society Inc, no NP2775)

[185] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 209.
[186] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 213.
[187] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 213.
[188] *Constructional Review,* November 1988, pp 48-49.

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Related heritage places

HO272 – Former ATV 0 Television Studios, 104-168 Hawthorn Road, Forest Hill

Draft

6 CREATING WHITEHORSE'S SUBURBS

6.1 The early townships

The first township in the Parish of Nunawading was Burwood, then known as Ballyshanassy. Proclaimed in 1854, the village was bordered by present-day Gilmour Street, Burwood Highway, Highbury Road and Gardiner's Creek.[189] The township was named in honour of Victoria's Irish-born Premier, John O'Shanassy, with *bally* being an Irish word for 'town'.[190]

Ballyshanassy remained the only official township until 1861, when the Box Hill Township was proclaimed.[191] Box Hill Township comprised a blacksmith, general store, butcher's shop and school and was considered the main town centre for Nunawading.[192] The opening of a post office in the township in 1861 is said to have been the first official use of the name 'Box Hill'.[193]

Also in 1861, land speculator Thomas Graham proposed the so-called Norwich Township, which was located west of Dandenong Creek in present-day Vermont South.[194] Graham's scheme envisaged vineyards along the river, and a market square with a rectilinear grid of streets. Graham had hoped that the proposed Lilydale railway line would pass through his new town. However, it never did, and the Norwich Township subsequently failed. Traces of the original layout remain as present-day Morack and Terrara Roads. Several other townships were proposed in the Vermont, Tunstall and Mitcham areas under such names as Springfield, New Brunswick and Studley. They were equally unsuccessful.[195]

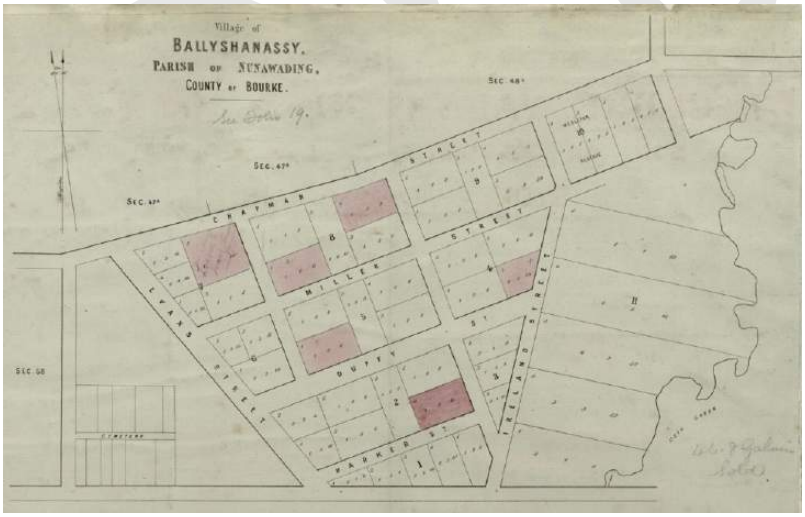

Figure 48. The township of Ballyshanassy, 1858 (State Library of Victoria, ID 1294016)

[189] Alyssa Clarkson, *Ballyshanassy: a history of the Burwood District,* Burwood, 1991, p 7.
[190] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, pp 24-25.
[191] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 30.
[192] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 25.
[193] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 30.
[194] Tim Shambrook, *This is Vermont,* Blackburn, 1989, p 11.
[195] Niall Brennan, *This is Nunawading,* Melbourne, 1972, pp 33-34.

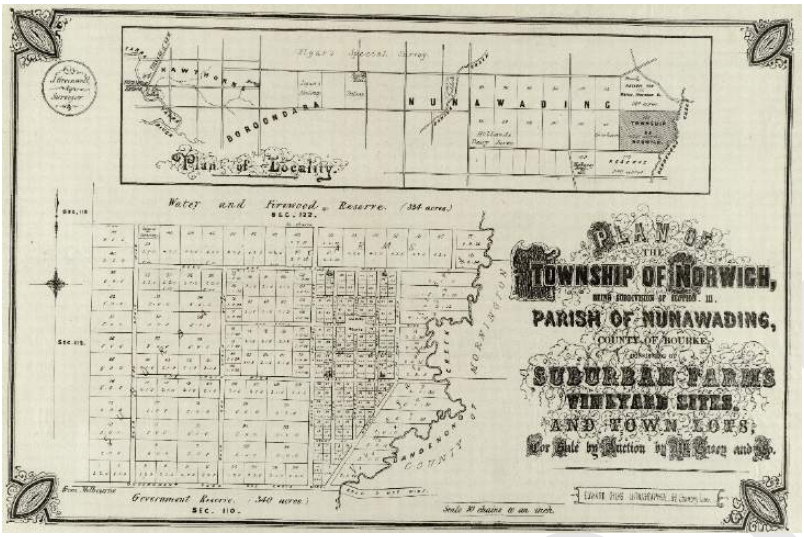

Figure 49. The proposed township of Norwich, 1860s (State Library of Victoria, ID 2100195)

6.2 Early residential development

According to the 1841 census, Thomas Toogood occupied a mud house on his land in Box Hill North.[196] Such crude houses, built of mud, timber or wattle and daub, would have been erected by many of the earliest European settlers in Whitehorse. One of these, a mud house built by the Bennett brothers in Burwood, even survived until the 1950s.[197] The first substantial house was Arundel Wrighte's house, Beaudesert, a timber and stone dwelling which he had erected on his Box Hill North property by 1844.[198]

Others engaged in farming activity also erected permanent homesteads. Edward Crossman built his farmhouse in Box Hill North, as did Gad Eley in Burwood.[199] In the mid-1850s, George Blood and William Ellingworth both settled in central Box Hill, and built timber houses for themselves on opposite sides of Station Street.[200] The latter was demolished in 1956, and Blood's cottage was dismantled in the 1990s.

[196] Andrew Ward & Associates, *City of Box Hill Heritage and Conservation Study,* Volume 1, p 13.
[197] Niall Brennan, *This is Nunawading,* Melbourne, 1972, p 18.
[198] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 8.
[199] Andrew Ward & Associates, *City of Box Hill Heritage and Conservation Study,* Volume 1, pp 49-50, 61-62.
[200] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 17, 20.

Figure 50. Blood Cottage, March 1980 (State Library of Victoria, ID 1670300)

The earliest houses in the former municipality of Nunawading appeared in the early 1860s. Once again, they were mostly crude dwellings of mud, timber and wattle and daub. David Boyle built a wattle and daub house on his land at Forest Hill, and German immigrants August and Paulina Schwerkolt built their first stone house in Mitcham.[201] John McClelland, one of Nunawading's earliest settlers, built a wattle and daub house on the south side of Whitehorse Road in 1869, and soon extended it into a substantial timber house which he named The Elms.[202] It was relocated to Springvale Road in the 1940s, and has since been demolished.[203]

Related heritage places

HO30 – Schwerkolt's Cottage, 2-10 Deep Creek Road, Mitcham

HO64 – House, 27 Morley Crescent, Mont Albert North

[201] Tim Shambrook, *This is Vermont,* Blackburn, 1989, p 15; Information provided by Valda Arrowsmith, Nunawading Historical Society.
[202] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 34-35.
[203] Information provided by Valda Arrowsmith, Nunawading Historical Society.

6.3 The 1880s land boom

In 1882, the Camberwell railway line was extended to Lilydale, and the area of what is now the City of Whitehorse suddenly became an attractive location for large-scale land development. Subdivisions rapidly emerged around stations, including Elgar Park Estate in Surrey Hills (1882) and the Railway Station Estate in Box Hill (1883). The latter had been the property of long-time Box Hill resident George Sims, who made a considerable profit from the sale.[204] Another pioneer landholder, Arundel Wrighte, did not live to make a similar fortune. He and his wife both died in 1887, and their vast property was acquired by a concern called the Box Hill Township Estate Company.[205] Wrighte's land was promptly subdivided, and the ensuing lots were progressively sold over several months in 1888. Similar estates appeared throughout Box Hill, Surrey Hills, Mont Albert and, to a lesser extent, Box Hill South, at this time.[206]

The Freehold Investment and Banking Company, purchased a thousand acres in Blackburn for a proposed estate. Streets were laid out, community facilities were established, and as a centrepiece, a watercourse was dammed to create Blackburn Lake.[207] The 138-lot subdivision, bordered by Central Road, Blackburn Road and Wellington Avenue, was declared in early 1889.[208] By that time, the secretary of the company, T RB Morton, had built several large houses in Gordon Crescent. But this was not enough to attract potential purchasers, and the company soon went into liquidation. Morton set up his own estate agency in Blackburn, but the remaining land took many years to sell.

Developers were less keen to subdivide land further east, in the Tunstall and Mitcham areas, although a few did appear along the north side of Whitehorse Road. A wedge-shaped area of land, bordered by Mitcham and East Doncaster roads, was subdivided in 1889 as the 163-lot Mitcham Township Estate.[209] Between 1888 and 1890, land on the opposite side of Mitcham Road was subdivided in three stages.[210] A railway station opened at Tunstall (now Nunawading) in 1888, and the following year saw the subdivision of land on the corner of Whitehorse and Springvale roads.[211] All of these modest estates, like their more substantial counterpart in Blackburn, developed slowly, often with only one or two houses built in an entire street before 1900.

The land boom had ended by the early 1890s, but not before a few so-called 'Boom mansions' were erected, many in the central part of Box Hill. These included Albion, Banff and Turriff in Albion Street, Box Hill, Tyneholm in Elgar Road, Box Hill and Urara in Gordon Crescent, Blackburn.[212]

[204] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 71.
[205] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 87.
[206] Subdivision plans in Vale Collection, Map Room, State Library of Victoria.
[207] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 82.
[208] Lodged Plan No 2400, declared 28 February 1889, Land and Survey Information Centre.
[209] Niall Brennan, *This is Nunawading,* Melbourne, 1972, pp 3 63.
[210] Lodged Plans Nos 1968, 2180, 2525, 3045, variously dated, Land and Survey Information Centre.
[211] Lodged Plan No 2494, declared 15 April 1889, Land and Survey Information Centre.
[212] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 96.

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Figure 51. 'Turriff', 40 Albion Road, Box Hill in the 1880s (Box Hill Historical Society, no B2589)

Figure 52. 'Banff' in Albion Road, Box Hill (Box Hill Historical Society. no B2026)

Figure 53. Gordon Crescent in Blackburn in c1880s-90s (Courtesy of the Whitehorse Historical Society Inc, no NP40)

Figure 54. House in Gordon Crescent, Blackburn, c1880 (Courtesy of the Whitehorse Historical Society Inc, no NP1366)

Figure 55. Game family home, in Gordon Crescent in c1909 (Courtesy of the Whitehorse Historical Society Inc, no NP2159)

Related heritage places

HO10 – Albion, 50 Albion Road, Box Hill

HO14 – Banff, 29 Albion Road, Box Hill

HO40 – Urara, 2 Gordon Crescent, Blackburn

HO108 – Tyneholm, 310 Elgar Road, Box Hill

HO125 – Turriff, 40 Albion Road, Box Hill

6.4 Early twentieth century development

With the turn of the century came signs of a slow return to prosperity following the 1890s depression. One early subdivision was Austral Park in Mitcham, which was auctioned for sale in 1906. Located close to Mitcham Station, the Estate offered 'suburban conveniences and country advantages'.[213] In 1910, the Blackburn Township Estate was laid out around the railway station, to the immediate west of the Blackburn Model Town estate. Two years later, builder Algernon Elmore erected a timber bungalow for himself, Kyalite, in what is now Laburnum Street. Over the next decade, Elmore erected almost thirty similar houses in the immediate vicinity, which forms most of what is now known as the Bellbird Streets area.[214]

In the 1910s and 1920s, much of the land in the Nunawading area remained rural. In 1911, an expanse of land between Springvale and Mitcham roads was auctioned as nine huge lots, obviously intended for farming.[215] Box Hill meanwhile began to lose its rural character in the 1920s, as orchards were increasingly replaced with residential development. In 1924, one of the district's leading orchardists, Henry Hatfield, subdivided his Koonwarra orchard, located between Box Hill and Blackburn, into '108 choice residential lots'. Lots within the Mascot Estate, located equidistant between Blackburn and Tunstall (Vermont) and with frontages to White Horse Road, were also released for sale at this time.[216]

[213] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 59.
[214] Angela Taylor, 'Craftsman Bungalows in Blackburn', *Historic Environment,* Volume 1, 1986, p 41.
[215] Subdivision plan in Vale Collection, Map Room, State Library of Victoria.
[216] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 67.

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Figure 56. Elmore House, Laburnum in 1914 (Courtesy of the Whitehorse Historical Society Inc, no NP3516)

Figure 57. Advertisement for Koonwarra Estate, 1924 (Courtesy of the Whitehorse Historical Society Inc, no NP294)

During the 1920s and 1930s, many of the failed Boom subdivisions were finally developed. To this day, there are entire streets of inter-war houses in Blackburn, Nunawading and Mitcham which reveal their nineteenth century origins with their grid layouts and rear lanes.

Just as the extension of the railway line promoted land development in the 1880s, the extension of tram lines promoted land development in the early twentieth century. The existing tram line was extended to Wattle Park in 1917, and then to Elgar Road in 1928. This gave rise to an influx of land subdivisions in the Burwood, Box Hill South and Surrey Hills areas. Several were named in honour of the new mode of transport in the area, including the Tramway Estate (1916) in Burwood and the Tram Terminus Estate (1936) in Box Hill South.[217]

[217] Subdivision plans in Vale Collection, Map Room, State Library of Victoria.

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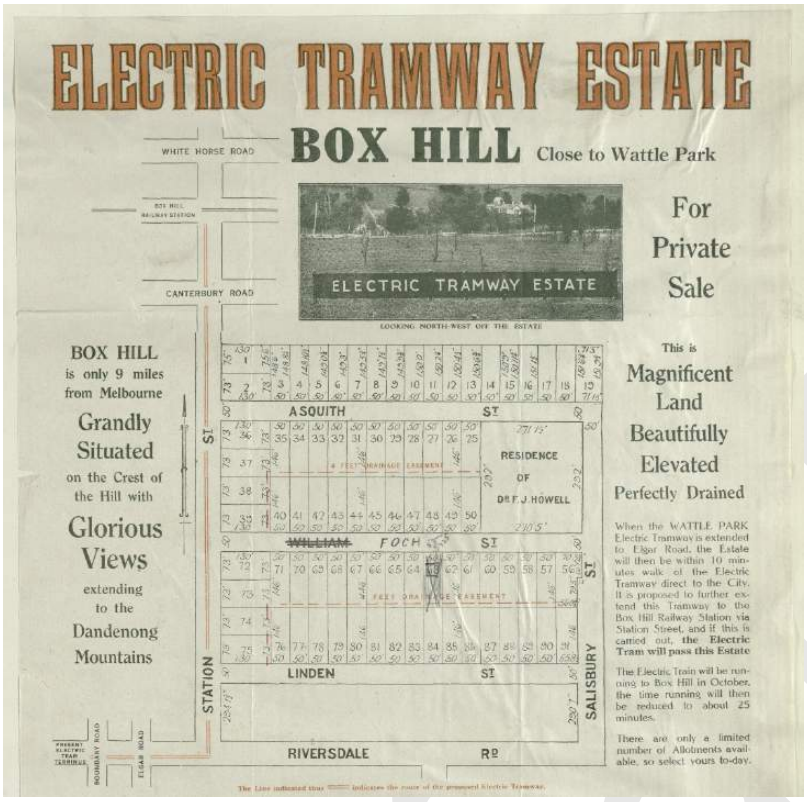

Figure 58. Advertisement for Electric Tramway Estate, Box Hill, undated (State Library of Victoria, ID 2240534)

Related heritage places

HO144 – House, 28 Laburnum Street, Blackburn

HO178 – Black's Estate Precinct, Mont Albert

HO179 – Thomas Street Precinct, Mitcham

HO180 – Mount View Precinct, Burwood

HO191 – Mate's Housing Development Precinct

HO202 – House, 64 Laburnum Street, Blackburn

HO243 – Windsor Park Estate, Surrey Hills

6.5 Development in the post-war era

From the 1950s, the City of Whitehorse underwent its most rapid period of residential development. In the context of the overall development of the municipality, the grand subdivisions of the 1880s cover a very small area set against the vast acreages which were transformed by building activity in the post-war period. Rural areas developed rapidly in the post-war period, and the predominant theme of development in this period was the subdivision of former orchard and farming properties into large residential estates, the names of many revealing their origins, such as the Cherry Orchard Estate (East Burwood, 1958) and the Boronia Farm Estate (Blackburn South, 1956).[218]

After 1946, when the City of Box Hill revised its land valuation system, residential subdivision started to boom across the municipality. Undeveloped land near railway stations was the first to be subdivided, typified in Nunawading by the Nunawading Estate (1949), the Rosedale Estate (1951) and the Sunnyside Estate off Springvale Road (1955), and in Mitcham by the Central Hill Estate (1953). The opening of new railway stations at Laburnum and Heatherdale in 1958 also prompted subdivisions.

By the late 1950s, residential subdivision had spread even further north and south of the established settlements of Box Hill, Mitcham, Blackburn and Nunawading. These varied from small developments such as the 28-lot Best Estate on Middleborough Road in Blackburn (1957) to larger ones such as the 51-lot Highbury Crest Estate in Burwood, or the 62-lot Lakeview Estate in Blackburn (both 1958). Much larger estates were atypical, with the extensive Parkmore Estate on the south side of Canterbury Road in Forest Hill (1957) being exceptional. Developed by the Southern Construction Company, it was publicised as a new community for upwards of 500 families with every essential service provided.[219]

The Collins Street Directory for 1960 shows that residential subdivision in the City of Box Hill was virtually complete by that time. Box Hill South and Burwood were both almost fully subdivided, as was the portion of Box Hill North beyond Belmore Road and Woodhouse Grove. The bulk of unsubdivided land was to the south of the municipality. Most of the area of Fulton Road and Eley Road in Blackburn South remained undeveloped, as was the area south of Hawthorn Road and along Mahoneys Road in present-day Forest Hill. At that time, the land bounded by Blackburn Road, Highbury Road and Burwood Highway (partly occupied by the Tally Ho Boys Farm) still did not contain a single side street, while Terrara Road and Stanley Road were virtually the only roads in what is now Vermont.[220]

For the most part, the boom of residential subdivision across the municipality abated during the 1960s. By the end of that decade, the City of Box Hill had been fully subdivided – the last of the large rural properties, located on Highbury Road, was subdivided in 1968 as the Hillside Estate.[221] Development was otherwise focused on the fringes of the City of Nunawading, where new subdivisions included the Grovedale Estate to the south of Canterbury Road (1964). As noted by historian

[218] Subdivision plans in Vale Collection, Map Room, State Library of Victoria.
[219] *The Age,* 12 June 1962, p 17.
[220] Niall Brennan, *This is Nunawading,* Melbourne, 1972, p 131.
[221] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 206.

Lesley Alves, Burwood East and Vermont South were the last parts of the municipality to be transformed from rural areas to suburbs.[222]

The 1970s and 1980s saw the last rural frontiers of the municipality subdivided as housing pressed up against parklands along the Mullum Mullum and Dandenong creeks to the north and east. A small part of the municipality in which suburban development retained a somewhat rural feel was in Vermont and Vermont South, where land along Terrara, Moore and Morack roads was carved up into large blocks, usually exceeding an acre (0.4ha). Many large houses were built on such blocks, often designed by noted contemporary architects.[223] Such houses existed side by side with the early farming homesteads which survived on greatly reduced blocks. By 1976, virtually all of Vermont South had been developed.

From the late 1980s, new housing development has occurred on sites formerly occupied by schools, factories and welfare institutions. Examples include the former Vitclay site in Springfield Road, Blackburn North, the Tally Ho Boys' Training Farm, now housing a retirement village and technology park, and numerous state schools which have been closed and subsequently demolished.

Figure 59. Aerial photograph showing development in the City of Whitehorse in 1945; large swaths of rural land remain to the south and east (Whitehorse Maps)

[222] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 165.
[223] See list of addresses in Daryl Jackson et al, *Homebuilder's Handbook,* Melbourne 1968, p 41.

Figure 60. Aerial photograph showing development in the City of Whitehorse in 1975; the municipality was almost completely urbanised by this time (Whitehorse Maps)

Related heritage places

HO276 – House, 1 Laurencia Court, Mont Albert

HO288 – House, 1163 Riversdale Road, Box Hill South

HO289 – House, 40 Somers Street, Burwood

6.5.1 Modernist architecture and the architect-designed house

With its roots in the 1930s, Modernism in Melbourne emerged with force in the post-war period aided by overseas and local publications, post-war migration and 'rite of passage' overseas travel by young architects and designers. Rejecting historic styles, architects and designers were instead inspired by a broad range of architectural trends from overseas, including the United States, Europe, Japan and Great Britain, which embraced the principles of functionalism, simplicity and rationality.

The Modernist house type offered a radical alternative to the conventional postwar housing type. A new generation of architects and designers shunned the conservative house forms and seized the opportunity to address housing demands in an affordable but contemporary manner. They responded to the prevailing economic constraints by experimenting with lightweight materials and simple construction methods. Architects and designers utilised materials such as brick, timber, steel, concrete and glass, designing buildings that were characterised by

plain, unadorned surfaces.[224] The Modernist house type, with its flat or shallow roof, box-like forms and generous glazing, flourished in the 1950s and 1960s, and came to embody the forward-looking optimism of the post-war era.

Architects including Robin Boyd, Neil Clerehan, and Chancellor and Patrick, designed houses in the Cities of Box Hill and Nunawading in the 1950s and 1960s. The suburbs of Vermont and Vermont South, which retained a somewhat rural feel, were particularly popular and a number of architect-designed Modernist houses remain in these suburbs.[225]

Figure 61. Mirrabooka at 30-40 Moore Street, Vermont designed by Robin Boyd, 1957 (State Library of Victoria, ID 1698777)

Figure 62. House at 1 Verona Street, Vermont designed by architectural firm Chancellor & Patrick, 1959 (State Library of Victoria, ID 1696683)

[224] P Goad, 'Modernism' in P Goad & J Willis (eds), *The Encyclopedia of Australian Architecture,* 2012, pp 464-467.
[225] See list of addresses in Daryl Jackson et al, *Homebuilder's Handbook,* Melbourne 1968, p 41.

Related heritage places

HO63 – Mirrabooka, 30-34 Moore Road, Vermont

HO278 – Former Franciscan Mission Hospital Appeal House, 453 Whitehorse Road, Mitcham

HO285 – House, 1 Gracefield Drive, Box Hill North

HO287 – House, 7 Norris Court, Blackburn

HO291 – House, 1 Verona Street, Vermont

HO292 – Wildwood, 3 Villa Mews, Vermont

6.5.2 The Small Homes Service and project housing

The Small Homes Service (SHS), established in 1947 by the Royal Victorian Institute of Architects in conjunction with *The Age* newspaper, was conceived in response to the desperate need for housing after World War II.[226] Aiming to bring architecturally designed houses within everyone's means, the service offered a range of standard house plans, which could be purchased cheaply by prospective homebuyers. The SHS proved to be a particularly popular option for those purchasing land in developing outer suburbs and the cities of Box Hill and Nunawading were no exception with SHS houses built across the municipality. This included a timber house at 111 Main Street, Blackburn, which was erected in 1948 using standard plan T22[227] – the first SHS design ever published – and another at 17 Sheehans Road, Blackburn, built in 1956 to plan T2124 designed by Neil Clerehan.[228] Two demonstration houses designed by Clerehan on opposite corners of Whitehorse Road and Linden Street, were incorporated into the SHS range as T2143 and V271.

The SHS underwent renewed popularity from the late 1960s when it was renamed as the Royal Australian Institute of Architects (RAIA) Housing Service. During this time, fresh designs were introduced into the range by holding annual competitions for local architects and students, with winning entries sometimes erected at suburban display villages. This culminated in 1970, when entries in the previous year's competition formed the basis for a display village of twenty houses at Vermont South. Co-sponsored by the Gas & Fuel Corporation, it became known as the Blue Flame Project and included houses by noted architects such as Albert Ross, Ronald Monsbourgh, Sergei Halafoff, John Herniman and John Reid.[229]

By this time, the RAIA Housing Service was competing against a growing number of project housing companies that also offered affordable modern houses, including Contemporary Homes Pty Ltd, Australia's first project housing company. During the company's heyday in the mid to late 1950s, at least a dozen examples are known to have been built (or proposed) in developing parts of the City of Whitehorse such as

[226] Phillip Goad, *The Modern House in Melbourne 1945-1975,* Melbourne, 1992, p 3/30.
[227] '111 Main Street, Blackburn' Heritage Citation, *City of Whitehorse Post-1945 Heritage Study,* 2016, Citation E012, pp 143-44.
[228] '17 Sheehans Road, Blackburn' Heritage Citation, *City of Whitehorse Post-1945 Heritage Study,* 2016, Citation E016, pp 163-64.
[229] 'Blue Flame Project (residential precinct' Heritage Citation, *City of Whitehorse Post-1945 Heritage Study,* 2016, Citation F003, pp 226-229.

Forest Hill, Mitcham, Burwood East and Blackburn. Several remain in various states of alteration. A number of other display homes were erected along Canterbury Road between Blackburn and Forest Hill by various project housing companies (including Lewis Coote Homes, Hallmark Homes and Concept Constructions Pty Ltd) – in 1964, the Sands & McDougall Directory specifically identified six properties along Canterbury Road, Forest Hill.[230]

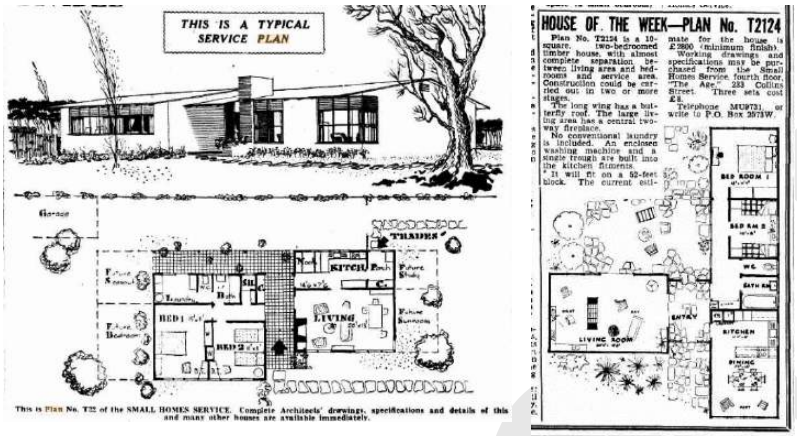

Figure 63. Plans in the Age newspaper for T22 - the first SHS design ever published - and T2124 (Age, 2 July 1947, p 2 and Age, 5 April 1954, p 6)

Figure 64. Hallmark Homes display home exhibition in Forest Hill in 1960 (Courtesy of the Whitehorse Historical Society Inc, no NP3511)

Related heritage places

HO282 – Concept Constructions Display Homes Precinct, Canterbury Road, Forest Hill

HO283 – House, 24 Arnott Street, Mont Albert North

[230] *Sands and McDougall's Victorian Directory,* 1964.

HO284 – House, 150 Canterbury Road, Blackburn South

HO286 – House, 4 Ian Grove, Burwood

6.5.3 Display villages and housing estates

A step up from individual display houses was the establishment of an entire group of display houses. The concept of the 'display village' of project housing had been introduced in Melbourne in early 1959, when the Futurama estate was unveiled in Glen Waverley. The first display village to open within the City of Whitehorse was a small group of timber dwellings in Henwood Street, Blackburn, which was erected in 1959 by Mutual Constructions (Melbourne) Pty Ltd. Two years later, Carmel Builders Pty Ltd built a similar development in Douglas Street, Box Hill South.

Display villages that included examples by multiple housing companies appear to have emerged in the City of Whitehorse from the mid-1960s. In Spencer Street, Nunawading, A V Jennings erected a group of weatherboard houses that essentially used the same plan, but with some variation introduced into the external elevations.[231] Homesville, on the west side of Springvale Road at Forest Hill, included display houses by Beaumaris Constructions Pty Ltd, Holwerda & Hayes Homes, and others. Other examples, dating from the late 1960s, included groups of houses in Minerva Crescent, Burwood East (representing Moorehouse Construction Company and P D Pastellas Pty Ltd), Ritz Street, Vermont (representing Spaceline and Stewart Craig Pty Ltd) and Stanley Road, Vermont South (representing Tompkins Homes, Williams Quality Homes and Holwerda & Hayes).

In early 1971, Inge Brothers opened its Granada display village on Burwood Highway, Vermont South, with a series of Spanish-flavoured house designs designated as La Costa Rustic, La Granja Spanish, the Ponderosa Spanish and the Supreme Spanish. Well into the 1970s, Burwood Highway remained a significant focus for such smaller-scaled display villages, including one at Beacon Street (Glenvill Homes Pty Ltd), two on opposite corners of Fortescue Road (one by Deva Ideal Homes and the other by Executive Homes & Associates) and another at the junction of Terrara Road (Civic Constructions).

Related heritage places

HO280 – AV Jennings Estate Precinct, Spencer Street/Springvale Road, Nunawading

6.5.4 Higher density living

The former City of Box Hill experienced a boom in the construction of apartments after 1960, when strata titling was introduced into Victoria in 1960.[232] Initially, this phenomenon was most noticeable in the more well-established eastern fringe of the municipality, around Mont Albert and Surrey Hills.[233] Larger and more ambitious developments, representing new types of multi-unit dwellings, began to emerge over the next few years. Another new development in higher density living was the

[231] 'A V Jennings Estate' Heritage Citation, *City of Whitehorse Post-1945 Heritage Study,* 2016, Citation F001, p 210.
[232] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 214.
[233] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 193.

introduction of the villa unit; one early local manifestation in the municipality was the block of five units at 4 Albion Road, Box Hill, designed by Ben Alexander in 1970.

Changes to strata title legislation in 1968 prompted a boom in the construction of flats around Melbourne, and the City of Whitehorse was no exception. By 1971, there were reportedly 1,000 flats in the City of Box Hill, compared to 14,600 occupied single dwellings, and the municipality underwent an 'unmistakable flat building boom' during 1973-74.[234] By that time, the proliferation of flats in the area had become a sensitive issue, and, in 1976, the City of Box Hill adopted policies to control the location, scale and density of flat development. Certain parts of the municipality still remain strongly characterised by flats. Townhouses and villa units proliferate along the east-west thoroughfares to the north of Whitehorse Road (for example, Thames Street, Severn Street, Medway Street and beyond) while numerous larger blocks of flats can be found south of Whitehorse Road (for example, Albion Road, Ashted Road and Merton Street). Similar patterns are evident in the City of Nunawading, where villa units define entire streetscapes along Surrey Road, Mount Pleasant Road, Mitcham Road and elsewhere.

A parallel development in the early 1970s was the emergence of cluster housing, where individual dwellings were sited in a landscaped setting with communal pathways and vehicular access. This type of higher density living was effectively introduced into Melbourne by Merchant Builders, a building company that was formed in 1965. Merchant Builders developed its first cluster housing estate, Winter Park, at Doncaster (1970-74). This proved such a success that a larger and more ambitious estate was subsequently established in Vermont.[235] Known as Vermont Park, the estate comprised more than fifty individual dwellings in a landscaped setting with connecting pathways, roadways and communal facilities including a swimming pool and barbecue area.

While Vermont Park has been described as a unique development in the City of Whitehorse, a number of comparable and contemporaneous cluster housing projects are known to have been realised. The Vermont Village, located at 457-467 Canterbury Road, comprised 92 dwellings in an open landscaped setting with communal hall, swimming pool and two tennis courts.[236] Commenced in 1975 and completed by 1977, it was designed by architects Clive Fredman and John Malina, who had recently created similar cluster housing developments in Dandenong, Frankston and Ringwood.[237] A slightly later example, Blackburn Rise, is located in Burwood East at 313 Blackburn Road. Completed in 1979, this comprised 17 dwellings on a 2.5-acre site, also with a communal hall and swimming pool.[238]

From the later part of the twentieth century even greater levels of higher density living became part of the Whitehorse landscape, especially around Box Hill where high-rise apartment towers, such as the 36-storey 'Sky One' development on Station Street, now dominate that part of the municipal sky line.

[234] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 217, 220-21.
[235] Allom Lovell & Associates, *City of Whitehorse Heritage Review, Volume 2, Part 1: Datasheets A-K,* 1999.
[236] *The Age,* 15 November 1977, p 30.
[237] *The Age,* 5 May 1985, p 12.
[238] *The Age,* 2 March 1979, p 16.

Figure 65. Vermont Park (Reproduced from Architecture Australia, July/August 2021, pp 82 and 86)

Figure 66. Vermont Park (Reproduced from Architecture Australia, July/August 2021, pp 82 and 86)

Related heritage places

HO118 – Vermont Park Precinct

HO277 – Indiana (Flats), 96 Severn Street, Box Hill

6.6 Public housing

A minor theme in the history of the municipality was the building of public housing in Box Hill South in the immediate post-war period. In early 1947, the Victorian premier announced that the Housing Commission would acquire land for 1,000 house sites in Box Hill South.[239] Despite industrial disputes and a change in government, the project went ahead and the estate was laid out on the south-east

[239] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 183.

corner of Elgar and Riversdale roads. By 1951, the Commission had erected over 400 houses. Today, many of these early concrete houses have been demolished or enlarged and few cohesive streetscapes still remain.

A small amount of public housing was erected in the municipality in the 1980s and 1990s, but its extent has been limited. In a similar manner, a number of houses were constructed in Box Hill North for employees of Roger de Sloop's textiles factory, which was established on a 50-acre site on the Koonung Creek in 1950. The housing was part of a grand plan to build a 'model suburb' with recreational, educational and shopping facilities complementing the housing.[240]

6.7 Parks and gardens

The pockets of remnant bushland in the municipality have long been used to attract suburban development to the area. Blackburn Lake, long a passive recreational focus for Blackburn, was created as the centrepiece of the 1888 Blackburn Model Town estate, and is now an important bird habitat. Owned by the Adult Deaf and Dumb Society since 1909, it was re-zoned as a public park by the MMBW in 1954, and gradually taken into Council ownership from 1975.[241] The nearby Blackburn Creeklands Reserve and Furness Park have similarly influenced the semi-rural, landscape character of the surrounding streets. Other such natural open spaces within the municipality generally occur along or near watercourses, including Yarran Dheran (originally a quarry) and Antonio Park in Mitcham, and Campbells Croft and Bellbird Dell in Vermont.

One of the earliest formally landscaped spaces in the locale was The Ovals in Box Hill, on the site of the present Whitehorse Road median strip. In 1883, Whitehorse Road comprised a three-chain wide road reserve with two narrow strips of roadway. By 1889, the central roadway had been moved to the south boundary, and the median fenced. Improvements over the years included tree planting and the erection of the South African and China War memorial drinking fountain and the bowling green (1900), a rotunda (1911), the RSL Hall and Clubroom (later used as the library, demolished c 1974) and and the White Horse statue (1934).[242]

The 1920s saw the creation of the Kingsley Gardens, near the corner of Whitehorse and Elgar roads, on the site of the former Lloyd's abattoir (1921), and the Box Hill Gardens, the competition for the design of which attracted a prize of ten guineas, and included new courts for the Box Hill Tennis Club.[243]

Wattle Park, officially opened to the public on 31 March 1917, was established on land which had been acquired by the Hawthorn Tramways Trust (later the Melbourne and Metropolitan Tramways Board, M&MTB). Comprising a mix of formal landscaping and natural bush, it was developed as a recreation facility in conjunction with the opening of the electric tram route along Riversdale Road, first to Warrigal Road, then to Elgar Road. The Park remained under the ownership of the

[240] 'Worker's paradise factory at Blackburn – Belgian's Scheme', *The Sun,* 11 May 1951.
[241] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 96.
[242] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 78-79, 99, 115, 117, 131, 145.
[243] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 149, 159.

M&MTB until 1983, then by its successors, and includes golf and tennis facilities, chalet, picnic grounds and remnant natural bushland.[244]

Figure 67. Blackburn Lake in 1906 (Courtesy of the Whitehorse Historical Society Inc, no NP1323)

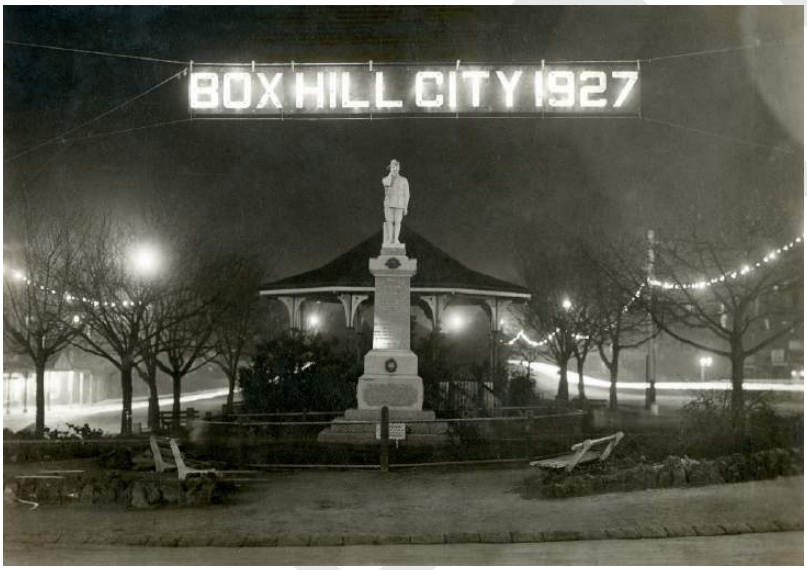

Figure 68. The White Horse Road median strip with WW1 memorial and 1911 rotunda, 1927 (Box Hill Historical Society, no B0919)

[244] Allom Lovell & Associates with John Patrick Pty Ltd, *Wattle Park Heritage Conservation Plan*, 1993.

Figure 69. Wattle Park, c1925-1960 (State Library of Victoria, ID 1735003)

During the post-war period, the residents of many parts of suburban Melbourne became increasingly aware of the importance of the provision of public open space such as parklands and reserves. This, however, presented a problem in the City of Box Hill, where little vacant land remained available for this type of use by the 1960s.[245] A few small reserves had been established in the developing Box Hill North area in the early post-war era, including the recreation reserve at the corner of Springfield and Dorking roads (by 1954) and the Box Hill Memorial Park along the Bushy Creek at Station Street (by 1957). There was little scope, however, for larger reserves even in that area. Elgar Park, overlooking the Koonung Valley in Box Hill North, was created only because the land had originally been set aside in 1961 for a high school that was subsequently erected elsewhere.[246]

Community concern for the preservation of the natural landscape came to the fore in 1959 with the establishment of the Blackburn & District Tree Preservation Society. This group campaigned against the removal of remnant trees along Springvale Road – slated for removal when the road was widened in the early 1960s – and the ongoing protection of the Blackburn Lake area. The latter, which had long been recognised as a place of natural beauty (as well as a source of inspiration for artists such as Tom Roberts), did not become formally protected until it was acquired in 1964 by the MMBW, which jointly managed it in conjunction with the City of Nunawading.

From the mid-1960s, the City of Nunawading embraced the protection of natural landscapes on a grand scale. As early as 1966, the Council had commissioned a specialist consultant, Alan J Brown & Partners, to undertake a study of open spaces

[245] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 217.
[246] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 206.

in the municipality.[247] In the same year, the council negotiated with Vermont orchardist Cecil Rhodes to acquire seven hectares of bushland that formed the basis of Bellbird Dell. Halliday Park in Mitcham, which dated back to 1938, was extended in the late 1960s, while Antonio Park in Mitcham, which had been acquired by the Council in 1963, was enlarged in 1975. More land in the area was acquired from the Campbell family in 1969, creating present-day Campbell's Croft.[248] Soon afterwards, work began on Yarran Dheran at Mitcham, which was conceived as a native botanical garden in the tradition of the Maranoa Gardens at Balwyn.[249] During the same period, the City of Nunawading acquired the Ronald E Gray Reserve in Nunawading (1977) and preserved the last remaining portion of natural bushland in Blackburn North as a linear park known as the Cootamundra Walk (1978).[250]

By that time, a number of entirely new local parks had also been created as residential subdivision filled out across Vermont and Vermont South, including Terrara Park, Charlesworth Park and Billabong Park. Such was the Council's concern for the provision of public open space that, in 1977, a Director of Parks & Recreation was appointed.[251] Several new reserves were created during this period, including Ballyshannassy Park in Burwood East (1975) – formerly a quarry site – and Slater Reserve in Blackburn North (1979).

The proposed Eastern Freeway extension was the subject of an extensive Environmental Effects Statement (EES) in 1998. The EES predicted an 18.5% increase in carbon dioxide, impacts on groundwater and wetlands, high impacts on areas of conservation value and the potential to affect 38 species of rare or threatened fauna and flora if the freeway was built. The Friends of Yarran Dheran[252] was established to protect the Mullum Mullum Valley together with strong support from Whitehorse, Maroondah and Manningham Councils and the Australian Conservation Foundation (ACF) and a range of community groups and individuals. They campaigned for 'the long tunnel option' to go under the valley, and in so doing, protect bushland in Yarran Dheran and some residential streets. Support also came from the local Councils as well as politicians including the Victorian Planning Minister Robert McClelland.

The tunnel option was finally accepted as a political decision in the face of strong community opposition. As part of an election promise by the Victorian Labor Party, the Victorian government announced that it would seek federal funding support for building Eastlink, with the 'long tunnel' option to be included. It was agreed that the tunnel would protect the length of the Mullum Mullum Valley. At Yarran Dheran on 11 October 2000, Premier Steve Bracks announced the $326 million extension to the freeway featuring a 1.5 km tunnel.[253]Transport Minister Peter Batchelor described the announcement as …'a victory for local residents, a victory for the environment and a victory for common sense…'.[254]

[247] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 206.
[248] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 205.
[249] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 134.
[250] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 241.
[251] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 241.
[252] https://yarrandherannaturereserve.wordpress.com/friends/
[253] Yarran Dheran Nature Reserve Advisory Committee, *The History of Yarran Dheran Nature Reserve*, c. 2020, p. 18.
[254] *Whitehorse Gazette*, 18 October 2000 p. 1

Following the completion of the Eastern Freeway in 2008, Yarran Dheran Reserve was linked to the Mullum Mullum Creek Reserve and the Eastlink Trail. In 2020 the City of Whitehorse re-vegetated a site it had purchased to create a link between Yarran Dheran and Antonio Park.

Related heritage places

VHR H0904/HO4 – Wattle Park, 1012 Riversdale Road, Burwood

HO252 – South African and China War Memorial, Whitehorse Road Median Strip, Box Hill

Draft

7 GOVERNING WHITEHORSE

7.1 Municipal origins

7.1.1 Road Districts

The Nunawading District Road Board was proclaimed on 6 August 1857. Its function was to construct and maintain roads surveyed by the Government in the area. The boundaries of the Board's jurisdiction coincided with those of the Parish of Nunawading.[255]

7.1.2 The Shire of Nunawading

Nunawading was one of the last District Road Boards to be proclaimed a Shire. In 1863, the Government had provided for the formation of Shires, allowing municipalities far greater self-reliance and responsibilities than merely those related to roads. The Nunawading Road Board had initially favoured a merger with its western neighbour, Boroondara, but by May 1871 the Boroondara Road Board had voted against this.[256] The *Shires Amendment Act 1870* had allowed any Road District less than 100 square miles and with a total net annual value in rates of more than £12,000, to become a Shire.[257] In May 1872, with very little fanfare or civic celebration, Nunawading Shire was proclaimed.[258]

When the *Local Government Act 1874* abolished Road Districts completely, Nunawading Shire was expanded to encompass the Templestowe Road District, to the north. This arrangement lasted only until the proclamation of the Shire of Bulleen in May 1875, but the temporary expansion did prompt the building of the Shire's first permanent meeting place.

Since its inception in 1857, the Road Board had occupied a number of meeting places, most notably Delaney's Royal Hotel in Canterbury Road, but such a meeting place was not deemed appropriate for a Shire. Thus, the Shire Hall, a modest brick building with a corrugated iron roof, was built further east in Canterbury Road, near Gardiner's Creek. The location of the offices centrally in the Shire, rather than at Box Hill, reflected the lack of representation of Box Hill landholders on the Council at the time. It was completed in late 1875 at a cost of £187/10/-.[259] In 1889, the Council moved into new premises on the corner of Station and Cambridge streets, designed by Arthur E Clark, and in 1922 an extra storey was added to it.[260]

[255] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 22.
[256] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 61.
[257] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 44.
[258] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 44-45.
[259] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 63-65.
[260] Andrew Ward & Associates, *City of Box Hill Heritage and Conservation Study,* Volume 1, p 49; Eleanor Findlay & Marjorie Morgan, *The Days before Yesterday: a picture book of early Box Hill,* Box Hill, 1993, pp 22-23.

Figure 70. Nunawading Shire Hall, c1890 (Courtesy of the Whitehorse Historical Society Inc, no NP2817)

7.1.3 Severance

It was almost universally accepted that the Shire of Nunawading was too diverse in character to be administered as a single entity.[261] After all, much of the eastern part of the municipality was still largely rural. Progress Associations and local business groups supported residents and Councillors in pushing for separation.

In 1925, pressure from ratepayers led to the Shire of Nunawading Councillors voting unanimously in favour of severing the Shire into two new municipalities: thus the Borough of Box Hill, and the Shire of Blackburn and Mitcham were created on 27 May 1925. Box Hill was proclaimed a City two years later in 1927.[262]

7.1.4 The Shire of Blackburn and Mitcham

The Shire of Blackburn and Mitcham was temporarily housed in the Blackburn Recreation Hall, but by early November 1925 it found its first home in a modest timber Californian Bungalow style house on Lot 2, Keoghs Estate in Whitehorse Road, near the site of the present Civic Centre. By December 1926, the Councillors had begun negotiating new purpose-built Council Chambers; in the following October, the bungalow burnt down.[263] 1n late 1928 the Council moved from temporary premises above a shop to its new brick building in Whitehorse Road, near Springvale Road.

[261] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 155; Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 67.
[262] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 66-67.
[263] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 69.

Figure 71. Former Mitcham and Blackburn Shire Offices, 1973 (Courtesy of the Whitehorse Historical Society Inc, no NP0010)

7.1.5 The City of Box Hill

The City of Box Hill was officially proclaimed on 28 April 1927, after a short time as a Borough. Box Hill's meteoric growth during the 1920s meant its City status was inevitable, and the festivities which accompanied the designation have been well documented. From the time of inauguration of the new City Council, there had been ideas for a new Town Hall and, in 1928, land in Whitehorse Road was compulsorily acquired for such a building in the future. The Depression halted any immediate plans, but by January 1934, the design and costing of the monumental new building was complete. The design was a collaboration between H J R Cole, the Town Clerk, F W Kerr, the Shire Engineer, Councillor and architect John Gawler, and Council Architect, Mr Aisbett. The Depression had lowered the cost of materials and labour, bringing the construction costs to £40,424, well below the estimate. The foundation stones were laid in August 1934, and the building was officially opened on 15 April 1935.[264]

7.1.6 The City of Nunawading

In 1937, there was considerable pressure from local lobby groups to sever Blackburn from the Shire.[265] By that time, internal ructions of Council had moved to the issue of whether the Shire should become a City. Despite questions as to whether City status would genuinely improve Council services, the City of Nunawading was proclaimed on 30 May 1945, prompting the suburb of Tunstall to change its name to Nunawading accordingly.[266] By the mid-1960s, the Council had outgrown its 1928 offices, and in 1964, a limited architectural competition was held to select a design for the new complex, on a large site which encompassed the area formerly occupied by the Council's original bungalow premises. The winning design, by Gerd and

[264] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 169-170, 172.
[265] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 74-77.
[266] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 77, 79.

Renate Block, was opened in 1968.[267] The large library was added in 1972, to the design of the original architects, and the Arts Centre in 1985.[268]

Figure 72. Box Hill Town Hall, c 1935 (Box Hill Historical Society, no 1025)

Figure 73. Nunawading Civic Centre, c1970 (Courtesy of the Whitehorse Historical Society Inc, no NP3099)

7.1.7 Amalgamation

The City of Whitehorse was created in 1994 by the merger of the Cities of Box Hill and Nunawading as part of the State Government's Council amalgamation program. The first Council elections of the new municipality were held in March 1997.

It was originally envisaged that the Box Hill Town Hall would become the administrative centre for the new City of Whitehorse and that the Council offices in

[267] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 190-92.
[268] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 171-72, 186.

Nunawading would be adapted for another use or even sold.[269] However, the decision was reversed due to several factors, including the lack of space for carparking and future expansion at Box Hill (two problems not evident at Nunawading) and the fact that the Nunawading building had then only recently been extended and refurbished.

No longer required for everyday Council purposes, the former Box Hill Town Hall was 'revitalised for community and artistic activity'.[270] The main hall was restored in 2006 for use for public and private functions, the administrative offices gutted to create an enlarged exhibition area for the municipal art collection, and the rear annexe refurbished to accommodate a Council Service Centre and space for the Box Hill Historical Society and other community groups.

Related heritage places

HO7 – Former Mitcham and Blackburn Shire Offices, 360-362 Whitehorse Road, Nunawading

HO94 – Box Hill Town Hall, 1022 Whitehorse Road, Box Hill

7.2 Maintaining law and order

A police presence in the City of Whitehorse was established as early as 1864 in Box Hill[271] and 1889 in Mitcham.[272] By the start of the twentieth century, the municipality was served by four police stations located at Box Hill, Burwood, Mitcham and Surrey Hills. Upgraded facilities were subsequently provided at Burwood (1904) and Box Hill (1914). The latter, the first purpose-built police station in the municipality, stood alongside the new court house, which had been built at the corner of Whitehorse and Kangerong Roads three years earlier. The Box Hill police station was enlarged just before World War II, with two new front rooms and a lobby (in the fashionable Moderne style) completed in 1938.

A new police station was constructed at Surrey Hills in 1947 and another in Blackburn in 1951 (since demolished). Mitcham's original police station, located on the south side of Whitehorse Road adjacent to St John's Church, was acquired by the church in 1956 as the site for its new presbytery.[273] A replacement was erected on the opposite side of the church reserve.

[269] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 258.
[270] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 263.
[271] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 33-34.
[272] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 63.
[273] Joan Adamson and Nance Cotter, *Our Parish, Our Story: the story of St John's, Mitcham 1952-2002,* Mitcham, 2002, p 6.

Figure 74. Photograph of Mitcham in c1910 showing original Mitcham Police Station to the right of the image (Courtesy of Whitehorse Historical Society, no NP1331)

This period also saw new police stations erected at both Burwood and Box Hill. The Box Hill court house had become so overcrowded by the late 1960s that witnesses in some court houses were obliged to wait outside the building.[274] Extensive alterations were proposed and, in early 1968, tenders were called for works that provided two new courtrooms, magistrate's rooms and greatly improved public facilities. The new court house opened in 1969.

In 1973, a new regional police complex was erected on Whitehorse Road at Nunawading. In the late 1980s, the station at Mitcham was closed and its counterpart at Burwood reduced to a one-man 'shopfront' facility, with its remaining staff transferred to Box Hill. In 2008, the judicial precinct at the corner of Whitehorse and Kangerong Roads (comprising two former police stations and the court house) was entirely razed for the construction of a new regional police complex. A similar centre was constructed at the same time at Forest Hill, on the former site of Wobbie's World theme park.

7.3 Providing essential services

7.3.1 Gas

The first gas to be supplied to the municipality was from the Colonial Gas Company, which established its works at the corner of Whitehorse and Elgar roads in 1889. Gas street lighting in Box Hill first appeared in 1890. The cost of laying gas mains restricted the supply to small parts of Box Hill and Surrey Hills, and in the ensuing decades the financial success of the company relied upon its supply of gas for street lighting.[275] Although it was one of the last gasworks to be established in Victoria, the Box Hill works was extended several times to keep up with demand for gas during

[274] *The Age,* 5 January 1968.
[275] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, pp 92-93.

the 1940s.[276] Natural gas was introduced to most of the municipality in 1969 and the Box Hill gasworks finally ceased production of coal gas in November of that year.[277] The Colonial Gas Association opened a modern showroom, designed by Maurice King, in Whitehorse Road in 1936.[278]

The Colonial Gas Association was absorbed by the Gas & Fuel Corporation in 1974. The gasworks site on Elgar Road was decommissioned and, a few years later, redeveloped as the new home of the Box Hill TAFE College. A gas holder in Vermont, on the north-west corner of Canterbury Road and Rooks Road, stood until as late as 1978, when it was razed and the site redeveloped as new administrative offices for the Gas & Fuel Corporation. By the mid-1990s, it was also a regional headquarters for Skiltech, a subcontracting company responsible for reading gas meters. Following the privatisation of the Gas & Fuel Corporation in 1997, the building was adapted as the core of a new commercial/industrial precinct known as the Vermont Centre.

Figure 75. The Colonial Gas Association showroom in Whitehorse Road, c 1940-50s (Box Hill Historical Society, no B2081)

Figure 76. Colonial Gas Association gasworks, Box Hill, c 1945 (State Library of Victoria, ID 1642127)

[276] Ray Proudly, *Circle of Influence: a history of the gas industry in Victoria,* Melbourne, 1987, p 356.
[277] Ray Proudly, *Circle of Influence: a history of the gas industry in Victoria,* Melbourne, 1987, pp 269, 355-356.
[278] Eleanor Findlay & Marjorie Morgan, *Those were the days: Box Hill in pictures,* Box Hill, 1994, p 17.

Related heritage places

HO91 – Former Colonial Gas Association Building, 942-946 Whitehorse Road, Box Hill

7.3.2 Electricity

Under the *Electric Light and Power Act 1896*, Councils were permitted control over distribution within their boundaries.[279] The Melbourne Electricity Supply Company (MES Co.) began supplying the eastern suburbs in the early 1910s, and by 1912 the Shire of Nunawading had joined the Councils of Brunswick, Northcote, Port Melbourne and Preston in obtaining an order to re-sell the MES Co.'s electricity to its residents.[280] By 1919, Nunawading Shire supplied electricity to 1,424 properties; the service had quickly extended from Surrey Hills and Box Hill in 1914 to Mitcham and Vermont soon after. In 1924, the Shire began obtaining electricity from the newly-established State Electricity Commission of Victoria (SECV). When the Shire split in 1925, the Borough of Box Hill continued to supply electricity to both new municipalities. With the governmental abolition of local electricity companies in the early 1990s, the sharing of the Box Hill Electricity Company's profits between the municipalities was a hotly-debated issue.[281]

Founded in 1914, the Box Hill Electricity Company was one of eleven electricity companies in Melbourne that were wholly owned and operated by the local authorities in which they were located. The SECV remained responsible for the provision of larger infrastructure such as terminal stations, and two of these were established in developing parts of the municipality during the post-war period. One, off Eram Road in Blackburn North, dates from the late 1960s and the other, on the south-west corner of Morack Road and Burwood Highway in Vermont South, appeared about a decade later. In 1984, Box Hill Electricity relocated its service centre from Station Street to the recently-closed drive-in cinema in Burwood.[282] A new building was erected there, and several of the original structures associated with the drive-in were retained and adapted, including the former walk-in shelter (converted into a maintenance shed) and the former dining room known as the Maori Hut (which became the employee's lunchroom).[283]

When the SECV was dismantled and privatised in the mid-1990s, so too were Melbourne's eleven municipal electricity companies, including Box Hill Electricity. The latter's premises in Burwood was taken over by a new company, United Energy, which, in turn, was absorbed by another company, Alinta Energy in 2003. Since the privatisation of the SECV, the former terminal station at Vermont South has been decommissioned and its site redeveloped, initially as a golf driving range and more subsequently with a branch of the Bunnings hardware chain.

[279] Andrew Ward & Associates, *City of Box Hill Heritage and Conservation Study,* Volume 1, p 78.
[280] Andrew Ward & Associates, *City of Box Hill Heritage and Conservation Study,* Volume 1, p 78.
[281] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 60-65.
[282] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 250.
[283] 'Burwood Skyline (Hoyts)', *Drive-ins Downunder,* https://drive-insdownunder.com.au/australian/vic_burwood.htm, accessed 20 December 2022.

Figure 77. Nunawading Shire Electric Supply Van and workmen in the 1920s (Courtesy of Whitehorse Historical Society, no NP920)

7.3.3 Water and Sewerage

The newly established Melbourne and Metropolitan Board of Works (MMBW) built its first water reservoir in 1891 in Surrey Hills (Canterbury Road) providing a water supply to Box Hill and surrounding suburbs.[284] A second reservoir was built nearby, in Elgar Road, in 1912.[285] Mains water was available in Box Hill from 1894, but by the mid-1920s, the area was felt to have been neglected by the MMBW at the expense of the inner suburbs.[286] By 1926 the Mitcham reservoir and water tower added to the municipality's growing water infrastructure,[287] and 1928 saw the beginning of MMBW connecting suburbs to the sewerage system.[288]

Although night-carts were gradually replaced by septic tanks, there were still more than 2,000 unsewered properties in Box Hill North in the mid-1950s. Expansion of the sewerage infrastructure continued in earnest over the next decade and virtually all of the City of Box Hill had been sewered by 1966.[289] The situation was slightly different in the City of Nunawading, which was only connected to the MMBW sewerage system as late as 1934.[290] Septic tanks remained in use in certain parts of the municipality, such as Vermont South, well into the 1970s, and some still exist there today.

[284] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 112.
[285] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 113.
[286] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 113-115.
[287] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, p 17.
[288] Context Pty Ltd, *City of Nunawading Historical Geography Project,* 1994, pp 92-93.
[289] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 206.
[290] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 223.

10.3 – ATTACHMENT 1. City of Whitehorse, Thematic Environmental History (Consolidated), Final Draft, GJM Heritage,14 July 2023

Figure 78. Water tower at Mitcham, 1922 (Courtesy of the Whitehorse Historical Society Inc, no NP3517)

Figure 79. Water tower at Surrey Hills in 1928 (Argus, 19 December 1928, p 17)

From the 1960s until its demise in the 1990s, the MMBW maintained a strong presence in the municipality. In the mid-1960s, four new regional MMBW depots were established on the north, south, east and west fringes of the metropolitan area. The first of these, which opened in 1970, was located in Mitcham on a site in Lucknow Street adjacent to the existing MMBW reservoir. The complex, which provided administrative offices, a customer service centre and maintenance workshops, was designed by architects A K Lines, McFarlane & Marshall.

During this period, the MMBW also constructed a number of retarding basins to provide protection from massive influxes of stormwater. One was provided at Sparks Reserve on Middleborough Road, Box Hill South, when the parkland was reconstructed with playing fields in 1965.[291] Another basin existed on the south side of Eley Road in Burwood East, and still another in Vermont South, formed in the early 1970s, on the site of what subsequently became Billabong Park. For much of the post-war period, the MMBW also maintained a reserve in Forest Hill, on the north side of Burwood Highway between Springvale and Mahoneys Roads. The western half of this large property became the site of the new Eastern Geriatric Centre in 1985, and the remainder has since been redeveloped as a commercial precinct.

Related heritage places

HO34 – MMBW Water Tower, 313 Elgar Road, Surrey Hills

HO119 – Melbourne Water Tower, 37 Lucknow Street, Mitcham

7.3.4 Rubbish disposal

In 1944, the Shire Engineer to the Shire of Mitcham & Blackburn (soon to become the City of Nunawading) proposed a re-organisation of domestic refuse collection, including a new rubbish tip to be established at the corner of Junction and Springvale Roads.[292] Despite protests from those who lived nearby, the tip was established, but soon became inadequate for the municipality's burgeoning residential areas. By the late 1960s, the City of Nunawading had established a considerably larger rubbish tip in a remote location off Morack Road, Vermont South, overlooking the Dandenong Creek in the extreme south-eastern corner of the municipality. In the early 1980s, the site was redeveloped as a recycling centre and waste transfer station, where the municipality's rubbish was stored prior to relocation to a regional landfill in the City of Berwick.

7.3.5 Fire services

A bushfire had been recorded in Box Hill in 1858[293], but a Fire Brigade did not exist until 1893, when stations were opened in Surrey Hills and Box Hill.[294] East of Middleborough Road, the first station opened adjacent to the Shire Offices in 1951.[295]

[291] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 213.
[292] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 119.
[293] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 26-27.
[294] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 108.
[295] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 207.

Related heritage places

HO229 – Box Hill Fire Station, 1050-1054 Whitehorse Road, Box Hill

Draft

8 BUILDING COMMUNITY LIFE

8.1 Religion and worship

8.1.1 Establishing churches in Whitehorse

In 1854, two acres (0.8ha) on the north-east corner of Warrigal and Riversdale roads was granted jointly to the Church of England and the Catholic Church. By 1857, the latter had erected St Bridget's on the land, a brick building for use as a chapel and a school. The Church of England did not build on the same reserve, and it was not until 1861 that they erected their first building, a school house (also used as a church) on the corner of Canterbury Road and Bedford Street.[296]

Another church reserve, on the south side of Burwood Road, had been granted in 1855 to the Methodists, who were by far the most represented denomination amongst Nunawading's early settlers. A timber building, used as a school and church, was erected in 1856.[297] Other Methodist churches were established by devout settlers who built them on their own land. In 1856 alone, John Ellingworth erected a school and chapel on his land in Station Street, and Joseph Aspinall built a sandstone church on his land in Woodhouse Grove.[298] Primitive Methodist (1862) and United Methodist (1872) churches were built in Whitehorse Road, and a timber Wesleyan chapel was erected at Mount Pleasant (Forest Hill) in 1865. The Wesleyans took over the old Primitive Methodist church in 1883, and built new churches in Station Street, Box Hill in 1885, Surrey Hills in 1888 and Blackburn in 1891.[299]

Figure 80. Wesleyan Church, Box Hill in 1980 (Courtesy of the Whitehorse Historical Society Inc, no NP676)

[296] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 30.
[297] Alyssa Clarkson, *Ballyshanassy: A history of the Burwood District,* Burwood, 1991, p 24.
[298] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 20.
[299] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 83; Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 230.

An Independent church, built in Springfield Road in 1869, was the first in the area to have a resident clergyman.[300] Another Catholic church and school was established in Mitcham in 1872. The Church of England built their first church in Box Hill proper in 1883, moving to a site on Whitehorse Road six years later. By 1890, Churches of England had also been established in Surrey Hills, Mitcham and Blackburn. The first Presbyterian church in Box Hill, a timber chapel in Court Street, did not appear until 1889.[301]

There were few entirely new congregations established in the early twentieth century, with most new churches being built by the already well-established congregations, who had outgrown their earlier buildings. The St Bridget's Catholic church closed, and was replaced by a new building on Mont Albert Road. New and larger premises were also built in Box Hill for the Methodists (1902), the Church of England (1908), the Presbyterians (1911) and the Catholics (1912).[302] The Methodists also built new churches on their old sites at Surrey Hills (1915) and Mount Pleasant (1916). This pattern of replacing existing churches continued; in 1926 alone, the old churches of the Baptists (Station Street), Catholics (Whitehorse Road) and Methodists (Oxford Street) were all replaced with new buildings. In 1935, the Presbyterian congregation in Box Hill replaced their timber chapel with a 'new' building, in the form of the old West Melbourne Presbyterian church, which was dismantled and re-erected in Whitehorse Road.[303]

8.1.2 Churches in the post-war period

The post-war period saw more new congregations being established, as denominations expanded into areas where there had previously been no churches. In the late 1940s and early 1950s, there were new Presbyterian churches at Wattle Park and Vermont, a new Church of England in Forest Hill, Baptist churches in North and South Blackburn, and a Catholic church in Box Hill North.[304] From the mid-1950s, new congregations spread even further outwards into previously underdeveloped parts of the municipality – invariably as offshoots of existing churches and parishes. St Mark's Church of England in Forest Hill, for example, was established as a branch of St Luke's at Vermont.[305] In 1955, the Parish of St Phillip acquired two acres on Junction Road in North Blackburn, although another decade passed before a church (and associated parish school) was erected there in 1965.[306] A new Anglican congregation, St Alfred's, also emerged in Blackburn North during the 1950s. From the late 1960s, the establishment of new parishes and congregations largely remained focused on the south-eastern fringe of the municipality, where residential development was still booming. These included St Timothy's Roman Catholic Church in Vermont (1968) and the Holy Name Anglican Church in Vermont South (1978).

By the late 1950s, many of the long-established congregations had once again outgrown their buildings, and rebuilding took place. New churches, most designed by noted contemporary architects, replaced the older ones at Christ Church, Mitcham (1958) and St James' Presbyterian, Wattle Park (1964). Denominations

[300] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 33.
[301] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 102.
[302] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 117, 130, 131.
[303] Eleanor Findlay & Marjorie Morgan, *Those were the days: Box Hill in pictures,* Box Hill, 1994, p 66.
[304] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 231.
[305] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 230.
[306] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 231.

such as the Seventh Day Adventists (Centre Road, Blackburn) and the Church of the Latter Day Saints (Whitehorse Road, Blackburn) built completely new churches in this period.

Amongst other congregations to replace earlier buildings during this period were St Luke's Church of England in Vermont, St Benedict's Roman Catholic Church in Warrigal Road, Burwood (1957), The Avenue Presbyterian Church in Blackburn (1959), St Augustine's Church of England in Mont Albert North (1960), the Church of Christ in Surrey Road, Blackburn (1961) and the East Burwood Methodist Church at the corner of Blackburn Road and Burwood Highway (1961). One especially notable example, towards the end of that decade, was the new building at 561-63 Whitehorse Road, Mitcham, built in 1967 for the joint use of the local Methodist and Presbyterian congregations. This was reportedly the first time that a church had been specifically designed to be shared by Presbyterians and Methodists, predating the creation of the Uniting Church by 10 years.[307]

Figure 81. Wattle Park Presbyterian Church, Box Hill, 1964 (State Library of Victoria, Peter Wille collection, ID 1696103)

Figure 82. St Benedict's Roman Catholic Church, Burwood, 1957-58 (State Library of Victoria, Peter Wille collection, ID 1708759)

[307] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 231.

The post-war influx of migrants also saw the establishment of churches for previously unrepresented denominations, including the Dutch Reformed and Greek Orthodox churches in Box Hill. A Buddhist Temple (Wat Dhammarangsee) – the first Buddhist temple in Melbourne – was established in Forest Hill in 1984 and a Sikh temple (Gurdwara Sahib) was established in a former postal warehouse in Blackburn in 1993.[308] A congregation called the Melbourne Eastern Suburbs Chinese Christian Fellowship (MESCCF) held its first service in August 1978 in the hall at St Andrew's Uniting Church, Box Hill. That same year, the Salvation Army formed a Chinese Corps at Box Hill, which was followed five years later by a South East Asian corps.[309] In 1982, the MESCCF formalised itself as the Evangelical Chinese Church, and now maintains discrete congregations in Box Hill and Blackburn South. Other Chinese-language Christian congregations include the True Jesus Church, which commenced in Box Hill North in 1987, and St Thomas's Anglican Church in Burwood, which holds weekly services in English, Cantonese and Mandarin. These congregations typically occupy existing church buildings rather than purpose-built ones.

Related heritage places

HO6 – Former St George's Church, 370 Mont Albert Road, Mont Albert

HO25 – Mount Pleasant Uniting Church, 333A Canterbury Road, Forest Hill

HO61 – St Luke's Anglican Church Complex, 551 Mitcham Road, Vermont

HO67- St John's Anglican Church, 9-15 Queen Street, Blackburn

HO69 – Wattle Park Uniting Church, 1201-1205 Riversdale Road, Box Hill South

HO77 – Former Wesleyan Methodist Church, 515 Station Street, Box Hill

HO96 – All Saints (Former Christ Church) Anglican Church Complex

HO99 – Former Wesleyan Chapel, 147 Woodhouse Grove, Box Hill

HO106 – Burwood Heights Uniting Church, 347 Blackburn Road, Burwood East

HO132 – St Stephen's Presbyterian Church, 650 Canterbury Road, Surrey Hills

HO162 – Methodist Church, 559-563 Whitehorse Road, Mitcham

HO214 – St Paschal's Friary, 90-100 Albion Road, Box Hill

HO260 – The Avenue Uniting Church, 38-44 Blackburn Road, Blackburn

HO262 – St Benedict's Roman Catholic Church, 299 Warrigal Road, Burwood

HO263 – Former Chapel of St Joseph, 27-29 Strabane Avenue, Mont Albert North

[308] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 229.
[309] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, pp 231, 233.

8.2 Education

8.2.1 Pre-school education

The Boroondara Free Kindergarten, which opened in North Richmond in 1914, provided for residents living in the suburbs of Camberwell, Canterbury, Surrey Hills, Mont Albert, Box Hill and Burwood.[310] A decade later, in 1926, a Holiday Home for Children, intended to accommodate children from city kindergartens considered to be 'poorly nourished and underweight', was established in Blackburn by the Free Kindergarten Union.[311] The following year, the Graduates Associate of the Melbourne Kindergarten Teachers College acquired a property at Forest Hill to establish a country holiday home for young inner-urban children. The Forest Hill Residential Kindergarten began offering emergency short-term residential care from 1960 for pre-school children whose families were unable to care for them at home. In 1988, Forest Hill Kindergarten discontinued its residential program and offered day care kindergarten only. From 1990, Forest Hill gradually closed all its programs and the following year sold the property, using the proceeds to establish the Forest Hill Early Childhood Foundation.[312]

In 1947, the City of Box Hill provided funding for the erection of a non-denominational kindergarten at the rear of St Peter's Church on Whitehorse Road, and three others in Surrey Hills.[313] This was exceptional at that time, given the wartime shortages of finance, labour and materials that persisted in the late 1940s and early 1950s. The City of Nunawading was not able to fund similar projects, and when the new Blackburn North Baptist Church proposed to erect a small timber hall on Middleborough Road in 1951, Council approval was granted only on the condition that the facility was also made available as a pre-school.[314]

During this period, kindergartens would only otherwise be erected through the efforts of the local community, who formed committees and raised funds. Established in 1948, the Blackburn Preschool Centre Committee managed to raise sufficient funds to erect two kindergartens by 1952.[315] In much the same way, Mitcham physician Dr Stanley Cochrane was the driving force behind the provision of a kindergarten in the area in the early 1950s. Plans were prepared by honorary architect Robert Rolfe in 1953, who also happened to be the Mayor of Nunawading at the time. Opened in 1955, it was (and remains) known as the Dr Stanley Cochrane Memorial Kindergarten. The Blackburn Progress Association launched a fundraising campaign for a new pre-school in 1954, though this was not completed until 1962.[316] Located on land in Larch Street provided by the Council, the City of Nunawading Kindergarten (as it was named) was designed by Croydon architect Hank Romyn.

[310] *Weekly Times,* 26 September 1914, p 9/
[311] *The Age,* 1927 p 14.
[312] 'Forest Hill (Residential) Kindergarten (1927-88)', *Department of Health and Human Services*, www.findingrecords.dhhs.vic.gov.au, accessed 21 December 2022.
[313] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 196.
[314] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 174.
[315] *Argus,* 11 June 1952, p 6.
[316] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 221.

Figure 83. Forest Hill Residential Kindergarten, 124 Lake Road, Forest Hill in c1938 (Courtesy of the Whitehorse Historical Society Inc, no NP676)

During the later 1960s and 1970s, new kindergartens proliferated. One significant development was the Sir Edgar and Lady Coles Kindergarten in Neil Court, Blackburn, which was established by the Victorian Society for Cripple Children & Adults. Opened in April 1966, the building was specially designed to accommodate disabled pupils, 'with a minimum of architectural obstacles for the children… there are no steps and the entrance is covered to permit cars and other vehicles to drive to the door'.[317]

8.2.2 Primary and secondary education

The earliest schools in what is now the City of Whitehorse were denominational. By the early 1860s, secular schools had opened in Nunawading and Forest Hill.[318] The Denominational School Board was superseded in 1862 by the new Board of Education, and all schools thereafter became numbered common schools.

In 1872, the new *Education Act* began a system of free and compulsory education in Victoria. No new public schools appeared in the Shire however, until the establishment of Nunawading North State School in 1880. New schools were also built at Box Hill, Mitcham, Vermont, Blackburn and Surrey Hills during this time. In the 1890s, two of the oldest schools in the Shire had their allowances withdrawn by the Department of Education. One of these, the former Church of England school in Canterbury Road closed in 1894, and the other, St Bridget's Catholic school, survived for a few more years as a private school.[319]

[317] *The Age,* 15 April 1966, p 14.
[318] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 221.
[319] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 59-60, 117.

Figure 84. Vermont State School, c1888 (Courtesy of the Whitehorse Historical Society Inc, no NP2099)

Figure 85. Blackburn State School, 185 Surrey Road Blackburn, c1910-20 (Courtesy of the Whitehorse Historical Society Inc, no NP1850)

Private schools, which generally ran in private houses, had flourished since the 1880s land boom. In Box Hill, these included Banff Ladies' College, New College (later Box Hill Grammar) and Surrey College.[320] The first private school in Mitcham opened in 1883, and within a decade, there were nine in the entire Shire of Nunawading.[321] A private girls' school, Ormiston House, was established in Mont Albert in 1900, and this later became the junior school campus of Camberwell Girls' Grammar.

[320] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 94-96.
[321] Niall Brennan, *A history of Nunawading,* Melbourne, 1972, p 61; Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 222.

The establishment of conventional public schools picked up in the 1920s, and new schools appeared at Blackburn South, Tunstall, Box Hill South and Wattle Park. In 1929, Box Hill Grammar relocated to new and larger premises, and work began on the first high school, also in Box Hill. The first technical school had appeared five years earlier, although it only accepted female students. The establishment of this school, which was the first girls' technical school in Victoria, had been spurred by the prominent educationalist Frank Tate, who was a Box Hill resident.[322] A technical school for boys did not appear in Box Hill until 1943.

Figure 86. Girls Technical School (undated) (State Library of Victoria ID 1683796)

Figure 87. Boys Technical School (1949), Box Hill (State Library of Victoria H2004.101/293)

[322] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 150, 159-161; William Orange, Box Hill Historical Society, pers com.

The high post-war birth rate caused extensive overcrowding in schools, especially state-run schools, in the late 1940s and into the 1950s. This issue was finally addressed in 1954, when three new public schools – at Box Hill North, Koonung Heights and Bennettswood – simultaneously opened in October. Earlier that year, another began operation in the City of Nunawading at Blackburn North.[323]

Because land was plentiful, the municipality was also attractive to private schools from other municipalities who were outgrowing their premises. Presbyterian Ladies' College (PLC) had relocated from East Melbourne to Burwood in 1938; this was followed by Mt Scopus College, the first Jewish day school in Australia, which moved to Burwood from St Kilda in 1951.[324] Leading Jewish architects Anatol Kagan and Ernest Fooks worked in association on the design of Mount Scopus College, while Presbyterian architect John Scarborough (best known for his work at Scotch College in Hawthorn) worked on PLC. Development of the PLC site commenced in 1954 and the campus was officially opened by the Prime Minister, Robert Menzies, in February 1958.

The late 1950s and early 1960s saw a record boom in the establishment of state schools across the municipality. In the decade that followed, no less than 15 new public schools were built, comprising six high schools (including Blackburn, Mitcham, Wattle Park and Vermont), three technical schools (Burwood, Blackburn and Mitcham), and six state primary schools (including Blackburn North, Nunawading South, Antonio Park and Laburnum).[325]

This boom had abated by the late 1960s, when provision of state schools focused on developing suburbs to the southern and south-eastern fringes of the City of Whitehorse. New schools were established at Burwood East in 1968 and Mitcham in 1969. This pattern continued into the 1970s and beyond, with the opening of Livingstone Primary School in 1977 and Weedon Heights Primary School in 1980, both in Vermont South.

The later 1980s and 1990s were characterised by a period of closure and consolidation. The first state primary school to cease operation was the pre-war Forest Hill Primary School, which closed in 1987 as it marked its 60th anniversary.[326] In 1991, three post-war primary schools in the Blackburn area (Mirrabooka, Killoura and Warrawong) merged with Blackburn South Primary School to create the multi-campus Orchard Grove Primary School – the first amalgamated primary school in Victoria.[327] The three campuses later merged into one, which remains in operation on the Mirrabooka State School site. Several other local primary schools closed during the 1990s, including Middlefield in Box Hill North and Narmara in Burwood East.

The City of Whitehorse purchased the former Nunawading Primary School in 1025 and the main school building has been retained as part of the Nunawading Community Hub.

[323] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 223.
[324] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 201.
[325] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 223-24.
[326] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 225.
[327] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 228.

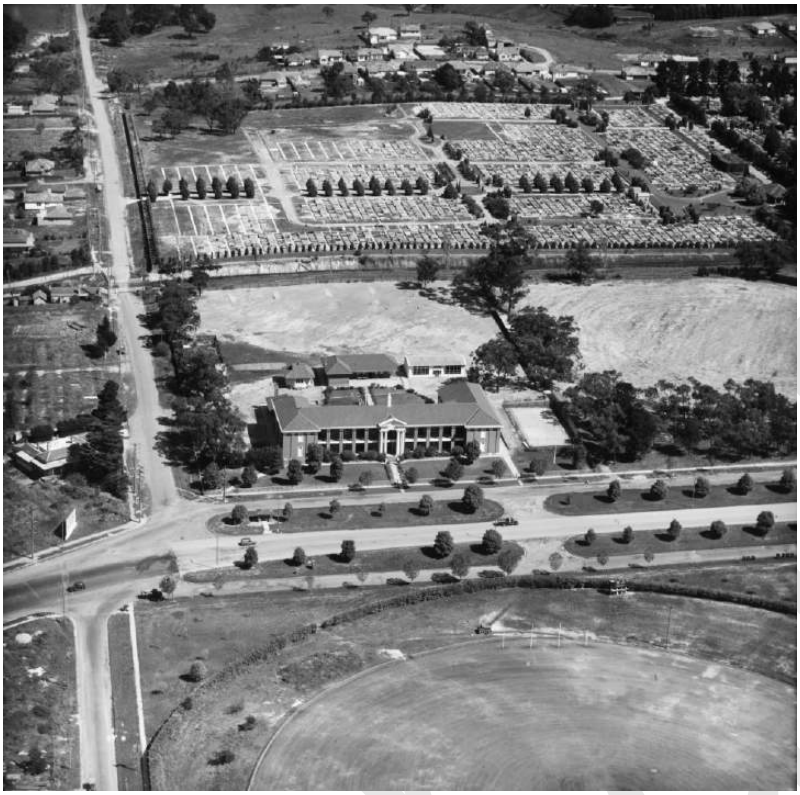

Figure 88. Aerial view of Box Hill High School looking south, 1951 (State Library of Victoria, ID H2010.91/276)

Secondary schools were also subject to closure and consolidation from the late 1980s. In 1988, Nunawading High School amalgamated with Blackburn South High School, Burwood Heights High, and Burwood Technical School to create a single entity known as Forest Hill College.[328] Three of these campuses later closed, and school was consolidated at the former Burwood Heights site. Mullauna College Mitcham was formed in 1989 as an amalgamation of Mitcham High School, Mitcham Technical School and Donvale High School. Since the 1990s, several other high schools in the municipality have ceased operation, including Wattle Park High School, Blackburn Technical School and Mitcham Technical School.

8.2.3 Tertiary education

The first tertiary institute in Whitehorse was St Paschal's College, a theological training college and monastery which opened in Box Hill South in 1936.[329] The Christian Brothers established a similar institution – St Leo's College – nearby in 1952. Burwood Teachers' College, later the State College of Victoria, opened in 1954. It is now a campus of Deakin University, and has expanded to take over the adjacent Bennettswood Primary and Burwood High school sites. A technical college, now Box Hill TAFE, was built in 1977 on the old gasworks site in Elgar Road. Completed at a

[328] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 227.
[329] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 172.

cost of $25 million, the complex opened in April 1981. This institute, which grew out of the two technical schools in Box Hill, has since established several other campuses elsewhere in the municipality.

At the same time, the Whitehorse Technical College (formerly the Box Hill Girls' Technical School) similarly became Whitehorse TAFE. After new legislation required that State Colleges merge with Colleges of Advanced Educations (CAE), the Burwood State College joined forces with counterparts at Toorak and Rusden and, together with the Prahran CAE, created a new entity, Victoria College. In 1984, the Whitehorse TAFE was similarly absorbed by the larger Box Hill College of TAFE. Further expansion took place, with a third campus established at Doncaster (1991) and then another in Box Hill (1994) in the former Holeproof factory on Whitehorse Road.[330] In the early 1990s, Victoria College at Burwood became a campus of Deakin University and was significantly redeveloped by the addition of new buildings by architects Wood Marsh (1997), later joined by the Activity Centre (H20 Architects, 2001) and Science & Technology Building T (DesignInc, 2002). Since the 1990s, Box Hill Institute (as it is now known) has also expanded its presence with the enlargement of the Nelson Campus and a new building for the automotive school (both by Lyons Architects, 2000), Building 8 (Spowers Architects, 2005) and a new trades facility (Paul Morgan, 2007).

Related heritage places

HO1 – Primary School No. 461 – Former Burwood School (Former Wesleyan Day School), 172-174 Burwood Highway, Burwood

HO16 – Surrey Hills Primary School, 2 Beatrice Avenue, Surrey Hills

HO32 – Former Box Hill Technical School, 19 Dunloe Avenue, Mont Albert North

HO48 – East Burwood Primary School, 401 Blackburn Road, East Burwood

HO66 – Vermont Primary School, 4-10 Nurlendi Road, Vermont

HO117 – Former Box Hill Girls' Technical School, 1000 Whitehorse Road, Box Hill

HO238 – Nunawading Primary School, 96-106 Springvale Road, Nunawading

HO247 – Mont Albert Primary School, 21-23 Inglisby Road, Mont Albert

HO248 – Box Hill High School, 1180 Whitehorse Road, Box Hill

[330] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, pp 229-30.

8.3 Health and welfare

8.3.1 Hospitals and doctor's surgeries

The first medical practice in Box Hill was established in 1886.[331] By the turn of the century, there were only three doctors in the area – two in Box Hill, and one in Windsor Crescent, Surrey Hills.[332] In 1922, the Dunstaffage Private Hospital was set up in the former mansion of Mrs Henry Scott, on the corner of Highbury Road and Warrigal Road, Burwood. From the 1920s onwards, other similar hospitals were established in Box Hill, Blackburn and Surrey Hills and Mitcham, many in private residences.

By the mid-1950s, the first local medical clinics had begun to appear. In 1954, leading architect Raymond Berg designed a flat-roofed medical clinic at the corner of Mitcham Road and Harrison Street for a group of local physicians headed by Dr Verner Threlkeld. Five years later, another opened at the opposite end of Mitcham Road, near the corner of Grove Street in Vermont.

The foundation stone of the new Box Hill and District Hospital was laid in 1950. The new hospital, designed by noted hospital architects Stephenson & Turner was officially opened six years later.[333] It was the only public hospital in the municipality until the Dunstaffage Private Hospital became the Burwood and District Community Hospital. With only 18 beds, it was the smallest public hospital in Melbourne until its closure in 1996.[334] The building was demolished in 2000 and the site redeveloped.

Since the 1990s, the Box Hill & District Hospital – now known simply as the Box Hill Hospital – remains in operation as the only public hospital in the City of Whitehorse. It now forms part of the Eastern Health network, which includes other hospitals at Ferntree Gully, Healesville and East Ringwood, as well as the Peter James Geriatric Centre at Burwood East.

A private hospital has since been established at Blackburn South (1970), and the Mitcham Hospital (c1964) has been rebuilt on a new site. The Surrey Private Hospital (formerly the Mont Albert and Surrey Hills Hospital) in Broughton Road, was built adjacent to the old Kinross Private Hospital, which has been remodelled as a nursing home; both have now closed.

[331] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 83.
[332] *Sands and McDougall Victorian Directory,* 1901.
[333] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 201.
[334] Dugald Jellie, 'Too Small to Live: the death of Burwood Hospital', *The Age,* 29 November 1996, p B3.

Figure 89. Box Hill Hospital, c1956 (State Library of Victoria, H32492/8685)

8.3.2 Maternal and child health

The health of babies and the nation's falling birth rate during World War I precipitated a widespread infant welfare movement across Australia. The Victorian Baby Health Centres' Association, which was established as a voluntary organisation in 1918, began to establish baby health centres, particularly in working class suburbs where infant mortality rates were highest.[335]

The first infant welfare centre in Box Hill was established in temporary quarters in 1923 in conjunction with Fern Tree Gully Shire. An article in the *Reporter* in January 1923 encouraged:

> *All the young mothers of the district are invited to bring their babies to the centre, where they will be given sound practical advice on general hygienic and infant feeding…* [336]

The *Reporter* also reiterated that:

> *…the Baby Health Organisational is not a charity but a national movement, supported by the local council, with Government help, its aim being to educate the young mothers of Australia to intelligently look after their babies and so decrease infant mortality.*[337]

Two years later, Box Hill's infant welfare centre relocated to a purpose-built premises on the council reserve in the middle of Whitehorse Road. In 1929, a similar centre was opened in Mitcham in the Memorial Hall.[338]

8.3.3 Children's homes

One of the first major welfare institutions to open in Whitehorse was the Burwood Boys' Home, established in 1896 on land donated by a Melbourne philanthropist.[339]

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[335] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 97.
[336] *Reporter,* 5 January 1923, p 6.
[337] *Reporter,* 5 January 1923, p 6.
[338] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 97.
[339] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 110.

A few years later, the Methodists, who had always been a strong presence in Box Hill, sought to establish a similar institution for disadvantaged boys. They purchased land in 1903 in a district of Burwood known as Tally-Ho, from which the home took its name. Tally Ho was developed as a training farm, allowing boys to 'develop discipline and good character through hard work and healthy living'.[340] The architectural firm of Bates, Smart & McCutcheon prepared a masterplan for the expansion of Tally Ho in 1949 and new buildings were still being added in the early 1960s, when Earle & Partners designed a modern gymnasium block.

In 1913, the Salvation Army set up a new boys' home on the corner of Elgar and Canterbury Roads, after a fire had destroyed their property at Bayswater. Later, they established a men's hostel, the Inala Village, now an extensive village complex, in Blackburn South.

In 1937, the Presbyterian Church established Kildonan Children's Home as a residential care home for neglected children. Located in Elgar Road, Burwood, the site originally comprised two dormitories, a school and an administration block, designed by architects Kemp, Sherrard and Forster. A kindergarten was added in 1941, followed by a sick bay in 1944-45 and a cottage for teenage girls in 1946. A recreation hall opened the following year. Kildonan Children's Home developed into one of the premier children's homes in Victoria.[341].

Figure 90. Illustration of the new Kildonan Children's Home, 1936 (Argus, 6 June 1936, p 32)

8.3.4 Other welfare services

The Victorian Deaf Society was established in 1884, at which time it was known as 'The Adult Deaf and Dumb Mission of Victoria'. The Mission built its first home and church in Flinders Street, Melbourne in 1903. The Mission became incorporated as 'The Adult Deaf and Dumb Society' in 1908. That same year, the opportunity for farming led the Society to purchase 75 acres of land near Blackburn Lake. The home, known as 'Lake Park', opened in 1909.[342] In addition to a flower farm, accommodation was provided for 'aged, infirm, mentally defective and blind deaf-mutes'.[343] The property was sold to the Regis Group in 2002.

The establishment of welfare institutions continued in the post-war period. The Orana Methodist Peace Memorial Home, located on Elgar Road, was established in

[340] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 90.
[341] Coleman Architects, *City of Whitehorse Heritage Review 2012, amended 2016, Appendix A: Citations for Individual Places*, p A-29.
[342] 'Victorian Deaf history', *Expression Australia*, www.expression.com.au, accessed 21 December 2022.
[343] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 87.

Burwood by the Methodist Church to house and care for destitute children. Largely constructed in the 1950s, it was innovatively designed on a cottage system, with designs prepared by the office of Bates, Smarts & McCutcheon.[344] At its peak, the home included six cottages, a preschool centre, clinic, craft and play centre, chapel, hall and administration centre. Children were housed in family groups and attended local schools.

In 1986 the site was sold to the State Government for the development of public housing. The following year a mixture of detached houses, town houses and flats designed for families and the elderly were constructed on the site. The Orana chapel, kindergarten and clinic, administration building and hall were retained and formed part of this redevelopment.[345]

Figure 91. The Adult Deaf and Dumb Society (Courtesy of the Whitehorse Historical Society Inc, no NP2508)

[344] Renate Howe & Shurlee Swain, *All God's Children: a centenary history of the Methodist Homes for Children and the Orana Peace Memorial Homes,* Kambah, 1989, p 118.
[345] Coleman Architects, *City of Whitehorse Heritage Review*, 2012, Appendix A: Citations for Individual Places, 'Former Orana Methodist Peace Memorial Homes', pp A-176-177.

Figure 92. Cottages at the Orana Peace Memorial Home in 1958 (State Library of Victoria, ID 1791355)

The Nunawading (later Eastbridge) Migrant Hostel and the Winlaton Girls' Training Centre – a facility conceived by the Social Welfare Department to accommodate young females on remand or under sentence for criminal offence – were built in Nunawading in 1950 and 1954 respectively. The Royal Victorian Institute for the Blind – which established a residential school for children on land at the corner of Station Street and Burwood Highway in 1959 – and the Princess Elizabeth Kindergarten for Deaf Children, Burwood (1950) – the first residential and daily pre-school centre for deaf children in Australia – also became important regional facilities. Additional facilities for disabled children also began to appear, including several special schools as well as the Alkira Day Training Centre in Box Hill (1955) and the NADRASCA Centre in Nunawading (1967).[346] The Alkira Day Centre relocated elsewhere before moving out to Vermont South in the early 1970s, where it was re-badged as Burwood East Special School (and where it continues to operate as Vermont South Special School).[347] NADRASCA, which now has a much broader remit of caring for disabled people in the community, maintains its head office in Rooks Road, other premises in Nunawading and Mitcham, and a community farm in Morack Road, Vermont. The former school on Springvale Road, latterly known as the Nunawading Adult Training Service, now accommodates one of the NADRASCA community options programmes.

8.3.5 Changing attitudes and closure

From the 1960s, shifting attitudes towards institutionalisation resulted in significant changes, and ultimately the closure, of many of these welfare facilities. As early as 1960, the Kildonan Children's Home in Burwood was taken over by the State Government and re-named the Allambie Reception Centre. It temporarily

[346] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 223-24.
[347] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 196.

accommodated displaced children until they could be placed with families. In the early 1970s, the Burwood Boys' Home on Warrigal Road broadened its remit to include females, and was renamed the Burwood Children's Home. Around the same time, a portion of the vast acreage of the Tally Ho Boys' Farm was sold off for private development, and the farm itself ceased operation in 1976.[348] This was followed by the successive closures of the Burwood Children's Home (1986), the Orana Peace Methodist Home (1988), the Allambie Reception Centre (1990) and the Winlaton Girls' Training Centre in Nunawading (1993). The sites of these institutions have all since been redeveloped. The Tally Ho Boys' Farm, which closed in 1976, is now the Tally Ho Business Park. A retirement village occupies the site of the Burwood Boys' Home. The Eastbridge Migrant Hostel was demolished in 1988, and the new Eastern Mail Centre was erected on part of the site. Many others, including Winlaton in Nunawading and the Orana Peace Methodist Home in Burwood, have been redeveloped as residential subdivisions.

Related heritage places

HO249 – Former Kildonan Children's Home, 70 Elgar Road, Burwood

8.4 Community organisations and services

8.4.1 Progress associations

Progress associations in the Box Hill and Nunawading area were established following the Boer War.[349] In 1900, the British Army victory at Mafeking saw celebrations throughout the British Empire. The citizens of Surrey Hills held processions with bunting and fireworks. Box Hill residents formed a progress association to organise their own celebrations, and the Nunawading Shire Council formed a special committee. When the celebrations were over, the new Box Hill Progress Association moved on to other municipal improvements. It was superseded in 1915 by the Nunawading Citizens' Association.[350]

By the 1930s, progress associations had been formed under the names of Blackburn, Middleborough, Burwood and District, Mont Albert, Mitcham and Vermont, and even Irishtown, after the former name for the area around Surrey Park. The number of progress associations in the Nunawading area increased dramatically from the 1950s, when 'new people moved into the area, determined to develop it into a modern, thriving community with all the amenities Australians were coming to expect after the lean years of the war.' [351] Citizens' groups formed in the post-war period included the Blackburn North, Box Hill South, and Heatherdale District Progress Associations, as well as the Malcolm Street (Blackburn) Citizens' Group, and the Blackburn and District Tree Preservation Society.[352]

The various associations lobbied for improvements including tree planting, street lighting, road surfacing and public transport. Many buildings in present-day Whitehorse, including kindergartens, libraries, halls and elderly citizens' clubs, owe

[348] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 91, 224.
[349] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 114.
[350] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 135.
[351] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 225.
[352] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 225-228.

their existence to the lobbying, and often fundraising, of the progress associations. Most of these associations disbanded in the 1960s and 1970s as the various improvements they fought for had been implemented; the Blackburn and District Tree Preservation Society is one that remains in existence today.

8.4.2 Public libraries

In July 1890, a public meeting was held in the Nunawading Shire Hall to discuss the formation of a Mechanics Institute and Free Library for Box Hill. Such institutions were established in towns and suburbs throughout Victoria in the nineteenth century in the hope of improving the minds of working people. While a Mechanics Institute was established in Box Hill by the Women's Christian Temperance Union in 1892, a lack of community interest led to its abandonment just three years later in 1895.[353] It would be over 50 years before a public library was established in the City of Whitehorse.

The provision of municipal libraries was streamlined in the early post-war period with the establishment of the Free Library Services Board in 1947. As historian Lesley Alves notes, the City of Box Hill was one of the first local authorities in Melbourne to take advantage of this opportunity.[354] Opened in October 1950, the Box Hill Library was initially accommodated in a temporary structure on Bank Street, to the rear of the Town Hall, before relocating the following year to the building formerly occupied by the RSL Club.[355]

Figure 93. Box Hill Library in the old RSL building opposite the Town Hall, c 1950s (Box Hill Historical Society, no B5137)

In 1953 the Nunawading Progress Association began to campaign for a local library in their district, though this would not come to fruition for over a decade.[356] A mobile library service was initiated in 1963 and, the following year, Council appointed its first municipal librarian, Constance Pavey. With plans for a new civic centre that would eventually include a library, it was decided to proceed with the erection of a branch library at Blackburn, which would serve the entire community until the civic

[353] *The Reporter,* 28 October 1892, p 1; *The Reporter,* 25 January 1895, p 2.
[354] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 129.
[355] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 196.
[356] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 227.

centre was completed.[357] Located on the edge of Morton Park – a site formerly occupied by a pre-war public hall – the new library opened on 21 November 1966. It was designed by architects Drayton & Colman.[358]

The new library at Blackburn proved an enormous success.[359] Having been conceived only as a branch library, it quickly became too crowded to service the whole community. The new Nunawading Library, forming part of the Nunawading Civic Centre designed by architects Gerd & Renate Block, opened in 1972. By that time, there were also plans for a new library building at Box Hill. The Box Hill Library, located on Whitehorse Road, was officially opened by the Governor of Victoria in May 1973.[360]

Following Council amalgamation in the mid-1990s, public libraries in the City of Whitehorse have been united under the umbrella of the Whitehorse Manningham Library Service – a continuation of the association that has been maintained with the former City of Doncaster & Templestowe since the early 1960s.

8.4.3 Masonic lodges

Although Freemasons had met in Box Hill's Barkly Hall since the 1860s, it was not until 1889 that the first purpose-built Masonic temple was erected in the area.[361] A new temple was built in Station Street in 1923 and was later remodelled with a new facade.[362] A Masonic temple was built in Clarke Street, Blackburn, in 1928.[363]

8.4.4 Scouts and Guides

The 1st Box Hill Boy Scouts was established by 1916. Club rooms were initially based in Whitehorse Road until a Scout Hall was erected on the railway side of Box Hill's Main Street in 1925. The building was opened by the Prime Minister, Stanley Bruce.[364] According to the *Box Hill Reporter* on the opening of the hall, the 'Box Hill troop was one of the oldest in the State'.[365] The 2nd Box Hill Scouts had formed by 1929.[366] Further east, a troop was established in Blackburn in c1917.[367]

A large number of new troops were established in the post-war years.[368] Many of these emerged in the developing northern fringes of the municipality, erecting halls following their establishment.

The first troop of local girl guides was organised by Mrs Webber at Surrey Hills in 1926.[369] A year later, a company of girl guides was also formed in Mitcham. By 1929,

[357] *The Age,* 23 October 1965, p 12; *The Age,* 17 June 1967, p 39.
[358] 'Drayton & Colman', *Dictionary of Unsung Architects,* Built Heritage, www.builtheritage.com.au, accessed 21 December 2022.
[359] Robin da Costa, *Blackburn: a picturesque history,* Lilydale, 1978, p 128.
[360] *The Age,* 13 September 1974, p 22.
[361] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 101.
[362] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 154.
[363] Information from Foundation Stone.
[364] *The Reporter*, 10 Nov 1916, p 4; Andrew Lemon, *Box Hill,* Melbourne, 1978, p 154.
[365] *Box Hill Reporter*, 11 September 1925, p 3.
[366] *Box Hill Reporter*, 5 July 1929, p 2.
[367] *The Reporter,* 16 February 1917, p 4.
[368] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 220, 222.
[369] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 153.

the 1st Mitcham Girl Guide Company, numbering 17 members, was using the 1st Mitcham Scout Hall for their activities.[370]

As with the Scouts, the popularity of the Girl Guides grew in the post-war years and Girl Guide halls were erected in Clarke Street, Blackburn (c 1958), Garie Street, Blackburn (c 1962), Luckie Street, Nunawading (c 1961), Welfare Court, Box Hill South (c 1964), Brunswick Street, Mitcham (c 1966), off Nunkeri Street in Vermont (c 1966) and at Eley Park in Blackburn South (1974).

Figure 94. Opening of Blackburn Scout Hall in 1919 (Courtesy of the Whitehorse Historical Society Inc, no NP798)

Figure 95. Mitcham Guides (right) (Courtesy of the Whitehorse Historical Society Inc, no NP1798)

Related heritage places

HO230 – Masonic Centre, 1 Clarke Street, Blackburn

[370] *Box Hill Reporter,* 12 August 1927, p 4; *Box Hill Reporter,* 1 November 1929, p 2.

HO232 – Blackburn Scout Troop site, 12 Lake Road, Blackburn

8.5 Community halls and centres

The first public hall appeared on the north side of Whitehorse Road in 1864. Named Barkly Hall in honour of the then governor of Victoria, it was used as a meeting place by freemasons, political and religious groups, charities, and even the Nunawading Road Board.[371] The new and larger Box Hill Recreation Hall was built on the south side of Whitehorse Road in 1885, and the obsolete Barkly Hall was demolished soon after. Other nineteenth-century recreation halls included Mill's Recreation Hall in Albany Crescent, Surrey Hills (1885), Gordon Hall in Elgar Road, Box Hill (1889), and the Blackburn Recreation Hall, on the corner of Blackburn and Central Roads (1889). The latter was built by developer T R B Morton for his proposed housing estate beside Blackburn Lake. It was demolished in 1964 to make way for the construction of the new Blackburn library.

The Recreation Hall in Box Hill was used for many purposes until the late 1920s, when it was remodelled as a cinema. By that time, public halls had also been established at Box Hill South, East Burwood and Forest Hill. The Mitcham Memorial Hall was opened in 1925 after several years of planning and fundraising.[372] It was managed by the RSL until 1955, when it was taken over by the Nunawading Council (since demolished).

Figure 96. East Burwood Hall, 1971 (Courtesy of the Whitehorse Historical Society Inc, no NP1338)

The Nunawading North Neighbourhood Centre commenced in 1974 in a house on Mountain View Road rented from the Presbyterian Church.[373] The first of its type in the municipality, it was soon joined by others including the Mitcham Community House (1975), Koonung Cottage Community House in Blackburn North (1978), the

[371] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 83.
[372] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 162-166.
[373] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, pp 180-81.

Avenue Neighbourhood House in Blackburn (1982) and the Vermont South Community House (1987). During this period, a few larger purpose-built community centres also appeared, notably the Box Hill Community Centre on Whitehorse Road (1977) and the Eley Park Community Centre in Burwood (1979).

In 2015 Whitehorse Council bought the former Nunawading Primary School site on Springvale Road from the State Government to create the Nunawading Community Hub. Completed in 2020, the hub includes the remaining school building as well as an indoor stadium, dance/activity spaces, art rooms and meeting rooms for a variety of community groups including the University of the Third Age and Whitehorse Arts Association.

Related heritage places

HO234 – East Burwood Hall, 310 Burwood Highway, East Burwood

HO238 – Nunawading Primary School, 96-106 Springvale Road, Nunawading

8.6 Commemorating

8.6.1 Cemeteries

In 1858, five acres of land in Ballyshanassy (Burwood) was gazetted as a cemetery at the request of local residents who were tired of travelling to Melbourne for funerals.[374] This was the only official cemetery in present-day Whitehorse for 15 years, although burials also took place in the grounds of the Methodist church in Station Street, Box Hill and the Catholic church at Mitcham. The former relocated to a new site in 1872, which may have been the impetus for a public meeting held that year to form a Cemetery Trust. The Trust asked the Government to gazette part of a reserve in Box Hill for the purposes of a cemetery.[375] The proposed site for the Box Hill Cemetery was a large reserve on the corner of Whitehorse and Middleborough roads, then partly occupied by the police paddock and a state school. On 29 August 1873, 10 acres (4ha) were gazetted for a cemetery, and the first interment, of a three-week-old infant, took place the following day. [376] A further two acres (0.8ha) of the reserve was acquired in 1877, and another three acres (1.2ha) in 1886.

In 1899, the burial ground behind the Catholic church in Mitcham was closed and the tombstones removed. It is now the site of the parish school.[377] Thus, by the early twentieth century, the only cemeteries in Whitehorse were at Box Hill and Burwood. Both sites were extended in 1935.[378] At Burwood, the north-east boundary was extended so that the cemetery effectively occupied the entire block. At Box Hill, an additional 14 acres (5.7ha) of land were gazetted so that the cemetery extended to Middleborough Road. The recreation reserve which formerly occupied this land was moved north, where it became the present-day Whitehorse Reserve. In 1979, the

[374] Niall Brennan, *A history of Nunawading,* Melbourne, 1972, pp 28-29.
[375] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 56.
[376] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 56.
[377] Niall Brennan, *A history of Nunawading,* Melbourne, 1972, pp 28-29.
[378] National Trust of Australia (Victoria), 'Classification Report: Box Hill Cemetery', unpublished typescript; Alyssa Clarkson, *Ballyshanassy: a history of the Burwood District,* Burwood, 1991, p 31.

main entrance on Whitehorse Road was closed in favour of a new entry off Middleborough Road, although the ceremonial gates were retained in situ.

8.6.2 Memorials

A number of memorials dedicated to the memory of those who served in various wars have been erected throughout the City of Whitehorse. These include World War I memorials in Moreton Park, Blackburn (date unknown), Halliday Park in Mitcham (1922, relocated to its present site in 1988), and Wattle Park, Burwood (1948). The Wattle Park stone cairn was dedicated to the memory of Royden Louis Charles Bennett, who served in France with the 7th Battalion of the AIF and was killed at Pozieres on 18 August 1916.

In 1952 the municipality obtained its first dedicated World War II memorial in a public area, located on Nelson Road, Box Hill. This comprised a large inscribed granite wall and a life-size bronze statue by Wallace Anderson entitled Kokoda Trail, depicting a soldier carrying a wounded comrade. World War II is otherwise commemorated by a few local churches. St Peter's Anglican Church in Box Hill has a plaque that was unveiled on 9 March 1952, while the Orana Peace Memorial Home in Burwood erected a chapel in 1958 that was conceived as a war memorial. The original World War I memorials at Box Hill and Blackburn have been amended to record the contributions of those who fought in Korea (1950-53), Malaya (1955-65), South East Asia (1964-66), Vietnam (1962-72) and peacekeeping operations since 1947.

In 1995, a small stone cairn was erected in the East Burwood Reserve to commemorate the 50th anniversary of the end of World War II, and to mark the location of the Field Survey Training Depot that operated there during the early 1940s. The Mitcham RSL installed memorial plaques to fallen World War II servicemen after whom local streets were named: Brian Street, Ross Street, Ronald Street, Owen Street and Alwyn Street. The Salvation Army Memorial Rose Garden at the Inala Village in Blackburn South commemorates members of that church who fought in various twentieth century conflicts, from the Second Boer War (1899-1902) through to East Timor (1999).

Other memorials include the South African and China War Memorial, originally located on the Whitehorse Road median strip in Box Hill, which commemorates those who served in the Boer War in South Africa in 1899 and in China in 1902. The memorial was unveiled by Premier A J Peacock in 1902.[379] It was relocated to its current position in the central reserve of Whitehorse Road between 1914 and 1920.[380]

[379] South Africa (Boer) War & China War Memorial, https://monumentaustralia.org.au, accessed 23 November 2022.
[380] Eleanor Findlay and Marjorie Morgan, *The Days Before Yesterday: a picture book of early Box Hill*, Box Hill, 1993, p 2 [shows photograph of memorial in original position near Railway Hotel, built 1914; but relocated by the time it was de-licenced in 1920].

Figure 97. Halliday Park World War I Memorial (Courtesy of the Whitehorse Historical Society Inc, no NP2326)

Figure 98. South Africa and China War Memorial in original location at intersection of Whitehorse Road and Station Street, Box Hill, 1902-10 (Box Hill Historical Society, no B0835)

Related heritage places

HO58 – Box Hill Cemetery Columbarium and Myer Memorial, 395 Middleborough Road, Box Hill

HO219 – Box Hill Cemetery, 395 Middleborough Road, Box Hill and 1158-1160 Whitehorse Road, Box Hill

HO233 – Burwood Cemetery, 74-108 Burwood Highway, Burwood

HO252 – South African (Boer) War and China War Memorial, Whitehorse Road Median Strip, Box Hill

HO253 – World War 1 Memorial Blackburn, Moreton Park, Central Road, Blackburn

HO254 – World War 1 and 2 Memorials Box Hill, Box Hill Gardens, Nelson Street, Box Hill

HO255 – World War 1 Memorial Mitcham, Halliday Park, Mitcham Road, Mitcham

9 SHAPING WHITEHORSE'S CULTURAL AND CREATIVE LIFE

9.1 Sport and recreation

Organised sport has existed in the City of Whitehorse since the 1860s, when hotelier Dennis Delaney hosted athletics and horse racing adjacent to the White Horse Hotel.

The Mitcham Football Club, founded in 1888, is one of the oldest sporting clubs in the municipality. Many of its players were employees at the Australian Tessellated Tile Company.[381] Football clubs were also established at Box Hill (1892), Nunawading (1893) and Burwood (1897), and sporting facilities including a cricket oval and tennis courts were integral to the Freehold Investment and Banking Company's speculative Blackburn Lake subdivision.[382] The late 1800s also saw the emergence of golf, played on Harston's paddock in Mont Albert, cricket and fox hunting. The municipality's first playing field, lobbied for by the Box Hill Cricket and Football Clubs, on a site south of the railway line in Box Hill, was cleared in 1893, although most sports matches were still held on private land.[383]

The early twentieth century saw the expansion of sports facilities. In 1903-05 the Nunawading Shire Council purchased several recreational facilities, including Surrey Park in Box Hill, Morton Park in Blackburn, and 10-acre (4ha) sites in Mitcham and East Burwood.[384] Box Hill Cricket Club was formed in 1902, and a bowling green was established in Whitehorse Road, Box Hill.[385] Walker Park in Mitcham was acquired from E E Walker in 1910, and by the 1920s was the area's local sports ground.[386] By the late 1920s, sports catered for locally had been extended to include grey hound racing, athletics, cycling, soccer and lacrosse, and tennis clubs in Mitcham and Vermont boomed.[387] Wattle Park Golf Course was laid out in the 1930s, and was later joined by golf courses on Gardiners Creek in Box Hill South and Dandenong Creek in Vermont South. In the early 1970s, the City of Nunawading acquired a large tract of land in Vermont South, between Morack Road and the Dandenong Creek, which became the site of a public golf course. It opened in 1975 as a nine-hole course with space for further expansion, and the remaining nine holes were completed in the early 1980s.

Many new sporting facilities were established in newly-subdivided areas in the post-war period. Wembley Park in Box Hill was established as a major soccer venue, and in 1951 Box Hill Football Club joined the Victorian Football Association; this prestige was a selling-point for local real estate.[388]

From the 1950s onwards, several other new outdoor sporting venues were provided across Box Hill and Nunawading. In 1964, an eight-acre site on Middleborough Road

[381] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 104, 178.
[382] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 81-82.
[383] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 100; Information received from Nunawading Historical Society.
[384] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 122.
[385] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 117.
[386] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 178; Information received from Nunawading Historical Society.
[387] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 159.
[388] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 194.

was reconstructed to create playing fields, which were named after Councillor R H L Sparks.[389] This is now the home ground of the Box Hill Rugby Union League, which was founded in 1958. In the late 1960s, Koonung Park was created in Springfield Road in Blackburn North, which included premises for the local tennis and lawn bowling clubs.

At a similar time, the existing Hagenauer Reserve in Box Hill North was upgraded to provide 'a top-grade athletics track with clubrooms', and a new rubberised bitumen running track was added three years later.[390] The Burwood East Reserve was also improved during this time and, by the mid-1970s, the existing football oval was supplemented by tennis courts, cycling track and an indoor basketball stadium. It was redeveloped further in the early 1980s when, following the increasing popularity of the Little Athletics movement (with branches formed at Box Hill in 1968 and several others in Nunawading), a committee was formed to lobby for improved facilities.[391] The result was a major refurbishment of East Burwood Reserve, including a new all-weather Olympic-standard running track that opened in November 1983.

The first swimming facilities were dams and claypits. In Nunawading, clay holes such as that near the Tunstall tile works doubled as swimming holes, as did the East Mileham dam and Morton's dam.[392] The old claypit at the corner of Elgar and Canterbury roads in Box Hill was already in use as a de facto swimming hole, and when the Council purchased it in 1905, it fenced the hole, and built a bathing shed and diving platforms. The Surrey Dive, as it was known, became a major recreational focus for the area, and was the site of many swimming carnivals. In 1939, a purpose-built outdoor pool was constructed adjacent to the old clay pit to accommodate children and non-swimmers. The Surrey Dive continued to be used for swimming until severe drought resulted in its closure in 1968. It was later filled in and an ornamental lake created.[393] By the late 1970s, the remaining outdoor pool and its associated facilities were badly in need of upgrading and Box Hill's new indoor pool and recreation centre opened in 1981.[394] It was redeveloped in 2013.

A swimming pool in the Nunawading area was a key priority for local Councillors in the post-war period and in 1960, the Nunawading Memorial Pool opened in Forest Hill. [395] It was constructed in recognition of those who served in World War I and World War II. Originally comprising a 50m outdoor pool, the pool was covered and heated in 1976 to maximise its use year-round.[396]

The Nunawading Memorial Pool and Box Hill Swimming Complex today comprise modern leisure centres, owned and operated by Aqualink.

[389] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 213.
[390] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 217.
[391] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 239.
[392] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 178-79.
[393] Eleanor Findlay & Marjorie Morgan, *The Days before Yesterday: a picture book of early Box Hill,* Box Hill, 1993, p 79.
[394] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 178-79; Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 240.
[395] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 122, 167, 218.
[396] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 178-79.

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Figure 99. Surrey Dive, Box Hill in c1920-54 (State Library of Victoria, H32492/8850)

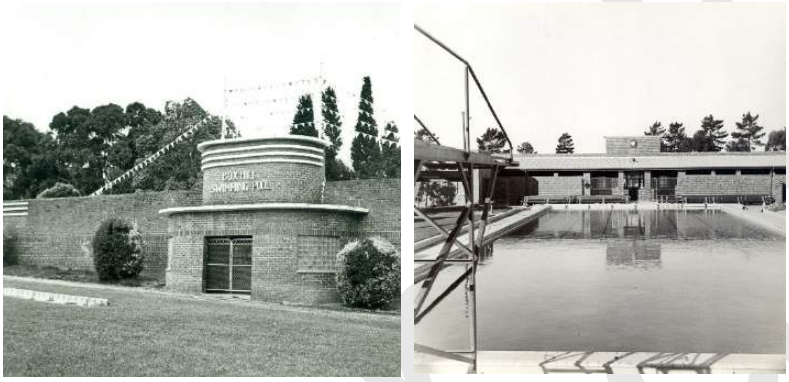

Figure 100. The outdoor swimming pool at Box Hill soon after opening in 1939 (Box Hill Historical Society, no B0642 and B9300)

Figure 101. Aerial view showing the Standard Brickworks with the drained Surrey Dive and foundations for the Box Hill Swimming Pool and Recreation Centre to the rear, 1981 (Box Hill Historical Society, no B0210)

Figure 102. The ornamental lake at Surrey Dive, with the old brickworks behind, 1988 (Box Hill Historical Society, no B9132)

Figure 103. Nunawading Pool, 1973 prior to its enclosure (Courtesy of the Whitehorse Historical Society Inc, no NP3604)

Lawn bowling clubs have also maintained a presence in the City of Whitehorse. A few clubs, such as those in Box Hill and Blackburn, were formed prior to World War II, with upgrades to their facilities occurring later. In 1953, the Box Hill Bowling Club relocated from its original green in Watts Street to new premises on Whitehorse Road.[397] The Mitcham Bowling Club was founded in 1958 and a site for a green and clubhouse in Halliday Park, off Mitcham Road, was provided by the City of Nunawading. It occupied a makeshift shed until a purpose-built clubroom was completed in the 1960s. The RSL clubs in Box Hill and Blackburn established associated bowling clubs in the post-war era, each with its own green.

[397] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 202.

Related heritage places

HO217 – Surrey Dive and surrounds, 354 Elgar Road, Box Hill

HO257 – Box Hill Swimming Pool Precinct

9.2 Drive-ins and cinemas

Moving pictures were shown as part of a Cinematographic exhibition at the Box Hill Annual Show in 1907, but it was not until 1911 that regular screenings began.[398] Throughout Australia at that time, films were screened in any large open space which could accommodate seating and a projector, including church halls, town halls, public halls, or even parks. In the Box Hill area, the main venue was the Recreation Hall on Whitehorse Road, although films were also shown in the recreation halls at Blackburn and Surrey Hills.

The first purpose-built cinema, or 'picture palace,' in Australia was built in Sydney in 1910, and many others soon appeared in various cities and suburbs.[399] It was in 1920 that the first one appeared in the municipality, when the 1,200-seat New Theatre was erected on the corner of Whitehorse Road and Watts Street.[400] The old Recreation Hall on the other side of the road could not cope with the competition, and promptly reverted to being a dance hall. Nine years later, however, it was remodelled, emerging triumphantly as the Rialto Theatre. Not to be outdone, the competing New Theatre immediately changed its named to the Lyric Theatre; in 1937, it was remodelled and changed its name again, this time to the Regent.[401] The introduction of television in 1956 saw the gradual closure of many Australian cinemas, and the Rialto in Box Hill closed three years later. It was subsequently remodelled as a shopping arcade. Its long-time competitor, the Regent, survived until 1970.[402]

The first drive-in cinema in Australia was opened in Burwood in 1954.[403] A venture of a company known as Auto Theatres Australia Ltd, the facility was designed by the architectural firm, A C Leith & Bartlett, whose principal, Arthur Leith, was a director of the development company. The complex, with parking for 652 cars and a children's playground in front of the screen, originally comprised a main building (with diner, projection room and toilets), a ticket booth, substation and storeroom. It subsequently expanded to include a Polynesian-themed communal dining room known as the Maori Hut (1955), a walk-in shelter (1959), a western-themed BBQ area (1960s) and a new ticket booth (1975). Although the drive-in closed in the early 1980s, a number of its structures currently remain including the former Maori Hut, walk-in shelter, BBQ area and replacement ticket booth. Like most of the drive-ins in metropolitan Melbourne, the one at Burwood closed in the 1980s.

[398] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 130.
[399] Ross Thorne, *Picture Palace Architecture in Australia,* pp 7-8.
[400] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 145.
[401] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 158, 173.
[402] Daniel Catrice, 'Cinemas in Melbourne, 1896-1942', M Arts thesis, Monash University, 1991, p 193.
[403] Eleanor Findlay & Marjorie Morgan, *Those were the days: Box Hill in pictures,* Box Hill, 1994, pp 34-35.

Figure 104. The Hoyts Skyline drive in cinema site at Burwood, c 1950s (Box Hill Historical Society, no B0928)

Figure 105. The Hoyts Skyline drive in cinema site at Burwood, c 1950s (Box Hill Historical Society, no B0069)

Figure 106. The Hoyts Skyline drive in cinema site at Burwood, c 1950s (Box Hill Historical Society, no B2623)

No cinemas were erected in the former City of Nunawading in the 'picture palace' era. Instead, films were shown in the various local halls. The Mitcham Memorial Hall, completed in 1925, showed films for many years. Indeed, the vacant site had been used for open-air film screenings in the early 1920s to raise funds for the erection of the building itself.[404] The Blackburn Recreation Hall, near the railway in Blackburn Road, was still being used as a cinema in the 1960s. The first purpose-built theatre in the Nunawading area was erected in Mahoneys Road, Forest Hill in the 1960s.[405] Opened in 1968, the Forest Hill Cinema had a capacity of 362. Originally independently run, it was later taken over by Dendy (1970) and then Village (1978) before reverting to independent. It finally closed in 1989, following the completion of the new Hoyts multi-screen complex at Forest Hill Chase shopping centre, on the opposite side of Mahoneys Road.[406]

Related heritage places

HO281 – Burwood Skyline Drive-In Cinema, Burwood Highway, Burwood

[404] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 162.
[405] Valda Arrowsmith, Nunawading Historical Society, pers comm.
[406] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 214.

9.3 Music and drama

A dramatic club had been formed in Box Hill as early as 1888.[407] Bands became popular in the first two decades of the twentieth century, and many were formed including the Box Hill Military Band, the Box Hill Temperance Brass Band, and the Nunawading District Brass Band. In the 1930s, former child star Iris Roderick was a central figure in Box Hill's theatrical community. She produced plays for the Box Hill Operatic Society, as well as forming her own School of Dancing.[408] In the early 1930s, many amateur groups were formed; in Mitcham alone, these included the Mitcham Choral and Orchestral Society, the Mitcham and District Musical and Dramatic Society, and the Mitcham Musical Society.[409] In the 1940s, similar groups were inaugurated in Box Hill, and the band and the operatic society were both revived.[410]

A special committee formed by the City of Box Hill in 1945 – which had prompted the establishment of the Box Hill City Art Group (1952) – similarly resulted in the establishment of the Box Hill City Ballet Group (1951) and the Box Hill City Drama Group (c1955).[411] Other groups, such as the Box Hill South Square Dance Club (1953) and the Box Hill Musical Comedy Society (1958), emerged independently.

The Mitcham Repertory Group, formed in 1952, held its meetings in the Warnes Road residence of Cecil and Daphne Powell.[412] With a complete absence of suitable performance spaces in the City of Nunawading, the company staged its first play in the city in a church hall in Latrobe Street. It was later brought under the umbrella of the new Nunawading Arts Council, together with the Mitcham Arts Association, Blackburn Film Society, and the Blackburn branch of the Musical Society of Victoria.[413] The Utassy Ballet Company, founded in 1961 by Hungarian migrant Eugene Utassy, was also included within the Nunawading Arts Council.

Performance or dramatic groups that have emerged since the mid-1960s include The Avenue Church Players, which was founded in 1965 by the Blackburn Presbyterian Church and later re-named the Blackburn Players. In the early 1970s, the existing Box Hill Musical Comedy Society and the Box Hill Light Opera Company were similarly updated and re-named, respectively, as Whitehorse Musical Theatre and NOVA Music Theatre.

Until the opening of the Nunawading Arts Centre in 1985, performances, whether musical or dramatic, mostly took place in local recreation halls. An arts centre had been part of the original brief for the Nunawading Civic Centre in 1964, but it was eliminated from the masterplan when residents baulked at rising costs.[414] The Whitehorse Centre, which included a 400-seat auditorium, was built as the Nunawading Arts Centre in 1985 to the design of local architect David Gawler (former Nunawading Councillor and mayor), son of John Gawler (architect and former Box Hill Councillor). It was constructed to the rear of the existing civic offices. The venue subsequently became the performance base for local performance

[407] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 88-89.
[408] Andrew Lemon, *Box Hill,* Melbourne, 1978, pp 171-72.
[409] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 166.
[410] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 196.
[411] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 130.
[412] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 168.
[413] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 135.
[414] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, pp 171-72.

groups including the Whitehorse Musical Theatre, NOVA Music Theatre and Babirra Musical Theatre. A major redevelopment of the arts centre is due to be completed in 2023. The new facilities known as The Round were designed by BKK Architects in collaboration with Kerstin Thompson Architects and include a 626-seat auditorium, 200 seat studio theatre, rehearsal studios, function centre and an improved soundshell for outdoor events.

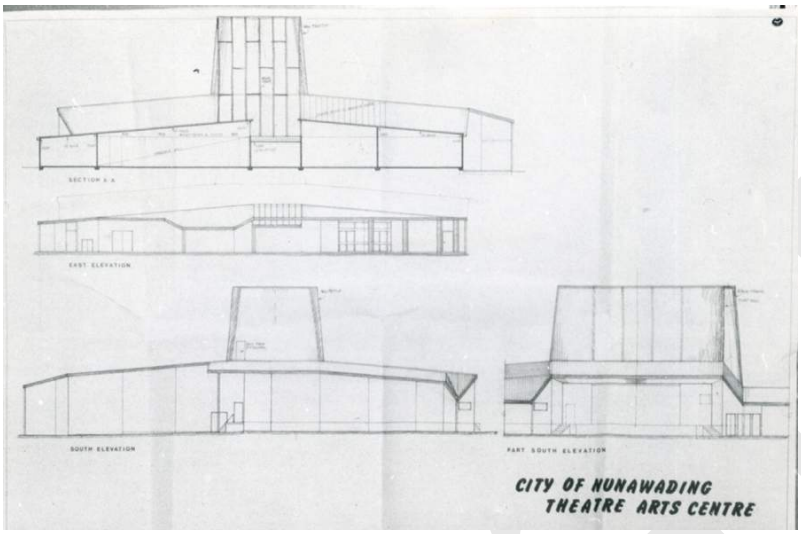

Figure 107. Architectural drawing for Nunawading Theatre Arts Centre, 1985 (Courtesy of the Whitehorse Historical Society Inc, no NP3206)

Figure 108. Photograph of the Arts Centre in 1986 (Courtesy of the Whitehorse Historical Society Inc, no NHP4274)

9.4 Visual arts

In 1885, a group of painters, eager to implement the techniques of plein-air painting which they had seen while travelling through Europe, set up a camp on the banks of Gardiner's Creek in Box Hill South. This group included then-unknown painters Tom Roberts, Louis Abrahams and Frederick McCubbin, later joined by other artists including Arthur Streeton and Jane Sutherland. Many of their now-famous paintings used the local landscape as a backdrop. Roberts's *The Artist's Camp* depicts the site at Gardiner's Creek, and McCubbin's *The Bush Burial* was painted while being 'carefully posed at Blackburn with a specially dug grave'.[415] After three years, the artists relocated their studio to Eaglemont, becoming well-known as the Heidelberg School of painters. The important historical link between the Heidelberg School and the Box Hill area has not been forgotten. A large exhibition of their paintings was held in the Town Hall to celebrate the centenary of Box Hill in 1957.[416]

Since then, artists have thrived in Whitehorse. In the City of Box Hill, a special committee was formed in 1945 to consolidate interest in the establishment of local cultural organisations. The Box Hill Art Group, founded in 1952, was one of the groups to emerge from this initiative. In 1962 an art exhibition held to raise funds for the construction of a local kindergarten prompted the establishment of the Mitcham Arts Association.[417] In 1966, this became one of several local groups to be united under the umbrella of the newly-formed Nunawading Arts Council. Five years later, the Mitcham Arts Association obtained a permanent home of its own when it acquired the lease to a Council-owned house in Humphreys Avenue.[418] A similar group, the Eastern Suburbs Art & Craft Group, was formed in the late 1960s by a group of 'housewives' in Forest Hill.[419] By the early 1970s, the group was holding classes not only in Forest Hill but also North Balwyn, Bentleigh and Frankston, and staging an annual exhibition at the Mount Pleasant Hall on Canterbury Road.[420]

By the late 1980s, local art and craft groups had flourished to the point that the City of Box Hill appointed a Community Arts Officer and provided the former electricity depot in Station Street as a place where these groups could meet and work. The building was not ideal for this purpose however and architect Greg Burgess, who had been engaged to design the refurbishment, suggested that an entirely new purpose-built facility could be erected elsewhere for the same amount of money. The result was the Box Hill Community Centre (1991), located in Station Street, which was designed by Burgess with the participation of local artists and the community. The building remains a foci for the local arts community.

[415] Niall Brennan, *A history of Nunawading,* Melbourne, 1972, p 104.
[416] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 200.
[417] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 182.
[418] Diane Sydenham, *Windows on Nunawading,* North Melbourne, 1990, p 224.
[419] *The Age,* 5 November 1968, p 15.
[420] *The Age,* 2 December 1971, p 18.

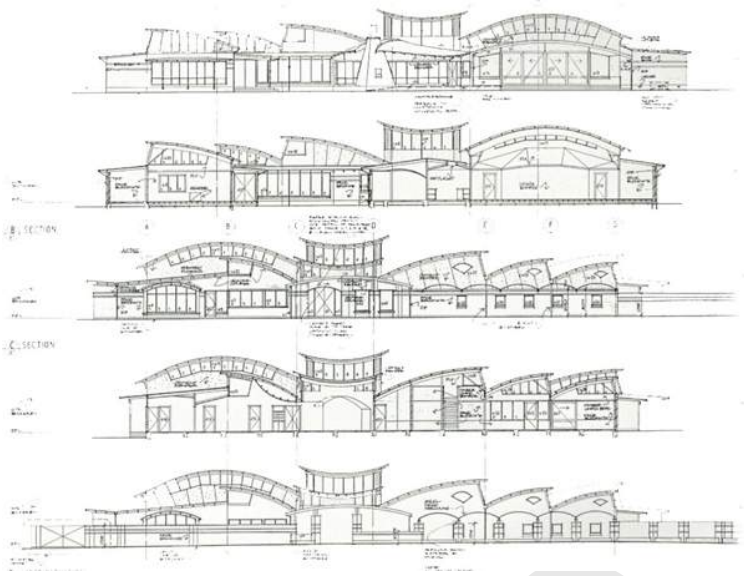

Figure 109. Architectural drawings for the Box Hill Community Arts Centre, 1991 (www.gbarch.com.au)

A noted aspect of the cultural life of the municipality has been the creation and development of a municipal art collection. Although the City of Box Hill had commissioned a portrait of a retiring Town Clerk back in 1927, it was not until the 1950s that the donation of six more paintings formed the basis of a collection.[421] This burgeoned during the 1960s under Town Clerk Andrew Walls, who acquired works from dealers as well as local art shows and exhibitions. Curatorship of the collection formalised in 1983 with the establishment of the Box Hill Art Advisory Committee, which not only broadened the collection's scope by acquiring works in many different media, but also began to commission public art. The first of these was a bronze sculpture by Anthony Pryor, entitled *Performers*, which was installed in the Box Hill Mall in 1985.[422]

During this same period, the City of Nunawading also commissioned works of public art, notably the stained-glass windows at the new Nunawading Arts Centre (1985) and a bronze sculpture by Inge King, *Dervish*, at the entrance to the Nunawading Civic Centre (1998). Following Council amalgamation in the mid-1990s, the two municipal art collections merged to form the City of Whitehorse Art Collection and a permanent exhibition space was provided at the former Box Hill Town Hall. To mark the creation of the new municipality, two works of public art were commissioned: *Unity* by Stephen Glassborrow (on the Whitehorse Road median at Box Hill) and the *Spirit of Whitehorse* by Graham Radcliffe (at the Council offices in Nunawading).

Related heritage places

HO246 – Box Hill Community Arts Centre, 470 Station Street, Box Hill

[421] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, pp 130-31.
[422] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 237.

9.5 Film and television

It has been suggested that the 1906 movie *The Story of the Kelly Gang* – not only the first full-length feature film ever produced in Australia, but in the world – may have been partly filmed in the Mitcham area.[423] However, modern film and television production did not arrive in the municipality for another 60 years, with the 1965 opening of the new Channel O (later Channel 10) Studios in Forest Hill. Designed by architects Hassell & McConnell, the building accommodated what was then Melbourne's fourth TV network, and only the second with its own entirely purpose-built studio facility.

Over the following decades, innumerable television programmes would be created, rehearsed and filmed at Forest Hill. Filming not only took place in the studios, but also in the extensive grounds that surrounded the building – perhaps most famously when rows of false windows were attached to a blank side wall to represent the fictitious Wentworth Detention Centre in the cult drama series *Prisoner* (1979-81). Some of the sequences in *Prisoner* were also filmed on location in the surrounding suburbs. Amongst the locations identified are the Forest Hill Shopping Centre, the Burvale Hotel-Motel, the Box Hill Hospital and the Laburnum railway station.[424] An Edwardian timber villa at 27 Howard Street, Box Hill, was also used to depict the private residence of one of the series' most popular characters, vindictive prison officer Joan 'The Freak' Ferguson (played by Maggie Kirkpatrick).

In 1981, a tropical resort set was erected in the grounds of the Channel 10 studios for the filming of *Holiday Island*, a new drama series created by Crawford Productions. It was possibly this connection, or at least the general proximity of the Forest Hill studios, that prompted Crawford Productions to relocate from its own premises in Abbotsford to a new site in Box Hill South. The company acquired an eight-acre site in the industrial precinct on the west side of Middleborough Road, where a new office and studio complex opened in 1981.[425] Aside from the short-lived *Holiday Island*, productions that emerged during Crawford's time at Box Hill South included *Carson's Law* (1983-84) and *The Flying Doctors* (1986-93). In 1987, an ailing Hector Crawford sold his entire company including its name, film library and the property in Box Hill South. The latter was subsequently upgraded with new studios that opened in April 1988.[426]

The year 1988 also marked the start of a new Channel Ten TV series destined for noted longevity: a soap opera simply titled *Neighbours*. It was filmed at the Forest Hill studios, where the old *Holiday Island* set was recycled to represent the fictitious Lasseter's Hotel complex. Location filming was otherwise focused on a nearby cul-de-sac, Pin Oak Court in Vermont South, which represented the fictitious Ramsay Street for over 30 years. Exterior scenes were filmed at many other places around the City of Whitehorse. Local places filmed to represent counterparts in the fictitious suburb of Erinsborough include the Weedon Heights Primary School ('Erinsborough Primary School'), the former Killoura Primary School in Burwood East ('Erinsborough

[423] Eric Reade, *The Australian Screen: a pictorial history of Australian film-making,* Melbourne, 1975, p 28.
[424] 'Prisoner locations', *Prisoner Cell Block H: on the inside, https://www.prisoner-cellblockh.co.uk/reference/locations.html,* accessed 23 November 2022.
[425] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 208.
[426] *The Age,* 30 March 1988, p 14.

High School'), the Forest Hill Chase Shopping Centre ('Erinsborough Plaza'), the Eley Park Community Centre ('Erinsborough & District Community Hall') and the former Box Hill Town Hall ('Erinsborough Court House').

The early 1990s saw significant changes to television production in the City of Whitehorse. In 1991, the Box Hill South studios were taken over by WIN Television, which had acquired Crawford Productions. The following year, Channel Ten vacated the Forest Hill studios when it relocated its administrative functions to the Como Centre in South Yarra. Both studios, however, remained in use. While ownership of the Forest Hill property passed to a private company, Global Television, in 1995, Channel Ten continued to lease the facilities for the filming of many programmes, including *Neighbours*.

Since the 1990s, several Australian feature films have also been produced using the studio facilities at both Box Hill South and Forest Hill, including the highly successful film *The Dish* (2000), which was partly filmed at the former Crawford studios. The latter facility closed in 2005 and was demolished the following year for the construction of a Bunnings hardware store.

Figure 110. Former Channel O Studios at Forest Hill, 1964 (Courtesy of the Whitehorse Historical Society Inc, no NP4490)

Related heritage places

HO272 – Former ATV 0 Television Studios, 104-168 Hawthorn Road, Forest Hill

10 PROTECTING AND PRESERVING WHITEHORSE'S HERITAGE

10.1 The National Trust

The former Wesleyan Chapel in Woodhouse Grove, Box Hill North, dating to 1856, was the first building within the City of Whitehorse to be classified by the National Trust, in November 1961. This was followed by the classification of Schwerkolt's Cottage in Mitcham, which was classified in February 1964 after being narrowly saved from demolition by the action of the City of Nunawading. Though Lydswood, a red brick Victorian mansion at 12 Stanhope Street, Mont Albert, was classified in April 1970, historic sites within the municipality did not otherwise attract much interest from the National Trust until 1980, when St Andrew's Uniting Church on Whitehorse Road, Box Hill – a building relocated there from West Melbourne – was classified.

Blackburn Lake and the nearby Bellbird streets became part of an early significant landscape classification for the National Trust. In 1976 the Trust classified the lake and seven streets in the Bellbird area describing the area as 'an oasis in suburbia…' which 'retain a quiet, almost rural character unique in Melbourne.'[427]

Since the 1980s, the National Trust has become more active in classifying places in the City of Whitehorse, including the former Standard Brickworks in Federation Street, Box Hill (September 1988), Blood's Cottage in Station Street (August 1993; since demolished), the original portion of the Vermont State School (June 1990), the Box Hill Town Hall (June 1996) and the Wunderlich Terracotta Roof Tile Company's site in Vermont (August 1998). From the 1990s, the Trust also began to classify significant trees, and several examples have been noted in the City of Whitehorse.

Since 2000, the Trust has turned its attention to more recent buildings, including the Chapel of St Joseph in Mont Albert North designed by Edmond & Corrigan in the mid-1970s. These places have variously been deemed to be of cultural significance at the local, regional, state or even (in the case of the Chapel of St Joseph) the national level.

10.2 Designating historic sites

Independent of the work of the National Trust, local interest in the preservation of historic sites emerged in the early 1960s. In both Box Hill and Nunawading, the establishment of historical societies stemmed from the threatened demolition of cherished local landmarks. Upton House in Nelson Road, the former residence of pioneer Arundel Wrighte, was acquired by the Box Hill District Hospital in 1962 and demolished, prompting the formation of Box Hill Historical Society in 1963.[428] Two years later, a counterpart in Nunawading was established after Schwerkolt's Cottage in Mitcham was similarly threatened with demolition. In that case, intervention by the local Council prevented the loss of what was then considered to be the oldest

[427] 'Blackburn Lake and Bellbird Streets', National Trust Database, http://vhd.heritage.vic.gov.au/search/nattrust_result_detail/70271 accessed on 25 May 2023.
[428] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 208.

surviving building in the municipality. In what was then a notable project, the Council engaged architects John & Phyllis Murphy to repair and restore the building. It was officially opened as a public museum by the Governor of Victoria in October 1964.[429]

From the early 1970s, community interest in the preservation of the historic environment increased at a rapid rate. Around that time, the newly-formed Box Hill Association expressed its concern about the demolition of older houses for higher-density apartment development.[430] The application of planning controls to protect significant places in the municipality dates back to 1985, when the City of Nunawading introduced Special Residential (Nunawading) Zone No 5, covering six streets in the Bellbird Area of Blackburn that had previously been deemed by the National Trust to possess 'a quiet almost rural character unique to Melbourne'.[431] The City of Box Hill was the first of the two Councils to commission a heritage study with the *City of Box Hill Heritage & Conservation Study* completed by Andrew Ward in 1990. Four years later, the City of Nunawading Heritage Survey Project was completed by Context Pty Ltd. Following Council amalgamation in the mid-1990s, the recommendations of both heritage studies were re-visited in the *City of Whitehorse Heritage Review* (1999) by Allom Lovell & Associates. Further studies have been undertaken in the ensuing years, including the 2001 *Whitehorse Heritage Review* by Andrew Ward, the 2012 *City of Whitehorse Heritage Review* by Coleman Architects and the *City of Whitehorse Post-1945 Heritage Study* (2016) by Built Heritage.

Draft

[429] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, pp 134-35.
[430] Andrew Lemon, *Box Hill,* Melbourne, 1978, p 221.
[431] Lesley Alves, *Suburban Heartland: a history of the City of Whitehorse,* Melbourne, 2010, p 195.

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10.5 City of Whitehorse Heritage Review 2024

Attachment 1	City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage
Attachment 2	City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage
Attachment 3	City of Whitehorse Heritage Review 2024 - list of properties with a citation

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

CITY OF WHITEHORSE HERITAGE REVIEW 2024

VOLUME 1: INTRODUCTION, METHODOLOGY & CITATIONS FOR INDIVIDUAL PLACES (A-R)

Prepared for the City of Whitehorse
DRAFT 18 June 2024

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Front cover image:

Box Hill Post Office, Box Hill
(1910-11)

Source: Picture Collection, State Library of Victoria
(photographer unknown)

Schedule of Issues	Date
Draft report (Volumes 1 and 2)	18 June 2024

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A: INTRODUCTION

A1 Project Background & Brief

Background

The areas that comprise the City of Whitehorse, created in 1994 by the amalgamation of City of Box Hill and the City of Nunawading, have a long and multi-layered history that encapsulates many different phases of human settlement and interaction. While some suburbs contain physical evidence dating back to the 1850s and '60s (Box Hill North, Burwood), much of the municipality remain strongly characterised by development from the later nineteenth and early twentieth centuries (Surrey Hills, Mont Albert, Box Hill, Blackburn), while other areas show the dominant impact of the second half of the twentieth century, either partly (Burwood East, Forest Hill, Nunawading and Mitcham), or entirely (Mont Albert North, Vermont South).

Prior to amalgamation, each of the former municipalities undertook a heritage study: the *City of Box Hill Heritage & Conservation Study* (Andrew Ward, 1990) and the *City of Nunawading Heritage Survey Project* (Context Pty Ltd, 1994). After amalgamation, the findings and recommendations of these studies were re-assessed and consolidated as the *City of Whitehorse Heritage Review* (Allom Lovell & Associates, 1999). Since then, the Council has regularly undertaken heritage reviews that include municipality-wide gap studies by Andrew Ward (2001), Graeme Butler (2002) and Coleman Architects (2012), as well as more specific studies focused on particular areas or themes. The latter includes re-assessment of several precincts, the Elmore houses in Blackburn (2006), and a dedicated *City of Whitehorse Post-WW2 Heritage Study* (Built Heritage Pty Ltd, 2016).

An outcome from more than three decades of heritage work, involving at least seven different heritage consultants (and several successive heritage advisors), has been the identification of place of potential heritage significance, which form the basis of an ever-expanding Masterlist. While these places were sometimes subject to detailed assessment as part of various reviews (and individually, when triggered by Section 29a applications), most were doomed to languish on the Masterlist as "lower priorities". As of 2023, this list comprised several hundred plans.

Brief

In September 2020, the City of Whitehorse adopted the *Whitehorse Heritage Framework Plan*, which identified a number of tasks to be undertaken in order to improve the heritage management in the municipality. One priority task was to review the long-standing masterlist of places of potential significance. An initial review of the Masterlist was undertaken by Council's heritage advisor, Coleman Architects, which eliminated those places that had been demolished or substantially altered since they were first identified. In this way, the Masterlist was reduced to a total of 144 individual places and seven precincts.

The present review was commissioned to provide a more rigourous re-assessment of the places and precincts in the Masterlist. This was to be undertaken in two stages, as follows:

Stage One: Review

- Review of 144 individual places and 7 potential precincts to identify individual places and precincts warranting detailed heritage assessment;
- Provision of reasons why places / precincts do not warrant further heritage investigation;

Stage Two: Detailed Assessment

- Heritage assessments of those individual places and precincts identified in Stage One;

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A2 Study Team

The study was undertaken by Simon Reeves, director and principal of Built Heritage Pty Ltd.

A3 Acknowledgements

I am indebted to the Box Hill Historical Society and the Whitehorse Historical Society for ongoing assistance during the course of the project. At an early stage, the presidents of both societies canvassed their members and provided list of places considered to be of interest or concern. Both societies continued to provide ongoing support, responding to my specific questions and sharing useful snippets of information and invaluable scanned material from their archives.

I am also grateful for the input of Robin Grow (President Emeritus, Art Deco & Modernism Society) and Tony Lee, who kindly shared his extensive knowledge of Robin Boyd (and post-WW2 architecture in general) as well as providing me with a special preview of his unpublished research on the RVIA Small Homes Service, soon to be released as a book and website.

I would also like to thank those architects who responded to my requests for further information on specific projects with which they were involved. Amongst those generously who shared their recollections and insight were Desmond Bloink, John Denton, David Hopkins, Phyllis Murphy and Michael Spivakovsky. In preparing certain citations, I was also able to drawn an oral history archive of interviews conducted with other architects over the past twenty years. My belated thanks are offered to the late Jim Earle, Gerrit "Gerry" Hartland, John Herniman, Michael Jan, the late Harry Pels, John Reid, Conrad Theodore and Klaus "Nick" Veltjens.

I am also indebted to the families of deceased architects, who kindly shared information and memorabilia. My thanks to Dr Andris Blokmanis of Vancouver, Canada (son of Karlis Blokmanis), Alexandra Pottage (daughter of J B Chmielowski), Bruce Fergie (son of Alex J W Fergie) and Bridget King (daughter of Lionel King), for providing crucial insight into their fathers' careers, and the houses that each of them designed for their own families in the City of Whitehorse.

I am also very grateful for Ms Rosemary Coull for sharing information, photographs and original drawings for the house that her parents commissioned in Diosma Crescent, Nunawading.

A4 Findings

The consultant's fee proposal for this project allowed for the preparation of citations for 48 individual places and four precincts. During the ongoing process of review, research and assessment, it became apparent that one of the sites initially considered as an individual place was more appropriately considered as a precinct or group listing. Consequently, the completed citation was slightly re-formatted and re-written, then relocated to the corresponding section of the report. Ultimately, this resulted in a total of 47 citations for individual places, and five citations for precincts and group listings. These represent a broad cross-section of building stock, encapsulating different periods, typologies and locations across the municipality:

Period	Places	Precincts
Victorian		
- Early (1850 - 1879)	1	-
- Late (1880 - 1901)	5	-
Edwardian		
- Early (1901 - 1910)	4	-
- Late (1911 - 1918)	7	-

Period	Places	Precincts
Inter-War		
- Early (1918 - 1929)	4	-
- Late (1930 – 1945)	2	-
Post-WW2		
1945 – 1949	4	1 (part)
1950 - 1959	10	1 (part)
1960 – 1969	9	1 (part)
1970 - 1979	3	2 (part)

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The 47 individual places comprise six from the Victorian era, eleven from the Edwardian era, six from the inter-war era and the remainder from the post-WW2 era. The higher proportion of the latter reflects the fact that, despite completion of a dedicated *Post-WW2 Heritage Study* (2016), places (and especially precincts) of more recent origin still remain significantly under-represented on the heritage overlay schedule. The places and precincts assessed in this study span some four decades of the post-WW2 era, from the mid-1940s through to the later 1970s.

Suburb	Place	Precinct
Blackburn	6	-
Blackburn North	2	-
Box Hill	5	-
Box Hill North	1	1 (part)
Box Hill South	2	-
Burwood	2	1
Burwood East	4	-
Forest Hill	1	1 (part)

Suburb	Place	Precinct
Mont Albert	7	-
Mont Albert North	1	1 (part)
Mitcham	3	-
Nunawading	4	1 (part)
Surrey Hills	5	-
Vermont	1	-
Vermont South	2	1

Thus, every major suburb in the municipality is represented by at least one individual place. This includes suburbs Vermont South and Mont Albert North, which are not well represented on the heritage overlay. The split between places located in the former City of Box Hill and former City of Nunawading is roughly 50-50 (there are 26 places in the former and 21 in the latter).

Typology	Place	Precinct
Houses (single)	31	4
Houses (duplex)	2	
Flats / units	1	
Factory	3	
School	2	

Typology	Place	Precinct
Kindergarten	2	
Post office	2	
Church	2	
Welfare / institution	1	1
Bank branch	1	-

Characteristically, most (around two-thirds) of the individual places assessed were single private dwellings; all but one of the precinct/group listings were similarly residential in nature. Other places assessed cover a range of typologies, including some that are demonstrative of particularly important themes in the City of Whitehorse (such as social welfare) and some building types that are either under-represented on the heritage overlay schedule (eg schools, post offices and branch banks) or entirely unrepresented (eg kindergartens and factories).

The final iteration of the Masterlist (see Appendix, Volume 2), as repeatedly filtered and annotated during the course of the project, arrived at the following conclusions:

- **47 individual places and 5 precincts/groups** are recommended for inclusion on the heritage overlay schedule;
- **103 individual places and 3 precincts/groups** are still considered to be candidates for assessment as part of future heritage studies (including places not visible from the street that might only be assessed when triggered by Section 29a);
- **200 individual places and 4 precincts/groups** are **not** recommended for further assessment, due to demolition, substantial alteration or limited basis for local significance.

It is recommended that the 103 places and three precincts identified in the second rung should form the basis of a new Masterlist, to underpin ongoing heritage management and future studies.

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A5 Draft Heritage Overlay Schedule to Clause 43.01

Individual Places

No	Heritage Place	External Paint controls apply?	Internal controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01.3	Included on the Victorian Heritage Register?	Prohibited uses may be permitted?	Name of incorporated plan under Clause 43.01-2	Aboriginal heritage place?
HOxx	House 38 Adele Street, Vermont	No	No	No	Yes	No	No	No	-	No
HOxx	Factory buildings, 19 Ailsa Street, Box Hill South	No	No	No	Yes	No	No	No	-	No
HOxx	House, 4 Bentley Street, Surrey Hills	No	No	No	Yes	No	No	No	-	No
HOxx	Bank branch (former), 2 Brentford Square, Forest Hill	No	No	No	Yes	No	No	No	-	No
HOxx	House, 132 Burwood Highway, Burwood East	No	No	No	Yes	No	No	No	-	No
HOxx	House, 760 Canterbury Road, Surrey Hills	No	No	No	Yes	No	No	No	-	No
HOxx	Tally Ho Memorial Hall (former), 27, 27a, 29 Carrington Court, Burwood East	No	No	No	Yes	No	No	No	-	No
HOxx	House, 26 Central Road, Blackburn	No	No	No	Yes	No	No	No	-	No
HOxx	Blackburn Post Office (former), 9 Chapel Street, Blackburn	No	No	No	Yes	No	No	No	-	No
HOxx	House, 13 Chester Street, Surrey Hills	No	No	No	Yes	No	No	No	-	No
HOxx	House, 18 Churchill Street, Mont Albert	No	No	No	Yes	No	No	No	-	No
HOxx	House, 58 Diosma Crescent, Nunawading	Yes	No	No	Yes	No	No	No	-	No
HOxx	House, 43 Florence Street, Surrey Hills	No	No	No	Yes	No	No	No	-	No
HOxx	House, 19 Francesca Street, Mont Albert North	No	No	No	Yes	No	No	No	-	No
HOxx	House, 18 Gilmour Street, Burwood	No	Yes	No	Yes	No	No	No	-	No
HOxx	House, 17-19 Grandview Road, Box Hill South	No	No	No	Yes	No	No	No	-	No
HOxx	Houses (duplex pair) 20-20a Harold Street, Blackburn	No	Yes	No	Yes	No	No	No	-	No
HOxx	House, 5 Heather Grove, Nunawading	No	No	No	Yes	No	No	No	-	No
HOxx	House, 213 Highbury Road, Burwood	No	No	No	Yes	No	No	No	-	No
HOxx	House, 5 Ireland Street, Burwood	No	No	No	Yes	No	No	No	-	No

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HOxx	House, 29 Leonard Street, Burwood	No	No	No	Yes	No	No	No	-	No
HOxx	Livingstone Primary School, 25-29 Livingstone Road, Vermont South	No	No	No	Yes	No	No	No	-	No
HOxx	House, 15 Middlefield Drive, Blackburn North	No	No	No	Yes	No	No	No	-	No
HOxx	House, 452 Mitcham Road, Mitcham	No	No	No	Yes	No	No	No	-	No
HOxx	House, 372 Mont Albert Road, Mont Albert	No	No	No	Yes	No	No	No	-	No
HOxx	House, 20 Naughton Grove Blackburn	No	No	No	Yes	No	No	No	-	No
HOxx	House, 29 Naughton Grove Blackburn	No	No	No	Yes	No	No	No	-	No
HOxx	House, 12 Pembroke Street, Surrey Hills	No	No	No	Yes	No	No	No	-	No
HOxx	House, 2 Peter Avenue, Blackburn North	No	No	No	Yes	No	No	No	-	No
HOxx	Blackburn Pre-School Centre, 54 Pope Road, Blackburn	No	No	No	Yes	No	No	No	-	No
HOxx	House and tree, 2 Roberts Avenue, Box Hill South	No	No	Yes	Yes	No	No	No	-	No
HOxx	Houses (pair), 66-68 Rutland Road, Box Hill	No	No	No	Yes	No	No	No	-	No
HOxx	House, 20 Salisbury Avenue, Mont Albert	No	No	No	Yes	No	No	No	-	No
HOxx	House, 26 Saxton Street, Box Hill North	No	No	No	Yes	No	No	No		
HOxx	House, 3 Shady Grove, Nunawading	Yes	No	No	Yes	No	No	No		
HOxx	Factory (former), 8-12 Simla Street, Mitcham	No	No	No	Yes	No	No	No		
HOxx	House, 7 Somers Street, Mitcham	No	No	No	Yes	No	No	No		
HOxx	Kingswood College (Junior School), 355 Station Street, Box Hill	No	No	No	Yes	No	No	No		
HOxx	House, 7 Streeton Court, Mont Albert	No	No	No	Yes	No	No	No		
HOxx	House, 9 Streeton Court, Mont Albert	No	No	No	Yes	No	No	No		
HOxx	House, 87 Victoria Crescent, Mont Albert	No	No	No	Yes	No	No	No		
HOxx	Birralee Pre School Centre, 21 Weeden Drive, Vermont South	No	No	No	Yes	No	No	No		
HOxx	Nunawading Uniting Church, 355-357 Whitehorse Road, Nunawading	No	No	No	Yes	No	No	No		
HOxx	Factory (former), 853 Whitehorse Road, Box Hill	No	No	No	Yes	No	No	No		
HOxx	Box Hill Post Office (former), 957 Whitehorse Road, Box Hill	No	No	No	Yes	No	No	No		
HOxx	St Peter's Peace Memorial Church, 1030 Whitehorse Road, Box Hill	No	Yes	No	Yes	No	No	No		
HOxx	Flats (villa units), 18 York Street, Mont Albert	No	No	No	Yes	No	No	No		

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Precincts and Group Listings

No	Heritage Place	External Paint controls apply?	Internal controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01.3	Included on the Victorian Heritage Register?	Prohibited uses may be permitted?	Name of incorporated plan under Clause 43.01-2	Aboriginal heritage place?
HOxx	*Orana Peace Memorial Homes Group* 14-18, 17 and 27 Livingstone Close, Burwood	No	No	No	Yes	No	No	No	-	No
HOxx	*RVIA Small Homes Services House Group* 19 Acacia Street, Blackburn 37 Bridgeford Ave, Blackburn 164 Central Road, Nunawading 15 Charlotte Street, Blackburn South 15 Elm Street, Blackburn 13 Essex Street, Blackburn North 10 Florence Street, Blackburn 18 Goodwin Street, Blackburn 18 Goodwin Street, Blackburn 2 Kingsclere Court, Vermont 2 Lexton Road, Box Hill North 26 Loddon Street, Box Hill North 62 Owen Street, Mitcham 5 Ronald Street, Mont Albert North 7 Ross Street, Mitcham 47 Somers Street, Mitcham 270 Springfield Road, Nunawading 714 Whitehorse Road, Mitcham	No	No	No	Yes	No	No	No	-	No
HOxx	*Swedish Prefabricated Houses Group* 30 Box Hill Crescent, Mont Albert North 26 Cameron Road, Box Hill North 2 Olympiad Crescent, Box Hill North 92, 98, 102, 104 and 108 Shannon Street, Box Hill North	No	No	No	Yes	No	No	No	-	No
HOxx	*Post-WW Modenrist Houses Group* 5, 6, 9 and 16 Andrew Street 29, 35, 42, 44, 46, 47, 49 and 59 Menin Road 68 and 68a Shady Grove Forest Hill	No	No	No	Yes	No	No	No	-	No
HOxx	*Blue Flame Project Display Village Precinct* 3 and 5 Fortescue Grove 1, 2, 3, 6, 7, 8 and 9 Parkleigh Court 2, 4, 6, 7 and 8 Shalimar Court Vermont South	No	No	No	Yes	No	No	No	-	No

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B: METHODOLOGY

B1 Stage One: Review of Masterlist

B1.1 Preliminary Review

A preliminary review of the Masterlist was conceived and executed as a wholly desktop exercise.

For the preliminary review, virtual fieldwork was undertaken that referred to on online resources such as Google StreetView, Google Maps, Google Earth and photographs from property sales listings. This enabled swift confirmation of places that had been demolished or significantly altered, which, by definition, meant that no further research or assessment would be required.

Virtual fieldwork was followed by a consolidation of readily-available background information on those places and precincts confirmed or suspected to remain extant as possible candidates for further assessment. This background information included the following:

- The source/s through which the place/precinct was originally identified as being of potential significance;
- more recent material generated by or within the Council, such as reports, remarks or opinions made by planning staff, heritage advisors or previous heritage consultants;
- online heritage registers or inventories;
- any discussion or mention of the places/precincts in published sources such as online newspaper or magazine articles, standard local history publications, and special interest Facebook groups devoted to local history or architecture
- the Consultant's own in-house database of post-WW2 Australian architecture (for those places/precincts dating from that specific period);
- historic aerial photographs for 1945, 1951, 1956, 1960, 1963, 1970, 1975, 1981, 1987, 1996, 2005, 2015 and 2024, available online via <https://map.whitehorse.vic.gov.au>

As part of this preliminary filtering process, input was also sought with local historical societies and similar stakeholder bodies. Contact was made, via email, with the Box Hill Historical Society, Whitehorse Historical Society and Surrey Hills Historical Society. As it was not deemed appropriate to provide these groups with a full copy of the confidential Masterlist, they were instead requested simply to nominate any places, areas or even general buildings types of interest, which the y might consider to be under-represented on the heritage overlay schedule, or vulnerable to redevelopment.

Presidents of the societies at Box Hill (Helen Harris, OAM) and Whitehorse (Vicki Jones-Evans) responded and duly canvassed their members and volunteers, providing a brief list of places of interest. Upon cross-referencing, some of these places were found to be present on the Masterlist.

A similar invitation was also made to the Art Deco & Modernism Society, Incorporated, through its President Emeritus, Robin Grow, and a list of places of interest was provided.

B1.2 Development and filtering of Masterlist

The findings of the preliminary desktop review, and the engagement with local historical societies and interest groups, was consolidated in a tabulated form, where each place or precinct was recorded with its address, originating source, current status (ie, mostly intact, significantly altered, or demolished), and brief notes on its known or likely origins, and degree of acknowledgement in any of the sources identified to date.

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The tabulated list was then filtered, with each place/precinct designated as one of the follow three priorities, utilizing the consolidated information to inform a *prima facie* case for local significance

- Level 1: Highest priority for further assessment (ie, extremely likely candidate for HO)
- Level 2: High priority for further assessment (ie, probable candidate for HO)
- Level 3: Moderate priority for further assessment (ie, possible candidate for HO)

In designating certain places as a higher priority over others, a number of factors were taken into account. Weighting was given to places that already allocated a provisional high grading by a previous consultant (eg places with an A-grading under the old alphabetical system), and to any places that had been flagged by a local historical society or other interest group when consulted during the early stages of the current project. Consideration was also given to places that reflected historical themes, building typologies, architectural styles or specific architects of importance, hitherto under-represented (if not entirely unrepresented) on the heritage overlay schedule.

In evaluating the particularly large number of architect-designed post-WW2 houses on the Masterlist, weighting was given to those examples that had won awards, or had garnered notable press attention in newspaper and/or magazine articles, or represented the work of particularly well-known architects whose names were likely to be familiar even to the layperson. Amongst lesser-known architects, emphasis was placed on the sub-theme on architect's own houses, particular of those practitioners who, consequent to being employed in larger firms or government departments, did not maintain their own sole practice and thus undertook few (or indeed no) other projects aside from their own houses.

Further details on the rationales for prioritising specific places and precincts the can be found in the annotated Masterlist, included as an Appendix to Volume 2 of this study.

B2 Stage Two: Assessment of Places and Precincts

B2.1 Shortlisting places/precincts from Masterlist

Following the filtering of the masterlist, the top forty-eight (48) places and top four (4) precincts were selected for more detailed investigation, research and assessment as standard heritage citations. The consultant's fee proposal for the project had capped the number of individual citations at 48, because this equated to a third of the total 144 places on the initial list. This meant that one in every three places on the Masterlist would be subject to more detailed assessment.

The process of filtering saw the Masterlist go through multiple incarnations and iterations, with constant updates and re-appraisals as further research unfolded. A number of places that appeared to have a strong *prima facie* case for local significance were found, upon more detailed investigation, to be less significant than they seemed. These places included some that were determined to be not as old as they had looked, and others (such as architect Lionel King's own house in Glendale Street, Surrey Hills, and the Roman Catholic Church of St Frances Xavier in Whitehorse Road, Box Hill) were confirmed to have been altered to a much greater degree than had been initially surmised.

Conversely, there were also some places at, during the preliminary filtering, seemed merely representative of their type or period but, upon further investigation, were found to more far more important. This is typified by a seemingly unprepossessing Victorian villa at 213 Highbury Road, Burwood, which turned out to have been built in 1854, thus revealing it to be of considerable historical significance as one of the oldest surviving houses in the City of Whitehorse.

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B2.2. Detailed assessment

When the shortlisting of places and precincts was considered to be finalised, after a certain amount of chopping and changing, they were all subject to site fieldwork. Individual places of potential significance were visited and digitally photographed from the street, or other public vantage points, and field notes taken as appropriate. At no point was private property encroached.

Precincts of potential significance were similarly documented with digital photographs of both streetscapes and individual buildings, as well as field notes and indicative mapping.

Historical research for citations drew from a broad range of standard primary and secondary sources include the following:

- Standard local history books (see bibliography);
- Books, booklets or pamphlets on specific local churches, schools, etc
- Land records (municipal rate books, subdivision plans, certificates of title, etc);
- Historical photographs, including historic aerial photographs;
- Directories (street directories, postal and telephone directories);
- Public building files (held by Public Record Office Victoria);
- Civil registration records;
- Contemporary press reports, variously sourced through digitized publications available online (ie, TROVE), photocopies/scans provided by local historical histories, and articles identified through the Consultant's in-house database of post-WW2 architecture;

Extensive use was made of the archival and other holdings of the Box Hill Historical Society and the Whitehorse Historical Society. The Box Hill Historical Society maintains a number of extremely useful online resources, including a local history database and indexes to post-WW2 rate records and scrapbooks of press cuttings. These resources proved invaluable, and several visits were made to the society's premises in Box Hill to view specific items, and to make use of the municipal rate books on microfiche. The Whitehorse Historical Society has also indexed a great deal of its archive, including photographs, clipping, booklets and other material, which can be searched online via <www.victoriancollections.net.au>. Over the course of the project, the society kindly provided the consultant with scans of items pertaining to specific places or precincts.

In specifically researching and assessing architect-designed post-WW2 places, a number of additional sources were consulted:

- Building permit records/property files (held by the City of Whitehorse);
- Published monographs on individual architects and firms;
- Research files on individual architects and firms (held by the Consultant);
- Other holdings of architectural drawings (variously held by descendent architectural firms, public repositories such as the RMIT Design Archives or State Library of Victoria, and in the private collection of the Consultant);
- Oral history interviews with architects. While several architects were contacted specifically for this project, to share their recollections of buildings that they designed, we were also able to draw from our own in-house archive of oral history, which includes interviews previously conducted with a number of other architects, some of which have since died.

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Comparative analysis was informed by reference to similar places or precincts, variously:

- Already included on the HO schedule;
- Identified in earlier heritages studies but not yet included on the HO schedule;
- Identified elsewhere on the Masterlist of places/precincts of potential significance, but designated as lower priorities for further assessment;
- Identified through other sources, including online research and fieldwork.

In some cases, particularly where a building type, style or architect's work was not sufficiently well represented within the municipality, it was deemed appropriate to cite comparators from outside the City of Whitehorse.

B2.3 Completion of citations

The citations followed a standard format that was developed by the Consultant, with reference to previous examples commissioned by the City of Whitehorse. Citations provided the usual elements: a history of the place, precinct or group, a description, comparative analysis and Statement of Significance in standard tripartite format, citing relevant HERCON criteria.

Citations for individual places included a current photograph, historical images as available (including maps, plans, photographs and architectural drawings) and a map showing location and extent of the proposed HO. Citations for precincts and group listings included multiple photographs, a small location map and a larger more detailed map indicating either the boundaries of the HO or the specific places within the group.

B2.4 Updated Masterlist

Following completion of the citations, the Consultant's tabulated version of the Masterlist, annotated and provisionally prioritised, was reviewed and updated. A new grading system was adopted to designate all properties as one of the following categories:

- **Grade 1** Place considered as high priority for individual HO, with a citation already completed as part of the present study;
- **Grade 1b** Place considered for inclusion in group/serial listing, with a citation already completed as part of the present study;
- **Grade 2** Place considered as a high priority for assessment as part of future study;
- **Grade 3** Place considered potentially significant, pending further investigation, analysis or research; this includes numerous places that, as of 2014, cannot be properly assessed because they are not visible from the street;
- **Grade 0** Places previously considered potentially significant but are now no longer considered as candidates for further investigation, for the following reasons:
  - Places that have been demolished;
  - Places that have had a Demolition Consent issued;
  - Places that have been significantly altered;
  - Places that are considered merely representative of their type or era;
  - Place not otherwise considered to reach the threshold for local significance;

Thus, the filtered and annotated Masterlist (included in this report as an Appendix to Volume 2) remains as a resource to inform both future heritage studies and ongoing heritage management.

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C: CITATIONS FOR INDIVIDUAL PLACES (STREET NAMES A-R)

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IDENTIFIER	HOUSE	**Citation Number**	001
Other name/s	*Adele*	**Melway reference**	49 B1
Address	38 Adele Street VERMONT		
Date/s	c.1906		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	4 TRANSFORMING AND MANAGING THE LAND 4.3 Orchards and market gardens				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The house at 38 Adele Street, Vermont, was erected in c.1906, for orchardist Johann Zander and his wife Mary, whose family would continue to run the orchard for over fifty years.

The site of the house formed part of Crown Allotment 131 of the Parish of Nunawading, which spanned over 143 acres (58 hectares) on the north-west corner of present-day Canterbury Road and Heathderdale Road. This land, and parts of the contiguous Crown Allotments 126, 129 and 130, was duly acquired by investor Frederick Walter Purches, who slated it for subdivision. Promoted as the *Heathedale Estate*, this huge subdivision extended from Whitehorse Road in Mitcham to Canterbury Road in Vermont, bisected by a new north-south road, predictably named Purches Street (LP4815, 15/02/1906). Offered for private sale from 1905 (*Age* 29/04/1905:20), the *Heatherdale Estate* comprised 33 allotments that, aside the two-acre sites along Whitehorse Road, were all substantial agricultural blocks of between six and fifteen acres. Lot 2, a twelve-acre (4.8 hectare) site fronting Canterbury Road, was purchased by Johann Zander.

Johann Emil Zander (1876-1960) was part of well-known and well-established family of Doncaster orchardists. His father and uncle, Wilhelm and Andreas Zander, migrated from Germany in 1854, and were amongst the early Lutheran migrants who settled and pioneers fruit-growing in the Doncaster district, which was originally named Waldau. The two brothers lived together in a small house on Doncaster Road until 1860, when Wilhelm married Charlotte Haag and moved to George Street. While Andreas Zander married four times and had eleven children, of whom four sons took over the family's extensive orchard properties in Doncaster, Wilhelm and Charlotte Zander appear to have had only one child, Johann, before Wilhelm's early death in 1884.

Johann Zander married Mary Jane Ross (1878-1967) in 1905, the same year that the couple acquired Lot 2 of the *Heatherdale Estate*, and the present timber house was evidently built soon afterward. There were presumably in residence in 1906, when the birth of their first son, also named Johann Emil, was registered at Mitcham; the child died in infancy. The house is recorded in the Shire of Nunawading rate books for 1907-08 (dated 21 January 1908) as a dwelling on Lot 2, *Heatherdale Estate*, with a population of two and a Net Annual Value of £12. In 1913, the couple acquired the adjacent Lot 3, which combined to provide them with a large holding of 24 acres (9.7 hectares) on the north-west corner of Purches Street.

Johann and Mary Zander had three more children, all sons. The second and fourth sons, who respectively married in 1939 and 1944, moved elsewhere and left their middle brother, (Alex) Leslie Zander (1913-1993), who never married, to take over the family orchard at Vermont. Aerial photographs show that the property continued to be used as such well into the post-WW2 era: images from 1945, 1951 and 1956 depict the house on a cleared area bounded by mature trees, with a large outbuilding to the north and a driveway to the west, leading down to Canterbury Road. Orchards, punctuated by a few dams and small structures, extended north to what emerged, in the early '50s, as Churinga Avenue.

The vast property was finally subdivided in 1957, creating a network of smaller streets (Adele Street, Andrew Street, Barbara Street, Denis Street and Held Street) and 174 new allotments. The original house, still occupied by the Zanders, was retained on Lot 132, a larger (three-quarter acre) block on the west side of Adele Street, which also included the large outbuilding to the immediate north and some mature trees along the west boundary. Johann Zander died in 1960, followed by his widow Mary in 1967, but their son Leslie remained living in the house, by then designated as 28 Adele Street, for many more years. When the property changed ownership in 1989, the land was further subdivided: the large outbuilding and remnant trees were removed to create four new residential allotments (three at the rear, accessed by a new right-of-way), with the original house on a reduced curtilage, now addressed as 38 Adele Street.

When the property was advertised for sale in 1997, it was referred to by the name *Adele*.

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Physical Description

The house at 38 Adele Street, Vermont, is a double-fronted timber-framed Edwardian dwelling with a weatherboard cladding. It has a hipped and gabled roof clad in corrugated metal sheeting, with red brick chimneys that have corbelled caps and roughcast banding. The present street frontage (to the east) and the original street frontage (to the south, ie when the property faced Canterbury Road) are asymmetrical and identical, albeit mirror reversed. Each has a projecting bay with half-timbered gable end, bracketed eaves, bargeboard and turned finial, and a large window with a skillion hood. A return verandah, straddling the south and east sides of the house, has turned timber posts, fretwork brackets and a slatted frieze with matching balustrade.

A skillion-roofed weatherboard addition extends along the north side of the house.

Comparative Analysis

Large tracts of the City of Whitehorse (and particularly to the south-east, east of Blackburn Road and south of Canterbury Road) were strongly characterised by orcharding activity from the early twentieth century until well after WW2, and this has been identified as a significant theme in the history of the municipality. The theme is represented by numerous places on the heritage overlay schedule, of which the most notable is *Strathdon* at 449-467 Springvale Road, Forest Hill (HO113). Established in 1893 by William Fankhauser, the original brick farmhouse was built at that time and then altered and enlarged in the later 1910s by Charles Matheson. Still owned by his family in the early 1990s, the property retained an expansive curtilage (2.5 acres) with remnant fruit trees and a large outbuilding. Consequently considered so potently evocative of local fruit-growing activity, it was acquired by the then City of Nunawading. Although the outbuilding was demolished in the early 2000s, the property otherwise retains its expansive curtilage, original tree-lined driveway and remnant fruit trees, combining to present a unique snapshot of this important local theme.

The theme is otherwise represented by some key examples in Blackburn North. A double-fronted timber house at 17 Vivian Street (c.1905) (HO86) is similar to but simpler in design than 38 Adele Street, while *Harwood* at 17-21 Junction Road (1910) (HO50) has a more expansive homestead-like expression with a broader verandah. These relatively modest timber houses contrast with the larger and grander red brick villa at 48 Shafer Road (1907) (HO72), associated with the Lawford family, who maintained one of the largest orchards in the municipality. Two other notably intact timber orchard farmhouses in Blackburn North, at 2 Peter Avenue (c.1905) and 15 Middlefield Road (c.1908), both comparable to 38 Adele Street in form and date, have been assessed as part of this current review, and have been recommended for individual heritage overlays.

Of the remnant orchard properties on the heritage overlay schedule, there is only one example in Vermont. *Labedir* at 8 Smithfield Walk (1912) (HO73) is directly comparable with 38 Adele Street, having been associated with an expansive orchard on the opposite side of Canterbury Road albeit, following a comparable pattern of post-war subdivision, now occupying reduced curtilage off a smaller side-street. Only a few years apart in date (with 38 Adele Street being the earlier example), these two houses have some broad features in common, such as the weatherboard cladding, corrugated metal roofing, red brick and roughcast chimneys, and verandahs with slatted friezes. However, the homestead-like form of *Labedir* (similar to *Harwood* in Blackburn North) contrasts with the more compact expression of 38 Adele Street, which is more akin to a suburban Edwardian villa. The two houses are complementary manifestations of their common theme. Both remain far more intact than other early twentieth century ex-orchard farmhouses that are known to survive in Vermont, typified by much-altered examples at 23 Penlynne Avenue, 4 Beaumont Street and 9-11 Centre Road.

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Statement of Significance

What is significant?

Adele, at 38 Adele Street, Vermont, is a double-fronted Edwardian timber villa with a hipped and gabled roof and an asymmetrical street frontage with return verandah. It was erected c.1906 by orchardist Johann Zander and his wife Mary, whose family occupied it for over seven decades.

Significant fabric is defined as the exterior of the original house. Specific elements of significance include the brick chimneys, half-timbered gable ends, eaves brackets, bargeboards, finials, window canopies and return verandah with turned timber posts and slatted frieze and railings.

The skillion roofed wing along the north side of the building, which is presumably not original but still dates from the pre-war period, is considered to be a contributory element.

How is it significant?

Adele, at 38 Adele Street, Vermont, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The house is historically significant as evidence of the intensive fruit-growing activity that strongly characterises Vermont, and the broader south-eastern fringes of the municipality, from the early twentieth century until after WW2. One of a relatively number of former orchard farmhouses to survive in the area, it is also one of the most intact, consequent to being occupied by the same family for more than seventy years. (*Criterion A*)

The house is aesthetically significant as a fine and intact example of a double-fronted Edwardian timber villa. It displays the characteristic asymmetrical façade, gabled bays and return verandah, combined with an above-average level of embellishment, notably the prominent half-timbered gable ends (with boarded eaves, finials and brackets), skillion window canopies and return verandah with elegant timber detailing. While of this style are common in more closely settled parts of the municipality, such as Surrey Hills and Mont Albert, they represent a rare and unusual presence in Vermont and environs. (*Criterion E*)

References

Lodged Plan No 4815 (15 February 1906).

Shire of Nunawading Rate Books. Microfiche edition, held by Box Hill Historical Society.

Certificates of Title, Volume 3199, Folio 632 (1 May 1907); Volume 8225, Folio 851 (18 December 1957); Volume 8213, Folio 831 (18 December 1957).

"For Sale: 38 Adele Street, Vermont. Adele, circa 1895" [*sic*], undated flyer (late 1997). Item N242, Whitehorse Historical Society, Mitcham.

Previous Heritage Studies

Context Pty Ltd, *City of Nunawading Heritage Survey* (1994) – graded C

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 2, graded C

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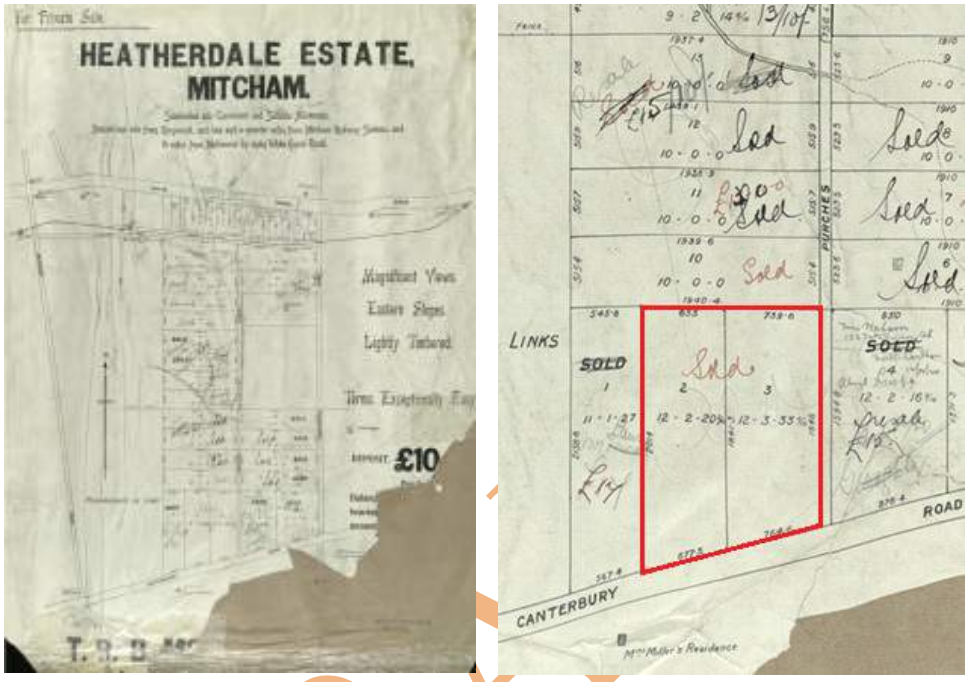
Historical Images



Subdivision plan for Heatherdale Estate at Mitcham (1905) between Whitehorse Road and Canterbury Road. Enlarged detail (right) shows Lots 2 and 3 fronting Canterbury Road, acquired by the Zander family
Source: Map Collection, State Library of Victoria

Excerpt from 1945 aerial photograph (and enlarged detail, right), showing the Zander family's orchard property with the original farmhouse, outbuilding, mature trees and driveway down to Canterbury Road.
Source: City of Whitehorse Maps. <https://map.whitehorse.vic.gov.au/index.html>

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38 Adele Street, photographed in 1997 from the south (ie, the original frontage to Canterbury Road)
Source: Real estate flyer, held by Whitehorse Historical Society (photographer uncredited).

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IDENTIFIER	FACTORY (SORBENT PAPER CO)	**Citation Number**	002
Other name/s	Bowater Scott; Carter Holt Harvey; Asaleo	**Melway reference**	61 F3
Address	19 Ailsa Street BOX HILL SOUTH		
Date/s	1957-58 (original masterplan) 1959-60; 1963 onwards (construction)		
Designer/s	Farmer & Dark (UK) Gregory Simpson & Associates		
Builder/s	Clements Langford Pty Ltd (1959-60) A V Jennings (later 1960s)		
Heritage Group **Heritage Category**	Manufacturing and processing Paper/pulp manufacture		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	5 BUILDING WHITEHORSE'S INDUSTRIES AND WORKFORCE 5.1 Manufacturing				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☐ To title boundaries	☑ As indicated on diagram overleaf			

Place History

The industrial complex at 19 Ailsa Street, Box Hill South, was developed from 1959 by paper manufacturers Bowater Scott Australia Pty Ltd, initially to a masterplan prepared in 1957-58 by British architects Farmer & Dark and overseen by the local firm of Gregory Simpson & Associates, which was then responsible for the design of later buildings into the 1970s.

Bowater Scott Australia was the successor to an earlier firm, the British Australian Paper Company (BAPCo), formed in 1933 to import paper products from the USA. BAPCo maintained premises in South Yarra before moving to a larger factory in Burke Road, Glen Iris, after WW2. In 1956, the firm was taken over by major British paper manufacturer, the Bowater Corporation, with BAPCo's managing director, Harry Archdall retaining that role in what then became the Bowater Paper Company of Australia (*Argus* 01/03/1956:13). During 1957, Archdall oversaw additions to the Glen Iris factory, in parallel with more ambitious scheme for a new and larger complex on a 30 acre (12 hectare) creek-side site at Box Hill South, newly rezoned for industrial use.

Plans for the new factory were prepared by London architects Farmer & Dark, designers of the Bowater factories in the UK, with Surrey Hills architect Gregory Simpson appointed to oversee the project here. An early site plan, dated March 1957 and simply titled 'Melbourne project', depicted a masterplan comprising a vast sawtooth-roofed conversion building with gable-roofed machine house to the north, flat-roofed office block to the south, a detached boiler house and oil store to the north-east, an area for wood pulp storage to the east, and a carpark to the west. Gerry Hartland, who was the project architect responsible for the factory in Simpson's office, recalled that, as the plans had come from the UK, many revisions were required to bring them into line with Victorian regulations, while the engineering drawings had to be completely re-done (interview, 2017).

While the scheme developed further during 1947-58, construction would not begin until after March 1959, when it was announced that the Bowater Corporation had now joined forces with a major American counterpart, the Scott Paper Company of Philadelphia, to develop and operate the factory at as a joint enterprise under the auspices of a new firm, Bowater Scott Australia Pty Ltd, with Archdall remaining as managing director. Hence, a widely-reported decision to "proceed immediately with the erection of a tissue-papermaking plant on a site near Melbourne, involving a capital expenditure of around £1,500,000" (*Bulletin* 25/03/1959:22).

Construction, by the major city building firm of Clements Langford Pty Ltd, duly commenced (*Age* 20/04/1960:40) and, in mid-1960, an international industry journal noted that work on Bowater Scott's "new tissue plant at Box Hill, Victoria", was "progressing" (*Pulp & Paper* 10/07/1960:259). A 1960 aerial photograph indicates that the first stage, as shown in Farmer & Dark's 1957 site plan, was virtually completed. The complex, spanning 8½ acres (3.4 hectares) of the larger site, began operation early the following year, when it was described in a local source as "the first integrated tissue paper manufacturing operation in Australia" (*Age* 26/01/1961:9), and by a UK-based journal as the first in the southern hemisphere (*Chemist & Druggist* 11/02/1961:128).

In early 1963, Bowater Scott announced that it would spend £2,500,00 on "huge plant extensions" to include new machine house, warehouses, storage areas, office space and a staff canteen (*Eastern Times* 17/04/1063). A second tissue paper machine, imported from the UK, was due to commence operation in late 1964. These works would not only double the physical size of the factory but also double its yearly output, which then stood at 12,000 tons of tissue paper. The new works were not designed by Farmer & Dark but rather solely by Gregory Simpson & Associates, who remained as the firm's regular architects for more than a decade. Later work included a two-storey sales office facing the dead end of Ailsa Street (c.1969), and reel stores to the north (c.1972) and south (1973). In 1978, the firm would design a second factory for Bowater Scott at Springvale.

In 1995, Bowater Scott was taken over by Carter Holt Harvey, which was in turn absorbed by Asaleo Care. Since 2018, the factory has been operated by the Sorbent Paper Company.

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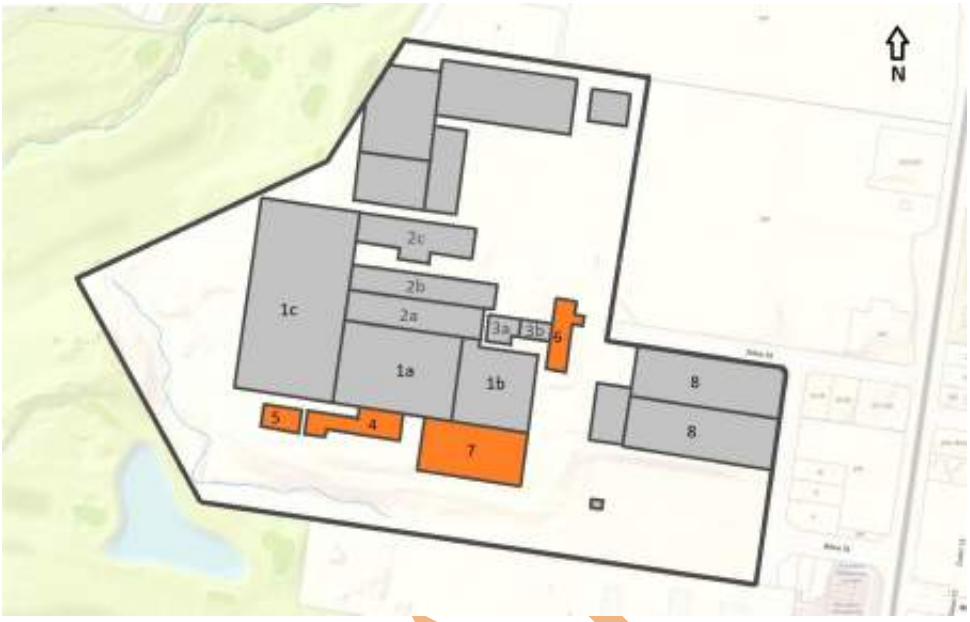

Diagram of present extent of factory site, with early buildings numbered as follows: original Conversion Building (1a) with later additions (1b and 1c), original Machine House (2a) with later additions (2b and 2c), original Boiler House (3a) with later addition (3b), Office Block (4), Staff Canteen (5), Victorian Sales Office (6), South Reel Store (7) and Warehouses (8). Elements of heritage significance are showing in ORANGE.

Physical Description

The vast Bowater Factory site in Box Hill South has a stepped street frontage that follows the bend of Ailsa Street, extending west to Gardiner's Creek. While the site comprises numerous structures, dating from the late 1950s to the early '90s, the historic core is located to the south, comprising the elements shown on the 1957-58 masterplan, with subsequent additions to the early 1970s. Many of the key elements have a degree of visibility from the public or semi-public realm, from Ailsa Street, from the factory carpark, and from the golf course on the other side of Gardiner's Creek.

The original extent of the sawtooth-roofed Conversion Building (1a) (1959-60) can no longer be readily interpreted, as it is concealed from the north by the gable-roofed Machine House (2a) and the flat-roofed Boiler House (3a) (both of which have themselves been extended; 2b, 2c and 3b), with substantial extensions along its entire frontages to the east (1b) and west (1c), as well as a partial addition to the south, known as the South Reel Store (7). The Boiler House and Machine House are not visible from the public realm, although the three narrow metal smokestacks of the former building can be seen from numerous vantage points.

The original Office Block (4) (1959-60; extended later), south-west of the Conversion Building, is a curtain-walled flat-roofed building on an elongated rectangular plan, slightly stepped at either end. The Staff Canteen (5) (1963), to the immediate west, is a smaller detached flat-roofed building with full-height window walls opening to a posted verandah. The South Reel Store (7) (1973), which projects at the far end of the extended Conversion Building, is a large flat-roofed building, raised on concrete piers to form an open undercroft, with a repetitive façade comprising a vast and continuous bay of metal-framed windows along a brick spandrel. Historic photographs confirm that the rear additions to the Conversion Building (1c) (c.1973) were designed in a similar style.

The Warehouses (8) (c.1964), at the intersection of Ailsa Street, are a semi-detached pair of identical single-storey buildings with low gambrel roofs, blank brick walls to the east, and continuous metal-framed windows and brick spandrels to the north and south.

The Victorian Sales Office (6) (c.1969), which faces the dead end of Ailsa Street, is a flat-roofed two-storey building on a long rectangular plan. Designed in a stark modernist style, it has a grid-like façade with wide spandrels and fin-like concrete piers supported on projecting beams, full-height window bays, and an off-centre projecting *porte-cochere* in matching style.

Comparative Analysis

While post-WW2 industrial development is a significant theme in that is now the City of Whitehorse, as of 2024, there are no post-WW2 factories on the heritage overlay schedule.

Occupying 12 hectares, with buildings initially spanning one third of the area, the former Bowater Scott complex was one of the largest industrial sites in the municipality. Its scale is comparable to the expansive sites associated with local clay product manufacture, which often included large clay-pits. By far the largest of these was the former Nubrik brickworks at 78 Middleborough Road, Burwood East (17 hectares), followed by the former Builders' & Roofers' Trading Company tileworks at 9-19 Rooks Road, Mitcham (11 hectares), although both sites have since been entirely redeveloped. The former Wunderlich tileworks at 656 Mitcham Road, Vermont, dating back to 1932 and still in use (by Monier Roofing), covers 7 hectares, with a heritage overlay (HO5) to a pre-war building along its south boundary. The former Standard brickworks at 14 Federation Street, Box Hill, also spanned 7 hectares, but most of this is now public open space, with a heritage overlay (HO3) to remnant structures in the south-west corner. Similar sites, such as the former Co-operative brickworks at 33 Alfred Street, Blackburn (6 hectares), former Vitclay pipeworks at 43 Springfield Road, Blackburn North (5 hectares), and former Daniel Robertson tileworks at 58 Station Street, Nunawading (5 hectares), were even smaller, and have all since been redeveloped.

The Bowater Scott site stands out not only for its scale but also its range of buildings that includes multiple production areas, warehouses, office blocks, boiler house and canteen. This contrasts with smaller contemporaneous factories that, on sites of three hectares or less, usually have only a production building or two, with an integrated office/staff block. Many such examples remain in the municipality, in various states intactness, typified by the former premises of Aerosol Industries at 6 Clarice Road, Box Hill South (1958-59), Terry Engineering Company at Cook Street, Mitcham (1958-59), Masonite Fabricators at 8-12 Simla Street, Mitcham (1959) and Bakaert Australia at 6-16 Joseph Street, Blackburn North (1960). All these factory sites have had their curtilages reduced, with some original or early buildings demolished and others altered.

The Bowater Scott factory formed part of a major industrial area that developed in Box Hill South between Middleborough Road and Gardiner's Creek. Bowater was not the first to build here: their complex was predated by a mid-size factory at 249 Middleborough Road (c.1955; demolished) and a few smaller ones further north. All of the larger factory sites along Middleborough Road (eg Nos 259, 277-289, 313 and 321) have also been redeveloped since, leaving Bowater Scott as the major lynchpin, with a few mid-size examples survivors on Middleborough Road (eg Nos 275) and much smaller ones on Clarice Street. Other major post-war industrial hotspots in the municipality include Lexton Street, Box Hill North (a continuous streetscape of smaller factories on elongated narrow blocks), Joseph Street, Blackburn North (characterised by a small group of factories on larger sites, most dating from the later 1960s onwards) and parts of Nunawading and Mitcham between Whitehorse Road and the railway line, extending down Rooks Road (also defined by large factories on larger sites, although many of these have since been demolished). None of these industrial precincts, however, retain complexes that are truly comparable to Bowater Scott.

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Statement of Significance

What is significant?

The former Bowater Scott factory, at19 Ailsa Street, Box Hill South, is a large industrial complex on a 12 hectare site, containing buildings dating from the late 1950s to the early 1990s. Initially based on a masterplan prepared in 1957-58 by Bowater's UK architects Farmer & Dark, construction was supervised by local architects Gregory Simpson & Associates, who took responsibility for further buildings from 1963 until the 1970s. Structures from this initial phase include production areas, warehouses, etc, of utilitarian form, and more distinctive elements for staff and administrative use.

Significant fabric is identified as the two-storey curtain-walled Office Block (1959-60), flat-roofed and glass-walled Staff Canteen (1963) and two-storey Victorian Sales Office (c.1969), which constitute the most architecturally distinctive elements on the site, along with the South Reel Store (1973), which, with its open undercroft, continuous window bay and brick spandrels, is considered to be a representative example of the more utilitarian production areas.

How is it significant?

The former Bowater Scott factory satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The site is historically significant as the largest post-war factory complex in the municipality, demonstrative of the intensive boom of industrial expansion in the 1950s and '60s that reshaped certain parts of the City of Whitehorse, including this part of Box Hill South between Gardiner's Creek and Middleborough Road. The factory is important for associations with Bowater Scott, an Australian company established as an unprecedented collaborative venture between two major international paper manufacturers based in the UK and the USA. (*Criterion A*)

The four nominated buildings are aesthetically significant as fine examples of modernist factory architecture. The South Reel Store, with its vast expanses of metal-framed glazing, plain brick spandrels and elevated undercroft, is a bold expression of a utilitarian industrial aesthetic, while the three office and staff buildings are even more architecturally considered, with stark fbox0like forms and large areas of glazing. The Canteen has an elegant and almost domestic expression, with multi-paned windows opening onto a posted verandah, while the Victorian Sales Office is particularly distinguished, with a bold grid-like façade of continuous spandrels and fin-like concrete piers supported on projecting beams. (*Criterion E*)

References

"Firm will spend £2.5 in Box Hill", *Eastern Times*, 14 April 1963.
Newspaper Clipping Scrapbook, Vol 7, p 78. Box Hill Historical Society.

British Australian Paper Company Pty Ltd, Ailsa Street, Box Hill. New factory, 1958.
Plan 3681, File Red 1345. VRPS 10150/P0, Public Record Office Victoria.

Bowater Scott Australia Pty Ltd, Ailsa Street, Box Hill. Extension, 1973.
File Red 20678. VRPS 10150/P0, Public Record Office Victoria.

Interview with Gerry Hartland (project architect for Gregory Simpson), November 2017.

Previous Heritage Studies

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 2, graded B

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Historical Images

Victorian Sales Office (c.1969), designed by Gerry Hartland, in office of Gregory Simpson & Associates
Source: Collection of Gerry Hartland, Forest Hill.

The factory complex in 1974, viewed from the south west showing then-recent additions to the west side of the conversion building, as well as the flat-roofed glass-walled staff canteen (to the extreme right).
Source: <www.facebook.com/boxhillvic/photos/a.735512283156961/2106972719344237>

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IDENTIFIER	HOUSE	**Citation Number**	003
Other name/s	*Mixbury*	**Melway reference**	47 A12
Address	4 Bentley Street SURREY HILLS		
Date/s	1908		
Designer/s	C Ernest Wright		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.4 Early twentieth century development				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

Mixbury, at 4 Bentley Street, Surrey Hills, was erected in 1908 for Charles and Edith Mayfield.

The site formed part of the *Chicken Farm Estate*, an ambitious Boom-era residential subdivision bordered by Canterbury Road, Elgar Road and Erasmus Street, which comprised 149 residential allotments with frontages to those existing streets and the new north-south thoroughfares of Harding, Pembroke, Newton, Bentley and Lamborne Streets.

Promotion of the *Chicken Farm Estate* ("the grandest and modest extensive of the Surrey Hills") commenced in late May 1885, when thirteen allotments were offered for sale (*Age* 29/05/1885:2), with a second auction the following week (*Herald* 05/06/1885:4). A real estate map held by the State Library of Victoria shows that 26 allotments between Bentley Street and Russell Street were offered for sale on 5 September 1885. A later map, for an auction held in March 1887, shows that all land on the western side of Bentley Street had been sold by then, save for Lots 51 and 52. However, much of the land in these eastern sections of the *Chicken Farm Estate* was to remain vacant into the early twentieth century.

In July 1907, ownership of six lots in this underdeveloped area was transferred to Edith Sophia Mayfield: Lots 45 to 49 combining to provide a vast frontage of 380 feet (116 metres) on the west side of Bentley Street, plus contiguous Lots 60, 63 and 64 to the rear, facing Newton Street.

Edith Mayfield (1867-1957) and her Dublin-born husband, Charles Edward Mayfield (1865-1924), married in 1895 and the couple took up residence in a six-roomed brick villa in Cambridge Street, Auburn, which they named Mixbury. Their first and only child, Beryl Eleanor Mayfield, was born there in 1896. Intending to build a new and grander family home at Surrey Hills, the Mayfields engaged architect C Ernest Wright, who, in August 1908, called tenders for a "brick residence, Bentley Street, Mont Albert" (*Argus* 24/08/1908:2). Work was evidently still in progress in December of that year, when Charles Mayfield, still using his Cambridge Street address, was listed as one fifty 'public spirited ladies and gentleman' (mostly residents of Surrey Hills, Box Hill and Mont Albert) who had pledged contributions to the laying out of a sports oval at Surrey Park (*BH Reporter*, 04/12/1908:5). The family had taken up residence by 1909, when electoral rolls first listed Charles and Sophia in Bentley Street rather than Cambridge Street.

Little is known of architect Charles Ernest Wright (1866-1944). Born in England, he had settled in Melbourne by 1903, when he was living in Manningtree Road, Hawthorn, not far from the Mayfields in Cambridge Street. By his own account, Wight initially worked for the Melbourne Harbour Trust, where he was involved in works on the Flinders Street Extension (ARBV file, PROV). In early 1907, he advertised that he had resumed private architectural practice from a city office in Little Collins Street (*Age*, 22/02/1907:7). Professionally active for the next two decades, Wright retired in the late 1920s and moved to Croydon.

The Mayfields lived in Bentley Street for many years, recycling the name Mixbury from their former home in Auburn. Their daughter Beryl, who studied piano at the Melbourne University Conservatorium, became a music and singing teacher and, from 1920, offered private lessons from the family home (*BH Reporter*, 30/1/1920:2). Charles Mayfield died in 1924 and, two years later, his widow Edith offered the property for sale. A detailed advertisement described it as a "charming well-designed brick tiled residence containing entrance hall to hexagon lounge, drawing room with double doors to dining room, three bedrooms, bathrooms… breakfast room, maid's room, two pantries, cellarette, kitchen… laundry and scullery" (*Age* 4/12/1926:2). Noted as being "in excellent order", the house was deemed suitable for "a retired gentleman, a grazier or a professional man". It was further stated that, while the property spanned more than two acres ("having frontages of 290' to Bentley Street… with a frontage of 228' to Newton Street"), the vendors would offer the house on a reduced curtilage if required.

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Ultimately withdrawing the house from sale, Edith and Beryl Mayfield remained in residence for another three decades. In 1946, the expansive grounds were reduced by the sale of the three allotments on Newton Street and the subdivision of the Bentley Street frontage. The house was retained on Lot 2, a generous block with a frontage of 120 feet (36 metres), with a smaller Lot 2 (60 foot frontage) to the north and larger Lot 3 (200 foot frontage) to the south (LP17221, 12/11/1946). Over the next fifteen years, these sites were gradually developed with new houses at Nos 2, 6, 8 and 10 Bentley Street, leaving *Mixbury* addressed as No 4.

Physical Description

The house at 4 Bentley Street, Surrey Hills, is a single-storey Edwardian red brick house on a sprawling stepped rectilinear plan, sited diagonally across a large double-width allotment. The house has the characteristically irregular terracotta-tiled roofline, variously hipped and gabled, with tall chimneys that have plain rendered tops and terracotta pots. The roofline is distinguished by a large 'widow's walk' (ie, an fenced expanse of flat roof, forming a viewing platform), which is enclosed by a metal railing with lattice panels, and accessed from the rear by a half-timbered stairwell enclosure that rises above the roofline.

The elongated frontage to Bentley Street is stepped and asymmetrical, with a projecting bay at the far left (south) end, which has a canted bay window with multi-paned sashes, a timber-clad spandrel above and a half-timbered gable end with wide bargeboards. The off-centre entrance has a projecting porch of polygonal form, with turned timber posts and slatted frieze, and there is a second canted bay window to the right.

The detached gable-roofed brick garage to the right (north) of the house is not original.

Comparative Analysis

As of 2024, there are still relatively few houses on the heritage overlay schedule that date from the Edwardian period, circa 1901 to 1911.

A large brick house at 48 Shafer Road, Blackburn North (1907) (HO72) is smaller and simpler than *Mixbury*, but broadly comparable with its varied roof profile in terracotta tile, canted bay window and half-timbered gable end. Originally sited, orthogonally, on a double-width block, this large curtilage has been reduced since the early 2000s, with a second dwelling built next door. Two other examples in Mont Albert, at 13 Victoria Crescent (1908) (HO84) and 17 Victoria Crescent (1911) (HO85) are more sophisticated in design, with polygonal corner towers and a greater degree of decorative embellishment, although both are more compact in plan, occupying standard-sized suburban allotments. The former *Gwynton Park* at 355 Station Street, Box Hill South (1907) (HO76), on an expansive site that is now Kingswood College, is a larger and grander Edwardian house, with picturesque roofline, ornate chimneys, partly roughcast rendered walls and a partial attic storey. However, its intactness has been compromised by post-war alterations and additions consequent to its adaptation as the school's administrative offices.

Befitting the fact that it was intended for a large site, *Mixbury* was conceived as a sprawling single-storey residence that stretched diagonally across its two-acre site. As such, its only truly pertinent comparator is *Nyora* at 15 St Johns Avenue Mont Albert (1904) (HO155), a similarly sprawling single-storey Edwardian red brick house, similarly sited on a diagonal axis across a similarly large block (albeit, like *Mixbury*, now somewhat reduced by later subdivision). These two houses, only four years apart in date, have many attributes in common, such as the canted bay windows, half-timbered gable ends, tall brick chimneys with roughcast rendered caps, and polygonal entry porches with turned timber posts. Yet, *Nyora* lacks what is the single most distinctive element of *Mixbury*: the flat roofed terrace with widow's walk and half-timbered stairwell enclosure.

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The incorporation of a widow's walk must be seen in the context of development in this particular part of Surrey Hills that, loosely bounded by Canterbury Road, Elgar Road, Harding Street and Erasmus Street, was long considered to be the highest point in the Melbourne metropolitan area. This was exploited during the earliest residential subdivisions of the 1880s, when a timber-framed observation tower was built on the north side of Canterbury Road to entice potential purchasers. While the tower proved to be a short-lived folly (its site usurped for the MMBW No 1 Reservoir in 1892), a few houses in the area incorporated towers to take advantage of the elevated topography. The large single-storey timber house known as *Colinruby*, originally built at 744 Canterbury Road (1886) including a tower with a balustraded viewing platform, while a brick house at 12 Pembroke Street (c.1892) had a half-timbered tower that had been added by the early twentieth century. Neither of these towers, however, survives today. The tower at *Colinbury* was not re-erected when the house was relocated in 1917 to a new site, slightly further south at 7 Pembroke Street, while the timber-framed tower of the brick house opposite, at No 12, had been dismantled by 1945.

Research to date has yet to identify any other surviving local examples of an Edwardian house with a widow's walk in the City of Whitehorse. This distinctive feature, mostly associated with larger two-storey houses of the late Victorian period, is represented by only one other example in the municipality, namely *Terreglea* at 79 Warrigal Road, Surrey Hills (1889) (HO87). Aerial photographs suggest that a smaller single-storey house at 81-83 Dorking Street, Box Hill (1891) (HO31) might have once had a widow's walk, although no evidence now remains of either the perimeter railing or internal access. A single-storey brick house at 2 Gordon Crescent, Blackburn (1889) (HO40) has a steep mansard roofed element above the porch, surmounted by iron railings, that might be correctly described as a widow's walk, although, given its tiny scale, it was clearly intended merely as a decorative feature rather than a functional viewing platform.

There are several surviving Victorian houses with widow's walks in the eastern half of the adjacent City of Boroondara (including one at 41 Suffolk Street, Surrey Hills, just across the municipal border), but seemingly no more in the City of Whitehorse.

Statement of Significance

What is significant?

The house at 4 Bentley Street, Surrey Hills, is a single-storey Edwardian red brick house on a sprawling stepped plan, with an irregular tile-clad roofline (incorporating a widow's walk, with enclosed access stairs) and an elongated and asymmetrical street façade. Erected in 1908 for retired civil servant Samuel Foy, the house was designed by architect C Ernest Wright,

Significant fabric is defined as the exterior of the original 1908 house. Specific elements of significance include the sprawling plan form, irregular roofline, widow's walk and its enclosed access staircase, chimneys, half-timbered fable ends, canted bay windows and polygonal entry porch with turned timber posts and slatted frieze.

How is it significant?

The house at 4 Bentley Street, Surrey Hills, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion B: Possession of uncommon, rare or endangered aspects of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

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Why is it significant?

The house is architecturally significant for its unusual incorporation of an expansive widow's walk at roof level, complete with enclosed access stair. While widow's walks tend to be associated with grand two-storey Victorian houses, they are less commonly found in single-storey houses, and are even more rarely seen in Edwardian houses. The widow's walk at *Bentley* demonstrates how early homebuilders in this particular part of Surrey Hills, which was considered to be the highest point in the Melbourne metropolitan area, sought to take advantage of the elevated topography. While several houses in the immediate area are known to have provided such observation areas, this appears to be the only one to survive (*Criterion B*).

The house is aesthetically significant as an Edwardian house of unusual form and detailing, with a sprawling stepped plan that unfolds diagonally across the large site, and an elongated and asymmetrical street facade that includes half-timbered gabled bays, canted bay windows and a polygonal entry porch with elegantly detailed timberwork. (*Criterion E*)

References

Certificate of Title, Volume 3214, Folio 684 (24 July 1907).

Lodged Plan No 17221 (12 November 1946).

Charles Ernest Wright, application file, Architects' Registration Board of Victoria, Box 17, VPRS 8838/P1, Public Record Office Victoria.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 2, graded B

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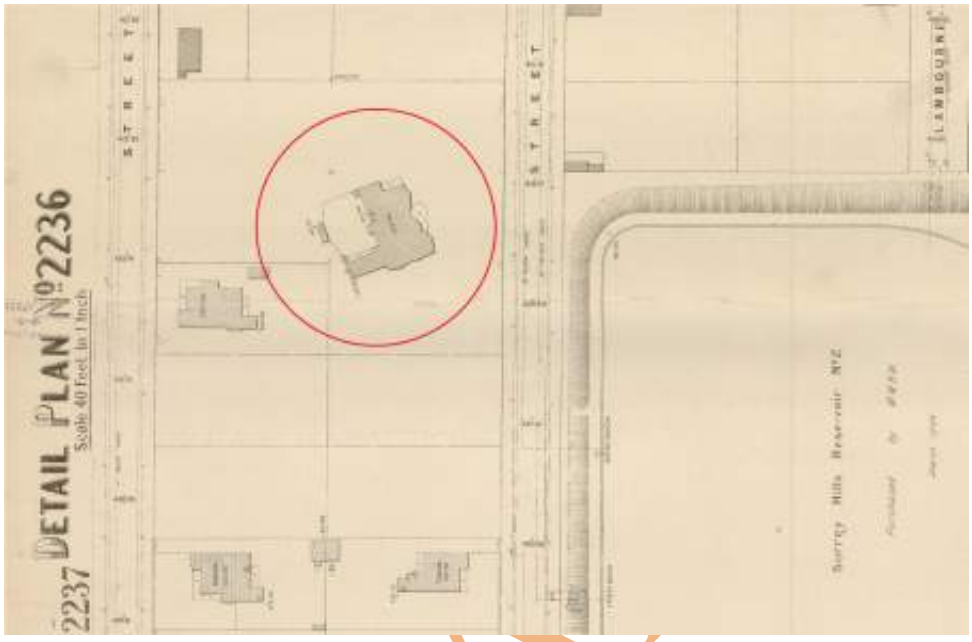
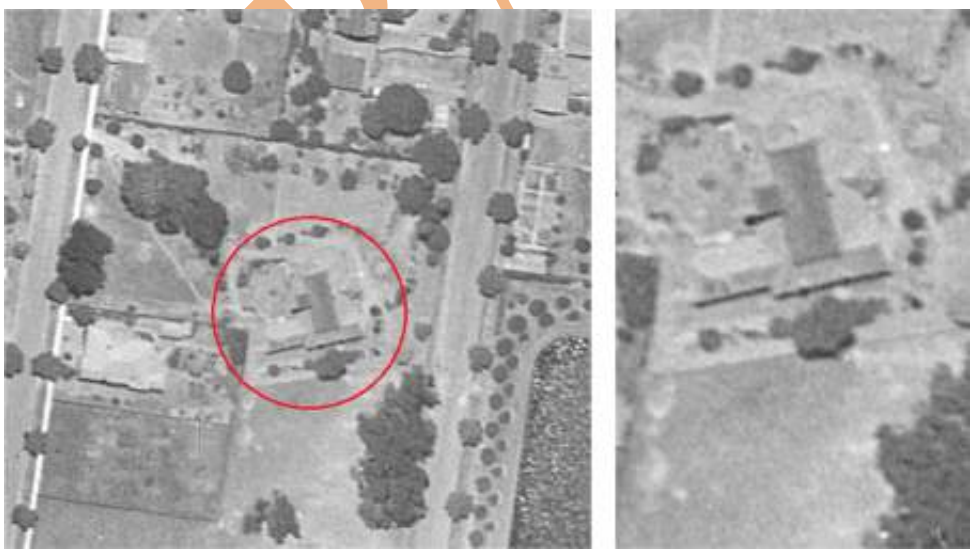
Historical Images



Excerpt from MMBW Detail Plan No 2236 (April 1927), showing footprint of Mixbury at 4 Bentley Street
Source: Map Collection, State Library of Victoria



Excerpt from 1945 aerial photograph (and enlarged detail, right), showing Mixbury in Bentley Street. Note expansive curtilage with landscaping setting and frontage to Newton Street. Note outline of widow's walk
Source: City of Whitehorse Maps. <https://map.whitehorse.vic.gov.au/index.html>

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	OFFICE BUILDING	**Citation Number**	004
Other name/s	Branch bank (State Savings Bank)	**Melway reference**	62 G2
Address	2 Brentford Square FOREST HILL		
Date/s	1970-72		
Designer/s	State Savings Bank Architectural Dept (John McCorriston)		
Builder/s	Unknown		
Heritage Group	Commercial		
Heritage Category	Bank		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	5 BUILDING WHITEHORSE'S INDUSTRIES AND WORKFORCE 5.3 Banking and finance				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The building at 2 Brentford Square, Forest Hill, was erected in 1970-72 as the Parkmore branch of the State Savings Bank of Victoria, to a design by the bank's in-house architectural department.

The now-defunct State Savings Bank of Victoria (SSBV) traced its origins back to 1842, when the Savings Bank of Port Phillip commenced business in Melbourne. Subsequently taking over several other savings banks, it amended its name after new legislation was passed in 1912. Over the next three-quarter century, it saw notable statewide expansion, and, by the late 1980s, had over seven hundred branches, including twenty in central Melbourne alone. The SSBV expanded into Forest Hill in the early 1960s, when a new retail hub, the Parkmore Shopping Centre, was developed on the corner of Canterbury Road and Stevens Street, to comprise two strips of shops in an L-shaped configuration around a carpark. The SSBV acquired one of the new shopfronts in the southern block, addressed as 20 Brentford Square, which opened in June 1962 as the new Parkmore branch (officially, Branch No 318) (*Age*, 30/05/1962:5). As demand for banking services rose, the premises became cramped. Proposing new and larger purpose-built premises nearby, the SSBV acquired the last remaining undeveloped site, at the opposite end of Brentford Square's south block.

As was the case with many banks, the State Bank maintained its own in-house architectural department, responsible for the design, construction and maintenance of branches. From the mid-1950s, the position of Chief Architect was held by Robert Cousland (1908-1973), who oversaw a team of Staff Architects in the tasks of design, documentation and supervision. Amongst these was John Wellesley McCorriston (1933-1998), who was already employed by the bank when he became registered as an architect in 1964. He had designed several branches in the metropolitan area (including those at Camberwell East, Auburn South and Burnley North) and regional Victoria when entrusted with the project for the new Parkmore branch at Forest Hill. The drawings, dated June 1970, have a title block that records Cousland as Chief Architect, with McCorriston simply noted as "architect" (although, when building was later published, McCorriston would be credited conclusively as Project Architect). Occupying a narrow corner site, the building comprised an elongated banking chamber with manager's office and records room at the north end, with the strong room to the south, and a split-level area providing staff room and toilets upstairs with a delivery dock/secure parking area underneath.

A perspective drawing of the building appeared in the bank's magazine, *Statesman*, in April 1972, when it was reported that "nearing completion this month, the rather austere grey concrete block exterior of this branch will contrast with the white painted interior". After the new branch opened the following month, a photograph and further coverage appeared in the August issue, reporting "dramatic lighting fixtures and a striking carpet design are the interior highlights of the Parkmore branch: the lights are suspended triangular clusters in timber frames, the carpet is mustard-toned with a pattern of rich red circles".

After the SSBV was taken over by the Commonwealth Bank in 1990, the building was re-purposed as a branch of the latter, prompting minor physical changes such as repainting and new signage. The branch closed in the late 2010s and the building has since been leased as office space.

Physical Description

Occupying a relatively narrow corner site at the eastern edge of a block of shops, the former bank branch at 2 Brentford Square, Forest Hill, is a single-storey building in the post-war Brutalist style. Of concrete block construction, it has a varied roofline with a long low gable, terminated at either end by steep and jagged skillion forms, which incorporate east-facing clerestory windows with large metal-framed sashes. These skillions are clad in metal tray decking, with some pyramidal skylights visible at the rear. A flat-roofed canopy extends along the east side of the building (facing the pedestrian mall), partially returning along the north and south frontages.

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The north and elevations of the building are double-fronted, asymmetrical and mirror-reversed, each with a recessed bay to the east side, sheltered by the returning canopy roof, which is supported at the outermost ends by overscaled projecting concrete beam. On the north side, there are two beams with three flush-mounted square light fittings between. To the right side, a large projecting rainwater head at the base of the skillion clerestory has been conspicuously expressed. The public entrance, underneath the canopy proper, has a full-height window wall with sliding glass doors. On the south side of the building, a corresponding standard doorway provides a staff-only rear entrance, with a delivery dock alongside that has a metal roller shutter. There are also several full-height window bays along the east elevation.

The concrete blockwork has mostly been overpainted but some unpainted areas remain visible, namely the west wall (as seen from the rear) and the inner faces of the clerestory skillions.

Comparative Analysis

Branch banks

Purpose-built branch banks are underrepresented on the heritage overlay schedule. As of 2024, the only examples individually listed appear to be the pre-war SSBV branch at 957 Whitehorse Road, Box Hill (1912) (HO116), built to accommodate a bank agency that ran from the adjacent post office for many years, and the former ES&A Bank branch at 153-155 Springvale Road, Nunawading (1957) (HO290), with a bold polygonal-themed design by that bank's Chief Architect, Stuart Macintosh. Many other purpose-built branch banks survive in local shopping strips, from pre-war and post-war eras, in various states of intactness, and often no longer in use as banks.

While the SBBV had a dozen branches in what is now the City of Whitehorse by the late 1980s, Parkmore was the only one to be profiled and illustrated in the regular 'Progress in Premises' section of the bank's own magazine (and, furthermore, not once but twice). Its architectural distinction is evident when compared with other local SSBV branches from the later 1960s, typified by the simpler flat-roofed brick buildings on similar corner sites at 515 Middleborough Road, Box Hill North (c.1965), and 79 Station Street, Burwood (c.1968). After Parkmore opened in 1972, there would no new SSBV branches in Whitehorse until the later 1970s, demonstrated by those at 40 Burwood Highway, Burwood East, and 532 Mitcham Road, Mitcham, both designed in a slicker and simpler corporate style.

Brutalism

The Brutalist style in modernist architecture, broadly characterised by a stark, raw materiality (famously, exposed concrete block) and sharp, angular expression in plan and elevation, emerged gradually in Australia in the 1960s, maturing and rising in popularity in the 1970s, lingering into the early 1980s. Currently, there are no examples of Brutalism on the heritage overlay schedule.

Designed in 1970, the former SSBV branch is a notably early local manifestation of the Brutalist tendency, predating several larger institutional examples such as the Junior School at Kingswood College, 335 Station Street, Box Hill South (Earle, Shaw & Partners, 1971-72), the school library at Mount Scopus College, 345 Burwood Highway, Burwood East (Daryl Jackson Evan Walker, 1973), the Student Wellbeing Centre at Presbyterian Ladies' College, 141 Burwood Highway, Burwood (1975) and Livingstone Primary School, 25-29 Livingstone Road, Vermont South (Public Works Department, 1976-78). The extent to which these buildings express a Brutalist spirit varies: some use concrete blockwork (Kingswood College; Livingstone Primary School), others use off-form concrete (Mount Scopus College), or a mix of off-form concrete and face brickwork (Presbyterian Ladies' College). All four buildings have less dramatic rooflines than the branch bank, but express a bold sculptural aesthetic in other ways, such as projecting curved bays (Livingstone Primary) or heavily modelled concrete staircases (Mount Scopus; Presbyterian Ladies College)

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Few comparably small-scaled examples of Brutalism have yet been identified in the City of Whitehorse. A compact two-storeyed concrete block house at 7 Karwitha Drive, Vermont (1973) was designed by architect Michael Morris, whose firm, Morris & Pirrotta, were the pioneers of applying the Brutalist style to residential architecture in Melbourne. A tiny but eye-catching local example of Brutalism, seeming dating from the later 1970s, is the toilet block along the Whitehorse Road frontage of Antonio Park in Mitcham, with stark walls of clinker brickwork and a boldly modelled slab-like concrete roof with skillion clerestory vents at either end.

Statement of Significance

What is significant?

The former SSBV Parkmore branch at 2 Brentford Square, Forest Hill, located at the eastern end of a retail strip, is a single-storey concrete block building in the Brutalist style, with an angular roofline importing steep skillion clerestory windows and simple elevations with full-height windows and a wraparound canopy to three sides. Erected in 1970-72, the building was designed by John McCorriston, a project architect in the SSBV's in-house architectural department.

Significant fabric is defined as the exterior of the original 1970-72 building. Specific elements of significance include the concrete blockwork (since largely overpainted), angular roofline with steep clerestories and full-height glazing, the wraparound canopy to three sides, the full-height windows, projecting concrete beams and the overscaled rainwater head to the north facade.

How is it significant?

The former SSBV Parkmore branch at 2 Brentford Square, Forest Hill, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

Aesthetically, the former branch bank is significant as an example of Brutalist architecture, incorporating such defining characteristics as stark concrete blockwork, a jagged roofline with steep clerestory windows, and a sculptural expression of projecting beams and a rainwater head. Designed in mid-1970, when the style was still maturing on the Melbourne architectural scene, it can be considered as a notably early manifestation of the Brutalist tendency within the City of Whitehorse, and perhaps on even broader scale (*Criterion E*).

References

State Savings Bank of Victoria, "New branch bank, Parkmore: Lot No 3, corner Chermar and Stevens Road, Forest Hill", working drawings, dated 1 June 1970.
Building Permit No 18817/1971, City of Whitehorse.

"Progress in premises", *Statesman*, April 1972, p 4.

"Progress in premises", *Statesman*, August 1972, p 8.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) – Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review (2016)* – Appendix 2, graded A

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Historical Images

Perspective of John McCorriston's design for the State Bank's new Parkmore branch at Forest Hill
Source: Statesman, April 1972.

Exterior and interior photographs at the time of the branch's opening in May 1972
Source: Statesman, August 1972.

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

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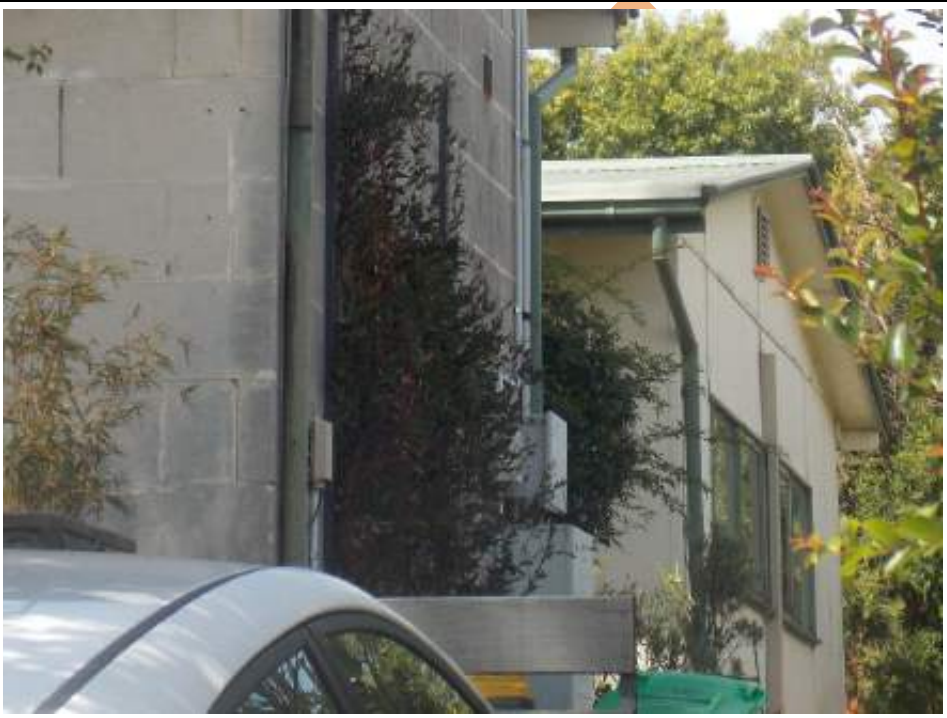
10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	005
Other name/s	*Lark Rise*	**Melway reference**	61 J6
Address	132 Burwood Highway BURWOOD EAST		
Date/s	1949		
Designer/s	Robin Boyd		
Builder/s	Robin Boyd		
Heritage Group **Heritage Category**	Residential buildings (private) House		



Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	9 SHAPING WHITEHORSE'S CULTURAL AND CREATIVE LIFE 9.4 Visual Arts					
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☐ Good ☐ Good	☑ Fair ☑ Fair	☐ Poor ☐ Poor	
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls					
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf				

Place History

The house at 132 Burwood Highway, Burwood East, was erected in 1949 for Mrs Susan Boyd, to a design by her son, well-known architect Robin Boyd.

Born in Brisbane, Edith Susan Gerard Anderson (1880-1961) travelled to Europe in 1905, studying at the Slade School of Fine Art in London and then living in Paris for a time, where she modelled for well-known Australian impressionist painter E Philips Fox. He introduced her to fellow artist Penleigh Boyd, whom she married in 1912. Returning to Melbourne, the couple settled in Warrandyte, where Penleigh designed a built a house, named *The Robins*. Widowed in 1923 with two young sons, Mrs Boyd sold *The Robins* and lived in a flat in Toorak before buying a modest bungalow in Malvern East, where she raised her boys. She was still living there in the late 1940s, when she commissioned her son, a registered architect since 1946, to design her new house and studio at Burwood East (then known as Tally Ho, and still a largely rural area). At the time, Robin Boyd (1919-1971) was thirty years old: he had completed his studies, married, served in WW2 and resumed civilian life as an architect, briefly in partnership with army colleagues Kevin Pethebridge and Frank Bell, before becoming inaugural director of the new RVIA Small Homes Service (SHS) in 1947. While his work for the SHS was not conducive to maintaining full-time private practice in parallel, Boyd still completed a string of commissions under his own name prior to 1953, when he left the SHS to enter into celebrated partnership with Roy Grounds and Frederick Romberg.

Boyd's drawings for his mother's house at Burwood East, simply titled "Studio at Burwood Road, Nunawading [*sic*], for Mrs Penleigh Boyd", are dated February 1949. His scheme proposed a deceptively simple gable-roofed timber-framed and cement-sheeted dwelling on a rectangular footprint that belied unusual planning within: a large studio and living room, separated by a double fireplace, with a row of service spaces along the rear, providing dressing room, laundry and two tiny bathrooms. There appears to have been no separate kitchen: instead, there was a single bench, with cupboards and a sink, along one wall of the studio.

In June 1949, the architect himself applied for the building permit, giving his own name as the builder of record. Construction was estimated to cost a mere £1,600, equivalent to $107,000 in 2023. A permit was issued on 12 July and work had been completed by the following year, when an newspaper reported that Mrs Penleigh Boyd would soon hold a party at "her new home, *Lark Rise*, at Tally Ho", to raise money for the Save the Child Fund (*Age* 15/04/1950:5). The name of the house referenced a popular novel, *Lark Rise to Candleford* by Flora Thompson, published in 1945. The fundraising event proved to be one of many occasions when Mrs Boyd would open her house/studio to the public for similar purposes over the course of the decade. Subsequent events held at *Lark Rise* included a lecture by sculptor Ola Cohn (*Argus* 11/04/1951:9), several exhibitions of Mrs Boyd's own artwork (*Age* 03/09/1951:5; *Argus* 24/05/1952:8), some 'moonlight concerts' with guest vocalists and film screenings (*Age* 23/02/1956:8; 13/03/1957:8, and a Christmas party with carol singing (*Age* 06/12/1957:8), with a treasure hunt and games for children. Invariably, contemporary reports described the venue as Mrs Boyd's "studio", *Lark Rise*.

Visited weekly by her sons Robin and Pat, and their families, Mrs Boyd resided happily at *Lark Rise* for more than a decade, during which "she enjoyed creating an English garden and growing roses over the porch, and continued to sketch in the neighbourhood" (Serle:138). A talented artist in her own right, working in watercolours and miniatures, her late output includes a number of depictions of *Lark Rise*. Following her death in March 1961, "after a short illness, at Tally Ho" (*Age* 03/04/1961:3), her estate passed to her two sons, who promptly sold *Lark Rise*. The next owners, a mining engineer and his wife, added a large front wing with a connecting link, creating a C-shaped footprint around a central paved courtyard. In 1966, the large corner block was subdivided, leaving the house on a smaller lot with a right-of-way to Tiller Street (COT 8639/041).

The property has had only one other owner since 1967.

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Physical Description

Note: The original house is only partially visible from the public realm, due to the semi-detached addition that was added in the 1960s, which extends across the street frontage.

The original house/studio at 132 Burwood Highway, Burwood East, is a single-storey timber-framed building on a rectangular plan, with a low gabled roof clad in corrugated metal sheeting (replacing the original roofing of corrugated cement sheeting), and external walls clad in flat cement sheeting with strapped joints. The western end of the house, which is the principal part that remains visible from the public realm, has a long rectangular window with four timber-framed sashes, and a small louvred vent to the gable end above.

The front wing, added in the 1960s, is of similar scale and form, with a low gabled roof clad in clad in corrugated metal sheeting, and walls of unpainted concrete block. On its street frontage, large windows and french doors open onto an elevated bluestone terrace.

Comparative Analysis

Robin Boyd, who designed his first buildings as a teenager in the late 1930s, was prolifically active as an architect for over three decades before his premature death in 1971, aged only 52 years. During that time, he designed numerous buildings in what is now the City of Whitehorse. By far the largest and most prominent of these was a factory for Turner Industries at 396-408 Whitehorse Road, Nunawading (1956), but this was demolished in the early 1990s. The remainder of Boyd's local output was residential, mostly comprising individual private dwellings, as well as a display house for a standard project house, and some residential alteration work. As of 2024, there, there are five examples of Boyd's work on the heritage overlay schedule: the Ednie House at 3A The Avenue, Blackburn (1955) (HO82), the Pearce House at 34-40 Moore Road, Vermont (1957) (HO64), the Mannerheim House at 134 Central Road, Blackburn (1958) (HO26), the display prototype of the FLER project house at 150 Canterbury Road, Blackburn South (1958) (HO284), and the Noble House at 3 Villa Mews, Vermont (1965-66) (HO292). The first four date from the celebrated partnership of Grounds, Romberg and Boyd (from 1953 and 1960), and the last from its subsequent incarnation as Romberg & Boyd (1960 onwards).

Boyd's pre-1953 output remains entirely unrepresented on the heritage overlay schedule. There are some houses in the municipality built to standard designs that he prepared for the SHS from 1947 to 1953, during his time as director. However, these were not personally supervised by him, and must be considered distinct from any one-off private commissions under his own name. Boyd undertook relatively few such projects during his early years in private practice, encapsulating his brief partnership with Pethebridge and Bell in 1945-46, and subsequent sole projects before joining forces with Grounds and Romberg. Apart from his mother's house/studio, the only other pre-1953 Boyd project yet identified in the municipality is the Harrison House, still standing at 457 Mitcham Road, Mitcham (1946). Dating from the Pethebridge and Bell period, it was designed by Boyd and documented by Pethebridge. As originally built, it was a split-level flat-roofed brick house on a stepped T-shaped plan, although was enlarged in the early 1960s with a substantial new front wing that entirely concealed the earlier portion. Photographs from recent online real estate listings, however, suggest that the 1946 house remains substantially intact at the rear. In its scale, planning, materiality and detailing, it is very different to the Susan Boyd house/studio. As both houses are necessarily rare as very early undertakings by one of Australia's most celebrated architects, they are both likely candidates for individual heritages overlays.

Considered more broadly amongst Boyd's large body of work, *Lark Rise* is one of very few projects that he undertook for members of his close family during his early years. These include an earlier and more modest art studio for his mother at Ferntree Gully (1936), a grander counterpart for his cousin Arthur Boyd at Murrumbeena (1938; demolished), and two houses for his brother John "Pat" Boyd, at Balwyn (1948) and Mount Martha (1947).

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Statement of Significance

What is significant?

The former Boyd House/Studio at 132 Burwood Highway, Burwood East, is a single-storey gable-roofed timber-framed building. Erected in 1949 for artist and former artists' model Mrs Susan Boyd, it was designed by her son, eminent architect Robin Boyd.

Significant fabric is defined as the exterior of the original 1949 building. Specific elements of significance include the simple strapped cement sheet cladding and original fenestration.

The L-shaped front wing, which was added in the 1960s and largely conceals the original house from the street, is not significant.

How is it significant?

The former Boyd House/Studio at 132 Burwood Highway, Burwood East, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion B: Possession of uncommon, rare or endangered aspects of our cultural history.
- Criterion H: Special association with the life or works of a person, or group of persons, of importance in our history.

Why is it significant?

The building is architecturally significant as a rare example of an early private commission by eminent architect Robin Boyd, dating from his earlier years in private practice before forming his celebrated partnership with Roy Grounds and Frederick Romberg in 1953. While Boyd designed a number of projects during this period of his career, encapsulating a brief partnership with Kevin Pethebridge and Frank Bell (1945-46) followed by what was Boyd's only stint in sole practice (1947-53), relatively few of these buildings were realised and fewer still remain standing today. (*Criterion B*)

The building is significant for special associations with Robin Boyd. It was one of a very small number of architectural projects that he undertook for members of his immediate family, and the only house that he ever designed for his own mother. Because of this unique personal association, the project was one of few where the architect himself acted as builder of record, and, upon completion, would return regularly, making weekly visits until his mother's death in 1961. (*Criterion H*)

References

Robin Boyd, "Studio for Mrs Penleigh Boyd, Burwood Road, Nunawading", working drawing, dated 1 February 1949. Collection of Peter Pass, Melbourne (Courtesy Tony Lee).

City of Nunawading building permit application No 549, dated 29 June 1949. Permit Application Book, West Ward, 1949-50. VPRS 10801/P0, PROV.

Marjorie Tipping, "Boyd, Edith Susan (1880–1961)", *Australian Dictionary of Biography*, <https://adb.anu.edu.au/biography/boyd-edith-susan-5611/text8993>

Philip Goad et al, "Chronological list of works by Robin Boyd", *Transition* No 38 (1992), pp 193ff.

Geoffrey Serle, *Robin Boyd: A Life* (1995), pp 138-39.

Previous Heritage Studies

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 2, graded A

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Historical Images

Excerpt of aerial photograph (1951), showing Mrs Boyd's house surrounded by orchards and farmland
Source: City of Whitehorse Maps. <https://map.whitehorse.vic.gov.au/index.html>

Rear view of Lark Rise, studio and residence of Mrs Susan Boyd, as photographed by a neighbour, c.1952.
Source: Collection of Denheld Family, Melbourne (Courtesy Tony Lee).

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

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10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	006
Other name/s	*Tooloongatta*	**Melway reference**	46 K12
Address	760 Canterbury Road SURREY HILLS		
Date/s	c.1915		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.4 Early twentieth century development				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The house at 760 Canterbury Road, Surrey Hills, was erected c.1915 for Samuel and Fannie Foy.

A civil servant, Samuel Foy (1856-1927) worked for many years as a clerk in the State Treasury Department. At the time of his marriage in 1908, to widow Fannie Elizabeth Herschell, *nee* Mann (1861-1944), he was living in the Albert Park Coffee Palace. The couple then took up residence in *Carlowie*, a Victorian villa in Prospect Hill Road, Camberwell. The subsequent moved to Surrey Hills seems to have been prompted by Foy's retirement from the Treasury Department circa 1913, by which time, aged 57 years, he held the position of Senior Clark in the Receipt & Pay Office (*BH Reporter*, 18/11/1927: 7).

In early 1914, Fannie Elizabeth Foy became the registered owner of three blocks of vacant land at the west corner of Canterbury Road and Bentley Street, comprising Lots 42, 43 and 44 of the *Chicken Farm Estate*, subdivided in 1885. In 1915, the *Sands & McDougall Directory* recorded a "house being built" at that location (being the only entry on the south side of Cantebrury Road, between Newton and Bentley Streets), with Samuel Foy listed in residence the following year at what was then designated as 132 Canterbury Road. Completion of the house by 1916 is confirmed by classified advertisements for domestic staff, citing the same address (*Argus* 01/03/1916:15, 03/06/1916:13). Electoral rolls indicate that the Foys named their new house *Tooloongatta*. Samuel Foy died in 1927 and his widow Fanny remained in residence until her own death in 1944. During her later tenure, the street address was renumbered from 132 to 760.

In early 1950, the house was acquired (for the sum of £9,000) by the Evangelical Lutheran Church, which intended to adapt it for use as a children's home, specifically intended for the offspring of widowed female migrants who were engaged in full-time employment. The property, described as a "large family residence" with "extensive grounds", would not only provide weekday accommodation (with the children returned to their mothers at weekends) but also educational facilities (*Argus* 25/10/1950:8). The hostel was described as "probably the first of its kind" when officially opened on 22 October 1950 by the Reverend W H Paech President of the Victorian District of the Evangelical Lutheran Church in Australia (*Age* 21/10/1950:12). At that time, there were already twenty children in residence (with capacity for twice that number), under a Latvian-born matron, Mrs Elza Buivids, and two assistants, also Latvian.

The Lutheran Peace Memorial Home, as it was known, proved a great success. A few years later, it was reported that "the present property, a fine brick house in a pretty garden, had provided a happy home for 160 migrant children since it was opened" (*Age* 03/04/1954:11). It was noted that the children attended local state schools, with religious instruction classes held in a hall at the rear of the main house. At that time, the hostel still accommodated only 38 children, under the same three staff, and expansion was proposed to allow for additional children and staff. It was mooted that adjacent land might be acquired in Surrey Hills or that the hostel might relocate elsewhere, either to another large house or to a purpose-built 'cottage style' development. Ultimately, the church bought a larger house in Sackville Street, Kew, where the hostel re-opened in May 1955 and remained in operation until 1973.

When the former hostel property in Surrey Hills was sold, the large corner block was subdivided to create three smaller blocks along the east frontage (762 Canterbury Road; 2a and 2b Bentley Street), retaining the original house on smaller curtilage. This subdivision reduced the landscaped setting and necessitated re-orientation of the driveway and demolition of the hall to the rear. Still addressed as No 760, the house was subsequently occupied by a medical practitioner, Dr Gordon Wray, who ran his practice from the address for many years (*Argus* 02/06/1956:5).

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Physical Description

The house at 760 Canterbury Road, Surrey Hills, is a late Edwardian attic-storeyed brick bungalow. It has an irregular roofline, hipped and gabled, clad in slate with terracotta ridging and tall roughcast rendered chimneys. The asymmetrical street frontage is dominated by an off-centre half-timbered gable end to the attic storey, with a smaller gable end to the entry porch on the right side, and an even smaller gabled dormer window to the left. The two large gable ends have timber shingles and louvred vents. At ground level, external walls have red brickwork exposed to dado height, with roughcast render above. There is an off–centre bowed window bay, flanked on one side by the entry porch and on the other by a narrower porch that extends along the east side (what would have originally been the Bentley Street frontage). Both porches are similarly detailed, with brick piers, dwarf walls and timber posts with long tapering brackets and slat friezes.

The detached gable-roofed brick garage to the west, designed in a manner that echoes the forms and finishes of the house, is not original but was added in the early 2000s.

Comparative Analysis

Architectural/aesthetic

The heritage overlay schedule includes a few comparable attic-storeyed brick bungalows in the Surrey Hills and Mont Albert area. *Whitchurch*, at 16 Churchill Street, Mont Albert (1915) (HO136) is more explicitly in an Arts & Crafts idiom, with a cross-ridged terracotta-tiled roof, bracketed eaves, face brickwork and a porch with large brick piers. The house at 12 Zetland Road, Mont Albert (1914) (HO172), is also in the Arts & Crafts mode, but with more uncommon detailing such as the oriel window, strapwork and buttress-like stepped piers.

More comparable, albeit later, is *Goodwood* at 744 Canterbury Road (1919) (HO24). Similarly scaled and also designed for a large corner site, it has much in common with nearby No 760, namely the half-timbered and shingled gable-end, bow window and face brickwork with roughcast render. However, dating from a few years later, it is more explicitly in an inter-war bungalow style, typified by the round-arched porch that contrasts with the verandah timberwork at No 760. Much the same can be said of other attic-storeyed brick bungalow of the later 1910s and the early 1920s, including the fine example at 40 Churchill Street, Mont Albert, (1919-20) (HO138), and others, not on the heritage overlay schedule, at 17 Rostrevor Parade, Mont Albert North (c.1923), 99 Warrigal Road, Burwood (c.1924) and 3 Harding Street, Surrey Hills (c.1925).

The house at 760 Canterbury Road stands out amongst more contemporaneous attic-storey brick bungalows not yet on the heritage overlay schedule. Two examples at 6 Pembroke Street, Surrey Hills (c.1914) and 396 Mont Albert Road, Mont Albert (c.1915) are similarly expressed with red brick walls, broad gabled terracotta-tiled roofs with attic balconies, and balanced (if not symmetrical) facades with double return verandahs. These contrast sharply with No 760, with its more picturesque irregular roofline of slate cladding and terracotta ridging, and its asymmetrical facade with separate entry porch and side verandah with their distinctive timberwork.

Historical

The post-war use of the house as the Lutheran Peace Memorial Home reflects an important theme of social welfare that recurred across the City of Whitehorse (and specific suburbs therein) for much of the twentieth century. The hostel was predated the Burwood Boys' Home in Warrigal Road, Burwood (1895), of which no buildings now survive, and by the Tally Ho Boys' Home (1903), Kildonan Children's Home (1937), and Orana Peace Memorial Home (1950), of which some buildings remain. The surviving Kildonan buildings, at 70 Elgar Road, Burwood, are included on the heritage overlay schedule (HO259), while the remnants at Tally Ho and Orana has been recommended for inclusion as part of the present study (see citations for 27, 27A & 29 Carrington Court, Burwood East, and 17 & 14-18 Livingstone Close, Burwood).

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In all of these cases, the remnants are purpose-built structures. As an example of an existing building adapted for welfare use, *Tooloongatta* is most comparable to *Tyneholm*, a grand Victorian house at 310 Elgar Road, Box Hill (HO108), which was occupied by the Salvation Army Boys Home from 1913 onwards. The Statement of Significance for *Tyneholm* ascribes historical significance for being "one of a few remaining nineteenth and early twentieth century buildings associated with children's welfare organisation".

While the Lutheran Peace Memorial Home operated from *Tooloongatta* for just under five years, before moving to Kew, the organisation maintained links with what is now the City of Whitehorse. In March 1971, an off-shoot for older children, known as the Lutheran Teenage Family Care Home, was officially opened at 755 Station Street, Box Hill. Subsequently a number of private houses were acquired in Mitcham, Nunawading and Blackburn South for use as family group homes. The hostel in Station Street closed in 1983, and the site was redeveloped as offices of the Lutheran Church, which still operates from that address. Thus, the use of *Tooloongatta* as a Lutheran children's home, however brief, marks the start of an association that lingered and recurred in the City of Whitehorse into the 1980s and beyond.

Statement of Significance

What is significant?

The house at 760 Canterbury Road, Surrey Hills, is a late Edwardian brick and roughcast attic-storey bungalow with irregular slate-clad roof and asymmetrical façade with prominent half-timbered and shingled gable ends, entry porch and side verandah. Erected in c.1915 as a private residence for retired civil servant Samuel Foy, the house was repurposed in 1950 as the Lutheran Peace Memorial Home, a venue to providing accommodation for children of widowed migrant women in full-time employment.

Significant fabric is identified as the exterior of the original c.1915 house. Specific elements of significance include the slate roof, terracotta ridging, face brick and roughcast render, shingled and half-timbered gable ends, bow window, and timber detailing to the porch and verandah.

How is it significant?

The house at 760 Canterbury Road, Surrey Hills, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

Historically, the house is significant for associations with the Lutheran Peace Memorial Home, a welfare hostel with an innovative programme to provide weekday accommodation for migrant children whose widowed mothers were in full-time employment. Founded in 1950, the hostel only operated from Surrey Hills for five years before relocating to Kew, but it marked the start of an association with the City of Whitehorse that resonated into the late twentieth century, with further homes established (also in existing houses) in Box Hill, Mitcham Nunawading and Blackburn South in the 1970s. (*Criterion A*)

Aesthetically, the house is significant as one of the more striking local examples of an attic-storey brick bungalow of the 1910s. In contrast to a number of contemporaneous houses characterised by simpler forms and more symmetrical expression, this house stands out for its picturesque irregular roofline, with hips, gables and dormers, and asymmetrical façade with offset entry porch and side verandah. It incorporates detailing and finishes that are less common in attic bungalows of the era, notably the slate roof with terracotta ridging, and the distinctive timberwork to the entry porch and side verandah. (*Criterion E*)

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References

Certificate of Title, Volume 2006, Folio 114 (29 March 1888).

Sands & McDougall Directory.

"Obituary: Mr Samuel Foy", *Box Hill Reporter*, 18 November 1927, p 7.

"Lutherans buy child hostel", *Age*, 21 October 1950, p 12.

"Meet a New Australian", *Good Neighbour* [Canberra], 1 June 1952, p 3 (profile of Mrs Elza Buivids)

"Lutherans hope to enlarge Peace Home", *Age*, 33 April 1954, p 11.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) – Schedule 2, graded B

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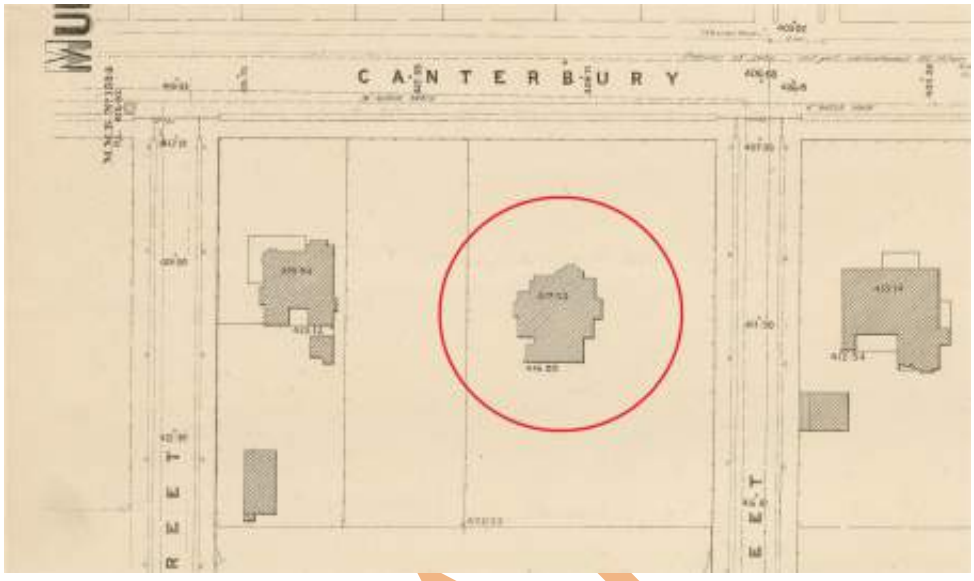
Historical Images



Excerpt from MMBW Detail Plan No 2236 (April 1927), showing footprint of 760 Canterbury Road
Source: Map Collection, State Library of Victoria

Official opening of the Lutheran Peace Memorial Home, 1950
Source: Age, 28 October 1950

Matron Elza Buivids with child migrants
Source: Age, 3 April 1954

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	BLOCK OF FLATS (3)	**Citation Number**	007
Other name/s	Tally Ho Memorial Hall / Chapel	**Melway reference**	62 C9
Address	27, 27a and 29 Carrington Court BURWOOD EAST		
Date/s	1929-30		
Designer/s	Alec S Eggleston		
Builder/s	Unknown		
Heritage Group	Institutional Places		
Heritage Category	Reformatory		

Photographs by Built Heritage Pty Ltd, February 2024

Historical themes	8 BUILDING COMMUNITY LIFE 8.3 Health and welfare 8.3.3 Children's homes					
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☐ Good	☐ Fair ☑ Fair	☐ Poor ☐ Poor	
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls					
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf				

Place History

The building at 27, 27a and 29 Carrington Court, Burwood East, was erected in 1929-30 as the Memorial Hall at the Tally Ho Boys' Village, to a design by architect Alec Eggleston. After the home ceased operation in the 1980s, it was converted into a large single residence and thence into three smaller self-contained dwellings.

The Tally Ho Boys' Training Farm, as it first known, was founded by the Methodist Church Mission (ECM) to accommodate male youths with troubled backgrounds, and to train them in agriculture and husbandry. In July 1903, the ECM acquired a 32-acre orchard in Burwood East, where an existing house and out buildings were adapted for the first intake of 25 boys. By the end of the year, an adjacent 52-acre orchard was purchased, and its larger brick house became the staff residence. The next decade or so saw the acquisition of further acreage and expansion of facilities: a timber dining hall that doubled as a chapel and schoolroom (1905), two dormitory blocks and a new purpose-built schoolhouse (1908), an acetylene plant to provide an electricity supply (1911), and a bakehouse (1915).

A swimming poll was installed in 1925, but the next major addition was the large building referred to as the Tally Ho Memorial Hall, which was to provide a new dining room and kitchen (with servery, scullery, pantry and cold store) and a bakehouse for instructing the boys in bread-making. Designed in a suitably institutional Gothic style by prolific Methodist architect Alec Eggleston (1885-1955), the hall was to cost £4,000, funded by a donation from the Aikman family. In August 1929, a newspaper report reproduced Eggleston's sketch and confirmed the new building to be "now in course of construction" (*Herald* 14/08/1929:11). It was noted that the dining hall, measuring 50 by 30 feet (15 by 9 metres), had "a large open fireplace at one end and a platform at the other", and that "a feature of the hall will be the lofty open timbered roof with heavy wooden beams". Early the following year, it was reported that the new hall "will be completed shortly" (*Herald*, 23/1/1930:31), with an official opening announced to take place on Saturday, 8 March 1930 (*Age*, 15/2/1930:22).

By the later 1930s, welfare homes of this type began to embrace a less institutional approach, with accommodation provided in a more domestic scale, often referred to as "cottage style". While the first "cottage style" residence was built at Tally Ho in 1939, further expansion was delayed by WW2. In 1946, a new masterplan for the site was prepared by architects Bates, Smart & McCutcheon, which proposed two groups of cottages that were completed in 1952 and 1955. Further innovations were initiated by Ian Cox, who was superintendent from 1957 to 1962. When he took over, the boys attended religious services at a local Methodist church ("a walk of a couple of kilometres"), so he proposed an on-site chapel. The Memorial Hall, latterly neglected, was repaired, restored and repurposed, with furniture and fittings sourced from local churches, including an organ from the Benson Street Methodist Church in Surrey Hills. Officially opened by the Reverend Sir Irving Benson, the chapel proved an important new focus for village life, with Cox noting "the chapel was a central point, and the cottage families were able to come together there". It hosted its first wedding in March 1961 (*Age* 06/03/1961:6), as well as the christenings of Cox's own children.

When the Tally Ho Boys' Village finally ceased operation in the 1980s, the site was sold for subdivision and the buildings gradually demolished except for the former Memorial Hall, retained on a block along the east side of newly-formed Carrington Court. Circa 1989, it was converted into a "large luxurious mansion", with the dining hall becoming an open-planned living area, the caretaker's office a laundry, the bakehouse a three-car garage, and with new bedrooms and bathrooms inserted at the attic level (*Age* 13/03/1991:35). This "mansion" has since been converted into three smaller self-contained flats.

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Physical Description

The former Tally Ho Memorial Hall, which now comprises three separate residences, is a large red brick building on a T-shaped plan, with the former dining hall to the rear (east), and the former service wing projecting westwards to Carrington Court. The taller and more prominent element, the dining hall has a very steep tile-clad gabled roof. Its north elevation is relatively plain, while the south elevation (formerly the main façade to Highbury Road, from where it is still visible) is more embellished, having a projecting central bay with rendered parapet and matching dripmould to a tall lancet arched window with (non-original) leadlight glazing depicting bunches of grapes. A side porch, facing Carrington Court and providing access to one of the three residences, has a steep parapeted gablet and an arched doorway.

The Carrington Court street frontage is otherwise dominated by the projecting service wing. This has a gentler pitched roofline with dormer windows and a gable end clad in weatherboard, incorporating a large tripartite window. At ground level, there is a small gabled entry porch to the left side (providing access to another residence), alongside a segmental-arched garage door with a roller shutter. A partly-rendered buttress-like wing-wall projects from the right (south) side of the street facade.

Comparative Analysis

The former Memorial Hall is demonstrably unique as the last surviving building from the Tally Ho Boy's Village, with a review of historical aerial photographs confirming that no other elements remain. Two of the earliest buildings disappeared while the home was still in operation: the former orchard homestead (latterly the superintendent's residence) was destroyed by fire in 1962, and the original dormitory block alongside was razed in the later 1970s. When redevelopment of the property began in the 1980s, the first buildings to be demolished were the grouped cottages (1952-55), and the former staff quarters on Highbury Road. By 1987, new streets had been created, and the Memorial Hall was the only building east of Carrington Court. To the west side, all that remained were the schoolhouse, playing fields and three post-WW2 buildings including the gymnasium/indoor pool. The last of these, perhaps considered for retention and reuse, was still standing as late as 1993, but was ultimately demolished. This area was then subdivided to create Tally Ho Court.

The former Memorial Hall reflects an important theme of social welfare that recurred across the City of Whitehorse (particularly, a large arc straddling the south-eastern fringe, covering Box Hill South, Burwood and Burwood East) for much of the twentieth century. As of 2024, the heritage overlay schedule includes only two places demonstrative of this theme, both on Elgar Road. *Tyneholm*, a grand Victorian house at 310 Elgar Road, Box Hill South (HO110) retains historical associations with the Salvation Army Boys' Home that occupied it from 1913. The house was enlarged in 1917, with a rear dining hall added in 1924, followed by a separate residential block, the Edward Wilson Trust Cottage, in 1928. During the 1980s and '90s, the large property was gradually redeveloped, when virtually all of the later buildings were razed (including the Edward Wilson Trust Cottage), leaving only *Tyneholme* and the dining hall. While the citation in the 1999 heritage study mentions the dining hall in the history and description, it is not mentioned in the Statement of Significance and, as currently mapped, the extent of HO110 appears to cover only the house itself.

The former dining hall at *Tyneholm*, a gambrel-roofed painted brick building with buttresses that impart a slight institutional Gothic feeling, is the most pertinent comparator to the Tally Hall Memorial Hall. It is slightly earlier in date but simpler in form, with less architectural pretension. Both halls are important as pre-war evidence of this important theme of social welfare in the municipality, and thus worthy of heritage overlay. Consideration should be given to amending the extent of HO110 to include the dining hall.

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Currently, the only other manifestation of this theme on the heritage overlay schedule are the remnants of the former Kildonan Children's Home (HO249) at what was 70 Elgar Road, Burwood (now part of Deakin University, 213-243 Burwood Highway), which developed from the mid-1930s. The overlay is larger and covers several early buildings, namely the administration block (1937), kindergarten (1941), girls' home (1946), and some landscaping.

In addition to these two examples already on the heritage overlay schedule, there are several other places in the City of Whitehorse that illustrate the theme of social welfare and have been identified as potentially significant. Aside from former Tally Ho Memorial Hall (which was flagged as far back as 1994), there are the remnant buildings of the Orana Peace Memorial Home (1945; 1950-60) at what is now Livingstone Close, Burwood. A citation for these buildings, prepared in 2016, has been reviewed and updated as part of the present review, and the recommendation for a heritage overlay is upheld.

Statement of Significance

What is significant?

The former Tally Ho Memorial Hall, at 27, 29a and 29 Carrington Court, Burwood East, is a single-storey gable-roofed red brick building on a T-shaped plan. Erected in 1929-30 to a design by architect Alec Eggleston, it formed part of the Tally Ho Boys' Village that occupied an expansive site on Highbury Road from 1903 until the 1980s. When the facility ceased operation, and all other buildings were demolished, the hall was retained and converted for residential use.

Significant fabric is identified the exterior of the original 1929-30 building. Specific elements of significance include the steep gabled roofline, terracotta tiling, face brickwork with rendered mouldings, the arched entry porch and the lancet arched window with intricate tracery.

How is it significant?

The former memorial hall satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is historically significant as the sole surviving remnant of the former Tally Ho Bays' Village, a welfare facility developed by the Methodist Home Mission to accommodate troubled youths and train them in agricultural and husbandry skills. It was one of a number of facilities associated with the theme of child welfare that recurred across the municipality in the twentieth century, with a strong focus on the Box Hill South, Burwood and Burwood East areas. Established in 1903, the Tally Ho Bays' Village was one of the oldest and longest-running of these centres; its former memorial hall (later chapel), built in 1929-30, is one of only two surviving purpose-built pre-war buildings in the City of Whitehorse associated with this important theme. (*Criterion A*).

The building is aesthetically significant as a modest but striking example of the inter-war Gothic Revival style, as uncommonly applied to a building that was not conceived for ecclesiastical use. Evocative of church architecture, the hall's mediaevalised character, expressed in its steep roofline, rendered mouldings and especially its lancet arched window with intricate tracery, were deemed appropriate for the its institutional/quasi-collegiate use. (*Criterion E*)

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References

"Memorial hall at Central Mission Boys' Training Farm", *Herald*, 14 August 1929, p 11.

"New building nearly finished", *Herald*, 23 January 1930, p 31.

"History of the Boys' Training Farm, now known as Tally Ho Boys' Village, Highbury Road, Tally Ho", 5pp typescript, undated. Item ND2448, Whitehorse Historical Society.

Ian Cox, "Tally Ho Boys Village", 14pp typescript, dated 19 June 1987. <www.findandconnect.gov.au/ref/vic/objects/pdfs/D0000052IanCoxdocument.pdf>

Previous Heritage Studies

Context Pty Ltd, *City of Nunawading Heritage Survey* (1994) – graded C

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

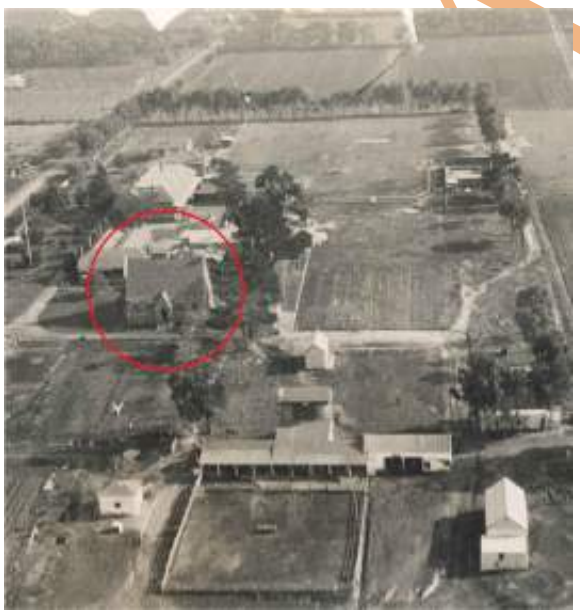
Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 2, graded B (citation)

DRAFT

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

Historical Images

Architect's original sketch, showing south elevation of the proposed Tally Ho Memorial Hall, 1929
Source: Herald, 14 August 1929, p 11.



Aerial photograph, looking west across the Tally Ho Boys' Village in 1935, providing one of the earliest known views of the new memorial hall (circled in red)
Source: <www.findandconnect.gov.au>

A similar aerial view from the 1980s; note the post-war swimming pool and gymnasium complex to the north-west
Source: <www.findandconnect.gov.au>

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	008
Other name/s	Fergie House (former)	**Melway reference**	48 A11
Address	26 Central Road BLACKBURN		
Date/s	c.1948		
Designer/s	Alex J W Fergie		
Builder/s	Unknown		
Heritage Group **Heritage Category**	Residential buildings (private) House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses					
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor	
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls					
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf				

Place History

The house at 26 Central Road, Blackburn, was erected in c.1948 and was designed by architect Alex J W Fergie as his own residence.

An engineer's son, Alexander Johnson William Fergie (1912-1990) was born in Hawthorn. He attended the Melbourne University Architectural Atelier from 1935 to 1938, during which time he won two scholarships (*Herald* 15/02/1936:5; *Argus* 23/12/1937:4). Concurrently with his studies, he gained professional experience in some major city architectural offices, namely Marcus Barlow, Marcus Martin & Tribe, and Scarborough, Robertson & Love. Graduating in April 1938, Fergie went on to establish sole practice, with a city office at 108 Queen Street. During 1939, he won fourth prize in the *Herald* Ideal Home Competition (*Building* 24/06/1939:50), and also designed a large house at Mornington that was profiled in the same newspaper (*Herald* 11/10/1939:13).

In early 1942, Fergie enlisted with the Australian Army and served with the 10th Australian CRE Works, a unit of the Royal Australian Engineers. For a time, he was stationed in Darwin, where the RAE was involved in rebuilding works following the Japanese air raids (Fergie, 2024). In 1944, while still serving in the army, Fergie became engaged to Phyllis May Mumme (1924-1986), a teacher from Echuca. The couple wed in September 1945 (*Age* 03/09/1945:5), two months before his discharge from the army, and took up residence in a modest timber bungalow in Linum Street, Blackburn. Resuming civilian life, Fergie began working as an architect with ICIANZ, a leading Australasian chemical company, where he would remain for the rest of his career.

During 1947, with Phyllis Fergie expecting their first child, her husband prepared plans for a new family home in Blackburn, for a site on Central Road, south of Gordon Crescent. Preliminary drawings, dated 28 August, depict a single-storey brick house on a stepped rectilinear plan, neatly zoned with bedrooms and living room along the north, and the kitchen, laundry, bathroom and dining room along the south. It was to have a simple gabled tiled roof, and an entry porch marked by three portholes. The drawing has been amended with the scribbled annotation, "superseded". While revised drawings do not appear to have survived, the scheme was clearly revised to add the bolder skillion roof, and omit the portholes. The arrival of the Fergies' daughter in December 1947 doubtless hastened their plans. While it is unknown when drawings were finalised, construction was likely to have been completed by February 1949, when ownership of the property title was transferred into Fergie's name (COT 7284/634). The new building was first recorded in directory listings in 1951 as a "house being built", which is consistent with works being in progress for a year or two prior to publication date. The house is visible in an aerial photograph of 1951.

By the time that the house was finished, the Fergies already had a second child, with two more to come over the next few years. With two sons and two daughters, the family remained comfortably accommodated in the three-bedroomed house for many years, with the only addition being a small sunroom built onto the rear by the early 1960s. In late 1963, application was made for a building permit to erect a small prefabricated outbuilding, intended as a sleep-out for Phyllis' mother, Mrs Mumme (BA 36596, 28/11/1963). Subsequently, the detached garage at the rear of the block was converted into a study/workshop, and a new carport erected to replace it (Fergie, 2024).

By the early 1950s, Fergie held the senior position of Chief Architect at ICIANZ, in charge of the architectural section of the firm's development department. In that capacity, he oversaw the development of buildings at the expansive ICIANZ property in Deer Park. He also headed the team that designed the firm's new central research laboratories at Ascot Vale (1955-56), a high-profile project that would be lauded as the first building of its type in Australia and "an example of functional planning combined with clean modern lines" (*Argus* 23/10/1956:12). Fergie is also believed to have been involved with ICIANZ projects interstate, as well as a designing a house for one of the company directors at Red Hill. After Fergie retired from ICIANZ in the mid-1970s, he and his wife sold the house in Central Road and moved to Metung, where he had designed and built a new house for their retirement.

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Physical Description

The house at 26 Central Road, Blackburn, is a single-storey post-war modernist house of solid brick construction, with a prominent skillion roofline. Laid out on a rectilinear plan that is set at an angle on the site, the house has tall stark walls of plain red brickwork (some with a slight bluish clinker tone) enlivened along the uppermost level by projecting terracotta pipes. The boldly raked skillion roof has unusually wide eaves to the north elevation, supported on exposed and tapering rafters. This frontage has a slightly projecting bay to the far (west) end, and an off-centre front doorway with a small porch that comprises a flat concrete slab canopy supported on two angled metal poles. Fenestration is simple, with large windows to the north and east sides.

Comparative Analysis

Dating from c.1948, this house presents as an unusually early manifestation of the nascent Post-war Modernist style, demonstrating chief characteristics such as the stark walls, large windows and, most notably the boldly raked skillion roofline, with broad eaves and exposed rafters. These qualities, which would become increasingly fashionable, and widespread, as the decade wore on, were still highly unusual in 1950. As of 2024, there is only one directly comparable house on the heritage overlay schedule: the Mitchell House at 1163 Riversdale Road, Box Hill South (Leslie Mitchell & F T N Jessup, 1940) (HO288). This house, which was also an architect's own residence, is similar in its expression of face brickwork, large windows and, particularly, the prominent skillion roofline with broad eaves and expose rafters. Predating 26 Central Road by a full decade, the Mitchell House represents a major architectural breakthrough on a broader metropolitan scale. This was acknowledged by no less authority than Robin Boyd, who referenced the house in two of his early books (*Victorian Modern* in 1947 and *Australia's Home* in 1952), and, in a newspaper article, credited it as Melbourne's very first example of an expressed skillion roof (*Age* 08/01/1952:4).

A number of weighty modernist houses of brick or block construction, with similarly prominent skillion roofs, are known to exist in the City of Whitehorse. Chief amongst these is the house at 74 Main Street, Blackburn (Brian O'Connor, 1954), where the bold skillion had comparably broad eaves with exposed rafters. Although flagged as a potential heritage place in 2016, this house has not been subject to further assessment because a demolition consent had already been issued. Another shortlisted example, at 56 Kitchener Street, Box Hill South (Dack & Armstrong, 1958) is a partially two-storey dwelling with prominent broad-eaves skillion roofs to each part. Several simpler and more modest examples, by architects as yet unknown, have also been sighted in the municipality, such as 18 Morden Court, Nunawading (c.1956), 14 Percy Street, Mitcham (c.1957; with entry porch detailing very reminiscent of Fergie's house) and 4 Glenice Avenue, Blackburn South (c.1961). Fergie's own house at 24 Central Road, with a date that has been pinpointed with some accuracy to between 1947 and 1949, clearly predates all of these other examples.

As Fergie spent his entire post-war career employed with ICIANZ, and did not formally maintain sole practice under his own name, there are few comparable private projects with which to draw comparisons. According to the architect's son Bruce, Fergie designed a house at Red Hill for L W Weickhardt, one of the directors if ICIANZ, and also did residential alteration projects for a few friends and family members. After retiring from ICIANZ in the mid-1970s, Fergie also designed several new houses, including his own retirement residence at Metung and some others for his son Bruce, who became a builder. These projects, however, were all located in regional Victoria. Research to date has identified only one other example of Fergie's private residential work in the City of Whitehorse: namely, a rear addition to a house at 6 Acacia Street, Blackburn, occupied by Phyllis Fergie's uncle, Edmund Mumme, which seemingly dates from the 1970s.

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Statement of Significance

What is significant?

The house at 26 Central Road, Blackburn, is a single-storey early post-war modernist house of solid brick construction with a prominent skillion roofline. Erected in c.1948, it was designed by architect Alex J W Fergie as his own residence.

Significant fabric is defined as the exterior of the original c.1948 house. Specific elements of significance include the red brick walls with projecting terracotta pipes, the bold skillion roofline with broad eaves and tapered rafters, the large windows and the entry porch with its concrete slab roof and angled metal pipe columns.

How is it significant?

The house at 26 Central Road, Blackburn, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The house is aesthetically significant as an intact and notably early example of the Post-war Modernist style. While the use of stark wall surfaces, large windows and prominently-expressed skillion rooflines would become widespread in residential architecture during the 1950s, this particular manifestation, dating from c.1948, is a pioneering example. The bold roofline, with the uncommonly wide eaves and exposed tapering rafters, is a particularly striking motif even when compared to houses of similar style form the later 1950s. (*Criterion E*).

References

"Distinctive styling for a home at Mornington", *Herald*, 11 October 1939, p 13.

Alex J F Fergie, "Brick residence at Blackburn for Mr A Fergie", working drawings, dated 28 August 1947. Collection of Bruce Fergie, Kilcunda.

Certificate of Title, Volume 7284, Folio 634 (20 January 1949).

"They spent £500,000 to say it's Australia's best industrial lab", *Argus*, 25 October 1956, p 12. [article includes comments from, and portrait photo of, architect Alex Fergie]

"Contemporary Bungalow Specification" [intended "sleepout for use of mother-in-law"], and other documentation. Building Permit No 36596/1963, City of Whitehorse.

Alexander Johnson William Fergie, application file, Architects' Registration Board of Victoria, Box 5, VPRS 8838/P2, Public Record Office Victoria.

Sands & McDougall Directory.

Interview with Bruce Fergie, April 2024.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 2, graded B

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10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	BLACKBURN POST OFFICE	**Citation Number**	009
Other name/s		**Melway reference**	48 A9
Address	9-11 Chapel Street BLACKBURN		
Date/s	1959-60		
Designer/s	Gregory Simpson & Associates Commonwealth Department of Works		
Builder/s	A Yates & Partners		
Heritage Group	Postal and Telecommunications		
Heritage Category	Post Office		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	3 CONNECTING WHITEHORSE 3.5 Communications 3.5.1 Establishing postal services				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The building at 9-11 Chapel Street, Blackburn, was erected in 1959-60 as the new Blackburn Post Office, to a design by architects Gregory Simpson & Associates, in conjunction with the Commonwealth Department of Works.

Postal services in Blackburn date back to 1876, when George King was appointed a postmaster of the 'Blackburn Creek Post Office', along the mail route from Melbourne to Lilydale (Da Costa:17). Mail would be despatched to King's home, and collected from there by local residents. In 1913, confectioner Henry Poyntz took over as postmaster and the service transferred to his shop at 10-12 Blackburn Road, where it remained for many years. In December 1951, the service shifted to a site on nearby Chapel Street, where a departmental prefabricated building was provided. Intended as a temporary solution, it was positioned on the site to allow space for a purpose-built counterpart to be developed alongside, whereupon the prefabricated building would be removed.

Since Federation in 1901, responsibility for design, documentation and supervision of new post offices fell under the auspices of the Department of Home Affairs, which regularly altered its name and remit before becoming the Commonwealth Department of Works in 1952. The department maintained a large staff of architects, engineers and others, but in the later 1950s, also began to outsource projects to private architectural firms. Drawings for Blackburn's new post office, dated July 1959, bear a standard departmental title block with signatures of principal architect Harold Anderson (1899-1982) and supervising architect J McMahon Keane (1911-1988), alongside the name, address and signature of Gregory Simpson, an architect in private practice in Surrey Hills. While a contemporary article credited the new post office to the Commonwealth Department of Works (Victorian Branch), it acknowledged that Simpson was responsible for sketch design and documentation (*Arch Aus* 03/1962:109). Gerrit Hartland, who worked for Simpson from the 1950s, and became the firm's principal designer, recalled the post office project but has stated that he himself had no involvement, and that it was entirely Simpson's work (Hartland, 11/2017).

Gregory Simpson (1910-1987) studied architecture at Melbourne University in the mid-1930s and then worked as a draftsman for R M & M H King. After WW2, he moved to Auckland to oversee construction of a textile factory and, returning to Melbourne in 1950, worked for Marsh & Michaelson before starting private practice the following year. Operating from a home-based office in Whitehorse Road, Surrey Hills, Simpson built up a successful practice focusing on industrial work as well as houses, churches and other buildings, mostly in the eastern suburbs. His long-time staff included Gerrit Hartland and Ted Gillies, who became partners in 1975, when the firm was rebadged as Simpson, Gillies & Hartland.

Simpson's drawings for the new Blackburn post office proposed a flat-roofed glass-walled box containing public area, mail room and postmaster's office, with staff areas at the back, a rear wing for bicycle parking, and a glazed entry porch that provided access to PO boxes, public telephone booths, seating and pram parking. Tenders for the "erection and completion of steel-framed brick post office" at Blackburn was called in early September and, seven weeks later, the contract was awarded to local builders A Yates & Partners (*Comm Gaz* 03/09/1959:3120; 19/11/1959:4073). The contract value was listed as £25,840, and the completion date as 28 April 1960. The finished building was officially opened on 16 September 1960 (Da Costa:17).

In early 1962, the building was published in the national RAIA journal, *Architecture Australia*, as part of three-page spread devoted to recent post office architecture in Victoria, in which it was stated that that "the modern approach to their design and choice of materials is a clear indication of the growing acceptance and understanding by the general public of this non-stylistic approach".

The building operated as a post office for many years, during which time it was slightly altered by re-configuration of the entry porch at one end, and bays of louvred sun-shades at the parapet line (removed c.2019). The post office ceased operation in 2020, and the building was sold in 2023.

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Physical Description

Occupying an irregularly-shaped corner site, the former Blackburn Post Office at 9-11 Chapel Street, Blackburn, is a flat-roofed steel-framed single-storey building in stark post-war modernist style. It is boldly articulated as a rectilinear volume with the structural framework expressed, defining modular vertical bays that are divided horizontally to create a narrower attic storey. Extending around all four sides of the building, this attic storey contains metal-framed sashes that provide narrow clerestory windows below with solid spandrels above, forming a parapet to the low roof behind. The windows have clear glass, while the spandrels are opaque glass panels with a pale blue finish (labelled on the drawings as "quarter-inch toughened cast coloured glass").

On the north and east elevations, the modular bays are infilled with plain red brickwork. The south elevation, to railway Road, has full-height multi-paned window bays that contain fixed and operable metal-framed sashes in various rectilinear configurations. The windows have clear glazing and the spandrels below have opaque blue glass panels, matching the parapet level. At the far (east) end is a feature wall of black mosaic tiling, with matching tiling at plinth level.

The east elevation, to Chapel Street, has a projecting full-width entry porch with exposed framing of steel posts and beams, a flat roof and a modular glazed screen, with entrances at either end. Inside, the porch has a tiled floor and a vermiculite ceiling. At one end, a full-height window bay, with sliding glass doors, gives access to the post office within. Large rectangular openings along the brick wall, formerly containing bays of PO boxes, have been temporarily infilled. No evidence remains of the telephone booths, benches or other porch fittings shown on the original plans.

The north elevation, which faces the enclosed yard adjacent to the building, is far more utilitarian in expression, with simple door and window openings in the plain brick walls. The former bicycle storage shed, which extends from the far end of the north elevation, is a narrow skillion-roofed brick structure with metal grille screens.

Comparative Analysis

As of 2024, the only purpose-built post office on the heritage overlay schedule is a pre-war example at 528 Whitehorse Road, Mitcham (1924; HO161), a two-storey brick building on a corner site. The former Box Hill Post Office at 957 Whitehorse Road, Box Hill (1910-11), has previously been flagged as a potential heritage place, and a citation prepared as part of the current review. The only other purpose-built pre-war post office in the municipality, at 609 Canterbury Road, Surrey Hills, (1912), was demolished in 2000.

Only a few more new post office buildings appeared in the City of Whitehorse in the 1950s and '60s. Nunawading's first dedicated post office, at 146 Springvale Road (c.1955), was a simple gable-roofed prefabricated structure. When it was demolished in the late 1960s for a new and larger facility, a temporary post office was erected nearby, on the north side of Silver Grove. With its flat roof, panelled window walls and glazed undercroft, this temporary structure was very reminiscent of (if smaller than) the one in Chapel Street, Blackburn. In any case, it was dismantled on completion of the new post office on the south corner of Springvale Road and Silver Grove, a utilitarian two-storey brick building of little architectural merit. Vermont's original post office, erected at 596 Canterbury Road (demolished), was another simple gable-roofed prefabricated building – in fact, the same one that previously served as Blackburn's temporary post office from 1951, which was relocated to Vermont in 1970.

By contrast, the first new post office at Blackburn South, at 134 Canterbury Road (c.1957), was a far more considered and overtly modernist design, with a bold skillion roofline and recessed window wall that extended across the front and sides of the building. This striking glass-walled building, the only truly pertinent comparator to the counterpart at Chapel Street, Blackburn, was demolished in the late 1980s.

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As an example of the local work of Surrey Hills-based architect Gregory Simpson, the post office can be compared to St Luke's Parish Primary School at 46 Orchard Grove, Blackburn South (1961), with a similarly stark expression of repetitive window bays and face brick spandrels, and some of the buildings at the former Bowater Scott factory complex at 19 Ailsa Street, Box Hill South, especially the staff canteen (1963), with its flat roof, exposed structure and full-height multi-paned window wall. Simpson's other major work in the City of Whitehorse includes the Church of St Thomas the Apostle at 57 Central Road, Blackburn (1972), with its steep pyramidal roof, bluestone walls and fin-like piers of textured blockwork.

Statement of Significance

What is significant?

The former Blackburn Post Office at 9-11 Chapel Street, Blackburn, is a single-storey steel-framed post-war modernist building, articulated as a flat-roofed rectilinear volume with exposed structure and window walls with both clear and opaque glazing. Erected in 1959-60 under the auspices of the Commonwealth Department of Works, it was designed and documented by architects Gregory Simpson & Associates.

Significant fabric is identified as the exterior of the main 1959-60 building, excluding the utilitarian bicycle storage shed that faces the rear yard. Specific elements of significance include the expressed steel structure, multi-paned windows walls, the pale blue opaque glass spandrels, and the front entry porch with its glazed screen.

How is it significant?

The former Blackburn Post Office satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is aesthetically significant as a particularly striking example of post-war modernist architecture. Characterised by an uncompromisingly minimalist approach, the building is starkly expressed as a flat-roofed rectilinear volume with exposed structure defining modular bays with infill of plain brickwork and multi-paned windows with clear glazing and opaque blue-coloured glass panels. While this bold aesthetic was frequently adopted for multi-storey office buildings of the period, this represents a deft application to a small-scaled suburban building. (*Criterion E)*

References

Gregory Simpson, with Commonwealth Department of Works (Vic/Tas Branch Office).
"Blackburn Post Office", working drawings, dated July 1959.
Folder 22, Drawer 62, Series B3712. National Archives of Australia.

"Four post offices", *Architecture Australia*, March 1962, pp 108-110.

Robyn da Costa, *Blackburn: A Picturesque History* (1978), pp 17, 20-21

Interview with Gerrit Hartland, November 2017

Previous Heritage Studies

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 2, graded B

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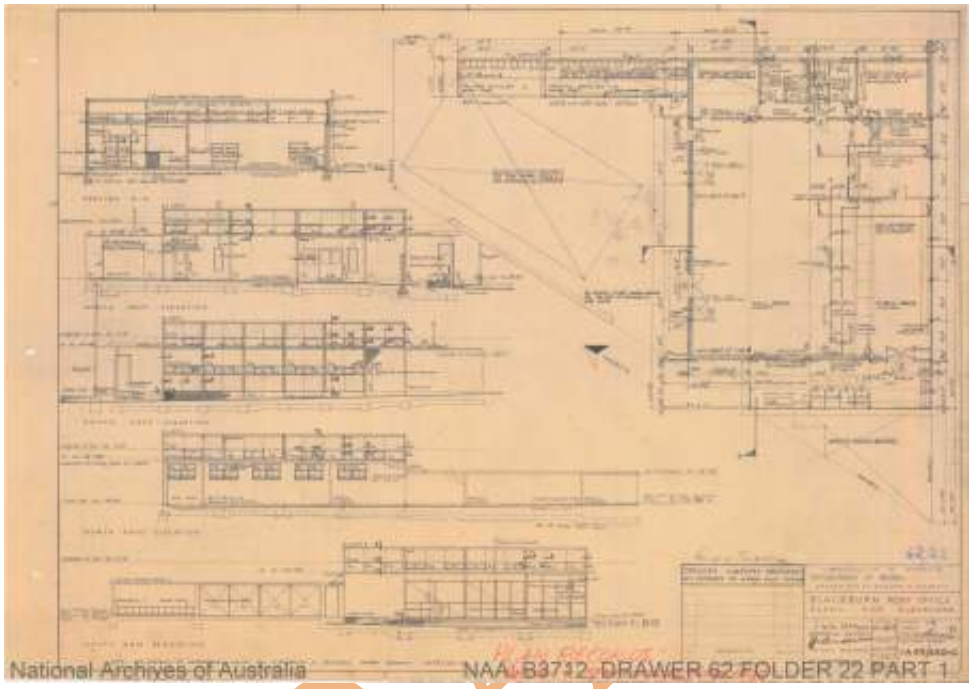
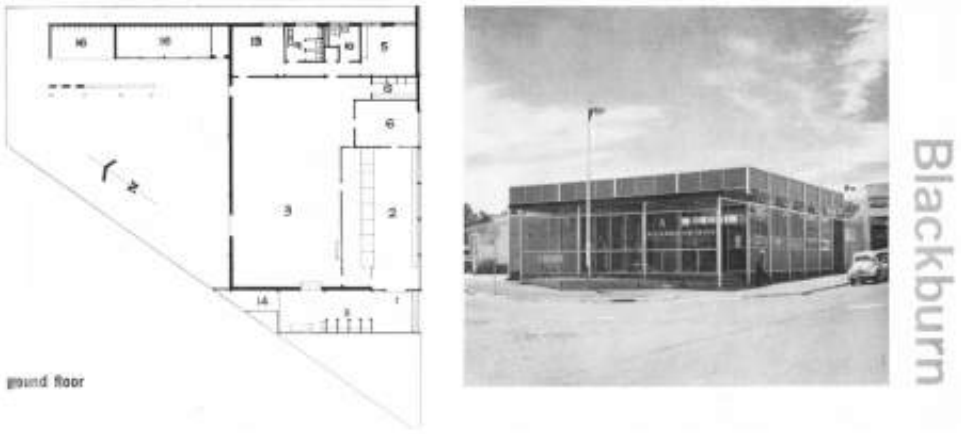
Historical Images



Working drawings for the new Blackburn Post Office, dated July 1959; note position of the prefabricated temporary post office on the site, indicated as a rectilinear footprint further along the Chapel Street frontage
Source: Folder 22, Drawer 62, Series B3712, National Archives of Australia.



Sketch plan and external photograph of the new Blackburn Post Office, as published nationally in 1962
Source: Architecture in Australia, March 1962.

The Post Office around the time of official opening, 1960; note signage (since removed), flagpole (since slightly relocated) and original configuration of entry porch at left side (compare later photo, right)
Source: DaCosta, Blackburn: A Picturesque History

The Post Office as it appeared in the 1970s. Note slight reconfiguration of entry porch at left end (compare earlier photo, left) and addition of louvred sun-shades along the parapet level (since removed)
Source: DaCosta, Blackburn: A Picturesque History

Key Comparators

New post office at 134 Canterbury Road Blackburn South, in similar modernist mode (1957; demolished)
Source: National Archives of Australia

Temporary post office in Silver Grove, Nunawading in similar modernist mode (c.1969; demolished).
Source: National Archives of Australia

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	010
Other name/s	Connell House (former)	**Melway reference**	60 J1
Address	13 Chester Street SURREY HILLS		
Date/s	1965		
Designer/s	Bernard Joyce & Associates		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The house at 13 Chester Street, Surrey Hills, was erected in 1965 for builder Gary Connell, to a design by Bernard Joyce Associates.

Garry Gordon Connell (1937-2019) followed in the footsteps of his father, A N Connell, a builder and long-time Surrey Hills resident who variously occupied houses in Whitehorse Road and Union Road before settling in Smythe Avenue by the early 1960s. At the time of Connell senior's death in July 1964, the family resided in Godfrey Court. Twelve months later, his widow Lillian acquired the title to a vacant block of land in the same suburb, on the northeast corner of Chester and Glendale Streets (COT 7689/068). It remains unclear whether the new house proposed for this site was intended for the family's own use, or whether it was perhaps a speculative venture. At the time, Connell and his two brothers were not married, and still lived with their mother.

Plans for the new house were prepared by British-born architect Bernard Joyce (1929-1994), who had migrated to Australia as a child and completed architectural studies in Melbourne. While Joyce had only recently started private practice at the time he was commissioned by the Connells, he had already developed an enviable reputation. While still a university student in the 1950s, he entered several house and furnishing design competitions, including one held by the Age Small Homes Service, winning first place every time. In 1960, he joined the highly-regarded firm of Bogle & Banfield, rising to become one of their chief designers. He left in 1964 after winning first prize in another competition –a high-profile international contest for a new racecourse grandstand in Malaysia, which was completed to Joyce's design in 1972. In parallel, Joyce became well known as a designer of stylish modernist houses, many of which appeared in newspapers and magazines.

Joyce's drawings for Chester Street project, which identify the client as "Gary [*sic*] Connell, esq", proposed a split-level house in a stepped L-shaped plan, made up of two wings linked by a corridor-like foyer (labelled as "gallery") with a window wall opening to a paved rear terrace. One wing, extending east-west along the Chester Street side, provided an open-planned living area with a landlocked pod-like kitchen at one end, while the other wing, running north-south along Glendale Road, contained laundry, two bathrooms and five bedrooms. The drawings are undated, but were submitted to the City of Box Hill as part of a building permit application in 1965. Construction had commenced by mid-October, when an advertisement was placed seeking bricklayer's labourer for a job at 13 Chester Street (*Age* 18/10/1965:17).

Regardless of whether the Connell family intended to occupy the new house themselves, it was sold soon after completion. The new owners, who acquired title to the property in early 1966, were hotelier Donald Washington and his wife Lilian, who would later state that "when we found this house, we knew it was just what we wanted" (A*H&G* 12/1969:98). The couple, who had three sons, were still satisfied more than three years later, when the house was profiled by the *Australian House & Garden* magazine. The lengthy article, illustrated by interior and exterior photographs, was quick to acknowledge that

> although the house has not been specifically designed by architects Bernard Joyce for its present owners, it might well have been. The Washington family have found it ideal for their way of life after living in previous homes which never quite suited them.

Thence followed praise for what was described as an "unusually interesting" street façade:

> It presents a series of full-length windows recessed between brick pillars, uninterrupted by a front entrance. Instead, the entrance, a simple wide flush-panelled door, is set into the back wall of the carport, which is also panelled in timber. But if the outside appearance is quietly inconspicuous, there is a surprise element once inside. Immediately confronting you is a long glass wall through which there is a view of as delightful garden court with sun patio and swimming pool.

The Washington family remained living there until 1975.

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Physical Description

The house at 13 Chester Street, Surrey Hills, is a single-storey split-level modernist residence house of brick construction with a pale painted finish. The asymmetrical gabled roof, clad with cement tiles, has no eaves, with integrated guttering and downpipes placed at the corners. Occupying a corner site, the house is laid out on a stepped L-shaped plan comprising two elongated rectangular wings with a connecting link. One wing, containing the kitchen and living rooms, faces Chester Street and the other, with bedrooms and bathrooms, faces Glendale Street. Both street frontages are similarly treated, with repetitive elevations that alternate between solid pier-pike elements and recessed full-height window bays. The end walls of each wing remain blank and windowless.

Where the two wings connect, along Chester Street, there is a recessed double carport leading back to a feature wall of vertical timber boarding, containing the centrally-placed front door. The flat roof of the carport, with matching timber boarded ceiling, is supported on brick walls. The wall to the left side returns northwards to form an enclosed courtyard. To the right of the driveway is a plinth-like brick letter box that, while not shown on the original drawings, is in a matching style.

Comparative Analysis

As of 2024, there are still relatively few post-war houses on the heritage overlay schedule, and only two of those date from the 1960s. These two houses, both assessed as part of the *Post-1945 Heritage Study* (2016), are 3 Village Mews, Vermont (Romberg & Boyd, 1965-66) (HO292) and 7 Norris Court, Blackburn (Frances Seidel, 1967-68) (HO287). Both have some qualities in common with 13 Chester Street, such as the use of stark pale-coloured brick walls, which was becoming fashionable at that time. Broadly speaking, all three houses have unusual stepped plan forms and rooflines, but they remain individually distinctive.

The 2016 study also included citations for three other houses from the mid-1960s, at 18 Gilmour Street, Burwood (Howard Hodgens, 1964), 12 Sunhill Avenue, Burwood (Peter Corrigan, 1965), and 18 Grange Road, Mont Albert (Bernard Joyce, 1967), but heritage overlays were not applied. The last of these would seem the most obvious comparator to 13 Chester Street, not only for its date but also because it was designed by the same architect. The two houses have some qualities in common, such as its compartmentalised planning (a recurring theme in Joyce's houses), but the Mont Albert one is otherwise very different in it use of rough clinker brickwork and pyramidal roofs. In any case, the house has been altered to a degree that makes it difficult to interpret the extent of the original house, which is why it was not pursued for a heritage overlay. The Corrigan house in Burwood was demolished in 2016, and Hodgens' own house has been re-assessed as part of the current review, with an updated citation. A gable-roofed modular dwelling built using a proprietary panel system, it has nothing in common with 13 Chester Street, aside from its date.

Apart from these two houses that Bernard Joyce designed in the Mont Albert/Surrey Hills area in the mid/late 1960s, the architect appears to be represented by only one other residential project in what is now the City of Whitehorse. This was a house at 28 Marchiori Road, Blackburn North (c.1954), built to standard plan V256 from the Age Small Homes Service, which represented Joyce's prize-winning entry in the service's 1953 design competition. The example at Blackburn North, a photograph of which appeared in the weekly service column (*Age* 12/09/1955:8), was built to slightly amended design and would not have been personally supervised by Joyce. It has long since been demolished.

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Statement of Significance

What is significant?

The house at 13 Chester Street, Surrey Hills, is a split-level modernist house on a stepped L-shaped plan, with an asymmetrical roofline and painted brick walls that incorporated recessed full-height window bays. The house was erected in 1965 for builder Gary Connell, to a design by the leading architectural practice of Bernard Joyce Associates.

Significant fabric is identified as the exterior of the original 1965 house. Specific elements of significance include the asymmetrical roofline, stark painted brick walls, corner downpipes, recessed full-height window bays, enclosed courtyard and carport with its flat roof, projecting wing walls and timber boarding.

How is it significant?

The house at 13 Chester Street, Surrey Hills, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is aesthetically significant as a highly unusual example of modernist residential architecture of the 1960s. Designed by leading architect Bernard Joyce, well known for this stylish houses, it demonstrates Joyce's trademark compartmentalised planning (expressed as two elongated wings with a linking element), unusual yet understated roof forms and fenestration, and fastidious attention to detail (such as the concealed guttering with recessed corner downpipes), With its two street elevations characterised by an boldly offset roofline and stark walls of painted brickwork alternating with recessed full-height window bays, with a recessed double carport on Chester Street, the house remains as an eye-catching element along both streetscapes. (*Criterion E)*

References

Certificate of Title, Volume 7689, Folio 068 (created 20 March 1952).

Bernard Joyce Architects, "Proposed brick veneer residence, corner Glendale Road and Chester Street, Surrey Hills, working drawings, undated. Building Permit No 21021/1965. City of Whitehorse.

"A house where privacy is top priority", *Australian House & Garden*, December 1969, pp 41ff.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) – Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 2, graded B

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Historical Images

External views of the house, at it appeared during early occupation by the Washington family, late 1960s
Source: Australian House & Garden, December 1969

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IDENTIFIER	HOUSE	**Citation Number**	011
Other name/s	*Sydenham*	**Melway reference**	46 K9
Address	18 Churchill Street MONT ALBERT		
Date/s	1891-92		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group **Heritage Category**	Residential buildings (private) House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.3 The 1880s Land Boom				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

Sydenham, at 18 Churchill Street, Mont Albert was erected in 1891-92 for James and Barbara Lancaster.

The site of the house formed part of the *Phoenix Park Estate*, a Boom-period residential subdivision that extended between Mont Albert Road and the Box Hill railway line. The estate comprised 59 allotments with frontages to the newly-formed Hamilton Street, Stanhope Street, Salisbury Street and Churchill Street (parallel to the railway line), as well as the north side of Mont Albert Road. When advertised in November 1886, it was stated that "this magnificent estate, which has for long remained in the lands of the original owners, has at last been subdivided" (*Argus* 27/11/1886:15). It was noted for being "close to the Surrey Hills railway station, embracing the grandest views in the district". Three months later, the same firm of auctioneers held a second auction for "the balance of this magnificent estate… close to the railway station with unsurpassed scenery and perfect drainage" (*Argus* 11/03/1887:2). Some sites remained unsold by 1888, when another firm, R W E Hooke & Hill, held an auction of leftover allotments from several recent local subdivisions. Amongst these were eight blocks along the east on the *Phoenix Park Estate*, including Lot 35 fronting Churchill Street, the future site of *Sydenham* (*Argus*, 9/6/1888:15).

In the rate book for 1890 (dated 20/01/1890), Lots 35, 36, 37 and 38, straddling the corner of Churchill Street and Salisbury Avenue were still vacant, each with a Net Annual Value (NAV) of £5 and their owner listed, unhelpfully, as "owner". In the next year's volume (dated 16/2/1891), the owner of Lots 35, 37 and 38 was listed as one J H Lancaster, with a combined NAV of £42, indicative of construction in progress. Title certificate confirms that the land was in fact owned by his wife Barbara, who became registered proprietor of the three lots in July 1891 (COT 2367/255). The finished house was first recorded in the 1892 rate book (dated 25/4/1892), listed as a brick building with a NAV of £71, owned and occupied by J H Lancaster. By then, the couple had also acquired the adjacent Lot 36, providing a generous curtilage for their new house.

Born in Manchester, James Henry Lancaster (1853-1946) had settled in Melbourne by 1878, when he married Barbara Jane Jackson. By the late 1880s, the couple was living in Punt Road, South Yarra (S&M 1888, 1890). Their decision to relocate to Surrey Hills and erect a new house may have been hastened by the arrival of the couple's first (and only) child, daughter Florence Rebecca Lancaster, who was born on 14 May 1888. An accountant by profession, Lancaster was practicing from a city office in Collins Street at the time that the new house was being built in Surrey Hills. Subsequently, in the mid-1890s, he was elected to serve as Local Auditor for the Shire of Nunawading (*BH Reporter* 09/08/1895:3). Towards the end of that decade, the Lancasters acquired a vacant block around the corner (Lot 33; now 16 Stanhope Street) on which was built a modest six-roomed brick villa for Barbara's widowed mother, Ann Jackson (S&M 1899), who resided there until her death in 1904. The house was demolished in the 1960s (Aerial 1963, 1970).

The Lancasters' house in Churchill Street, identified by the name *Sydenham* on the MMBW plan (1911), was occupied by the family for many years. Their daughter Florence, who never married, moved elsewhere during the 1930s but James and Barbara remained in remained in residence until their respective deaths, eight months apart, in 1946 and 1947. The property thence remained in the hands of Barbara's executors for some years, during which time the adjacent allotments (hitherto providing an expansive landscaped grounds for the house) began to be sold off for development, starting with a new dwelling at what is now 25 Salisbury Avenue. duly flanked by others at Nos 23 and 27. When *Sydenham* itself was finally advertised for sale by auction in 1955 (on behalf of "the estate of B J Lancaster"), it was described as a "solid brick residence comprising four large bedrooms, lounge, billiard room, bathroom, kitchen, kitchenette, breakfast room, garage, laundry and large return verandah (glassed in)" (*Age* 23/07/1955:31). This partly infilled verandah is visible in an aerial photograph from 1950 (see Historical Images).

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Description

The house at 18 Churchill Street, Mont Albert, is a single-storey hip-roofed Victorian brick villa with a symmetrical double-fronted street frontage. The low roof is clad in slate, penetrated by a pair of bichromatic brick chimneys with moulded rendered caps, and has narrow eaves supported on shaped consoles. The house is mostly of plain red brick, but has contrasting dark brown Hawthorn bricks (with tuckpointed joints) to the north and part of the east elevations. There is painted quoining at the corners and the sides of door and window openings, and painted banding at the sill and floor levels.

The symmetrical street frontage has a central entrance, flanked by large windows. The entrance comprises a heavily panelled front door, flanking sidelights with leadlight panes and fielded panels, a tripartite highlight window, and bluestone threshold. The flanking windows have segmental arched heads, projecting bluestone sills and tripartite sashes separated by solomonic columns. Windows to the west elevation are treated similarly, but simpler, and there is a canted bay window to the east elevation. The street frontage is otherwise dominated by a prominent verandah that extends across the facade and returns partly down the east side and further down the west side. The verandah has a bluestone plinth with entrance steps to the front door, an intricately patterned tessellated floor, and rows of cast iron columns with Composite capitals and an ornate wrought iron lacework frieze, supporting a bullnose roof of corrugated metal sheeting, painted in grey and white stripes.

Comparative Analysis

There are many Victorian houses already on the heritage overlay schedule, including a number of comparably grand villas (both single and double-storey) in the Surrey Hills and Mont Albert areas.

Sydenham was erected on the *Phoenix Park Estate*, which, while heavily promoted in the late 1880s, subsequently experienced limited residential development into the early twentieth century. The MMBW plan (1910) indicates that, by that time, there were still only thirteen houses across the entire 59-lot subdivision, of which only five were built before 1900. Three of these houses have since been demolished, at 36-40 Hamilton Street, 4 Salisbury Street and 16 Stanhope Street (the last being the house that James and Barbara Lancaster built for Barbara's mother in the late 1890s). Today, *Sydenham* is one of only two Victorian-era survivors on the estate along with *Lydswood*, a grand two-storey mansion at 12 Stanhope Street (1892) (HO75).

Sydenham is of interest for its siting directly opposite the railway line, which provides evidence of the attraction that the recently-opened transport route had to potential residents of Surrey Hills. It is the only Victorian-era house in Churchill Street, and one of few that face the face the railway line in the immediate area. Other examples, already on the heritage overlay, include 12 Windsor Crescent (c.1889) (HO199) and 16 Windsor Crescent (1885)(HO165) in Surrey Hills, and 3 Beatty Street, Mont Albert (1892) (HO129), although the last of these has its rear frontage to the railway line. Of these, the house at 16 Windsor Crescent is the most directly comparable to *Sydenham*, with its slate-clad roof, bichromatic brickwork and elevated verandah with entry steps and flanking urns. However, the house lacks the less common double-return verandah that imparts *Sydenham* with wider and a more prepossessing street frontage. Some smaller Victorian villas are known to have been built in Lorne Parade, Surrey Hills, similarly fronting the railway line, including Nos 14, 18, 22 and 34. However, only the last of these, a modest weatherboard cottage, remains standing.

On the Box Hill side of Elgar Road, two late-Victorian brick villas face the railway line at 15-15A Hopetoun Road (1889) (HO268) and 29 Hopetoun Road (1891) (HO269). Designed by the same architect, they are similar to each other but different to *Sydenham*, with banded red brickwork and double-fronted facades with return verandahs. The most easterly example of a Victorian house fronting the railway line is 42 Bishop Street, Box Hill (1891) (HO266), although, like 3 Beatty Street, this abuts the railway only to the rear. There are no other examples further along the line.

Considered most broadly as an example of a large detached Victorian villa in bichromatic brick, *Sydenham* can be compared with several others already on the heritage overlay schedule. Examples at 39 Blackburn Road, Blackburn (1888) (HO88) and 9 Warrigal Road, Surrey Hills (1890) (HO159) both have asymmetrical double-fronted façade, the latter with a simple verandah and the former with an L-shaped return verandah. The bichromatic villa at 9 Russell Street, Surrey Hills (1888-89) (HO152) has a symmetrical double-fronted facade, more directly akin to *Sydenham*, but, again with a smaller verandah that extends only across the street façade, without returns. As such, *Sydenham*, can be considered a standout example in comparison to these others.

Statement of Significance

What is significant?

The house at 18 Churchill Street, Surrey Hills, is a single-storey late Victorian bichromatic brick villa, with slate-clad hipped roof and double return verandah. It was built in 1891-92 for James and Barbara Lancaster, who lived there for more than fifty years.

The significant fabric is defined as the exterior of the original house. Specific elements of significance include the bichromatic brickwork, slate roof, ornate chimneys, canted bays windows, and double return verandah comprising bluestone plinth, tessellated floor, cast iron columns and decorative lacework, with entry steps and flanking piers.

How is it significant?

The house at 18 Churchill Street, Surrey Hills, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is historically significant for associations with the early development of the *Phoenix Park Estate*, a major Boom-era subdivision in Surrey Hills that was conceived to exploit the recently completed railway line, which ran along its north boundary. One of only five houses built on the estate prior to 1900, *Sydenham* is now one of only two that survive. The only one with frontage to the railway line itself, it is now one of very few surviving Victorian houses, in Surrey Hills, Mont Albert and Box Hill, to have their principal frontage to the railway, demonstrating the potency that the new transport links had as a drawcard to potential residents. (*Criterion A*)

The building is aesthetically significant as fine example of a late Victorian villa. It is notable for its highly expressive brickwork, combining tuckpointed Hawthorn bricks, cream bricks, red bricks and painted banding and quoining, and for its uncommonly grand verandah, elevated on a bluestone plinth and returning down two sides, with ornate tessellated floor and wrought iron lacework and entry steps with flanking piers. (*Criterion E*)

References

Certificate of Title, Volume 2367, Folio 255 (8 July 1891)

Shire of Nunawading Rate Books, 1890-94. Microfiche edition, held by Box Hill Historical Society.

MMBW Detail Plan No 2246, dated October 1910. Map Collection, State Library of Victoria.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) – Schedule 2, graded B

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Historical Images

Excerpt of MMBW Detail Plan No 2246 (1910), showing Sydenham on Churchill Street (circled in red); note smaller house, Dundas, to the south-west, built for James Lancaster's mother-in-law in the late 1890s. Source: Map Collection, State Library of Victoria

Detail of aerial photograph of Surrey Hills, taken on 15 October 1950, looking south across the railway line and showing towards Sydenham with its original expansive grounds, and the partially infilled verandah Source: Picture Collection, State Library of Victoria (photograph by Airspy Company).

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IDENTIFIER	HOUSE	**Citation Number**	012
Other name/s	Coull House (former)	**Melway reference**	48 G12
Address	58 Diosma Crescent NUNAWADING		
Date/s	1959		
Designer/s	David Hopkins		
Builder/s	R J Grills		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The house at 58 Diosma Crescent, Nunawading, was erected in 1959 for John and Heather Coull to a design by Heather's architect brother David Hopkins, later a founding partner in the prominent architectural firm of Clarke, Hopkins & Clake.

Born and raised in Surrey Hills, David Hopkins (1931-) began his architectural career in early 1950 when he joined the Public Works Department as a cadet draftsman. He and his young colleagues, which included future associates Les Clarke and Neil Biggin, concurrently attended night classes at Melbourne Technical College. In April 1952, while Hopkins was still at the PWD, his sister Heather (1928-2020) married John Alexander Coull (1925-2017), a former Merchant Navy engineer. Latterly employed by British Petroleum at Port Melbourne, Coull was transferred to Brisbane, where he and Heather lived for several years before returning to Melbourne in 1957. The couple planned to build a house for themselves and, in September 1958, Coull acquired the title to a vacant block in Diosma Crescent, Nunawading. Designated as Lot 73, the site marked a bend in the road and was effectively a corner block with two street frontages (COT 8241/469).

The choice of architect was obvious: Heather's younger brother, who was then still working as a draftsman in the PWD. While Hopkins had completed his part-time studies at MTC during 1958, he had not yet formally graduated, nor become registered as an architect in Victoria. The house for his sister and brother-in-law at Nunawading, for which drawings are dated February 1959, represented, by Hopkins' own account, his first architectural commission. The young architect, who recalled that his clients gave him a free hand, proposed an elevated single-storey house on an L-shaped plan with living areas, kitchen and utility room in one wing, with three bedrooms and bathrooms in the other, connected by a glazed link that also served as the entry foyer. The slope of the block, from north to south, allowed for a subfloor carport to be incorporated at the far end (with stairs leading up into the house), while the two bedrooms above opened through window-walls onto a cantilevered and partly recessed balcony extending across the south elevation.

The house was built by Richard Grills, a builder from Surrey Hills who lived in the same street as Hopkins' parents, and would later become proprietor of a well-known construction firm, R J Grills Pty Ltd, working with such architects as Chancellor & Patrick, Brine Wierbowski Associates and Daryl Jackson. Realisation of the Nunawading project overlapped with several milestones in Hopkins' own professional life. In March 1959, he became registered as an architect in Victoria and, two months later, formally graduated from MTC. Disappointed that these changes in status did not prompt a commensurate pay-rise at the PWD, Hopkins opted to leave. He transferred to the office of the MCC City Architect, where he met Jack Clarke. The two men duly commenced private practice, along with Hopkins' former PWD colleagues Les Clarke and Neil Biggin, to form the enduring partnership known as Clarke, Hopkins & Clarke. The office became well known, initially for residential work (with Jack Clarke serving a stint as director of the Age Small Homes Service) and later for educational buildings. The firm still operates as of 2024.

John and Heather Coull, who had two daughters and a son, resided in Diosma Crescent for over sixty years. During their long tenure, they returned to original architect Hopkins whenever new work was required. Hopkins recalls that, after about ten years in residence, it was observed that the cantilevered joists to the south-facing balcony showed signs of rotting. To prevent further water damage, he conceived a scheme to infill the balconies by relocating the window bays of both bedrooms to the balustrade line and adding a steeply raked rooflet above, creating a canted profile. In 1983, the Coulls turned to Hopkins again to renovate the kitchen and add a new living room as a skillion-roofed rear wing, sympathetically designed in brick veneer construction.

John Coull died in 2017, and his widow Heather in 2020. After their former home was sold, Hopkins assisted the new owners by providing a scheme for the insertion of an en suite bathroom, thus marking his seventh decade of professional involvement with the property.

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Physical Description

Occupying a long corner block, the house at 58 Diosma Crescent, Nunawading, is a single-storey post-war Modernist house on an elongated L-shaped plan, starkly expressed as two intersecting rectilinear volumes, each with a separate longitudinal inward-sloping skillion roof to form an overall butterfly roofline. The longer wing, running north-south along the sloping site, is partially elevated where the land falls away at the south end, with a brick sub-floor plinth and metal columns defining a carport below the house. This wing is clad with vertical timber boarding (painted white), with large multi-paned window walls at the north end, and along the south façade. On the south side, the roofline is bent downward, forming a sharp skillion rooflet above the windows. The shorter wing, running east-east, has a blank end wall of painted brick facing the street, and another multi-paned window wall to the south. At the junction of the two wings, there is a recessed entry porch with an off-centre front door set into another multi-paned window wall.

Comparative Analysis

While falling into the broad category of post-war Modernism, the house at 58 Diosma Crescent is more specifically a manifestation of the slick, academic strain referred to Philip Goad as the East Coast International Style, referencing its association with ex-Bauhaus architects Walter Gropius and Marcel Breuer after they migrated to the USA and began teaching at Harvard University's Graduate School of Design. The style, characterised by expression of stark (sometimes elevated) volumes, low rooflines, plain surfaces and large windows, is most strongly associated in Australia with the early houses of Harry Seidler, who studied under Gropius at Harvard and worked for Breuer before settling in Sydney in 1947. The style emerged in Melbourne in the early 1950s in the work of Douglas Alexandra and Kenneth McDonald. Others, such as Roy Grounds, Robin Boyd and Kevin Borland, made brief early forays, but the architects who became known as its leading and most frequent exponents were Montgomery, King & Trengove and, later, Harry Ernest.

Houses of this particular type are not well represented in the City of Whitehorse. The heritage overlay schedule includes a modest but striking example at 359 Whitehorse Road, Nunawading (J W Rivett, 1954-55) (HO293), expressed as an elevated butterfly-roofed box with vertical timber cladding and large windows. While notable for bold expression and early date, the house is still smaller, simpler and less sophisticated in comparison to 58 Diosma Crescent. As noted above, the office of Montgomery, King & Trengove were among the leading local champions of this style, and co-founder Lionel King's own house, at 12 Glendale Road, Surrey Hills (1949-50) was a startling example, with a long, narrow rectilinear and stepping plan form under a longitudinal skillion roof. The exterior, which originally had vertical timber boarding and full-height timber-framed window bays, has been entirely remodelled, with varnished plywood panels and metal-framed windows in horizontal bays, which has diminished its original character. A later house by the same architects, at 371 Burwood Highway, Burwood (1958), is a smaller and far more modest example of the style, with face brickwork and a broad gabled roofline. An early Borland project, the Hannah House at 655 Springvale Road, Burwood East (1952-3), was cited by Goad as "an attempted variation on the Seidler vocabulary" (Goad:71). The house, evident on aerial photographs with a low-pitched roof and a pinwheel plan, was demolished in the 1980s.

Comparisons might also be drawn with the stark box-like modernist houses of Stuart McIntosh, chief architect to the ES&A Bank, typified by his own residence at 24 Arnott Street, Mont Albert North (1954) (HO283) and another at 29 Leonard Street, Burwood (1954) that has only recently been attributed to him, in association with regular collaborator (and ES&A colleague)Alexander Harris. The latter house, assessed as part of the present study and recommended for a heritage overlay, has much in common with 58 Diosma Crescent, being similarly expressed as a partially elevated rectilinear volume with broad skillion roof, blank side walls and a full-height window wall above a carport undercroft.

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David Hopkins, a lifelong resident of what is now the City of Whitehorse (growing up in Surrey Hills before moving to Nunawading), was responsible for numerous buildings in the municipality. However, there are none on the heritage overlay schedule as of 2024. His sister's house in Diosma Crescent is one of three projects in Nunawading for his own family. In the mid-1950s, Hopkins began work on the design and construction of a house for himself at 20 Heather Grove, which took some years to reach completion. Still standing, the house has been much altered and extended over the years (to Hopkins' design), and no longer resembles the simple dwelling as conceived in the 1950s. After completing his sister's house, Hopkins went on to design a house for their mother at 2 Lorikeet Street (1965), a site chosen because it was halfway between the two other houses. By then a widow, Mrs Hopkins required a small house and her son provided a modest flat-roofed dwelling suitable for her needs. While still standing, the house is no longer recognisable, due to remodelling and a large second storey addition. Hopkins was also represented in the municipality by some non-residential projects, including a building at the Nunawading South Primary School (1976; demolished), an addition to the Uniting church hall in Canterbury Road, Forest Hill (1982) and, lastly, a new hall at the rear of All Saints' Anglican Church in Mitcham (2010).

Statement of Significance

What is significant?

The house at 58 Diosma Crescent, Nunawading, is a single-storey post-war Modernist house, expressed as a partly elevated box-like volume with low skillion roofline, plain walls of painted brick and vertical timber, and large window walls. It was erected in 1959 for John and Heather Coull, to a design by Heather's brother, David Hopkins (later of Clarke, Hopkins & Clarke).

Significant fabric is defined as the exterior of the original 1959-60 house, as well as the canted roofline at the south end, as later altered to Hopkins' design. Specific elements of significance include the elongated expression, low roofline, vertical timber cladding, multi-paned window walls and the open undercroft carport.

How is it significant?

The house at 58 Diosma Crescent, Nunawading, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics
- Criterion H: Special association with the life or works of a person, or group of persons, of importance in our history

Why is it significant?

The building is aesthetically significant as an fine and intact example of post-war Modernist residential architecture of the 1950s, and specifically the sub-style described as East Coast International Modernism, characterised by expression of stark and often elevated volumes, low rooflines, plain surfaces and huge windows. This house, with its box-like forms (raised at one end to form an undercroft carport), longitudinal skillion roofline and multi-paned window walls, is an exceptional example of this style, which is not well represented in the municipality. (*Criterion E*).

The building is significant for associations with local architect David Hopkins. A lifeline resident of what is now the City of Whitehorse (raised in Surrey Hills before moving to Nunawading), Hopkins was a founding partner in the important and award-winning architectural firm of Clarke, Hopkins & Clarke, which began in 1962 and remains in operation today. Hopkins is known to have undertaken numerous projects in the municipality, of which this house, designed for his own sister, has special associations as his very first private architectural commission, started before he had even graduated in architecture or become registered as an architect. (*Criterion H*)

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References

Certificate of Title, Volume 8241, Folio 469 (19 September 1958)

David Hopkins, "Residence for Mr & Mrs J A Coull, Lot No 73, Diosma Crescent, Nunawading", working drawings, dated January 1959. Collection of Rosemary Coull, Melbourne.

David Hopkins, "Proposed enclosure of existing balcony, 58 Diosma Crescent, Nunawading", working drawings, undated (circa 1969?). Collection of Rosemary Coull, Melbourne.

Clarke, Hopkins & Clarke, "Additions to residence, 58 Diosma Crescent, Nunawading", working drawings, dated September 1983. Collection of Rosemary Coull, Melbourne.

Interview with David Hopkins, February 2024.

Information and photographs provided by Rosemary Coull, April 2024.

Philip Goad, "The Modern House in Melbourne", Ph D thesis, 1993. Chapter 5, pp 5/63-81.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 2, graded A
[an outline citation was prepared; refer pp 255-56 of that study]

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10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

Historical Images

The Coull House in Diosma Crescent, as it appeared in the 1960s before the front balcony was infilled
Source: Collection of Rosemary Coull, Melbourne

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IDENTIFIER	HOUSE	**Citation Number**	013
Other name/s	*Oural*	**Melway reference**	46 J12
Address	43 Florence Street SURREY HILLS		
Date/s	c.1920		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, March 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.4 Early twentieth century development				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The house at 43 Florence Street, Surrey Hills, was erected c.1920 for Frank and Marjorie Stark.

An electrical engineer by profession, Frank Beuzeville Stark (1892-1934) passed examinations in early 1910 that allowed him to join the public service as a junior assistant engineer in the Electrical Branch of the Postmaster General's Department (*Comm Gaz* 26/02/1910:643). At that time, Stark resided with his parents in Hawthorn, and he subsequently moved with them when they built a new house at 18 Florence Road, Surrey Hills, circa 1914 (since demolished). The site of the house formed part of a new subdivision, known as the *Bayview Estate*, which comprised "thirty splendid residential allotments" (*Argus* 29/04/1914:2).

During WW1, Stark served with the Australian Army, initially attached to the 34th Fortress Company of the Australian Engineers and then, from March1916, with B Company of the newly-raised 3rd Pioneer Battalion. In April, he became engaged to Dorothy Brooke of Yarra Junction (*Punch* 06/04/1916:29). The following month, Stark acquired the title to a vacant block at 43 Florence Road, Surrey Hills, down the street from his parents, clearly intended as the future site of his own marital home (COT 3967/313).

The anticipated marriage, however, did not occur. In June 1916, Stark's military unit embarked to the UK, transferring thence to the AIF Base Depot in Le Havre in northern France. While there, Stark met an English woman, Marjorie Ross, who was staying or working at the Le Havre YWCA. After the war, Captain Frank B Stark (as he was by then) accompanied Ross to her home town of Oxford and, in July 1919, the couple's marriage there was reported in the Melbourne press (*Age* 26/07/1919:5). Returning to Australia, Stark resumed his civilian engineering career in the Postmaster General's Department as he and his wife proceeded to have a new house built on the site in Florence Street that he had purchased some four years earlier.

The new house is first recorded in the *Sands & McDougall Directory* for 1921, listed as "house being built", which is consistent with the building being under construction at least a year prior to the directory's publication. In 1922, the occupant of the completed house was listed as Frank B Stark. When the couple's first son child was born in early 1922, the newspaper announcement cited their address as *Oural*, Florence Road, Surrey Hills (*Argus* 18/02/1922:5). Ultimately, the couple lived there for only a short period, due to Stark being transferred to the Postmaster General's Department in South Australia. In January 1924, ownership of the house in Florence Street was transferred to Roy Smith, an insurance official. Stark, who rose to the position of Divisional Engineer in South Australia, died there in 1934.

Physical Description

The house at 43 Florence Street, Surrey Hills, is a single storey timber-framed inter-war bungalow with walls of weatherboard and roughcast render, and a terracotta-tiled hipped roof with tapering roughcast rendered chimneys. The house has an asymmetrical street frontage, with a splayed corner entrance opening onto a return verandah that extends along the north and west sides. The hipped roofline extends continuously across the verandah, with a small subsidiary hip over the splayed corner, and is supported on large brick piers with a roughcast rendered finish. The front door, set into the splayed corner, is glazed and multi-paned, with matching sidelights and two flanking porthole windows. The north elevation has a pair of french doors with leaded glazing, and there is a bow window to the south elevation.

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Comparative Analysis

As of 2024, there are relatively few houses on the heritage overlay schedule that date from the late Edwardian or early inter-war period, deemed to span the late 1910s to early 1920s. Virtually all of these reflect the prevailing trend towards larger attic-storeyed bungalows, as demonstrated by those houses at 12 Louise Avenue, Surrey Hills (1917) (HO197), 32 Thomas Street, Mitcham (1918) (HO83), 64 Churchill Street, Mont Albert (1919) (HO29) and 744 Canterbury Road, Surrey Hills (1920) (HO24). All of these have the characteristically prominent gabled roofline and facades that are balanced, if not fully symmetrical. While such houses might have some incidental qualities in common with 43 Florence Road, such as the dado-like weatherboard cladding with roughcast render above, evident at 32 Thomas Street, or the tapering roughcast chimneys also seen at 744 Canterbury Road, these houses are demonstrative of quite a different aesthetic.

Contemporaneous houses with a more compact expression and less prominent rooflines are less common in the City of Whitehorse. A small house at 9 James Street, Box Hill (c.1920), is somewhat comparable to 43 Florence Road, with similar weatherboard dado and roughcast render, and a tighter rectilinear plan with hipped roof, albeit with a symmetrical façade, projecting gabled porch and little decorative embellishment. A more substantial two-storey house at 747 Canterbury Road, Surrey Hills (Grainger, Little & Barlow, 1919-20) (HO239), in the Arts & Crafts style, is larger and grander than 43 Florence Road, but represents a comparable departure from the bungalow idiom through its asymmetrical composition, understated gabled roofline, tall roughcast-rendered walls with matching chunky piers, and multi-paned windows. *Greywood*, at 187-189 Canterbury Road, Blackburn (c.1921) (HO201), attributed to prolific local designer/builder Algernon Elmore, is a smaller and simpler example of the Arts & Craft, with plain weatherboard cladding, asymmetrical roofline and multi-paned windows. A nearby house at 179 Canterbury Road (now 8 Wirreanda Court), seemingly also dating from the early 1920s, had more in common with 43 Florence Road, with an asymmetrical layout, weatherboard dado with roughcast render above, tapered chimney and multi-paned windows. However, this interesting house was demolished in the 1980s.

Statement of Significance

What is significant?

The house at 43 Florence Street, Surrey Hills, is a single-storey timber house with a hipped terracotta-tiled roof and an asymmetrical façade with splayed corner and return verandah. The house was erected c.1920 for Frank Stark and his British-born wife Marjorie.

Significant fabric is defined as the exterior of the original c.1920 house. Specific elements of significance include the irregular hipped roofline, tapered chimneys, stepped façade with canted corner, weatherboard dado and roughcast render verandah with roughcast piers, front door, french doors porthole windows and bow window.

How is it significant?

The house at 43 Florence Street, Surrey Hills,, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The house is of aesthetic significance as a highly distinctive example of early inter-war residential architecture, combining an unusual composition (with an asymmetrical and steeping façade and irregular hipped roof enveloping a return verandah with canted corner) and detailing that is less commonly seen in contemporaneous houses, such as the weatherboard dado with roughcast render above, and some even more unusual features such as the porthole windows, chunky piers and multi-paned french doors. (*Criterion E*)

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References

Lodged Plan No 6476 (26 September 1914).

Certificate of Title, Volume 3967, Folio 313 (22 May 1916).

Sands & McDougall Directory.

Previous Heritage Studies

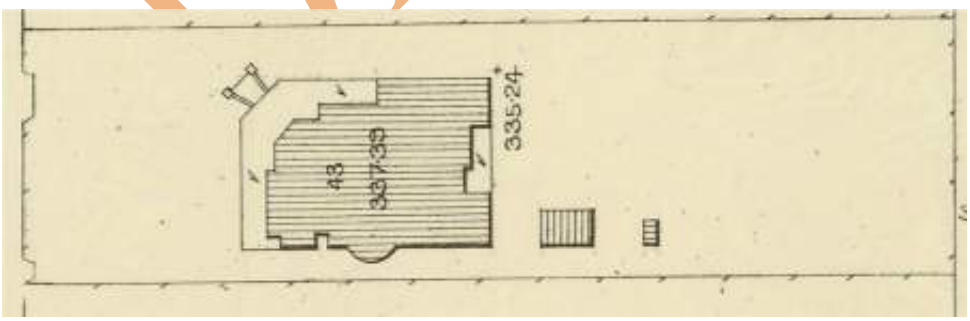
Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Graeme Butler & Associates, *City of Whitehorse Heritage Review* (2002) – Appendix B, graded Local D

Coleman Architects, *Whitehorse Heritage Review* (2016) – Schedule 2, graded A

Historical Images

Excerpt from MMBW Detail Plan No 3113 (dated 27 April 1927), showing Oural at 43 Florence Road. Source: Map Collection, State Library of Victoria



Enlarged detail of above, showing footprint of the house (and outbuildings) on the allotment

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IDENTIFIER	HOUSE	**Citation Number**	014
Other name/s	Turnbull House (former)	**Melway reference**	46 K6
Address	19 Francesca Street MONT ALBERT NORTH		
Date/s	1946 (designed) 1948-49 (built)		
Designer/s	Ace Drafting Service		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☐ Good ☑ Good	☑ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The house at 19 Francesca Street, Mont Albert North, was erected in 1948-49 for plumber A V Turnbull, to a design previously prepared in 1946 by Ace Drafting Services.

The son of a plumber, Arthur Victor Turnbull (1914-1987) followed the same profession. During 1946, he married Margaret Claire Speakman, which was presumably the impetus to have the new house built in Mont Albert North. On 22 October that year, Turnbull acquired the title to a block of land in Francesca Street, representing Lot 136 of the *Kenmare Heights Estate*, a large inter-war subdivision bounded by Strabane Avenue, Union Road, Belmore Road and Boondara Road. When first advertised for sale in 1918, the estate coffered "283 magnificent lots in an unequalled position at moderate prices on remarkably easy terms; rapid increase in values certain" (SLV map, undated). Despite such rhetoric, the estate did not develop promptly, with an aerial photograph from 1945 showing only a handful of houses yet built along Belmore Road and Rostrevor Road, with the remainder of the internal streets, including Francesca Street, not yet even formed.

Plans for the "proposed brick veneer residence" on Lot 136, for "A V Turnbull, esq", proposed a single-storey dwelling on an asymmetrical H-shaped plan that provided bedrooms and living areas at opposite ends with the service areas grouped between. To the rear, there were two smaller projecting rooms, designated as a laundry and office, which are brazenly crossed out, with a note stating 'Omit'. The plans are not dated, but the title block identifies the delineator as the Ace Drafting Service of 57 View Street, Mont Albert. Electoral rolls confirm that this was the residential address of one Kenneth Alan Williams, draftsman.

While never registered as an architect in Victoria, Kenneth Alan Williams (1920-2012), had some architectural training, attending the Melbourne University Architectural Atelier for a single year, in 1940 (at the time, the diploma course ran for three years). Married in 1941, Williams and wife Gwendoline took up residence at 57 View Street, Mont Albert, establishing a home-based design and drafting service by the mid-1940s. The venture was often promoted in newspapers, with early advertisements archly declaring that "A drawing always comes first" (*Age* 03/11/1945:13) or that "Home design is a specialised field" (*Age*, 22/12/1945:1945). From early 1946, these notices stated more explicitly that the business offered "builder's plans, prompt service, moderate charge" (*Argus* 18/05/1946:30), with "satisfaction guaranteed; representative will call any suburb, any time" (*Age* 29/06/1946:12). The Ace Drafting Service was successful enough to remain in business several decades, relocating to Station Street, Box Hill, by the mid-1950s.

While the drawings that Ace Drafting Service prepared for Turnbull's house in Francesca Street are undated, they were submitted as part of a building permit application in 1946. However, rate records indicate that the proposed site remained undeveloped for some time, with a Net Annual Value listed at only £5 (indicative of vacant land) in September 1947, then £6 in May 1949 and finally to £70 in September 1949. A note on the rate card lists the construction date as 1948-49, with a pencilled amendment noting "interior not complete". It was also stated that the house cost £1,250 and was of Cindcrete veneer (an early form of concrete block made of cement and crushed cinder, introduced to Australia in the 1930s) with a concrete title roof.

Arthur and Margaret Turnbull , who lived in Thompson Street, Ormond, when they purchased their land in 1946, were still at that address in early 1950 (*Age* 14/01/1950:29). While the couple seem to have taken up residence in Francesca Street soon afterwards, they were to remain there for only a few years. During their brief tenure, electoral rolls identified Turnbull as a builder rather than a plumber. The Turnbulls sold the house in 1955 and moved to Ivanhoe.

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Physical Description

The house at 19 Francesca Street, Mont Albert North, is a single-storeyed house in the inter-war Functionalist style, with stark walls of Cindcrete concrete block (with a pale painted finish), and a horizontally stepped roofing that comprise low gables, entirely concealed by parapets to evoke the effect of a flat roof. Laid out on an H-shaped plan, the house has a balanced but asymmetrical triple-fronted façade to the street, with a recessed and elevated central terrace flanked by two projecting bays. The terrace, accessed by steps, opens from the centrally-placed front door, which has a flat-roofed porch with metal pipe columns. The porch is flanked by large windows and there are even larger and wider windows to the projecting bays at either side; all of these windows have metal-framed sashes windows.

Comparative Analysis

The inter-war Functionalist style, characterised by stark block-like massing, plain wall surfaces, and flat roofs (actual or implied), is contemporaneous with the Art Deco or Moderne styles, but is quite distinct from them. It is most frequently associated with large-scale public buildings such as town halls, schools, hospitals and fire stations of the later 1930s and 1940s, as well as larger blocks of flats, but tends to be less commonly applied to single private dwellings.

In the City of Whitehorse, the Functionalist style is represented by some notable non-residential examples. Chief amongst these are two state school buildings in the Box Hill area, both designed by Percy Everett, Chief Architect of the PWD and a leading exponent of the Functionalist style: the former Box Hill Girls' Technical School at 1000 Whitehorse Road (1936) (HO117) and the former Box Hill Technical School at 25 Dunloe Avenue (1943) (HO32). Both are of face brick construction. The earlier school has a prominent rectilinear street frontage with horizontal window bays and a tower-like element, while the latter comprises detached flat-roofed blocks with fin-like piers and continuous windows bays, and a main building with two angled wings, similarly expressed, but with porthole windows and a more idiosyncratic treatment of the main entrance at the junction, incorporating contrasting concave and convex elements.

The remnant elements of the former Kildonan Children's Home at 70 Elgar Road, Burwood (HO249) include an large administration block (F B Kemp, K M Forster & L H Sherrard, 1937) dominated by a starkly expressed double-height wing in red brick, with vertical strip windows, and an even taller rectilinear tower alongside, all highly evocative of Functionalist style, notwithstanding the more conventional hip-roofed single-storey wings to either side.

By contrast, single private houses in the Functionalist style are less common in the municipality, as they tend to be across the broader metropolitan areas. As of 2024, there are only two Functionalist houses on the heritage overlay schedule. The earlier and superior example is at 47-49 Kitchener Street, Box Hill South (1946) (HO52), which has pale-coloured rendered walls, flat roof and a bold volumetric composition that includes a tall rectilinear tower with vertical strip window. While its Statement of Significance does not use the term Functionalist, it does acknowledge that the house is "directly inspired by European modernism", which effectively means the same thing. The citation does not identify the architect of the house, but new research confirms that it was designed by Percy H Keys and, furthermore, was intended as the first of a group of houses to be erected for returned servicemen in the Box Hill South area, although the others were never built (*Argus* 18/09/1946:19). The other Functionalist house on the heritage overlay is the former residence of well-known cartoonist William "Weg" Green at 40 Somers Street, Burwood (1950-51) (HO289), a two storey building starkly expressed with orange brick walls, corner windows with rendered surrounds, a vertical row of porthole windows and a concrete slab canopy to the front entrance.

While all are considered to manifestations of the Functionalist idiom, these two houses contrast with the one at 19 Francesca Street in that their rooflines are boldly expressed, with broad-eaved skillions, rather than being entirely concealed by parapets, as it the case of Francesca Street.

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A few other local houses might display some tendency toward Functionalism, but without fully embracing it to the extent seen at either Francesca Street or Kitchener Street. A single-storey house at 19 Black Street, Mont Albert (Craig, Reynolds & Garrett, 1934), has bold rectilinear massing and an elongated facade of pale-coloured rendered brick (with a contrasting manganese brick plinth), but with a conventional hipped roof with eaves, rather than a flat or parapeted roof. In any case, the overall effect has been compromised by a prominent second storey addition.

Statement of Significance

What is significant?

The house at 19 Francesca Street, Mont Albert North, is a single-storey concrete block house in the inter-war Functionalist style, with low roofline concealed by a parapet and a triple-fronted façade with a central recessed porch.

Significant fabric is defined as the exterior of the original 1946-49 house. Specific elements of significance include the rectilinear massing, the plain wall surface, the central recessed terrace, the large windows with metal-framed sashes, and the projecting porch with metal pipe columns.

How is it significant?

The house at 19 Francesca Street, Mont Albert North, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is aesthetically significant as a fine and substantially intact example of house in the inter-war Functionalist style, harking back to the original strain of International Modernism that emerged from Continental Europe from the 1920s. Characterised by a stark block-like expression with plain wall surfaces and implied or actual flat roofs, the Functionalist style is represented in the City of Whitehorse by several large non-residential buildings, but was far less commonly applied to single dwellings such as this. With its severe volumetric expression and parapeted roof, it remains an unusual element in a streetscape (and indeed a suburb) otherwise characterised by more conventional hipped or gable-roofed houses. (*Criterion E*)

References

Certificate of Title, Volume 4381, Folio, 086 (13 September 1920)

"What is Cindcrete?", *Australian Home Beautiful*, 1 March 1932, p 45.

Ace Drafting Service, "Proposed brick veneer residence, Francesca Street, Box Hill North for A V Turnbull, Esq", working drawings, undated. Building Permit No 796/1946. City of Whitehorse.

City of Box Hill Rate Cards, 1936-47. West Ward, Assessment No 4746. VPRS 9553/P1. Public Record Office Victoria.

City of Box Hill Rate Cards, 1947-54. West Ward, Assessment No 4746. Box Hill Historical Society.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 2, graded A

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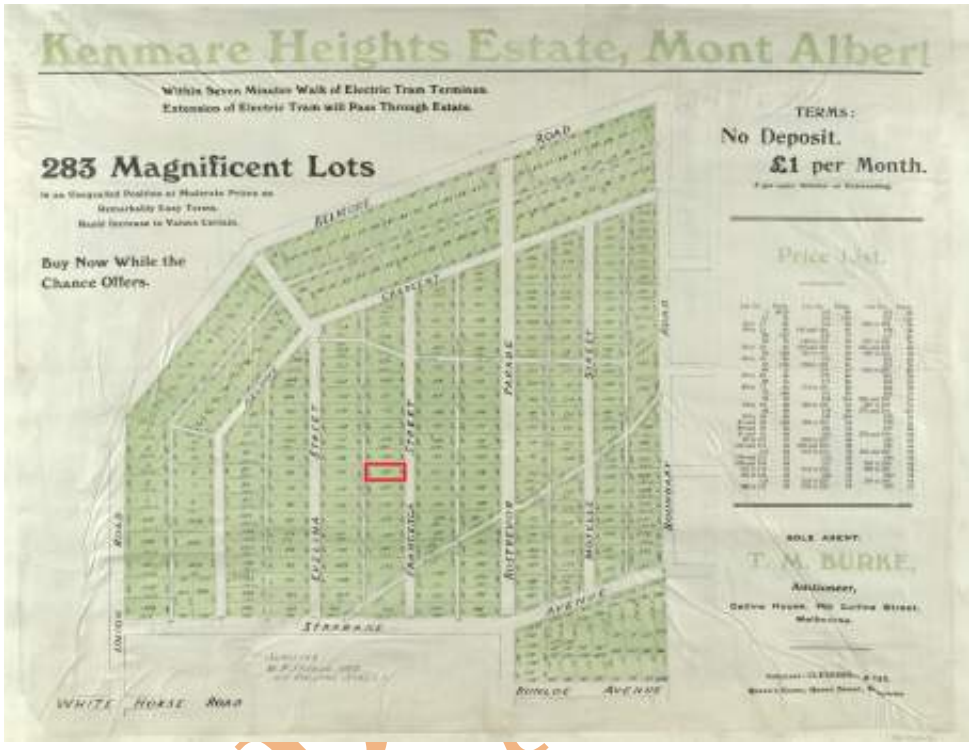
Historical Images



Subdivision plan for the Kenmare Heights Estate (1918), with Lot 136, Francesca Road, outlined in red.
Source: Map Collection, State Library of Victoria

Detail of 1951 aerial photograph, showing recently-completed house at 19 Francesca Street (circled in red)
Source: City of Whitehorse << https://map.whitehorse.vic.gov.au/index.html>>

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IDENTIFIER	HOUSE	**Citation Number**	015
Other name/s	Hodgens House (former)	**Melway reference**	60 H7
Address	18 Gilmour Street BURWOOD		
Date/s	1963-64		
Designer/s	Howard Hodgens		
Builder/s	W H Brayden		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The house at 18 Gilmour Street, Burwood, was erected in 1964 for architect Howard Hodgens, who designed it as his own residence, using an experimental structural system of his own devising.

In a brief autobiographical statement, Howard Stanley Hodgens (1924-2021) noted that, 'Thanks to a Methodist background for a social conscience, parents keen on education, and a post-war opportunity for the underclasses to have an academic career, I became an architect" (*Vic Humanist*, 09/2009: 6). He studied at the University of Melbourne from the late 1940s, attending a student congress in Adelaide in 1951 and contributing to the first issue of *Architecture & Arts* in 1952. His Bachelor of Architecture was conferred, in absentia, in December 1955. He went on to work as an architect in the Commonwealth Department of Works (*Comm Gaz* 07/11/1957:3430).

When Hodgens was registered as an architect in 1960, he and wife Marie were living in a house behind a shop in Camberwell. Planning a house of their own, they bought land in Gilmour Street, Burwood. Aside from providing a family home, Hodgens intended to showcase an innovative new structural system that he had developed. This was, as he later explained to the Council, 'a result of some years of research for a light, readily assembled, permanent attractive yet economic house'. His system comprised a light steel framing into which modular four-foot (760mm) panels were inserted to form solid wall or windows as necessary. The frame, of 1⅝ inch (41mm) sections, was connected by patented locking nuts, and the panels attached by steel ties and timber wedges, with a mastic seal. Solid panels were two-inch (50mm) chipboard clad with cement sheet and sealed with autoclaved enamel for a 'permanent colour finish'. Available under the proprietary name of OKAL board, these panels had been used in commercial buildings (mostly multi-storey office blocks) for some time, but had not yet been applied to suburban-scale detached dwellings. Hodgens referred to his own system as 'Okalstrut'.

Working drawings are dated August 1963, just weeks after the Hodgenses acquired title to the land. The compact rectangular plan, generated by a four-foot module, provided three bedrooms, the largest designated as 'future family room' with two extra bedrooms shown as a second stage. Hodgens' building permit application appended much supporting documentation, including structural computations and results of tests on OKAL board by the Commonwealth Experimental Building Research Station, the Department of Health and the CSIRO divisions of Forestry Products and Building Research. On 23 September, a permit was issued for a 'steel-framed panel-type house', to be erected by W H Brayden of East Doncaster, at an estimated cost £3,500.

Swift construction was inherent in Hodgens' system, and, when the project was profiled in the *Age* property column by architect Jack Clarke, it was noted that that 'once the floor slab was set and the components delivered, the external shell … was erected in several days' (*Age* 17/08/1964:8). Clarke praised Hodgens' system, asserting it 'could revolutionise the industry and bring it in line with other major Australian industries which became fully industrialised years ago'. He drew attention to such innovations as the concealment of electrical wiring in tubular ducts in the panels, and embedding of hot water pipes in the floor slab to provide central heating and 'unlimited hot water'. Clarke noted that the thin wall panels increased floor area, compared to standard brick veneer construction, and that costs could be reduced further if a plainer finish had been specified. An accompanying photograph of the house bore the caption: 'the only hint of unconventional construction is given by the regular four-foot division of window and wall'.

When Hodgens applied for his permit, he advised the Council that a few interested parties had expressed a wish to inspect the finished house, including the Housing Commission of Victoria, the State Savings Bank, and Commonwealth Experimental Building Research Station. While it is not clear if anything came of this, Hodgens would continue to champion panelised construction systems for many years. He spoke on them at a building congress (1967), published an article in a national journal (1969), contributed to a government survey into modern housing techniques (1974) and pursued at least three related patents (1969, 1989 and as recently as 2000).

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Hodgens, who held the position of Executive Architect Planner to the Melbourne Underground Loop Authority in the early 1970s, and also served as a long-time councillor to the City of Box Hill, remained living in the Burwood house until his death in 2021, aged 96 years.

Physical Description

The house at 18 Gilmour Street, Burwood, is a single-storey steel-framed house on a compact rectangular plan with a low-pitched gabled roof with broad eaves along the two side walls. Laid out on a modular plan based on a four-foot (1.2 metre) grid, the elevational treatment is necessarily regular and repetitive. The street façade, which is six modules wide, is balanced without being precisely symmetrical: it alternates two solid panels, one window, one solid panel, then two more windows. The window bays are full-height, each in a tripartite arrangement with a central awning sash with smaller fixed sashes above and below. Window frames are painted white, with the operable sashes (and the solid panels) in a dark grey. The front door is set into a recessed porch along the side (south) elevation, opening off a flat-roofed carport that also serves as a *porte-cochere*. This carport is an original element, as it is shown on the 1963 plans.

Comparative Analysis

As an experimental house conceived to demonstrate a new structural system that was devised by the architect himself, this house has few, if any, direct comparators in the City of Whitehorse. The most pertinent comparator on the heritage overlay schedule would be the former exhibition house at 453 Whitehorse Road, Mitcham (Smith, Tracey, Lyon & Brock, 1957) (HO278), which was built to raise funds for a Catholic charity. Like Hodgens' own house, it used a light steel structural frame and a concrete slab floor, both of which were still unusual in small-scale residential projects of the 1950s and 60s. The Mitcham house was otherwise unusual in its roofing system, with open-web steel joists and insulated panels finished in bituminous membrane and a layer of gravel, as well as internal partition walls of 'a new type of precast reinforced solid plaster, 2½ inches thick'.

As a dwelling that was built to demonstrate a particular construction system, this house might also be broadly compared to the exhibition houses erected by the manufacturers of building products from the mid-1950s to the early 1960s. Several of these were built in the municipality in the 1950s and '60s, the most famous of which were the Fibrolite Demonstration Huse at 235 Whitehorse Road, Blackburn (1955), and the Victorboard Insulwool House at 231 Whitehorse Road, Blackburn (1958), although both of these have long since been demolished. A surviving example at 531 Mitcham Road, Vermont (1962), built to showcase various types of wall cladding made by James Hardie & Company, has been re-clad externally and has thus lost the ability to demonstrate the reason for which it was built. In any case, none of these houses was innovative per se: they were all houses of conventional form, showcasing what were conventional building materials.

Architect's own houses tend to be more innovative or experimental, as the designer does not feel restricted by the requirements or budget of a paying client. In this broadest sense, Hodgens' house can be compared to a number of progressive post-war modern houses in the municipality that architects designed for themselves in the 1950s. Notable examples already on the heritage overlay schedule include the residences of Charles Weight and Stuart McIntosh, respectively located at 1 Gracefield Drive, Box Hill North (1954) (HO285) at 24 Arnott Street, Mont Albert North (1956) (HO283). The heritage overlay schedules income some earlier examples of architect's own houses, such as Leslie Mitchell's house at 1163 Riversdale Road, Box Hill South (1940) (HO288), as well as Alex J W Fergie's own house at 24 Central Avenue, Blackburn (c.1949-50), which has been assessed and recommended for a heritage overlay as part of the present study. However, the heritage overlay schedule does not currently include any examples of architect's own houses from the 1960s, or later.

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Statement of Significance

What is significant?

The house at 18 Gilmour Street, Burwood, is a single-storey post-war Modernist house on a modular rectangular plan, with a low gabled roof. Erected in 1963-64, it used an innovative new construction system based on prefabricated sandwich panels set into a light steel framework, which was devised by its architect owner, Howard Hodgens.

Significant fabric is defined as the exterior of the original 1963-64 house. Specific elements of significance include the repetitive modular expression, infill panels, tripartite window bays and the projecting carport to the south side, which was part of the original design.

How is it significant?

The house at 18 Gilmour Street, Burwood, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion F: Importance in demonstrating a high degree of creative or technical achievement at a particular period

Why is it significant?

The building is technologically significant for its innovative construction system referreds to as Okalstrut, involving a light steel framework into which modular window bays and factory-made OKAL panels (made of chipboard with cement sheet cladding and an autoclaved enamel finish) were inserted and fixed to create external walls. At the time of its construction, OKAL panels had been used for commercial and industrial buildings but, reportedly, never before applied to a detached private residence. The use of steel framing and concrete slabs floors was then still uncommon in small domestic projects, while other aspects of the house, such as imbedded hot water pipes for central heating and concealed wiring tubes in the modular panels, were also acknowledged at the time to be technologically innovative. (*Criterion F*)

References

Howard Hodgens, "Residence for H S Hodgens at Lot 14, Gilmour Street, Burwood", working drawings, dated 3 September 1963, and associated permit documentation. Building Permit No 18422/1963. City of Whitehorse.

Jack Clarke, 'The Building Industry Skeleton', *Age*, 17 August 1964, p 8.

Howard Hodgens, 'Industrialised building: Lightweight systems', *Architecture in Australia*, October 1969, pp 841-85.

Australian Government Task Force to investigate Modern Housing Techniques: Report to Minister for Housing & Construction, Australian Government Publishing Services, June 1974, p 103.

"Know your committee: Howard Hodgens", *Victorian Humanist*, October 2009, p 6.

Previous Heritage Studies

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 2, graded A [full citation was prepared but did not proceed to panel]

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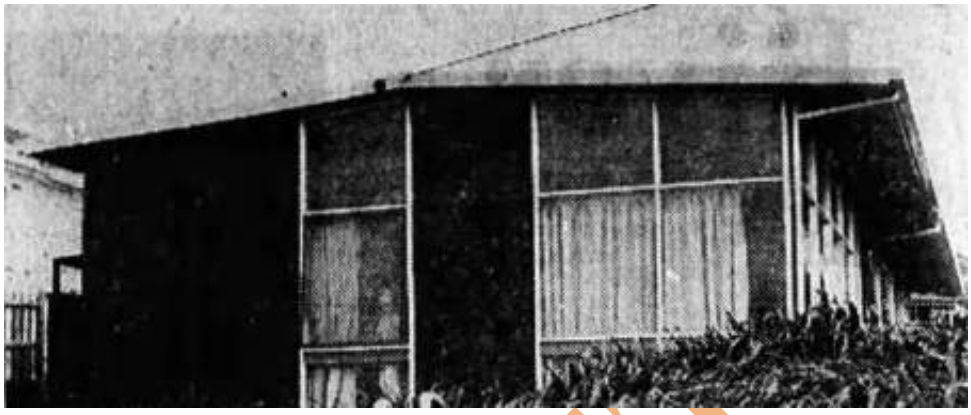
10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

Historical Images



Exterior of the Hodgens House at 18 Gilmour Street, Burwood, as it appeared in 1964, soon after completion
Source: Age, 17 August 1964, p 8.

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10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	016
Other name/s	Reid House (former)	**Melway reference**	61 B2
Address	17-19 Grandview Street BOX HILL SOUTH		
Date/s	1954-55 (house) 1960 (addition and carport)		
Designer/s	Chancellor & Patrick (both stages)		
Builder/s	K W Robertson		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The house at 17-19 Grandview Street, Box Hill South, was erected in 1954 for Dr Colin Reid and his wife Elsie, to a design by architects Chancellor & Patrick.

Colin Stuart Reid (1925-1999) was born in Ballarat but his family lived from Skipton, where his father, Dr C C Reid, practiced medicine. In 1943, the family moved to Melbourne and Reid's father took over another doctor's practice in Canterbury Road, Canterbury (*Argus* 02/03/1943:2). The family attended the local Presbyterian church, where Reid befriended William David Chancellor (1926-), an engineer's son who lived in Mont Albert Road (Callister:121). Both were in the process of following in their fathers' footsteps. Reid had enrolled in the medical course at the University of Melbourne, while Chancellor had started civil engineering studies at Melbourne Technical College while working as a junior draftsman in his father's firm, Johns & Waygood Ltd (Callister:6). On graduating with an MB BS degree in October 1949, Reid was appointed a junior Resident Medical Officer at Prince Henry's Hospital in St Kilda Road (*Age* 28/10/1949:4). By then, he lived with his mother in Station Street, Box Hill, where the family moved after Reid's father died in 1948.

Chancellor's career path was interrupted by a stint with the Royal Australian Navy. Following his discharge in 1947, he took up architectural studies at the University of Melbourne, graduating in March 1952. He then joined the well-respected office of Yuncken, Freeman Brothers, Griffiths & Simpson, where he met another young architect, William Rex Patrick (1926-2017). Later that year, Chancellor resigned to establish sole practice, working from the much-published house that he had recently designed and built for himself at Frankston. For a time, he was assisted informally by former colleague Patrick, until the latter finally left the Yuncken office in early 1954 to become full partner in the architectural practice re-branded as Chancellor & Patrick.

In 1950, Dr Reid became engaged to Rosalind Dence, also of Canterbury, and the couple married the following year (*Herald* 28/06/1950:8). Initially living in East Camberwell with Reid's mother, the couple planned to build for themselves and acquired vacant land in Grandview Road, Box Hill South, which was formed in the 1920s by subdivision of a large steeply-sloping property fronting Riversdale Road. Grandview Road, which followed the zigzagging form of the original driveway, was aptly named. The Reid's block, designated as Lot 13, offered fine views of the Dandenongs and was generously proportioned, albeit with an awkward kite-shaped form. Reid acquired the title to the land in August 1954. The choice of architect was obvious – the office of Chancellor & Patrick, which had only been officially known by that name for a few months (Callister:8).

The drawings for the house, dated October 1954, proposed a flat-roofed house on an elongated and stepped rectilinear plan that provided a large living and dining space at one end (divided by a freestanding fireplace), with two bedrooms at the other end and the service areas (kitchen, laundry and bathroom) along the rear. Chancellor's scheme allowed for the future addition of a third bedroom to the rear, as well as a detached carport in front. The house was elevated on a plinth to exploit the views, with huge full-height windows opening to a wide paved terrace. A building permit for construction, estimated to cost £3,800 (but ultimately totalling £4,115), was issued in June 1956. Work was undertaken by K W Robertson, a builder from East Camberwell who clearly completed to task to a high standard, as he was also responsible for two of the firm's other early houses on the Mornington Peninsula (Callister: 324, 328).

The third bedroom and carport were never built as depicted on the original plans, but, in 1960, Dr Reid returned to Chancellor & Patrick to prepare drawings for an addition where the bedroom was intended, providing a medical consulting suite, with waiting room, separate entrance and a larger double-carport to the side, rather than front (Callister:121). These works were completed and the Reids remained in residence (during which time, Reid's mother lived nearby, at No 25) until they moved to Heathmont in 1968. Since then, the former medical suite has been converted into two bedrooms, and another small rear addition made at the other end of the house.

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Physical Description

The house at 17-19 Grandview Street, Box Hill South, is a single-storey post-war Modernist house on elongated stepped plan with a low pitched roofline. Elevated on a red brick plinth, the house presents an asymmetrical but balanced elevation to the street, with repetitive bays that alternate between full-height windows and solid spandrels of vertical timber boarding with a pale painted finish. The low roof has broad eaves and exposed beams, with narrow highlight windows that extend between the beams. The north end of the façade has an expansive window wall, with huge fixed panes and sliding glass doors that open onto a paved terrace. Here, the roof beams project beyond the eaves line, cranking at a downward right angle to define a simple trabeated pergola.

The addition to the south end, designed by the same architects in matching style, incorporates a double carport with flat metal-deck roof supported on steel truss beams and steel columns.

Comparative Analysis

The office of Chancellor & Patrick, and David Chancellor in particular, maintained a special association with this part of the City of Whitehorse, consequent to Chancellor's early adulthood in Canterbury and Box Hill, and his subsequent relocation from Frankston to Box Hill South after the partnership established a Melbourne branch office in 1958. As of 2024, the firm's local work i is represented by two buildings on the heritage overlay schedule: the Wattle Park Uniting (formerly Presbyterian) Church 1201-2015 Riverdale Road, Box Hill South (1964) (HO69) and a house at 1 Verona Avenue, Vermont South (1957) (HO291). Chancellor's own house at 31 Fowler Street, Box Hill South (1958), an important example of the firm's work, was previously assessed and recommended for a heritage overlay, but was demolished in 2018.

From 1953 to 1970, the partnership of Chancellor & Patrick (and Chancellor's brief sole practice that preceded it) undertook about thirty projects in what is now the City of Whitehorse. Most of these were additions and/or alterations to existing buildings, and at least five were unrealised projects. Chancellor's earliest forays into the municipality, predating the partnership proper, were both located in Blackburn: an unbuilt scheme for a house in Whitehorse Road (1953) and an addition to an existing house in Dundee Street (1954). The Reid House in Grandview Road was the partnership's first major commission in the municipality. Aside from the two new houses and Presbyterian church mentioned above, later projects were primarily alterations or additions to houses (as well a s a few hops and medical clinic) in Blackburn, Box Hill, Burwood, Forest Hill and Vermont, including substantial works to the street frontage of 28 Grandview Road, Box Hill South (1t968), which remain evident today. However, the only other new Chancellor & Patrick house to be built in the City of Whitehorse seems to have been the Major House at 20a Myrtle Grove, Blackburn (1960), a modest gable-roofed brick house that was demolished c.2015.

Considered more broadly across Chancellor's body of work, the Reid House demonstrates stylistic themes that that recur across his earlier houses. While Chancellor & Patrick is routinely lauded as Melbourne's leading exponents of the organic mode of Frank Lloyd Wright, Chancellor himself has admitted that his first houses were more influenced by the work of major European-trained architects who migrated to the USA, namely Walter Gropius and Marcel Breuer on the East Coast, and Richard Neutra on the West Coast. Such influences emerged in the design of Chancellor's own house at Frankston (1950-52), with its battered stone base, vast windows and raked roofline with projecting rafters merging into angled struts. The Bickford House in Glen Waverley (1952), Macadie House in Mount Eliza (1953), Mitchell House in Mount Martha (1953) and Pratt House in Frankston (1953) all adopted a similar aesthetic, potently evocative of Neutra, with stone or brick plinths, repetitive elevations with massive windows, and flat roofs with broad eaves and exposed rafters. These houses (the first three of which have since been demolished) anticipate Chancellor's design for the Reid House at Box Hill South, before the architect began to embrace and adapt wider influences from the mid-1950s onwards.

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Statement of Significance

What is significant?

The house at 17-19 Grandview Road, Box Hill South, is a single-storey flat-roofed post-war Modernist house with a simple repetitive facade of full-height window and vertical timber boards. It was erected in 1954-55 for Dr Colin Reid to a design by the then recently-formed partnership of Chancellor & Patrick, who were engaged for further additions in 1960.

Significant fabric is defined as the exterior of the house to the extent of the 1954-55 fabric as well as the south addition and carport of 1960, designed by the same architects. Specific elements of significance include the vertical timber cladding, face brick plinth, full-height windows and sliding glass doors, exposed beams, horizontal slit windows, and pergola with cranked beams.

The small addition to the north-west corner of the house is not significant.

How is it significant?

The house at 17-19 Grandview Road, Box Hill South, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics
- Criterion H: Special association with the life or works of a person, or group of persons, of importance in our history.

Why is it significant?

The building is aesthetically significant as an example of post-war modernism that demonstrates a strong influence of American architect Richard Neutra, whose houses were characterised by low rooflines, expressed structure and simple repetitive elevations. The pergola, with roof beams that extend outward and then crank downward to form a simple trabeated structure, represents a particular potent allusion to Neutra, whom David Chancellor admired, and whose influence imbued many residential projects of the early and mid-1950s. (*Criterion E*)

The building is significant for special associations with local architect David Chancellor, who spent his early adulthood in Canterbury and Box Hill before settling in Frankston but then returning to Box Hill South in 1958. While Chancellor undertook a number of projects in what is now the City of Whitehorse over a period of two decades (notably his own house, since demolished), this was the first house of his design to be built in the municipality, and for a client who was an early friend from when they both attended the same church in Canterbury. The house marks the start of this important local architect's professional association in the municipality. (*Criterion H*)

References

Certificate of Title, Volume 6260, Folio 812 (13 December 1938).

Chancellor & Patrick, "House on Lot 13, Grandview Road, Box Hill, for Dr C S Reid", working drawings, dated 12 October 1954. Building Permit No 6074/1955. City of Whitehorse.

Winsome Callister, "Anchoring Identity: The Architecture of Chancellor & Patrick, 1950-1970", Ph D thesis, 2007, pp 93-94, 121 n 74, 325.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) –Appendix 2, graded B

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Historical Images

Original perspective drawing for the Reid House, prepared by David Chancellor, October 1954.
Source: Chancellor & Patrick Archive, via Callister, "Anchoring Identity", Figure 75.

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IDENTIFIER	HOUSES (DUPLEX)	**Citation Number**	017
Other name/s		**Melway reference**	47 J8
Address	20-20A Harold Street BLACKBURN		
Date/s	1953-60		
Designer/s	Jan Bogdan Chmielowski		
Builder/s	Jan Bogdan Chmielowski		
Heritage Group	Residential buildings (private)		
Heritage Category	Duplex		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☐ Good	☐ Fair ☑ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The duplex at 20-20A Harold Street, Blackburn, was designed in 1953 by Polish-born architect J B Chmielewski, who built it himself over a period of some seven years.

Jan Bogdan "Bill" Chmielowski (c.1912-1986) was born in Poland. While his birthdate is officially cited as 24 May 1912, his daughter has noted that he was older, and supplied the alternate date to immigration officials lest his true age precluded him from migrating. Due to the worsening political situation in Eastern Europe in the years leading up to WW2, Chmielowski fled to the UK. While serving with the RAF, he met a compatriot, Krystyna Karola Lorens (born 1922), who was working as a RAF nurse. In 1949, the couple married in Liverpool, where they resided while Chmielowski completed architectural studies. The couple, who became naturalised British citizens during 1952, had one daughter by January 1953, when they migrated to Australia, embarking from London aboard the SS *Otranto*, bound for Sydney via Fremantle.

Preferring a cool climate, the family settled in Melbourne by September 1953, when Chmielewski applied to become registered as an architect in Victoria. Despite being approved to sit for exams, he never did become registered and, instead, joined the public service as a drafting assistant in the Public Works Department. His family state that he obtained the PWD position soon after arriving in Melbourne, and was involved in the design of the new Blackburn High School (1955), although his official date of appointment is recorded as February 1959 (*Vic Gov Gaz* 31/03/1965:920).

Chmielowski's daughter confirms that construction of the duplex in Harold Street, Blackburn, also began soon after the family arrived in Melbourne in 1953, although ownership of the land title was not transferred to Chmielowski's name until July 1954 (COT 8062/282). The project, developed on a single allotment with a street frontage of 84'4" (25.5 metres), was to provide two self-contained dwellings: one for the architect's family (eventually to comprise three daughters) and the other for his sister-in-law, who was then living in Turin and planned to migrate, although, later alarmed by the family's stories of Australian spiders and snakes, ultimately decided not to do so.

The project unfolded gradually, with the family occupying a caravan on the site as Chmielowski began with construction of the first of the two garages, where the family took up residence until further stages were complete. Directory listings recorded a "house under construction" in 1953, with "J B Chielowski" [*sic*] first listed at 20 Harold Street the following year (S&M 1953, 1954). Realisation was not without other problems, with the architect's daughter recalling that the flat roof met with opposition from the City of Box Hill, which insisted on a more conventional hipped roof until Chmielowski finally managed to convince them otherwise.

Working after hours and on weekends, Chmielowski undertook virtually all of the construction himself – all of the bricklaying, rendering and roofing, and most of the plumbing and electrical work. The building thus took some years to reach full completion. An aerial photograph from 1956 shows the full footprint with both dwellings, but, four years later, when the allotment was subdivided into two smaller lots, the gazetted plan noted the building as a "two storey brick house (under construction)" (LP 47094, 26/10/1960). Work was evidently completed by late 1961, when the second house, by now designated as No 20A, was advertised for auction as a "substantial brick maisonette" with three bedrooms and large sun terrace (*Age* 29/11/1961:26). Failing to sell at that time, it was purchased the following year by W J Weber, a German migrant. The two dwellings were separately titled in 1967. The Webbers went on to add a new enclosed sunroom at the upper level, where the sun terrace had been, which was completed in 1974.

By then, the Chmielowskis had moved elsewhere. Requiring a larger house, the architect designed a new and fully detached two-storey family residence in Queen Street, Blackburn. This was conceived in a similarly stark modernist style, albeit this time with a conventional hipped roof, to sidestep any difficulties with the local authority. The architect and his wife were still living there at the time of his death on 28 April 1986.

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Physical Description

The building at 20-20A Harold Street, Blackburn, is a duplex: a semi-detached pair of two-storey dwellings. Designed in the inter-war Functionalist style, it is of brick construction with a pale rendered finish, and has a low roof concealed by a parapet, creating the characteristically stark block-like expression. The elongated street facade was originally symmetrical: each half was mirror reversed, with a slightly projecting bay at the outer end, incorporating a recessed entry porch, with a projecting flat-roofed garage to the side, which forms a sun terrace at the upper level. This configuration has since been altered. The dwelling to the right (No 20) retains an intact sun terrace with metal railings, but the garage below has been infilled with horizontal boarding (and a large window) to create an extra room, with a simple timber-framed carport added alongside. Conversely, the house to the left (No 20A) retains a fully operable garage, but the terrace above has been infilled to create a sunroom, which projects eastward above a later carport.

The horizontality of the facade is emphasised by capping at the parapet level, a plain moulding along the alignment of the window lintels, and a shadow-line at sill level. Fenestration is simple, with large rectangular windows that have projecting sills and metal-framed sashes, both fixed and casement. Entry porches have flat concrete slab roofs supported on trellis-like metal frames, with a low flight of steps, flanked by planter boxes, leading to a glazed front door with multi-paned sidelight windows. The garage door openings have a keystone motif to the lintels.

Comparative Analysis

The duplex at 20-20a Harold Street is unusual on two levels, stylistically and typologically.

With its bold volumetric expression, stark rendered walls and concealed roofline, the duplex is a (late) example of the inter-war Functionalist style, which is not well represented in the City of Whitehorse, and especially in the context of residential buildings. The municipality has some fine larger-scaled non-residential examples, notably the former Box Hill Girls' Technical School at 1000 Whitehorse Road (1936) (HO117) and the former Box Hill Technical School at 25 Dunloe Avenue (1943) (HO32), both designed by Percy Everett, Chief Architect of the PWD and a leading exponent of the Functionalist style. The remnant elements of the former Kildonan Children's Home at 70 Elgar Road, Burwood (HO249) include an administration block (F B Kemp, K M Forster & L H Sherrard, 1937) dominated by a starkly expressed double-height wing in red brick, with vertical strip windows, and an even taller rectilinear tower alongside, all highly evocative of Functionalist style, notwithstanding the more conventional hip-roofed single-storey wings to either side.

As of 2024, the heritage overlay schedule includes only one house in the inter-war Functionalist style, at 47-49 Kitchener Street, Box Hill South (1946) (HO52). This is similarly expressed with pale-coloured rendered walls and volumetric composition, with a true flat roof and squat tower-like element with vertical strip window. While its Statement of Significance does not use the term Functionalist, it does state that the house is "directly inspired by European modernism", which effectively means the same thing. Only recently confirmed to have been designed by architect Percy Keys as the first in a series of houses for returned servicemen (of which the remainder were never built) the has an almost civic character, more akin to the above buildings (and especially the administration block at Kildonan) than to private houses of similar style.

A fine example of a single house in the inter-war Functionalist style, at 19 Francesca Street, Mont Albert North (Ace Drafting Services, 1946-49), has been assessed as part of the present study, and recommended for heritage overlay. A few other local houses display a token tendency toward Functionalism, but without fully embracing it, typified by a single-storey house at 19 Black Street, Mont Albert (Craig, Reynolds & Garrett, 1934), with bold rectilinear massing and an elongated facade of pale-coloured rendered brick (with a contrasting manganese brick plinth), but with a conventional hipped roof with eaves, rather than a flat or parapeted roof. In any case, the overall effect has been compromised by a prominent second storey addition.

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Semi-detached dwellings have been recorded in the municipality since the late nineteenth century, when scattered examples could be found in Surrey Hills, Mont Albert and Box Hill. The latter suburb had a unique (but since demolished) two-storey terraced pair at 30-32 Rutland Road, with a single-storey pair still standing, further down the street, at Nos 66-68. Edwardian counterparts duly appeared, demonstrated by the cluster of single-storey semi-detached pairs that straddle the corner of Whitehorse Road and Miller Street, Box Hill (1912-13) (HO191), and rarer double-storey pair at 72-74 Zetland Road, Mont Albert (1914) (HO173). A group of five semi-detached pairs on the east side of Dorking Road, apparently built in the 1910s as a cohesive single development, is evident in vintage aerial photographs but were all demolished in the early 1970s

From the late 1930s, single-storey maisonettes proliferated in the eastern part of the municipality, typified by 383-385 Mont Albert Road, 8-10 Rowland Street and 26-28 York Street, often simply expressed with face brickwork, hipped roofs and vaguely Tudor Revival character. A later but more striking example, at 3-3a Laurencia Court, Mont Albert (c.1949), conceived in a progressive modern mode by designer/builder C H Langdon, comprised an asymmetrical pair of flat-roofed dwellings in pale-coloured brick, with corner windows. Yet, two-storey counterparts were rare. In 1936, when it was reported that maisonette development in the City of Box Hill would be aided by recent revisions to by-laws, the article reproduced a sketch for what was described as "one of the first blocks to be erected … under the new by-laws" (*Argus* 29/10/1936:4). A two-storey block in the Functionalist style, it had a stark volumetric expression akin to Chmielowski's later building in Blackburn, but with a hipped roof. The article did not cite a street address and, as research has failed to locate it, it is presumed demolished, or perhaps never built in the first place. Ultimately, two-storey duplex dwellings would not become more widespread until the 1970s and later, when the typology re-emerged as townhouse developments, demonstrated by countless examples in Box Hill, such as 65-67 Albion Road (c.1978) and 724-730 Station Street (c.1984).

As an example of the work of architect Chmieloswki in his private capacity, the building at 20-20a Harold Street has only one other local comparator: the second house that he designed for his own family at 14 Queen Street, Blackburn (c.1969). An asymmetrical double-fronted orange brick house with hipped roof, large windows and a narrow balcony, it was rather less architecturally distinctive than the earlier duplex s, and, in any case, was demolished was demolished c.2019.

Statement of Significance

What is significant?

The building at 20-20A Harold Street, Blackburn, is a duplex (ie, semi-detached pair of two-storey dwellings) in the inter-war Functionalist style, with stark volumetric expression, pale rendered brick walls and a concealed low-pitched roof. It was designed by Polish émigré architect J B Chmielewski for his own use, and erected (almost entirely by him) between 1953 and 1960.

Significant fabric is defined as the exterior of the entire 1953-60 building. Specific elements of significance include the block-like expression, stark rendered walls, low concealed roofline, large windows with metal-framed sashes, integrated garages, entry porches with slab roofs on metal frames, front doors with multi-paned sidelights, and the remaining sun terrace with metal railing. The two flanking carports, and the first-floor sunroom addition that infilled the former sun terrace of No 20A, are not considered to be significant.

How is it significant?

The building at 20-20A Harold Street, Blackburn, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion B: Possession of uncommon, rare or endangered aspects of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is architecturally significant as a rare example of duplex housing that, while expressed as a single building, constitutes a semi-detached pair of self-contained two-storey dwellings. Although a small number of typological precedents developed in the City of Whitehorse in the late nineteenth and early twentieth century, this large and prominent double-storey block seems to have no direct local comparators from the broader mid-twentieth century era, and anticipates the subsequent emergence and proliferation of townhouses developments from the later 1960s. (*Criterion B*)

The building is aesthetically significant as an excellent, if late, example of a residential building in the inter-war Functionalist style, which is not well represented in the City of Whitehorse. With its stark block-like articulation, pale rendered walls, concealed roof, large widows with metal-framed sashes and one surviving sun terrace, the building is not only potently evocative of the European modernist tradition of the 1920s and '30s, but also, being designed by a Polish émigré architect, an uncommonly authentic manifestation. (*Criterion E*)

References

Certificate of Title, Volume 8062, Folio 282 (13 July 1954).

Lodged Plan No 47094 (26 October 1960).

"Proposed new sun-room extension over garage, 20a Harold Street, Blackburn", working drawings, undated. Building Permit No 29119/1974. City of Whitehorse.

Emails from Ms Alexandra Pottage (*nee* Chmielowski), February 2024.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) –Appendix 2, graded B

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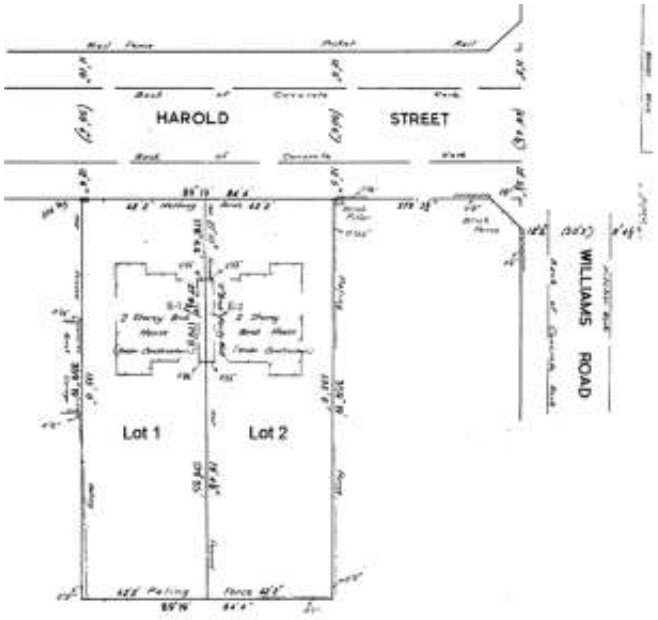
Historical Images



Plan of subdivision when property was split into two lots (1960), noting house still "under construction". Source: Lodged Plan No 47094, declared 26 October 1960.

The eastern half of the building (20a Harold Street) at the time it was advertised for sale in the early 1960s. Source: Collection of Chmielewski Family, Melbourne.

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	018
Other name/s	Brown House (former)	**Melway reference**	48 F11
Address	5 Heather Grove NUNAWADING		
Date/s	c.1932-33		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.4 Early twentieth century development				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The house at house at 5 Heather Grove, Nunawading, was erected c.1932-33 for Walter and Bessie Brown. The architect has not been identified.

Born in Hawthorn, Walter Edward Brown (1904-1988) worked as a brass-moulder in the family business, Brown Brothers, a leading firm of engineers and brass-founders established by his father, the grandly named Thomas William Benjamin David Haig Brown. From the early twentieth century, Brown Brother operated from premises in Burwood Road, Hawthorn, and the family occupied an adjacent villa. After Thomas Brown was widowed in 1924, he moved out to Nunawading (then still known as Tunstall) with this three unmarried sons, Walter, Harold and Thomas junior, where they built a modest timber bungalow in Shady Grove.

In May 1932, Walter Brown married Bessie Winifred Walker at the West Hawthorn Presbyterian Church. Planning to make their home in Nunawading, they purchased land on the north side of Heather Grove, just around the corner from where Brown's father still lived in Shady Grove. The land, formerly a three-acre farmlet property fronting Springvale Road, had been subdivided and offered for sale in October 1926 as the *Kylana Estate*, comprising "eight timbered home sites… minutes south from the railway station" (*BH Reporter* 01/10/1926:5). A ninth lot, designated as Lot 1, was reserved from sale, containing the original farmhouse. Walter and Bessie Brown acquired Lots 4 and 5, adjacent to the farmhouse, giving them an expansive double-width frontage of 120 feet (36 metres) to Heather Grove. While the Certificate of Title indicates that ownership of the land was transferred to Bessie Brown's name in 1938 , there is no doubt that the house was completed much earlier (COT 6254/642). Electoral show the unmarried Bessie Walker still living in Hawthorn in 1931, with she and her new husband listed in Heather Grove by 1934. It seems most likely that the new house was completed c.1932-33, coinciding with the couple's marriage.

Some details of the construction of the house are provided by a newspaper article published when the house was offered for sale after Walter Brown's death in July 1988 (*Age* 06/10/1989:29). . Although this account appeared over fifty years after the fact, the information quoted could only have been provided by the Brown family. It was stated that the construction of the full-width front verandah, supported only at either end, was made possible by an eleven-metre steel beam that had to be brought to the site by horse and cart. The article also noted that the house had an above-average fitout, with high quality fixtures and finishes, such as extensive timber panelling, bevelled glass panels and leadlighting, as well as items of bespoke brassware, including light fittings, that were specially manufactured by Brown Brothers foundry, which was then still operating in Burwood Road, Hawthorn (and would continue to do so into the 1940s).

The Brown family, eventually comprising two sons and two daughters, remained living in the Heather Grove house for more than five decades. During that time, Brown's occupation was listed in electoral rolls as a cement worker, although other primary sources describe him as a machinist or a brassware manufacturer, confirming his ongoing involvement in the family business. At the time that the property was offered for sale in 1989, it still occupied a double-width block, with the house to the west and landscaped grounds to the east. Subsequently, the block was split and the eastern half redeveloped with a pair of villa units, designated as 7 Heather Grove.

Physical Description

The house at 5 Heather Grove, Nunawading, is a single-storey timber-framed inter-war bungalow with weatherboard cladding and a broad longitudinal gabled roof of red terracotta tiles with scrolled finials. The roof projects forward towards the street, at a slightly gentler pitch, to enclose the full-width front verandah. At the junction, there is a dormer-like element with a broad gable, lattice and timber shingle infill, exposed rafters and bargeboards with sharply tapered ends.

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The verandah roof, with rafters exposed to the street, runs along a continuous beam (reportedly concealing an eleven-metre steel joist) that is supported at either end by wide rendered brick pillars, enlivened by soldier-courses of clinker brickwork between projecting bands. On all three sides, the verandah is enclosed by balustrade walls of matching clinker brick (overpainted, in a dark grey, along the street side) crowned by a continuous and bracketed planter box. In the centre of the street façade, two smaller pairs of clinker brick piers, with rendered capping, flank a low flight of steps leading up to the front door. The entrance contains double doors, with a pair of timber screen doors. The doorway is flanked by two large boxed window bays, each containing tripartite timber-framed sashes with bevelled glazing and leadlight to the upper panels.

Flanking the house proper, and heightening its dominant horizontal composition, are two wide but low pergola-like gateways. Each has matching rendered brick piers with clinker brick and rendered banding, supporting wide beams and smaller perpendicular joists-like elements, all with ogee-profiled ends. The gateway to the east side of the house, which is somewhat wider, aligns with the driveway that extends back to a detached weatherboard garage with terracotta-tiled roof and latticed gable. As the outline of this garage is evident on an aerial photograph from 1945, it would have been built by the Brown family and is possibly contemporaneous with the house.

Comparative Analysis

There are countless inter-war bungalows in the City of Whitehorse, and especially the former City of Box Hill, with much variation in form, scale and degree of architectural sophistication. They tend to be most commonly characterised by a varied roofline, combining hipped and gabled forms, and an asymmetrical façade with projecting gabled bay incorporating an entry porch. Porch supports vary widely, from plain brick piers to more ornate capped or decorated piers, tapered pillars and columns, with balustrade walls of basic or more embellished form. A variation, where the roofline and structure of the porch extend across the entire façade, enveloping the projecting bay, are more distinctive but not particularly uncommon, typified 419 Mont Albert Road, Mont Albert (1925) (HO151) and examples in the *Combarton Street Precinct* in Box Hill (HO101) and the *Alexander Street Precinct* in Box Hill North (HO242).

Bungalows with a true full-width porch, extending across a symmetrical façade with central entry, are less common, with such examples as 7 Alexander Street, Box Hill (within HO242) and 30 Hill Street, Box Hill South, the latter plainer and simpler than 5 Heather Grove. More comparable, in form and date, is *Walyarra* at 21 Shady Grove, Nunawading (1933) (HO71). Like 5 Heather Grove, it has a wide street frontage with central dormer-like element and integrated full-width verandah with central entrance and steps. The hipped roofline at *Walyarra*, and four tapering porch pillars, contrast with the more streamlined expression at Heather Grove, with its longitudinal gable and continuous end-supported verandah, extended by the two flanking pergola gateways.

Counterparts with symmetrical façades, and full-width porches supported only the ends, tend to be rarer. There are scattered modest examples, such as 435 Station Street, Box Hill, and slightly grander ones located in heritage areas, such as at 9 Clydesdale Street, Box Hill (within HO101) and three more 13, 18 and 26 Alexander Street (within HO242). A larger and grander specimen at 38 Court Street, Box Hill (1923) (HO185), is far more comparable to Heather Grove, having the rarer longitudinal gable, with dormer-like element, and a full-width end-supported porch that offers a higher degree of decorative embellishment (with rough clinker brick, blind arches and rubble)

The Court Street example, however, lacks what is the most distinctive feature at 5 Heather Grove: the flanking pergolas gateways, a rarely seen element in inter-war bungalows. A few local houses have been sighted that have one such feature, at 11 Alexander Street, Box Hill (part HO242) and the larger two-storey house at 747 Canterbury Road, Surrey Hills (1919) (HO237). However, no other example has been found of a bungalow that has two such elements, flanking the main frontage in a fashion that heightens an already strong horizontal expression.

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Statement of Significance

What is significant?

The house at 5 Heather Grove, Nunawading, is a single-storey weatherboard inter-war bungalow with a gabled roofline and full-width verandah on brick piers. It was erected c,1932-33 for Walter and Bessie Brown.

Significant fabric is defined as the exterior of the original c.1932-33 house, and the detached timber garage to the north-west side, which is of pre-war origin. Specific elements of significance include the longitudinal gabled roofline, the broad dormer-like element with shingles, lattice and tapered bargeboards, the full-width verandah with brief piers and balustrade wall, the boxed windows with leaded glazing, and the two flanking pergola-like gateways.

How is it significant?

The house at 5 Heather Grove, Nunawading, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is aesthetically significant as an inter-war timber bungalow of unusual form and detailing. It has a uncommonly dominant horizontal expression, consequent to its longitudinal gabled roofline, full-width verandah supported only at either end, and a flanking pair of pergola-like gateways that are themselves an unusual and distinctive feature, rarely seen in other inter-war bungalows across the City of Whitehorse. With its shingled and latticed dormer gablet and wide rendered piers with clinker brickwork, it is a highly embellished bungalow of a type that, while more common in the eastern half of the municipality, is rarely seen in Nunawading and Mitcham. (*Criterion E*).

References

Certificate of Title, Volume 6254, Folio 642 (created 22 November 1938)

"Family home on double block", *Age*, 6 October 1988, p 29.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) – Schedule 2, graded C

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Historical Images

Subdivision plan for the Kylana Estate, Tunstall (1926), with nine lots on north side of Heather Grove
Source: Map Collection, State Library of Victoria.

Detail of MMBW Plan No4705 (1938; updated to show later houses), showing house on its double block
Source: Public Record Office Victoria

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IDENTIFIER	HOUSE	**Citation Number**	019
Other name/s	*The Pines; Woodland Villa*	**Melway reference**	61 B7
Address	213 Highbury Road BURWOOD		
Date/s	1854		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	4 TRANSFORMING AND MANAGING THE LAND 4.3 Orchards and market gardens				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☐ Good ☑ Good	☑ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The Pines, at 213 Highbury Road, Burwood, was erected in 1854 for orchardist Andrew Goold, a member of an extended family of northern Irish migrants who were district pioneers, and who would retain ownership of this property for more than a century.

The family's presence in Victoria dates back to January 1841, when the former Ann Goold arrived in the colony with her husband George Bennett and George's brother William. From 1849, the two brothers began to acquire large parcels of land in the Parishes of Nunawading and Mulgrave, much of which was intended for other relatives who intended to migrate. The land purchased by the Bennetts were Sections 11, 55A and 55B of the Parish of Nunawading, which totalled over 122 acres (50 hectares) bordered by present-day Burwood Road, Station Street, Highbury Road and Gardiners Creek. In 1853, Ann Bennett's brother Andrew Goold (1831-1897) arrived from Ireland and, the following year, married Esther Reid (1835-1893). He then purchased Section 55B, facing Highbury Road, from his brother-in-law George Bennett. According to their great-grandson Max, Andrew and Esther Goold initially occupied a tent on the vast property before building a modest brick house in 1854, which they named *Woodland Villa*. The house was recorded in the district's earliest rate book, compiled by the Shire of Nunawading in 1863, which described Andrew Goold as owner of "house and land" on 15 acres, South Boundary Road, valued at £19.

Between 1858 and 1873, the Goolds had three daughters and two sons; the youngest child, and second son, died in infancy. The daughters all eventually married and left the district, leaving their surviving brother Andrew junior (1866-1948), who married in 1889, to take over the family orchard. During the 1880s, the marriages of the Goold children were announced in newspapers, providing some of the earliest documentation of the name *Woodland Villa* being applied for their parents' home in Burwood (*Weekly Times* 17/9/1881:21, *Age* 11/10/1884:5, *Age* 19/10/1889:5). Esther Reid died in 1893, followed by Andrew senior four years later, when another newspaper notice reported that the funeral would depart from "his late residence, Woodland Villa, Boundary Road, Burwood" (*Age* 1/4/1897:8). Andrew's probate papers, compiled soon afterwards, contain an inventory of assets to gives and even more useful record of the family estate:

> Freehold land having a frontage of 513 links to Boundary Road, Nunawading, by a depth of 450 links, part of Allotment B of Portion 55, Parish of Nunawading, on which is erected a six roomed brick, and weatherboard house (old) with stabling and outhouses, used as an orchard.

After Andrew senior's death, the property was taken over by his like-named son, who renamed it *The Pines*, after an avenue of mature trees (long since removed) along Highbury Road. The new name was cited in a newspaper announcement for the engagement of one of Andrew senior's granddaughters, Aimee Priestley, in 1912 (*Argus* 15/06/1912:13). Andrew junior and his wife, the former Ada Charlotte Beddows (1864-1948), had three sons and two daughters. After their deaths, both during 1948, their children opted subdivide the property, which then still comprised the entire eastern half of Section 55B. The land was carved into 64 residential allotments with frontage to Station Street and Highbury Road, and two new dead-end roads off Station Street, named Goold Street and Beddows Street (LP22805 11/02/1952). The subdivision also provided an elongated reserve between the two new streets, "for drainage, sewerage and recreational purposes".

The old farmhouse on Highbury Road was retained on a considerable curtilage (comprising Lots 59 to 64 of the new estate) that remained in the ownership of Andrew junior's grandson, Sydney Maxwell (Max) Goold (1921-2009), who continued to run market gardens in the area until as late as 1983. Over the years, the family sold off the few remaining vacant lots on Highbury Road, leaving the original farmhouse on a double-width block (Lots 62 and 63) that it still occupies today. From 1959, the house was owned and occupied by furniture maker Janis Baltvilks and his wife Isabel, who remained there until 1981. The next owner was George Bell, a recently retired businessman, who lived there with his wife Audrey (d.1995) and then alone until his death in 2008, aged 92.

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Description

Occupying a double-width block, the house at 213 Highbury Road, Burwood, is a single-storey hip-roofed Victorian rendered villa with a symmetrical double-fronted street frontage. The roof is clad in corrugated galvanised steel, penetrated by a plain chimney with rendered cap, and has virtually no eaves. The street frontage has a central front entrance, with stop-chamfered jambs and a panelled timber door with a single sidelight to the left side. This doorway is flanked by rectangular windows with projecting sills and timber-framed double-hung sashes. A simple verandah extends across the entire facade, with a skillion roof of corrugated cement sheeting, a wrought iron lacework frieze, and plain timber posts that have been partially encased in masonry (concrete block?) plinths. The verandah floor is finished in crazy paved stonework.

The original mid-Victorian dwelling, which has an elongated rectangular plan (seemingly one room deep) has been extended to the rear by a large wing that forms an overall T-shaped footprint. This addition, which appears to be of concrete block construction, has a low gabled roofline that is higher than the ridge of roof of the original house, making it partly visible from the street.

To the left (west) side of the original house is an attached garage, also of concrete block construction, with a low roofline concealed by a parapet.

Comparative analysis

When advertised for sale in 1981, *The Pines* was reported to be "the oldest home in Burwood" (*Age* 14/2/1981:54). It predates two local contenders associated with another pioneer orchardist, Edward Harrison: his original cottage at 11 Sixth Avenue (1864) and his son's later villa (c.1880) at 16 Highbury Road. While both houses still exist, they are located across Highbury Road and thus just outside the City of Whitehorse. Both have individual heritage overlays in the City of Monash. North of Highbury Road, the oldest surviving house in the former Township of Burwood dates back only to 1895. Located at 5 Ireland Street, Burwood, this former market-garden farmhouse has been assessed and recommended for heritage overlay as part of the current study.

Asserted by the Goold family to have been built as early as 1854, and dating back at least as far as the first rate book of 1863, *The Pines* is not only the oldest surviving house in Burwood but also one of the oldest surviving buildings in the municipality. For his 2001 heritage study, Andrew Ward prepared a map showing the fifty or so places documented in the 1863 rate book, which included dwellings, shops, two churches, two hotels, a school and a police station. Predictably, few of these structures remain today. Two notable survivors, both in Box Hill North, are included on the heritage overlay schedule: the former Wesleyan Chapel at 147 Woodhouse Grove (1856) (HO99), and a modest weatherboard house at 27 Morley Crescent (HO64). The latter, built by early settler Edward Crossman, is of unconfirmed date, but is clearly pre-1863.

Of the early dwellings shown on Ward's map, a surprising number survived into the post-WW2 era, but have since disappeared. By 1860, William Bennett, another early settler in Burwood (and related by marriage to the Goolds) had built a modest house of pise (rammed earth) on Section 11, next to the Goolds' Section 55B. The ruins of Bennett' house were still visible in the 1950s (a much-reproduced photograph appears in Ivan Southall's book, *A Tale of Box Hill*), but have long since vanished. In Mitcham, a basic gable-roofed timber cottage on the east side of Edward Street [No 3 or 5?] was described in 1986 as "one of the oldest houses in Mitcham" (as per photograph held by Whitehorse Historical Society, refer item NP1063). It was demolished shortly afterward, for a new supermarket carpark. Nunawading's counterpart was *The Elms*, a farmhouse built on Whitehorse Road (opposite the present-day civic centre) by John McLelland, who acquired the land in 1869. Eighty years later, the house was relocated to a new site at 113 Springvale Road, where it remained occupied by McLelland's daughter until her death in 1956. In the early 1970s, the Nunawading Historical Society declared it the oldest house in Nunawading still being inhabited as a dwelling (Sydenham:35). However, it had been demolished by 1981.

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More recent casualties include the timber farmhouse of early settler Gad Eley, originally fronting the road that took his surname, which survived post-WW2 subdivision to occupy a large site at 10 Houston Court, complete with remnant farm outbuildings. Described by Andrew Ward as "Box Hill's most intact early home", it was also demolished in the late 1990s. The timber house at 519 Station Street, Box Hill, known as 'Blood's Cottage' for its associations with the pioneering local family, was said to date back to 1854, although its earliest fabric was engulfed by later additions so that, from the street, it presented as a typical late Victorian villa. Blood's Cottage was demolished, not without some local controversy, in the late 1990s. Another house that similarly incorporated early fabric was *Spencycroft* at 654 Canterbury Road, Surrey Hills. Originally a modest timber dwelling erected in the late 1850s by the Jackel family, it was extended in the early 1900s with a substantial front wing that concealed the earlier portion. *Spencycroft* was demolished in 2016.

The Pines at 213 Highbury Road, Burwood, is demonstrably one of the oldest houses in the City of Whitehorse, if not the oldest, and one of very early surviving buildings of any type. Aside from the two pre-1863 buildings mentioned earlier, the oldest buildings on the heritage overlay comprise a few houses from the 1870s, namely *Wittenham* at 2 Hayward Court, Vermont (c.1874) (HO46) and *The Cottage* at 36 Scott Street, Vermont (1876) (HO70), and the original portions of the primary schools at Burwood and Vermont, respectively at 172 Burwood Highway (1865) (HO1) and 4-10 Nurlendi Road (1871) (HO66). While St Andrew's Uniting Church at 909-911 Whitehorse Road, Box Hill (HO90), technically dates back to 1866-67, the building was originally located elsewhere, before being dismantled and re-erected in the municipality in 1935.

Statement of Significance

What is significant?

The house at 213 Highbury Road, Burwood, is a single storey double-fronted mid-Victorian brick villa with a hipped roof, symmetrical façade and full-width verandah. It was erected in 1854 by pioneer district orchardist Andrew Goold, whose family owned the property for over a century

Significant fabric is defined as the exterior of the original 1854 house. Specific elements of significance include the rendered brickwork, simple hipped roof form , chimney and symmetrical façade with central doorway, double-hung sash windows and verandah with timber posts and wrought iron lacework frieze.

The garage to the west side, and the later addition to the rear, are not considered significant.

How is it significant?

The house at 213 Highbury Road, Burwood, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is historically significant as one of the oldest surviving buildings, and possibly the oldest surviving house, in the City of Whitehorse. Said to have been built in 1854, it is one of only three surviving buildings to have been recorded in the first rate book of 1863. Erected by Andrew Goold, a pioneer of orcharding in the Burwood district, the house provides rare evidence of the earliest post-contact settlement in that part of the municipality. Owned by the same family for over a century, with only two other owners since then, this simple but largely intact dwelling, still occupying a double-width block, remains potently evocative of the early farming properties that once characterised this area. (*Criterion A*)

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The building is aesthetically significant as a mid-Victorian brick villa of characteristically simple form, with symmetrical-double-fronted façade and full-width verandah. Its plain rendered finish contrasts with other mid-Victorian houses of similar form in the municipality, which are far more commonly of timber construction, as well as later Victorian examples in face or bichromatic brick. (*Criterion E*)

References

Nunawading Road District Rate Book, 1863-64.
Entry for Andrew Goold, cited in card index held by Box Hill Historical Society.

"Statement of assets and liabilities", dated 30 March 1897. Grant of Probate for Andrew Goold. File 64/275, VPRS 28/P0, Public Record Office Victoria.

Certificates of Title, Volume 6946, Folio 119 (9 August 1948); Volume 7699, Folio 001 (19 March 1952); Volume 8243, Folio 093 (13 August 1959).

Lodged Plan No 22805 (11 February 1952).

"The Last of the Highbury Road farmers", *Burwood Bulletin*, February-March 1989, pp 9-10.

"History of the Goold family", 1 p typescript, undated (c.1989). Box Hill Historical Society.

Goold family file, including family tree, marriage certificates, photographs, research notes and other material, held by the Box Hill Historical Society.

Diane Sydenham, *Windows on Nunawading* (1990).

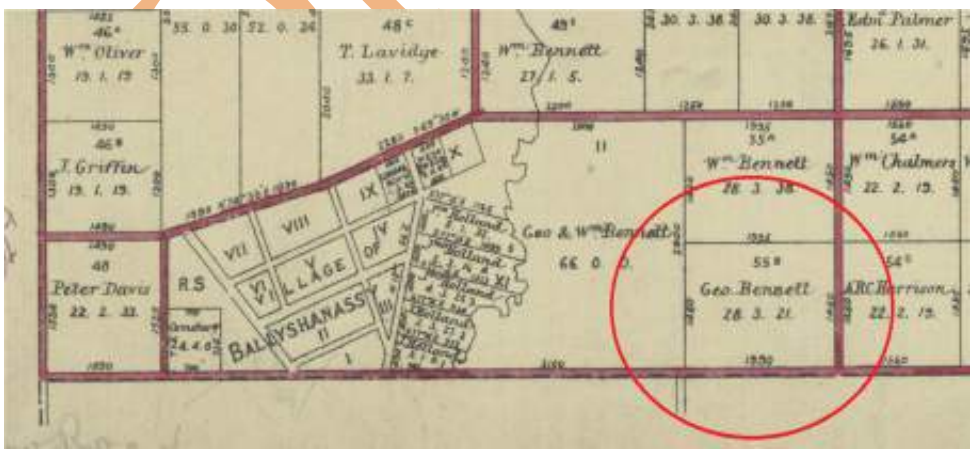
Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001).

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review (*2016) – Schedule 2, graded B

Historical Images



Excerpt of Parish Plan, Parish of Nunawading (1853), showing land in Burwood owned by the Bennett brothers, including Section 55B (circled in red), later the site of Andrew Goold's house and orchard.

The Pines in the early twentieth century; note wrought iron lacework frieze, which remains in situ today
Source: Box Hill Historical Society (photographer unknown).

Undated photographs showing verandah detail (right); note later concrete block piers and crazy paved floor
Source: Box Hill Historical Society (photographer unknown).

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IDENTIFIER	HOUSE	**Citation Number**	020
Other name/s		**Melway reference**	60 K6
Address	5 Ireland Street BURWOOD		
Date/s	1895		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	4 TRANSFORMING AND MANAGING THE LAND 4.3 Orchards and market gardens				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The house at 5 Ireland Street, Burwood, was erected in 1895 for market gardener William Dalzell, on a site that former part of the original Township of Burwood.

Originally known as the Village of Ballyshanassy, the Township of Burwood was gazetted in April 1858, bordered by present-day Burwood Road, Gilmour Street, Highbury Road and Gardiner's Creek. The township comprised three streets running parallel to Burwood Road (Harker, Duffy and McIntyre Streets), two perpendicular cross-streets (Millicent and Cromwell Streets) and two angled thoroughfares (Ireland and Evans Streets) linking to Highbury Road. This irregular grid defined ten sections with allotments of an acre or less, with Section 11 (between Ireland Street and the creek), having larger blocks between 3 and 5 acres. Reserves were set aside for a Wesleyan Church and Common School, both on Burwood Road, and a cemetery west of Evans Street.

William James Dalzell senior (1834-1901) and his wife Esther, *nee* Adams (1829-1913) hailed from Armagh, Ireland, migrating to Victoria in 1857. While the couple seemingly settled in Hawthorn, their sons, Allen (1861-1928) and William James junior (1865-1945), were both recorded as being born in the Parish of Nunawading. In the late 1880s, William senior and elder son Allen, who married in 1884, established themselves as market gardeners in Burwood (Wise 1888). By 1890, they had been joined by William junior, who married that year, with directories listing all three men on Grange Road, Burwood (S&M 1890). Later directories record Allen's farm on the east side of Middleborough Road, and William senior's farm on Burwood Road (S&M 1892).

In 1894, all five of the Crown Allotments in Section 11 of the Township of Burwood were offered for sale by auction, advertised as "splendid sites for orchard or market gardens, close to the city" (*Age* 05/05/1894:2). The Dalzells acquired all five, with William senior taking CA1, 2 and 3, and William junior taking CA4 and 5. The former built a house along the north boundary of CA3, set well back from the street, and the latter built one on CA5, fronting Ireland Street. Work was well underway in early 1895, when one of the Williams called tenders for "plastering a four-roomed cottage at Burwood" (*Age* 30/03/1895:5). The two houses first appear in the rate book for 1896 (dated 29/02/1896), each described as "wood", with a Net Annual value of £16. That same year, directories first listed Williams senior and junior together as the only residents of Ireland Street, between Burwood and Boundary (ie Highbury) Roads (S&M 1896). After William senior died in 1901, his widow Esther remained in their house until her own death in 1913. The intervening period saw the death of William junior's wife Eliza in 1905, his subsequent marriage to (Margaret) Jane Bennett that same year, and the birth of two children in 1906 and 1907. After Esther's death, her house was vacant for a few years (S&M 1914, 1915) before being rented by Thomas Badrock (S&M 1920) and then Joseph Gough, who remained for over a decade (S&M 1922, 1935).

During 1920, the land comprising CA1, 2, 3, 4 and part of 5 was subdivided to create 87 residential lots with frontages to Ireland Street, Highbury Road, Lytton Street, and three new dead-end roads (Tudor, Hughes and Spence Streets) between Ireland Street and the creek (LP7729). This estate, however, remained largely underdeveloped until the post-WW2 era, when William and Esther's house (now on a triple block on the north side of Spence Street) was gradually encroached by new dwellings. William junior's house, by now addressed as 5 Ireland Street and occupying only the northern half of CA5, remained the family's home until the early 1950s, when Jane Dalzell (a widow since 1945) opted to sell it. The land to the rear was subdivided to form eight residential lots fronting Judith Street, plus another on Ireland Street, next to the former farmhouse. The latter was advertised for sale as "a large old-style timber home" with four bedrooms, living room, kitchen, enclosed verandah, garage and storerooms (*Herald* 26/2/1954:12).

Nine members of the Dalzell family are buried at Burwood Cemetery, spanning three generations across ten decades: William senior (d.1901) and wife Esther (d.1913), eldest son Allan (d.1928) and Allan's wife Rebekah (d.1926), plus William junior (d.1945), his first wife Eliza (d.1905) and second wife Margaret (d.1967), their son Allan (d.1976), and Allan's wife Violet (d.1995).

Physical Description

The house at 5 Ireland Street, Burwood, is a single-storey double-fronted late Victorian timber villa, with a block-fronted street facade and weatherboarding to the sides. The front portion of the house has a hipped roof clad in corrugated steel sheeting, and two tall red brick chimneys with stepped caps. The street elevation is symmetrical, with a central entrance flanked by two pairs of windows and a full-width verandah. The entrance has a heavily panelled timber door with narrow sidelights and a tripartite highlight. Windows are rectangular, with moulded architraves and timber-framed double-hung sashes. The verandah has a concrete floor, cast iron columns with Composite capitals, an ornate wrought iron lacework frieze, and a low hipped roof also clad in corrugated steel sheeting. Above the verandah, the narrow eaves of the main roof are supported on pairs of carved timber consoles with fielded panels between.

The timber picket fence along the street boundary, with recessed gate and stop-chamfered posts with metal caps, is not original. The side fence, with matching timber posts and ripple iron panels, is also not original.

Comparative Analysis

Although laid out in 1858, the Village of Burwood underwent limited settlement over the next eight decades. The 1945 aerial photograph shows around thirty dwellings within the township boundaries, some occupying small allotments and others on expansive farmland. Even then, there were only four houses between Ireland Street and Gardiner's Creek: the two Dalzell farmhouses from 1895, a house on the north-east corner of McIntyre Street (c.1900) and a later house further south, fronting Highbury Road (c.1923). The former farmhouse of William Dalzell senior, which endured inter-war subdivision to remain on a triple-width block at what is now 5-9 Spence Street, was finally demolished in the late 1960s. The two other houses noted above, at 1 Ireland Street and 109 Highbury Road, both followed suit in the 1970s.

Post-war expansion, encapsulating intensive light industrial and commercial development along the east and south fringes of the Village of Burwood, and higher-density residential development, took its toll on the early houses within the township boundaries. Examples at 11 Harker Street, 17 Evans Street and 24-26 Cromwell Street, which are all visible on the 1945 aerial photograph and appear to have been of late Victorian origin, similarly vanished during the 1950s and '60s. Only a few early houses survived into the twenty-first century. Aside from the one at 5 Ireland Street, these included two modest timber cottages on the other side of the street, at Nos 4 and 14. Both date from the early twentieth century, but have a basic form evocative of the preceding Victorian era, with hipped roofs, symmetrical double-fronted facades and simple posted verandahs. The house at No 14 (latterly 28 Duffy Street) was demolished circa 2011, while No 4 (which has some bungalow-like detailing that hints at a construction date of the 1910s) stands in an altered state. A more typical Edwardian timber villa, with asymmetrical double-fronted facade and verandah with turned posts and decorative fretwork, remain at 26 Cromwell Street. Evidence of subsequent inter-war infill development is demonstrated by only a handful of surviving bungalow-style houses, including those at 6 Ireland Street, 36 McIntyre Street and 17 Cromwell Road.

Given that all of these pre-WW2 houses post-date the late Victorian villa at 5 Ireland Street, the latter is demonstrably the earliest surviving house in the former Township of Burwood. However, it is not the oldest surviving building therein – it is pre-dated by the oldest part of the Burwood Primary School, at 172 Burwood Road (1865) (HO1). The former Ballyshanassy Protestant Hall (c.1877), which formerly stood alongside the school, was destroyed in the 1990s. The Burwood Cemetery (HO233), which also forms part of the original 1858 township, does not contain any surviving buildings from the Victorian era (its present gate-lodge dates from c.1935), but early fabric still exists in the form of many nineteenth century gravestones, some of which even date back as far as 1859-60.

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As of 2024, the heritage overlay schedule includes few nineteenth century buildings in this part of the City of Whitehorse, extending south of Riversdale Road and east to Middleborough Road, even though it was one of the first parts of the municipality to undergo post-contact settlement. Two earlier houses in Burwood have heritage overlays: *Bronte* at 5 Bronte Avenue (1886) (HO21) and *Heathersett* at 141-169 Burwood Highway (1885, c.1908) (HO22), though the original Victorian character of the latter house has been largely obscured by its subsequent Edwardian remodelling. Both of these houses are significantly pre-dated by the former orchard farmhouse at 213 Highbury Road, Burwood (1854), a remarkably early survivor that has been assessed as part of the current study and recommended for an individual heritage overlay.

Statement of Significance

What is significant?

The house at 5 Ireland Street, Burwood, is a single-storey double-fronted late Victorian timber villa with a hipped roof and symmetrical façade incorporating a full-with verandah. It was erected in 1895 for market gardener William Dalzell junior, son of a district pioneer who lived next door.

The significant fabric is defined as the exterior of the original 1895 house. Specific elements of significance include the hipped roofline with eaves brackets and stepped brick chimneys, the symmetrical façade with block-fronting, central doorway and pairs of double-hung sash windows, and the verandah with cast iron columns and wrought iron lacework frieze

How is it significant?

The house at 5 Ireland Street, Burwood, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is historically significant as a the oldest surviving house in the Township of Burwood, and, along with the cemetery and former state school, one of only three sites that remain to demonstrate the original nineteenth century settlement therein. One of two farmhouses erected in 1895 (the other, to the south, long since demolished) by the Dalzell family, market gardeners and district pioneers, the house provides evidence of early occupation by Irish settlers, whose association with the area is otherwise perpetuated by the name of Ireland Street. (*Criterion A*)

The building is aesthetically significant as a fine and substantially intact example of a late Victorian timber villa. Its characteristically simple double-fronted form, low hipped roof and symmetrical façade is combined with a level of stylistic pretension, demonstrated by the stepped brick chimneys, bracketed eaves a, block-fronted façade, paired windows and ornately-detailed verandah, that is unexpected for what was a modest market gardener's farmhouse. Although embellished Victorian timber villas of such form are common in Box Hill, Surrey Hills and elsewhere in the north of the municipality, they are rare in Burwood and environs. (*Criterion E*)

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References

Village of Ballyshannassy, Parish of Nunawading, Country of Burke, township plan, 10 April 1858. Map Collection, State Library of Victoria.

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Sands & McDougall Directory of Victoria, various.

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Lodged Plan No 7729 (5 February 1920).

Alyssa Clarkson, *Ballyshanassy: A History of Burwood* (1991).

Previous Heritage Studies

Allom Lovell & Associates, *City of Whitehorse Heritage Review* (1999) - Appendix A, Part B

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 2, graded C

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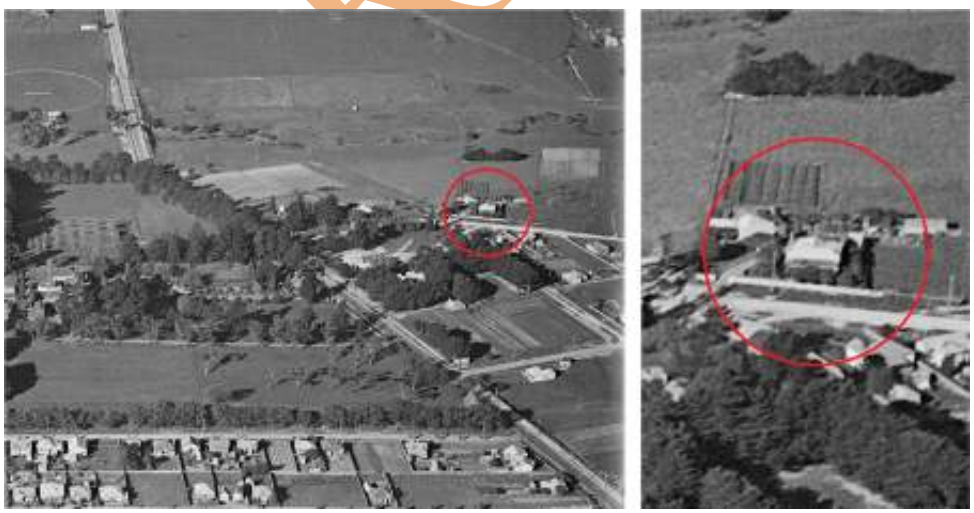
Historical Images

Original township plan of the Village of Ballyshanassy (later Village of Burwood), dated 10 April 1858; Note Crown Allotment 5 of Section 11, acquired by William Dalzell junior in 1894, outlined in red. Source: Map Collection, State Library of Victoria.



Aerial photograph, looking south-east across Burwood Road, 1938; House at 5 Ireland Street circled in red. Source: Picture Collection, State Library of Victoria (photograph by Airspy Company).

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	021
Other name/s	Selleck House (former)	**Melway reference**	61 D7
Address	29 Leonard Street BURWOOD		
Date/s	1956-57		
Designer/s	Stuart Macintosh and Alexander Harris		
Builder/s	Kenneth Selleck?		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses					
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☐ Good	☐ Fair ☑ Fair	☐ Poor ☐ Poor	
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls					
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf				

Place History

The house at 29 Leonard Street, Burwood, was erected in 1956-57 for Ken and Shirley Selleck, to a design by architects Stuart Macintosh and Alexander Harris.

The son of builder, Kenneth Selleck (1924-?) followed in the same profession. During WW2, he served with the Australian Army and was attached to the 2/8 Australian Infantry Battalion at the time of his discharge in October 1945. Married in 1948 but soon separated, Selleck lived alone in a modest pre-war house in Hawthorn. In November 1955, he married for a second time, to Shirley May Bingham, a former usherette. The next month, aided by a War Service Homes loan, Selleck acquired the title to vacant land in Burwood, where he and his wife intended to build a new house. The site, on the eastern corner of Leonard Street and Renown Street, represented Lot 35 of a new subdivision that extended along both side of Leonard Street and part-way along the cross-streets.

Plans for the new house, undated but prepared in early 1956, bear the names of Stuart Macintosh and Alexander Harris as "architects in association". The two men were not in private practice as a partnership but, rather, were colleagues in the Architectural Department of the ES&A Bank. Born in Adelaide, (John) Stuart McIntosh (1924-2007) was in Melbourne by 1943, when he enlisted with the Australian Army, serving in New Guinea and Borneo before discharge in 1946. Completing architectural studies at the University of Melbourne, he graduated in 1952 and worked at Yuncken, Freeman Brothers, Griffiths & Simpson until 1953, when he joined the ES&A Bank's Architectural Department. Acting as Chief Architect until 1963 (when he moved to Brisbane), he oversaw the design of startlingly modernist branch banks across the country. For much of that time, his key assistant was Alexander Harris (1929-), who graduated from the University of Melbourne in 1954. While employed full-time in the bank's Architectural Department, the two men undertook a small number of private commissions under their own names, sometimes working individually but more often collaborating as "architects in association".

As Macintosh and Harris were not officially in partnership, it is unclear how they came to design a house for the Sellecks. At that time, Harris lived in Burke Road, Camberwell, and Macintosh in Medway Street, Box Hill (the address cited on the drawings for Selleck's house), later designing his own house in Arnott Street, Mont Albert North. Selleck's house, dating from early 1956, seems to be one of the earlier collaborations between the two bank colleagues. It is possible that Selleck, a builder, may have worked on the construction of one of the ES&A branch banks.

As shown on the original drawings, the Sellecks' house was a three-bedroom dwelling expressed as a huge rectilinear volume raised on a recessed plinth. Walls to the east and west were finished in Conite (a type of cement render), while the Leonard Street facade had a full-width full-height window wall screened by bays of horizontal louvres. The recessed plinth, to be clad in random stonework, incorporated a double carport below the window wall. The flat roof, supported on herringbone joists, was to be clad in Masonite sheeting, finished with aluminium foil. The rear of the house was to have huge glass windows opening to a north-facing pergola, screened by a long fence of horizontal planks. The front entrance, set into a recessed porch at the rear, was accessed from Renown Street via a long concrete ramp.

The Sellecks lived in their new house for only a few years; they had separated by 1960, when Selleck moved into a flat in South Yarra. Their former Burwood home had two subsequent owners by 1969, when it was photographed by a local estate agent (who described it as "a most unusually white contemporary home"), showing it substantially intact, with louvred screen, rear pergola and entry ramp. In 1988, the house was altered by addition of a rear family room, replacement of the original roofing with metal tray decking, and removal of the louvred screen and huge recessed front windows, which were substituted by a new multi-paned window wall that aligned to the outer edge of the facade. The rear pergola has also been removed, and the entry ramp truncated to form a flight of steps, presumably consequent to the subdivision of the block, and the erection of a second dwelling at the rear (now 33 Renown Street) in the early 2000s.

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Physical Description

The house at 29 Leonard Street, Burwood, is a two-storey post-war Modernist house that is starkly expressed as a large volumetric mass hovering over a recessed plinth level. The main block, which contains the principal living areas, has a low skillion roofline with no eaves to the front and sides. The walls to the east and west, which are slightly angled at either end, have a pale textured Conite finish, a type of cement render popular in the 1950s. The substrate of these rendered walls is not brick but, rather, a timber-frame with chicken-wire, and the joints have been expressed, creating the effect of large rectangular panels. At the north-west corner of the house is a recessed entry porch, accessed by a flight of concrete steps that incorporates part of the original concrete ramp that formerly extended along the Renown Street side. The full-height single-pane windows on the north side of the house, formerly opening to a pergola area, remain visible from the street.

Facing Leonard Street, the upper level has a full-width and full-length multi-paned timber-framed window wall, which replaced the original row of huge recessed single-pane windows and screen of horizontal louvres. Underneath, a double garage is set into the recessed plinth level, with a pair of panelled garage doors. While the original drawing indicate that the plinth level was to be clad with stone veneer on two sides, this is not evident today (assuming it was ever realised in the first place). Instead, the recessed plinth is of exposed brickwork with a dark grey painted finish.

Comparative Analysis

Stuart McIntosh is recognised as a major Australian architect of the post-war era. Of the branch banks that he designed for the ES&A Bank, one in Melbourne has been added to the *Victorian Heritage Register* (1284-1286 High Street, Malvern, 1959), and another in the ACT to the *RAIA Register of Significant Twentieth Century Architecture* (17 London Circuit, Canberra, 1961-63). A resident of Box Hill for some years, later living in Mont Albert North before moving to Brisbane in 1963, his association with the City of Whitehorse is represented by three places on the heritage overlay schedule. These include a fine example of a ES&A branch bank, at 153-155 Springvale Road, Nunawading (c.1958) (HO290), boldly expressed as a windowless polygonal mass, clad in stone panels, that projects over a recessed entry porch flanked by splayed red brick walls. In their private capacity, Macintosh and Harris were also responsible for the design of the new Catholic Church of St Benedict at 299 Warrigal Road, Burwood (1957) (HO262), with a stark box-like form and a butterfly roofline that projected to the street to form a raked canopy across the vast panelled façade, supported on angled struts.

The most pertinent local comparator, however, is McIntosh's own house at 24 Arnott Street, Mont Albert North (1956) (HO285), which, until recently, was thought to be the only example of his residential work in the municipality. The two houses are contemporaneous, both with building permits issued during 1956, (Selleck's permit, No 7133, predating the architect's own, No 7786). They have much in common and, on the original drawings, their west elevations are virtually identical. Each is expressed as a box-like form, with full-height windows, textured Conite walls and recessed plinth. McIntosh's house, designed on a limited budget, is smaller in scale, with its recessed plinth forming a low sub-floor area rather than a basement level with integrated parking. His own house is also more strictly rectilinear, with a horizontal roofline and plumb walls that contrast with the bolder skillion and angled end walls at Burwood. Lastly, McIntosh's house has been altered in a similar fashion, with its north-facing pergola area entirely remodelled and the adjacent concrete entry ramp removed; at Burwood, the latter element has been truncated and altered but can still be interpreted.

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Considered more broadly in McIntosh's body of work, the Selleck House is one of very few private houses that the architect ever designed during his Melbourne years. Only two other examples have yet been identified in Victoria, at Glen Waverley (c.1956) and Moe (c.1957; demolished). Both were quite different to the Selleck House, expressed with longer rectangular plans and continuous bays of full-height glazing under flat broad-eaved roofs. The Selleck House is more reminiscent of a house that McIntosh designed for an ES&A Bank manager at Darwin, NT (c.1958; demolished), expressed as an elevated rectilinear volume with undercroft parking, plain end walls, and a glazed façade with bays of horizontal louvres. This celebrated house, published in Neil Clerehan's *Best Australian Houses* (1961), was destroyed by Cyclone Tracey in 1974.

Although the Selleck House was credited jointly to McIntosh and Harris, its design was almost certainly McIntosh's given the similarity to his own house (for which Harris was not co-credited). It is worth noting that Alexander Harris, working in a solo capacity, designed a few buildings in the City of Whitehorse under his own name. One of these is on the heritage overlay schedule: the former East Burwood Methodist (now Burwood Heights Uniting) Church at 347 Blackburn Road, Burwood (1961) (HO106), with its striking A-framed form. Harris had previously designed a small modernist house at 38 Main Street, Blackburn (1954), simply expressed in cream brickwork with a low gabled roof and central window bay. This house was demolished in the early 2000s.

Statement of Significance

What is significant?

The house at 29 Leonard Street, Burwood, is a two-storey post-war Modernist house expressed as a large skillion-roofed volume elevated above a recessed brick plinth, with a window wall to the street and a double carport below. The house was erected in1956 for builder Ken Selleck and his wife Shirley, to a design by Stuart McIntosh and Alexander Harris, architects in association.

Significant fabric is defined as the exterior of the original 1956 house. Specific elements of significance include the bold rectilinear massing, recessed brick plinth, side walls with panelled expression and textured Conite finish, full-height windows to the north, recessed entry porch and the remnant of the original entry ramp. The south window wall, added in 1989, is not significant.

How is it significant?

The house at 29 Leonard Street, Burwood, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion B: Possession of uncommon, rare or endangered aspects of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The house is architecturally significant as a rare example of a private residential commission by Stuart McIntosh, Chief Architect of the ES&A Bank's Architectural Department, in association with colleague Alexander Harris. While employed full-time by the bank, the two men occasionally collaborated on private commissions under their own name, but never entered into a formal partnership. McIntosh's work (with or without Harris) is represented in the City of Whitehorse by a branch bank and a church, but this is one of the only two houses he designed in the municipality (the other being his own in Mont Albert North), and one of only four that have yet been identified across Victoria. (*Criterion B*)

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The building is aesthetically significant as an outstanding, if altered, example of post-war modernist residential architecture in an uncommonly stark minimalist style. Characteristic of the work of McIntosh, it is boldly articulated as a massive volume hovering above a recessed plinth level that incorporated a double garage. The west elevation, expressing the bold sloping roofline (without eaves), with tapered walls at either end and the expanses of plain textured render contrasting with the dark recessed plinth, produces a striking effect. While the house has been altered by the replacement of the window wall to Leonard Street, and rear alterations including truncating the concrete entry ramp, it remains potently evocative of this celebrated architect's idiosyncratic modernist style. (*Criterion E*)

References

Certificate of Title, Volume 8131, Folio, 281 (15 December 1955).

Stuart McIntosh and Alexander Harris, architects in association, "Proposed residence at Lot 36, corner Renown & Leonard Streets, Burwood, for K Selleck", working drawings, undated. Building Permit No 7133/1956. City of Whitehorse.

Igea Troiani, "Deserved Exposure: Stuart McIntosh's Architecture, 1953-63", *Fabrications* Volume 16, No 2 (2006), pp 28-43.

Interview with Mrs Jean McIntosh, 7 April 2014.

Previous Heritage Studies

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Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) –Appendix 2, graded B

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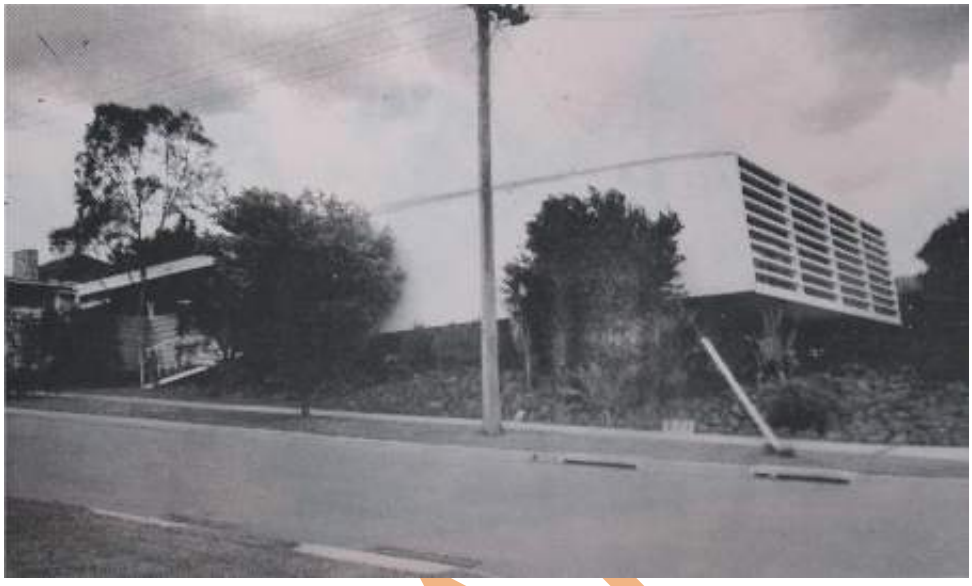
10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

Historical Images



The house at 29 Leonard Street, Burwood, as photographed by a real estate agent in November 1969. Note original horizontal louvred screen to the south, and the concrete entry ramp to the north-west. Source: Box Hill Historical Society.

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10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER **Other name/s**	LIVINGSTONE PRIMARY SCHOOL	**Citation Number** **Melway reference**	022 62 G7
Address	25-29 Livingstone Road VERMONT SOUTH		
Date/s	1976-77		
Designer/s	Public Works Department (Des Bloink, Michael Spivakovsky, et al)		
Builder/s			
Heritage Group **Heritage Category**	Education School – state (public)		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	8 BUILDING COMMUNITY LIFE 8.2 Education 8.2.2 Primary and secondary education				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☐ To title boundaries	☑ As indicated on diagram overleaf			

Place History

The original portion of the Livingstone Primary School at 25-29 Livingstone Road, Vermont South, was erected in 1976-78 to a design by architects of the Public Works Department.

The school's origins date back to 1970, when an amendment to the Melbourne Metropolitan Planning Scheme saw Vermont South (then considered as part of Burwood East, and still strongly characterised by orchards) rezoned for residential use. An aerial photograph from that year shows the first inkling of new subdivision, with a network of small streets and cul-de sacs flanking Burwood Highway, east of Springvale Road, but still very few houses. The City of Nunawading was encouraged to develop a specific area as a community hub with educational, retail and other facilities. Land on the corner of Burwood Highway and Hanover Street was set aside for a shopping centre, which opened in 1974, and the Education Department was prompted to acquire an adjacent 20 acres for a primary school. During the year, the Council made a formal submission to the Minister of Education for a "joint development with the Education Department in the provision of community facilities in Vermont South".

A public meeting in November 1974, which noted that the suburban boom had overcrowded the nearest state school, Parkmore Primary in Jolimont Road, prompted formation of the Vermont South Community Planning Group, which allowed residents to liaise with Council. This, in turn, led the Education Department to establish the Livingstone Primary School Interim Committee, made up of departmental staff, the Town Clerk, local residents, and representatives of Parkmore Primary School and Vermont South Special School. At its inaugural meeting in April 1976, it was iterated that the community would be heavily involved in planning the school. The Committee was given ultimate responsibility for siting the building, and tasked with developing a brief. Limited to a few pages, the brief had to be finished by May 1976, so that design, documentation and construction could unfold in time for classes to begin with the 1978 school year. The building, to accommodate 560 pupils, would include facilities specifically for community use, such as a meeting room and a second art room, funded by the Council. This unique aspect of co-habitation was reported in the local newspaper, which described the "big new community centre complex", with "the new primary school… planned to fit in with the development" (*Nun Gaz* 19/05/1976).

Plans were prepared by the Public Works Department, with involvement from senior architects Desmond Bloink and Michael Spivakovsky. Bloink (1940-), who started with the PWD as a cadet in 1957, was now part of the Investigation & Development Group, which oversaw specialised projects such as agricultural colleges and police academies. Spivakovsky (1939-) was an expert in school design who had previously masterminded an innovative high school prototype, known as C-800, based on a new Education Specification, which introduced open planning and flexible work spaces. Following similar lines, the scheme for the new Livingstone Primary School proposed four so-called "learning units", each divided into four classrooms, which enveloped the school library at the centre of the building. As the Chairman of the Interim Committee explained it, the new school would "cater for 'closed' and 'open' methods of teaching" and be "of flexible design, suited to the climate and conditions of the area". He reiterated that the school's facilities were intended, and designed, for community use after hours (*Nun Gaz* 06/06/1976).

Plans for the new complex had been finalised by October 1976, when they were exhibited at a committee meeting held at Parkmore Primary School. At that time, the "tight building schedule" was reiterated, with a plan for tenders to be called by Christmas, and construction to start early the following year (*Nun Gaz* 21/10/1976). However, due to delays in finalising the documentation, tenders would not be called until 9 March 1977 (*Vic Gov Gaz*, 09/03/1977:635). Construction began promptly in April, but was not completed in time for the next school year, with the pupils being transferred in three stages during July 1978. The official opening of the new school took place on 31 March 1979, with a plaque unveiled by John Richardson, MLA.

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Current aerial photograph of school site, showing proposed extent of heritage overlay, covering the original school block, rear assembly hall with linking element, and curtilage extending to Livingstone Road frontage.

Physical Description

The original portion of the Livingstone Primary School, as completed by 1978, is a large single-storey concrete block building on a rectangular plan that incorporates three internal courtyards and a series of projecting half-round bays to all four sides. The building has a flat roof, punctuated by skillion-roofed clerestory windows in L-shaped configurations that straddle the three corners. The street façade is elongated and near-symmetrical, with a slightly off-centre entry porch, flanked by large multi-paned window bays, and thence by projecting curved bays. These bays are starkly expressed in charcoal-coloured concrete blockwork with a rough rock-faced finish, laid in a stack bond (ie, with perpend joints aligned) to create a vertical ribbed effect. Each bay has a narrow and slightly recessed full-height window at the outermost edge of its curving arc.

To the rear (east) side of the main building, and publicly visible from the property's frontage to Karabran Drive, is a detached hall linked by a covered way. Also of concrete block construction, it is square in plan and has a low roofline that incorporates a distinctive pop-up roof of low gabled form, with clerestory windows to all four sides.

Comparative Analysis

As of 2024, post-war school buildings remain entirely unrepresented on the heritage overlay schedule, although progressive educational architecture has been a minor recurring theme since the early 1950s. At that time, it emerged notably in the first stage of the Mount Scopus College in Burwood East (Anatol Kagan & Ernest Fooks, 1950-53), which was laid out on an innovative stepped plan with window walls and open terraces. Although recommended for local heritage listing in 2014, this did not eventuate and the building was demolished the following year.

Of later date, and rather more conventional form, were the earliest purpose-built elements of the Presbyterian Ladies' College at Burwood Highway, Burwood (J F D Scarborough, 1956), which comprised a series of elongated multi-storey blocks in various configurations, along with a large butterfly-roofed hall. While most of these early buildings still exist at the school site, they have largely been altered and engulfed by later additions. Subsequent examples of progressive private school architecture include the new Junior School at Kingswood College in Box Hill South (Earle Shaw & Partners, 1970-71), which has been assessed and recommended for a heritage overlay as part of this current review. The building, which was considered highly innovative in its day, has elements in common with the governmental counterpart at Vermont South, notably the use of clerestory windows, multi-functional open planning and internal courtyards.

In parallel, the architecture of local state schools in the 1950s and '60s tended to follow a consistent departmental approach, where standardised skillion-roofed blocks were linked in elongated configurations. This is typified by primary schools at Nunawading South (1958), Kerrimuir (1959) and Laburnum (1964), all of which retain at least some of their original buildings. The early 1970s saw occasional departures, as when a detached art room was erected at Kerrimuir Primary School to a distinctive pavilion-like design developed by architect John Baird, whose prototype was built at Beaumaris North Primary School. The Livingstone Primary School therefore stands out as an important milestone in progressive state school design of the 1970s, not just in the City of Whitehorse but more broadly. Chronologically, and indeed geographically, it closest local counterpart, the Weeden Heights Primary School at 41-51 Weeden Drive, Vermont South (1980), is not only a considerably more conventional design, but was conceived without the special brief for shared community facilities that makes Livingstone Primary School such a unique development.

Statement of Significance

What is significant?

The original portion of the Livingstone Primary School at 25-29 Livingstone Road, Vermont South, comprises a large flat-roofed rectilinear block, with clerestory windows, internal courtyards and half-round projecting bays, with a detached assembly hall linked by a covered walkway. It was erected in 1976-78 to a design by architects in the Public Work Department.

The significant fabric is defined as the exterior of the original 1976-78 school complex, comprising the main flat-roofed block and detached assembly hall to the rear, and the covered walkway that connects them. Specific elements of significance include the internal courtyards, low roofline with clerestory windows, and the projecting half-round bays with rock-faced concrete block and vertical strip windows, and the lantern roof of the assembly hall.

All of the later buildings and structures on the school site, including any that incidentally fall within the proposed extent of heritage overlay, are not considered significant.

How is it significant?

The original portion of the Livingstone Primary School at 25-29 Livingstone Road, Vermont South, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics
- Criterion F: Importance in demonstrating a high degree of creative or technical achievement at a particular period.

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Why is it significant?

The building is historically significant for associations with the early development of community facilities in Vermont South after the former orcharding district was re-zoned for residential use in 1970. Conceived as a unique scheme to provide a joint amenity for educational and community use, with collaborative input from state and local government representatives, other local schools, and the residents themselves, the complex would became a major focus for those who settled in Vermont South during the suburb's major residential boom of the 1970s. (*Criterion A*)

The building is aesthetically significant as a fine example of the mature Brutalist style of the later 1970s, characterised by stark expression of materials and bold, sculptural forms. The main block demonstrates this aesthetic with its low roofline punctuated by raked clerestories, large windows and, especially, the projecting half-round bays in grey rock-faced concrete blockwork with vertical strip windows. The rear assembly hall evokes an almost industrial character in its low-pitched monitor roof with clerestory windows and flanking skillion-roofed wings. (*Criterion E*)

The building is architecturally significant as an innovation in the design of state government schools. A project of the PWD with a design team that included architects Desmond Bloink and Michael Spivakovksy (who pioneered the innovative C-800 high school prototype in 1965), the school was designed in accordance with a recently-developed Education Specification, and reflected a new preference for open planning and flexible work spaces, with classrooms grouped as "learning units" around the central school library. (*Criterion F*)

References

Education Department Capital Expenditure Works File for Livingstone Primary School No 5113. Box 156, VPRS 8796/P1, Public Record Office Victoria.

"Vermont South's salute", *Nunawading Gazette*, 19 May 1976. Item ND3498, press clipping held by Whitehorse Historical Society.

"Twin teaching at new school", *Nunawading Gazette*, 6 June 1976. Item ND2980, press clipping held by Whitehorse Historical Society.

"Livingstone School has schedule", *Nunawading Gazette*, 21 October 1976. Item ND2970, press clipping held by Whitehorse Historical Society.

Livingstone Primary School: A Synopsis of Twenty Years (1998).

Emails from Michael Spivakovsky, March and April 2024.

Interview with Desmond Bloink, April 2024.

Livingstone Primary School, "Our History", <www.livingstoneps.vic.edu.au/our-school/our-history/>

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) –Appendix 2, graded B

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Historical Images

Early aerial photograph of school site (1981), showing main building, rear assembly hall, and four portable classrooms straddling the north-east corner. Note the three internal courtyards and the half-rounded bays. Source:

Early view of the school, as seen from Livingstone Road.
Source: <www.livingstoneps.vic.edu.au/our-school/our-history/> (photographer uncredited)

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	023
Other name/s		**Melway reference**	47 K5
Address	15 Middlefield Drive BLACKBURN NORTH		
Date/s	c.1908		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	4 TRANSFORMING AND MANAGING THE LAND 4.3 Orchards and market gardens				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The house at 15 Middlefield Drive, Blackburn North, was erected in c.1908 for orchardist Walter Adams and his wife Lillian.

The site of the house forms part of Section 70 in the Parish of Nunawading, a vast block of 146 acres (59 hectares) that was one of several along the parish's northern fringe that extended from present-day Springfield Road to the Koonung Koonung Creek Section 70 was initially granted to James Cousens, who also acquired the two flanking blocks, Sections 69 and 71. In 1893, two long strips of Sections 69 and 70, bisected by Koonung Road, were subdivided into 34 farming sites. These comprised a row of smaller two-acre blocks along Springfield Road, larger blocks of four or five acres flanking Koonung Road, ones larger twenty-acre block, and six others blocks, between four and five acres in area, that stretched between two new east-west roads, then known as Fithie Street and Henry Street (later renamed Middlefield Drive), to the Koonung-Koonung Creek.

In 1902, Lots 15, 16 17 and 18 of this subdivision, combining to provide a huge creek frontage, were acquired by Robert Campbell Edwards. A tea merchant and property speculator, he had recently settled in Station Street, Box Hill South, where he acquired another large tract of land and built a modest timber dwelling, only to demolish it a few years later for a grander brick residence that he named *Gwynton Park* (now Kingswood College). Ultimately, he opted not to live at *Gwynton Park*, and, from 1910, leased it to others. In May 1914, ownership of three of Edwards' Lots 16, 17 and 18 in Blackburn North, between Henry Street and the creek, was transferred to orchardist Walter Samuel Adams, late of Doncaster. By that time, a house had already been built on the property, with electoral rolls first listing Walter Adams and wife Lilly as residents of Henry Street in 1909. The house is also appears in the rate book for 1909-10 (dated 22 December 1909) as a wooden dwelling on a 14½ acre site, Lots 16 to 18 of Section 69/70, with a Net Annual Value of £35.

Born in Templestowe, Walter Samuel Adams (1880-1953) was one of nine children of a carpenter. Electoral rolls show that, by 1905, Adams lived in Main Road, Doncaster, with his unmarried eldest sister, Mabel, his occupation cited as labourer. In 1906, he married Lillian (aka Lilly) Brooks (1886-1982) in Tasmania. The couple then seem to disappear from public record until 1909, when electoral rolls first listed them in Henry Street, Blackburn. It was not until 1913 that directories first included an entry for "Walter S Adams, orchardist, Blackburn" (S&M 1913). The couple's first child, daughter Bessie, was born that same year, followed by a son, Gordon, 1919.

The vast property in Blackburn North remained owned by the Adams family for several decades, with Walter' son Gordon assisting with, then taking over, the running of the orchard. An aerial photograph from 1945 shows he house as the only dwelling on the north (and south) side of Henry Street, which was then a single-lane dirt track dotted by mature trees, effectively serving as the property's driveway from the only slightly more trafficable Koonung Road. The house had a few outbuildings to its immediate west, with expanses of orchards extending all the way to the creek. Subsequent aerial photographs show virtually the same situation in 1951, 1956 and 1960.

The 1960s, however, brought dramatic changes. After Walter Adams died on 30 September 1953, ownership of the vast property passed to his widow Lillian and son Gordon. Towards the end of the decade, by which time Gordon Adams had moved to Pakenham, the Blackburn North orchard was partially subdivided. In 1959, the Henry Street frontage was excised, retaining the farmhouse on a generous lot, flanked by two much longer tracts of land (COT 8252/643). These, in turn, were carved up into seventeen residential lots that were sold, and swiftly built upon, in the early 1960s. By then, Lillian Adams had gone to live with her son Gordon in Pakenham. The residual expanse of the property, extending to the creek, became part of the reserve for the freeway that had been proposed in the *Melbourne Metropolitan Planning Scheme* (1954), although construction would not commence until 1971. In the interim, the reserved land to the north of the old Adams farmhouse became a public park, with a scout hall built there in the later 1960s.

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Physical Description

Occupying a double-width block, the house at 15 Middlefield Drive, Blackburn North, is a single-storey Edwardian weatherboard villa. The varied roofline, clad in corrugated galvanised steel, comprises a tall prominent hipped roof that extends forward, at a slightly lower pitch, to envelop a return verandah, with a gabled bay alongside. The roofline incorporates two red brick chimneys of tapered form, with roughcast rendered banding, brick capping and a terracotta chimney pot.

The street frontage is a double-fronted and asymmetrical. The projecting bay, to the right, has a pair of timber-framed double hung sash windows with glazing bars to the upper sash, and a half timbered gable end with bracketed eaves. The return verandah has plain timber posts, paired at the corner, with vertical timber slats at the upper end, and carved brackets with simple fretwork, merging into a plain frieze with slightly concave underside. Two doorways open to the verandah (one to the south, one to the west), with highlight and sidelight windows. The north side has a large double-hung sash window and the west side has two smaller windows.

To the west of the house is a small gable-roofed timber garage, apparently dating from the 1960s. The outbuildings shown in the earlier aerial photographs no longer exist.

Comparative Analysis

Large tracts of the City of Whitehorse (and particularly the northern fringes, extending beyond Belmore Road, Woodhouse Grove and Springfield Road) were strongly characterised by orcharding activity from the early twentieth century until well after WW2, and this has been identified as a significant theme in the history of the municipality.

The theme is represented by numerous places on the heritage overlay schedule, of which the most notable is *Strathdon* at 449-467 Springvale Road, Forest Hill (HO113). Established in 1893 by William Fankhauser, the original brick farmhouse was built at that time and then altered and enlarged in the later 1910s by Charles Matheson. Still owned by his family in the early 1990s, the property retained an expansive curtilage (2.5 acres) with remnant fruit trees and a large outbuilding. Consequently considered so potently evocative of local fruit-growing activity, it was acquired by the then City of Nunawading. Although the outbuilding was demolished in the early 2000s, the property otherwise retains its expansive curtilage, original tree-lined driveway and remnant fruit trees, combining to present a unique snapshot of this important local theme.

The theme is represented by several key examples in Blackburn North. A double-fronted timber house at 17 Vivian Street (c.1905) (HO86) is similar to but simpler in design than 15 Middlefield Drive, while *Harwood* at 17-21 Junction Road (1910) (HO50) has a more expansive homestead-like expression with a broader verandah. These relatively modest timber houses contrast with the larger and grander red brick villa at 48 Shafer Road (1907) (HO72), associated with the Lawford family, who maintained one of the largest orchards in the municipality. A notably intact timber orchard farmhouse at 2 Peter Avenue (c.1905), comparable to 15 Middlefield Drive in its form and date, has been assessed as part of this current review, and recommended for a heritage overlay.

While the aerial photographs from 1945 show a number of early orchard farmhouses along the northernmost edge of municipality, close to the Koonung-Koonung Creek corridor, the example at 15 Middlefield Drive seems to be the only one to remain in a substantially intact state. Its nearest neighbour, a timber house still standing at 9 Fithie Street, has been considerably altered. Another early orchard farmhouse, currently addressed as 2/12 Sheila Street, formerly fronted Surrey Road but, due to later subdivision, now occupies an entirely landlocked block at the end of a narrow driveway, so the house cannot be seen from the street. Online photographs from recent real estate listings confirm it to be a late Victorian double-fronted brick villa, albeit significantly altered with a rendered finish, no verandah, new windows and a concrete slab canopy over the front door.

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The aforementioned orchard farmhouse that still stands at 17-21 Junction Road was one of a number that were built along this major thoroughfare. Others, at what are now Nos 13-15, 25, 33, 41, 59 and 63, have all long since disappeared. Another, further east at No 111 (technically, within Nunawading rather than Blackburn North) still stands, but has been substantially altered, with new windows and two separate second storey additions. Further east, remnant pre-war orchard farmhouses on the northern fringes of Nunawading and Mitcham have also mostly disappeared, including those on sites now addressed as 32 Springvale Road, 399 Springvale Road, 158 Mitcham Road, 240 Mitcham Road, and 2a Winchester Road. A modest and later timber example, dating from the inter-war era, stands in an altered state at 196 Mitcham Road, Nunawading.

Statement of Significance

What is significant?

The house at 15 Middlefield Drive, Blackburn North, is a single-storey double-fronted Edwardian timber villa with a hipped roof, gabled bay and return verandah. It was erected c.1908 for Walter and Lillian Adams, whose ran the property as an orchard for almost fifty years.

Significant fabric is defined as the exterior of the original c.1908 house. Specific elements of significance include the prominent hipped and gabled roofline with tapered roughcast brick chimneys, the half-timber gable end with bracketed eaves, the timberwork to the verandahs, and the timber-framed double-hung sash windows with glazing bars.

How is it significant?

The house at 15 Middlefield Drive, Blackburn North, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The house is historically significant as evidence of the intensive fruit-growing activity that strongly characterised Blackburn North, and the northern fringes of the municipality, from the early twentieth century until after WW2. Built on a large property that formerly extended all the way to the Koonung-Koonung Creek (now the Eastern Freeway corridor, the house provides evidence of early post-contact settlement at the outermost edges of the City of Whitehorse. One of a small number of former orchard farmhouses to survive in the area, it is not only the northernmost, but one of the most intact, still occupying a wider-than-average block in an otherwise tighter-grained post-war streetscape. (*Criterion A*)

The house is aesthetically significant as a fine and intact example of a double-fronted Edwardian timber villa. It displays the characteristic asymmetrical façade, gabled bays and return verandah, combined with an above-average level of embellishment, notably the half-timbered gable ends with bracketed eaves, tapered and partially roughcast rendered chimneys, and return verandah with elegant timber detailing. While of this style are common in more closely settled parts of the municipality, such as Surrey Hills and Mont Albert, they represent a rare and unusual presence in Blackburn North and environs. (*Criterion E*)

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References

Lodged Plan No 3676 (26 June 1893).

Certificate of Title, Volume 2864, Folio 608 (7 March 1902);
Volume 8252, Folio 643 (16 December 1959).

Shire of Nunawading Rate Books. Microfiche edition, held by Box Hill Historical Society.

Sands & McDougall Directory of Victoria, various.

Previous Heritage Studies

Context Pty Ltd, *City of Nunawading Heritage Survey* (1994) – graded C

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 2, graded B

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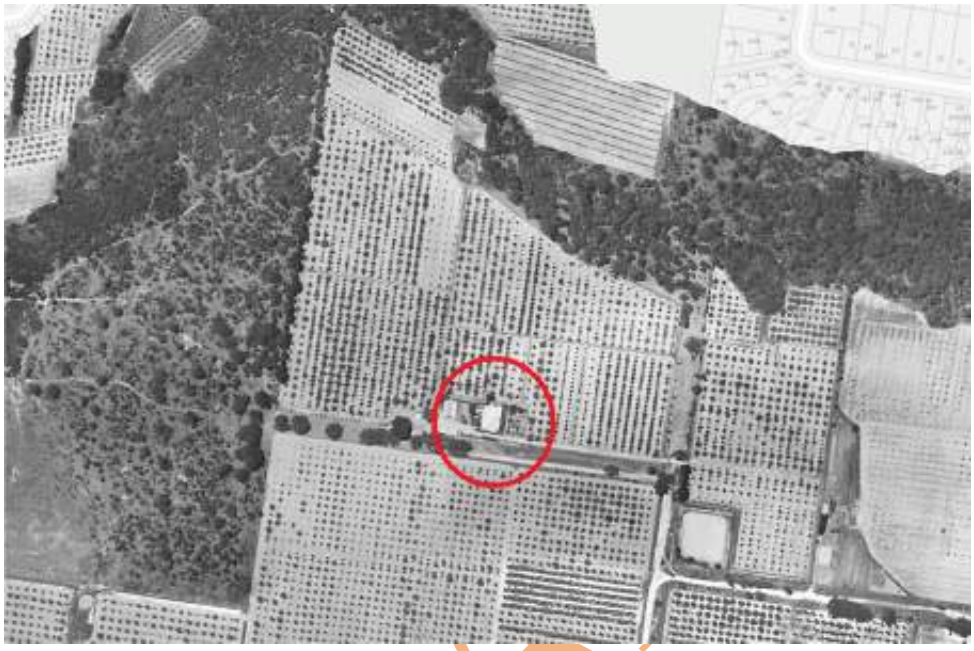
10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

Historical Images



Excerpt of aerial photograph (1945), showing farmhouse at 15 Middlefield Drive, surrounded by orchards. Source: City of Whitehorse Maps. <https://map.whitehorse.vic.gov.au/index.html>

Enlarged detail; note outbuildings to west and treed driveway aligning with present-day Middlefield Drive. Source: City of Whitehorse Maps. <https://map.whitehorse.vic.gov.au/index.html>

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	024
Other name/s	Watershed Engineer's House	**Melway reference**	48 K10
Address	452-454 Mitcham Road MITCHAM		
Date/s	1928		
Designer/s	MMBW		
Builder/s	T E P Beck		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	7 GOVERNING WHITEHORSE 7.3 Providing essential services 7.3 .3 Water and sewerage				
Significance	☑ Local ☑ State (potential)	**Condition** **Intactness**	☑ Good ☐ Fair ☐ Poor ☑ Good ☐ Fair ☐ Poor		
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The house at 452-454 Mitcham Road, Mitcham, was erected in 1928 by the Melbourne & Metropolitan Board of Works (MMBW) to provide a residence for the Officer-in-charge of Watersheds & Channels, located near the new Mitcham Reservoir.

The MMBW was formed in 1891 to provide and manage infrastructure for water supply, sewerage and sewage treatment across the Melbourne metropolitan area. One of its early initiatives was the provision of a permanent water supply to the Shire of Nunawading, which commenced with the construction of a reservoir at Surrey Hills (1892), on what was the highest point in the Melbourne metropolitan area. This was followed by a second reservoir, located at Mitcham (1924), and then another at Surrey Hills (1929), each of which was also provided with a water tower.

The MMBW maintained a huge staff of engineers, inspectors and others, including a senior position formally designated as Officer-in-charge of Watersheds & Channels. From the MMBW's inception in 1891, the position was held by John Wilson (1839-1920), an ex-PWD engineer who, from 1874, worked for the Melbourne Water Supply Board as Resident Inspector at the Yan Yean Reservoir (*Age* 25/11/1920:7). Living on site, he occupied a small cottage that had been erected for the Resident Engineer when the reservoir was constructed in 1854-57. Continuing this role under the new MMBW, Wilson became responsible for watersheds and channels at both the Yan Yean and Maroondah reservoirs (*Australasian* 26/03/1910:39).

In May 1908, the MMBW mooted a number of reforms that included retiring long-serving engineer John Wilson and replacing him with "a younger man" (*Age* 14/05/1908:5). His role as inspector at Yan Yean was taken over by his son George, who continued to occupy the house there, but his formal position as Officer-in-charge of Watersheds & Channels was filled by engineer Harry Metherel Trethowan (1875-1943) (*Argus* 30/06/1909:8). Consequent to Trethowan's promotion in June 1909, the MMBW planned to provide a residence for him on the reservoir reserve at High Street, Preston, for which tenders were called in November (*Argus* 15/11/1909:2). Trethowan and his wife Annie lived there for almost twenty years, when the MMBW opted to transfer him to the Mitcham Reservoir, necessitating provision of a new resident engineer's house there.

In March 1928, the MMBW obtained the title to two vacant blocks on the south corner of Mitcham Road and Delhi Street, which comprised Lots 38 and 39 of an earlier residential subdivision (COT 5041/060). These combined to form a substantial double-width site with two street frontages, conveniently located near the Mitcham Reservoir, barely a 400 metre walk away. In May 1928, the MMBW called tenders for a number of projects including "erection of a brick residence and garage at Mitcham Reservoir" (*Argus* 15/05/1928:2). The contract was awarded to builder T E P Beck, who tendered the sum of £1,895 (*Annual report* 30/06/1928). Work was well underway, if not finished, by September, when a newspaper stated that "Mr James [*sic*] Trethowan, engineer of the Metropolitan Board of Works at Reservoir, is being transferred to Mitcham" (*Sun* 18/09/1928:35). The following year, an MMWB report helpfully explained the reason for the transfer, noting the changing role of the officer-in-charge, "the centre of whose work, which was formerly at Preston, being now in this district" (*Annual report* 30/06/2929:7)

After Trethowan's transfer to Mitcham, his former home at Preston was taken over by Clarence George Skewes (1897-1989), who had been appointed as assistant engineer of water supply in 1926 (*Age* 24/04/1926:16). When ill health hastened Trethowan's retirement in 1935, Skewes succeeded him as Officer-in-charge of Watersheds & Channels, taking up residence at Mitcham. In the same way, when Skewes retired in 1962 (moving to nearby Windouran Drive), he was succeeded by his assistant, Roy George Kermode (1916-2004), who then moved into the house on Mitcham Road. In 1976, Kermode was appointed to the new position of Manager, Water Supply, Headworks & Distribution. No longer requiring a resident engineer to live in proximity to the Mitcham Reservoir, the MMBW sold the Mitcham Road house in the 1980s.

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Physical Description

Occupying a double-width corner block, the house at 452-454 Mitcham Road, Mitcham, is a large single-storey inter-war solid brick bungalow on a stepped rectilinear plan. It has a broad hipped roof clad in terracotta tiles, with a dormer-like feature to Mitcham Road, and four brick chimneys with rendered banding across the top.

The house presents a long and asymmetrical facade to Mitcham Road, dominated by a projecting porch, with a canted bay window at the far end. The porch has a flat roof on timber beams with tapered ends, supported on fluted Roman Doric columns that are raised on red brick piers with rendered capping. A red brick balustrade wall, with matching rendered capping, extends across the front of the porch. At the left end, a short flight of steps provides access to the main entrance, which retains its original timber front door with a bold geometric pattern of glazing bars and textured glass. Two flanking sidelight windows have leaded glazing and rendered sills. The canted bay window, and a wide window opening to the porch, have timber-framed double-hung sashes with leaded lozenge glazing to the upper sashes.

Fronting Delhi Street, there is a detached weatherboard garage with a terracotta-tiled gabled roof, a half-timbered gable end and a modern tilt-panel door. The garage, which is visible in the same location in a 1945 aerial photograph as well as the 1938 MMW plan, seems contemporaneous with the house and is likely to be the original garage mentioned in the 1928 tender notice.

Comparative Analysis

For a century after it inception in 1891, the MMBW sustained a notable presence in what is now the City of Whitehorse, and especially through the major works undertaken from the early 1890s to the late 1920s to expand town water supply across the district. As of 2024, there are two examples of this early MMBW infrastructure on the heritage overlay schedule; namely, the reinforced concrete water towers that were built alongside the reservoirs at Mitcham (1925) and Surrey Hills (1929), respectively addressed as 37-55 Lucknow Street (HO119) and 313 Elgar Road (HO34). The Surrey Hills tower, with detailing said to evocative of Italian medieval architecture, is considered of both historical and aesthetic significance, while the Mitcham counterpart, of more utilitarian design, is deemed only of historical significance. A later example of local MMBW infrastructure, the former Eastern Regional Depot at 25-25 Lucknow Street (1969-70) was assessed for the *City of Whitehorse Post-1945 Heritage Study* (2016) and considered of historical significance for associations with the MMBW's regional decentralisation programme, as well as aesthetic and architectural significance. However, a heritage overlay was not applied due to the extent of external alteration.

As an example of a purpose-built residence for MMBW staff, the former home of the Officer-in-charge of Watersheds & Channels on Mitcham Road has only two local comparators, and neither of these still exist. Each of the two reservoirs in the municipality, at Surrey Hills and Mitcham, was provided with a small detached dwelling for a live-in caretaker. The caretaker's house at Surrey Hills, of uncertain date, was located to the north of the reservoir, with a street frontage corresponding to present-day 9 Tower Street. The counterpart at Mitcham, erected in 1936, stood at the north-west corner of the reservoir, accessed by a narrow driveway at the junction of Agra and Simla Streets. During the 1970s, when the MMBW undertook a number of reforms, both of these pre-war dwelling were demolished and replaced by newer buildings. These replacement houses have, in turn, also been demolished.

As a purpose-built residence for the MMBW Officer-in-charge of Watersheds & Channels, the house at Mitcham is unique in the City of Whitehorse and rare in the broader metropolitan area, with its only counterpart being the earlier house built for Harry Trethowan on the reservoir reserve at Preston. This Edwardian-style brick dwelling still stands at 839 High Street, and is currently protected by a heritage overlay (City of Darebin, HO313) that covers the entire reservoir reserve. For their intrinsic rarity, both houses are potentially of state significance.

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As a brick bungalow-style residence of the late 1920s, the house is larger and grander than most. Designed for a double-block with two street frontages, the house extends across the large site and presents an uncommonly elongated façade to Mitcham Road. Its understated roofline, expressed as a series of low hips with a dormer-like feature to the east side, is unusual. The house displays a higher level of architectural sophistication with its wide flat-roofed porch, broad timber beams , cast concrete columns (apparently retaining the original unpainted finish) and brick piers and balustrade wall with rendered capping. The window treatment with leaded glass, and especially the original front door with geometric glazing bars and textured glass, is also notable.

There are relatively few bungalows of this type on the heritage overlay schedule, and most seem to be located in the Bellbird area of Blackburn. Examples of similar date, comparably expressed with elongated form, low rooflines and above-average detailing, include those at 12 Fuchsia Street (1928) (HO36), 1 The Avenue (1929) (HO81) and 20-22 Fuchsia Street (1930) (HO37). One of these houses occupies a double block, and another occupies a corner block. None, however, occupies a double corner block as seen at Mitcham, where the large house presents to both frontages, in an expansive landscaped setting. The survival of the original detached timber garage is also notable.

Statement of Significance

What is significant?

The house at 452-454 Mitcham Road, Mitcham, is a single-storey sold brick inter-war bungalow with a hipped terracotta tiled roof and an asymmetrical façade with wide porch, canted bay windows and windows with leaded glazing. Located near the Mitcham Reservoir, it was erected in1928 by the MMBW as a residence, for the Officer-in-charge of Watersheds & Channels.

Significant fabric is defined as the exterior of the original 1928 house and detached timber garage. Specific elements of significance to the house include red brickwork, hipped roofline with dormer feature, partly rendered chimneys, wide front porch with capped brick piers, balustrade walls and cast concrete columns, canted bay windows and the front door, sidelights, and double-hung sashes with leaded and textured glazing. Specific elements of significance to the garage include the gabled roof, half-timbered gable end and weatherboarding. The non-original garage door, dating from the post-WW2 era, is not significant.

How is it significant?

The house at 452-454 Mitcham Road, Mitcham, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is historically significant for associations with early expansion of town water supply in the City of Whitehorse, which began in the early 1890s with a reservoir at Surrey Hills, reaching a peak in the latter half of the 1920s with two more reservoirs, each with a water tower, at Mitcham and Surrey Hills. Built by the MMBW as a residence for the senior engineer known as the Officer-in-charge of Watersheds & Channels, the house demonstrates the rising importance of Mitcham's reservoir at the time (the Officer-in-charge previously being stationed at Preston). The house was occupied by three successive incumbents over five decades, until the position of Officer-in-charge of Watersheds & Channels was superseded in 1976. As one of only two houses in Victoria that the MMBW specifically built for this senior engineer (the other still standing at Preston), the building is unique in the City of Whitehorse and very rare in the broader metropolitan area. (*Criterion A*)

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The building is aesthetically significant as a fine and remarkably intact example of a brick bungalow-style house of the late 1920s. Occupying a double corner block, it is notable for its larger scale and less common expression with low hipped roofline and elongated façade, and the wide and elegantly-detailed front porch with a flat roof on tapered beams, cast concrete columns and capped brick piers, as well as windows with leaded glazing and original front door with a striking geometric pattern of glazing bars and textured glass. Consequent to being a departmental house for five decades, with apparently only one owner since, the house displays a remarkable degree of intactness, including the rare survival of its early or original detached garage. (*Criterion E*)

References

MMBW Annual Reports for the year ending…, 1927-28, 1928-29, 1929-30.

Certificate of Title, Volume 5401, Folio 060 (22 March 1928).

Context Pty Ltd, "Yan Yean Water Supply System Conservation Management Plan. Volume 2: History", unpublished report, May 2007.

Previous Heritage Studies

Context Pty Ltd, *Regional Water Supply Study* (2010) – recommended for VHR

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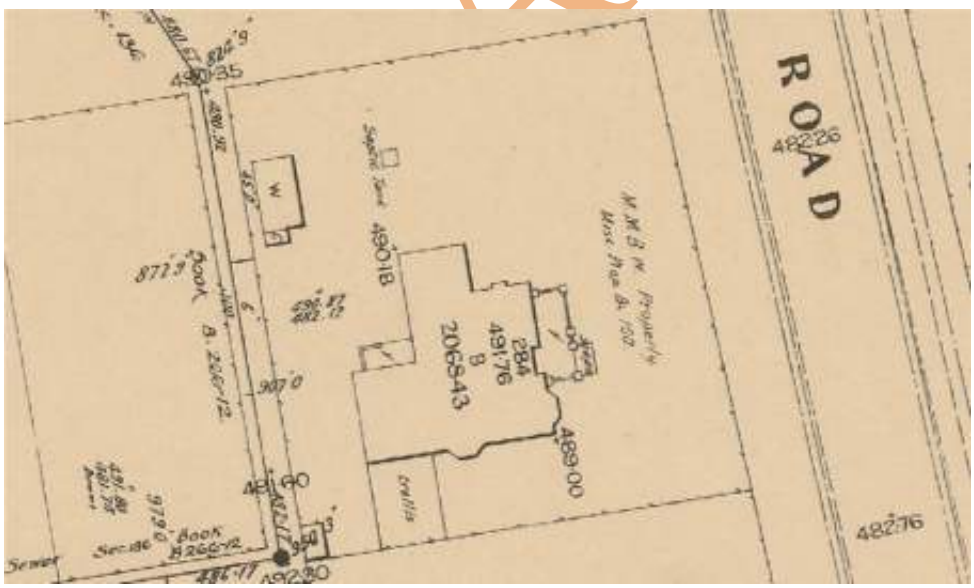
Historical Images

MMBW Detail Plan No 4370 (18 November 1938), showing engineer's house at 452-454 Mitcham Road
Source: Map Collection, State Library of Victoria.



Detail of above.

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	025
Other name/s	*Lugano; Nocton*	**Melway reference**	46 K10
Address	372 Mont Albert Road MONT ALBERT		
Date/s	1893		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.3 The 1880s Land Boom				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☐ Good	☐ Fair ☑ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The house at 372 Mont Albert Road, Mont Albert, was erected in 1893 for William Wilson, a partner in leading Melbourne firm of stonemasons, and his wife Delia.

The site of the house formed part of the *Windsor Park Estate*, a huge Boom-era subdivision between Mont Albert Road and Canterbury Road that was laid out in two stages from 1884-85. The first stage, from the railway line to St Georges Avenue and Balmoral Crescent, provided 205 allotments (LP631 05/12/1884), while the second stage extended east to provide a further 170 allotments with frontages to existing streets and the new north-south streets of St Johns Avenue, St James Avenue, View Street, Rosemont Street, Benwerrin Road, Loch Street and Tower Street (LP831 30/07/1885).

Lots 1 and 2 of Section B, on the southeast corner of Mont Albert Road and St Georges Avenue, were initially sold separately in 1888 (COT 1992/389). Both were still vacant in November 1892, when ownership of Lot 1 was transferred to stone merchant William Wilson (1858-1941), who was associated with Messrs Wilson, Corben & Company, an eminent city-based firm co-founded by his father in the 1860s. By the late 1880s, when its wares were shown at the Melbourne Centenary Exhibition, the firm had 500 employees and styled itself as "manufacturers and importers of marble and enamel slate mantelpieces, grates, gas-fittings, tiles, etc" (*Leader* 08/12/1888:38). In 1880, William Wilson married Delia Letitia Bird (1861-1913) and, by the time the couple bought their vacant block in Surrey Hills, had three young sons, with a daughter to follow in 1893. The new house began construction that year and first appeared in the rate book for 1893-94 (dated 29 January 1894), noted simply as "brick". A scribbled note in the rate book further reveals that the adjacent Lot 2, then owned by architect W U Billing (who built his own house on nearby Lot 4), was acquired by Wilson during 1894. Now occupying a double block, Wilson's house was named *Lugano* (*Age* 06/06/1896:10). The family would remain in residence for just over a decade.

In 1905, the property was acquired by W A Holmes (1856-1921), the Chief Engineer of Victorian Railways. In the later 1910s, while still living there, he developed the scheme to electrify the suburban rail network, which was completed after his death. The family, who remained there until 1923, retained the name *Lugano*, but the house was renamed *Nocton* by its next owner, grazier Horace Smith. The property had various owners in the 1930s, including a brief stint (c.1934) as a temporary home for the Ormiston Girls' before it moved to nearby St John's Avenue. Subsequent owners included medical practitioner Dr Ronald Small, and then William and Florence Hewett, proprietors of *May Waterson*, a leading women's clothing retailer. It was evidently during the Hewetts' tenure that the two-storey verandah was removed, as seenin an aerialphotogprahs from 1950. In early 1952, Hewitt's widow offered the house for sale by auction, described as a ten-roomed house with three reception rooms, five bedrooms and sunroom (*Age* 14/03/1952:16). Passed in at auction, it was sold privately before the end of that year (*Age* 17/10/1952:9)

The next owners, businessman C K Cutting and his wife Joan, initiated major renovations, calling tenders in December 1952 for "alterations, large home, electrician, plumber, painter, swimming pool, reconditioning tennis court" (*Age* 13/12/1952:31). These works, which continued into 1953, included a narrow single-storey wing along the west frontage, new french doors and colonnaded pergola fronting Mont Albert Road, as well as the concrete swimming pool and converted the tennis court as *en tout cas*, or red clay dust (*Age* 18/04/1953:20; 17/10/1953:26). The Cuttings lived there until 1972, when the house was advertised for sale as a "lavish but practical property" that "stands out like a beacon", with a "spacious, high-ceilinged hall that flows serenely into the main living room or drawing room, the dining room and an expansive kitchen" (*Age* 01/11/1972:28). In 1980, the property was acquired by Ubaldo Larobina, founding editor of Melbourne's leading Italian-language newspaper, *Il Globo*. In 1999, Larobina engaged architect Peter Barton to restore the Victorian character of the exterior. This work included reinstating the original front doorway and fenestration, and partial reconstruction of verandahs to the east and west sides, using new wrought iron balustrading that was copied from surviving remnants on site.

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Physical Description

Occupying a large corner site, the house at 372 Mont Albert Road, Mont Albert, is a double-storey rendered brick Victorian Italianate mansion on an elongated stepped plan. The low hipped roof is clad in slate, penetrated by two wide rendered chimneys with plinth-like bases and moulded caps, and has narrow eaves supported on moulded consoles with a stringcourse below. Fenestration is consistent across the west, north and east sides, comprising tall windows with projecting sills, moulded architraves and timber-framed double-hung sashes. Some windows are rectangular and others have segmental arched heads.

The north frontage of the house incorporates recessed bays to either side, each with a two-storey verandah. Constructed in 2000, these represent partial reconstruction of the grander two-storey return verandah that originally straddled the north and east sides of the house before being removed in the early 1950. The two new verandahs (and a similarly-scaled counterpart to the south-east corner of the house) have cast iron columns with fluted shafts and Composite capitals, ornate wrought iron lace friezes, and matching railings to the first floor balcony. At ground level, the raised floor of the return verandah has an ornate tessellated finish.

There are single-storey flat-roofed additions to the west and south sides of the house, designed in a sympathetic manner. The addition to the west (St Georges Avenue) side is largely concealed by a substantial mature hedge. The eastern portion of the double-width block contains a tennis court, several mature trees, and two timber outbuildings along the south boundary of the block. The smaller single-storey building is of some vintage (being shown on the 1914 MMBW plan), while the larger two-storey ones dates from the early post-WW2 era. There is also a swimming pool (c.1953) and a flat-roofed double garage (c.1980s), fronting St Georges Avenue

Comparative Analysis

Relatively few grand double-storey Victorian residences are known to have been built in what is now the City of Whitehorse, and there are several examples on the heritage overlay schedule. The most pertinent surviving comparators in a geographic sense, located in Surrey Hills and Mont Albert, are *Lydswood* at 12 Stanhope Street, Mont Albert (1892) (HO75), *St Aubins* at 29 Erasmus Street, Surrey Hills (1888) (HO176) and *Terreglea* at 79 Warrigal Road, Surrey Hills (1889) (HO87). Of these, *Lydswood* is more historically comparable, providing evidence of expansion in the new Boom-era subdivisions along the spine of Mont Albert Road. However, its form and finishes, with bichromatic brickwork and canted bays echoed in a distinctively canted verandah form, contrast with the rendered block-like massing and Italianate character evident at *Lugano*. Stylistically, *Lugano* is more comparable to the two Surrey Hills examples, and especially the recently-restored *St Aubins*, on a similar corner site, with similar stepped facade, and single-storey return verandah (the latter also being a partial reconstruction/restoration). Two other large Victorian mansions survive in Surrey Hills, namely *Kirkland* at 89 Union Road (c.1886) and *Medlow* at 42 Warrigal Road (1889), but both are located just over the municipal boundary, in the City of Boroondara.

A number of other surviving examples can be found further eastwards. There are several such houses in Box Hill, notably *Bannff* at 29 Albion Road (c.1888) (HO14) and *Tyneholm* at 310 Elgar Road (1891) (HO108), as well as others at 30-32 Watts Street (1890) (HO88). There are two further examples in Gordon Crescent, Blackburn: Nos 10 (1889) (HO41) and 18 (1889) (HO43). All of these grand houses, however, exhibit considerable variety in their forms, finishes and detailing. The examples at 30-32 Watts Street and 18 Gordon Crescent are both double-fronted asymmetrical brick houses, the former with lively bichromatic brickwork, and the latter overpainted. The others are rendered brick, like *Lugano*, but *Banff* and *Tyneholm* both have arcaded loggias rather than projecting verandahs, while *Rheims*, at 10 Gordon Crescent, has a projecting verandah, but only to one side of its asymmetrical double-fronted façade. None of these houses, therefore, is directly comparable to *Lugano* in its expression and detailing.

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In the localised context of Mont Albert, *Lugano* can only be compared with the nearby *Stanhope*, of similar scale and date, or the single-storey but still substantial Victorian villa, located just around the corner from *Stanhope* at 18 Churchill Street (1892), which has been assessed and recommended for heritage overlay as part of the current review. While a handful of large and prominent houses were built along Mont Albert Road in the late nineteenth century, *Lugano* is the only one that still stands today. The casualties include *Rubra* at No 376 (c.1892), erstwhile home of architect W U Billing, and *Quamby*, later the Mosgiel Private Hospital, on a double-width block at No 397 (1898). Scant evidence remains of even more modest Victorian houses along Mont Albert Road, with smaller villas at Nos 322 and 330 both demolished, and a much-altered example at No 439, which is now recognisable only from above by its Victorian-style M-profile roof form.

Statement of Significance

What is significant?

The house at 372 Mont Albert Road, Mont Albert, is a large two-storeyed rendered Victorian Italianate house with a slate-clad roof and a symmetrical north elevation that formerly included a double-storey return verandah, which was removed by the 1950s and partially reconstructed in 2000. The house was erected in 1893 for stone merchant William Wilson.

Significant fabric is defined as the exterior of the original 1893 house. Specific elements of significance include the slate roofing, smooth rendered walls, large double-hung sash windows, segmental arched heads, projecting sills, eaves brackets, and rendered mouldings to chimney caps, stringcourses and architraves.

Post-WW2 additions, including the single-storey wings to the south and west sides, the garage and the reconstructed verandahs, are not considered to be significant.

How is it significant?

The house at 372 Mont Albert Road, Mont Albert, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is historically significant as one of a very small number of grand two-storey Victorian residences that survive in the Surrey Hills and Mont Albert area (and the only one still remaining on the major thoroughfare of Mont Albert Road) to provide evidence of the higher-end residential settlement during the prosperous Boom era of the late 1880s and early 1890s, when the area's high elevation and transport connections made it highly desirable to wealthy Melburnians. (*Criterion A*)

The building is aesthetically significant as a substantial and well-sited, if altered, example of a Victorian Italianate house. Its low hipped and slate-clad roofline, plain rendered walls, large windows and simple moulded embellishments, including stringcourses, consoles and architraves, are all are characteristic of the style. While the house has been altered, most fundamentally by the removal of its original double-storey return verandah (in turn, partially reconstructed in 2000), it remains a grand and monumental element in this major residential streetscape, enhanced by its corner siting on a double-width block. (*Criterion E*)

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Lodged Plans No 661 (5 December 1884) and No 831 (30 July 1885).

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Shire of Nunawading Rate Books, 1892-94. Microfiche edition, held by Box Hill Historical Society.

Ray Davie, "Lavish but practical", *Age*, 1 November 1972, p 28.

Surrey Hills in Celebration of the Centennial 1883-1983 (1983), p 13.

Miles Lewis (ed), *Melbourne Mansions Database.* << www.mileslewis.net/melbourne-mansions>>

Previous Heritage Studies

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Graeme Butler & Associates, *City of Whitehorse Heritage Review* (2002) – Appendix 2, graded Local C

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 2, graded B

Historical Images

The house as it appeared after completion in 1893. Note original double-storey return verandah
Source: Surrey Hills in Celebration of the Centennial 1883-1983 (1983) (photographer uncredited)

Excerpt of MMBW Detail Plan No (1914), showing Lugano and outbuildings on double corner block
Source: Public Record Office Victoria.

The house in 1923, seen in the background during fence-building at St George's Anglican Church in 1923
Source: Surrey Hills Historical Society (via www.victoriancollections.net.au)

Detail of aerial photograph taken 15 November 1950, looking south across Mont Albert Road. Note house with verandah removed, tennis court to the left (east) and outbuildings beyond.
Source: Picture Collection, State Library of Victoria (photograph by Airspy Company)

The house at it appeared when offered for sale in 1972, showing the external alterations that were made two decades earlier. Note the french windows at ground level, opening to a colonnaded pergola area
Source: Age, 1 November 1972 (photographer uncredited)

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	026
Other name/s	Morley House (former)	**Melway reference**	48 A12
Address	20 Naughton Grove BLACKBURN		
Date/s	1954-55		
Designer/s	John & Phyllis Murphy		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, March 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses					
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☐ Good ☑ Good	☑ Fair ☐ Fair	☐ Poor ☐ Poor	
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls					
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf					

Place History

The house at 20 Naughton Grove, Blackburn, was erected in 1954 for Cyril and Patricia Morley, to a design by husband-and-wife architects John & Phyllis Murphy.

A Yorkshireman by birth, Cyril Horwood Morley (1922-2004) was living in Surrey and working as an insurance agent by August 1950, when he migrated to Australia aboard the RMS *Otranto*, bound for Melbourne. Finding similar employment here, he lived alone in Hampton for some time before his marriage to Patricia Macbeth Miller in 1954. This evidently prompted the scheme for a new house in Blackburn. In August of that year, the couple acquired the title to a vacant block at the corner of Naughton Grove and Carey Court, which comprised Lot 8 of a recent subdivision. Drawings for their new house, also dated August 1954, were prepared by the husband-and-wife architectural partnership of John & Phyllis Murphy.

The son of an architect, John Gordon Murphy (1920-2006) worked in his father's office in the late 1930s and then, after wartime service with the Army Service Corps, commenced architectural studied at Melbourne Technical College, where he met Phyllis Elaine Slater (1924-). She worked in the office of Yuncken, Freeman Brothers, Griffiths & Simpson until 1947, when she and John travelled to Europe together and were particularly impressed by buildings they saw in Sweden. Returning to Melbourne, the couple completed their studies at the University of Melbourne and married after graduating in 1950. Commencing private practice, the Murphys initially focused on small-scaled residential projects. In 1952, they collaborated with university friends Peter McIntyre and Kevin Borland on an entry in the competition for Melbourne's new Olympic swimming pool. The scheme won first prize and, as documentation and construction unfolded over the next four years, the couple's public profile rose sharply. While John Murphy remained heavily involved in the pool project Phyllis took charge of their private practice, with assistance from another of their university friends, Stuart Warmington.

Working drawings for the Morleys' house in Blackburn (which credit the job to John & Phyllis Murphy, architects, and Stuart Warmington, architect in association) were prepared at a time when construction of the Olympic pool had only recently begun; the tender was accepted in June 1954. Laid out on an elongated and stepped L-shaped plan, the Blackburn house provided three bedrooms, a large living area with freestanding fireplace, and separate dining room with adjacent north-facing sunroom. A revised version of the working drawings, with an amendment dated February 1955, shows only two very minor internal changes: the removal of partition wall between the dining room and sunroom, and a smaller one between the kitchen and laundry. The house was unusually large for its time. Phyllis Murphy has observed that most of their early houses were small because so many clients were returned servicemen, with limited budgets that included funds from War Service Homes loans, while houses that the couple designed for non-military types, such as Cyril Morley, tended to be larger.

At an early stage, the house was extended by the addition of a double garage, which projected from the street side of the living room to create an offset T-shaped footprint. Aerial photographs confirm that this addition was made by 1960, or possibly by 1956, while the Morley family were still in residence. The design of the garage closely and seamlessly follows the form and detailing of the original house, which suggests that it was likely also designed by the Murphys, although no documentation has survived to confirm this.

The Morleys, who had two sons and daughter, remained living in the house until 1966, when the family moved to Sydney. Their former Blackburn residence was occupied by another family until 1974, and subsequently by another that retained ownership until 2021. During this remarkable tenure spanning five decades, very few major changes were made to the buildings apart from a new flat-roofed double carport, with no further additions to the footprint.

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Physical Description

Occupying a corner site with two street frontages, the house at 20 Naughton Grove, Blackburn, is a single-storey timber dwelling in the Post-war Modernist style, laid out on an elongated and stepped T-shaped plan. It has a low split-skillion roof, clad in corrugated metal sheeting, with narrow eaves to most sides, but much wider bracketed eaves to the north side. Walls are clad with vertical timber boards, with a dull grey/green painted finish.

The frontage to Naughton Grove is asymmetrical, dominated by the projecting bedroom wing. This has a blank wall to the south, facing the street, and simple fenestration to the east and west, with paired rectangular windows with white-painted frames. The front door is well back from the street, set into a recessed porch in the smaller wing to the west side, with a full-height window wall that opens from the dining room. The double garage, on the opposite side of the house, has a double-width opening with tilt panel door, and no windows to Carey Court. The double carport is a simple trabeated structure with slender columns and beams supporting a flat roof.

The north frontage of the house, visible from Carey Court, is also asymmetrical. It has projecting bay at one end, with the full-height window wall to the east that opened to an elevated terrace. An identical window wall, on the north side of the dining room, opens to the same terrace. The garage has an elongated and narrow bay of three windows, and a door that is clad in matching vertical timber boards so that it effectively disappears into the wall surface.

Comparative Analysis

As of 2024, there are two examples of the work of John & Phyllis Murphy on the heritage overlay schedule. Both are later projects from the 1960s and '70s, when the couple were better known for their work in conservation and restoration of historic buildings, consequent to their long-time role as honorary architects to the National Trust of Victoria. In the early 1960s, the couple undertook the restoration of Schwerkolt's Cottage at 2-10 Deep Creek Road, Mitcham (1886) (HO30) after it was purchased by the City of Nunawading. The project, which included reconstruction of a barn and other structures, was completed in 1965. It prompted the establishment of the Nunawading Historical Society, for which the Murphys acted as honorary architects. The heritage overlay on the Schwerkolt's Cottage site includes not only the house itself, restored by the Murphys, but also the reconstructed outbuildings and the later historical society premises (1974-77), designed not by the Murphys but by local architect David Gawler.

It was the Murphys' interest in historic architecture that prompted a project housing company, Concept Constructions Pty Ltd, to approach them in 1969 to design a dwelling as part of a new and stylistically diverse range of standard houses. The couple prepared a scheme for a house in a colonial mode, known as the *Homestead*, with a low hipped roofline and enveloping verandah. A display version was erected at 234 Canterbury Road, Forest Hill, alongside two more overtly modernist houses at No 236 and 238, designed by Stan Baker and Guilford Bell. All three houses are now collectively protected as a small heritage precinct (HO282).

Still unrepresented on the heritage overlay are any examples of the early work of John & Phyllis Murphy, from their peak period of private practice in the 1950s, when they were known for houses in what Neil Clerehan later described as "their version of contemporary design, elegant and timeless"(Clerehan 2004). During that key decade, the couple designed eight houses in what is now the City of Whitehorse. The earliest ones, dating from the first half of the decade, tend to be similar, reflecting the Murphys' characteristic minimalist approach with sprawling stepped plans, basic box-like forms, enveloping skillion roofs, vertical timber cladding and varied fenestration. In the later 1950s, they departed from this trend, designing houses that were more often characterised by tighter planning and gabled rooflines, sometimes spread over two storeys.

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Among the Murphys' early projects in the City of Whitehorse, the Morley House is exceptional for its high degree of intactness. Owned by the same family from 1974 to 2021, it has had few major changes. Aside from the garage, added by the Morleys within a few years of completing the house (and probably also designed by the Murphys), there are no subsequent room extensions. This contrasts with all other examples of the couple's work in the municipality. Two contemporaneous houses, at 57 Orchard Grove, Box Hill North (1954) at 43 Moore Road, Vermont (1954-55), share many of the same qualities with 20 Naughton Grove, but each has had a large addition; at Box Hill North, the addition projects to the street, and the vertical boards replaced by weatherboards. An earlier and simpler house at 64 Kenmare Street, Mont Albert (1952), with basic stepped plan and low gabled roof, has been engulfed by additions on three sides. Two of the couples' houses from the later 1950s have also been much altered. A house at 43 Boondara Road, Mont Albert North (1956-57), originally a two-storey dwelling on a compact rectangular plan, it has been altered by infilling of the balcony and a large addition at the mezzanine level. The house at 117 Terrara Road, Vermont (1958) originally comprised a main two-storey block with a projecting single-storey wing, although the latter element has been demolished and rebuilt in an entirely different form.

Statement of Significance

What is significant?

The house at 29 Naughton Grove, Blackburn, is a single-storey timber-framed Post-war Modernist house on a stepped plan with low skillion roof and varied fenestration including paired windows, strip windows and larger full-height window. It was built in 1954-55 for insurance agent Cyril Morley, to a design by husband-and-wife architects John & Phyllis Murphy.

Significant fabric is defined as the exterior of the original 1954-55 house and double garage. Specific elements of significance include the stepped plan form (which includes no further additions), low skillion roofline with broad eaves to the north, vertical timber board cladding, recessed entry porch and varied fenestration, including full-height multi-paned window walls.

The flat-roofed double carport, added in the early 1970s is not considered to be significant.

How is it significant?

The house at 20 Naughton Grove, Blackburn, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion D: Importance in demonstrating the principal characteristics of a class of cultural places and objects
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is architecturally significant as a representative and notably intact example of the early residential work of architects John & Phyllis Murphy. The house demonstrates many of the qualities that characterise their houses of the early and mid-1950s, namely the stepped planning, low-pitched enveloping skillion roofline, vertical timber boarding and varied fenestration. One of a number of early houses that the couple designed in what is now the City of Whitehorse, it stands out for its remarkable degree of intactness, consequent to having few owners over seventy years. (*Criterion D*)

The building is aesthetically significant as a fine example of Post-war Modernist residential architecture of the 1950s, characterised by compartmentalised planning with careful consideration of both site orientation (demonstrated by the broad eaves and window walls to the north) and privacy from the street, with few windows visible, and its simple forms and limited palette of materials, including the vertical timber cladding that was fashionable at the time. (*Criterion E*)

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10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

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Certificate of Title, Volume 7985, Folio 081 (3 March 1953).

John & Phyllis Murphy, with G Stuart Warmington, "Timber house, Lot No 8, corner Naughton Grove & Carey Court, Blackburn, for Mr & Mrs C H Morley", working drawings, dated August 1954. City of Whitehorse

John & Phyllis Murphy, with G Stuart Warmington, "Timber house, Lot No 8, corner Naughton Grove & Carey Court, Blackburn, for Mr & Mrs C H Morley", working drawings, dated August 1954, amended February 1955. Picture Collection, State Library of Victoria.

Julie Willis & Bronwyn Hanna, *Women Architects in Australia, 1900- 1950* (2001), pp 88-89.

Neil Clerehan, "John Gordon Murphy: Architect, Farmer", *Age*, 16 August 2004.

Julie Willis, "Murphy, John & Phyllis", in Julie Willis & Philip Goad (eds), *Encyclopaedia of Australian Architecture* (2012), p 481.

Interview with Phyllis Murphy, February 2024.

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Coleman Architects, *Whitehorse Heritage Review* (2016) – Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) –Appendix 2, graded B

Historical Images

Nil

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10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

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10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	027
Other name/s	Veltjens House (former)	**Melway reference**	48 A12
Address	29 Naughton Grove BLACKBURN		
Date/s	1962-64		
Designer/s	Klaus (Nick) Veltjens		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, March 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses					
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor	
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls					
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf				

Place History

The house at 29 Naughton Grove, Blackburn, was erected in 1962-64, designed by German émigré architect Nick (*ne* Klaus) Veltjens as his own residence.

Klaus Jurgens "Nick" Veltjens (1928-) was born in Berlin but completed architectural studies at the Technical University at Braunschweig. In 1951, he and his wife Lisa left Germany what was planned as an extended world tour but, after arriving in Australia, decided to settle permanently. Veltjens initially found employment as an assistant to the City Architect of the Melbourne City Council but took a position with Bates, Smart & McCutcheon. After few years, he transferred to Conarg Architects, working under fellow European émigré architect Gregory Hirsch. Around 1960, Veltjens opted to leave Hirsch's office to establish private practice under his own name. However, this would be cut short by the onset of the Credit Crunch in early 1961, prompting Veltjens to close his office and accept an offer to return to Bates, Smart & McCutcheon.

By June 1960, when they both became naturalised citizens, Veltjens and his wife had two children and were living in a small house in Canterbury Road, Forest Hill (*Comm Gaz* 25/09/1960:2998). The family subsequently moved to Blackburn, taking up residence in a large pre-war house on a double block at 28 The Avenue. Veltjens, however, was keen to design and build a new house for the family and, in August 1962, he and his wife acquired the title to a block of land on the corner of Naughton Grove and The Ridge. Designated as Lot 17, this formed part of a new residential subdivision that extended Naughton Grove (hitherto, a dead-end street off Lake Road) all the way to Blackburn Road, providing 46 new allotments (LP 56767, 06/12/1962).

The Veltjens' block had a northerly frontage to Naughton Grove and sloped gently downwards along The Ridge, and the architect envisioned a house that would follow the topography, with expansive north-facing windows. Working drawings, bearing the title-block of Design Rite, a professional drafting firm, are dated September 1962. They depict a flat-roofed house on an L-shaped split-level plan, with large living area and master bedroom facing the sunny north, a landlocked kitchen with a pop-up clerestory, and a rear wing with two bedrooms opening from a smaller informal living area. Underneath, there was a wide double carport and a cluster of service rooms, including a dark room and firewood store, with connecting stairs up to the main house. Veltjens also incorporated more unusual features to facilitate future improvements: a drop ceiling to allow for central air-conditioning to be installed, and a shaft for a dumbwaiter.

The structure and materiality of the house would be simple but boldly expressed. The main wing, fronting Naughton Grove, was to have a concrete slab floor articulated as a dominant horizontal platform supported on projecting beams, extending to form a cantilevered terrace to the living space. Full-height windows extended between the floor and roofline, with mitred corners and retractable vertical flywire screens, and there were bays of blank wall in pale-coloured bricks of reconstituted limestone, sourced from South Australia. A stone feature wall, projecting from the front of the master bedroom to form a hovering mass over an integrated rectangular fishpond, concealed a built-in wardrobe within. Veltjens recalled that, notwithstanding his unusual design, construction unfolded with few problems, and the house was completed in 1964. Sometime later, however, he observed deflection in the floor line and, concerned that this might cause cracking at the mitred corners of the windows, consulted his original structural engineers. It was discovered that allowance had not been made for deflection in the steel beams, although he problem was swiftly and successfully rectified by jacking up the slab, removing the concrete casing from the underside of the beams, welding additional steel plates, and re-spraying with concrete.

The architect and his family occupied the house for a decade, during which period he left Bates Smart & McCutcheon to become head designer at Bernard Evans & Partners, before joining Peddle Thorp Du Preu in the early 1970s. Latterly resident in Clifton Hill and then Fitzroy, Veltjens re-established his own private practice in 1980.

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Physical Description

Occupying a sloping corner site, the house at 29 Naughton Grove, Blackburn, is a Post-War Modernist house with a stepped split-level plan incorporating a partial lower level. It has a flat roof, which is stepped to follow the changing levels and incorporates a pop-up clerestory above the landlocked kitchen. The asymmetrical façade to Naughton Grove has a dominant horizontal emphasis, with broad eaves on exposed beams, and the floor slab boldly expressed, supported on projecting concrete beams. There is cantilevered terrace to the right side, and a wide flight of slab-like concrete steps leading to the panelled front door. There are large windows with butt-jointed glazing at the corners, horizontal boarded spandrels, as well as a feature wall of random-coursed stonework that projects beyond the line of the house as a hovering mass.

The frontage to The Ridge comprises a mostly blank wall of reconstituted limestone blockwork, with the double carport underneath, supported on wide concrete beams and square piers. The remainder of this west elevation is concealed by dense planting.

The fishpond, shown on the original plans, is no longer evident. The stone paved pathway that leads from the front door to the street, and the letterbox of matching rock-faced masonry block, are not shown on the plan but are likely to be early, if not original.

Comparative Analysis

For most of his career in Australia, Veltjens was employed in large corporate architectural offices, namely Bates Smart McCutcheon and Bernard Evans & Associates, where he undertook virtually no small-scale residential projects. When he resumed sole practice in 1980, residential alterations became a mainstay, including regular work through the RAIA Renovator Service. However, by his own admission, the house at 29 Naughton Grove was the only complete house that he ever designed from scratch. His only other known project in the City of Whitehorse was a renovation to his former residence at 28 The Avenue, Blackburn. On completion of his new house, Veltjens initiated a project to convert his former home into a small private hospital, which was completed circa 1965 and operated for several decades. The complex, which expanded during the 1980s with larger flat-roofed rear wing, was demolished in the early 2000s.

Few comparators exist in Veltjens' broader body of work beyond the City of Whitehorse. Only one other example of his work has been identified from the early 1960s: a block of flats at 11 Ardene Court, Hawthorn, which dated from his brief foray into sole practice, circa 1960-61. A flat-roofed two-storey cream brick building with large windows opening to projecting balconies, it is a lively example of modernist design but has little is common with the stark minimalist expression of his own house. Being located outside the City of Whitehorse, the block of flats are of no relevance in establishing a basis for local significance of the architect's own house, although it is worth noting that the flats do have an individual heritage overlay (City of Boroondara, HO781).

While Veltjens' work not represented on the heritage overlay schedule for the City of Whitehorse, it is also noted that, as of 2024, the schedule does not include any examples of architect-designed houses from the early 1960s. While a number of Post-war Modernist houses already have heritage overlays, as individual specimens or as part of precinct, the majority date from the 1950s. There are only two examples from the 1960s, both dating from the latter half of the decade, located at 3 Village Mews, Vermont (Romberg & Boyd, 1965-66) (HO292) and 7 Norris Court, Blackburn (Frances Seidel, 1967-68) (HO287). Neither of these houses has much in common with Veltjens' own house in Blackburn. The latter is exceptional even in comparison to fine architect-designed houses of similar date and form, such as another architect's own house at 43 Haig Street, Box Hill South (Murray Wilson, 1962), with a comparable expression of stepped flat roofline, full-height windows and blank masonry walls, and a house at 4 Thornhill Drive, Forest Hill (Peter Robinson, 1962), with window walls and concrete blockwork under a prominent skillion roof. Neither of these, however, demonstrate the bold structural expression seen at 29 Naughton Grove.

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Statement of Significance

What is significant?

The house at 29 Naughton Grove, Blackburn, is a Post-War Modernist house on a split-level plan, with a stepped flat roofline, an expressed concrete slab floor, and walls with alternating bays of full-height glazing and solid walls of pale blockwork and stone. Completed in 1962-64, the house was designed by émigré architect Klaus Veltjens as his own residence.

Significant fabric is defined as the exterior of the original 1962-64 house. Specific elements of significance include the stepped flat roofline (importing pop-up clerestory above the kitchen), the expressed structure of concrete floor slabs, beams, and posts to the garage undercroft, large window bays with mitred corners, pale blockwork and stone feature wall, and floating stair treads.

Although not shown on the original plans, the stone paved entry pathway and letterbox unit in matching blockwork are likely to be early if not original, and are considered to contribute to the setting of the house.

How is it significant?

The house at 29 Naughton Grove, Blackburn, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion B: Possession of uncommon, rare or endangered aspects of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is architecturally significance as a unique example of a single dwelling designed by noted German émigré architect Klaus Veltjens, who spent much of his Australian career employed in larger commercial architectural firms, with only a brief foray into sole practice in 1960-61 and then not again until 1980. Although he undertook residential alteration work, his own house in Blackburn was a rare undertaking that, by his own admission, represented the only single dwelling that he ever designed and built from scratch. (*Criterion B*)

The building is aesthetically significant as an outstanding example of Post-War Modernist residential architecture of the early 1960s. Its minimalist expression, low roofline and large windows, alternating with solid spandrels, are all broadly characteristic of the style. Yet, it is considered exceptional as a deft response to the sloping site (with stepped flat roof incorporating a pop-up clerestory), for its uncommonly conspicuous structural expression (with the concrete slab visibly supported on projecting beams to evoke a hovering effect) and its above-average attention to details and materiality, including large windows with butt-jointed glazing at the corners, pale walls of reconstituted limestone blockwork, and a projecting stone feature wall. (*Criterion E*)

References

Certificate of Title, Volume 8393, Folio 697 (10 August 1962).

Design Rite [on behalf of Klaus Veltjens], "Proposed residence at Blackburn". Working drawings, dated 265 September 1962. Building Permit No 33515/1962. City of Whitehorse.

Lodged Plan No 56767 (6 December 1962).

Interview with Nick Veltjens, Februay 2017.

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Previous Heritage Studies

Context Pty Ltd, *City of Nunawading Heritage Survey* (1994) – graded C

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) –Appendix 2, graded B

Historical Images

The Peter Wille Collection of Architectural Slides, held by the State Library of Victoria, includes two images that that have been catalogued as the house at 29 Naughton Grove, Blackburn South [*sic*], dated 1964. However, the scanned images depict an entirely different house. Library staff have confirmed (email, 15/05/2024) that the original slide was mis-labelled by the photographer, and the whereabouts of Wille's photographs of the actual house at that address are unknown.

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10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

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10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	028
Other name/s	*Maroondah*	**Melway reference**	46 K12
Address	12 Pembroke Street SURREY HILLS		
Date/s	c.1892		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, March 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.3 The 1880s Land Boom				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

Maroondah at 12 Pembroke Street, Surrey Hills, was erected c.1892 for Francis Strickland.

The site formed part of the *Chicken Farm Estate*, an ambitious Boom-era residential subdivision bordered by Canterbury Road, Elgar Road and Erasmus Street, which comprised 149 residential lots with frontages to the existing streets and the newly formed Harding, Pembroke, Newton, Bentley and Lamborne Streets. Promotion of the *Chicken Farm Estate* ("the grandest and modest extensive of the Surrey Hills") began in late May 1885, when thirteen allotments were offered for sale (*Age* 29/05/1885:2), with a second auction held the following week (*Herald* 05/06/1885:4). Despite the hype, not all of the land was sold at that time, and most allotments between Harding Street and Newton Street (including the west side of Pembroke Street) were advertised for sale again in December 1887, this time as the *Tower Paddock Estate* ("the beauty spot of Surrey Hills"). Sales of remaining allotments in Pembroke Street were still being advertised throughout 1888.

In August 1888, Lots 19, 20 and 21 on the west side of Pembroke Street, encapsulating the future No 12, were acquired by a syndicate of three businessmen who also acquired two nearby lots on Canterbury Road. A few weeks later, ownership of Lots 19, 20 and 21 passed to Francis Stickland, who also acquired three contiguous blocks to the west (Lots 36, 37 and 38), which combined into a vast rectangular site with triple frontages to both Pembroke and Harding Streets (COT 2069/793). Then, in late October, Stickland consolidated Lot 21 and the south half of Lot 20 to form one single block with a frontage of 108 feet (33 metres) of Pembroke Street.

Identified on the Certificate of Title as a coach-builder, Francis Henry Stickland (1857-1946), was involved with a successful city-based business that his father, also named Francis, had founded in the 1850s. In 1885, Francis junior had married Ida Amelia Todd (1861-1939) and, by the time that the couple contemplated a new house in Pembroke Street, they had two young daughters who were born in 1886 and 1888. Two more children followed in 1890 and 1891, and then a fourth in 1896, all recorded as being born in Surrey Hills. The family's new house in Pembroke Street appears to have been completed during 1891-92. The rate book for 1889-90 (dated 20 January 1890) still records Stickland as the owner of three vacant lots in Pembroke Street, each with a Net Annual Value (NAV) of £10. The completed house appears in the rate book for 1892-93 (dated 24 April 1893), identified as being brick of construction, with the greatly increased NAV of £55.

The Sticklands were still residing there in 1905, when they sold off their adjacent land, including the three blocks facing Harding Street, leaving their house on the block-and-a-half on Pembroke Street. A new house soon appeared next door, on the corresponding block-and-a half to the north (Lot 19 and part 20). Known as *Eign Brook*, this house (now No 10) was the home of William Hill, who took some early photographs that are now held by the Surrey Hills Historical Society. One of these images shows No 12 in the background, with the conspicuous addition of a timber-framed observation tower. This reflected a trend of the day, when residents of this part of Surrey Hills, which was then considered to be the highest point in the Melbourne metropolitan area, sometimes provided themselves with towers or rooftop decks to exploit the views.

The Sticklands resided in Pembroke Street until the 1920s, when the family, which then included two adult daughters who never married, moved to Maling Road, Canterbury. The MMBW Detail Plan, prepared in April 1927, identifies their former house as *Maroondah*. It is not known when the observation tower was dismantled, but it is not visible in an aerial photograph from 1945.

In 1991, the house was enlarged with an attic storey addition to provide three extra bedrooms, bathroom and playroom. Designed by architects Greenway Hirst Page, the addition was set well back from the street, and copied the forms, finishes and detailing of the original house, including its red brickwork, slate roofing and bluestone sills, with the gable end of the new roof that incorporating a replicate of the decorative timberwork seen on the original street façade.

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Physical Description

The house at 12 Pembroke Street, Surrey Hills, is a double-fronted Victorian bichromatic brick villa on a wider-than-average allotment. Originally single-storeyed, it now has a partial second storey to the rear. The house is mostly of red brick, with contrasting cream brick banding, stringcourses, dripmoulds, window voussoirs and other embellishments. The street facade is asymmetrical, with a projecting bay to the north (left) side and a return verandah to the south. The slate-clad roof is predominantly hipped, with a gable over the projecting bay. The main hip has a central red brick chimney with cream brick mouldings, metal finial, and narrow eaves on shaped brackets. The gable end has a carved bargeboard with rounded feet, a tie-beam with vertical posts and scalloped timber boards, over a chequerboard frieze of red and cream brick. Below, a rectangular bay window has a heavily moulded cornice, stringcourse and tall windows with segmental arches, dripmoulds, bluestone sills and timber-framed double-hung sashes with leadlight panels. The verandah has turned timber posts, an ornate wrought iron lacework frieze, and a bullnosed verandah of corrugated steel sheet. The side (south) elevation incorporates a canted bay window.

The partial second storey addition, which is set well back from the street facade and remains only partly visible from the public realm, is not considered to be intrusive.

Comparative Analysis

There are many Victorian houses already on the heritage overlay schedule, including a number of single-storey villas in the Surrey Hills and Mont Albert areas.

The house at 12 Pembroke Street occupies part of the *Chicken Farm Estate*, a Boom-era subdivision that, not unlike the contemporaneous *Phoenix Park Estate* further north, only underwent limited residential settlement in the late nineteenth century but gradually filled out in the early twentieth century. Relatively few Victorian houses can be found within the boundaries of the *Chicken Farm Estate*. Two earlier examples, both included on the heritage overlay schedule, are *St Aubins* at 29 Erasmus Street (1888) (HO176) and *Colinruby* at 7 Pembroke Street (1886-87) (HO264). The latter originally stood on the east corner of Canterbury Road and Pembroke Streets, but was moved to its present site in 1917. Another grand early house, at 15 Harding Street (c.1886), is shown on the auction flyer for the *Tower Paddock Estate* as the residence of "McLean, esq", but was razed in the 1960s. Two smaller and more modest brick villas survive in Pembroke Street, at Nos 16 and 18. Their larger and grander neighbour at No 12, still retaining it larger curtilage and wider street frontage, remains a more notable survivor of Boom-era settlement on the *Chicken Farm Estate*.

Considered most broadly as an example of a large detached Victorian villa in bichromatic brick, *Maroondah* can be compared with several others already on the heritage overlay schedule. Two examples in Surrey Hills, at 9 Russell Street, Surrey Hills (1888-89) (HO152) and 42 Warrigal Road (1890) (HO159), are both smaller in scale and simpler in form, with basic single verandahs that do not return down the sides. The rather grander specimen at 39 Blackburn Road, Blackburn (1888) (HO88), has the same type of L-shaped return verandah seen at *Maroondah*. In all of these cases, the bichromatic expression is similar: darker bricks walls enlivened by contrasting cream brick, used for quoining at the corners and the edges of windows and door openings, moulded consoles to eaves and chimney tops, and simple diaperwork. Some have more unusual embellishments, such as the triple horizontal banding at 9 Warrigal Road, and the blind arches at 9 Russell Street. However, none is truly comparable to the distinctive bichromatic detailing seen at 12 Pembroke Street, with cream brick voussoirs to segmental arched windows, cream brick dripmoulds and moulded stringcourses and, most notably, the chequerboard pattern across the gable end. This more sophisticated type of bichromatic patterning is more commonly seen in grander public buildings such as churches and schools, typified in the City of Whitehorse by the original part of the Blackburn Primary School at 189 Surrey Road, Blackburn (1889) (HO89).

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Maroondah at 12 Pembroke Street has other decorative features that are less commonly seen in the context of late Victorian residential architecture in the City of Whitehorse. The gable end treatment, using bargeboards with rounded feet and a tie-beam with vertical posts and scalloped boards, is unusual. There are a few houses of comparable vintage with a similar treatment, such as the brick villa at 83-87 Dorking Road, Box Hill (1891) (HO31), and three others in Gordon Crescent, Blackburn, at No 2 (1889) (HO40), No 10 (1889) (HO41) and No 18 (1889) (HO43), although the last two are double-storey. However, no other local example has yet been identified where the gable end treatment includes the highly distinctive infill of scalloped timber boards.

Statement of Significance

What is significant?

The house at 12 Pembroke Street, Surrey Hills, is a single-storey Victorian bichromatic brick villa with a hipped and gabled slate roof and an asymmetrical double-fronted façade with gabled bay, projecting bay window and return verandah. It was erected c.1892 for coachbuilder Francis Stickland, whose family remained there for over thirty years.

Significant fabric is defined as the exterior of the entire c.1892 house. Specific elements of significance include the hipped and gabled roofline with slate cladding, metal finials and chimneys, the bichromatic brickwork, double-fronted facade with gabled bay, rectilinear bay window, tall windows, and ornamented gable end with tie-beam, posts and scalloped boards, and the return verandah with bullnosed roof, turned timber posts and lacework frieze.

The second storey addition to the rear, added in the 1980s, is not considered significant.

How is it significant?

The house at 12 Pembroke Street, Surrey Hills, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The building is historically significant for associations with the early development of the *Chicken Farm Estate*, a major Boom-era subdivision in Surrey Hills that saw only limited settlement in the late nineteenth century before filling out in the early twentieth century. One of only a small number of houses to have been built on the estate prior to 1900, *Maroondah* is now one of even fewer that survive. Larger and grander than other single-storey counterparts, it also stands out for its substantial curtilage on large block with a wider-than-average street frontage. (*Criterion A*)

The building is aesthetically significant as an uncommonly distinctive example of a late Victorian bichromatic brick villa. Of larger than average scale, the house demonstrates an above-average level of architectural sophistication, with its rectilinear bay window, prominent return verandah, elongated windows with segmental arches, and a unusual gable end treatment with shaped bargeboards, tie-beam, posts and a distinctive scalloped timber board infill. The house also has a particularly lively use of bichromatic brickwork, with contrasting cream brick elements including banding, voussoirs to the segmental arches, moulded stringcourses and dripmoulds. and, most strikingly, a chequerboard frieze to the gable end, which is a rare and unusual feature in a relatively smaller-scaled private residential building such as this. (*Criterion E*)

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References

Certificate of Title, Volume 2060, Folio 966 (17 August 1888);
Volume 2069, Folio 793 (18 September 1888).

Shire of Nunawading Rate Books. Microfiche version, held by Box Hill Historical Society.

Sands & McDougall Directory, various.

Greenway Hirst Page Pty Ltd, "Residence alterations, 12 Pembroke Street, Surrey Hills", working drawings, dated May 1991. Building Permit No 45021/1991. City of Whitehorse.

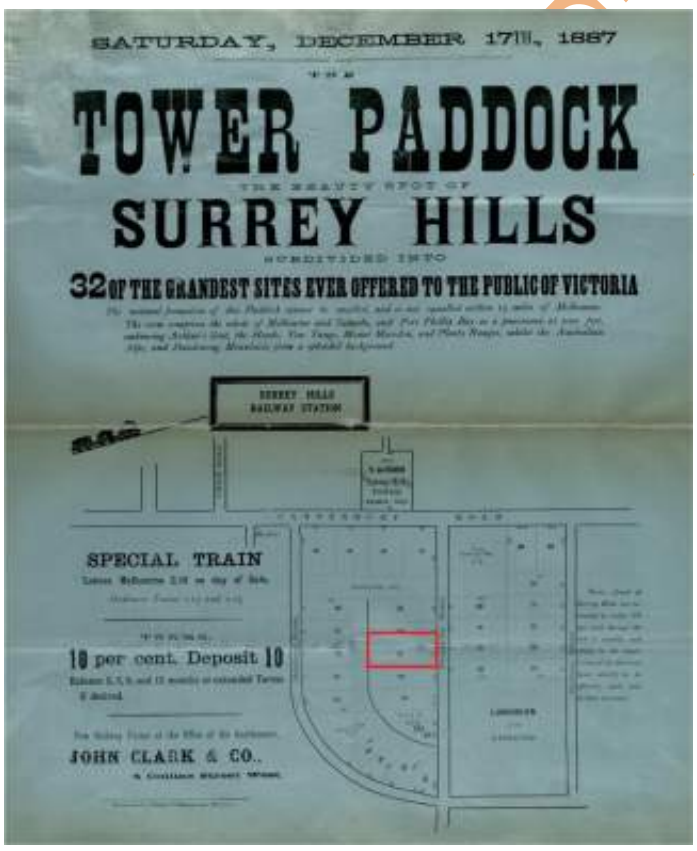
Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Graeme Butler & Associates, *City of Whitehorse Heritage Review* (2002) – Appendix 2, graded Local C

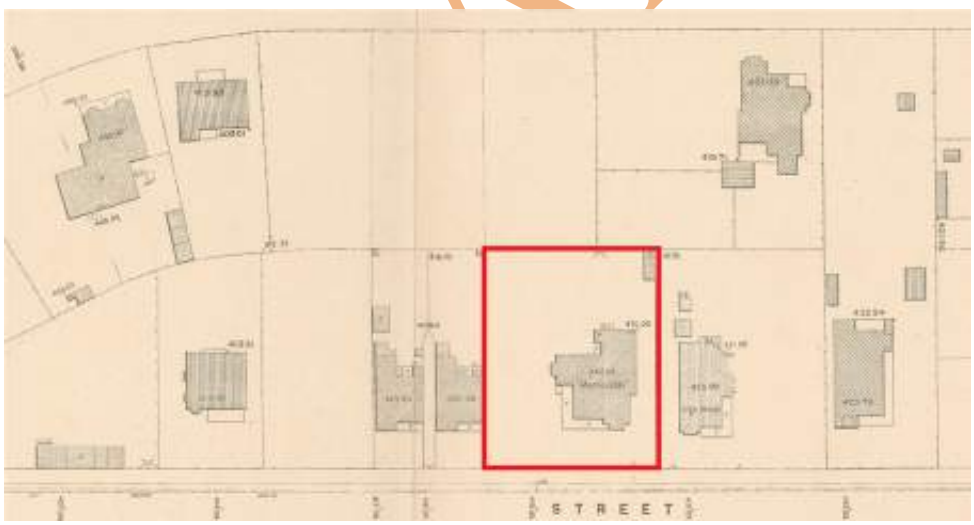
Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 2, graded A

Historical Images



Flyer advertising forthcoming auction of Tower Paddock Estate (1887), which comprised unsold land from the earlier Chicken Farm Estate. Future site of 12 Pembroke Street (Lots 21 and part 20) outlined in red. Source" Map Collection, State Library of Victoria

Early photograph of 10 Pembroke Street (c.1906), showing No 12 in background, with observation tower.
Source: Surrey Hills Historical Society (via www.victoriancollection.net.au) (photograph by William Hill)



Excerpt from MMBW Detail Plan 2237 (20 April 1927), showing footprint of Maroondah at 12 Pembroke Street, with Eign Brook to the immediate east, at No 10.
Source: Map Collection, State Library of Victoria

10.5 – ATTACHMENT 1. City of Whitehorse Heritage Review 2024 Volume 1 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	029
Other name/s		**Melway reference**	48 A7
Address	2 Peter Avenue BLACKBURN NORTH		
Date/s	c.1905		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, March 2024

Historical themes	4 TRANSFORMING AND MANAGING THE LAND 4.3 Orchards and market gardens				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The house at 2 Peter Avenue, Blackburn North, was erected in c.1905 for orchardist John Harris, his wife Jane, and their three adult children, including a son who assisted with the orchard.

The site of the house forms part of Section 70 in the Parish of Nunawading, a vast block of 146 acres (59 hectares) that was one of several along the parish's northern fringe that extended from present-day Springfield Road to the Koonung Koonung Creek. Section 70 was initially granted to James Cousens, who also acquired the two flanking blocks, Sections 69 and 71. In 1893, two long strips of Sections 69 and 70, bisected by Koonung Road, were subdivided into 34 farming sites. These comprised a row of smaller two-acre blocks along Springfield Road, larger blocks of four or five acres flanking Koonung Road, ones larger twenty-acre block, and six others blocks, between four and five acres in area, that stretched between two new east-west roads to the creek.

From the turn of the century, the land closest to Springfield Road was acquired by members of the Harris family, orchardists of nearby Junction Road. In August 1901, brothers Alfred John Harris and Arthur Henry Harris acquired Lots 6 and 7, followed in January 1904 by Lots 1, 2, 3, 4 and 5. These lots combined into a 21-acre holding with a frontage of 1,394 feet (424 metres) to Springfield Road by a depth of 1,513 feet (479 metres). A house had already been completed by 1905, when electoral rolls first listed five members of the Harris family in residence. The rate book for 1908-09 (dated 23 December 1908) includes an entry for a timber house on an 11-acre site on Springfield Road, with Net Annual Value of £25 and a population of five. Alfred was listed as principal occupant, and his brother Arthur as owner. The two men were the sons of orchardist John Harris (1848-1938), although only Alfred followed in the family business. He and his father seem to have run the Blackburn North orchard together, occupying the house on Springfield Road with John's wife Jane and their two unmarried daughters, Edith and Miriam. After Alfred was married in 1910, to Hilda Emily Murdoch, she also took up residence in the family farmhouse.

In 1923, the vast property was subdivided for residential redevelopment and offered for sale as the *Blackburn Heights Estate*, comprising 130 "magnificent building sites" with frontage to Springfield Road, Koonung Road and Surrey Road, plus a network of new streets including Harris Street, Hirst Street, Alma Street, Gordon Street, Merle Street and Deane Street (*Argus* 05/12/1923:2). The original farmhouse was retained on a large unnumbered corner allotment with a frontage of 132 feet (40 metres) to Springfield Road and 231 feet (70 metres) to Alma Street, later to be renamed Peter Avenue. With the orchard no longer extant, Alfred Harris and wife Hilda moved elsewhere, while his parents continued to occupy the farmhouse on its reduced curtilage. The surrounding estate, however, barely developed. After Alfred's early death in 1934, his parents relocated to Fuchsia Street, Blackburn, and ownership of the farmhouse on Springfield Road was transferred to Alfred's widow, Hilda, who moved there with their two sons, Leonard and Alfred.

When Hilda Harris remarried in 1936, she and her new husband, orchardist John Stevens, moved elsewhere. However, she retained ownership of the Springfield Road property and leased it to Joseph Tighe, who ran it as a poultry farm. An aerial photograph of 1945 not only shows a group of poultry shed to the immediate north of the house, but also that the surrounding subdivision, the *Blackburn Heights Estate*, had still barely developed in two decades, with only a few scattered houses along its Springfield Road and Surrey Road frontages. In 1947, tenant Tighe purchased the property from Alfred Harris's widow. Subsequently, the *Blackburn Heights Estate* began to develop with new housing, prompting Tighe to subdivide his own large corner block in 1957, forming four small lots (LP 4155 30/07/1955). The farmhouse, retained on Lot 2, consequently lost its frontage to Springfield Road and was re-addressed as 2 Peter Avenue. By 1960, the chicken sheds to the north had been demolished, with new houses built at Nos 4, 6 and 8.

In 1963, the farmhouse was acquired by the Robley family, who owned it for over sixty years.

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Physical Description

The house at 2 Peter Avenue, Blackburn North, is a single-storey Edwardian timber farmhouse. It has a varied roofline, clad in corrugated steel sheeting, comprising a high gambrel roof, with intersecting gables, an integrated skillion to the verandah, and two large red brick chimneys with stepped caps and rendered banding. While the property originally fronted Springfield Road, to the south, the principal elevation of the house is to the east, facing Peter Avenue. It is elongated, asymmetrical and triple-fronted, with an off-centre projecting gabled bay and a verandah to the left. The projecting bay has a half-timbered gable end with diagonal timber straps and roughcast render, and a pair of windows with double-hung sashes, under a bracketed canopy with ripple iron roofing. The verandah has turned posts and decorative frieze, and the front entrance, opening from the verandah, has a timber door with narrow sidelights and highlight windows. The recessed wing to the north (right) side has paired multi-paned windows.

Comparative Analysis

Large tracts of the City of Whitehorse (and particularly the northern fringes, extending beyond Belmore Road, Woodhouse Grove and Springfield Road) were strongly characterised by orcharding activity from the early twentieth century until well after WW2, and this has been identified as a significant theme in the history of the municipality.

The theme is represented by numerous places on the heritage overlay schedule, of which the most notable is *Strathdon* at 449-467 Springvale Road, Forest Hill (HO113). Established in 1893 by William Fankhauser, the original brick farmhouse was built at that time and then altered and enlarged in the later 1910s by Charles Matheson. Still owned by his family in the early 1990s, the property retained an expansive curtilage (2.5 acres) with remnant fruit trees and a large outbuilding. Consequently considered so potently evocative of local fruit-growing activity, it was acquired by the then City of Nunawading. Although the outbuilding was demolished in the early 2000s, the property otherwise retains its expansive curtilage, original tree-lined driveway and remnant fruit trees, combining to present a unique snapshot of this important local theme.

The theme is represented by several key examples in Blackburn North. A double-fronted timber house at 17 Vivian Street (c.1905) (HO86) is similar to but simpler in design than 2 Peter Avenue, while *Harwood* at 17-21 Junction Road (1910) (HO50) has a more expansive homestead-like expression with a broader verandah. These relatively modest timber houses contrast with the larger and grander red brick villa at 48 Shafer Road (1907) (HO72), associated with the Lawford family, who maintained one of the largest orchards in the municipality. A notably intact timber orchard farmhouse at 15 Middlefield Drive (c.1908), comparable to 2 Peter Avenue in its form and date, has been assessed as part of this current review, and recommended for a heritage overlay.

While the 1945 aerial photograph shows a number of early orchard farmhouses along major the thoroughfare of Springfield Road, the example now addressed as 2 Peter Avenue seems to be the only one to remain in a substantially intact state. Its former neighbour to the west, which occupied a large block on the east corner of Koonung Road, survived post-war subdivision and still stands at 15 Harris Street. A simpler hip-roofed weatherboard house with plain brick chimney, it has been much altered, with new windows and projecting flat-roofed porch to the new street frontage. A seemingly earlier red brick farmhouse, further west along Springfield Road, was retained as part of a 1960s villa unit development and still stands, albeit engulfed by additions and not visible from the street, addressed 4/9 Blake Street, Blackburn North. Further west, in Box Hill North, a former orchard farmhouse still retains its original street frontage at 32 Springfield Road, but has also been heavily altered. Several former orchard farmhouses survive at the Nunawading end of Springfield Road, including a large landlocked timber house to the rear of strip shops (now 25 Mountainview Road) as well as a few later ones, dating from the inter-war period, that retain a Springfield Road frontages at Nos 241, 265 (with a packing shed still standing at the rear) and 277.

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Statement of Significance

What is significant?

The house at 2 Peter Avenue, Blackburn North, is a single-storey Edwardian timber house with a gambrel and gabled roofline and asymmetrical triple-fronted façade with projecting gabled bay and verandah. It was erected c.1905 for orchardist John Harris, whose family would retain ownership for over forty years.

Significant fabric is defined as the exterior of the original c.1905 house. Specific elements of significance include the varied roofline, with gambrel gabled and hopped elements, the brick chimneys, the projecting bay with half-timbered gable end (with unusual diagonal strapwork), paired windows and canopy, and the verandah with turned timber posts and lacework frieze.

How is it significant?

The house at 2 Peter Avenue, Blackburn North, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics

Why is it significant?

The house is historically significant as evidence of the intensive fruit-growing activity that strongly characterised Blackburn North, and the broader northern fringes of the municipality, from the early twentieth century until after WW2. While a number of similar orcharding farmhouses can be found in the area, in various states of alteration, this one is both a remarkably intact example (consequent to having had few owners over a period of more than a century) and a rare survivor along the major thoroughfare of Springfield Road, which marked the southern boundary of the most intensive orcharding activity in the district. The subsequent use of the property as a poultry farm, from the mid-1930s to the later '50s, demonstrates a rare survival of local agricultural activity well into the post-war era. (*Criterion A*)

The house is aesthetically significant as a fine and intact example of an Edwardian timber villa. It displays the characteristic asymmetrical façade, gabled bays and verandah, combined with an above-average level of embellishment, notably the half-timbered gable end (in a highly unusual diagonal pattern), skillion window canopy and verandah with turned timber posts and lacework frieze. (*Criterion E*)

References

Certificates of Title: Volume 2830, Folio 926 (5 August 1901; Volume 2970, Folio 901 (19 January 1904); Volume 3389, Folio 795 (10 January 1910); Volume 8430, Folio 221 (8 February 1963).

Shire of Nunawading Rate Books. Microfiche edition, held by Box Hill Historical Society.

Lodged Plan No 41555 (30 July 1957).

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) – Schedule 2, graded C

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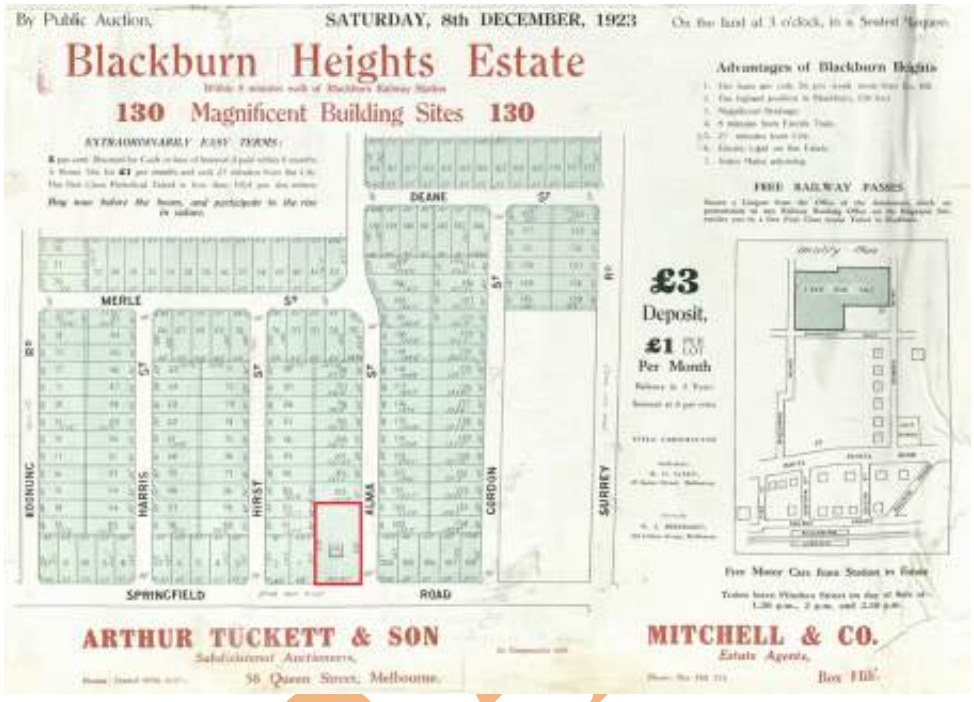
Historical Images



Flyer for auction of Blackburn Heights Estate (1923) showing former orchard farmhouse (outlined in red) with large curtilage on west corner of Springfield Road and Peter Avenue (then known as Alma Street).
Source: Map Collection, State Library of Victoria

Excerpt from 1945 aerial photograph, showing the house at 2 Peter Avenue (circled in red), with the chicken sheds to the immediate north, the former orchard mostly consumed by shrubland, and a few newer houses further to the east, fronting Surrey Road and Springfield Road.
Source: City of Whitehorse Maps. <https://map.whitehorse.vic.gov.au/index.html>

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IDENTIFIER **Other name/s**	BLACKBURN PRE-SCHOOL CENTRE	**Citation Number** **Melway reference**	030 48 A9
Address	52-54 Pope Road BLACKBURN		
Date/s	1950-52		
Designer/s	Unspecified architecture student/s		
Builder/s	Voluntary labour		
Heritage Group **Heritage Category**	Community facilities Childcare facility		

Photograph by Built Heritage Pty Ltd, March 2024

Historical themes	8 BUILDING COMMUNITY LIFE 8.2 Education 8.2.1 Pre-school education				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The Blackburn Pre-School Centre at 52-54 Pope Road, Blackburn, was erected in 1950-52, to a design prepared by unspecified architectural student/s from the University of Melbourne.

The project's origins date back to 1947, when a City of Nunawading councillor, Leslie Sutherland, surveyed residents of Blackburn regarding the need for pre-school facilities (*Age* 10/09/1948:5). The City of Nunawading then had no municipal kindergarten, although services were offered by denominational or privately-run centres, typified by the Blackburn Kindergarten & Sub Primary School, which operated from the Masonic Hall in Clarke Street from 1929 until 1940, with the kindergarten staggering on until the end of 1948 (Da Costa:82). Councillor Sutherland's survey prompted the formation of the Blackburn Pre-School Centre Committee, which negotiated with the local Presbyterian Church to open a kindergarten in the pre-war hall on the church's property at the corner of Blackburn Road and The Avenue. With voluntary labour provided by local parents and others, which involved internal reconfiguration and construction of a playground, the new facility was officially opened by Lady Angliss in September 1948 (*Age* 13/09/1948:3)

With Councillor Sutherland elected as Mayor of Nunawading for 1948-49, the Pre-School Centre Committee initiated a second project, this time for a purpose-built kindergarten on three vacant lots of council-owned land in Pope Road. Intensive fundraising commenced, including carnivals, barbecues, square dances, gymkhanas and mannequin parades. During 1950, plans for a building were prepared by architecture students from the University of Melbourne, doubtless working in an honorary capacity, and perhaps as part of a formal design project (*Argus* 11/06/1952:6). While this was unusual, it was not unprecedented. That year, when the Royal Historical Society planned to erect a memorial to Matthew Flinders at Mornington, a competition was held among fifth-year students of the Architecture School (*Herald* 10/10/1950:4). It has not known who worked on the design of the Blackburn Pre-School, but senior students that year included such future luminaries as David Chancellor, James Birrell, Robert Trengove and Raymond Jones, amongst others.

A specification for the "proposed weatherboard pre-school centre at Blackburn" was completed by January 1951. Accompanying drawings, which are undated and do not identify a designer or delineator, depicted a simple gable-roofed building on an L-shaped plan, comprising a larger nursery space with toilet and locker rooms at one end, with an entry lobby, office and kitchen in a projecting skillion-roofed wing to the south side. Sited on the southernmost of the three vacant blocks, the building had a vast north-facing window wall that overlooked the remaining land. Construction began within months, using voluntary labour provided by local parents who worked at weekends. It was later reported that "the building went up in less than a year from the clearing of the site" (*Herald* 14/06/1952:3). In May 1952, the Committee notified the Department of Heath that the building "is now finished, and we wish to have the centre in operation as from the beginning of the second term on 3 June". It was officially opened on 14 June 1952 by Lady Muriel Brooks, patroness of the Free Kindergarten Union and wife of the Governor, Sir Dallas Brooks. The event was reported in the daily press, which noted that the new kindergarten was the second to be established by the Committee in only four years, lauding the latest one, its first purpose-built facility, as "Victoria's most modern pre-school centre", with "one wall of the nursery of glass, to enable children to get the winter sunshine" (*Herald*, 14/06/1952:3). Later that year, an interior photograph showing this "sunny nursery" inside the "delightful kindergarten" accompanied an advertisement in the *Australian House & Garden* (09/1952:55).

The remaining council-owned land north of the kindergarten became a small public reserve. The building itself changed little over the decades, with departmental files showing minor changes in the 1960s and '70s, such as installation of ceiling fans, window blinds and central heating, as well as a small semi-enclosed foyer to the toilets. In the early 1980s, a detached storeroom was built to the west of the building, and a new external doorway formed in the south wall of the nursery. A simple verandah along the north side appears to have been added in the 1990s.

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Physical Description

The Blackburn Pre-School Centre at 52-54 Pope Road, Blackburn, is a single-storey timber-framed building on a nominal L-shaped plan, comprising a large gable-roofed block with a small skillion-roofed wing that projects from the west end of the south side. A smaller projecting bay on the north side of the building, added in the 1970s in a matching style, provides a semi-enclosed foyer to the toilets. The exterior of the building, including the later foyer, is clad in weatherboards with a pale green painted finish. The roofing, noted on the original specification as corrugated cement sheet, is now corrugated metal sheet.

The principal frontage, to Pope Road, retains its original centrally-placed double doorway with glazed highlight windows as a pair of glazed doors (not original). Along the lintel line, a timber member supports a row of four flagstaffs. The south elevation, which is only partly visible from the street, retains two original pairs of timber-framed windows to the nursery area (with the later double doorway inserted between), and some similar but smaller windows to the projecting wing. The north elevation, still overlooking a small public reserve, is dominated by the vast multi-paned window wall, with repetitive bays of timber-framed fixed sashes and two original doorways at the far (right) end. The second doorway opens to the later foyer, which has smaller windows to the north. The rest of the window wall is sheltered by a skillion-roofed verandah on timber posts.

Comparative Analysis

In Victoria, modern kindergarten design was pioneered by the architects Marcus Martin & Tribe in a much-published example, the Lady Gowrie Pre-School Centre, which opened in Carlton in 1938. This introduced many innovations, notably the vast light-filled nursery with north-facing window wall, and toilet areas with facilities scaled specifically for children. Consequent to this high-profile project, Martin & Tribe became sought-after as Victoria's pre-eminent pre-school design specialists into the mid-1940s. After WW2, Horace Tribe resumed that role in his sole practice, designing an influential prototype, the Robert Cochrane Kindergarten at Hawthorn (1948-50)

In such capacity, Martin & Tribe were involved in two major projects in what is now the City of Whitehorse: the Kildonan Children's Home and the Princess Elizabeth Kindergarten for the Deaf, which developed on adjacent sites in Elgar Road, Burwood. In 1940, they prepared a scheme for a so-called Kindergarten Cottage at Kildonan, to provide both accommodation and teaching space for young children. A split-level hip-roofed brick building of domestic character, it included two north-facing nurseries that were linked to dressing/washing areas "planned for the latest nursery kindergarten practice" (*Argus* 24/10/1940:9). This important local example of modern pre-school design, still standing in the south-west corner of the former Kildonan site, is covered by a heritage overlay (HO249) that includes other surviving buildings from the home (now part of Deakin University, 213-243 Burwood Highway, Burwood). Martin & Tribe were also the architects for the adjacent Princess Elizabeth Kindergarten for the Deaf, which offered pre-school teaching on both a day and residential basis. Their masterplan (1945) provided a Nursery School in the centre, encircled by 12 residential cottages and other facilities (*Building & Engineering* 24/02/1947:32). However, all these buildings were demolished when the site was redeveloped from the late 1990s.

At the time of its opening in 1952, the Blackburn Pre-School Centre was described as the first kindergarten to be built in the City of Nunawading. This is correct, in as much as it was the first purpose-built kindergarten to be developed by the municipality itself, although this project was predated by the earlier kindergarten that commenced operation in 1948 from existing premises at the Blackburn Presbyterian Church. Completion of the building in Pope Road ushered in a new era of modern architect-designed pre-school centres in the City of Nunawading, typified by the Stanley Cochrane Kindergarten at 257 Mitcham Road, Mitcham (Robert Rolfe, 1955) and the North Kindergarten at 16 Larch Street, Nunawading (Hank Romyn, 1960), both of which have similar planning and huge window walls.

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The emergence of modern kindergarten facilities in the former City of Box Hill followed a similar pattern. When a Free Kindergarten began operation in 1947, from a hall at the rear of St Peter's Anglican Church on Whitehorse Road, it was described as the first of its kind in the municipality. Six years later, it moved into a purpose-built centre fronting Bank Street, that, at the time of the official opening in March 1953, was loftily described as "Melbourne's most modern kindergarten" (*Argus* 02/03/1953:7). The building, which still stands between the carparks of the Town Hall and the Library, is a relatively simple red brick hall with a tile-clad gabled roof and tripartite windows to the street frontage. Otherwise, the era of the modern municipal pre-school was evidenced in the former City of Box Hill by such examples as the Parkside Kindergarten at 524 Elgar Road (c.1953; altered), the Box Hill South Kindergarten at 1216 Riversdale Road (c.1954; demolished), the Box Hill North Kindergarten at 110 Woodhouse Grove (1957), and others from the 1960s and beyond.

As of 2024, the heritage overlay schedule includes no buildings associated with this post-war boom of modern municipal kindergartens, either in the former City of Nunawading or the former City of Box Hill. The aforementioned Kildonan building, which was technically a Kindergarten Cottage that accommodated both pre-school and residential functions, is the nearest typological counterpart with a heritage overlay.

As an example of a building erected to a design prepared by architecture students, the pre-school has few comparators, local or otherwise. As stated earlier, it was unusual but not unprecedented in the 1950s for architecture students to be invited to design real-life structures on an honorary basis, particularly for community or charitable groups. The aforementioned Matthew Flinders Memorial, designed in 1950 by fifth-year student Alan Williams and unveiled in October 1952, still stands at Schnapper Point Drive, Mornington. While further examples have been identified, such as a playhouse designed for pupils of the Marathon Centre for Spastic [*sic*] Children at Toorak (*Age* 02/04/1954:1953), no other example has yet been found is in the City of Whitehorse.

The closest local counterparts would be a few later buildings designed by architecture students in different contexts. Evan Walker (later a well-known architect and politician) had not yet finished his architectural course in 1960, when he was engaged by a family friend to design their house at 7 Elmhurst Road, Blackburn. A simple brick dwelling on a H-shaped plan, the building appeared in the *Australian Home Beautiful* in June 1961, but was demolished in the 2010s. The so-called *Blue Flame Project* in Vermont South (1969-71), effectively a display village of houses built to designs sourced from a competition organised by the RAIA Housing Service, included three designs submitted by architecture students. These houses, by Michael Jan, John Herniman and Graham Reid, were built respectively at 4 Parkleigh Court, 6 Shalimar Court and 11 Shalimar Court. However, only one of these three houses, Herniman's design at 6 Shalimar Court, remains standing as of 2024. It has been recommended for a heritage overlay under the current review, as part of a broader group listing of surviving houses from the *Blue Flame Project*.

Statement of Significance

What is significant?

The Blackburn Pre-School Centre, at 52-54 Pope Road, Blackburn, is a gable-roofed weatherboard building, dominated by a vast north-facing window wall, with a small projecting skillion-roofed wing to the south. Dating from 1950-52, it was designed by architecture students of the University of Melbourne and erected by voluntary labour provided by local parents.

Significant fabric is defined as the exterior of the original 1950-52 building. Specific elements of significance include the low roofline, simple block-like planning, weatherboard cladding and original doorways and fenestration, especially the huge north-facing window wall.

The small semi-enclosed north lobby and skillion-roofed verandah, which are both later additions, are not considered to be significant.

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How is it significant?

The Blackburn Pre-School Centre satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion D: Importance in demonstrating the principal characteristics of a class of cultural places and objects.

Why is it significant?

The building is historically significant as the first modern purpose-built pre-school to be erected not only in the former City of Nunawading, but across the entire City of Whitehorse. The project followed a typical pattern of the time, when kindergartens were realised after intense and often prolonged phases of community activism, committee work and fundraising. This example demonstrated the co-operative theme even more profoundly, with construction undertaken by voluntary labour provided by local parents and, more unusually, to a design provided, *pro bono*, by architecture students from the University of Melbourne. (*Criterion A*)

The building is architecturally significant as a representative example of modern pre-school design from the middle third of the twentieth century. It demonstrates a number of innovations, most prominently the large high-ceilinged nursery with vast north-facing window wall, which were pioneered by architects Marcus Martin & Tribe in the late 1930s and recurred in their subsequent kindergarten projects into the 1940s, and were much replicated in examples designed by other architects into the 1950s and '60s. (*Criterion D*)

References

Certificate of Title, Volume 5996, Folio 724 (16 October 1935).

"Proposed pre-school centre at Blackburn", working drawings, undated [1950].
Public Building File No 3646, Box 532, VPRS 7882/P2, Public Record Office Victoria.

"Around the suburbs", *Age*, 10 September 1948, p 5.

"Blackburn's second centre", *Sun*, 26 September 1950, p 18.

"Blackburn gets kindergarten", *Argus*, 11 June 1952, p 6.

"New school centre at Blackburn", *Herald*, 14 June 1952, p 3.

"Pre-school Centre", *Age*, 16 June 1952, p 5.

Australian House & Garden, September 1952, p 55 [advert for Commonwealth Floors].

Previous Heritage Studies

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix A, graded C

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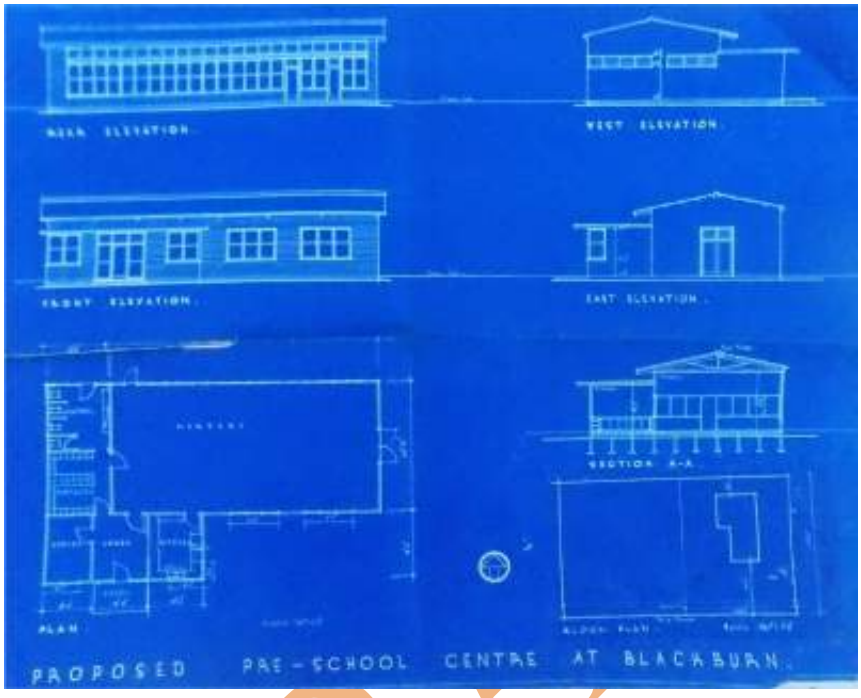
Historical Images



Blueprint of working drawings for the Blackburn Pre-School Centre, undated (circa 1950)
Source: Public Building File No 3646, Box 532, VPRS 7882/P2, Public Record Office Victoria.

Interior photograph of the "sunny nursery" inside the recently-opened Blackburn Pre-School, 1952
Source: Australian House & Garden, September 1952, p 55.

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IDENTIFIER	HOUSE & TREE	**Citation Number**	031
Other name/s	*Yarnda Bunna*	**Melway reference**	61 E4
Address	2 Roberts Avenue BOX HILL SOUTH		
Date/s	1912		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	4 TRANSFORMING AND MANAGING THE LAND 4.2 Farming				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☑ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The house at 2 Roberts Avenue, Box Hill South, was erected in 1912 for Charles Roberts, a retired civil servant turned farmer.

The site formed part of a vast property comprising Portions 18B and 18C, Parish of Nunawading, and part of Portion 19A, totalling 70 acres with frontage to Eley Road. By the 1880s, the property was owned by wheat farmer George Hopkins who, at the time of his death in 1890, occupied what was noted on his probate inventory as "an old weatherboard house containing six rooms" (Probate 43/467). In June 1911, ownership of the constituent blocks was transferred to John Johnston Smart, a director of the Colonial Bank of Australasia and brother-in-law of Charles Roberts, who would soon take up residence there. A clerk in the civil service, Charles Augustus Roberts (1858-1930) followed in the footsteps of his late father, Colonel H H Roberts, who had been Second Clerk to the Court of Insolvency in Geelong, then Stawell, in the 1860s and '70s. The younger Roberts married in 1882, to Annie Ellen Richardson (1859-1947). The couple, who had two sons and two daughters, lived for many years in Albert Park. After retiring from the civil service around 1908, Roberts relocated the family to Camberwell, where his sister and brother-in-law also lived.

In 1912, a new house was built on the property at Box Hill South (then still considered part of Burwood), with electoral rolls listing Charles and Annie Roberts at "Eley Road, Burwood" from 1913. In June of that year, ownership of the property was transferred from the Smarts to Lyall Massey Roberts (1889-1948), Charles and Annie's eldest son. From 1914, Lyall and his sister Alma Frances Roberts (1891-1969) were both also listed at Eley Road (referenced, for the first time that year, by the name *Yarnda Bunna*), followed, from 1917, by younger sister, Edna Marie Roberts (1894-1979). In 1919, the property expanded with the family's acquisition of a further ten acres to the west (part of adjacent Portion 18A), which provided a frontage to Station Street.

In 1920, Alma Roberts visited relatives in Western Australia and, while there, she met John Clifton Pierce Wellard (1895-1984), a share farmer. The couple married the next year and settled on a large property at Green Hills, near York, east of Perth. When Alma's father Charles died in 1930, she returned to Melbourne with her husband and moved into *Yarnda Bunna*. Intending to settle in regional Victoria, they offered the property for sale by auction in early 1931. An advertisement, referring to it as the Yarnda Bunna Estate, noted that the property exceeded 65 acres (26 hectares), with frontage of 1,353 feet (412 metres) to Eley Road, and "a weatherboard cottage of four rooms, front and back verandah, bathroom, pantry" (*Age* 17/01/1931:2). Ultimately, it was not sold and, after a briefly running a farm at Callaghan's Creek near Tallangatta, the Wellards returned to Box Hill South. From the early 1930s, John Wellard began to develop the northern portion of the huge property, including its frontage to Station Street, as the core of the new Box Hill Golf Links. A clubhouse was duly erected near the corner of Riverdale Road and Station Street.

In 1941, the property was transferred from the ownership of Lyall Roberts to that of his sisters Alma Wellard (who still lived there) and Edna Nash (then living in Geelong). During that decade, the Wellards took up residence in the nearby golf clubhouse, and *Yarnda Bunna* was taken over by their son Robert and his wife Marion. A 1945 aerial photograph shows what appear to be fields of arable land (ie, not orchards) around the farmhouse, extending along Eley Road, with the nascent golf course to the north, and remnant trees on Station Street. In 1952, the Box Hill Golf Club purchased 38.5 acres of Wellard's land and the remaining 41.5 acres, fronting Eley Road, was slated for residential subdivision (*Age* 21/01/1952:6). Released in stages as the *Golf Links Estate*, it comprised 188 lots and a series of new streets that referenced surnames within the Roberts family (Roberts, Wellard, Massey, Richardson, Nash and Swinburne. The old farmhouse was retained on Lot 121, a double-width wedge-shaped block on the north side of Roberts Avenue.

After it was sold in 2014, the house was renovated. An early gable-roofed rear wing was replaced by a larger hip-roofed wing, a new garage added, and a new timber balustrade to the verandah.

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Physical Description

The house at 2 Roberts Avenue, Box Hill South, is a single-storey Edwardian weatherboard house of homestead-like form. It has a prominent gambrel roof, clad in corrugated steel sheeting with vented gables and a symmetrical pair of red brick chimneys with terracotta pots. The roofline extends on three sides, at a slightly gentler pitch, to enclose a double return verandah. The house presents a wide elevation to the street that is balanced but not strictly symmetrically: it has a centrally-placed recessed front entrance, flanked on one side by a pair of tall rectangular windows and on the other by a rectilinear bay window. The double return verandah has stepped timber posts to the front and sides, with pairs of painted brick piers at the front corners, with a simple timber slat balustrade (which is not original, as it is not evident on a 1981 estate agent's sketch of the house). The front entry has a timber door with sidelight and highlight windows.

A hip-roofed weatherboard addition extends along the rear (north) side of the main house. This addition (which replaced a much earlier gabled-roofed rear wing visible in an earlier photographs, sketch and aerial imagery) dates from circa 2015, as does the nearby detached gambrel-roofed timber garage in the north-west corner of the property. Occupying a large wedge-shaped block, the house maintains a substantial curtilage to all sides with a wide street frontage. The grounds include a prominent mature eucalypt tree along the northern boundary.

Comparative Analysis

The heritage overlay schedule already includes a number of former farmhouses associated with agricultural activity in the later nineteenth and early twentieth centuries. Many of these buildings, and particularly those dating from the Edwardian era, are located in Blackburn North, Box Hill North and Vermont, and tend to be specifically associated with local orcharding activity. Those associated with other types of farming include *Wittenham* at 2 Hayward Court, Vermont (c.1874) (HO46), the former property of hobbyist vigneron Dr L L Smith, and *Greenways* at 142 Boronia Road, Vermont (c.1883) (HO107), which operated for several decades as a flower farm and then, from 1920, as a poultry farm. A former farmhouse at 10 Heatherlea Court, Blackburn North (c.1886) (HO47), while surrounded by orchards, was itself associated with market gardening.

Conversely, there are few counterparts in the south-western fringes of the municipality, which was never a major centre for orcharding but tended to be characterised by other agricultural activities such as market gardening. There are a few remnant Victorian-era farmhouses in the broader Burwood area, including one at 5 Bronte Avenue (1886) (HO21) that is already included on the heritage overlay schedule, and two others at 213 Highbury Road (1854) and 5 Ireland Street(1895), that have both been assessed and recommended for listing as part of the present review. The example in Bronte Avenue, which is a simple rendered brick dwelling with hipped slate-clad roof, formerly occupied a huge property with its northern boundary along Eley Road, opposite what was originally the wheat farm of George Hopkins, later to become *Yarnda Bunna.*

Two other early farmhouses in that vicinity, visible on historic aerial photographs, are no longer extent. The land immediately east of *Yarnda Bunna* property was owned and farmed for many years by early settler Gad Eley, who built a timber farmhouse fronting the road that took his surname. The house and several outbuildings survived post-WW2 subdivision to occupy a large site at 10 Houston Court. Once described by Andrew Ward as "Box Hill's most intact early home", it was demolished in the late 1990s. At least three other former farmhouses on Eley Road, similarly retained on reduced curtilages following closer subdivision, survived into the later twentieth century. One on the north side of Eley Road, at 1 Campbell Parade, disappeared in the early 1960s while another, on the south side, occupied a large block at 2 Clanbrae Avenue until it was demolished for villa units in the 1980s. A third but more recent example, apparently dating from the 1930s, still stands at 2 Narmi Court, Burwood, but has been altered and extended to the degree that it can no longer be readily interpreted as a modest farm dwelling.

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The only other former farmhouse in Box Hill South to have an individual heritage overlay stands at 28-30 Asquith Street, Box Hill South (1912) (HO215). Associated with poultry farming rather than crop-growing, this house is exactly contemporaneous with *Yarnda Bunna*, but is otherwise a more conventional Edwardian double-fronted asymmetrical timber villa, which contrasts to the more overtly rural character of the homestead-like dwelling in Box Hill South.

The distinctive homestead-like expression of *Yarnda Bunna*, with a prominent gambrel roofline extending to form a verandah to three sides, is highly unusual in the City of Whitehorse. There appear to be only two examples on the heritage overlay schedule, each of virtually identical date: another former farmhouse, *Labedir* at 8 Smithfield Walk, Vermont (1912) (HO73), associated with orchard activity in the municipality's south-eastern fringe, and a smaller house at 14 Harding Street, Surrey Hills (1913) (HO271), which was not actually associated with farming and occupies a standard block in a Boom-era residential subdivision. Research to date has identified one further local comparator: *Belmont* at 7 Joyce Street, Nunawading, a former orchard farmhouse that was retained when the broader property (fronting Central Road) was subdivided for housing in 1924. However this house was demolished c.1987.

Statement of Significance

What is significant?

The house at 2 Roberts Avenue, Box Hill South, is a single-storey weatherboard homestead with a broad gambrel roof and enveloping verandah to three sides, with brick piers and timber posts. It was built in 1912 for retired civil servant turned farmer Charles Roberts, who family owned it for more than forty years.

Significant fabric is defined as the exterior of the original 1912 building. Specific elements of significance include the gambrel roofline with vented gables, red brick chimneys and enveloping verandah, the brick piers and timber posts, bay window and recessed entrance. The mature eucalypt tree to the rear of the site, which contributes to its setting is also significant.

The rear addition, detached garage and balustrade are not considered significant

How is it significant?

The house at 2 Roberts Avenue, Box Hill South, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics.

Why is it significant?

The building is historically significant as a marker of early agricultural activity in the Box Hill South area (originally considered as part of Burwood), which was characterised by arable farming, including wheat growing and market gardening, for more than a century than the 1850s. Built on the site of an earlier farmhouse associated with wheat farming, *Yarnda Bunna* retained its rural character into the early post-war period, when the land as subdivided for housing. It is one of relatively few early surviving farmhouses in the broader Burwood area, and one of even fewer in what is now known as Box Hill South. (*Criterion A*)

The building is aesthetically significant as an unusual example of Edwardian residential architecture, adopting a distinctive homestead-like expression with prominent gambrel roofline that projects to form an enveloping verandah to three sides. Relatively few houses of this distinct type, highly evocative of vernacular tradition of the remote rural homestead, are known to survive in what is now the City of Whitehorse. (*Criterion E*)

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References

Certificates of Title. Volume 1964, Folio 760 (10 January 1888); Volume 6450, Folios 953 to 957 (26 February 1941); Volume 8098, Folio 581 (30 June 1955)

William Orange, "Recent Speakers", *Box Hill Historical Society Newsletter*, Vol 19, No 4 (August 2013), p 4. [Summary of talk by James Wellard, grandson of Charles Roberts]

Emails from John Trebilco [descendent of Wellard family], May 2024.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 2, graded B

Select Comparators

Labedir, 8 Smithfield Walk, Vermont (1912) (HO73), a surviving exmaple of similar homestead-like form
Source: Allom Lovell, Whitehorse Heritage Review

Belmont, 7 Joyce Street, Nunawading (demolished) shown on flyer for the Belmont Orchard Estate, 1924
Source: Map Collection, State Library of Victoria

Historical Images

Excerpt from 1945 aerial photograph, showing Yarnda Bunna (circled in red), with enlargement at right.
Source: City of Whitehorse Maps. <https://map.whitehorse.vic.gov.au/index.html>

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Early (undated) photograph of Yarnda Bunna, Box Hill South; note gable-roofed rear wing
Source: <<www.realestate.com.au/sold/property-house-vic-box+hill+south-112842903>>

Sketch of Yarnda Bunna from a real estate advertisement in the early 1980s; note verandah without railing
Source: Age, 28 November 1981, p 56 (artist uncredited)

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IDENTIFIER	HOUSES (PAIR)	**Citation Number**	032
Other name/s		**Melway reference**	47 E10
Address	66-68 Rutland Road BOX HILL		
Date/s	c.1889		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	Duplex		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.3 The 1880s Land Boom				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The pair of houses at 66-68 Rutland Road, Box Hill, was erected c.1889 by Isaiah Ainger, a local farmer turned property developer, as a speculative venture.

Born in England, Isaiah Ainger (1830-1893) married Eliza Tansley (1829-1916) in 1853 and the couple migrated to Australia that same year. According to an obituary, Ainger's early professional activities were varied, with successive stints working as a horseman, general carrier and gold miner (*BH Reporter*, 22/09/1893:3). He and his wife settled in Hawthorn, where they raised a family of four daughters and three sons. In the early 1870s, he began farming at Surrey Hills, on 18 acres of leased land on the corner of Whitehorse Road and Union Road. Evidently attracted by the opening of Box Hill's new railway station in December 1882, Ainger was drawn to property speculation in that suburb. He joined forces with long-time local resident William Ellingworth, and their professional association turned familial in 1883, when Ainger's daughter Harriet married Ellingsworth son, John Richard, who was also brought into the partnership.

Ellingsworth and Ainger's boldest scheme was the acquisition of a vast tract of land extending south from the railway line to Albion Street, which was subdivided as the *Burley Park Estate*. When it was advertised in September 1885, the vendors not only offered vacant lots ("98 valuable villa sites fronting Rutland Road, Albion Street, William Street and Rose Street") but also "two villa residences newly erected by the owner" (*Argus* 26/09/1885:15). This set a precedent for the partners to build further dwellings. Ultimately, Ainger erected a large timber villa for himself in Rose Street and at least five other dwellings as rental properties, comprising villas in Rose Street and Rutland Road and a semi-detached pair on a single lot, also on Rutland Road. Rate books show much of the land on the *Burley Park Estate* was not only still vacant but also unsold by 1889. The volume for 1889-90 (dated 20/01/1890) records two brick houses that each occupied part of Lot 37, owned by Isaac Ainger, each with a Net Annual Value of £24. One house was occupied by William Cliff North, painter, and the other by Joseph Bennett, labourer. By the next year, the houses were already occupied by others: Thomas Hill, labourer, and Mrs Sarah Bennett. The pair of houses appears for the first time in directory listings for 1892, with Thomas Hill listed again, but the other house now vacant (S&M 1892).

Ellingsworth and Ainger were still keen to attract development to the *Burley Park Estate* as late as 1890, when they offered a block of land for the district's proposed Mechanics Institute, although their offer was not accepted (Lemon:103). At the time of Ainger's early death, on 17 September 1893, he still retained ownership of these houses on the *Burley Park Estate*, as well as much unsold land. His probate papers (54/466) include an inventory of assets that describes the paired Rutland Road dwellings thus:

> All that piece of land having a frontage of 49 feet to Rutland Road, Box Hill, by a depth of 145 feet, 1 inch, upon which are erected two four-roomed brick houses let at a rental of 7/- and 8/6 per week respectively and being Lot 37 of the Plan of Subdivision of Burley Park Estate.

After Ainger's death, his property holdings passed to his widow Eliza. For the rest of that decade, the two houses on Rutland Road were invariably listed as vacant (S&M 1893, 1895, 1896). From the late 1890s until Eliza's death in 1916, they were occupied by a succession of short-term tenants, an exception being glazier Steele Taylor, who lived at No 68 for most of the 1910s. At the decade's end, that house was taken over by Isaiah and Eliza Ainger's daughter, Elizabeth (S&M 1920), who remained living there after her marriage in 1921 to Alfred Quarry, a french polisher who ran his business from there (*BH Reporter* 01/04/1921:3). By 1924, they had moved to Surrey Hills. The two houses thence had a succession of short-term tenants until 1935, when they were sold together for £516. The new owners continued to rent them out, with tenants Eli Brown (No 66) and Mrs Ida Parrish (No 68) remaining into the mid-1950s. At that time, Eliseo and Giovanna Pepicelli became tenants-in-common, with ownership of the two houses (which had hitherto remained on a single lot with a single land title) was finally split, forming separate allotments with separate titles.

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Physical Description

The building at 66-68 Rutland Road, Box Hill, comprises a semi-detached pair of single-fronted dwellings that are expressed as a detached double-fronted hip-roofed Victorian bichromatic brick villa with a full-width verandah. Brickwork, laid in Flemish bond, is mostly red, with contrasting cream brick to the quoining at the corners and the door and window jambs, and to the diaperwork, stringcourse and moulded consoles along the narrow eaves line. The roof, clad in corrugated metal sheeting, has neither chimneys nor a brick parapet between the dwellings. A continuous bullnosed verandah, also of corrugated metal sheeting, extends across the street frontage.

The street facade is symmetrical and mirror-reversed, with each of the two dwellings having an off-centre front doorway flanking a central party-wall, which supports (but does not project through) the centre of the verandah roof. The verandah is otherwise supported by posts, and each of the two dwellings retains at least some of the original (matching) wrought iron lacework frieze. The dwelling to the right side (No 66) retains its rectangular front window, but the corresponding position on the left dwelling (No 68) has been enlarged to create a larger opening with french doors. Both dwellings retain original door cases to the main entrance, with panelled front doors, narrow sidelights and highlight windows.

The street façade is partially concealed from view by a low brick wall with tall picket fence (No 66) and a tall brick wall (No 68), each with a gateway that aligns with the front door.

Comparative Analysis

As was the case with a number of Boom-era residential subdivisions in the City of Whitehorse, spanning from Surrey Hills and Mont Albert to Box Hill and as far as Mitcham, the *Burley Park Estate* underwent only limited development during the late nineteenth century, and would only fill out from the early twentieth century. The pair of dwellings at 66-68 Rutland Street is among few houses to have been erected on the subdivision prior to 1900, and fewer still to survive. The large timber villa that that Isaac Ainger erected as his own residence, at 34 Rose Street, was demolished in the 1970s, while the other villa on Rutland Road, located at No 62 on the east corner of William Street, followed in the later 1990s, its site redeveloped with three villa units now addressed as 62, 64 and 66 William Street. Since the early 2000s, a few other remnant Victorian villas have gone, including those at 24 and 28 Rose Street. Today, the only other surviving evidence of Ainger's initial development of the *Burley Park Estate* are two detached double-fronted brick villas in Rose Street that remain in relatively intact states, at No 31 and 35. A group of five detached Victorian villas also survives along the estate's Albion Road frontage, at No 51, 53, 55, 57 and 61 (a sixth house, on the corner at No 59, was demolished in the 1980s). These houses, however, have all been much altered, variously by the tiling of roofs, alteration or reconstruction of front verandahs, and reconfiguration of original window opening.

Ultimately, the late Victorian double-fronted detached villas that survive on the former *Burley Park Estate* are representative examples of their type, of which many examples survive in what is now the City of Whitehorse. By contrast, the building at 66-68 Rutland Road stands out as an example of a more distinct sub-typology – the semi-detached pair of single-fronted dwellings – that is far less common in the municipality. A small number of single-fronted detached Victorian cottages survive in the Surrey Hills and Mont Albert area, including individually listed examples at 17 and 19 Windsor Crescent (HO166 and HO167), another at 15 Blenheim Avenue, Mont Albert (HO20) that was formerly part of a detached pair (the other, at No 15, demolished c.1990), and another, at 62 Windsor Crescent, Surrey Hill, which falls within the *Windsor Park Estate Precinct* (HO243). One further example has been identified at 124 Windsor Crescent, currently without a heritage overlay.

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A review of aerial photographs and MMBW plans reveals that relatively few examples of similarly-scaled single-fronted housing existed in central Box Hill in the late nineteenth century, and these all seem to have long since disappeared. Among those confirmed as demolished are a single-fronted cottage at 13 Harrow Street, a semi-detached pair at 29-31 Bank Street (the nearest counterpart yet identified to the surviving example in Rutland Road), and a celebrated pair of single-fronted double-storey terrace house at 30-32 Rutland Road, long acknowledged as the only known example of that specific typology in the former City of Box Hill (with no others yet located elsewhere else in the present-day municipality).

Single-fronted dwellings were still somewhat unusual in the area in the early twentieth century, although a few survivors have been identified. A single-fronted brick cottage of uncertain date, circa 1910 or earlier, still stands on a very narrow frontage at 6 Ashted Road, Box Hill, although it has been much altered. Semi-detached dwellings seem to have become more common from the 1910s, demonstrated by the cluster of single-storey pairs that straddle the corner of Whitehorse Road and Miller Street, Box Hill (1912-13) (HO191), and a rarer double-storey pair at 72-74 Zetland Road, Mont Albert (1914) (HO173). A group of five semi-detached pairs on the east side of Dorking Road, apparently also built in the 1910s as a cohesive single development, is visible in vintage aerial photographs but were all demolished in the early 1970s. From the later 1930s, single-storey maisonettes would become more popular, typified by such examples as 17-19 Standard Avenue, Box Hill, and many others in Mont Albert and Surrey Hills, well into the 1940s.

Statement of Significance

What is significant?

The building at 66-68 Rutland Road, Box Hill, is a single-storey semi-detached pair of single-fronted Victorian bichromatic brick dwellings with a hipped roof and bullnosed verandah. The pair was erected c.1889 by property developer Isaiah Ainger as one of a number of rental properties on his recently-subdivided *Burley Park Estate*.

Significant fabric is defined as the exterior of the entire c1889 building. Specific elements of significance include the bichromatic brick, moulded eaves brackets, hipped roof, symmetrical façade, bullnosed verandah, remnant wrought iron lacework frieze, and original front entrances (with door casers, sidelights and highlights)

How is it significant?

The building at 66-68 Rutland Road, Box Hill, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion B: Possession of uncommon, rare or endangered aspects of our cultural history.

Why is it significant?

The building is architecturally significant as a rare surviving example of the type of smaller-scaled single-fronted Victorian dwellings that, while widespread in Melbourne's inner suburbs, was seldom found in the City of Whitehorse, with some examples in Surrey Hills and Mont Albert but very few in Box Hill and apparently none elsewhere. This building is even rarer as an example of the specific typology of the single-fronted and semi-detached Victorian pair, represented by very few examples in Box Hill, of which this is the only one to survive. The continuous roofline, lacking a party-wall parapet, also provides evidence of the unusual fact that these two houses were built on a single lot under single ownership, and would remain as such until the property was finally split into separate titles in the 1950s. (*Criterion B*)

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References

Shire of Nunawading Rate Books. Microfiche edition, held by Box Hill Historical Society.

Isaiah Ainger, Grant of Probate, dated 30 April 1894.
File No 54/466, VPRS 28/P0, Public Record Office Victoria.

Sands & McDougall Directory.

Andrew Lemon, *Box Hill* (1978).

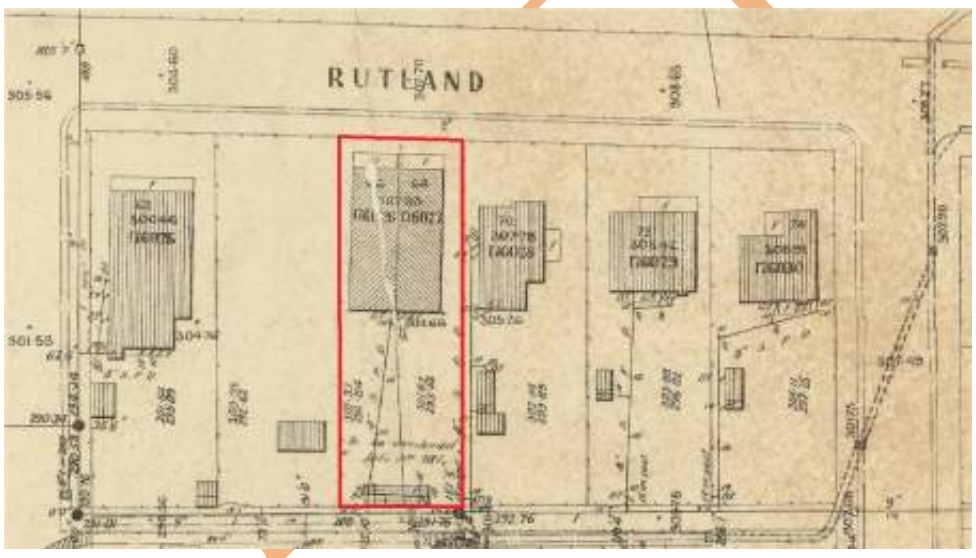
Helen Harris, "Ainger family, Rose Street", 2 pp typescript, no date. Box Hill Historical Society.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 2, graded C

Historical Images



Excerpt of MMW Detail Plan No 3089 (20 January 1930) showing 66-68 Rutland Road (outlined in red)
Source: Map Collection, State Library of Victoria

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Detail of aerial photograph of Box Hill, taken on 18 March 1953, looking south across the railway line and Rutland Road, showing the paired dwellings at Nos 66-68; note chimneys still extant (since removed)
Source: Picture Collection, State Library of Victoria (photograph by Airspy Company).

View of the building in the late 1990s, prior to erection of tall fence that now conceals façade to No 66.
Source: Auction flyer, dated December 1999, held by Box Hill Historical Society (photographer uncredited)

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

CITY OF WHITEHORSE HERITAGE REVIEW 2024

VOLUME 2: CITATIONS FOR INDIVIDUAL PLACES (S-Z), PRECINCTS & GROUP LISTINGS

Prepared for the City of Whitehorse
DRAFT: 18 June 2024

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Front cover image:

Le Pine & Sons Funeral Parlour, Box Hill
(Bates, Smart & McCutcheon, 1962)

Source: Picture Collection, State Library of Victoria
(photograph by Wolfgang Sievers)

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C: CITATIONS FOR INDIVIDUAL PLACES (STREET NAMES S-Z)

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IDENTIFIER	HOUSE	**Citation Number**	033
Other name/s		**Melway reference**	46 K9
Address	20 Salisbury Avenue MONT ALBERT		
Date/s	c.1915		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, March 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.4 Early twentieth century development				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The house at 20 Salisbury Avenue, Mont Albert, was erected c.1915 for tobacconist Thomas Gillam.

The site of the house formed part of the *Phoenix Park Estate*, a Boom-period residential subdivision that extended between Mont Albert Road and the Box Hill railway line. The estate comprised 59 allotments with frontages to the newly-formed Hamilton Street, Stanhope Street, Salisbury Street and Churchill Street (parallel to the railway line), as well as the north side of Mont Albert Road. When advertised in November 1886, it was stated that "this magnificent estate, which has for long remained in the lands of the original owners, has at last been subdivided" (*Argus* 27/11/1886:15). It was noted for being "close to the Surrey Hills railway station, embracing the grandest views in the district". Despite such enthusiastic promotion, much of the land remained unsold, with only a handful of houses erected on the estate before the end of the nineteenth century.

Development of the *Phoenix Park Estate* resumed very gradually in the early twentieth century, with directories still listing only four houses in Salisbury Avenue by 1914 (S&M 1914). In April 1915, ownership of vacant Lot 56, at the northern end of the east side of Salisbury Street, was transferred from widow Frances Peile, who had owned it since 1905, to Thomas George Gillam, a tobacconist of William Street, Glenferrie. Gillam (1867-1940), who was then operating tobacco stands on the platforms at Flinders Street Station, had been involved in trackside retailing since the mid-1880s, securing various contracts to run book stands, fruit stands and refreshment rooms at both Princes Bridge and Flinders Street (*Age* 02/06/1884:2, 20/06/1887:7, 12/11/1898:9). In 1905, Gillam married the former Ida Marie Carr (1868-1934), and the couple had one child, son Alan Thomas Gillam (1910-1977).

Development of the Gillams' site in Salisbury Avenue is recorded in the directory for 1916, which listed a "house being built" between existing No 18 and the Churchill Street corner (S&M 1916). The following year, the new house was designated as No 20, with its occupant definitively identified as "Thomas G Gillam" (S&M 1917). While neither the architect nor the builder of the house has yet been identified, it has at least been established that the client himself had more than a passing interest in matters of construction technology. In 1929, it was reported that Gillam had developed a proprietary compound that he modestly named Gillamite, which, he claimed, would significantly increase the strength of concrete (*BH Reporter* 06/12/1929:5). While quoted as saying that "his process will revolutionise concrete construction throughout the world", no patent appears to have been pursued and nothing further was ever reported of the matter.

The Gillams remained living in Salisbury Avenue until the early 1930s, when they relocated to a nearby timber bungalow at 423 Mont Albert Road.

Physical Description

The house at 20 Salisbury Avenue, Mont Albert, is an attic-storey late Edwardian weatherboard villa. It has a prominent gambrel roof that incorporates low dormer windows to the north and south sides, clad with shingles, and a smaller subsidiary gambrel above the front entry porch to the west. The roof is clad with slate, with ridge capping and scrolled finials of red terracotta, and a plain red brick chimney to the right side.

The street façade is balanced but not precisely symmetrical. The entry porch, supported on plain timber posts with tapering brackets at the upper ends, is slightly off centre. It is flanked by large boxed windows, with the slope of the roof plane projecting slightly forward to form canopies. The window to the left side contained two tall narrow timber-framed sashes, and the one to the right has three; they are otherwise identically detailed, with small highlight sashes containing leaded panes of textured glazing. Below the sill line, there are tapering fin-like timber brackets. The front door, also slightly off centre within the porch, has a small square window to one side.

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Comparative Analysis

The heritage overlay schedule includes a considerable number of houses dating from the 1910s, which demonstrate considerable variety in their scale, materiality and expression. Houses of brick construction, for example, vary from single detached dwellings, to semi-detached pairs such as the group at 3-5 Miller Street and 1060-1070 Whitehorse Road, Box Hill (1912-13) (HO191), and even terraced houses, such as the two-storey pair at 72-74 Zetland Road, Mont Albert (1914) (HO173).

Timber houses from the earlier years of the decade tend to continue the established model of Edwardian residential architecture: typically, single-storey double-fronted dwellings with asymmetrical façades incorporating a projecting gable bay, as demonstrated by those examples at 44 Husband Road, Forest Hill (1911) (HO49), 28-30 Asquith Street, Box Hill South (1912) (HO215), and 58 Lucknow Avenue, Mitcham (1914) (HO111). Other timber houses of the early 1910s have a more symmetrical expression, with prominent gambrel rooflines and enveloping verandahs that create a homestead-like character, typified by those at 17-21 Junction Road, Blackburn North (1910) (HO50), 8 Smithfield Walk (1912) (HO73) and 14 Harding Street, Surrey Hills (1913) (HO271), as well as 2 Roberts Avenue, Box Hill South (1912), which is recommended for a heritage overlay as part of the current study.

The emergence of the attic-storey bungalow in the mid-1910s is demonstrated by some fine early examples at 12 Zetland Road, Mont Albert (1914) (HO172), and 16 Churchill Street, Mont Albert (1915) (HO136), both of brick construction, while the subsequent proliferation of such house in the later 1910s is well represented by substantial examples at 12 Louise Avenue, Surrey Hills (1917) (HO197), 64 Churchill Street, Mont Albert (1919) (HO29) and 744 Canterbury Road, Surrey Hills (1920) (HO24), all similarly of brick construction. Attic-storey bungalows of timber construction seem to be less well represented on the heritage overlay schedule, but there is a fine example at 32 Thomas Street, Mitcham (1918) (HO83).

The house at 20 Salisbury Avenue is stands out in the local context of residential architecture of the 1910s. While it has an attic storey, and would thus technically be considered as an attic bungalow, the house has little in common with other attic bungalows of similar date. The integration of the attic storey into a relatively low gambrel roof, rather than the more typical broad gabled roof, is highly unusual, as are the low skillion-roofed dormer windows to each side. The roof form itself is unusual, with a subsidiary gambrel to the front porch, as is the slate cladding and terracotta detailing. The window detailing is also unusual, with fin-like timber brackets below the sill line. This is a highly distinctive house, with no direct comparators within the municipality.

Statement of Significance

What is significant?

The house at 20 Salisbury Avenue, Mont Albert, is a late Edwardian weatherboard attic-storey bungalow with a slate-clad gambrel roof and a projecting front porch. It was erected c.1915 for tobacconist Thomas Gillam.

Significant fabric is defined as the exterior of the original c.1915 house. Specific elements of significance include the gambrel roofline, slate cladding, terracotta ridge capping and finials, skillion dormer windows with shingled sides, brick chimney, entry porch, and boxed windows with leaded glass and bracketed sills.

How is it significant?

The house at 20 Salisbury Avenue, Mont Albert, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics

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Why is it significant?

The building is aesthetically significant as a distinctive and eclectic example of late Edwardian residential architecture. Falling chronologically between the lingering Federation style and the emerging bungalow style, the house deftly combines influences of both. The prominent gambrel roofline, with slate cladding and terracotta ridge capping and finials, harks back to the Federation style while the boxed windows, shingled dormers and porch timberwork anticipate the inter-war bungalow style. Certain elements of the design, such as the integration of an attic storey within a gambrel roof (rather than a broad gable), and the long fin-like timber brackets to the window sills, are distinctive and highly unusual, rarely seen in houses of this period. (*Criterion E*)

References

Certificate of Title, Volume 3060, Folio 940 (28 June 1905); Volume 4219, Folio 795 (2 July 1919)

Sands & McDougall Directory.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) – Schedule 2, graded B

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Historical Images

Excerpt of aerial photograph of Mont Albert, taken 19 October 1950, looking south-east across Salisbury Avenue, showing house at No 20 (indicated by red arrow); note dormer windows at attic storey level
Source: Picture Collection, State Library of Victoria (Photograph by Airspy Company)

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	034
Other name/s	*Carinya*	**Melway reference**	47 C6
Address	26 Saxton Street BOX HILL NORTH		
Date/s	c.1921		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.4 Early twentieth century development				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The house at 26 Saxton Street, Box Hill North, was erected c.1921 for Lindsay and Evelyn Taylor.

Born and raised in Box Hill, Lindsay Gordon Taylor (1899-1987) was the son of Steele Taylor, a glazier who was living at 68 Rutland Road in the late 1910s. The younger Taylor had evidently moved northwards by 1920, when he was recorded as a resident of Severn Street, and also as a scoutmaster (*BH Reporter* 26/11/1920:2). Electoral rolls otherwise identify Lindsay Taylor as a painter, and, given his father's profession as a glazier, it might be assumed that he painted houses rather than artwork. Research to date, including reference to artists' indices, exhibition listings and newspaper reports, has failed to identify any fine artist by the name of Lindsay Taylor, active in Melbourne during the inter-war period.

Construction of a house in Saxton Street coincided with Taylor's marriage to Evelyn May Ferris (1899-1980), which took place on 20 August 1921. Three weeks earlier, on 13 July, Ferris acquired the title to a block of land at the north-eastern end of Saxton Street, which included a right of carriageway that provided access off Shannon Street, 200 metres to the south, via a long laneway. Thus, when the newly-married couple were first recorded together in the electoral rolls for 1921, their residential address was cited as Shannon Street. From the mid-1920s, they were definitively recorded in Saxton Street, in both directories and electoral rolls. At that time, their house was one of only two in the street, the other located opposite, in the north-west corner of the dead-end road. The remaining land on Saxton Street, extending south to Shannon Street, would not be subdivided for a few more years, offered for sale by auction in 1927 as the *Pinnacle Estate*, providing "24 superb home sites" (Auction flyer, 01/10/1927). The auction flyer included a lot plan showing that the right-of-way between the Taylors' property and Shannon Street still existed at that time.

The Taylors had four children, a daughter and three sons. In late 1943, when the engagement of their daughter Margaret was announced in a newspaper, the Taylors' home address was cited as *Carinya*, Saxton Street, Box Hill, which represents early documentation of the house name that is still used today (*Argus* 24/12/1943:8). An aerial photograph, taken two years later, shows that *Carinya* still maintained a bucolic setting, wedged between two expansive orchard properties. It was then one of only five dwellings in Saxton Street: its pre-war counterpart still stood on the opposite side of the street's terminus, at the far end of an elongated dam, with three more recent houses on the west side of the street. By 1951, more houses had been built, and Saxton Street itself was extended further north, through an adjacent orchard property, through to Woodhouse Grove. This new stretch of street, in turn, had become almost fully developed with new houses by 1956.

Lindsay and Evelyn Taylor remained living at 26 Saxton Street until 1962, when the property was sold to a relative of Algernon Elmore, well-known designer/builder of bungalows in Blackburn.

Physical Description

The house at 26 Saxton Street, Box Hill North, is a large attic-storeyed inter-war bungalow of brick construction, with a roughcast rendered finish. Its roofline comprises a broad longitudinal gable that projects forward to enclose a full-width front verandah, punctuated by a projecting gable to the centrally-placed front porch. The roof is clad with what appears to be square cement shingles (see comparative analysis), laid diagonally to form a diamond pattern, with a simple roughcast rendered chimney. Gable ends, to the porch and sides of the house, are half-timbered. The street façade is symmetrical, dominated by the central porch. The verandah and porch are supported on roughcast rendered plinths with plain rendered capping, surmounted by simple moulded pilasters. The spaces between the rendered piers are infilled by a cross-braced timber fence. The front door is set into a slightly projecting bay, and is flanked by windows with wide architraves and tall timber-framed casement sashes with glazing bars at the top end. The windows to the attic storey are located in the gable ends to the sides, rather than the front.

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Comparative Analysis

Dating from c.1921, this was one of the first two houses to be built in what became Saxton Street. The other, located on what was originally the opposite (north-west) corner of the then dead-end street, still stands, now addressed as 1 Berry Street. A much smaller and simpler weatherboard house, with low pitched roofline and half-timbered gable ends, it was evidently the farmhouse for an orchard property that fronted Woodhouse Grove. Both houses are markers of early settlement in the area, as they pre-date the formal subdivision of Saxton Street in 1927. A number of other early houses in the area, evident on the 1945 aerial photograph, have since disappeared, including one at 22 Simmons Street and others that were demolished to create the new cul-de-sac estates of Roycliff Court and at the west end of Berry Street. The same photograph shows that only three more houses had been built in Saxton Street by that time, at what are now Nos 9, 11 and 13. These three houses have also been demolished.

There are countless bungalow-style dwellings in the City of Whitehorse, generally dating from the mid-1910s to the early 1930s. The heritage overlay schedule includes several examples that are contemporaneous with 26 Saxton Street, from the late 1910s to the early 1920s. These, mostly indicative of the same prevailing trend towards grander attic-storeyed bungalows, include those at 12 Louise Avenue, Surrey Hills (1917) (HO197), 32 Thomas Street, Mitcham (1918) (HO83), 64 Churchill Street, Mont Albert (1919) (HO29) and 744 Canterbury Road, Surrey Hills (1920) (HO24). All of these examples share the characteristically prominent gabled roofline, in all cases with the principal gable end facing the street, incorporating the windows and/or balcony to the attic storey. This contrasts with the more unusual composition of 26 Saxton Street, where the roofline has a stronger longitudinal expression, and the windows to the upper level are set into the gable ends at the sides of the house, with no evidence of an attic storey to the street facade.

While the aforementioned examples on the heritage overly schedule are distinguished by some striking and unusual detailing, such as the twin canted bay windows and side porches at 12 Louise Street, the round-arched loggia at 744 Canterbury Road, and paired Ionic columns and octagonal tower at 64 Churchill Street, the house in 26 Saxton Street incorporates some detailing that is also striking and unusual, such as the expression of a full-width front verandah with integrated gabled porch, supported on a row of moulded pilasters on capped roughcast piers.

Most distinctive of all, however, is the diamond-patterned roofing of fibro-cement slates, which is indicative of a specific roofing fad of early twentieth century. This product, initially promoted as a cheap alternative to conventional slate, was imported from France from the early 1900s (*The Fed House*:42). A number of rival local manufacturers offered their version, such as Calmon's Asbestos Roofing Slates (*Building* 26/08/1908:8), Sprigg's Asbestolite Company Ltd and its "Asbestolite roofing shingles for laying diagonally" (*Local Govt Journal of Aust* 28/04/1916), and James Hardie & Company, with "grey asbestos cement slates, diamond-shaped" (*Argus* 11/06/1919:10). Writing of different types of roofing materials in 1920, noted Melbourne architect Walter Drummond observed that "fibro cement tiles took well if in the natural colour and fixed diagonally" (*Real Property Annual* 07/1920:67). Drummond is known to have used such roofing in bungalow-style houses that he designed during this period (*Construction* 12/10/1923:1). Around the same time, James Hardie & Company exhibited a small display house at the Sydney Easter Show, showcasing their Fibrolite cement slates "fixed in the diagonal method"(*Architecture* 15/04/1922:xxx).

While roofing of fibro-cement shingles in a diagonal pattern was not uncommon across Melbourne in the later 1910s and early 1920s, this example in Saxton Street seems to be a rare example in what is now the City of Whitehorse. The underlying idea of laying roof slates in decorative patterns was not innovative in itself, and was occasionally used in the later nineteenth century. This is represented in the municipality by a late Victorian house at 42 Bishop Street, Box Hill (1891) (HO266), which has a roof of scalloped slates laid in a triangular pattern.

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Statement of Significance

What is significant?

The house at 26 Saxton Street, Box Hill North, is inter-war attic-storey bungalow of rendered brick construction, with a gabled roof of fibro-cement slates laid in a diagonal pattern. It was erected c.1921 for Lindsay and Evelyn Taylor.

Significant fabric is defined as the exterior of the original c.1921 house. Specific elements of significance include the roughcast rendered walls, broad gabled roof with diagonal fibro-cement slates, and projecting front porch with half-timbered gable end and moulded pilasters on capped brick piers. The cross-braced timber railings, which are not original, are not considered significant.

How is it significant?

The house at 26 Saxton Street, Box Hill North, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics.

Why is it significant?

The building is historically significant as an early marker of suburban development in this part of Box Hill North, north of Shannon Street, which remained sparsely settled and rural into the early post-war era. While surrounded by orchard properties, this house was not itself associated with agricultural activity but occupied what was effectively a typical suburban block. It was the first house to be built on what became Saxton Street, predating the 1927 subdivision that created all other blocks on the street, which, in any case, were most undeveloped until the 1950s. (*Criterion A*)

The building is aesthetically significant as an early inter-war bungalow characterised by some particularly unusual firm, finishes and detailing. These more distinctive elements include roofing of fibro-cement slates laid in a diagonal pattern, a full-width verandah incorporating a projecting central gabled porch with moulded pillars, and the placement of the attic storey windows to the side, rather than the street. A bungalow of this form is highly unusual in this part of Box Hill, and uncommon even across the broader City of Whitehorse. (*Criterion E*)

References

Certificate of Title: Volume 4499, Folio 783 (13 July 1921).

Sands & McDougall Directory.

Hugh Fraser and Ray Joyce, *The Federation House; Australia's Own Style* (1994)

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 2, graded C

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Historical Images

Flyer for forthcoming auction of the Pinnacle Estate, Saxton Street, Box Hill (1927), showing site of house at No 26 (outlined in red), which predated the subdivision; note right-of-way linking to south Shannon Street. Source: Map Collection, State Library of Victoria.

Excerpt of 1945 aerial photograph, showing Carinya (circled in red) at far north-eastern end of Saxton Road Source: City of Whitehorse Maps. <https://map.whitehorse.vic.gov.au/index.html>

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Photograph of the house at 26 Saxton Street, Box Hill, taken in 1922, shortly after completion.
Source: Box Hill Historical Society (photographer unknown)

Photograph of the house at 26 Saxton Street, Box Hill, in 2007 (prior to addition of timber balustrade)
Source: Box Hill Historical Society (photograph by Ian Taylor)

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	035
Other name/s	Blokmanis House (former)	**Melway reference**	48 F11
Address	3 Shady Grove NUNAWADING		
Date/s	1954		
Designer/s	Karlis Blokmanis		
Builder/s	Karlis and Andris Blokmanis		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses					
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☐ Good ☑ Good	☑ Fair ☐ Fair	☐ Poor ☐ Poor	
Recommendation	Include on heritage overlay schedule as individual heritage place ☑ External paint controls ☐ Interior alteration controls ☐ Tree controls					
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf					

Place History

The house at 3 Shady Grove, Nunawading, was erected in 1954 to a design by architect Karlis Blokmanis, for his own residence.

Born in Ventspils in north-western Latvia, Karlis Jekaba Blokmanis (1908-1971) initially pursued a military career, attending the Officers' Training School in Riga and graduating as a Lieutenant in 1926. As WW2 became imminent, he left the Army to join the police force in Riga but, aware that it was in his best interests to secure higher education, he opted to pursue architectural studies. In 1942, he enrolled at Riga University was unable to finish the course when Russian forces invaded Latvia, prompting Blokmanis to move to Germany with his wife Franciska and their young son Andris (1940-). There, he completed his architectural studies at the Baltic University in Hamburg, graduating in 1949. Initially planning to migrate to South Africa, the family were advised that, as they were residing in the part of Germany that had been designated as the British Zone following WW2, they could only migrate to England, New Zealand or Australia.

Arriving in February 1950, the family briefly stayed in the Bonegilla Migrant Camp before settling in Melbourne, where Blokmanis found work as a labourer on the docklands. As his English skills improved, he was invited by another Latvian architect, then employed in the Commonwealth Department of Works, to take a draftsman's position. Blokmanis would remain in the department for the rest of his career. Initially, the family shared a terrace house with other migrants but, after securing a loan from the Latvian Building Society, Blokmanis built a simple house in Reservoir, completed in 1953. His wife Franciska, keen for something better, found a site in Shady Grove, Nunawading. This bush block formed Lot 1 of a mostly undeveloped pre-war subdivision that extended down Menin Road, which was then barely a dirt track.

The architect's son Andris, who was a teenager at the time, recalls that his father wanted their new house to utilise the latest in both design principles and building technology. It was to include such then-fashionable elements as a butterfly roof and varnished vertical timber cladding, and utilise built-up aluminium roofing, and concrete stumps rather than timber ones. Drawings, which are undated but submitted for a permit application in 1954, show a small but efficiently planned house on an offset T-shape plan that provided two bedrooms, a compact living room and a study, with kitchen, bathroom and laundry forming a service core in the south-west corner. The house was not built entirely as depicted on the plans, with Andris noting minor revisions such as recessing of the front entry porch, and adding fireplace in the second bedroom. He assisted his father in the construction of the house, digging holes for stumps and, later, applying his woodworking skills in assembling window frames. Andris recalls that the house was erected without any power tools, using only hand tools such as hand saws, chisels and hammers. Construction had been completed by March 1955, when Blokmanis cited his new Shady Grove address on correspondence with the Architects' Registration Board of Victoria (ARBV).

Blokmanis became a registered architect in May 1955, which resulted in his promotion to Architect (Grade 1) in the Commonwealth Department of Works (*Comm Gazette* 15/08/1957:2484). In 1960, he was appointed Architect (Grade 3), a senior position that obliged him "to exercise the initiative and leadership necessary to carry out duties of Section Leader or Advanced Design Architect" (*Comm Gazette* 26/05/1960:1825). According to Andris, his father worked on the design of post offices, laboratories at the Fairfield Infectious Diseases Hospital and the new Tullamarine Airport. At the time of Blokmanis' death in October 1971, aged only 63 years, he and his wife still lived in Shady Grove. Their son, who qualified as a medical practitioner in the later 1960s, had travelled to Vancouver in 1970 to undertake training in otolaryngology and would remain there permanently, later working as an ENT specialist and oncology surgeon. His mother lived at Shady Grove until 1980, when the property was sold; there have been two owners since. Andris Blokmanis, who last saw the house on a return visit to Melbourne in 2015, attests that its street frontage has barely changed, aside from the installation of a gas heater flue through the living room roof.

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Physical Description

The house at 3 Shady Grove, Nunawading, is a single-storey timber house in the post-war modernist style. Laid out on a stepped T-shaped plan, it has an asymmetrical frontage to the street, with a wide projecting bay to the right side and a concrete-paved porch to the left. Walls are clad in vertical timber boarding with a medium brown finish. Large windows, grouped in bays of two or three, have various combinations of fixed and operable sashes, and white-painted frames. Based on comments by the architect's son Andris Blokmanis, and the extent of physical weathering the finishes themselves, this colour scheme is considered to be original.

The house has a low roofline, comprising a butterfly roof over the main part of the house (ie, paired skillions that slope inward to a central box gutter), with a lower skillion roof over the front wing (penetrated by the circular galvanised flue of a gas heater, which is not original). The roofs, clad in corrugated metal sheeting, have broad eaves lined with strapped cement sheeting.

Comparative Analysis

As Blokmanis did not formally maintain a private practice under his own name, and spent his architectural career in the public service, working on federal government projects that would not have included single residential commissions, the house he designed for himself in Nunawading is likely to be rare or even unique as an example of a work in the field of small-scale domestic design. To date, no other private residential commissions by Blokmanis have been identified in the City of Whitehorse, and the only one recorded anywhere else is the earlier house that he built for his family, which still stands (in a much altered state) at 19 Gill Street, Reservoir. A very rudimentary gable-roofed weatherboard house, with no architectural pretension whatsoever, it was clearly conceived as an interim solution for the family until the more permanent house could be provided.

Setting aside the context of Blokmanis' own work, his house can be broadly compared with others in the City of Whitehorse of similar date. A number of architect-designed houses of the 1950s are already included on the heritage overlay schedule, including those at 359 Whitehorse Road, Nunawading (J W Rivett, 1954-55) (HO293), 1 Verona Street, Vermont South (Chancellor & Patrick, 1957) (HO291) and 453 Whitehorse Road, Mitcham (Smith, Tracey, Lyons & Brock, 1957) (HO278). There are also two further examples that, like the house at 3 Shady Grove, were designed by architects as their own residences, at 1 Gracefield Drive, Box Hill North (Charles Weight, 1954) (HO285) and 24 Arnott Street, Mont Albert North (Stuart McIntosh, 1956) (HO283). As all of these houses fall within the category of post-war modernism, they have characteristics in common, such as volumetric massing, low rooflines and large windows. However, they are also quite distinct in other ways: the stark box-like expression of the two architects' own houses, for example, contrasts with the minimalist structural expression of 435 Whitehorse Road, and with the more organic style of 1 Verona Street, with its broad eaves, exposed rafters and slab-like stone chimney.

Among architect-designed 1950s houses with heritage overlays, the one at 359 Whitehorse Road is most similar to 3 Shady Grove, for its comparable date, vertical timber boarding, and, especially, bold butterfly roof. While the latter was fashionable in modernist residential architecture of that era, its popularity waned due to drainage problems inherent in the use of a central box gutter. Few other butterfly-roofed modernist houses have been identified in the municipality, typified by later examples such as 58 Diosma Crescent, Nunawading (David Hopkins, 1958), which has been assessed as part of this study, and 17 Sheehans Road, Blackburn South, built to a standard design T2124 from the Small Homes Service (Neil Clerehan, 1955), but much altered since.

In this local context of 1950s architect-designed housing, the building at 3 Shady Grove stands out both as a notably early manifestation of the modernist style (predating all of the other examples cited above) and as an example by a European-trained émigré architect, which contrast to those examples already on the heritage overlay schedule, all of which were designed by architects who were born and trained in Australia.

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Vertical timber boarding was a characteristic external cladding for modernist houses of the 1950s, and innumerable examples survive across the City of Whitehorse, which encapsulate individually commissioned architect-designed houses as well as dwellings built to standardised plans from the Age Small Homes Service or commercial project housing companies, and even prefabricated houses such as the Swedish-made ASA houses that were built in Box Hill North (and elsewhere) in the early 1950s. It was also very fashionable for vertical timber boarding to have a stained, oiled and/or varnished finish. However, this invariably did not age well, and many such houses would be overpainted, often in a flat neutral tone. In regard to his family home in Shady Grove, Andris Blokmanis has explained that, while his father was keen for the stained and varnished finish, the use of two different types of varnishes each met with an unsatisfactory result, prompting him finally paint the house in a medium-brown tone to evoke stained and varnished timber.

It is an unusual circumstance for any timber house to retain its original external colour scheme after several generations, and architect-designed houses of the 1950s are no exception. To date, few such comparators have been identified in the City of Whitehorse. A house at 38 The Ridge, Blackburn (C Ian Turner & Associates, 1957), retained a remarkably intact exterior, including horizontal timber boards with the original oiled finish, at the time it was demolished in 2023. Another house, at 10 Musk Street, Blackburn (c.1955) retained varnished vertical boards until it was overpainted in 2018; it has also been demolished. A house still standing at 131 Woodhouse Road, Blackburn North (c.1957), has vertical timber boards painted white to the side walls but still varnished to the street façade. In such a context, the house at 3 Shady Grove is considered to be a rare survivor of an original exterior colour scheme, justifying the recommendation for external paint controls as part of the proposed heritage overlay.

Statement of Significance

What is significant?

The house at 3 Shady Grove, Nunawading, is a single-storey double-fronted timber house in the Post-War Modernist style, with a butterfly roof, vertical board cladding and large windows.

Significant fabric is defined as the exterior of the entire 1954 house. Specific elements of significance include the low roofline with a prominent butterfly roof and subsidiary skillion, broad eaves, vertical timber cladding and large timber-framed windows.

How is it significant?

The house at 3 Shady Grove, Nunawading, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion D: Importance in demonstrating the principal characteristics of a class of cultural places and objects

Why is it significant?

The building is significant as a representative example of progressive residential architecture of the earlier 1950s. It demonstrates the principal characteristics of such houses, including the relatively small scale, tight but efficient planning, and the use of the fashionable butterfly roof and vertical timber cladding. These representative qualities are enhanced by a remarkable degree of physical intactness, which includes virtually no alteration to the street frontage, no additions, and survival of the original colour scheme of medium brown cladding, evoking a varnished timber, with contrasting white-painted window frames. (*Criterion D*)

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References

Karlis Blokmanis, "Proposed timber residence for Mr & Mrs K & F Blokmanis, Shady Grove, No 3, Nunawading", working drawings, undated. City of Whitehorse (Courtesy Tony Lee).

Karlis Blokmanis, application file, Architects' Registration Board of Victoria, Box 2, VPRS 8838/P2, Public Record Office Victoria.

Emails from Dr Andris Blokmanis, May 2024.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix A, graded B

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10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

Historical Images

The Blokmanis House in Nunawading, under construction in 1954
Source: Collection of Blokmanis family, Vancouver, Canada.

Karlis and Franciska Blokmanis photographed outside their newly-completed house
Source: Collection of Blokmanis family, Vancouver, Canada.

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

IDENTIFIER	MITCHAM BAPTIST CHURCH	**Citation Number**	036
Other name/s	Factory (Masonite Fabricators Pty Ltd)	**Melway reference**	48 J9
Address	8-12 Simla Street MITCHAM		
Date/s	1959		
Designer/s	Middleton & Talbot		
Builder/s	Morisons Pty Ltd		
Heritage Group	Manufacturing and processing		
Heritage Category	Factory/plant		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	5 BUILDING WHITEHORSE'S INDUSTRIES AND WORKFORCE 5.1 Manufacturing				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The building at 8-12 Simla Street, Mitcham, was erected in 1959 as a factory for Masonite Fabricators Pty Ltd, to a design by architects Middleton & Talbot.

Masonite Fabricators Pty Ltd was a subsidiary of the Masonite Corporation (Australia) Ltd, a leading manufacturer of building products that was established in 1937, with a large factory complex at Newcastle. In 1938, the firm joined forces with the Colonial Sugar Refining Company (CSR), which was then developing a range of proprietary building board products that included the popular Caneite brand. With the post-war building boom, the demand for such products increased, prompting the Masonite Corporation to establish a factory in Victoria, at Rouse Street, Port Melbourne. The subsidiary company, Masonite Fabricators Pty Ltd, operated from the same address until it was decided to provide its own factory in Mitcham, which was then establishing itself as a focus for decentralized industrial development. As later explained in a press report, "Mitcham has been selected because of its accessibility to rail, major roads and its relationship to the corporation's other plants and distribution centres" (*Arch & Arts* 05/1960:50)

Plans for the new factory were prepared by architects Middleton & Talbot. Established in 1952 by recent university graduates Ron Middleton (1924-2005) and Brian Talbot (1921-2014), the firm initially focused on small residential commissions but, as the decade wore on, began to embrace industrial buildings. One such project, a factory at Heidelberg for Associated Power Seals (1955), generated much press attention and brought the partnership similar work. Doubtless, the firm's rising profile as factory design specialists is what prompted Masonite Fabricators Pty Ltd to commission them to design the new complex at Mitcham.

While the factory scheme was conceived to provide for future expansion, its first stage was carefully designed for flexibility, in order to accommodate a range of activities until later buildings were completed. The first stage comprised a large sawtooth-roofed building on a long rectangular plan, which provided an open-planned manufacturing area with a crane bay running alone one side. To ensure flexibility, roof trusses would maintain high clearances and intermediate columns be kept to a minimum. Along the east side of this main building, facing Simla Street, was a single-storey flat-roofed office block that extended across the entire street frontage. As later reported, "the whole building is essentially designed for robust use and has an air of precision most suitable for industrial structures". External finishes were given careful consideration for low maintenance, with elements that might require re-painting kept to a minimum, and in easily accessible positions. The project also made extensive use of the company's own products, with Masonite being used for the roof decking to the office block (covered with bituminous felt) and the lining of demountable partitions inside, and ceilings of CSR Caneite acoustic tiles.

Construction was well underway by August 1959, when the company began to advertise for staff at its "new factory in Mitcham area" (*Age* 05/08/1959:32). The builders, Morisons Pty Ltd, were still calling tenders for labourers in October (*Age* 28/10/1959:34). The factory appears to have begun operation by January 1960, when advertisements for staff first cited its new address in Simla Street, Mitcham. A few months later, the building was profiled in a leading journal, *Architecture & Arts,* which observed that its "simple block form" imparted a "strong horizontal motif", while the deliberate expression of the structural steel framework provided "a vertical motif to counteract such excessive horizontality. The resulting effect is pleasant and restrained in character".

By the early 1960s, the complex had expanded further, with two additional premises for subsidiary companies erected at Nos 2-6 and 14, flanking the original building. The complex remained occupied by the same manufacturer (latterly under the auspices of Hardboards Australia Ltd, and then CSR Timber Products) until 1997, when the three separate factories were sold together (*Age* 20/11/1997:28). The original building (No 8-12) has since been adapted as a church, and one of the adjacent buildings (No 14) was demolished in 2019.

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Physical Description

The former industrial complex (now Mitcham Baptist Church) at 8-12 Simla Street, Mitcham, is a steel-framed brick building on an elongated rectangular plan, comprising a large double-height production building with a smaller flat-roofed office block that extends across the street frontage.

The former production building has a sawtooth roofline that is recessed below the parapet line so that the characteristic zigzag profile is not readily apparent from street level. Along the parapet line, there are continuous bays of aluminium-framed curtain-walled glazing, with double-height to the north and south sides, and a single-height bay to the street. Much of the original glazing has been overpainted on the east and north sides, but it remains intact along the south side. Below the curtain walling, walls at ground level are of face brick. There are a number of smaller windows, and vehicle entrances with metal roller shutters.

The front office building has a flat roof of metal tray decking and an elongated street façade. At either end, there are windowless bays of red brickwork that flank a long recessed bay with exposed steel columns that define smaller bays of multi-paned windows along spandrel of cream brickwork laid in stack bond (ie, with perpends in alignment). The window bays contain fixed and operable sashes, which are alternated vertically to create a lively geometric pattern. The main entrance to the office is at the north end, where a flight of steps leads to a terrace and thence to glazed doors and full-height windows, below a prominent cantilevered canopy.

Comparative Analysis

While post-WW2 industrial development is a significant theme in what is now the City of Whitehorse, as of 2024, there are no post-WW2 factories on the heritage overlay schedule.

Many factories were developed in the municipality during the 1950s and '60s, and these vary in scale as well as degree of architectural consideration. Vast factory complexes, comprising many buildings on an expansive site, tend to be exceptional, as demonstrated by the vast twelve-acre (4.8 hectare) Bowater Scott site at 19 Ailsa Street, Box Hill South (1959). Post-war industrial expansion was more typically characterised by medium scale factory complexes on sites of two hectares or less, with a few buildings that invariably comprised one or more shed-like production buildings with an administration/staff building to the front. Such complexes were often architect-designed, with the front-of house office block given particular aesthetic consideration

Not surprisingly, some of the most prominent examples of post-war industrial architecture in the municipality were developed on sites fronting Whitehorse Road, in Nunawading and Mitcham. By far the best known was the eye-catching Turner Industries factory at No 396-406 (1957), which was a high-profile commission for the celebrated architectural partnership of Grounds, Romberg & Boyd. Others included the respective premises of John Danks & Company at No 621 (1957) and Agfa-Gavaert Ltd at No 376 (1959). Since the 1990s, however, all of these factories have been demolished and their sites redeveloped. One that still remains is the former premises of the Terry Engineering Company at 613 Whitehorse Road, Mitcham (1958-59), although the original buildings have been engulfed by several phases of later addition.

Elsewhere in the municipality, other factory complexes of the late 1950s survive in various states of intactness. The former premises of Aerosol Industries at 6 Clarice Road, Box Hill South (1958-59) has been partially redeveloped, with demolition of the western half of the complex, but still retains a large expanse of sawtooth-roofed production building and a flat-roofed office block facing the street, with a simple modernist facade of cream brick, rendered trim and repetitive fenestration. The office building at the former premises of International Computers & Tabulators (Australia) Pty Ltd, at 34 Lexton Street (c.1959) has a more striking brick facade with window bays articulated by fin-like piers and splayed sills, although it has been compromised by unsympathetic overpainting.

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As an example of a medium-scaled architect-designed post-war factory complex, with a large production building to the rear and a smaller but aesthetically considered administration block to the street, the former Masonite Fabricators factory can be compared to later examples of the 1960s. The former Joynt & Company printing works at 21-23 Joseph Street, Blackburn North (1965), is similarly expressed, having a flat-roofed office wing with window bays along a continuous brick spandrel. While the office wing seems mostly intact, the production area to the rear has been altered by the replacement of the original sawtooth roof by a low gabled roof. Factories of comparable form are also represented in the industrial strip of Lexton Road, Box Hill North, namely the former premises of Lamson Engineering at Nos 30-32 (c.1962), Health Foods Victoria Pty Ltd at No 79 (c.1964), Camatic Engineering Pty Ltd at Nos 60-62 (c.1966) and Tamco Pty Ltd at No 83 (c.1967). These, however, are all less architecturally distinguished and have also been altered. More intact, and more aesthetically considered, is the eye-catching modernist office block at the former premises of the Taylor Instrument Company at 245 Middleborough Road, Box Hill South, which was added to the front of the firm's existing factory complex around 1970.

The former Masonic Fabricators factory otherwise has few local comparators as an industrial complex that garnered press attention for its architecture. The now-demolished Turner Industries factory in Nunawading appeared in *Architecture & Arts* in October 1958 as part of a feature on the recent work of Grounds, Romberg & Boyd. The aforementioned Terry Engineering factory on Whitehorse Road, Mitcham (designed by Meldrum & Partners) and the Joynt & Company printing works in Joseph Street, Blackburn North (designed by Rosman, Hastings & Sorel) both received coverage in the weekly architecture column of the *Herald* newspaper, with the former also having a feature article in the journal *Foundations*. While that may be commensurate with the attention that the Masonite Fabricators factory garnered in *Architecture & Arts*, the Terry Engineering factory has since been much altered and extended. As it exists today, the complex has a passing resemblance to the photographs published in 1960. This contrasts sharply with Masonic Fabricators, which seems virtually identical when compared to its photographs from 1960.

Statement of Significance

What is significant?

The former industrial complex at 8-12 Simla Avenue, Mitcham, comprises a large double-height steel-framed production building with a concealed saw-tooth roof, and a flat-roofed single-storey office block facing the street. The building was erected in 1959 as the new premises of Masonite Fabricators Pty Ltd, to a design by factory specialist architects Middleton & Talbot.

Significant fabric is defined as the exterior of the entire 1959 buildings. Specific elements of significance include the stark block-like expression of both buildings, the face brickwork and bays of aluminium-framed curtain walling, and the street façade of the office block, with exposed structure, window bays with varied sash configuration, stack bond brick spandrels and glazed entrance with cantilevered canopy.

How is it significant?

The former industrial complex at 8-12 Simla Avenue, Mitcham, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion D: Importance in demonstrating the principal characteristics of a class of cultural places and objects
- Criterion E: Importance in exhibiting particular aesthetic characteristics.

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Why is it significant?

The building is significant as a representative example of the mid-scale industrial expansion that reshaped parts of the City of Whitehorse from the mid-1950s, and especially between Blackburn and Mitcham, edging the transport links of Whitehorse Road and the railway line. The complex demonstrates the principal characteristics of a small post-WW2 factory, with a large but utilitarian production area behind a smaller but more aesthetically considered office block. While parts of the municipality would become strongly characterised by such industrial growth, many factory sites have since been demolished, redeveloped, or much altered, leaving this uncommonly intact survivor to provide evocative evidence of this important post-war theme. (*Criterion D*)

The building is aesthetically significant as a striking example of the Post-war Modernist style. Befitting its utilitarian purpose, the complex is starkly expressed as a series of block-like masses, with an understated palette of plain brickwork and curtain walling. The roofline of the production area, where the typical sawtooth form is concealed behind glazed (now mostly overpainted) bays, is unusual, while the office block provides an appropriate front-of-house focus, with an elegant façade that combines plain red brickwork, cream brick spandrels in decorative stack bond, and a repetitive window bays with alternating sash configurations to create a pattern. (*Criterion E*)

References

"New factory, Mitcham, Victoria", *Architecture & Arts*, May 1960, pp 50-51.

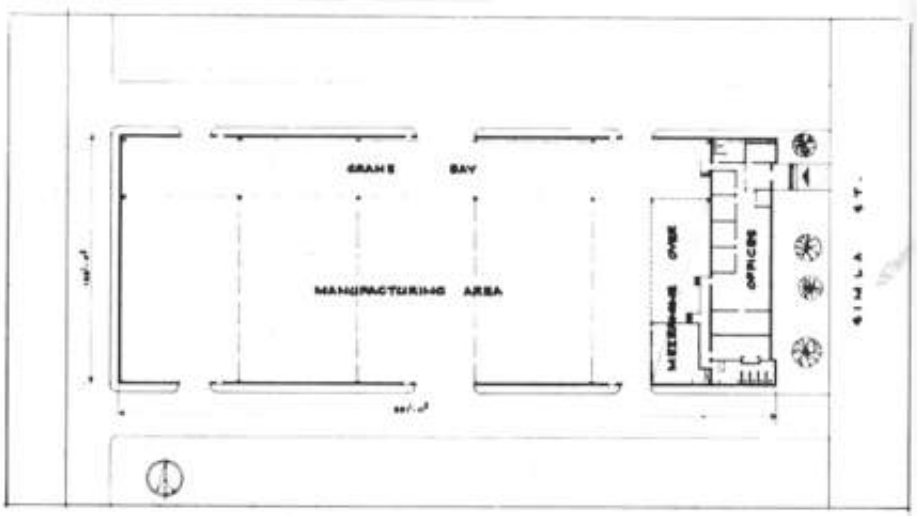
"Hardboard operations of Masonite and CSR rationalised", *Australasian Manufacturer*, 3 December 1960, pp 52-53.

Built Heritage Pty Ltd, "Middleton & Talbot", *Dictionary of Unsung Architects*, https://www.builtheritage.com.au/dua_middletalbot.html>

Previous Heritage Studies

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix A, graded B

Historical Images



Site plan showing factory layout with open-planned manufacturing area , mezzanine level, and office block
Source: Architecture & Arts, May 1960

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Early photograph showing the factory complex soon after completion, 1960
Source: Architecture & Arts, May 1960

A similar view of the building, 1962. Note altered signage, new landscaping and canvas window awning
Source: National Library of Australia, Canberra (photograph by Wolfgang Sievers)

Another view of the building, 1962. Note signage further altered again, and second building in distance.
Source: National Library of Australia, Canberra (photograph by Wolfgang Sievers)

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	037
Other name/s	Bhogal House (former)	**Melway reference**	49 B11
Address	7 Somers Street MITCHAM		
Date/s	1963		
Designer/s	Ajit Bhogal		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The house at 7 Somers Street, Mitcham, was erected in 1963 as the home of architect Ajit Bhogal.

Ajit Singh Bhogal (1931-1992) was born in Narur, a village in Punjab state, north-western India. In 1950, he travelled to Australia specifically to undertake architectural studies in Melbourne, as the shipping manifest cited his contact address as "c/o Melbourne Technical College". Arriving on 4 September, he was warmly greeted by a fellow Sikh, Jagdish Rapsukh, who was embarking upon the same course of study; the moment was captured by a press photographer and appeared on the front page of that day's afternoon edition (*Herald* 04/09/1950:1). Noted architect and academic Hugh O'Neill (1933-2022), who also attended the University of Melbourne in the early 1950s, recalled both Bhogal ("in a turban") and Rapsukh as part of a conspicuous proportion of South and South-East Asian students whose enrolments were facilitated by the then recently-initiated Colombo Plan, of which the Head of the Architecture School, Professor Brian Bannatyne Lewis, was an enthusiastic supporter.

Concurrently with his studies, Bhogal gained professional experience in the architectural sections of the Civil Aviation Department and the State Savings Bank of Victoria before joining the CSIRO, where he worked as a draftsman under the agency's staff architect, W R Ferguson (*CSIRO Ninth Annual Report* 1956-57:142). Completing his final examinations in November 1959, Bhogal received his Diploma of Architecture on 20 September 1960. During the intervening period, he married Phyllis Barbara Garrett (1932-2016), and applied to become a registered architect in Victoria. At the time that his registration was finalised on 30 March 1960, Bhogal was still employed with the CSIRO (then headquartered in Albert Street, East Melbourne), working under staff architect W R Ferguson, in a position now described as Experimental Officer (*CSIRO Thirteenth Annual Report* 1960-61:111). His residential address was cited as Tennyson Street, St Kilda. Later, he and his wife moved into a flat in a converted Victorian terrace house in nearby Wellington Street.

In August 1961, Ajit and Phyllis Bhogal acquired the title to a steeply-sloping block of land in Somers Street, Mitcham, which represented Lot 55 of a recent residential subdivision (COT 8292/621). Plans were prepared for a new house on the site and construction was completed in 1963, when electoral rolls memorialised the couple's change of address from St Kilda to Mitcham. However, they would no live there for long. In March 1964, Bhogal was contracted by the Commonwealth Department of Works for a stint in Papua New Guinea (*PNG Gazette* 23/03/1967:204). Retaining ownership of the house at Mitcham, the family transferred to Port Moresby, where Bhogal held his departmental position for some years, during which he was promoted from Architect (Grade 2) to Architect (Grade 3). In 1968, his role was described as "architectural adviser for all local government councils" formed by the recent Local Government Ordinance (*PNG Gazette* 29/08/1968:667). The following year, the Bhogals purchased a block of vacant land in Port Moresby (*PNG Gazette* 10/07/1969:515).

In any case, the family had returned to Melbourne, and to the house at Mitcham, by October 1970, when Bhogal obtained a building permit for erection of a detached double carport in a matching style, along with a concrete paved driveway, brick retaining walls and a flight of steps that provided access to the house further up the hill. By 1972, the Bhogals had moved to Highton, in Geelong, where he held teaching positions at Gordon Institute of Technology and later Deakin University. The couple sold the Mitcham house in 1978 and, four years later, relocated to Point Lonsdale, where Bhogal died suddenly on 7 June 1992.

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Physical Description

The house at 7 Somers Street, Mitcham, is a double-storey post-war modernist house on a stepped T-shaped plan, with a flat roof that has broad eaves, exposed beams and panelled fascias. Set well back from the street on a steeply sloping block, the house is starkly expressed as large rectilinear mass, with planar walls of orange brick that run north-south to define bays of full-height window walls to the street (and also to the rear), including a projecting off-centre stairwell bay. Window walls contain various permutations of full-height fixed sashes, groups of smaller operable sashes and glazed doors, creating a lively geometric effect. A timber-framed stair leads up to the front entrance, which is marked by a cantilevered canopy.

In front of the house is the detached garage, retaining walls, external staircase and driveway that were added in 1970, to a matching design by Bhogal, using similar orange brickwork. The double garage has a skillion roof of metal tray decking, a large double-width opening with single roller shutter, and full-height windows along the street frontage that alternate with brick piers. The retaining wall, which extends west of garage, at the same height, incorporates a returned staircase at the far end, providing access up to the house. The concrete paved driveway appears to be original, as it corresponds in form and finish to what is shown on Bhogal's 1970 drawings,

Comparative Analysis

As architect Ajit Bhogal spent much of his career employed in large government departments, without formally maintaining sole practice under his own name, there are few examples of his work with which his own house in Mitcham might be pertinently compared. Research to date has identified only two other houses that Bhogal designed in the early 1960s, both of which are known only from their publication in the weekly property column of the *Herald* newspaper. Neither of these, however, is located in what is now the City of Whitehorse. Bhogal's design for an elevated holiday house, still standing at 14 Pickworth Drive, Anglesea (1960), has qualities in common with his own house, namely the block-like expression, flat roof and multi-paned window walls, but is articulated very differently, with the upper level, clad in vertical timber boarding, raised on stilts and brick wing-walls to form a semi-enclosed undercroft below (*Herald* 02/12/1960:30). Bhogal's other early house, at 129 Bay Road Sandringham (1961) was a clinker brick dwelling of far more conventional design, with rectangular plan, low gabled roof and simple repetitive fenestration (*Herald* 10/03/1961:21). It has virtually nothing in common with the architect's own house.

As of 2024, the heritage overlay schedule does not include any architect-designed houses from the early 1960s. While a number of Post-war Modernist houses already have heritage overlays, either individually or as part of precinct, the majority date from the 1950s. There are only two examples from the 1960s, both dating from the latter half of the decade, located at 3 Village Mews, Vermont (Romberg & Boyd, 1965-66) (HO292) and 7 Norris Court, Blackburn (Frances Seidel, 1967-68) (HO287). However, neither has much in common with Bhogal's own house in Mitcham.

Two other architect-designed houses of the early 1960s have been recommended for individual heritage overlays as part of the present study, both of which, like 7 Somers Street, were houses that architects designed for themselves. One of these, located at 29 Naughton Grove, Blackburn (Klaus Veltjens, 1962-64), was similarly conceived for a sloping site but was expressed in an entirely different way, with stepping flat roofline and solid walls of pale blockwork and feature stone that alternating with full-height window bays. The overall effect is striking but is also quite different to 7 Somer Street, where the house has been conceived with utmost minimalism, using planar brick walls running north-south to define bays of expansive window walls for a sense of transparency rarely seen in houses of this, or any, period. The other architect's own house is 18 Gilmour Street, Burwood (Howard Hodgens, 1964), a simpler gable-roofed dwelling with modular fenestration. This more conventional expression, however, belies an innovative construction system that was developed by the architect himself, which is considered to be of technological significance.

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The house at 7 Somers Street is exceptional even in comparison to a number of other fine examples of architect-designed houses of similar date, such as yet another architect's own house at 43 Haig Street, Box Hill South (Murray Wilson, 1962), which has a comparable expression of flat roofline, full-height windows and blank masonry walls. However, the overall effect of this single-storey house on a flat suburban site is not nearly as dramatic as the more imposing double-storey house on the elevated parkside block at Mitcham. A few other architect-designed houses of comparable date incorporate similarly expansive full-height glazing, including those houses at 16 The Avenue, Blackburn (Murray Nankervis, 1960) and 4 Thornhill Drive, Forest Hill (Peter Robinson, 1962), but are still very different in comparison with 7 Somers Street.

Statement of Significance

What is significant?

The house at 7 Somers Street, Mitcham, is a double-storey brick house in the post-war modernist style, with extensive window walls across the street frontage, and a detached flat roofed garage, retaining walls and external staircase at the lower level. The house was erected in 1963 to a design by Ajit Bhogal, for his own residence.

The significant fabric is defined as the exterior of the entire 1963 house, as well as the detached garage, retaining walls and staircase added in 1970 to a matching design by Bhogal. Specific elements of significance include the flat roofline with broad eaves and exposed beams, stark brick walls and expansive window walls, including glazed stairwell, across the street frontage

How is it significant?

The house at 7 Somers Street, Mitcham, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics.

Why is it significant?

The building is aesthetically significant as an outstanding example of Post-War Modernist residential architecture of the early 1960s. While its minimalist expression, low roofline and large windows are all broadly characteristic of the style, this house represents a particularly grand and sophisticated manifestation. Its deceptively simple articulation, with blank brick walls running north-south to define expansive window walls across the entire street frontage, is distinctive and unusual, imparting transparency through the building. Set well back from the street on a sloping block, this large double-storey house has monumental qualities uncommon in post-war residential architecture, enhanced by the detached brick garage and retaining walls at the lower level, which were later additions designed in a matching style by the original architect. (*Criterion E*)

References

Ajit Singh Bhogal, application file, Architects' Registration Board of Victoria, Box 2, VPRS 8838/P1, Public Record Office Victoria.

Ajit Bogal, "Proposed carport and driveway to 7 Somers Street, Mitcham, for Mr & Mrs A Bhogal", working drawings, undated. Building Permit 17253/1970, issued 30 October 1970.

Hugh O'Neill, "Faculty Recollections", *Atrium*, No 14 (2010), p 17. <https://msd.unimelb.edu.au/data/assets/pdf_file/0011/2731880/Atrium-14.pdf>

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10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix A, graded B

Historical Images

Nil.

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IDENTIFIER **Other name/s**	KINGSWOOD COLLEGE (Junior School)	**Citation Number** **Melway reference**	038 60 C1
Address	355 Station Street (Piedmont Street side) BOX HILL SOUTH		
Date/s	1970-71		
Designer/s	Earle, Shaw & Partners (John Denton)		
Builder/s	Crow Industries Pty Ltd		
Heritage Group **Heritage Category**	Education School – private		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	8 BUILDING COMMUNITY LIFE 8.2 Education 8.2.2 Primary and secondary education				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☐ To title boundaries	☑ As indicated on diagram overleaf			

Place History

The building on the Piedmont Street frontage of Kingswood College, properly addressed as 355 Station Street, was built in 1970-71 as the new junior school, designed by Earle, Shaw & Partners.

Kingwood College traces its origin back to a private boys' school that began in 1890 from a house in Box Hill. In 1926, C F Walker became principal and held the post for four decades. After it was taken over by the Methodist Church in 1929, the school moved to *Gwynton Park*, a 20-acre property on the corner of Station and Piedmont Streets. Walker was keen to develop a masterplan but, after a classroom block was finished in 1930, plans ended with the Depression. In 1933, the school went co-educational in a bid to boost enrolments, but progress was delayed by financial issues, WW2 and a complex deal with Wesley College to acquire the property in exchange for debt relief. It was only after this deal collapsed in 1955 that site expansion could resume. The school was split into four sections (infant, junior, junior secondary and senior secondary), each to have their own zone. A classroom block, based on a standard Education Department model, was the first new building in 25 years. While further stages were planned, they did not eventuate as the college remained plagued by financial issues, declining enrolments and Walker's clashes with his own council.

Walker was due to retire in 1964, but departed earlier when, against his wishes, the council voted to revert to male-only pupils. His successor, Michael Norman (1934-2003) was a newly-ordained Methodist lay preacher with bold ideas on teaching. After he took over, the school was renamed Kingswood College and a masterplan commissioned from architects Earle, Shaw & Partners that proposed separate zones for each section, as well as a boarding school, chapel and houses for the principal and chaplain. The scheme was rejected as too costly, but the architects were retained to undertake new works as needed, starting with a principal's house and upgraded staff areas (1965). A fundraising scheme, launched in 1967, barely reached half of the targeted $100,000 but provided for an assembly hall that opened the next year, cheaply erected from a dismantled Methodist hall. By then, school enrolments had doubled since Norman took over. More classrooms were urgently needed but money was tight. A timely solution arrived when the Federal government introduced funding for public and private schools, providing grants initially for science blocks, then libraries. By late 1969, Kingswood College had added both buildings. For the first time, the school reported a substantial surplus in its budget, which paved the way for further site expansion.

The next step was a new junior school, to be built in the north-west corner of the site where the 1965 masterplan had proposed a boarding school. In the absence of Federal grants, the junior school was funded by securing $250 loans from each family. As noted in the school history:

> The building of the Junior School was a very significant development for Kingswood, both financially and educationally. It was built well away from the main block of classrooms, on the northwest corner of the property, and was designed around the open classroom concept.
>
> Its design was the result of extensive research. Norman and the head of the Junior School, Ian Hargrave, had been looking for an appropriate way of teaming teachers so that staff with complementary skills could operate together. They spent time looking at different approaches in South Australia and, after much discussion with staff involved, developed a plan in which teachers could work with students either co-operatively or individually. Hargrave did sketches of what he wanted and the architects … were delighted with the ideas. There were mobile room dividers, a conversation pit and withdrawal spaces as well as a gymnasium and a library. This beautiful new facility had a rugged, stimulating feel about it.

While the building was executed under the auspices of Earle, Shaw & Partners, principal Jim Earle acknowledged "that John Denton made a tremendous contribution to Kingswood College junior school, which was really breaking new ground at that time" (Interview, 2007). Denton himself has clarified that he was responsible for the design, documentation and supervision of the project (Interview, 2024). A member of Earle's office since he graduating in 1969, Denton had previously worked on a few projects, including the new school library at Kingswood College, before being appointed as the Job Captain for the new junior school in 1970.

Denton recalls planning the new building relied heavily on the programmatic input from school staff, particularly Ian Hargrave, and that its simple forms and materiality were strongly influenced by the limited budget (interview, 2024). Denton would use a similar palette of concrete blockwork and roof trusses for a house that he designed at Ringwood in 1969, which also completed in 1971. The next year, he left Earle's office and would later become co-founder of what expanded into the multi-award-winning international practice of Denton Corker Marshall.

Construction of the Junior School, by builders Crow Industries Pty Ltd (whose predecessor, A R P Crow & Sons, had completed the earlier school buildings), was completed a cost of $130,000. On 30 May 1971, it was officially opened by local author and former student Ivan Southall. As noted in the school history, "The junior school concept was a resounding success and the envy of many other schools at the time" (Millar: 97). It garnered broader attention including brief coverage in the national RAIA journal, *Architecture in Australia*, and a more detailed article in the *Age* that styled it as the "multi-dimensional junior school [that] proved to be everything the description claimed" (*Age* 31/05/1971:9). It elaborated as length:

> The gymnasium-hall, opening on to the courtyard of gumtrees and grass, makes an ideal setting for plays and concerts. Scope for drama, debating and acting is also provided in the "withdrawal room" with its sunken floor and mezzanine balcony. In a practically designed world of timber rafters, rugged stonework and heaps of light and colour, school has now become an exciting new experience.
>
> Aiming to provide a flexible environment in which boys at every level of ability may live and learn in "single streamed grades", the new school will be limited to an enrolment of 200. "We want to get away from the formal blackboard teaching approach", said the [junior school] headmaster, Mr Ian Hargrave. Classes, based on changing weekly timetable, will have a maximum of 30 boys. "Boys will move at their own rate – guided, but not teacher-dominated", said Mr Hargrave.

The last addition to the school facilities during Norman's tenure was a new tuck shop (1971), after which he resigned. Enthused by his experiences, he began full-time research into education and, in 1972, wrote two articles pleading for more consideration of teaching methods and teaching environments. In one, he proudly noted, "We were able, at Kingswood College, with nothing going for us, to build an entire junior school of radically contemporary design, with costs kept to departmental levels of expenditure but with gymnasium, library, walled gardens, for the same money" (*Age*, 07/04/1972:9). Norman went on to become principal of Woodleigh College at Frankston, and masterminded its new junior school campus at Baxter South (1973-4), developed to a similarly innovative architectural solution by Daryl Jackson Evan Walker.

After Norman's departure, Kingswood College went co-educational again, starting with the senior school in 1974, then all other years, gradually, over the next decade. The Junior School underwent few significant changes. In 1980, a semi-enclosed courtyard outside the staff room was infilled to create extra internal space. This work, by Buchan, Laird & Buchan, was done sympathetically by extending the skillion roof, relocating the existing window wall, and adding new blockwork. In 2005, a larger addition was made to the classroom wing at the east end. Set at a slight angle to the original school, and separated by a recessed link, it was also sympathetically designed in concrete blockwork, with a broad skillion roofline and windows to Piedmont Street with a horizontal louvred screen. A second pavilion-like addition was made to the rear in the 2010s.

Physical Description

The Junior School of Kingswood College, fronting Piedmont Street in the north-west corner of the school property, is a single-storey building of concrete block construction with a low skillion roofline incorporating clerestory windows. It is laid out on a courtyard plan, with an elongated central open space (identified on the original plans as "quadrangle-amphitheatre") surrounded by five separately-articulated blocks of stepped form, linked by covered walkways. The three blocks along Piedmont Street comprise a central administration block/library, flanked by two classroom blocks. To the rear, not visible from the street, are the gymnasium and kindergarten blocks.

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Current aerial photograph of NW corner of school site, showing proposed extent of heritage overlay across the Junior School, including curtilage to Piedmont Street boundary, but excluding post-2000 additions

Consequent to its compartmentalised plan, the building's frontage to Piedmont Street is elongated, stepped and asymmetrical, comprising expanses of plain concrete blockwork (now overpainted) alternating with full-height multi-paned window bays that contain various configurations of fixed and operable sashes, and glazed doors. The skillion roof, clad in corrugated metal sheeting, extends to define a series of verandahs supported on metal posts, and the clerestory windows of the two classroom blocks remain visible toward the rear. The later additions to the street frontage, namely the infilling of the principal's courtyard and the new wing at the east end, have been sensitively undertaken, in matching materials, and are not considered to be intrusive.

Comparative Analysis

As of 2024, post-war school buildings remain entirely unrepresented on the heritage overlay schedule, although progressive educational architecture has been a minor recurring theme since the early 1950s. At that time, it emerged notably in the first stage of the Mount Scopus College in Burwood East (Anatol Kagan & Ernest Fooks, 1950-53), laid out on an innovative stepped plan with window walls and open terraces. Although recommended for local heritage listing in 2014, this did not eventuate and the building was demolished the following year. Of later date, and more conventional form, were the first purpose-built elements of the Presbyterian Ladies' College at Burwood Highway, Burwood (J F D Scarborough, 1956), which comprised a series of elongated multi-storey blocks in various configurations, along with a large butterfly-roofed hall. While most of these early buildings still exist, they have largely been altered and engulfed by later additions.

The significance of the new Junior School at Kingswood College must be viewed in the context of the school's development between 1964 and 1971. Coinciding with the principalship of Michael Norman, this represented a significant turning point in its history, when it transformed from a struggling denominational school, plagued by wavering enrolments and recurring financial woes, into a thriving private college with an enviably progressive teaching programme and facilities.

Of the works completed during Norman's influential tenure, the Junior School was the largest and most significant. With the exception of the principal's residence (1965), demolished in the 2010s, all of the other Norman-era buildings remain extant. Earlier buildings, namely Brimacombe Hall (1968), the science block (1968-69) and library (1969), while all capably conceived by Earle, Shaw & Partners, were simpler and more conservative designs with broad gabled roofs and repetitive facades reflecting conventional planning within. The pavilion-like tuck shop (1971), laid out on a square plan with a pyramidal roof, forms a noted feature at the edge of the sports oval, but it still far from comparable to the ground-breaking design of the Junior School.

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The progressive layout of the Junior School, with central courtyard and zoned teaching areas, also contrasts with the college's own Senior School, built three years later (Daryl Jackson Evan Walker, 1973-74). While still innovative in its planning, the latter was programmatically very different to the Junior School. Geared for older pupils, it sought to provide a transition between secondary and tertiary education, with conventional classrooms combined with tutorial spaces, theatrette and multi-purpose room. The flexible/open-planned layout of the Junior School does not seem to have recurred in the City of Whitehorse until the later 1970s, in the design of a state government school, the new Livingstone Primary School at Livingstone Road, Vermont South (PWD, 1976-78), which has been assessed and recommended for a heritage overlay as part of the present study.

As an example of a very early building by architect John Denton, predating the founding of DCM in 1972, the Junior School has no counterparts in the City of Whitehorse, and very few elsewhere. As mentioned, the school has elements in common with the contemporaneous house that Denton designed for graphic designer Garry Emery at 50 Pine Crescent, Ringwood North (1969-71), which has an individual heritage overlay (City of Maroondah, HO119). Documentation from Earle's office confirms that Denton was responsible for the design, documentation and supervision of two other buildings while he was employed there: a pre-school centre at 56 Gabonia Avenue, Watsonia (1969-70) and the St Nektarios Greek Orthodox Church at 138-144 Major Road, Fawkner (1971-73). The latter has an individual heritage overlay (City of Merri-bek, HO405).

Statement of Significance

What is significant?

The Kingswood College Junior School, along the Piedmont Street frontage of the college's property at 355 Station Street, Box Hill South, is a single-storey skillion-roofed concrete block building on en elongated courtyard plan, originally comprising five discrete blocks around a landscaped court. Erected in 1970-71 as part of a series of new school buildings developed by Earle, Shaw & Partners, the junior school was designed, documented and supervised by staff member John Denton.

Significant fabric is defined as the exterior of the entire 1970-71 building. Specific elements of significance include the stepped planning around a central courtyard, concrete blockwork, irregular skillion roofline with clerestory windows and integrated verandahs, and the window walls. The small 1980 infill to the north (street) frontage, and the larger wings to the east and south sides of the building, dating from the 2000s, are not considered to be significant.

How is it significant?

The Kingswood College Junior School satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion H: Special association with the life or works of a person, or group of persons, of importance in our history.

Why is it significant?

The building is historically significant for associations with an innovative new approach to primary and pre-primary education pioneered by Kingswood College, using flexible teaching spaces (including withdrawal rooms, conversation pits and a central amphitheatre) to create new learning experiences and encourage non-traditional interactions between teachers and pupils. The building represented the highpoint of an ongoing programme of improvements to teaching and infrastructure under the progressive Michael Norman, who transformed the school during this tenure as principal from 1964 and 1971. (*Criterion A*)

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The building is architecturally significant as one of the first buildings designed by John Denton, who was then working for Earle, Shaw & Partners but would soon depart to become a co-founder of Denton Corker Marshall, one of Australia's most celebrated and award-winning architectural practices of the past five decades. One of three jobs in Earle's office for which Denton took a major role in design, documentation and supervision, it is one of very few projects that he completed as a young graduate prior to establishing DCM in 1972. (*Criterion H*)

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"Kingswood College, Box Hill, Victoria", *Architecture Australia*, February 1972, p 68.

Michael Norman, "School of disenchantment", *Age*, 6 April 1972, p 8.

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Dick Cotter, *Farmers, Ringmasters and Builders: A History of Kingswood College, Box Hill* (1985).

Frances Millar, *More than just a School: A Pictorial History of New College-Box Hill Grammar School-Kingswood College, 1890–1990* (1990).

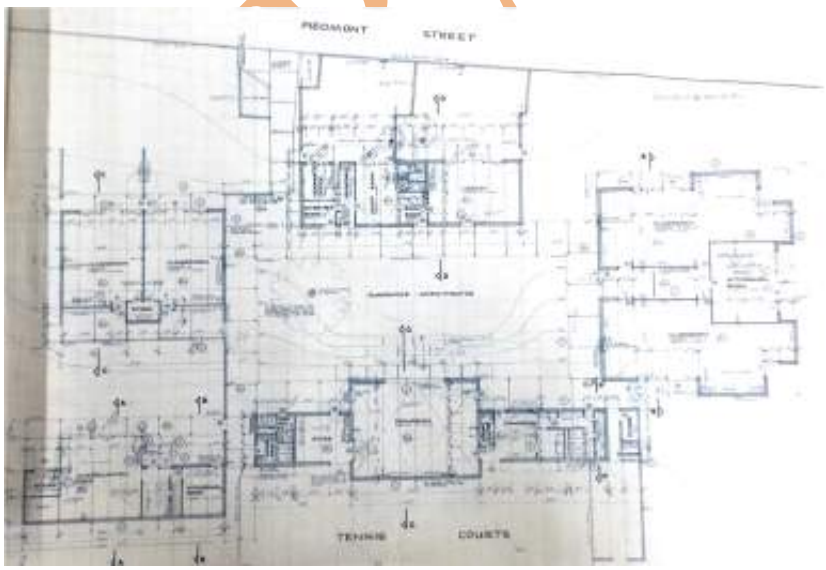
Earle & Partners, "Significant project list, 1953–2007", 14pp typescript. Courtesy Jim Earle.

Interviews with Jim Earle, 2007, and John Denton, May 2024.

Previous Heritage Studies

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix A, graded B

Historical Images



Working drawing for the Kingswood College Junior School, September 1970, showing distinctive planning
Source: PB 7412, VPRS 8044/P3, Public Record Office Victoria.

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

Interior photographs of the new Junior School, as published in the national RAIA journal.
Source: Architecture in Australia, February 1972.

View of Junior School looking across the Piedmont Street frontage, showing the library and office block
Source: Dick Cotter, Farmers, Ringmasters & Builders: A History of Kingswood College, Box Hill (1985)

View of Junior School looking across the Piedmont Street frontage, showing the western classroom block
Source: Frances Millar, More than just a School: A Pictorial History (1990)

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10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	039
Other name/s	Williams House (former)	**Melway reference**	47 A10
Address	7 Streeton Court MONT ALBERT		
Date/s	1964		
Designer/s	Geoffrey Woodfall		
Builder/s	G C Griffin & Associates		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The house at 7 Streeton Court, Mont Albert, was erected in 1964 for barrister Neil Williams and his wife Sara, to a design by architect Geoffrey Woodfall.

Neil James Williams (born 1934) studied at the University of Melbourne and his Bachelor of Laws, with Honours, was conferred on 2 April 1955 (*UM Calender* 1956:602). A week before graduating, he married Sara Avis Bradfield (1934-2022), who was commencing her final year at the Melbourne College of Nursing (*Age* 26/03/1955:7). For a time, the couple resided in Peel Street, Kew, before acquiring land in Streeton Court, a newly-formed cul-de-sac in Mont Albert. Created from a landlocked two-acre site, the subdivision offered "twelve choice home sites situated in quiet new court off Mont Albert Road; lots have wide frontage, suit executive home" (*Age* 06/06/1964:48). To design their new "executive home", the Williamses turned to architect Geoffrey Woodfall.

Geoffrey Rolf Woodfall (1929-2006) completed part-time architectural studies at Royal Melbourne Technical College in 1954, followed by full-time studies at the University of Melbourne. During and after his studies, he gained experience in the offices of Kevin Borland, Don Fulton, Peter Jorgenson and Mockridge Stahle & Mitchell. After brief stints at sole practice, interspersed by the short-lived partnerships of Walker & Woodfall (1956-57) and Woodfall & Reynolds (1959-62), he embraced a definitive full-time sole practice from 1962. Woodfall soon established a reputation as a designer of fine houses, of which several won awards and many more received press coverage. In its 1960s heyday, Woodfall's office embraced project housing (for CHI Pty Ltd), townhouses and a few small industrial projects but, from the early 1970s, his practice diversified, with an increasing number of multi-unit dwellings as well as motels, wineries, and retail, commercial and planning projects across Victoria and into South Australia, Tasmania and Queensland.

Woodfall's working drawings for the Williams' house in Mont Albert are dated October 1964, a month before the couple formally acquired the title to their land in Streeton Court, designated as Lot 5. Located towards the south-east end of the cul-de-sac, it was a tight wedge-shaped block. Responding to a context that allowed no opportunity for external views, Woodfall conceived the three-bedroomed house on a T-shaped plan with the principal rooms oriented toward enclosed courtyards. The living room, dining room and utility room all opened to a pergola-covered rear terrace, while the master open, facing Streeton Court, opened to a walled courtyard, effectively giving the house a black façade to the street. Construction, undertaken by builders G C Griffin & Associates, was completed in early 1966.

In July, the house received a two-page spread in *Architecture & Arts* magazine, lauded as "a solution to a small flat irregular site with no view", adding that "The plan is so arranged that all main rooms face on to semi-enclosed courtyards which have been fenced and planted to create interesting spaces and privacy from the street and adjacent buildings" (*A&A* 07/1966:11). Later that year, this praise was echoed in the *Herald* newspaper, which described it as "an interesting example of what can be achieved by good planning and design" (*Herald* 30/12/1966:16). The house was commended for way in which it responded to its restricted and unremarkable suburban site by "creating interesting spaces within the site and screening unattractive views with high perimeter fences". The article drew attention to other unusual features of the house, such as the built-in furniture and storage units, skylights in bathrooms, and a hydronic heating system that represented "an adaptation of those commonly used in Europe", utilising an oil-fired boiler to heat water for domestic use as well as circulating through it pipes concealed in the ceiling to provide central heating. During 1966, the house received a further plaudit when it selected by the editors of *Architecture & Arts* for its annual awards, designated as "one of the ten best houses" that year.

In 1966, the Williamses acquired part of the land of the adjacent property to the east, fronting 383 Elgar Road, which allowed them to expand their own back yard. The family remained living there into the 1970s. The next owners appear to have dismantled the brick wall that defined the enclosed courtyard facing the street, exposing the double doors of the master bedroom.

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Physical Description

The house at 7 Streeton Court, Mont Albert, is a single-storey flat-roofed Post-War Modernist house of beige-coloured concrete brick, starkly expressed as a series of masses, voids and planes. The asymmetrical street elevation is effectively triple-fronted, comprising a projecting bay to the south (right) side, with a recessed off-centre entry bay (marked by a projecting fin-like wall), and then a wider expanse of entirely blank wall, set further back. The latter two-thirds of the façade are enveloped by a prominent horizontal mass of a continuous flat roof with overscaled fascia, which defines a double carport as well as a covered porch to the entrance. At the far (left) end, the carport roof is supported by a massive pier-like element, which conceals a storage unit.

The front entrance comprises a wide central front door, flanked by large full-height sidelight windows of equal width. The projecting bay, to the right of the entrance, has a recessed window bay with a pair of glazed doors, and a projecting canopy roof with broad panelled fascia.

Comparative Analysis

During the 1960s, Geoffrey Woodfall rapidly established himself as a highly regarded, frequently published and award-winning Melbourne architect, principally known for fine residential work. Although he designed several houses in what is now the City of Whitehorse, none of these has yet been included on the heritage overlay schedule.

Documentation from Woodfall's archive confirms a closed set of four houses that he designed in the municipality, all of which remain standing. Aside from the Williams House in Streeton Court, there are two houses in Blackburn that both also date from 1964, and share a similarly mass-like expression of beige-coloured concrete blockwork. The house at 43 Holland Road is dominated by a broad asymmetrical gabled roof that envelopes a double carport to one side, with a mostly blank wall to the other, incorporating a recessed window bay (*Herald* 29/05/1964:25). The house at 32 The Ridge is more akin to the William House, with blockwork articulated as chunky pier-like elements, defining a row of vertical window bays, with a stepped flat roofline forming a dominant horizontal element (*Herald* 04/11/1964:27). The other local example of Woodfall's work is a later house at 103 Boronia Road, Vermont (1966), which was an adaptation of a standard display house that Woodfall had designed for CHI Pty Ltd, a project housing company. It has a more overtly homestead-like character, with broad gabled roof and enveloping timber-posted verandah.

While the three earlier house that Woodfall designed in the City of Whitehorse are all excellent and intact example of his residential work of the period, and all three generated a degree of press attention (all appearing in the weekly property column of the *Herald* newspaper), the Williams House must be considered the superior example, as it garnered broader press attention through coverage in *Architecture & Arts* and, more notably, won an architectural award from that magazine in 1966. This was the second time that one of Woodfall's houses had been chosen by *Architecture & Arts* as "one of ten best houses", having previously won this accolade in 1963 for the Heine House at 16-18 Maton Road, Mount Eliza (1961).

Statement of Significance

What is significant?

The house at 7 Streeton Court, Mont Albert, is a single-storey flat-roofed concrete brick house. It was erected in 1964-66 for Neil & Sara Williams, to a design by architect Geoffrey Woodfall.

The significant fabric is defined as the exterior of the entire 1964-66 house. Specific elements of significance include the stark expression of beige-coloured concrete blockwork, the parapeted flat roof, the floating garage roof with broad fascia, and the recessed front windows with cantilevered canopy.

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How is it significant?

The 7 Streeton Court, Mont Albert, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics.

Why is it significant?

The building is aesthetically significant as an exceptional example of modernist residential architecture of the 1960s. Minimalist and organic in style, the house uses plain masonry blockwork to create a series of stark planes and massive pier-like elements that project and recede to define window openings, entry porch and a double carport, drawn together by the contrasting horizontal element of a massive floating roof with wide fascia. The distinctive aesthetic qualities of the house were acknowledged at the time, via publication in newspapers and magazines and, most notably, by its receipt of an architectural award in 1966. (*Criterion E*)

References

Certificate of Title, Volume 4452, Folio (11 May 1921); Volume 8499, Folio 277 (27 August 1964)

Geoffrey Woodfall, "House ta Lot 5, Streeton Court, Mont Albert, for Mr N Williams", working drawings, October 1964. City of Whitehorse.

"House at Mont Albert, Victoria", *Architecture & Arts*, July 1966, pp 10-11.

"No closed-in feeling here", *Herald*, 30 December 1966, p 16.

Previous Heritage Studies

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix A, graded B

Historical Images

Architect's watercoloured perspective drawing of the Williams House, dated October 1964.
Source: Geoffrey Woodfall Collection, RMIT Design Archives (Accession No 0017.2015.0038)

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Early exterior photograph of Williams House, showing walled courtyard to right side of double carport.
Source: Architecture & Arts, July 1966 (photographer uncredited)

Early exterior colour photograph of Williams House,
Source: Picture Collection, State Library of Victoria (photograph by Peter Wille)

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

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10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	040
Other name/s	Bebarfald House (former)	**Melway reference**	47 A11
Address	9 Streeton Court MONT ALBERT		
Date/s	1965-66		
Designer/s	Kevin Borland & Associates		
Builder/s	A H Coleman		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and architect-designed houses					
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor	
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls					
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf					

Place History

The house at 9 Streeton Court, Mont Albert, was erected in 1966-66 for Philip and Susan Bebarfald, to a design by architect Kevin Borland.

Phillip Sidney Bebarfald (1934-2010) hailed from a famous NSW family that, over four generations, ran Bebarfald's, a thriving furniture retail empire. In the 1900s, his grandfather, Meyer Bebarfald (1862-1930), retired from the family firm and moved to Melbourne, where Phillip's father, Norman (1905-1964), became a wool clerk and lived in St Kilda East. Phillip, who worked as a draftsman, got engaged in 1955 to Susan Eve Pincus, a kindergarten teacher from Burwood, and they married in August 1956 (*Age* 29/08/1956:8). For a time, they lived in Mount Waverley before buying land in Streeton Court, a new cul-de-sac in Mont Albert. Created from a landlocked two-acre site, the estate offered "twelve choice home sites situated in quiet new court off Mont Albert Road; lots have wide frontage, suit executive home" (*Age* 06/06/1964:48). To design an "executive home" for their family of two sons and a daughter, the Bebarfalds turned to architect Kevin Borland.

Kevin Borland (1926-2000) began his architectural studies at the University of Melbourne in 1944, although, due to interruption by wartime naval service, he did not graduate until 1951. During his studies, he gained experience working with exhibition designer Lester Bunbury as well as a brief stint with Harry Seidler in Sydney and then, after graduation, worked for Mockridge, Stahle & Mitchell and in the Age Small Homes Service. Commencing sole practice in1952, Borland focused on small residential work but duly achieved greater fame when, entering the high-profile design competition for Melbourne's new Olympic swimming pool with university friends Peter McIntyre and John and Phyllis Murphy, won first prize. In 1957, after the pool project was finished, Borland went into partnership as Borland & Trewenack, which became Borland, Trewenack & Brooks in 1961, then resumed to Borland & Trewenack by 1964. These partnership years embraced a broader range of projects that included houses, pre-schools and recurring work at the progressive Preshil School in Kew. During the 1960s, Borland moved away from the strict modernist style of his earlier work towards a regionalist mode, adopting natural materials and bolder geometry, which was to strongly characterise his output after resuming sole practice in late 1965.

Working drawings for the Bebarfalds' new house in Mont Albert are dated September 1965. While the accompanying engineer's drawings identify the architects as Borland & Trewenack, the title block of the architectural drawings has the firm's name scratched off, suggesting that the project was commissioned before Borland re-established sole practice, but was developed and completed under his own name. Responding to the oddly wedge-shaped site, Borland overlaid a four-foot (1.2 metre) modular grid to create a house on an irregularly stepped plan with a partial second storey. Its idiosyncratic open-planned layout incorporated expansive living space with living room, dining room, playroom and a study/bedroom merging into each other, a master bedroom suite at ground level and three more bedrooms upstairs, opening off a second playroom. The open planning was extruded into three dimensions, with voids to that provided visual and aural connection between the two levels.

Construction adopted a highly innovative all-timber structural system. Instead of traditional stud framing, eight-foot (2.3 metre) posts were placed at four-foot (1.2 metre) centres as defined by the modular grid, supporting internal beams with rows of horizontal girts to which external cladding could be fixed. At the upper level, the floor and roof structure was supported by a room-height timber Vierendeel truss (ie, without any diagonal members), which achieved structural stability through the use of plywood panels. These panels were left exposed as wall panelling, while a row of spaced horizontal stiffeners was expressed as a balustrade to the void. The roof of the double carport was supported on timber I-beams, fabricated on site by the builder, A H Coleman. Ceilings were lined with strawboard panels, interior walls with saw-textured radiata pine boards, finished in a diluted stain to reveal the grain of the timber, and exterior walls in saw-textured hardwood boards, this time with a dark brown stained finish.

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The extensive use of timber, for both structural and non-structural elements, saw the house subject to a two-page illustrated spread in the trade journal *Wood World* (08/1968:20-21). This praised the project on several levels, noting that the innovative construction not only reduced labour costs in frame fabrication but also resulted in a 20% saving on materials. It was stated that use of heavy slower-drying timber had "almost eliminated" any movement in the structure, and that lining and cladding materials were "expected to remain in good condition with virtually no maintenance". The house, summarised as a "32 square functional living unit which combines convenience and comfort" was praised for its unusual open layout, "for easy communication", drawing especial attention to the voids linking the upper and lower levels:

> Upstairs design provides for a variation on the concept that young children should be "seen and not heard". Through extensive use of open timber work the younger members of the family, who have retired upstairs at the appropriate time, are not seen but can hear, retaining a comfortable contact with the rest of the family.

The house remained occupied by the Bebarfalds until 2000. During their long tenure, few external changes were made, aside from a louvred screen to the first-floor windows (*Age* 13/05/2000:144). The exterior of the house, originally stained in dark down, has since been overpainted.

Physical Description

The house at 9 Streeton Court, Mont Albert, is a timber-framed flat-roofed Post-War Modernist house. Occupying an irregular wedge-shaped site, the house has been laid out on a strict modular grid of four feet (1.2 metres) that creates an irregular stepping plan, extruded into a cluster of interlocking volumes that include a partial second storey. Along the south-west side of the house, which abuts the site boundary, the plan zigzags in accordance with the modular grid to create a serrated profile, which is then echoed in the elevation treatment.

The flat roof is clad in metal tray-decking, and its horizontality emphasised by wide timber fascias at both levels, with the protruding roof beams partially visible below. External walls are clad with vertical timber boarding that, originally stained in dark brown, is now painted in a pale neutral tone. Fenestration, which also follows the modular grid, includes repetitive full-height window bays to the north and east elevations, with awning sashes above fixed ones, and some smaller windows to the south and west. One row of three north-facing windows at the first floor level has a projecting bracketed sunscreen, which is not original. Along the north and east sides of the house, the flat roof extends to form a verandah on plain timber posts. In the north-west corner, the verandah merges with a flat-roofed double carport. This is enclosed along the far side by clinker brick wall, enlivened by a row of pilasters with projecting headers.

Comparative Analysis

Kevin Borland is widely acknowledged as a significant and influential practitioner in Melbourne's post-war architectural scene, undertaking consistently important work from his earliest sole of the early 1950s, his partnerships in the later 1950s and early '60s, through to his highly-regarded sole practice from the mid-1960s until his death in 2000. Borland's work has won numerous awards and garnered considerable press coverage, with no fewer than five of his buildings on the *Victorian Heritage Register* (including two buildings in partnership with others) and many others on local heritage overlay schedules. Although he designed several houses in what is now the City of Whitehorse, none of these has yet been included on the heritage overlay schedule.

Research to date has identified five buildings that Borland designed in the municipality, all of which are single private dwellings, spanning a relatively short period from the early 1950s to the mid-1960s. The earliest local example of his work was the Hannah House at 655 Springvale Road, Burwood East (1952-3). A small flat-roofed dwelling on a pinwheel plan, it was designed in the minimalist International Style, influenced by Borland's brief employer Harry Seidler, that strongly characterised the young architect's work at that time.

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Borland's subsequent period in partnership with Geoffrey Trewanack was represented by three houses of the later 1950s: the Scott House at 4 Sewell Street, Box Hill North (1958), the McCarthy House at 335 Canterbury Road, Forest Hill (1958-59) and the McKenzie House at 11 Penlynne Street, Vermont (1959). The Scott House and McCarthy House were both of similar form, simply articulated in brick construction with flat roofs, exposed beams and full height windows. The McCarthy House was extended at the rear in 1970, to a design by Geoff Trewenack. The McKenzie House was a more striking design: a partly elevated dwelling on a rotated square plan, with open-planned layout, expressed structure and irregular hipped roofline with dormer-like clerestories.

All four of these earlier Borland houses in the City of Whitehorse, however, have been demolished. The Hannah House in Burwood East disappeared in the 1980s, the celebrated McKenzie House in Vermont in the 1990s, and the Scott House and the McCarthy House in the early 2000s. The Bebarfald House in Mont Albert is thus the only remaining example of Borland's work in the City of Whitehorse. Even prior to the loss of the four earlier houses, the Bebarfald House stood out as the only local project from Borland's highly-regarded period in sole practice after 1965, when his work became increasingly characterised by a highly individualistic regionalist approach, utilising unusual geometrical themes, expressed structure and natural finishes.

As of 2024, the heritage overlay includes only two architect-designed houses from the 1960s, both of which date from the middle of the decade and can thus be considered as broad comparators to the Bebarfald House. The Noble House at 3 Village Mews, Vermont (Romberg & Boyd, 1965-66) (HO292) and the Kristiansen House at 7 Norris Court, Blackburn (Frances Seidel, 1967-68) (HO287) are both of brick construction, with stark pale-coloured walls, which contrasts markedly from the conspicuous timber aesthetic of the Bebarfald House. In their massing, planning and rooflines, the two houses are not only very different from the Bebarfald House, but also from each other.

Statement of Significance

What is significant?

The house at 9 Streeton Court, Mont Albert, is a partially double-storey flat-roofed timber-frame house in the Post-War Modernist style. Built in 1965-66 for Phillip and Susan Bebarfald, it was designed by architects Kevin Borland & Associates.

Significant fabric is defined as the exterior of the entire 1965-66 house. Specific elements of significance include the stepping plan form generated by a modular grid, the innovative timber structural system, flat roofline, vertical timber boarding, full-height windows, timber-posted verandah and the clinker brick feature wall to the carport.

How is it significant?

The house at 9 Streeton Court, Mont Albert, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics.
- Criterion F: Importance in demonstrating a high degree of creative or technical achievement at a particular period

Why is it significant?

The building is aesthetically significant as an outstanding example of residential architecture of the later 1960s and, specifically, of the individualistic regionalist style developed by architect Kevin Borland. The stepped plan form (generated by a modular grid), articulated structure and rough expression of natural materials such as saw-textured timber and clinker brickwork are all demonstrative of this highly personal approach that Borland developed from the early 1960s, which continued to define his best work into the 1970s and beyond. (*Criterion E*)

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The building is architecturally and technologically significant for its innovative structural system based entirely on the use of timber members. In lieu of conventional stud framing, the house adopted a trabeated system using vertical timber posts (placed according to the modular grid) with connecting beams and girts, with the carport roof supported on timber I-beams fabricated on site and the entire upper level of the was effectively a room-height Vierendeel truss made rigid by plywood webbing and horizontal stiffeners. Collectively, this represented a bold and inventive structural solution that would have been rarely seen in suburban residential construction. (*Criterion F*)

References

Certificate of Title, Volume 8499, Folio 278 (27 August 1964).

[Kevin Borland & Associates], "Proposed residence at Streeton Grove [*sic*], Surrey Hills, for Mr & Mrs P S Bebarfald", working drawings, 16 September 1965. City of Whitehorse.

"A house that is really a home!", *Wood World*, August 1968, pp 20-21.

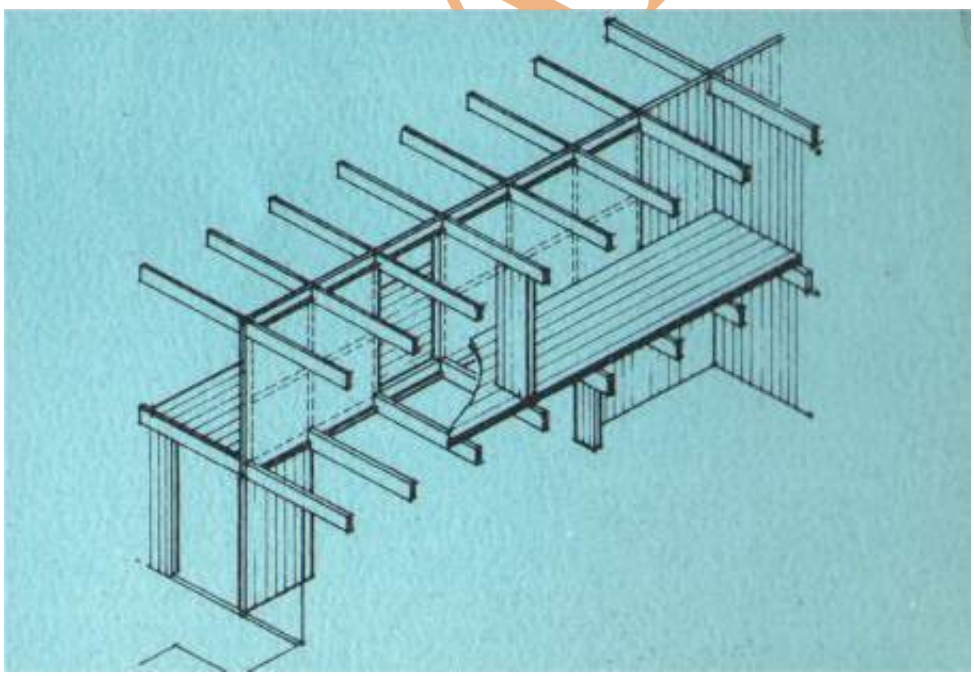
Douglas Evans, *Kevin Borland: Architecture from the Heart* (2006).

Douglas Evans, "Kevin Borland", in Philip Goad & Julie Willis (eds), *The Encyclopedia of Australian Architecture* (2012), pp 98-99.

Previous Heritage Studies

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix A, graded B

Historical Images



Isometric representation of Kevin Borland's innovative trabeated timber construction system
Source: Wood World August 1968.

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Early photograph of the house showing full-height windows and timber-posted verandah on north side.
Source: Wood World August 1968 (photographer uncredited)

Early colour photograph of the house; note clinker brick carport wall and serrated façade (right)
Source; Picture Collection, State Library of Victoria (photograph by Peter Wille)

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

IDENTIFIER	HOUSE	**Citation Number**	041
Other name/s	Creelman House (former)	**Melway reference**	47 A8
Address	87 Victoria Crescent MONT ALBERT		
Date/s	1941-42		
Designer/s	Unknown		
Builder/s	Unknown		
Heritage Group	Residential buildings (private)		
Heritage Category	House		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.4 Early twentieth century development				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The house at 87 Victoria Crescent, Mont Albert, was erected in 1941 for leather manufacturer Keith Creelman and his wife Daphne.

Keith Creelman (1898-1959) and his younger brother Hubert (1900-1985) were the co-founders of Creelman Brother, a firm that manufactured fancy leather goods, such as wallets and handbags, from a factory in Exhibition Street. In early 1930, the thriving venture was registered as a limited liability company, Creelman Brothers Pty Ltd (*Sun* 29/01/1930:24). Around 1933, the business relocated to a two-storey brick factory at 12 Hoddle Street, Abbotsford, where it would remain for almost two decades.

In 1922, Keith Creelman married Daphne May Croft and the couple lived in Oakleigh before moving to Shirley Grove, St Kilda East, in the late 1930s. Planning to build a house for themselves, Creelman found a vacant block of land in Mont Albert. The site, on the northeast corner of Victoria Crescent and Malvern Road, formed part of the expansive grounds of a large inter-war bungalow that had been occupied for many years by venerable Melbourne newspaper editor Reginald W E Wilmot (1870-1949). During 1941, Wilmot's estate, which spanned the entire block between Victoria Crescent and Harriet Crescent, was subdivided into five smaller allotments (LP 15926, 21/10/1941). The existing house was retained a large corner block, designated as Lot 1, and was re-addressed as 6 Malvern Road. Three smaller narrow-fronted blocks became 2 Harriet Crescent, 2 Malvern Road and 89 Victoria Crescent, while the wider corner block, Lot 3, took over what had been the street address of the Wilmots' original house, as 87 Victoria Crescent.

On 2 December 1941, ownership of Lot 3 was transferred to Keith Creelman, described on the title as a manufacturer of Shirley Grove, East St Kilda. Municipal rate records confirm that he wasted no time in erecting a new house on the site. The rate card indicate a substantial increase in the property's Net Annual Value (NAV), rising from £20 in October 1941, to £110 in June 1942, and then to £130 by October 1942, remaining consistent thereafter. Construction is thus likely to have spanned the period 1941-42. Neither the architect nor the builder has yet been identified.

Keith and Daphne Creelman lived in their new house for only a brief period, their residence being recorded in the electoral roll for 1943. In August of that year, ownership of the house passed to fellow manufacturer Cyril Edward "Ted" White (1903-1947), proprietor of the foodstuff company known as Ted's Products Pty Ltd. White's relocation to the new address was evidently prompted by his marriage, during 1943, to Phyllis Mary Browne. White's early death in 1947 prematurely ended the couple's period of residence together, although his widow Phyllis would continue to occupy the house for another four decades.

In the late 1990s, the house was refurbished and enlarged to a scheme by local building designer Heather Nankervis. This involve partial demolition of rooms to the rear of the house and addition of new kitchen, laundry, family room and meals area at the lower level, plus new bathrooms and a fourth bedroom upstairs. The project also included a new double garage to the east of the house, fronting Victoria Crescent. All of this work was executed in a sympathetic manner, with tile-clad hipped roofs and bagged-and-painted brickwork to match that of the existing house

Physical Description

The house at 87 Victoria Crescent, Mont Albert, is a large double-storeyed house in the Inter-war Streamlined Moderne style, with walls of bagged and painted brickwork and a low hipped roof clad in terracotta tiles. The house has an asymmetrical frontage to the street, dominated by a wide concrete slab balcony at the upper level that merges at the left (west) end into a projecting curved bay with a parapetted flat roof. This bay has full-height windows bays with multi-paned metal-framed sashes that are faceted to follow the curve. The balcony is accessed by a single door, with a narrow vertical multi-paned corner window at the opposite (east) end, and has a metal railing in a simple geometric design.

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The balcony's slab floor forms a verandah at the lower level, supported on metal pipe columns with matching geometric screen inserts. There is a slightly off-centre front door, flanked by multi-paned sidelight windows, with a vertical strip window of glass bricks to the right. To the left side of the front door is another curving bay, aligning with (but wider than) the one at the upper level. It has a row of windows that follow the curve, with multi-paned metal-framed casement sashes. There are additional rectangular windows to the east and west sides of the house, with matching multi-paned metal-framed casement sashes.

The single-storey double garage, added to the east side of the house in the late 1990s, was designed in a matching style with hipped terracotta-tiled roof and bagged and painted brickwork,

Comparative Analysis

The distinctive inter-war style commonly referred to as Art Deco or Streamlined Moderne, widely popular in many parts of Melbourne from the mid-1930s to the early 1940s, does not appear to be well represented in the City of Whitehorse, particularly in regard to individual private dwellings. As of 2024, the heritage overlay schedule includes a small number of non-residential buildings that are considered to be demonstrative of the Streamlined Moderne mode, most of which are located along the south side of Whitehorse Road in Box Hill. These include a two-storey block of shops and offices at Nos 920-928 (1940) (part HO244), the former Colonial Gas Association building at No 942-966 (R M & M H King, 1936) (HO91), and the former MMFB fire station at Nos 1050 -1054 (Stuart Calder and Harry Winbush, 1935) (HO229). All three of these buildings are characterised by the use of stark cream brickwork with stringcourses to give a strong horizontal emphasis; the two earlier examples also incorporate the trademark curving corner of the Streamlined Moderne.

Individual houses in the Streamlined Moderne style tend to be less common, and there is currently only one example on the heritage overlay schedule: a two-storey brick house at 1 Laurencia Court, Mont Albert (W H Langdon & Sons, 1946-49). Like the non-residential examples cited above, the house is of cream brick construction with rows of contrasting stringcourses, but its most dominant Streamlined Moderne characteristic is the expression of the asymmetrical triple-fronted façade as a series of curving bays, rising into parapet walls that conceal the roofs.

While houses in the Streamlined Moderne style are relatively uncommon across the City of Whitehorse, the area of highest concentration seems to be the eastern fringes of the municipality, particularly around Mont Albert, where residential development remained strong during the 1930s and '40s, when the style was at its most popular. Larger two-storey examples, comparable to those at 1 Laurencia Court and 87 Victoria Crescent, still remain rare. Research has identified a particularly pertinent comparator at 27 High Street, Mont Albert (Stapley & Hall, 1935), a similarly grand double-storey Moderne house, starkly expressed in rendered brick with a hipped tile-clad roof, curved bays, sun terrace and balconies with simple metal railings. However, this fine house, which had a great deal in common with 87 Victoria Crescent, was demolished in the late 1990s. Its appearance is only known from a sketch and floorplan published in the Architecture & Property column of the *Argus* newspaper at the time of construction (*Argus* 03/10/1935:4).

The Streamlined Moderne can also be discerned in a number of smaller and simpler houses of later date, which provide evidence of the style's lingering popularity into the 1950s. One striking example, albeit demolished in the 2010s, stood at 11 Evelina Street, Mont Albert (c.1953). A fairly conventional double-fronted dwelling of orange brick construction with a hipped tile-clad room, it incorporated a pair of projecting flat-roofed rounded bays, with faceted windows, to the north and east facades. A smaller cream brick house, still standing at 9 Boondara Road, Mont Albert (c.1952), has a simple asymmetrical façade with a curving bay to one side and a parapet that conceals the low hipped roofline. A similar brick house, this time with a bagged and painted finish, survives at 2 Calcutta Street, Mitcham (c.1951). A later hip-roofed cream brick house at 10 Molleton Street, Blackburn (c.1956), with projecting glass-walled curving bay to the street facade, demonstrates the pervasive influence of the Streamlined Moderne beyond the second half of the decade.

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Statement of Significance

What is significant?

The house at 87 Victoria Crescent, Mont Albert, is a two-storey hip-roofed bagged-and-painted brick house in the inter-war Streamlined Moderne style. It was built in 1941-42 for manufacturer Keith Creelman.

Significant fabric is defined as the exterior of the entire 1941-42 house. Specific elements of significance include the bagged and painted brickwork, the curving bays at both levels, banded parapet, the faceted first floor window bay, corner window and sidelight window, steel-framed sashes, concrete slab balcony, and metal railings and supports. The additions made in the late 1990s, including the double garage, are not significant.

How is it significant?

The house at 87 Victoria Crescent, Mont Albert, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics.

Why is it significant?

The house is aesthetically significant as a large, prominently-sited and substantially intact example of a house in the inter-war Streamlined Moderne style. It demonstrates the defining characteristics of that style through its stark wall surface, projecting rounded bays with faceted windows and steel-framed sashes, corner window, long concrete slab balcony with simple metal railings. It is one of few grander two-storey Streamlined Modern houses recorded in the municipality, and, dating from 1941-42, one of even fewer from the style's original heyday of the 1930s and early '40s, as opposed to the lingering manifestations from the early post-war period. (*Criterion E*)

References

Lodged Plan No 15926 (21 October 1941).

Certificate of Title, Volume 6524, Folio 756 (2 December 1941).

City of Box Hill Rate Cards (West Ward), VPRS 9553/P1, PROV.

Information from Robin Grow, president emeritus, Art Deco & Modernism Society

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001).

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Select comparator

House in the Streamlined Moderne style at 27 High Street, Mont Albert (1935; demolished 1990s)
Source: Argus, 3 October 1935, p 4.

Historical Images

Excerpt from 1945 aerial photograph (and enlarged detail, right), showing the house at 87 Victoria Crescent (not also the pre-war house to the north, from which property the site of the 1941-42 house was subdivided..
Source: City of Whitehorse Maps. <https://map.whitehorse.vic.gov.au/index.html>

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IDENTIFIER **Other name/s**	BIRRALEE PRE-SCHOOL CENTRE	**Citation Number** **Melway reference**	042 62 E8
Address	21 Weeden Drive VERMONT SOUTH		
Date/s	1973-74		
Designer/s	Pels Innes Neilson Kosloff		
Builder/s	Unknown		
Heritage Group **Heritage Category**	Community facilities Childcare facility		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	8 BUILDING COMMUNITY LIFE 8.2 Education 8.2.1 Pre-school education				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The Birralee Pre-School Centre at 21 Weeden Drive, Vermont South, was erected in 1973 to a design by the architectural firm of Pels Innes Neilson Kosloff.

At the time that the pre-school centre was mooted, Vermont South had only recently begun to develop as a residential area after being characterised for many decades by farming, particularly orchards. In 1970, an amendment to the Melbourne Metropolitan Planning Scheme saw the area (hitherto considered as part of Burwood East) rezoned for residential use. An aerial photograph that year shows the first inkling of subdivision, with a network of small streets and cul-de sacs flanking Burwood Highway, east of Springvale Road, but still very few houses. Weeden Drive was then only partially realised, comprising two short fragments of sealed road linked by a dirt track that ran past the future kindergarten site.

By 1972, Vermont South still lacked educational, retail and community facilities. During that year, construction commenced on what was initially known as the Burwood East Special School (later Vermont South Special School) on Livingstone Road, but the nearest state school was Parkmore Primary School in Jolimont Road, Forest Hill, a kilometre to the north. The nearest kindergarten Parkmore Pre-School, was also located in that street, with two others in Burwood East and one in Vermont, all dating from the later 1960s. The project for a new kindergarten in Weeden Drive was initiated by the Birralee Pre- School Association, whose president was John Bernard Edwards, a clerk then living in Winston Street, Glen Waverley. To design the building, the association engaged the architectural practice of Pels Innes Neilson Kosloff, a newly-formed partnership between four men who had been colleagues in the city firm of Bogle, Banfield & Associates.

During the 1950s, Dutch-born architect Harmon "Harry" Pels (1928-2021) worked for Stephenson & Turner, where he met David Brunton and, after Brunton left in 1958 to join Bogle & Banfield, Pels followed suit. At that time, co-founder Alan Bogle (1902-1976) was semi-retired while the entrepreneurial Gordon Banfield (1922-2007) ran the practice as a businessman, leaving the design input to talented younger staff such as David Brunton and Bernard Joyce. In 1963, the firm was reconfigured as a company, Bogle & Banfield Pty Ltd, with Pels and colleague Graeme Neilson appointed as directors. In 1972, dissatisfied by Banfield's increasing focus on speculative property development, Pels and Neilson resigned and, along with ex-colleagues Michael Innes (1942-2022) and Kirill Kosloff (d.2003), formed the new partnership of Pels Innes Neilson Kosloff, or PINK. During its early years, the firm focused on small-scaled residential work but, during the 1990s, became well-known for larger institutional projects, including new buildings at several university campuses, and the ongoing redevelopment of the State Library of Victoria.

It is unclear how the Birralee Pre-School Association came to engage Pels Innes Neilson Kosloff, although three of the partners then lived in the eastern suburbs: Kosloff in Canterbury, Innes in Deepdene and Neilson in Blackburn. All of the firm's surviving correspondence for the project is signed by Neilson, confirming him as partner-in-charge. Working drawings, dated February 1973, proposed a building on a centralized plan, with a top-lit square playroom and the subsidiary spaces (office, kitchen, cloakroom, warm room and entry foyer) clustered around the perimeter.

Plans were approved by the Department of Health in May 1973 and construction was evidently in progress by August, when correspondence circulated regarded the septic system. In February 1974, a playground layout scheme was prepared by engineers Eldon C Smith & Associates, which proposed lawn areas and native garden to the street side and expanses of lawn and tan bark to the rear, with a swing set, trestles, a bridge between two towers, and a circular sand pit. A detached equipment store, in alignment with the axis of the main building, was also shown. In March, the architects submitted their interior paint schedule, which proposed predominantly white colour scheme with door and window frames in charcoal, and doors in bright red.

In 1976, the equipment store was relocated off-axis, to the north-east corner of the site.

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Physical Description

The Birralee Pre-School Centre at 21 Weeden Drive, Vermont South, is a timber-framed building on a distinctive centralized plan that is perhaps most accurately described as a Greek cross overlaid onto a rotated square, resulting in an octagonal footprint extended by four projecting bays. This geometry is echoed in the unusual roof form. Each of the four projecting bays has its own skillion roof, while the octagonal area has separate skillions that slope upward from the longer sides, rising to a steeper pitch towards the centre, terminating as a tapering turret-like feature. The visible planes of this roofline are clad in corrugated galvanised steel, and the flat top of the turret incorporates four skylights in the form of low domes of translucent acrylic.

External walls are clad with vertical timber boarding with a pale painted finish. Instead of eaves, there is a continuous sheet-metal fascia that conceals the box gutters within, but with spouts and rainwater heads expressed. Fenestration is varied. Original drawings depict tall rectangular window bays, with timber spandrels and mullions that separate vertical strips of glazing, and these still exist on the south-east elevation and the end wall of the east bay. The pair of smaller single-pane windows on the south-west elevation appears to be a later alteration. The south bay, facing Weeden Street, contains a recessed porch with double doors flanked by sidelights.

Comparative Analysis

Research to date has identified few other examples of the work of Pels Innes Neilson Kosloff in what is now the City of Whitehorse. Co-founder Graeme Neilson, who lived in Mitcham for a time, later purchased a house at 35 Gardenia Street, Blackburn, where he undertook additions and alterations in 1976. These, however, are of limited architectural interest. The firm later designed a two-storey office block at 36-36a Rutland Road, Box Hill (1981-82), in a slick corporate style that combined expanses of vertically-ribbed concrete blockwork that terminated in projected rounded bays, framing a continuous window wall of tinted glazing. During the 1990s, when Pels Innes Neilson Kosloff was becoming better known for large projects on university campuses, the firm worked in association with Wood Marsh on a cluster of four buildings at Deakin University in Burwood, designated as Buildings C, D, E and F (1997).

These substantial corporate projects seem far removed from the modest local kindergarten that Pels Innes Neilson & Kosloff designed at Vermont South in 1973, not long after the partnership was established. Although research has not identified any other kindergartens designed by the firm at that time, the building does have elements in common with some of their other work from the 1970s. The distinctive roofline, with a central mansard lantern-like element, had previously been used by Michael Innes in his own recently-completed house at 1 Barnsbury Court, Deepdene (c.1972). A similar roof form, combined with the Greek cross plan, recurred in a subsequent residential project for a house in Harley Street, Bendigo (c.1975), creating a pavilion-like effect not dissimilar to the Birralee Pre-School Centre (*Age* 15/06/1976:19).

As of 2024, there are no post-war architect-designed pre-schools on the heritage overlay schedule. The only related building type to be covered by a heritage overlay is the so-called Kindergarten Cottage from the former Kildonan Children's Home on Elgar Road, Burwood. Designed in 1940 by architects Martin & Tribe, who were pioneers of modern pre-school design in Victoria, the Kindergarten Cottage at Kildonan had an unusual programme in that it provided both teaching facilities and residential accommodation for infants. The building is covered by a heritage overlay (HO249) that includes other remnants from the former home, which now forms part of Deakin University's Burwood campus.

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As part of the current review, an individual heritage overlay has been recommended for the Blackburn Pre-School Centre at 52-54 Pope Road, Blackburn (1950-52). The first purpose-built municipal kindergarten to be erected in the City of Whitehorse, it was designed in accordance with progressive design principles that would resonate in kindergarten design during the 1950s and '60s, typified by such later examples as the Stanley Cochrane Kindergarten at 257 Mitcham Road, Mitcham (Robert Rolfe, 1955) and the North Kindergarten at 16 Larch Street, Nunawading (Hank Romyn, 1960), both of which have similar open planning and huge window walls.

By contrast, the Birralee Pre-School Centre is demonstrative of the subsequent transformation of kindergarten architecture, characterised by a decisive move towards centralized planning. This emerged in the mid-1960s in a few high-profile facilities across Melbourne, notably the Eltham South Pre-School (Charles Duncan, 1965), which had an equilateral triangular plan, and the Pine Mont Pre-School at Ringwood (Graeme Gunn, 1965), with a two-stage hipped roofline. Both buildings were published in the mainstream architectural press. An early manifestation of this transforming typology in the City of Whitehorse was the Eastmont Pre-School Centre at 32 Frank Street, Vermont (W H Smart, 1967-68), which adopted a square plan form and a pyramidal roof with a central hipped turret. This contrasted with such near-contemporaneous local facilities as the Parkmore Pre-School at 41 Jolimont Road, Forest Hill (c.1965) and East Burwood Pre-school at 25 Statesman Avenue, Burwood East (c.1966), both of which followed the more traditional rectangular plan form with gabled roofline.

In itself, centralized planning is far from unusual in post-war modernist architecture, and is most commonly associated with churches of the 1960s. This is represented in the City of Whitehorse by such examples as the Roman Catholic Church of St Scholastica at 348 Burwood Highway, Burwood (McCarthy & Collins, 1965), with a Greek cross plan, and the Mountview Uniting (former Presbyterian-Methodist) Church at 561-563 Whitehorse Road, Mitcham (Earle, Shaw & Partners, 1967) (HO162), with a square plan and pyramidal roof. Smaller-scaled manifestations of centralized planning include some notable architect-designed houses such as the celebrated but now demolished McKenzie House at 11 Penlynne Avenue, Vermont (Borland & Trewanack, 1959), which had a centralized square pan, and the Kristiansen House at 7 Norris Court, Blackburn (Frances Seidel, 1967-68) (HO287), with a Greek cross plan. In both cases, the centralized planning was expressed externally by use of a centralized roof form, with a central pyramidal element.

While the plan of the Birralee Pre-School Centre might invite comparisons with both the Church of St Scholastica in Burwood and the Kristiansen House in Blackburn, both based on the Greek cross, the kindergarten's geometry is more sophisticated in that the Greek cross has been overlaid by an octagon, creating a distinctive form that is evocative of Baroque churches in northern Europe. Such planning is extremely unusual in post-war modernist architecture in Victoria, and the only other example that has been identified to date is the Veneto Club building in Bulleen (Ermin Smrekar & Associates, 1969-72), where a near-identical plan has been extruded over three levels.

Another rare local example of centralized planning based on the Greek cross, albeit dating from the pre-war era, is the Columbarium at the Box Hill Cemetery (Rodney Alsop and A Bramwell Smith, 1929-30) (HO58).

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Statement of Significance

What is significant?

The Birralee Pre-School Centre at 21 Weeden Drive, Vermont South, is a single-storey building in the post-War Modernist style, laid out on a centralized plan with vertical timber cladding and a mansard-like roofline with central lantern. It was erected in 1973-74 to a design by the architectural partnership of Pels Innes Neilson Kosloff.

Significant fabric is defined as the exterior of the entire 1973-74 building. Specific elements of significance include the distinctive centralized plan (comprising a Greek cross overlaid onto an octagon), the pyramidal roofline with mansard-like lantern and skylights, the vertical timber cladding, the recessed porch and the original elongated vertical window bays. The outbuildings, playground equipment and other later structures are not considered to be significant.

How is it significant?

The Birralee Pre-School Centre at 21 Weeden Drive, Vermont South satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics.

Why is it significant?

The pre-school centre is aesthetically significant as a particularly unusual example of Post-War Modernist architecture. Its centralized plan form, based on a Greek cross overlaid onto an octagon, is an extremely unusual motif that has no direct comparators in the City of Whitehorse, and few anywhere else. The centralized planning has been boldly articulated in the roof form, with sloping skillion planes merging into a central mansard-like lantern, creating a building of distinctive pavilion-like form that is unusual for a kindergarten, or indeed for any building type (*Criterion E*).

References

Public Building File No 16966, Box 2050, VPRS 8044/P3, Public Record Office Victoria.

Pels Innes Neilson Kosloff Pty Ltd, "Birralee Pre-School Centre, Weeden Drive, East Burwood", working drawings, dated February 1973.
Public Building File No 16966, Unit 1095, VPRS 8044/P3, Public Record Office Victoria.

Eldon C Smith & Associates, "Birralee Pre-School Centre, Weeden Drive, Vermont South: Playground layout", site plan, dated February 1974.
Public Building File No 16966, Box 2050, VPRS 8044/P3, Public Record Office Victoria.

Interview with Harry Pels, September 2016.

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

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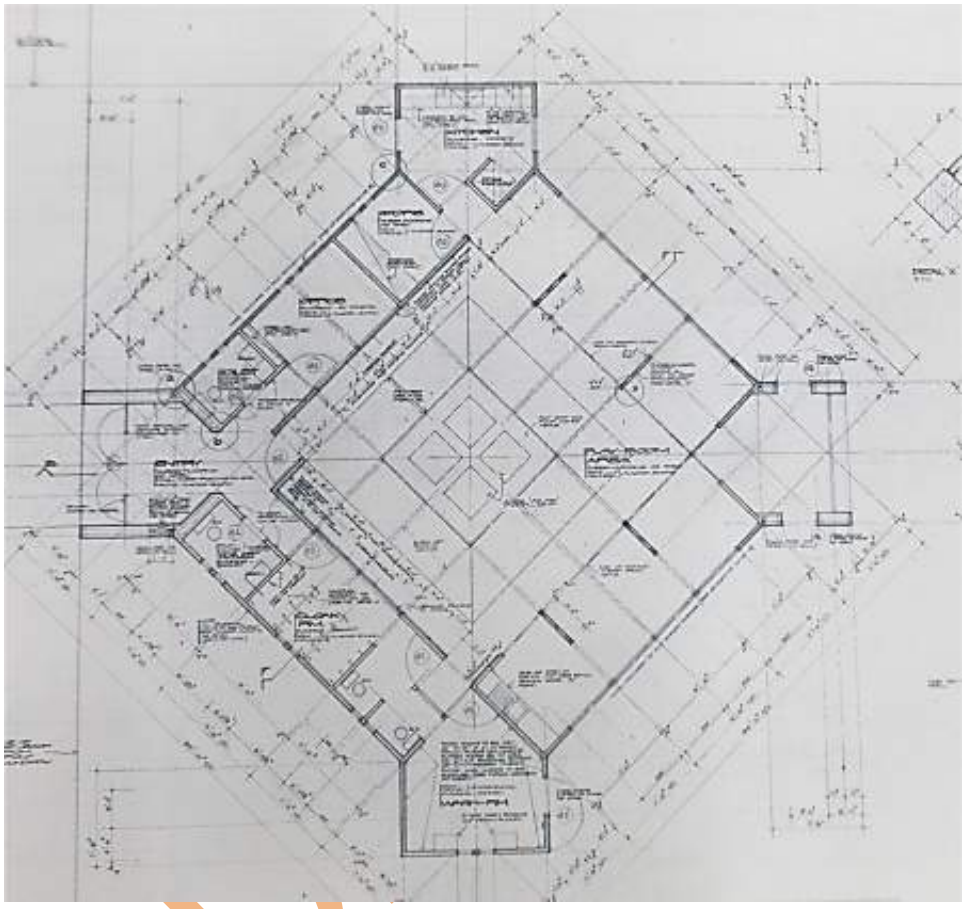
Historical Images



Excerpt of working drawings, dated February 1973, showing centralized floorplan
Source: Public Building File No 16966, Box 2050, VPRS 8044/P3, Public Record Office Victoria.

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

IDENTIFIER	WHITEHORSE UNITING CHURCH	**Citation Number**	043
Other name/s	Nunawading Methodist/Uniting Church	**Melway reference**	48 F9
Address	355-357 Whitehorse Road NUNAWADING		
Date/s	1960-61 (original church) 1990 (addition)		
Designer/s	Earle & Associates		
Builder/s	H E Weavell & Son Pty Ltd		
Heritage Group **Heritage Category**	Religion Church		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	8 BUILDING COMMUNITY LIFE 8.1 Religion and worship 8.1.1 Churches in the post-war period				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The Nunawading Uniting (former Methodist) Church at 355-357 Whitehorse Road, Nunawading, was erected in 1960-61 to a design by leading church architects Earle & Associates.

Methodist presence in the City of Whitehorse dates back to the 1850s, when a small stone chapel was built in Woodhouse Grove, Box Hill North. Over the new few decades, congregations were formed at Mount Pleasant (Forest Hill), Burwood, Mitcham and Blackburn. However, a Methodist church did not appear in Nunawading until 1923, when the present site was acquired at the corner of Whitehorse Road and O'Shannassy Street, and a timber hall built along its eastern side. As the congregation grew in the early post-WW2 era, the hall was enlarged in 1952. A kindergarten block was added to the rear in 1956, followed three years later by a connecting link. By that time, it had already been resolved to provide a new and larger church building on the expanse of vacant land to the west, extending to the corner of O'Shannassy Avenue.

While the kindergarten block was designed by F C Armstrong, a prolific Methodist architect and Mitcham resident, the new church would be the work of another. James Earle (1927-2014) graduated from the University of Melbourne in 1951 and commenced private practice in 1953. Establishing his early reputation with several smart modernist houses, Earle also fostered an association with the Methodist church that would sustain his office for decades. After completing some small projects for the denomination, including minor work at Methodist campsites and conference centres, he began designing new churches from the mid-1950s, including examples at Anglesea (1956), Pascoe Vale South (1957) and Boort (1958) that received much attention in both the church and architectural press. Many other churches, and church-related projects, followed.

Earle's scheme for a new church at Nunawading was given job number 5840, which infers that he was engaged in 1958, although the working drawings are dated May 1960. They proposed a large building with a polygonal nave that best described either as a truncated lozenge or a stretched hexagon, with a wedge-shaped vestry to the east side and a projecting entry foyer at the north end. Interviewed in 2007, Earle explained that the unusual geometry was informed by recent revisions to Methodist liturgy, which required less space at the sanctuary end of the nave at that time but more space for the congregation itself. Construction, undertaken by builders H E Weavell & Son, commenced in September 1960. A foundation stone was laid on 26 November and, in accordance with tradition, various objects were placed within, including coins, stamps, aerial photographs of Nunawading and a copy of Ivan Southall's recent book, *A Tale of Box Hill* (1957).

The south end of the building incorporated a full-height window with a Latin cross nineteen feet (5.8 metres) tall, set within a stained glass window in gold, silver, ruby red, blue and purple, noted as the colours that God had told Moses to use for the Tabernacle (see *Book of Exodus* 25:3). As was later stated, the intent of the stained glass window was "to enrich the sanctuary and also draw attention to the Cross". The symbolism of its abstract design was explained thus:

> The converging diagonals all meet at the heart of the cross and also emphasise the silver splinters which represent the Crown of Thorns and the spear head and the nails in the feet. The nails which pierced Christ's hands are shown in blue with blood marks beneath, but no figure hangs on the cross... Two panels in the coloured glass – one portraying the symbol of 'The Hand of God' is high in the central red panel… the other is at floor level and depicts the Griffin, symbolic of the mystery of the Divine and Human nature of our Lord.

As was characteristic for churches by Earle & Associates, the architects designed all the liturgical furniture. At Nunawading, this included a font with a lid depicting a descending dove, a pulpit with a brass scroll and the Chi Rho symbol (the Greek XP acronym), a lectern with a lamp symbol, a Holy Table, a communion rail (which was broken in the centre, to symbolise universal access to all believers) and a prayer desk with a motif of praying hands, stylised from the famous Albrecht Durer engraving.

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The new building was dedicated and officially opened on 25 March 1961 by the President of the Methodist Conference, Reverend G D Brimacombe. The event was covered in a daily newspaper, and the church garnered subsequent press attention when a photograph (captioned as "this is the new Methodist church") illustrated a full-page profile on the developing suburb of Nunawading (*Sun* 24/10/1961:22) . Early the next year, there was brief coverage in the architectural press, when two photographs appeared in *Cross Section*, alongside the observation that the building "has a strongly modelled plan and roof shape clearly perceived internally and a large flat-roofed porch which tends to subdue appreciation of its external form. Detailing is thorough and appropriately sparse" (*Cross Section* 01/06/1962:3).

In 1977, the church was rebranded as Nunawading Uniting Church consequent to the creation of the Uniting Church of Australia, formed by a merger of most of the Methodist, Presbyterian and Congregationalist congregations. During 1990, the building was enlarged with a flat-roofed single-storey addition to the eastern side, designed in a sympathetic fashion using similar textured concrete blockwork. This was officially opened on 10 November 1990 by the Reverend Kerrie Graham (*Nun Gazette* 31/10/1990). In more recent years, the congregation has merged with counterparts in Mitcham and Forest Hill to form the Whitehorse Uniting Church.

Physical Description

The Nunawading Uniting (former Methodist) Church at 355-357 Whitehorse Road, Nunawading, is a building of concrete block construction, comprising a large gable-roofed nave on a lozenge-shaped plan, with a flat roofed addition along the east side. The blockwork uses rock-faced units of varying sizes, to create a patterned effect akin to that of random uncoursed ashlar stone. The angular geometry of the nave plan is echoed in the jagged form of the gabled roof, which is clad with cement tiles and has broad eaves with varnishes timber lining boards and raked fascias. The side walls of the nave are stark and mostly windowless, save for some narrow vertical slits. The south end, where the lozenge form tapered inward, is dominated by a multi-paned window wall with a Latin cross and leadlight glazing in a bold abstract pattern. The corresponding north end has a similar multi-paned window wall, with central bays of leadlight glazing in a rectilinear Mondrian-esque pattern, flanked by plain mirrored glass.

At the north-west corner of the nave, facing O'Shannassy Street, is a projecting flat-roofed entry foyer with full-height windows, glazed doors and a wide canopy roof supported on square timber posts. This entry porch, which is original, merges at the rear with the flat-roofed addition that extends across the east side of the church. The original foundation stone, in polished black granite with gilt incised lettering, remains visible in the nave wall, to the right of the entry porch.

As an internal inspection has not been undertaken as part of the current survey, it is not known if the interior remains intact, or if some or all of the architect-designed furniture is still in situ.

Comparative Analysis

As of 2024, there are seven post-war modernist churches on the heritage overlay schedule, which demonstrate a considerable degree of diversity in their planning, forms, materiality and detailing. Three of these churches date from the later 1950s, and the other four from the 1960s. The two earliest examples are St Benedict's Roman Catholic Church at 299 Warrigal Road, Burwood (Stuart McIntosh and Alexander Harris, 1957) (HO262) and Christ Church Anglican Church at 469-471 Whitehorse Road, Mitcham (Raymond Berg, 1958) (HO96). They are both expressed in a stark modernist mode, with box-like forms, low skillion roofs, smooth wall surfaces and repetitive fenestration. By contrast, The Avenue Uniting Church, at 44 Blackburn Road, Blackburn (Keith Reid, 1958-59) (HO260), is a rather more conservative design in pink brick, having a rectilinear nave with tall windows and a low gabled roofline, punctuated a slab-like bell tower.

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Of the examples dating from the 1960s, there are two that are roughly contemporaneous with that at Nunawading: St Luke's Anglican Church at 551 Mitcham Road, Vermont (Wystan Widdows, 1961) (HO61) and the Burwood Heights Uniting Church at 347 Blackburn Road, Burwood East (Alexander Harris, 1961) (HO106). While of comparable vintage, they are otherwise very different to the Nunawading Uniting Church, and indeed to each other. The Vermont church is a monumental cream brick building in a traditional mode, based on a modified Romanesque style, while the one at Burwood East is more overtly contemporary, with the then-fashionable steep A-framed roofline. Both churches have conventionally rectangular nave forms, which contrast with the centralised polygonal planning seen at Nunawading.

The slightly later Wattle Park Uniting Church at 1201-1205 Riversdale Road, Box Hill South (Chancellor & Patrick, 1964) (HO69), is also based on rectilinear planning, albeit expressed as a series of sculptural skillion-roofed forms in rough-textured concrete blockwork. Of the six post-war churches on the heritage overlay schedule, the most pertinent comparator is probably the even later Mountview Uniting Church, 561-563 Whitehorse Road, Mitcham (Earle & Associates, 1967) (HO162), inasmuch as it was designed by the same architects. While it has a nave on a centralized plan, as seen at Nunawading, it is based on a square, with a low pyramidal roof and a central spire, and an enveloping verandah, producing an entirely different effect.

Compared to all of the other post-war modernist churches on the heritage overlay schedule, the Nunawading Uniting Church stands out for its unusual planning, based on a truncated lozenge form. Research indicates that it was the first new church in the City of Whitehorse to depart from conventional rectilinear planning. This approach would not become more common in the municipality until the later 1960s and beyond, typified by the kite-shaped plan of Our Lady of Perpetual Succour in Elgar Road, Surrey Hills (1964), the pentagonal plan of the Anglican Church of the Ascension in Blackburn Road, Burwood East (1968) and the trapezoidal plan of the new Church of St John the Evangelist, Whitehorse Road, Mitcham (1980). Jim Earle himself stated that the use of the lozenge plan at Nunawading was one of the first times that such a form had been adopted for any church anywhere in Victoria (Interview, 2007). Earle pointed out that, while the slightly earlier Church of the Mother of God at Ivanhoe East (Mockridge, Stahle & Mitchell, 1956) used a lozenge plan, this was imposed by the unusual shape of the site, whereas the Nunawading Uniting Church adopted the form specifically for liturgical reasons.

Statement of Significance

What is significant?

The Whitehorse (former Nunawading) Uniting Church at 355-357 Whitehorse Road, Nunawading, is a concrete brick building in the Post-War Modernist style, comprising a nave on a truncated lozenge plan with broad gabled roofline, a flat-roofed glazed entry foyer to the north, and a large single-storey flat-roofed addition to the east. It was erected in 1960-61 to a design by the architects Earle & Associates.

Significant fabric is defined as the exterior of the entire 1960-61 building. Specific elements of significance include the truncated lozenge plan form, textured concrete brick, foundation stone, prominent broad-eaved gabled roofline, glazed entry foyer, slit windows and large window walls to the north and south with abstract stained glass and a Latin cross motif. The flat-roofed wing to the east side, added in 1990, is not considered to be significant.

How is it significant?

The Whitehorse (former Nunawading) Uniting Church satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion E: Importance in exhibiting particular aesthetic characteristics.

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Why is it significant?

The church is aesthetically significant as a particularly striking example of Post-war Modernist ecclesiastical design. It is distinguished by its highly unusual lozenge-shape plan form (being the first modernist church in the City of Whitehorse to depart from traditional rectilinear planning), extruded into a highly sculptural form with rough textured concrete blockwork in initiation of ashlar stone, a prominent broad-eaved gabled roofline, slit windows and, notably, a massive window wall to the street frontage with Latin cross motif and stained glass window in a lively and colourful symbolic design. (*Criterion E*).

References

Earle & Associates, "Nunawading Methodist Church", working drawings, dated May 1960. Public Building File 400. Unit 92, VPORS 7882/P1, Public Record Office Victoria.

"Methodist Church, Nunawading: The Opening and Dedication of the Church", 7pp booklet, 25 March 1961. Simon Reeves Collection (courtesy the late Jim Earle).

"Tabernacle colours in new church", *Age*, 25 March 1961, p 20.

Cross Section, 116 (1 June 1962), p 3.

M A Chatwyn, "History of Methodist Churches in Nunawading", 2pp typescript, undated. Item ND2131, Whitehorse Historical Society.

"Uniting church reaches out", *Nunawading Gazette*, 31 October 1990. Item ND2242, Whitehorse Historical Society.

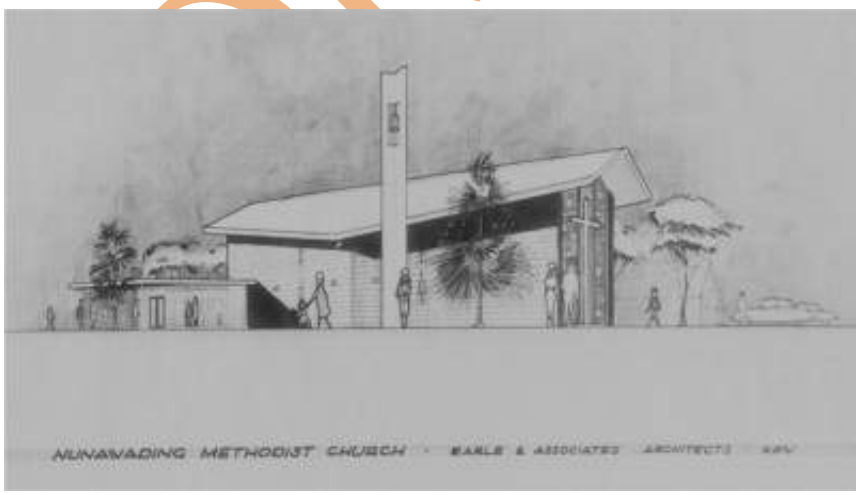
Interview with James Earle, 2007.

Previous Heritage Studies

Context Pty Ltd, *City of Nunawading Heritage Survey* (1994) – C+-graded

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Historical Images



Perspective drawing of proposed Nunawading Methodist Church; note bell tower, omitted in revised scheme
Source: Simon Reeves Collection (courtesy the late Jim Earle)

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Photograph of the completed church in 1962, looking south-east along O'Shannassy Avenue
Source: Cross Section Collection, University of Melbourne (photograph by Mark Strizic)

Photograph of the completed church, looking north-east along O'Shannassy Avenue
Source: Picture Collection, State Library of Victoria (photograph by Peter Wille)

Interior view of the nave, showing bespoke furniture and stained glass window wall at sanctuary end
Source: Simon Reeves Collection (courtesy the late Jim Earle; photographer unknown)

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

IDENTIFIER	BOX HILL INSTITUTE (Nelson Campus)	**Citation Number**	044
Other name/s	Factory (Holeproof Ltd)	**Melway reference**	47 C9
Address	853 Whitehorse Road BOX HILL		
Date/s	1947-50		
Designer/s	Gawler, Churcher & Blackett		
Builder/s	A R P Crow		
Heritage Group	Manufacturing and processing		
Heritage Category	Textile mill		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	5 BUILDING WHITEHORSE'S INDUSTRIES AND WORKFORCE 5.1 Manufacturing				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☐ To title boundaries	☑ As indicated on diagram overleaf			

Place History

The former factory at 853 Whitehorse Road, Box Hill, was erected in 1947-50 as a textile mill for clothing manufacturers Holeproof Ltd, to a design by architects Gawler, Churcher & Blackett.

A household name in Australia, Holeproof Ltd dates back the Atlas Knitting and Spinning Mills, a hosiery firm founded in 1920 by a group of men including George Foletta and Andrew Gray Staley. Rebadged in 1923 as Prestige Ltd, the firm saw modest success, until tensions between Foletta and Staley caused the latter to resign in 1924 and go out on his own. Starting from small premises in Brunswick, Staley expanded the venture and, aided by an uncle's financial backing, rebranded it as Staley & Staley. In the late 1920s, he began manufacturing items under license from the Holeproof Hosiery Company in Milwaukee, USA, which proved a shrewd and successful move. In 1930, the thriving business became a public company, the Holeproof Hosiery Company (Australia) Pty Ltd, and entered a prolonged phase of expansion. A five-storey factory was built in Dods Street, Brunswick (1930), followed by a showroom and office block on Sydney Road (1936), another large new factory at Deepdene (1940), and a temporary facility at Ringwood (1942).

Further expansion was delayed by WW2, during which Holeproof continued to thrive due to government contracts for hosiery for military personnel. In 1946, the company established small premises in Nunawading and announced plans to develop two larger permanent factories, at Box Hill and Ringwood, "as soon as building restrictions permit" (*Bulletin* 12/06/1946:26). The factory at Box Hill, intended a worsted spinning mill, was proposed for a large site on Whitehorse Road, roughly half way between existing facilities at Deepdene and Ringwood (both also on Whitehorse Road). Approval to build at Box Hill was granted by the State Building Directorate in May 1947, with the proviso that it was finished before any work started at Ringwood. The City of Box Hill imposed its own condition, requiring that the factory be designed "to conform to the general architecture of Box Hill", without detracting from the surrounding residential areas (*Box Hill Gazette* 21/04/1965:10).

Design of the new factory was entrusted to architects Gawler, Churcher & Blackett, formerly Gawler & Drummond, who had previously designed the Deepdene factory. The practice, dating back to 1914, had a long association with what is now the City of Whitehorse. Co-founder John Stevens Gawler (1885-1978) was a long-time Nunawading resident who, over several decades, served as a councillor to the Shire of Nunawading and City of Box Hill, and as Mayor of Box Hill in 1941 and 1948. While he retired in 1946, just before the Holeproof project in Box Hill, his firm continued under partners William A M Blackett (1873-1962) and Eric Churcher (1892-1958) and then, after their deaths, by the founder's son, David Gawler, until 1974.

Working drawings for the new Box Hill factory, dated between July 1947 and June 1948, depict a large steel-framed and reinforced concrete building in the fashionable Moderne style, comprising a large two-storey production area with a four-storey amenities block at one end providing locker rooms for male and female workers, first aid room and a rooftop cafeteria. The intended use of the factory, as a worsted spinning mill, did not eventuate due to pressure from manufacturer Stanley Korman, whose Centenary Mills supplied Holeproof's yarn. The new yarn spinning equipment was diverted to Korman's factory, leaving Holeproof to find another use for the Box Hill building. The firm promptly formed a new Apparel Division, geared to the manufactures of shirts, casual wear and pyjamas. Production had commenced by 1950, when it was reported that "the Box Hill mill was nearing completion and employing more than 100 already" (*Herald* 31/03/1950:6).

By 1954, the Box Hill factory had grown to become the second-largest of Holeproof's four factories in Melbourne, employing some 260 women (*Argus* 20/07/1954:21). Towards the end of that year, original factory architects Gawler, Churcher & Blackett were commissioned to design a large rear addition, worth £45,800, that would double the size of the premises (*Building Lighting Engineering* 24/11/1954:73). By 1965, the enlarged complex employed around 500 people, of which about one third lived in Box Hill (*Box Hill Gazette* 21/04/1965:10).

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During the 1960s, Holeproof Ltd underwent management changes, initially being taken over by Stanley Korman and then merging with Prestige Ltd, Staley's original pre-war company, before becoming a division of Dunlop Ltd in 1968. The factory at Box Hill remained in operation, and was enlarged to the east in the late 1970s. In 1992, operations relocated to a new purpose-built factory in Norcal Road, Nunawading, and the Box Hill property was offered for sale by tender, initially in late 1992 and then again in early 1994 (*Age* 27/10/1992:35; 08/03/1994:32). The site was subsequently redeveloped as the Nelson Campus of Box Hill Institute of TAFE.

Physical Description

The original portion of the former Holeproof Ltd factory, at 853 Whitehorse Road, Box Hill, is a large rendered brick building in the Inter-war Moderne style. Spreading across the gently sloping Whitehorse Road frontage of the broader TAFE complex, the building consists of an elongated double-storey wing with a gabled roof clad in terracotta tiles, terminated at the west (left) end by a four-storey tower-like block with a flat roof behind a parapet. The two storey block has a strong horizontal expression, with repetitive fenestration comprising rectangular windows with continuous sills and lintels, divided by piers. The piers at the lower level are recessed, while those at the upper level have a canted form. All of these windows contain metal-framed sashes with an H-shaped pattern. Two of the window openings at the lower level have been infilled.

The four-storey tower has a contrasting vertical emphasis, with narrow piers defining vertical bays with smaller rectangular windows at the three lower level, recessed spandrels between, and a wider multi-paned window at the top level. The side (west) wall of the tower has a vertical row of three porthole windows, and three cantilevered balconies with curved corners. The two lowest balconies are open, with simple metal pipe railings, while the top balcony has enclosed space, with a solid balustrade wall and continuous glazed infill that follows the curve at the corner. On this side of the building, fenestration is varied, with windows in pairs or rows of three or four, with an industrial-style expression of fixed, hopper and louvred sashes, many with textured glazing. At the curving end of the balconies, a stairwell is visible through multi-paned glazed doors.

The original building has a two-storey glass-fronted addition at the east end, which was added in the late 1970s in a simple Brutalist style. At the rear, some of the additions from the Holeproof era have been demolished and others retained but remodelled beyond recognition. There is also a large wing to the north, dating from the 2000s.

Diagram showing proposed extent of heritage overlay (outlined in red), covering full extent of the original 1947-50 building with a curtilage extending to south and east boundaries. All later additions are excluded.

Comparative Analysis

While post-WW2 industrial development has been identified a significant theme in what is now the City of Whitehorse, as of 2024, post-WW2 factories are not represented on the heritage overlay schedule. Two examples have been recommended for individual heritage overlays as part of the current study. The former Bowater Scott paper factory, occupying a twelve acre site at 19 Ailsa Street, Box Hill South (1959 onwards) is considered to be historically significant for its vast scale and associations with the major international company that developed it. The former Masonite Fabricators factory at 8-12 Simla Street, Mitcham (1959) is a representative and remarkably intact example of the mid-scale a smaller post-war factory complexes that once strongly defined that part of the municipality. These two factories, both architect-designed, are also considered to be of aesthetic significance as fine examples of modernist industrial architecture.

Designed in 1947-48 and completed by 1950, the former Holeproof Ltd factory at Box Hill stands out as a much earlier manifestation of post-war industrial development, and can be considered as one that ushered in the boom of factory development that transformed parts of Whitehorse Road (especially Nunawading, Blackburn and Mitcham) in the later 1950s and '60s. In this regard, the factory has few surviving counterparts. One pertinent comparator was the former E G Greenway pottery works at 127 Whitehorse Road, Blackburn (1947-49), although that building's distinctive modernist administration block, at the front of the site, was demolished during 2024.

Historically, if not architecturally, comparisons might also be drawn with the modest premises that Holeproof established at Nunawading in 1946. Designed by architect Harry Norris, this was a single-storey shopfront-like building on the west side of Springvale Road, between Silver Grove and the railway line. Intended as temporary facility, it ceased operation, and was sold, after Holeproof opened its permanent factory at Ringwood in 1949. The Nunawading building still stands at 150-152 Springvale Road and, while the monitor–style roofline of the rear factory remains evident, the street frontage has been remodelled beyond recognition. Occupied by Holeproof for only a few years, it cannot be considered as a truly pertinent comparator to the Box Hill factory.

Otherwise, little evidence remains from this initial burst of post-war industrial development in the late 1940s and early '50s. Most early factory complexes in central Box Hill have disappeared, such as the premises of Bristo Plastic Industries at 62 Carrington Road (1946), frock manufacturers S & S Advanced Modes at 532-538 Station Street (1949) and glass merchants L G Glover Pty Ltd at 837 Whitehorse Road (1953). The former Medley's Dry Cleaning factory at 912-918 Whitehorse Road (1949) is rare survivor in the vanity but has been altered beyond recognition. This trend is evident elsewhere in the municipality by such examples as the former factory of the Wilsonia Furnishing Company at 108 Whitehorse Road, Blackburn (1947), also extended and remodelled.

Research has identified only one other early post-war factory site in the City of Whitehorse that included a building in a comparable Streamlined Moderne style. The former premises of Brewer Sports Industries at 1 Colombo Street, Mitcham, developed from 1948 and included a two-storey administration building (c.1951) in cream brick with dark brown brick stringcourses, porthole window, rounded corners and a curved projecting bay. The building was demolished c.2006.

The work of John Gawler's architectural practice (in its various iterations) is represented on the heritage overlay schedule by a large modern block of flats at 96 Severn Street, Box Hill (Gawler, Churcher & Boardman, 1960-61) and earlier-war work such as the church hall at St Augustine's Anglican Church, 38 Bundoran Parade, Mont Albert (Gawler & Drummond, 1929) (HO261) and the former Box Hill Town Hall at 1022 Whitehorse Road, Box Hill (J S Gawler with J C Aisbett, 1934-35) (HO94). Other local projects from the post-war era include a block of shops at 941-953 Station Street, Box Hill North (1957; much altered), Gawler's own house at 116 Springvale Road, Nunawading (1958; demolished), the church hall at Christ Church Anglican Church, Mitcham (1960), and additions to the Migrant Hostel in Rooks Road, Nunawading (1961; demolished).

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Statement of Significance

What is significant?

The former Holeproof Ltd factory at 853 Whitehorse Road, Box Hill, is a large reinforced concrete building in the Streamlined Moderne style, with horizontal windows and a tower-like amenities block. It was built in 1947-50 for Holeproof Ltd to a design by Gawler, Churcher & Blackett.

Significant fabric is defined as the exterior of the entire 1947-50 building. Specific elements of significance include the stark wall surface, horizontal window bays, and the tower-like amenities block with vertical window bays, portholes, concrete slab balconies with curved corners and metal railing, and the matching projecting glazed bay at the former cafeteria level.

The additions to the east side and rear of the original factory are not considered significant.

How is it significant?

The former Holeproof Ltd factory at 853 Whitehorse Road, Box Hill, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics.

Why is it significant?

The building is historically significant for associations with early post-war industrial development in the municipality, and particular along the major spine of Whitehorse Road that would become a major epicentre for factories in the later 1950s and '60s. The Holeproof factory also demonstrates the rise of a major Australian hosiery firm that began modestly in the 1920s before experiencing phenomenal growth in the later 1930s and 40s, its brand becoming (and still remaining today) as a household name. The firm's Box Hill factory remained a significant focus for its manufacturing activities, as well as a major local employer, for over forty years. (*Criterion A*)

The building is aesthetically significant as a large and prominently-sited example of the inter-war Streamlined Moderne style. Its combination of a strong horizontal expression (in the production wing) with a contrasting vertical expression (in the tower-like amenities block) is typical for the style, as are the use of stark plain wall surfaces, strip windows, portholes, and the distinctive curving cantilevered balconies and projecting glazed bay to the side of the amenities block. The building remains a fine, if late, example of this style, which is not well represented in the City of Whitehorse. (*Criterion E*)

References

Holeproof Ltd, corner Whitehorse Road and Nelson Street, Box Hill: New factory, 1947-48. Plan 290, File Red 4640. Box 127, VRPS 10150/P0, Public Record Office Victoria.

"Nylon seen as rival to wool", *Herald,* 31 March 1950, p 6.

"They make 'jamas, socks, shirts", *Argus*, 20 July 1954, p 21.

"This is Holeproof", *Box Hill Gazette*, 23 April 1965, p 10. Newspaper Clipping Scrapbook, Vol 17, p 17. Box Hill Historical Society.

R W Churcher, "Holeproof History", 7pp typescript, undated (circa mid-1970s) Item No B6747, Box Hill Historical Society.

Eleanor Findlay & Marjorie Morgan, *Those were the Days: Box Hill in Pictures, 1930-1960* (1994).

Built Heritage Pty Ltd, "Gawler Churcher & Blackett," , *Dictionary of Unsung Architects*. <https://www.builtheritage.com.au/dua_gawler.html>

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 4

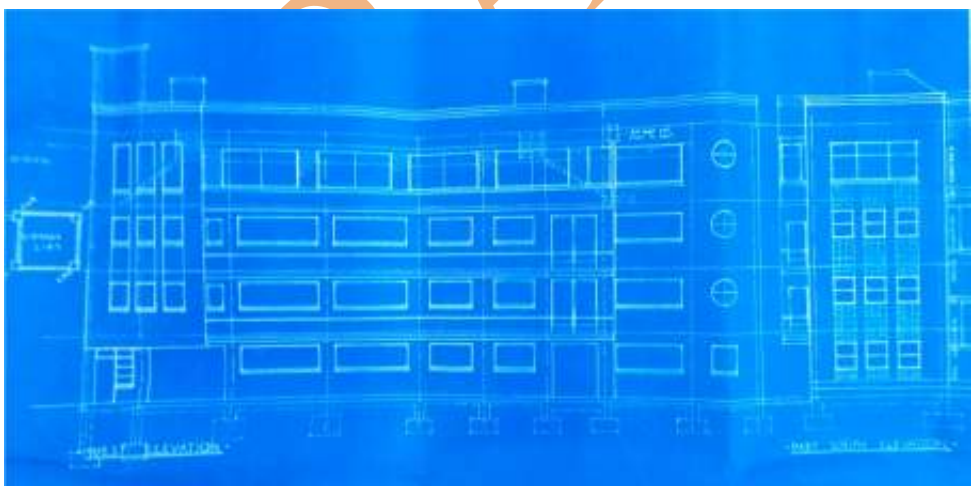
Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix A, graded B

Select comparators

Sketch of the short-lived Holeproof Ltd premises at 150-152 Springvale Road, Nunawading (1946)
Source: Herald 28 February 1949, p16.

Office building (c.1951) at the former Brewer Sports Industries factory, 1 Colombo Street, Mitcham
Source: Photograph by Simon Reeves 2006

Historical Images

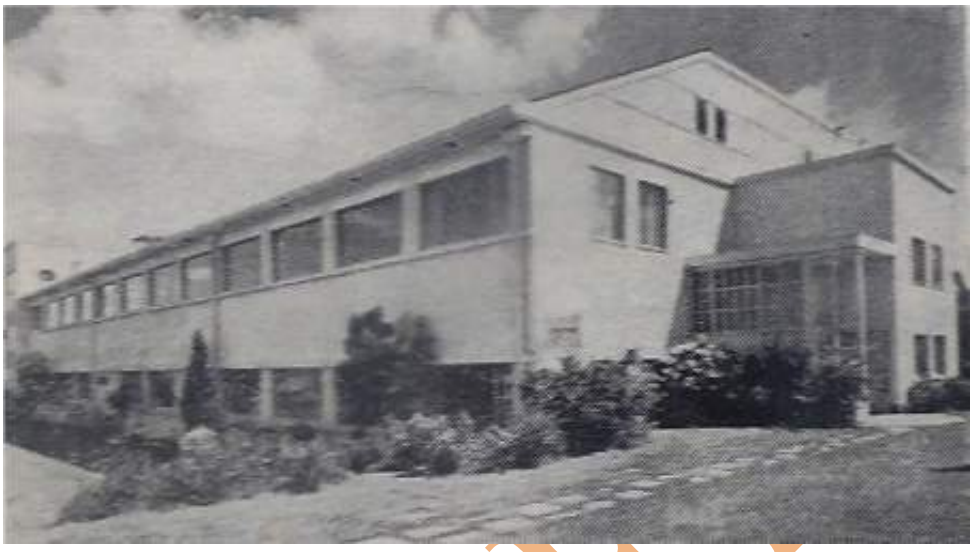


Excerpt of working drawings, dated 17 February 1948, showing west and south elevations of amenities wing
Source: Plan 290, File Red 4640. Box 127, VRPS 10150/P0, Public Record Office Victoria.

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

Perspective sketch from an early Holeproof Ltd advertisement, while the factory was still under construction
Source: Herald, 28 February 1949, p 16.

Detail of aerial photograph from 1953, showing new factory from the west, prior to 1954-55 additions
Source: Picture Collection, State Library of Victoria (photograph by Airspy Company).

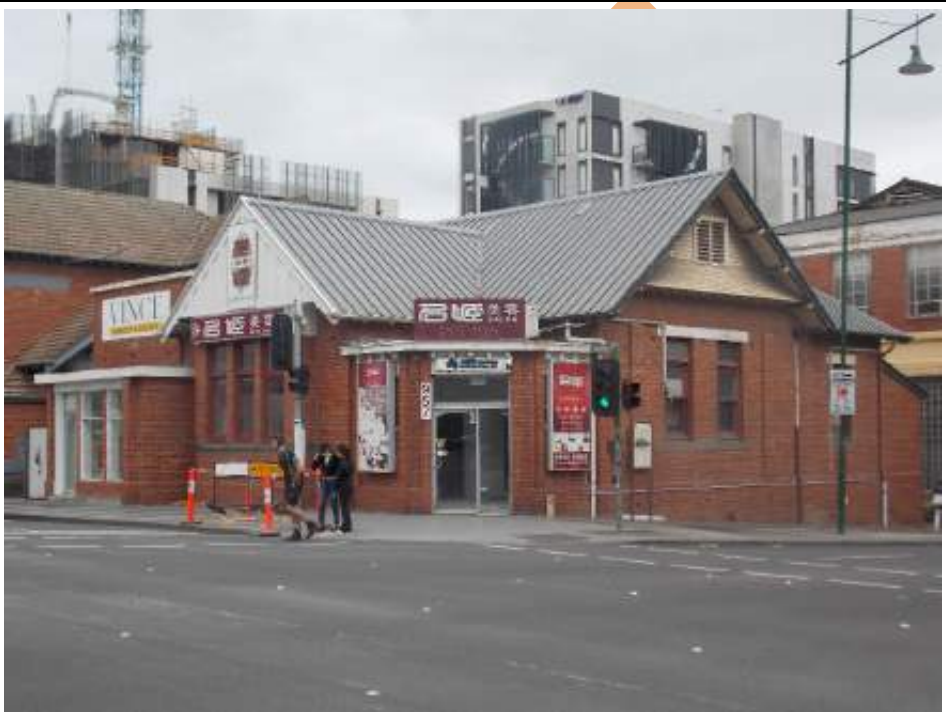


Photograph of the factory in the 1960s, looking west; note entry foyer at east side, since demolished
Source: "This is Holeproof", Box Hill Gazette, 23 April 1965, p 10.

Photographs of the factory in the early 1990s, while still occupied by Holeproof
Source: Eleanor Findlay & Marjorie Morgan, Those were the Days: Box Hill in Pictures, 1930-1960 (1994).

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

IDENTIFIER	RETAIL PREMISES	**Citation Number**	045
Other name/s	Box Hill Post Office	**Melway reference**	47 D9
Address	957 Whitehorse Road BOX HILL		
Date/s	1910-11		
Designer/s	Commonwealth Department of Works		
Builder/s	W H Murphy		
Heritage Group **Heritage Category**	Postal and Telecommunications Post Office		



Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	3 CONNECTING WHITEHORSE 3.5 Communications 3.5.1 Establishing postal services				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☐ Good	☐ Fair ☑ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram overleaf			

Place History

The former Box Hill Post Office at 957 Whitehorse Road, Box Hill, was erected in 1910-11, to a design by government architects within the Department of Home Affairs.

The site, on the north-west corner of Whitehorse Road and Station Street, maintained an early association with commercial activity in Box Hill and specifically with local postal services. In 1857, early settler Robert Sutton opened a blacksmith's store on the site, which was soon replaced by a general store established by Silas Padgham (Lemon:26). In 1860, Padgham expanded the business to include a post office, and remained as Box Hill's postmaster until 1888, when he was succeeded by W H G Ellingworth, second son of pioneer William Ellingworth (Lemon:87). Ellingsworth relocated the post office to his newsagency on the south side of Whitehorse Road, east of Station Street, where it remained into the early twentieth century

Following Federation, the new Department of Home Affairs proposed to provide Box Hill with a purpose-built post office and, in December 1908, it advertised for expressions of interest "from persons willing to sell to the Commonwealth, as a site for Post and Telegraph purposes, land at Box Hill, centrally situated with a frontage of about 60 feet [18 metres] and a depth of about 160 feet [49 metres]" (*Comm Gazette* 12/12/1908:1692). Much local debate ensued regarding the ideal location. Ellingworth, then a shire councillor, suggested the municipal oval on Whitehorse Road, west of Station Street (*BH Reporter* 18/12/1908:5). While an inspector from the Postmaster General's Department visited Box Hill and favoured another site on Whitehorse Road, near the state school, there was objection from residents who preferred a site nearer to the railway station (*BH Reporter* 05/03/1909:4). In March 1909, the Postmaster General himself arrived to inspect seven possible sites, which were narrowed down to three. Finally, it was resolved to build the post office on "Padgham's Corner on the White Horse Road" (*BH Reporter* 14/05/1909:7).

Plans were drawn up by architects in the Department of Home Affairs and, in August 1910, tenders were called for "erection of a new post office at Box Hill" (*Comm Gazette* 27/08/1910:1436). It was later reported that the sum of £1,200 had been set aside in that year's Federal Estimate (*Argus* 08/09/1910:6). In early December, it was reported that the tender had been awarded to W H Murphy of Hawthorn, who had recently built the new Post Office at Canterbury and was in the process of erecting another at Lilydale (*BH Reporter* 02/12/1910:2).

Within a fortnight of the contract being signed, it was reported that the building was already "in course of erection" (*Age* 17/12/1910:17). Construction was nearing completion in May 1911, when it the local newspaper stated that "the contract was completed this week and, as soon as the necessary fittings and instruments, etc, have been put in, it will be opened for the transaction of local postal business" (*BH Reporter* 19/05/1911:2). A detailed description followed:

> Ample accommodation for both the public and the officials has been provided at the new post office. The public entrance will be by the porch, in which will be the public telephone bureau and posting boxes, at the corner of the two thoroughfares. The space for the public, with writing desks facing White Horse Road, is 20 feet by 13 feet, and on the other side of the counter is the spacious mail room, 30 feet by 25 feet. At the back of the building are the officer's and letter carriers' rooms, lavatories, etc, but no provision is made for the officials to reside on the premises.

The facility was initially staffed by temporary officers until October 1911, when A J Rutherford became the first permanent postmaster (*BH Reporter* 27/10/1911:4). Others to follow included Edwin Jones, Miss A G McColl and Charles Woolford. The building underwent few significant changes until 1954, when the Department of Works called tenders for "alterations and additions" (*Comm Gazette* 03/06/1954:1612). These works, undertaken by Balwyn builder James Shillito, included a small addition to the west side, with a new porch in a late Moderne style.

The premises ceased operating as a post office in 1983, and has since accommodated retail use.

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Physical Description

Occupying a prominent corner site at the junction of two major thoroughfares, the former Box Hill Post Office is a single-storey Edwardian red brick building on what might be described as a pinwheel plan, with two intersecting gabled roofs clad in metal sheeting with expressed battens. The two street elevations are asymmetrical, each dominated by an offset gable end, with a small flat-roofed canted porch, with corbelled cornice, which straddles the corner.

On the Station Street side, the gabled bay has timber-lined eaves with exposed purlins, and the gable end has a large double louvred vent and an infill of scalloped timber boards, which tapers slightly outward at the base to form a skirt, supported on timber brackets. Underneath, between a pair of plain pilasters, are two tall windows with timber-framed double-hung sashes and highlights, with a common bluestone sill and painted lintel. There is a smaller rectangular window, similar detailed, to the north. On the Whitehorse Road side, the gabled bay projects forward, with a half-timbered roughcast infill to the gable end, and a rectilinear bay window underneath with three tall windows and a continuous rock-faced bluestone sill. To the left (west) side is the early post-war addition (c.1953), which uses matching red brickwork, but with a modernist touch in the rendered capping to the parapet and the flat roof of the projecting porch. The porch has two large windows, a wide glazed doorway at the far end.

The elevations to the north and west are partially concealed from view. The west elevation has a gable end with weatherboard infill and square louvred vent, and simpler rectangular windows. The north elevation has a brick gable ends with circular vent, and a narrow skillion-roofed wing with weatherboard infill. There is also a small brick outbuilding in the north-west corner.

The status of the post office site as the terminus of the Box Hill-Doncaster electric tramway route (which ceased operation in 1896, over a decade before the present building was erected) is marked by a commemorative plaque from 1940 (asserting it as "the first electric tram route in the southern hemisphere") and a large pictorial signboard from 1989.

Comparative Analysis

As of 2024, there is only one purpose-built post office on the heritage overcoat schedule: the former Mitcham Post Office at 528 Whitehorse Road, Mitcham (1924) (HO161). This is considered to be of historical significance for associations with local postal service and for aesthetic significance as an example of government architecture in the Arts & Crafts mode. It is one of only three purpose-built post offices erected in the City of Whitehorse before WW2. The other two examples, both dating from the earlier twentieth century, were those at 957 Whitehorse Road, Box Hill (1910-11) and 609 Canterbury Road, Surrey Hills (1912). The latter was demolished in 2000, which rendered the building at Box Hill as the oldest surviving purpose-built post office in the municipality.

Well into the twentieth century, other posts offices in the City of Whitehorse followed the tradition of occupying existing buildings or shopfronts. In Mont Albert, a post office service commenced in 1914 but did not obtain its own premises until 1928, in an existing shopfront at 10 Hamilton Street, where it remained into the 1960s. In Blackburn, the post office ran from a general store (itself a converted house) at 10-12 Blackburn Road, from 1913 until 1951. In Nunawading, the post office similarly operated from a confectioner's shop at 164-168 Springvale Road, opposite the railway line. These two early retail buildings at Blackburn and Nunawading, demonstrative of early postal services sharing commercial premises, have both been demolished in recent decades.

Provision of purpose-built post office has otherwise been a post-war phenomenon, with temporary departmental buildings provided at Blackburn (1951) and Nunawading (c.1955), superseded by permanent counterparts, respectively, in 1960 and 1968. Upon completion of the new Blackburn Post Office, the temporary building was relocated for use at Vermont, re-erected at 596 Canterbury Road. These temporary buildings no longer exist. Another early post-war post office, at 134 Canterbury Road, Blackburn South (c.1957), has also been demolished since the 1980s.

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Considered more broadly as evidence of early development of what became Box Hill's principal commercial hub, at the prominent junction of Whitehorse Road and Station Street, the former post office can be compared with a number of other buildings in the immediate vicinity. Examples on the heritage overlay include the remodelled Railway Hotel (1911)(HO92) at 950-956 Whitehorse Road, on the opposite (south-west) corner of the same intersection, and the former State Savings Bank branch at 953 Whitehorse Road (1912) (HO116), to the immediate west of the post office. There is also a nearby group of nine residential shops along the south side of Whitehorse Road (Nos 968 to 984) that date from the 1890s and early 1900s (part HO244). The pair at Nos 982-984, originally known as the *Studio Buildings* and conclusively dated to 1908, was built by W H G Ellingsworth to a design by local architect Walter Bamford (*BH Reporter* 04/12/1908:4). While the former Box Hill Post Office is thus not the oldest surviving building in this commercial hub, it is clearly associated with a concentrated burst of development that occurred from c.1910-12.

Statement of Significance

What is significant?

Occupying a prominent corner site, the former Box Hill Post Office at 957 Whitehorse Road, Box Hill, is a single-storey red brick building with a cross-gabled roofline, gabled bays to each of the two street elevations, and a canted corner entry porch. It was erected in 1910-11 by the Department of Home Affairs.

Significant fabric is defined as the exterior of the entire 1910-11 building, and the 1954 addition, which is considered to be sympathetic in form. Specific elements of significance include the red face brickwork, cross-gabled roofline with expressed battens, gable ends with shingled and half-timbered infill, canted corner entry porch and windows with timber-framed double hung sashes and bluestone sills.

The plaque and signboard on the east wall, commemorating the electric tram terminus, are considered to be of contributory significance.

How is it significant?

The former Box Hill Post Office at 957 Whitehorse Road, Box Hill, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics.

Why is it significant?

The building is historically significant as the oldest surviving purpose-built post office in what is now the City of Whitehorse, and one of only three such post offices to have been built prior to WW2 (of which only one other, at Mitcham, remains standing). This post office occupies a prominent corner site that has been associated with commercial activity in Box Hill since the 1850s, and with postal services from 1860. Dating from 1910-11, the present building has associations with a brief but significant burst of commercial development on and around this major intersection that took place in the early 1910s. (*Criterion A*)

The building is aesthetically significant as an early example of Federal government architecture, which is not otherwise well represented in the City of Whitehorse. With its cross-gabled roofline, expressed battens and prominent gable ends with shingled and half-timbered infill, the building demonstrates a decisive shift away from classical inspiration towards an Arts & Crafts style. The small but eye-catching pre-war building remains a landmark on this prominent corner site in Box Hill's principal commercial hub. (*Criterion E*)

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References

"Box Hill Post Office and Telephone Exchange", *Age*, 17 December 1910, p 17.

"Box Hill Post Office", *Box Hill Reporter*, 19 May 1911, p 2.

"Box Hill Post Office", *Box Hill Reporter*, 7 July 1911, p 4.

"Box Hill Post Office Staff", *Box Hill Reporter*, 27 October 1911, p 4.

Andrew Lemon, *Box Hill* (1978).

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001)

Coleman Architects, *Whitehorse Heritage Review* (2016) - Schedule 2, graded B

Select Comparator

The near-contemporaneous Post Officer at 609 Canterbury Road, Surrey Hills (1912; demolished 2000)
Source: Surrey Hills in Celebration of the Centenary 1883–1983 (1983)

Historical Images

Excerpt of original working drawings for new post office at Box Hill, dated 10 October 1910.
Source: National Archives of Australia (via City of Whitehorse)

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Two early views of the post office, circa 1910s
Source: Box Hill Historical Society

Another early view of the post office, circa 1920s
Source: Picture Collection, State Library of Victoria

View of the post office, circa 1970s; note flat-roofed porch addition to west (left) side
Source: Box Hill Historical Society

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IDENTIFIER	ST PETER'S ANGLICAN CHURCH	**Citation Number**	046
Other name/s	St Peter's Peace Memorial Church	**Melway reference**	47 E9
Address	1030 Whitehorse Road BOX HILL		
Date/s	1950-53 1969-71 (rear extensions)		
Designer/s	Louis Williams (both stages) Ken Bethell (supervision, 1969-71)		
Builder/s	E H Daniel & Sons (1950-53) Dance Brothers Pty Ltd (1969-71)		
Heritage Group	Religion		
Heritage Category	Church		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	8 BUILDING COMMUNITY LIFE 8.1 Religion and worship 8.1.1 Churches in the post-war period				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☑ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

St Peter's Anglican Church, at 1030 Whitehorse Road, Box Hill, was designed by architect Louis Williams in 1950-51, and erected between 1952-53.

Formalised Anglican presence in the City of Whitehorse dates back to 1861, when a brick building was erected on the corner of Canterbury Road and Bedford Road, for use as a church on Sundays and a denominational school during the week. In May 1883, the foundation stone was laid for a grander brick church, dedicated to St Peter, at the corner of Whitehorse Road and Frankcom Street in what was then the western edge of Blackburn. However, it was soon apparent that this location was not ideal for residents of Box Hill proper. In 1887, the congregation acquired the present site on Whitehorse Road, 1.5 kilometres further west, and the building at Blackburn was dismantled and re-erected thereon, along with a new parsonage and schoolroom. In 1908, a larger timber church was built on the site, and the old brick building relegated to the status of parish hall.

The congregation grew, and fundraising for a new brick church commenced under Reverend W W Laidlaw, who was vicar from 1925-42. In 1934, pre-eminent Anglican architect Louis Williams (1890-1980) prepared a design for a building to provide "a spacious nave with open timbered roof", along with baptistery, morning chapel, three vestries and a tower "visible for many miles" (*Herald* 15/11/1934:23). However, the ambitious scheme proved too costly. It was only after the timber church was destroyed by fire in late 1949 that the need for a new building became a matter of utmost urgency. Fifteen years after submitting his earlier scheme, Williams was engaged to prepare another. A perspective sketch, published in late 1950, depicted a large brick church of entirely different design, comprising a nave with a low gabled roof, curved baptistery, flanking porches and bell tower. It was noted that Williams "has admirably developed the ideas of the vicar … so that when the whole scheme is completed all buildings, while fulfilling their own independent functions, will form an integral part of the plan (*BH Reporter* 27/10/1950:1). Intended as a war memorial, it was to be known as St Peter's Peace Memorial Church. With £10,000 already raised, the church hoped to commence construction early the following year.

When working drawings were prepared in March 1951, Williams's scheme was revised to delete the sanctuary, chapel, vestries and tower, which were to be added as a future stage. Construction began, executed by prolific local builder E H "Ted" Daniels (*BH Gazette* 05/04/1972). On 9 March 1952, the foundation stone was laid by Sir Edmund Herring, the Chief Justice the Supreme Court (*Age* 08/03/1952:8). In parallel, work unfolded on the erection of a brick kindergarten, facing Bank Street, which was opened on 1 March 1953. The church itself was still not quite finished when it was dedicated by the Archbishop of Melbourne, Dr J J Booth, on 13 June 1953.

In March 1955, the church initiated a major scheme known as the St Peter's Memorial Building Fund and Budget Canvass, which planned to raise £40,000 to complete the rear of the church and bell tower, as well as a new parish hall. However, only the latter was realised. The foundation stone for the hall, also designed by William, was laid in February 1958 and the building dedicated on 6 June. In 1966, the old brick hall (formerly the original church relocated from Blackburn) was destroyed by fire, which hastened plans to complete the church to in accordance with Williams' original scheme. The next year, a new fundraising scheme, dubbed the Phoenix Project, was launched to raise $70,000 to complete the church (*BH Reporter* 31/5/1967).

Williams, by now in his late seventies, was engaged to prepare drawings that proposed a two-level addition with chapel, vestry and large sanctuary at nave level, with a choristers' room underneath. The addition replicated the form and finishes of the original church, with similar cream brick but simplified fenestration and detailing. Instead of the bell tower, proposed in 1950, the addition was to have a slender rooftop spire. This, however, was never built. Due to William's advanced age, the project was supervised by a younger associate, architect Ken Bethell. Construction was undertaken by Dance Brothers Pty Ltd, and the enlarged church was dedicated in February 1971.

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Associate architect Ken Bethell would continue his professional association with the church for some years, preparing drawings in 1976 for a screen in the front porch. Around the same time, bequests from two parishioners, Mrs Eleanor Black and Mrs Flora Michael, enabled the church to commission a mosaic mural for the rear wall of the chancel. This was executed by Anne Graham (born 1925), a Viennese émigré whose broad experience included art restoration, archaeological surveys and filmmaking. Best known as a painter and printmaker, she undertook few large-scale mosaics. Her work at Box Hill, depicting symbols of St Peter such as water, fish, nets and crossed keys, was dedicated on 12 February 1978 (*Whitehorse & Eastern Standard* 22/02/1978).

In 2006, the church was extended at the north end with a curving glass-walled foyer space.

Physical Description

Conceived as a modernist re-interpretation of mediaeval ecclesiastical architecture, with allusions to Romanesque, Gothic and Byzantine precedents, St Peter's Anglican Church is a cream brick building on a traditional cruciform plan. The main part, comprising the original nave (1951-53), and later nave addition and sanctuary (1969-71), has a gabled roof clad in terracotta tiles and a curved projecting baptistery to the street, with conical roof in matching tiles, topped by a Latin cross. The baptistery is flanked by flat-roofed porches, and the sanctuary by flat-roofed wings.

The symmetrical street façade is dominated by the projecting curve of the baptistery, which has a tall segmental-arched lancet window flanked by smaller lancet windows at the upper level, all containing coloured leadlight glazing in vertical strips. The flanking porches have squint brick parapets, buttresses and large side windows with deeply splayed rendered reveals. The lower level of the street façade is concealed by a glass-walled porch added in 2006, which extends between the two side porches and follows the baptistery curve. Inside this glazed porch, the detailing of the flanking porches and baptistery remain evident, including the foundation stone

The side walls of the original nave have corbelled eaves, rendered banding along the roofline, and rows of segmental-arched lancet windows. The later addition is similarly expressed, albeit with simplified detailing (eg simpler corbels, and windows with flat lintels rather than segmental arches). The end (south) wall of the sanctuary has a canted profile with notched brickwork at the corners. The apex has another Latin cross, and the gable end incorporates a metal representation of crossed keys (a symbol of St Peter). There are two rectangular windows at the basement level. The east side of the church incorporates other integrated artwork and artefacts, including a metal fountain/sculpture dedicated to the Dymond family, a wall-mounted metal sculpture depicting the Crucifixion, a metal quatrefoil salvaged from the brick parish hall destroyed by fire in 1966 (the original church relocated from Blackburn in the 1880s), and numerous wall-mounted memorial plaques constituting a "Garden of Remembrance".

The church interior is simple and understated, with plain walls comprising a cream brick dado and render above, and a cathedral ceiling with exposed queen-post timber trusses. The chancel wall is dominated by Ann Graham's large and colourful abstract mosaic. Most windows have plain leaded glass, although some have leadlight or stained glass of fairly recent origin, including one from 1979 (designed by artist Basil Barber), two others in memory of James Robertson Senior (d.1993) and his wife Ivy (d.2007), and four in the chapel from 2023. Other items of interest include a framed oil painting by French academic painter William-Adolphe Bouguereau (*Songs of the Angels*, 1881), the foundation stone from the original timber church of 1908, a cylindrical font in the baptistery (dedicated to former vicar W W Laidlaw, who initiated fundraising for the new church) and a pipe organ (dedicated 1991). Much of the timber furniture, including pews, altar and pulpit, are bespoke items that appear to be early, if not original.

The church kindergarten (1953), facing Bank Street, is a small gable-roofed red brick building with tripartite window bays. The Memorial Hall (1958), to the west of the church, is a large cream brick building with gabled roof, and a projecting hip-roofed front wing added in more recent years.

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Comparative Analysis

As of 2024, there are seven post-war churches on the heritage overlay schedule, which exhibit a considerable degree of diversity in their planning, forms, materiality and detailing. Four of these churches date from the 1960s, and the other three from the late 1950s. The latter comprise St Benedict's Roman Catholic Church at 299 Warrigal Road, Burwood (Stuart McIntosh and Alexander Harris, 1957) (HO262), Christ Church Anglican Church at 469-471 Whitehorse Road, Mitcham (Raymond Berg, 1958) (HO96) and The Avenue Uniting Church, at 44 Blackburn Road, Blackburn (Keith Reid, 1958-59) (HO260). The two earlier examples are both expressed in a stark modernist mode, with box-like forms, low skillion roofs, smooth wall surfaces and repetitive fenestration, while the later one is a rather more conservative design in pink brick, having a rectilinear nave with tall windows and a low gabled roofline, punctuated a slab-like bell tower.

By contrast, there are no churches on the heritage overlay schedule dating from the early 1950s. This was a period of austerity when restrictions on building activity, imposed during WW2, had not yet been rescinded, finances were tight, and issues still remained with availability of building materials. As such, few congregations would have elected to build new premises at that time. In the case of St Peter's, Box Hill, however, the need for a new building was hastened after its timber church was destroyed by fire in 1949. Due to this specific circumstance, the new St Peter's Peace Memorial Church at Box Hill became the first new place of worship built in the City of Whitehorse after WW2. Designed in 1950-51, it slightly predates the Roman Catholic Church of St John the Evangelist at 506 Whitehorse Road, Mitcham (Alan Robertson, 1952). A makeshift solution based on an adapted ex-military Quonset hut, this church was demolished in the 1980s, leaving only the freestanding brick bell tower. The only other local example of a more permanent brick church of the early 1950s is St Paul's Lutheran Church at 711 Station Street, Box Hill (O'Connor & Brophy, 1952-54), which is still later than St Peter's. The latter also predates some of the early post-war hybrid church/hall/school buildings that, characteristically for the time, were built as a temporary measure to accommodate church services until a permanent solution became viable. Examples include a combined Roman Catholic church/school building at 57 Central Road, Blackburn (1953), and a Baptist church/hall at 2 Holland Road, Blackburn South (1954).

Research suggests that St Peter's Peace Memorial Church in Box Hill was not only the first church built in the City of Whitehorse after WW2, but also the first to be erected in several decades. The early twentieth century saw local congregations start to outgrow their nineteenth century premises and a notable period of church expansion began in the mid-1910s, with such new buildings as the Surrey Hills Methodist (now Uniting) Church at 679-681 Canterbury Road, Surrey Hills (1915) (HO259) and the Mount Pleasant Methodist (now Uniting) Church at 333 Canterbury Road, Forest Hill (1916) (HO25). This phase peaked in the mid-1920s, with a boom of new churches such as Box Hill Baptist Church at 560 Station Street, Box Hill (1925) (HO157), The Avenue Presbyterian Church at 40-44 Blackburn Road, Blackburn (1926) (HO260), the Roman Catholic Church of St Frances Xavier at 1075 Whitehorse Road, Box Hill (1926) and the new Box Hill Methodist Church to the rear of its old one at 515 Station Street, Box Hill (1926). However, this phase ended abruptly, doubtless due to the onset of the Depression. No record has been found of any new churches being built in the City of Whitehorse after 1927, during the 1930s or '40s, until well after WW2.

The mosaic mural, by Anne Graham, is one of few public art projects known to have been executed by this well-known Viennese-born artist, who is best known for her painting and printmaking. A list of Graham's work identified only one other glass mosaic mural, at the former Red Tulip factory at 201 High Street, Prahran (demolished c.2013), along with two glass mosaic friezes at the Roman Catholic Cathedral in Bendigo, and four relief murals at the Seventh Day Adventist Hospital in Sydney. She is also credited with the design of two city fountains, one in the courtyard of the Southern Cross Hotel (destroyed) and the other in the first floor foyer of the *Park Towers* apartments in 197-207 Spring Street (status unknown).

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Statement of Significance

What is significant?

The St Peter's Anglican Church at 1030 Whitehorse Road, Box Hill, is a cream brick building in a stylised Gothic/Romanesque/Byzantine mode, with a gable-roofed nave, projecting curved baptistery and flanking flat-roofed porches. Designed by Louis Williams in 1950-51, it was built in 1952-53 with the second stage belatedly completed in 1969-71. The church reserve also includes a Kindergarten (1953) fronting Bank Street, and a Memorial Hall (1958), west of the church.

Significant fabric is defined as the exterior of the entire church, covering both stages but excluding the glazed front porch from 2006. Specific elements of significance include the plain cream brickwork, gabled roofline, curved projecting baptistery, flanking porches and false-arched windows. Elements affixed to the exterior of the building and its immediate environs, including metal sculptures, symbols, crosses and plaques, are considered of contributory significance.

The interior of the building is considered significant to the extent of the nave and sanctuary, with significant elements of significance including the exposed Queen post trusses, mosaic mural by Anne Graham, stained glass windows, foundation stones and cylindrical font.

The kindergarten (1953) fronting Bank Street and the Memorial Hall (1958) to the west of the church are considered to be of contributory significance within the broader church reserve.

How is it significant?

The Whitehorse (former Nunawading) Uniting Church satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics.

Why is it significant?

The church is historically significant as a breakthrough in local church architecture. Designed in 1950-51, it was the first new church to be built in the City of Whitehorse after WW2 (thus marking the start of a major boom of new churches in the 1950s and '60s) as well as the first new church built in the municipality in a quarter of a century (since a previous minor boom in the mid-1920s). The kindergarten (1953) and memorial hall (1958) combine to form a cohesive church reserve of buildings of similar date. The church reserve is also significant for associations with the local congregation known as St Peter's since 1883, which has continuously occupied the site (in three buildings) for over 130 years. The present church, while dating from the 1950s, incorporates elements, such as foundation stone and metal crosses, from earlier buildings on the site, providing tangible links with the church's occupation in the late nineteenth and early twentieth centuries. (*Criterion A*)

The church is aesthetically significant as a large and substantially intact example of the work of prolific Anglican architect Louis Williams, whose post-war output was characterised by a hybrid style that deftly combined modernist forms and materials with allusions to traditional church architecture. This example, utilising William's trademark cream brickwork, combines stylistic references to Perpendicular Gothic (ie, porch detailing), Romanesque (ie, corbel tables) and even Byzantine (ie, highly unusual motif of the projecting curved baptistery) to create a highly distinctive building that remains a landmark along this prominent thoroughfare. (*Criterion E*)

The church is also aesthetically significant for the semi-abstract mosaic mural added to the chancel in the late 1970s, executed by the noted Viennese émigré artist Anne Graham, who, best known for paintings and printmaking, undertook few larger public works such as this. (*Criterion E*)

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References

Louis Williams, "St Peter's Church, Box Hill", working drawings, dated 5 March 1951. PB 9326, Unit 1082, VPRS 7882/P1. Public Record Office Victoria.

"St Peter's Peace Memorial Church", *Box Hill Reporter*, 27 October 1950, p 1.

"St Peter's Church of England Peace Memorial Building Fund and Budget Canvass", 15pp brochure, March 1955. Item B6504, Box Hill Historical Society.

"$70,000 appeal to replace old church", *Box Hill Reporter*, 31 May 1967. Item B3137, Box Hill Historical Society.

Louis Williams & Associates, "Extensions to St Peter's Church, Box Hill", working drawings, dated 11 November 1969. PB 9326, Plan 1184, VPRS 8044/P3. Public Record Office.

Max Germaine, *Artists and Galleries of Australia and New Zealand* (1979), p 225 [Anne Graham]

Irene King, *We love the place, O God: A Memory of St Peter's, Box Hill* (1989)

Previous Heritage Studies

Allom Lovell & Associates, *Whitehorse Heritage Review* (1999) - Appendix A, Part B

Graeme Butler & Associates, *City of Whitehorse Heritage Review* (2002) – Appendix 2, graded Local C

Coleman Architects, *City of Whitehorse Heritage Review* (2016) – Schedule 4

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 2, graded B

Additional Images

East side of church, showing memorial plaques, etc

South side, showing rear addition with cross keys

Nave interior, looking towards chancel

Detail of Anne Graham's mosaic mural

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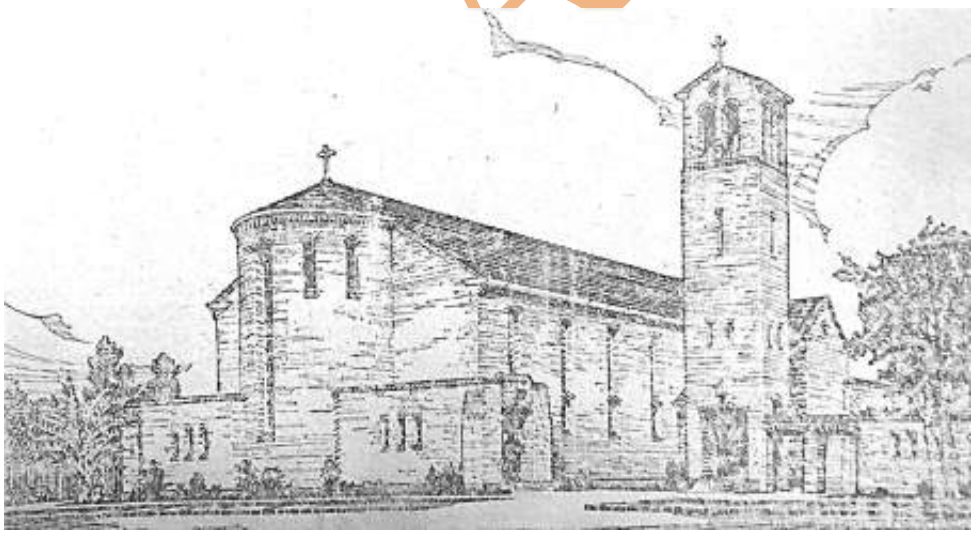
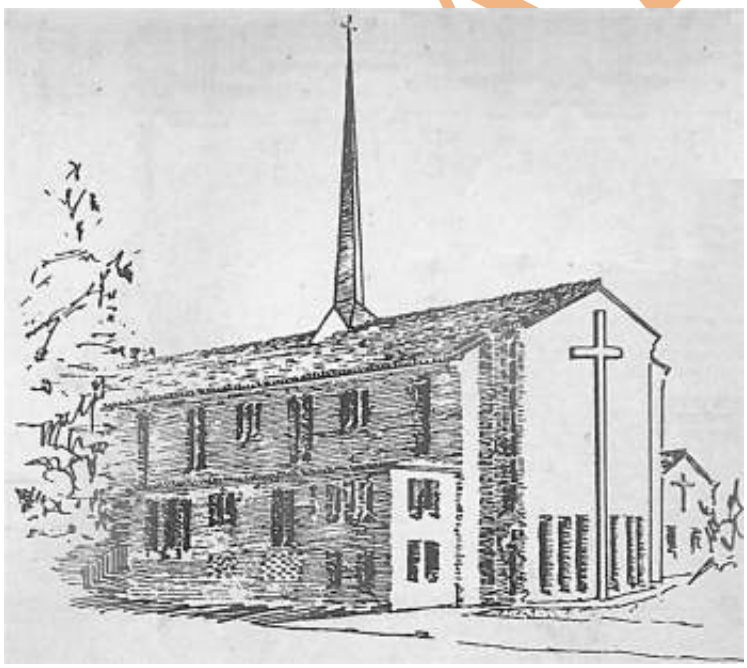
Historical Images

Perspective sketch of Louis Williams' original pre-war scheme for St Peter's Church, Box Hill (1934)
Source: Herald, 15 November 1934, p 23.



Perspective sketch of Louis Williams' new scheme for St Peter's Church, Box Hill (1950); note bell tower
Source: Box Hill Reporter, 27 October 1950, p 1.

Photograph of the recently completed church, circa 1954.
Source: St Peter's Church of England Peace Memorial Building Fund and Budget Canvass (1955)



Perspective sketch of proposed completion of church, with extended nave, sanctuary and spire (not built)
Source: Box Hill Reporter, 31 May 1967.

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IDENTIFIER	FLATS	**Citation Number**	047
Other name/s	Catholic Guild Homes for Elderly People	**Melway reference**	46 J9
Address	18 York Street MONT ALBERT		
Date/s	1963-64		
Designer/s	L V Connell		
Builder/s	A S L'Huillier		
Heritage Group **Heritage Category**	Residential buildings (private) Flat		

Photograph by Built Heritage Pty Ltd, February 2024

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.4 Higher density living				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as individual heritage place ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram overleaf				

Place History

The block of villa units at 18 York Street was erected in 1963-64 for the Catholic Housing Guild for the Elderly (CHGFTE), to a design by architect L V Connell.

The Catholic Housing Guild for the Elderly dates back to the early 1950s, when the then Prime Minister's wife, Dame Patti Menzies, became concerned for the plight of elderly homeless people and urged her husband to enact legislation for housing. This resulted in the *Aged Persons Homes Act* (1954), enabling the Department of Social Services to allocate two-for-one funding subsidies for housing provided by churches, religious organisations, charities, benevolent societies and councils. When Melbourne businessmen Neville Finn and Victor Burns learnt of the legislation, they were keen to develop such housing and were duly joined by Ray Shepherdson and Ray's brother-in law Amadie L'Huillier, a builder and estate agent. In initial discussion with the Department of Social Services, the men were advised that they needed to represent an organisation. As all four men were Catholic, they opted to form their own body under the auspices of the Catholic Archdiocese of Melbourne. Originally dubbed the Catholic Housing Fund for the Elderly, its first meeting took place on 29 November 1960, at which Finn was elected as Chairman and Burns as Secretary. At the next meeting, the name was changed to the Catholic Housing Guild for the Elderly.

The CHGFTE adopted a model where land was acquired in the name of the Catholic Archdiocese, with construction undertaken by L'Huillier. The first project, in Mentone, opened in December 1961 as *Villa Pacelli* and comprised "21 single-storey self-contained brick cottages home units for elderly people" (*Age* 06/12/1961:13). Designed for the specific needs of older people, they were individually serviced, metered and wired in order to be rated as separate private dwellings rather than group housing. Residents, who did not have to be Catholic, provided one third of the capital cost to secure lifetime tenancy, after which they were paid £1 per week for maintenance. The *Villa Pacelli* was barely finished when the CHGFTE announced further plans, with land acquired in Brighton and an option taken on a site in North Melbourne. By June 1963, when another block opened in Balwyn, the CHGFTE had a total of 48 flats in three suburbs (*Age* 09/07/1963:3), with a further block of 16 flats to be built in the same street in Balwyn (*Age* 12/07/1963:5). Plans were also underway for nine units in Mont Albert, where a site in York Street, already pre-approved for villa units, had been advertised for sale in March (*Age* 23/03/1963:38)

Drawings for the York Street project confirm the architect as L V Connell. Leonard Victor Connell (1925-2004) initially studied medicine at the University of Melbourne but, after wartime service in the RAAF, turned to architecture and took evening classes at RMIT while working during the day for silversmiths Stokes & Sons. At the time he was registered as an architect in 1956, Connell was working for A K Lines, MacFarlane & Marshall but, by the next year, had started private practice in East Melbourne. He initially focused on houses and flats, but also attracted publicity for his bold design for the Squashway Sports Centre in Malvern (1960). Later, he also designed churches, nursing homes and restaurants, notably the original Flower Drum in Little Bourke Street (1975).

For the elongated site in Mont Albert, Connell proposed a block of seven one-bedroom units, with a semi-detached pair of two-bedroom units at the rear. Early drawings, dated March 1963, depict a conventional gable roof with continuous verandah, but this was revised. Working drawings, dated 17 July, retained the plan form but introduced an irregular roofline, with individual hips. Construction, again by L'Huillier, continued into 1964, with tenders for labourers being called in March and again in June (*Age* 21/03/1964:61; 08/06/1964:17). The completed flats were blessed on 23 August 1964 by the Reverend Timothy Fitzpatrick from the Parish of Our Holy Redeemer, Surrey Hills (*Age* 21/08/1964:16). Amongst the first residents of the flats were Peter and Kathleen Burns, parents of Victor Burns, secretary of the CHGFTE and himself a resident of Surrey Hills.

Active for many years thereafter, the CHGFTE became an incorporated entity in 1989, severing its longstanding ties to the Catholic Archdiocese. The guild's website has been defunct since 2023.

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Physical Description

The development of villa units at 18 York Street, Mont Albert, consists of nine single-storey residential flats in two separate rectangular blocks. The front block, running east-west, comprises a contiguous row of seven one-bedroom flats, each on a narrow plan, while the rear block, running north-south, is a semi-detached pair of two larger two-bedroom flats, each on a square plan. A long L-shaped driveway extends along the north side of the property, providing access to the north side of the front block, returning south to provide access to the rear block.

The two blocks are similarly treated but not identical. They are of face brick construction, using beige-coloured pressed clay bricks with deeply raked joints and a heavily textured surface that resembles impasto painting with a scratched finish. Both blocks have hipped roofs clad in cement tiles. On the front block, each unit has an individual hip that slopes up from the corners and the apex of a gabled party-wall, creating a distinctive vaulted form known as a Rhenish helm (being mostly associated with the spires of Romanesque churches in Rhineland). The roofline over the rear block of units is different, expressed as two pyramidal forms with a linking hip.

The street façade of the main block is mostly blank, with a single central window bay to the front unit. The north façade, running along the driveway, articulates each unit between projecting wing walls, with an offset front door and tall rectangular window bays. Above the windows, the roof eaves incorporate an open pergola-like insert. The two units at the rear are similarly treated, with wider mirror-revered facades that incorporate raked eaves at the outer end.

The development includes a letter-box enclosure facing the street, in the form of a tall wall in matching textured brickwork. The aluminium letterboxes are not original.

Comparative Analysis

As of 2024, the heritage overlay schedules does not include any buildings directory comparable to the development of elderly person's flats at 18 York Street, Mont Albert. There are no places on the schedule that are comparable in historical terms (as an early example of purpose-built housing for the elderly), in typological terms, (as an early example of villa unit development) or even in architectural terms (as examples of the work of L V Connell). The closest counterpart on the schedule would be a broadly contemporaneous block of residential flats at 96 Severn Street, Box Hill (Gawler, Churcher & Boardman, 1960-61) (HO277), although this was a speculative private residential development rather than charitable housing, and expressed as three double-storey blocks of maisonettes, rather than a single-storey villa unit development.

The villa unit typology, broadly defined as multi-dwelling developments comprising individual single-storey dwellings either freestanding, attached or semi-detached, emerged in Melbourne around 1960 but would remain relatively uncommon for much of that decade until the passing of the *Strata Titles Act* (1967), which hastened a proliferation of villa units (and their two-storey counterparts, townhouses) across the metropolitan area into the 1970s and '80s. Although such developments would become widespread in what is now the City of Whitehorse, especially in parts of Box Hill, Mitcham and Nunawading, the earliest examples in those suburbs seem to date from the mid-1960s, typified by those at 27 Albion Street, Box Hill (1965), 838 Station Street, Box Hill (1965), and 251 Springfield Road, Nunawading (1967). To date, the earliest example identified in the municipality is a group of thirteen units at 81 Victoria Crescent, Mont Albert (1961), which are simply expressed in cream brick with hipped roofs and little architectural distinction. Thus, the development at 18 York Street might be a notably early example, but is not the earliest.

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Considered more specifically as an early example of purpose-built housing for elderly persons, the Mont Albert development has several local comparators. The oldest of these, both developed from the mid-1950s and therefore predating the CHGFTE flats in York Street, were those established at Box Hill South by the Loyal Orange Institution of Victoria, and at Blackburn by the Seventh Day Adventist Church. The Loyal Orange Centre at 325-335 Station Street, Box Hill South, was mooted in the late 1940s but development did not begin until around 1955, when a main building and two gable-roofed brick residential blocks were completed. By the early 1960s, the site had expanded with more gable-roofed blocks of units in a landscaped setting. The Seventh Day Adventist Old People's Home, occupying an expansive site at 163-165 Central Road, developed from 1956 to a masterplan by John & Phyllis Murphy, which included an administration building, dormitory blocks and stepped rows of self-contained flats. Both properties were redeveloped in the 2020s. The site at Blackburn, still owned by the Adventist church and now known as the AdventCare Retirement Village, retains none of the buildings from the 1950s, while the site at Box Hill South was sold in 2021 and has since been cleared and redeveloped with higher-density townhouses.

Later manifestations of this theme, post-dating the CHGFTE flats in Mont Albert, include the Inala Village at 220 Middleborough Road, Box Hill (1965 onwards) and the Strathdon Aged People's Settlement at 17 Jolimont, Forest Hill (1967 onwards). Both remain in operation and have been much remodelled, enlarged and upgraded, although some of the original buildings remain. Research has also identified one later local development by the CHGTFE, in the form of a block of thirteen units at 4 Wolseley Close, Mont Albert (c.1968), expressed as a group of semi-detached brick pairs with offset gable roofs. It has not been confirmed if it was designed by L V Connell.

The work of L V Connell was otherwise represented in the City of Whitehorse by a few single private dwellings. One contemporaneous house at 1097 Whitehorse Road, Box Hill (1963) was simply expressed with an elongated stepped plan, matching stepped gabled roofline, and painted brickwork, although the house was demolished c.2010. A later example of Connell's residential work, still standing at 6 Hamilton Avenue, Blackburn (1968), is a slightly more interesting brick house with flat roof (unusually, lacking eaves) and full-height window bays. It is still less distinctive that the building that he designed for the CHGFTE in York Street.

Beyond the City of Whitehorse, comparisons can also be made with other early developments of the CHGFTE, some of which are likely to have also been designed by Connell. The guild's first project, *Villa Pacelli* (1961), still stands at 6-8 Mitchell Street, Mentone. It comprises three rows of seven units in stepped blocks with longitudinal gabled roofs divided by party-walls, which project to form wing walls with Greek cross motifs. The block of ten flats at 24 Brenbeal Street, Balwyn (1963) was similarly expressed with a stepped plan form and stepped gabled roofline. However, the second block of sixteen units, located nearby at 14 Brenbeal Street, Balwyn (1963), was not only built at the same time as the York Street flats but is strongly reminiscent of them, complete with a similar (but not identical) expression of the highly distinctive Rhenish helm roofline.

Statement of Significance

What is significant?

The villa units at 18 York Street, Mont Albert, comprise nine dwellings in two separate blocks, similarly repressed in textured brickwork with individual hipped roofs of a distinctive Rhenish helm profile. Erected in 1963-64, the flats were designed by architect L V Connell as one of a number of such developments for the Catholic Housing Guild for the Elderly (CHGFTE)

Significant fabric is defined as the exterior of the entire 1963-64 building. Specific elements of significance include the textured brickwork, distinctive Rhenish helm roofs, configuration of doors and windows to the north front of each unit, wing walls, eaves with integrated pergolas, and the matching textured brick letterbox unit along the street frontage.

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How is it significant?

The villa units at 18 York Street, Mont Albert satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics.

Why is it significant?

The building is historically significant as an early undertaking by the Catholic Housing Guild for the Elderly, a charitable organisation founded in 1960 to take advantage of recently-introduced funding subsidies for this type of housing. One of the first of several such developments built by the guild in the early 1960s, it predates the only other example recorded in the City of Whitehorse, which was built in the later 1960s. More broadly, the flats are significant as one of the earliest surviving examples of purpose-built housing for elderly people, with several earlier counterparts in the municipality having been redeveloped in recent years. (*Criterion A*)

The building is aesthetically significant as an idiosyncratic example of post-war modernism, characterised by some highly unusual details and finishes. The roofline, expressed as a series of individually hipped roofs of a specific type known as the Rhenish helm, creates a vaulted effect seldom seen in post-war residential architecture in Melbourne, while the brickwork, with a highly unusual scratched and textured finish, is similarly distinctive and uncommon. The building remains an unexpected and eye-catching element in this quiet suburban streetscape. (*Criterion E*)

References

"Mentone homes for elderly people", *Age*, 8 December 1961, p 13.

L V Connell, "Proposed elderly people's units, York Street, Mont Albert", sketch design drawings, dated 22 April 1963. Building Permit No 18729/1963, City of Whitehorse.

"More villa flats for elderly people", *Age*, 9 July 1963, p 3.

L V Connell, "Proposed 9 single-storey units for elderly people, Mont Albert, CHGFTE", working drawings, dated 16 July 1963. Building Permit No 18729/1963, City of Whitehorse.

"Flats opened by Archbishop", *Age*, 12 July 1963, p 5.

"Flats to be blessed", *Age*, 21 August 1964, p 16.

"Ordinary People: A Remarkable Story. The Story of Catholic Homes", 4pp typescript, undated [circa 2002]. <http://www.catholic-homes.org.au/about-us/our-history/>

"Obituaries: Len Vincent Connell", *Herald Sun*, 26 March 2004.
Press clipping (Item EMVF01), East Melbourne Historical Society
<https://emhs.org.au/system/files/catalogue/pdf_files/emvf0191_01.pdf>

Previous Heritage Studies

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 2, graded A

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Historical Images

Early photographs of the villa units, taken in the 1960s.
Source; Picture Collection, State Library of Victoria (photographs by Peter Wille)

D: CITATIONS FOR PRECINCTS & GROUP LISTINGS

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IDENTIFIER	CHAPEL / HALL / SOCIAL CENTRE	**Citation Number**	P01
Other name/s	Orana Peace Memorial Home (remnants)	**Melway reference**	60 K4
Address	14-18, 17 and 27 Livingstone Close BURWOOD		
Date/s	1945 (masterplan) 1952-53 (clinic); 1956 (office); 1955-58 (chapel); 1959-60 (hall)		
Designer/s	Bates Smart & McCutcheon (Alan Ralton, project architect)		
Builder/s	Lewis Construction Company		
Heritage Group	Institutional Places		
Heritage Category	Orphanage		

Proposed places within group listing

Historical themes	8 BUILDING COMMUNITY LIFE 8.3 Health and welfare 8.3.3 Children's homes					
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor	
Recommendation	Include on heritage overlay schedule as heritage precinct ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls					
Extent of HO	☑ To title boundaries	☐ As indicated on diagram above				

Group History

The group of buildings at 14-18, 17 and 27 Livingston Close, Burwood, comprise four surviving elements (former clinic, office, chapel and hall) of the Orana Peace Memorial Home, a Methodist children's home developed from 1950 to a masterplan by architects Bates, Smart & McCutcheon.

The Orana Peace Memorial Home, as it became known, was conceived to provide a new home for what was previously the Methodist Central Home, a children's welfare facility founded in 1890. Initially based in Carlton, it moved to Cheltenham in 1892, occupying a large two-storey building that expanded over the years. By the 1920s, there was a global shift away from such foreboding institutional accommodation towards a more domestically-scaled model, often described as the cottage system, where smaller groups of children would be housed in smaller buildings to evoke family units. During the 1930s, Reverend T C Rentoul, General Superintendent of Methodist Home Missions, visited a seminal British example, the National Children's Home in Highbury, and returned to Melbourne keen to establish something along similar lines.

At first, it was mooted that the existing home at Cheltenham might be upgraded with cottage-style accommodation. Plans were halted by WW2, after which it was decided instead to develop a new centre from scratch, with a 21-acre former orchard site acquired in Burwood. Fundraising began while the architectural firm of Bates, Smart & McCutcheon was engaged to prepare a masterplan. Finalised in mid-1945, this ambitiously proposed twelve cottages (each housing ten children) around a central lawn or "play area", administrative block, hospital (aka clinic), school and chapel, with sports facilities, at a cost estimated to exceed £100,000 (*Age* 10/05/1946:6). Some debate ensued regarding the need for an on-site chapel but, at Rentoul's strong urging, and bolstered by a tied donation from the Cato family, a chapel was included. Realisation of the grand scheme, however, was curtailed when the tireless Rentoul died suddenly in December 1945.

With post-WW2 building restrictions and limited funding, the project stalled in the later 1940s. As estimated costs rose steadily, it was resolved to reduce the scope of the masterplan and develop the home in stages. In 1950, a superintendent was appointed and approval given for a "modified first section" to provide "six cottages, a toddler's cottage, a hall and kitchen and a superintendent's residence" at a cost of £175,000 (*Age* 03/03/1951:10). The building contract was awarded to the Lewis Construction Company, and work began on site in June 1950. On 3 March 1951, a memorial stone was laid by the premier, Sir Dallas Brooks, and, after a public competition, the name *Orana* (reportedly meaning "welcome") was chosen for the new centre. With three cottages completed, the first children were transferred from Cheltenham to Burwood in September 1952. By the time that the new Orana Peace Memorial Home was officially opened on 31 March 1953, again by Sir Dallas Brooks, the centre comprised six cottages (where "boys and girls aged six to fourteen will be brought up in a family atmosphere"), preschool centre, clinic, craft centre, kitchen and temporary assembly hall (*Age* 02/03/1953:4). That same month, the old Cheltenham property was sold.

While Bates, Smart & McCutcheon remained on board, their masterplan was amended and the remaining cottages were never built. By 1954, the centre still lacked administration block, chapel, assembly hall and further staff accommodation. An administration block and "staff cottage" were both completed in 1956, along with a children's library and remedial teaching block. The chapel remained a moot point, with debate whether it should of traditional or modern style; ultimately, project architect Alan Ralton came up with a hybrid design. Plans for the chapel were finalised in mid-1955, and construction began early the next year. Formally designated as a war memorial, it was officially opened by the Prime Minister, Robert Menzies, on 23 February 1958. A press report described the chapel as "the focal point of these homes", drawing attention to the fact that "this church is a children's church in which furnishings are built on a small scale and the decorations are colourful and of special significance" (*Age* 15/02/1958:8). Befitting the chapel's status as a war memorial, items of "special significance" included a Book of Remembrance, a brass cross from HMAS *Australia*, and three stained glass windows dedicated to the army, navy and air force.

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Drawings for a permanent assembly hall, prepared in 1958, proposed a huge brick building in a stark modern style. Subsequently built to a more domestically-scaled scheme, it opened in early 1960 as the T C Rentoul Hall, in honour of the centre's early champion (*Age* 27/02/1960:8). The next year saw the completion of what were referred to as "staff flatettes", which represented the last major addition to the site. Thus completed, the centre ran successfully for many years. Each cottage was given a name and, under the direction of its resident "cottage mother" (and sometimes also a "cottage father" to bolster the familial illusion), acted independently of the other cottages, organising its own activities and children attending different local schools. As a local prototype of the cottage model of children's homes, it was held in high regard, as noted in its official history:

> The idea of boys and girls growing up together in as homelike an atmosphere as possible was a revolutionary one in Victoria. All of the other institutions were still based on the congregate care model and even the Children's Welfare Departments had expressed some doubts about the proposition when it was first mooted… Orana quickly became a model and had frequent visitors from Australian and overseas. So great was the interest that the Home was opened to the public on the third Saturday of every month.

After the centre closed in the 1980s, the site was subdivided for housing, with new streets named after key figures in the home's history. All buildings were demolished except for the former office, hall, chapel and kindergarten, which were retained in a cluster in the centre of the redevelopment, and a former caretaker's house, located just off the property at 26 Uganda Street. In the late 1980s, a small addition was made to the west side of the chapel, followed by a larger addition in the late 1990s. The former caretaker's house was demolished in the early 2000s, but the other buildings remain, mostly used for purposes compatible with their original ones. The clinic has been adapted as a dwelling, but Rentoul Hall remains a community meeting venue, the former office as a Chinese Social Service Centre and the former chapel as the Christian Alliance Church of Victoria.

Physical Description

The Orana Peace Memorial Home was originally addressed as 79 Elgar Road, and its remnant buildings are grouped in a north-south alignment now bisected by Livingstone Close. The chapel and the clinic, on the north side of the street, are addressed as 17 and 27 Livingston Close, while the office block and Rentoul Hall, on the south side, are now Nos 14 and 16. The broader curtilage of the latter, fully addressed as 14-18 Livingstone Close, includes a carpark area and an elevated garden bed to the west, separated by retaining walls. These (and other) walls of random coursed volcanic rock were created as part of the 1980s redevelopment, and should not be confused with the original retaining walls visible in early photographs of the home, in coursed ashlar stone.

The **clinic** (1952-53) is a single-storey red brick-building with a hipped terracotta-tiled roof, on a long rectangular plan with a small projecting bay to the west side. It has a large central window to the street frontage, with timber-framed sashes, and smaller windows to the side. A narrow skillion-roofed addition extends along the west side, beyond the projecting side bay.

The **office block** (1956) is also a single-storey red brick-building on a long rectangular plan, with hipped terracotta-tiled roof. The west façade has an off-centre recessed entry porch, with timber doors, windows with reeded spandrels and a crazy paved floor, a long bay of timber-framed sash windows with by vertical sun louvres on an external frame, and smaller louvred windows with brick grille screens. The east façade has a long boxed window bay with timber-framed sashes and a narrow sunhood. The north façade (to Livingstone Close) has a small window to the right side.

The **chapel** (1955-57) occupies a flat but elevated lawn area between two stone retaining walls. It is a cream brick building on a traditional cruciform plan, oriented north-south, consisting of a large rectilinear nave, flanking transepts, projecting sacristy at the north end and a square tower to the south end. A flat-roofed addition, built in two stages in the 1980s and '90s, extends along the west and south sides, designed in a loosely matching style.

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The nave and sacristy have a gabled roof without eaves, intersecting with lower hipped roofs over the transepts, all clad with terracotta shingles. The stark brick walls have narrow vertical windows with splayed sills and false-arched heads with dripmoulds. The tower has a stepped form, with splayed top, octagonal lantern with louvred vents, and a low pyramidal roof clad in copper sheeting, crowned by a finial with a Latin cross. Alongside, the front entry porch has double doors with highlight and sidelight windows, and a large cantilevered canopy roof.

An internal inspection of the chapel has not been undertaken for this study, but photographs on the website of the Christian Alliance Church of Victoria suggest that it retains its sparse interior, with a plain brick walls and some original stained glass windows still evident.

The **T C Rentoul Hall** (1959-60) is a single-storey red brick building with a hipped roof clad in terracotta tiles, and wide board-lined eaves. The main hall is rectangular, with a small projecting wing to the east. The street facade is symmetrical, having a central steel-framed window-wall with glazed entry doors. The window wall is edged by convex rendered piers, and has a prominent cantilevered canopy roof with timber-lined ceiling. The walls flanking the entry are enlivened by rectangular borders of projecting brickwork and soldier-course panels. On the left, a textured concrete panel identifies the building in raised lettering: T C RENTOUL HALL. An elevated terrace extends across the façade, with crazy paving, a concave wall to the street and a simple steel railing. It has a flight of steps at the east end, while the west end merges with a raised concrete path in line with the rock retaining wall. The west elevation has a large window bay with vertical louvres.

Comparative Analysis

The former clinic, office building, chapel and Rentoul Hall constitute the most intact remaining elements of the Orana Methodist Peace Memorial Home. While the former pre-school centre still stands to the rear of the chapel (addressed as 19-25 Livingstone Close), the building is vacant and reportedly in unsafe condition. All other buildings demolished when the site was redeveloped for housing in the 1980s. The only other survivor at that time was the former caretaker's residence, located adjacent to the home proper at 26 Uganda Street. Shown on the masterplan, and built by the mid-1950s, this simple gable-roofed house was demolished in the early 2000s.

The remnant buildings reflect an important theme of social welfare that recurred across the City of Whitehorse (particularly, a large arc straddling the south-eastern fringe, covering Box Hill South, Burwood and Burwood East) for much of the twentieth century. As of 2024, the heritage overlay schedule includes only two places demonstrative of this theme, both on Elgar Road. *Tyneholm*, a grand Victorian house at 310 Elgar Road, Box Hill South (HO110) retains historical associations with the Salvation Army Boys' Home that occupied it 913. The house was enlarged in 1917, with a rear dining hall added in 1924, then a large detached residential block, the Edward Wilson Trust Cottage, in 1928. In the 1980s and '90s, the property was gradually redeveloped, when virtually all of the later buildings were razed (including the Edward Wilson Trust Cottage), leaving only *Tyneholme* and the dining hall. While the citation in the 1999 heritage study mentions the dining hall in the history and description, it is not mentioned in the Statement of Significance and, as currently mapped, the extent of HO110 appears to cover only the house itself.

More directly comparable to the Orana Peace Memorial Home are the remnant buildings of the former Kildonan Children's Home (HO249), which formerly occupied a similarly vast site on the other site of Elgar Road (now part of Deakin University, 213-243 Burwood Highway). Predating Orana, Kildonan developed from the late 1930s along similar lines, with an architect-designed masterplan providing various building types that were erected in stages over a decade or so, with further buildings added in the 1960s and later. The latter histories of the two sites also overlap: both ceased operation in late twentieth century, when some buildings were demolished and others retained and repurposed. While Orana was redeveloped for housing, Kildonan was absorbed into the adjacent Deakin University campus.

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The heritage overlay on the Kildonan site is large, encapsulating the administration block (1937), kindergarten (1941), girls' home (1946), some buildings from the 1960s, and the landscaped curtilage. Unlike Orana, it retains its original frontage to Elgar Road. While Orana's surviving buildings now have a different setting, they do include three specific building types that are not otherwise represented at Kildonan, namely the clinic, chapel and the assembly hall.

Evidence of the important theme of social welfare is also demonstrated by a building in Burwood East that represents the last surviving structure from the Tally Ho Boys Village, which, founded in 1903, was one of the first such facilities in the municipality. The former Tally Ho Memorial Hall (1929), a red brick building in a Gothic Revival mode, was originally erected as a dining hall with adjacent kitchen wing, but was converted into a chapel in the 1960s. When the Tally Ho Boy's Village closed in the 1980s, its large site was redeveloped for housing (as with Orana), and all of the buildings demolished save for the memorial hall, which was converted into a single dwelling. Since adapted into three flats, it is now addressed as 27, 27a and 29 Carrington Court, Burwood East. It has been assessed and recommended for heritage overlay as part of the current study.

No trace remains of several other large-scale social welfare facilities that once operated in what is now the City of Whitehorse. The oldest of these, the Burwood Boys' Home (1895) occupied a large site at 155 Warrigal Road, which was redeveloped after the home's closure in 1986 and is now occupied by the Cameron Close Retirement Village. The Princes Elizabeth Kindergarten for Deaf Children (1950), which provided specialised pre-school services on both a day and residential basis, developed on a site on Elgar Road, Burwood, immediately north of Kildonan and directly opposite Orana. Comprising multiple buildings on a large site, the centre remained in operation until as recently as 2002. The property has since been redeveloped as an adjunct to the Deakin University campus. The Winlaton Home (1956), a correctional facility for adolescent girls, occupied an eight-acre site at 186 Springvale Road, Nunawading. After it ceased operation in 1993, it was considered for a heritage overlay, but this did not eventuate. The site was cleared and redeveloped for housing, but its original front gates, bearing the centre's name, were presented to the Whitehorse Historical Society, which still displays them today (*WHS News*, 12/2020:7).

Statement of Significance

What is significant?

The remnant buildings of the former Orana Methodist Peace Memorial Home, at 14-18, 17 and 27 Livingstone Close, Burwood, comprise the former clinic, office building, chapel and assembly hall from the Methodist children's home that operated on this site from 1952. Based on a masterplan prepared by Bates, Smart & McCutcheon in 1945, the complex developed in stages from 1950, with these four buildings completed between 1952 and 1960.

Significant fabric is defined as the exterior of the four original buildings: the gable-roofed cream brick chapel at 17 Livingstone Close (1955-57) and the three hip-roofed red brick buildings: the clinic at No 27 (1952-53), office block at No 16 (1956) and T C Rentoul Hall at No 18 (1959-60). Specific elements of significance include:

- **Chapel**: cruciform plan, terracotta shingled roof, cream brickwork, false-arched windows with leaded or stained glass, and square tower with louvred vents, pyramid roof and finial;
- **Clinic**: hipped roof, chimney, red brickwork, front window bay;
- **Office block**: hipped roof, red brickwork, continuous window bays, vertical sun louvres, brick grille screens and recessed entry porch with reeded panels and crazy paving;
- **T C Rentoul Hall:** hipped roof, red brickwork (including decorative courses), steel-framed window wall, rendered piers, original signage, cantilevered canopy and front terrace with curved brick wall, metal railing, planter box and crazy paving.

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The late twentieth century additions to the west and south side of the chapel are not significant. The elevated garden bed to the west of Rentoul Hall, the carparking areas and the volcanic rock retaining walls, which all date from the 1980s redevelopment, are not significant.

How is it significant?

The remnant buildings of the former Orana Methodist Peace Memorial Home, at 14-18, 17 and 27 Livingstone Close, Burwood, satisfy the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion E: Importance in exhibiting particular aesthetic characteristics.

Why is it significant?

The remnant buildings of the former Orana Methodist Peace Memorial Home are historically significant for associations with the Methodist children's home that operated from this site from the early 1950s until the late 1980s. Collectively, they provide evidence of the theme of social welfare, which has been a significant recurring theme in the City of Whitehorse (and particularly this part of Burwood and environs) for most of the twentieth century. Individually, the buildings demonstrate a range of typologies that reflect the operation of the home: office block, clinic, assembly hall and, notably, a chapel that was specifically designed for use by children. The chapel's broader intent as a war memorial, with stained glass windows dedicated to the army, navy and air force, is also of historical significance in its own right. (*Criterion A*)

The remnant buildings of the former Orana Methodist Peace Memorial Home are aesthetically significant as a reflection of a masterplan by Bates, Smart & McCutcheon for a children's home on the "cottage model", where small-scaled buildings were grouped informally in a landscaped setting. While none of the residential cottages remain, the surviving buildings still demonstrate the considered layout of the masterplan, with the clinic, office block and Rentoul Hall evoking the domestic scale and feeling that once characterised the entire complex. Rentoul Hall is of aesthetic significance in its own right, for a striking modernist façade with decorative brick, steel-framed window wall, cantilevered canopy and crazy-paved porch. The chapel, the most aesthetically distinguished of the buildings, is significant as an example of a small church in a hybrid style that deftly mixes modernist materials and massing with traditional forms and a hint of Perpendicular Gothic character in the false-arched lancet windows and stepped square tower. (*Criterion E*)

References

"Garden homes for children", *Age*, 10 May 1946, p 6.

"Children's Homes as Peace Memorial", *Age*, 2 March 1953, p 4.

Orana Methodist Peace Memorial Home for Children (1953).

"Suffer the Little Children", fundraising brochure for Orana Peace Memorial Home, circa 1958.

"PM will open chapel", *Age* 15 February 1958, p 8.

"Orana Homes", *Age* 27 February 1950, p 8 [official opening of T C Rentoul Hall]

Renate Howe and Shurlee Swain, *All God's Children* (1989).

Previous Heritage Studies

Andrew Ward & Associates, *City of Whitehorse Heritage Review* (2001) – chapel only

Coleman Architects, *Whitehorse Heritage Review* (2016)
– included full citation for chapel, hall, office block, clinic and kindergarten

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Current Images [2024]

West side of former administration block

East side of former administration block

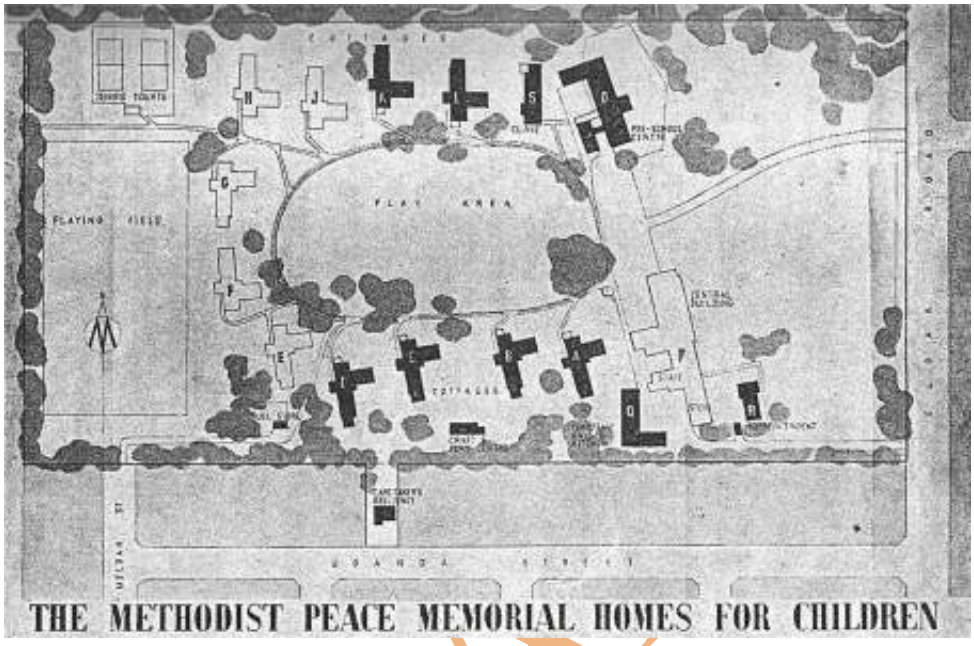
East side of former chapel

West side of former chapel (note flat-roofed addition)

General view of north frontage of Rentoul Hall

Detail of façade of Rentoul Hall

Historical Images



Original masterplan (1945), showing eleven cottages, clinic, pre-school, central building temporary hall and kitchen block, play centre, sports fields and residences for superintendent and caretaker (on Uganda Street) Source: Renate Howe and Shurlee Swain, All God's Children (1989).

Perspective sketch of amended masterplan (1946), showing chapel ultimately built to a different design. Source: Argus, 28 December 1946, p 13.

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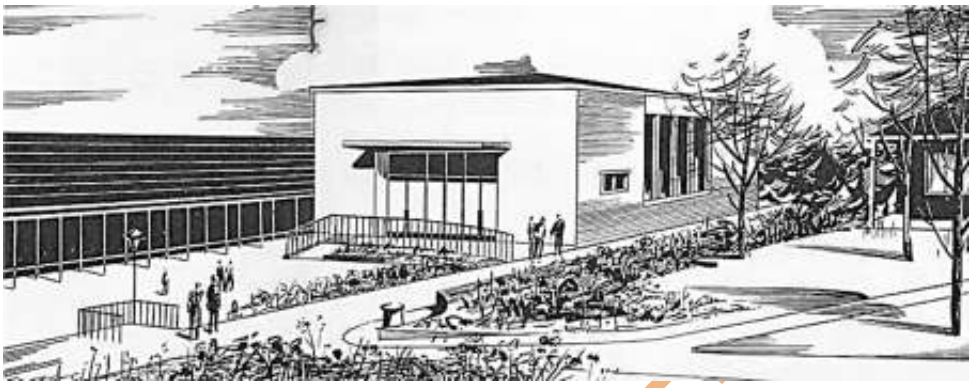

Sketch of original scheme for the assembly hall (c.1958), realised in a simpler form as Rentoul Hall (1959-60)
Source: "Suffer the Little Children", fundraising brochure, circa 1958.

View (c.1958) showing office building (left), with group cottages beyond; note brick retaining walls
Source: Picture Collection, State Library of Victoria (photograph by Wolfgang Sievers)

View looking west from Elgar Road (c.1959), showing (from L-R) the staff building (c.1953; demolished) Rentoul Hall (1959-60), office block (1956), a distant view of two cottages (c.1953) and the chapel (1956-57).
Source: Renate Howe and Shurlee Swain, All God's Children (1989) (photographer uncredited).

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View of cottages; note retaining walls (no longer extent) with memorial stone, drinking fountain and bench
Source: Picture Collection, State Library of Victoria (photograph by Wolfgang Sievers).

Views of the exterior (left) and interior of the chapel, photographed in 1959; note stained glass windows
Source: Wolfgang Sievers Collection, National Library of Australia (photograph by Wolfgang Sievers)

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IDENTIFIER	SMALL HOMES SERVICE HOUSES	**Citation Number**	P02
Other name/s	Age/RVIA Small Homes Service Houses	**Melway reference**	Various
Address	Various (see overleaf) BLACKBURN, BLACKBURN NTH/STH, BOX HILL NORTH, MITCHAM MONT ALBERT NORTH NUNAWADING, VERMONT		
Date/s	1947-54		
Designer/s	Various; see tabulated list		
Builder/s	Various		
Heritage Group	Residential buildings (private)		
Heritage Category	Houses		

Proposed places within group listing

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.2 The Small Homes Service and project housing				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☐ Fair ☐ Poor ☑ Good ☐ Fair ☐ Poor		
Recommendation	Include on heritage overlay schedule as heritage serial listing ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram above				

Group History

Initiated by the Royal Victorian Institute of Architects (RVIA) in 1947, the Small Homes Service (SHS) was the realisation of a bold idea that had been germinating for a long time. As architect and later SHS director Neil Clerehan put it, "for many years, the local profession, that is the RVIA, had the altruistic dream of providing architectural services to those unable to retain a private architect" (*Transition* 1992). With the end of WW2 bringing an unprecedented shortage of housing, the RVIA formed a committee in 1945 to "set up a service to provide plans and specifications for inexpensive houses designed by RVIA members" (*ibid*). The committee shortlisted three architects to act as SHS director and chose Robin Boyd (1919-1971), who was then working under Don Ward in the architectural section of Myer, following a brief partnership (1945-46) with Frank Bell and Kevin Pethebridge. While Boyd had designed a few suburban houses, he was better known as a writer and critic, through his editorship of the student newsletter *Smudges*. As the SHS director was obliged to write a weekly newspaper column, as well as develop and promote the range of standard plans, Boyd was the ideal candidate. The newspaper in question was Melbourne's venerable daily, the *Age*, which sponsored the venture, prompting its official title as the "the Small Homes Service of the RVIA, in conjunction with the Age".

From the time Boyd was appointed in January 1947, and the launch of the SHS in July, members of the RVIA were invited to contribute plans. Reflecting its titular "small homes" remit, the SHS offered modest dwellings of one, two or three bedrooms, with a floor area either 12 square (timber) or 12.5 square (brick/brick veneer), and a standard specification for each type of construction. Each design had an alphanumeric code, with an initial denoting its materiality (B, V or T), number of bedrooms, and a sequential number. Identities of contributing architects were withheld from publication, to maintain a distinction between the service's innovative model and the traditional process of clients engaging architects directly. Early contributors (aside from Boyd, who provided 25% of the plans himself), included such respected pre-war architects as John Scarborough, Horace Tribe, Robert Demaine, Stuart Calder and John Rivett, as well as emerging younger practitioners who were invariably close friends of Boyd from university or wartime days, such as Neil Clerehan, Kevin Pethebridge, Peter Newell, Frank Jessup and Robert Hodgson.

The first of the Boyd's weekly newspaper columns, published on 2 July ahead of the formal opening of the SHS on 7 July, summarised the service as follows:

> The Small Homes Service is a bureau designed to help the intending home builder with thorough and professional home advice… It offers the home builder the recommendation of leading members of the architectural profession in Victoria in all preliminary stages of building. It helps him with planning structure, estimation of costs, finance, finishes, fittings and equipment: all aspects of home design.
>
> It is based on a large library of house plans, each one especially designed by a member of the RVIA with his experience of years in home planning and particular regard to the present day difficulties of building… From the library of plans, a number will be selected to suit your family's requirements, the conditions of your site, your budget, your habits and your taste. Each will be a plan that incorporates the modern principles in home planning, with convenient, private, practical room arrangements with space-saving devices, with modern kitchen planned from the women's angle, with correct orientation and built-in storage spaces.
>
> There are plans to suit every aspect and every taste. With the help of the architect in attendance you may select the basic plan you prefer. The number of times your plan may be resold to others is limited... The originality of your home is ensured by a specification system which allows you fully freedom in selecting every detail. (*Age* 02/07/1947:5)

After a suitable design had been selected by the prospective homebuilder, payment of the wholly affordable sum of £5 provided them with a standard package of SHS documentation (including two sets of working drawings, standard specification and agreement forms) sufficient to enable tenders to be called, and construction to commence, by a builder of their choice. A revolutionary concept, the SHS brought well-designed houses within the reach of the average Victorian.

Mindful that a client's resources and tastes could vary, a degree of flexibility was inherent in the SHS. Some standard designs were conceived for future expansion, allowing for extra bedrooms or expanded living space. Plans could be mirror-reversed, and clients could also customise designs by opting for a different roof form or construction material. Such minor revisions were supported if not keenly encouraged by the service, which would prepare amended drawings as required (Serle: 92). Although more substantial revisions were not endorsed by the SHS, houses were often modified during construction (eg by changes to fenestration), which Boyd accepted as part of the broader process of houses being tailored to suit an individual's resources and needs. At the time that the service was launched, RVIA president W Race Godfrey stated (*Age* 02/07/1947:5):

> This is the first time that the profession has been organised to provide a highly specialised service at a cost within reach of every intending home owner, and we know that the Small Homes Service will not only benefit him, but will also immeasurably improve the standard of housing in the state.

The SHS proved an immediate success, with over 1,000 visitors attending the Flinders Street office during its first nine days. In 1948 alone, the service attracted 500 visitors per week and sold almost 100 plans per month. Such was its popularity that, by 1949, 10% of all new houses in Victoria had been built to a SHS design, with almost 5,000 examples completed by 1952 (Serle:92). By then, the range had increased to over 100 designs, running a stylistic gamut from conservative (invariably, traditional double-fronted houses with hipped or gabled roofs) to contemporary (with T-shaped or H-shaped plans, skillion roofs and window walls). Indicative of prevailing tastes of the day, the conservative designs were most popular; some of the more extreme modernist designs were never even purchased. Irrespective of style, houses were laid out in accordance with the latest design principles, such as the separation of sleeping and living zones, consolidation of service areas, and open planning to minimise extraneous circulation space. Rectilinear planning became the default, conceived for ease of construction. While the service actively encouraged its clients to opt for a modern skillion roof, and Boyd himself loathed traditional hipped roofs, many SHS houses were ultimately built with a simple gabled roofline.

During Boyd's seven-year stint as director, the SHS sustained its profile and profitability, bolstered by his stylishly laid-out, well-written and witty columns, plan exhibitions, wide circulation of plan folders and booklets, coverage by journals like *Australian Home Beautiful* and *Architecture & Arts*, and two display houses exhibited at Melbourne's annual home show, the *House of Tomorrow* (1949) and *Sunshine Home* (1951). During Boyd's last year as director, he sourced fresh contributions to the plan range though a design competition, which received much coverage in the column in late 1953. Amongst those who won prizes for their entries were architects Peter McIntyre, Kevin Borland, Bernard Joyce and Kenneth Hardcastle (*Age* 14/09/1953:6, 21/09/1953:6).

The booming post-war suburbs of the present-day City of Whitehorse emerged as early epicentre for SHS dwellings. A timber house in Main Street, Blackburn, built in 1949 to standard plan T22, was not only an example of the first SHS design ever published, but also became the first finished house to be profiled in the column, with a photograph appearing in early 1950 (*Age* 05/04/1950:4). Two years later, the column illustrated a new house at Vermont (*Age* 08/09/1952:6), followed by a two more, both in Blackburn, in the mid-1950s (Age 12/09/1955:8; 23/061956:8). While Blackburn became a major hotspot for SHS houses, a noted presence emerged elsewhere in the municipality's north-eastern fringes, in Box Hill North, Mitcham and Nunawading. The houses tended to be less common in Forest Hill, Burwood and Vermont, and, not surprisingly, seemingly unrepresented in the well-established pre-war suburbs of Surrey Hills and Mont Albert.

The SHS continued to thrive under Boyd's directorship until he resigned in late 1953 to resume private practice in partnership with Roy Grounds and Frederick Romberg. He was succeeded as SHS director by friend Clerehan, who had contributed plans to the range from 1947 and served as locum director when Boyd travelled overseas on his Haddon Scholarship in 1951. Forty years later, Clerehan reflected on Boyd's crucial period as foundation director of the SHS:

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> Boyd's ability, not only to design but also to publicise design, was the main reason for the Small Homes Service's initial and continuing success. Without him, there could probably have been a service of some sport, however lacking in flair and evangelism. (*Transition* 1992)

Following Boyd's departure, the SHS continued for another quarter-century, under a succession of directors, but failed to sustain what Philip Goad has described as the "unqualified success" of its initial incarnation under Boyd. The service became less profitable after Clerehan took over and, by the later 1950s, was competing with the emerging phenomenon of project housing. This would only become more dominant during the 1960s and beyond, as innumerable project housing firms flooded the market for affordable standardised dwellings.

Physical Description

The eighteen houses in the group listing share a common theme as examples of standard designs from the SHS range, dating from 1948 to 1954, which corresponds with the service's initial boom under Robin Boyd. All of the houses, by definition, are modest in scale, and all but one are single-storey. The SHS range offered very few double-storey houses, especially in its earliest years, and the house at 19 Acacia Street, Blackburn, built to a 1949 design by Boyd himself (V241) remains a very rare built example of that particular plan.

Aside from their common origin, comparable scale and similar dates, the houses in the group listing exhibit diversity in their planning, forms and finishes, demonstrative of the wide range of different plans that were available, contributed by different architects. Thirteen of the eighteen houses in the group represent examples of more conservative standard plans in the service range, with the other five being more progressive. This roughly amounts to a 70-30 split, which is an accurate reflection of the prevailing tastes of typical SHS clients during its early years.

Eleven of the eighteen houses in the group (almost two-thirds) have gabled roofs, mostly clad in terracotta or cement tiles although one example (10 Florence Street) retains what appears to be the original corrugated cement sheeting. Three houses have hipped roofs: one built in accordance with an original hip-roofed design (8 Hamilton Avenue) and two more where the hipped roof was the client's revision to an original design with a gable or skillion (47 Somers Street; 18 Goodwin Street). Four houses in a contemporary mode have bold skillion roofs. In three cases (2 Lexton Road, 26 Loddon Street, 5 Ronald Street), the skillions are split over two stepped parallel wings, while a third (13 Essex Street) has separate skillions to each of two perpendicular wings

Thirteen of the eighteen houses (almost 75%) have timber cladding, most often in the form of conventional weatherboards. One early house (714 Whitehorse Road) has a weatherboard dado to sill level, with cement sheeting above. The more overtly modernist houses are clad in narrower timber boards, fixed vertically (2 Lexton Road, 5 Ronald Street) or horizontally (13 Essex Street). The relatively few houses in the group of brick veneer construction include examples in clinker brick (62 Owen Street; 164 Central Road), pink brick (37 Bridgeford Street) and painted brick (19 Acacia Street), and one in rendered brick (8 Hamilton Avenue). Virtually all of the timber-clad houses have brick chimneys, typically of wide slab-like form, located along the side or end walls of a house so that they barely protrude through the roof plane, if at all.

Fenestration is varied. The more conservative houses tend to have traditional-style rectangular windows, larger picture windows and the occasional corner window, containing timber-framed double hung sashes or sometimes metal-framed casements (270 Springfield Road), sometimes multi-paned. The more contemporary styled houses tend to have larger timber-framed windows, sometimes in full-height bays (13 Essex Street; 5 Ronald Street) or continuous rows (19 Acacia Street). Front doors are sometimes set back into recessed porches (13 Essex Street; 62 Owen Street; 26 Loddon Street), or open onto small terraces with a separate flat or skillion-roofed verandah (13 Elm Street, 15 Charlotte Street).

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Comparative Analysis

As of 2024, the heritage overlay schedule includes no examples of houses built to designs from the Age/ RVIA Small Homes Service. Over the years, a number of individual specimens in the City of Whitehorse have been flagged as potential heritage places, namely those at 19 Loraine Avenue, Box Hill North (T226, 1948), 108 Morack Road, Vermont (T259, 1949), 23 Dalmor Avenue, Mitcham (T2130, 1953), 5 Ronald Street, Box Hill North (T2125, 1953), 28 Marchiori Road, Blackburn North (V256, 1954) and 2 Ireland Avenue, Mitcham (T377, 1958). The *City of Whitehorse Post War Heritage Review* (2016) shortlisted and assessed two others in Blackburn as higher priorities for individual heritage overlays: the notably early example at 111 Main Street (T22, 1949) and a later house at 27 Sheehans Road (T2124, 1956), each of which had a photograph published in the SHS column. However, both were withdrawn from the amendment: the former due to the owner's objections and the latter due to the extent of alteration to the street façade. The Main Street house has since been demolished, as have two other shortlisted examples at Loraine Avenue and Morack Road. Another, long known to have been built at an unconfirmed address in Marchiori Road, was only recently confirmed as No 28, but then discovered to have been demolished in the 1980s.

Most examples cited above were identified by references in contemporary newspapers or journals, or, in rare cases, by a consultant's educated guesswork in the field. As the archives of the SHS are incomplete, lacking a central register of clients or plans purchased, it has long been notoriously difficult to identify specific examples in any given suburb, much less to compile a list to provide a comparative framework. In more recent years, new research into the SHS has been undertaken by architect and historian Tony Lee, one of Australia's leading Boyd experts, whose findings will form the basis of a book and website. Working from first principles, Lee has identified permit applications for over 1,000 SHS houses in the eastern suburbs, and 300 in what is now the City of Whitehorse. The masterlist, which is a work in progress and may never be definitive, encapsulates houses that were proposed but not built and others built but yet to be conclusively located. As of 2020, Lee has located about 250 built examples in the City of Whitehorse. About 30% of these are noted to be demolished (as of 2020; a number of others have since followed). Of those still standing, many have been altered to at least some extent, some with substantial second storey additions and others extended or remodelled beyond recognition.

While certain parts of the City of Whitehorse had a higher proportion of SHS houses than others, research has failed to identify any areas where surviving examples remain in such proximity as to conceivably define a heritage precinct. By their very nature as standard plans sold separately to individual home owners, the houses did not develop in groups and, when examples existed in the same street or nearby, this was invariably coincidental. The SHS was keen that houses of the same design would not be built near each other, to deflect the cookie-cutter connotations of standardised housing, which is why the SHS limited the number of times each plan was sold. Lee's research has revealed a few rare instances where three SHS houses existed in the same street (eg Francis Street, Carween Street and Hodgson Street, all in Mitcham), and others where there were two, but, invariably, one or more houses in such streets has already been demolished or much altered.

Research for this study identified two larger areas of scattered SHS houses in the municipality: sixteen house in Mitcham (extending from McKeon Road and Beaufort Street, down Endeavour Street, Dalmor Road and Collina Street, to Burnett Street) and fourteen houses in Heatherdale (in the area loosely bordered by Brunswick Road, Creek Road, Purches Street and Orient Avenue). In both cases, however, houses are scattered over a wide area; some have already been demolished and others substantially altered. Ultimately, it was resolved that it would be more appropriate for surviving SHS house to be protected as a group heritage listing, encapsulating a larger area of the municipality in order to include the most intact examples, rather than attempt to define a precinct by relying on specimens that were less exemplary, and not necessarily in proximity.

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In defining a group listing, the consultants entreated Lee to provide shortlist of what he deemed as the best and/or most intact examples of SHS houses from the period under Boyd's directorship. His shortlist, comprising 33 houses built between 1947 and 1954, representing 25 standard plans, was then scrutinized. It was found that five of the houses had been demolished since 2020. While all of the houses seemed substantially intact, some were less intact than others (eg by replacement of wall or roof cladding). Where multiple examples of the same standard plan were represented, the most intact one was chosen. Ultimately, nineteen houses from Lee's list were considered as the best encapsulation of early SHS housing in the municipality, as the basis for a group listing.

These nineteen houses consisted of one from 1947, six from 1948, three from 1949, two from 1950, two from 1951, one from 1952, three from 1953 and one from 1954. They represented nineteen different designs, comprising two by Robin Boyd, three by Neil Clerehan, three by Robert Spence, two by John Rivett, two by Robert Demaine, and one each from Claude Dainton, Ken Hardcastle, Robert Hodgson, Rex & Lionel Jones, George Mitchell, Peter McIntyre and Ronald Wilson. This selection was considered appropriately representative of the various years and various architects (older pre-war architects versus younger emerging practitioners), as well as both conservative and progressive designs. It included a very rare two-storey design (by Boyd) as well as two designs that were sourced from the 1953 design competition (one of which won the first prize).

The shortlist of nineteen places for the group listing was reduced to eighteen when it became apparent that the house at 1 Hartigan Street, Blackburn (Ronald Wilson, 1948), a rare local example of standard design B21, from the less popular solid brick range, was already subject to a planning application for redevelopment. This, in itself, underscores the innate vulnerability of these early SHS houses and the urgency to preserve the best surviving examples.

Statement of Significance

What is significant?

The houses in this group, located at various addresses mostly in Blackburn and Mitcham, but also Blackburn North, Blackburn South, Box Hill North, Mont Albert North, Nunawading and Vermont, comprise eighteen dwellings that encapsulate the early years of the RVIA Small Homes Service during the foundation directorship of Robin Boyd, who held the position from its inception in 1947 until 1953. The eighteen houses represent eighteen different standard designs, prepared by eleven different architects including Boyd himself. Except for a rare double-storey example, they are single-storey dwellings, in timber of brick veneer, mostly demonstrative of conservative tastes but with a few in a more progressive contemporary mode.

Significant fabric is defined as the exterior of the original houses. Specific elements of significance include original rooflines (whether hipped, gabled or skillion), roof cladding (tiles or corrugated cement sheeting), wall cladding (variously weatherboard, vertical or horizontal timber boarding, brick veneer or cement sheeting), brick chimneys and fenestration.

How is it significant?

This group of eighteen houses in Blackburn, Blackburn North, Blackburn South, Box Hill North, Mont Albert North, Nunawading and Vermont, satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion D: Importance in demonstrating the principal characteristics of a class of cultural places and objects

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Why is it significant?

The houses are historically significant for associations with the early operation of the RVIA Small Homes Service, a bold initiative that represented the culmination of a long-held plan to make modern architect-designed dwellings affordable and achievable for the average Victorian. Based on an innovative model, where prospective homebuilders chose from a range of standard designs contributed by leading architects, then purchased (for only £5) documentation sufficient for their house to be erected, the scheme was ground-breaking at the time, saw unprecedented popularity and success during its early years under foundation director Robin Boyd (from 1947 to 1953), and its influence continued to resonate for years afterward. (*Criterion A*)

The houses are architecturally significant as a representative sample of intact dwellings built to standard designs of the RVIA Small Homes Service between 1947 and 1954, which was its initial and most successful period of operation under foundation director Robin Boyd. The eighteen houses in the group, considered the most intact surviving examples yet identified in the City of Whitehorse, encapsulate nineteen standard designs by eleven different architects, including two by Boyd himself and others by both established pre-war practitioners and members of a younger emerging generation. Representing both ends of the stylistic spectrum, from conservative to contemporary, and a range of forms, finishes and materials, the houses in the group provide evidence of when parts of the municipality, particularly in its north-eastern fringe, became an epicentre for this bold and innovative solution to the post-WW2 housing crisis. (*Criterion D*).

References

Small Homes Service of the RVIA, working drawings, various addresses, standard designs and dates, 1947 to 1954. City of Whitehorse.

Robin Boyd, "Small Homes Section", *Age*, 2 July 1947, p 5.

Neil Clerehan, "Age of Small Homes", *Historic Environment*, Vol 1, No 3 (January 1981), pp 5-8.

Neil Clerehan, "The Age RVIA Small Homes Service", *Transition* No 38 (1992), pp 56-69.

Philip Goad, "The Modern House in Melbourne 1945–1975", PhD Thesis, Department of Architecture & Building, University of Melbourne, 1992. Chapter 3, pp 30 -50.

Geoffrey Serle, *Robin Boyd: A Life* (1995), pp 91-100.

Information provided by Tony Lee, including a special preview of his forthcoming SHS website.

Previous Heritage Studies

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 2
[masterlist included six individual examples of SHS houses; study also included full citations for two other examples, but no heritage overlays were applied]

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List of places in group

No on Map	Address	Design	Architect / date / first published
1	19 Acacia Street, Blackburn	V241	Robin Boyd, 1949 *Age*, 6 April 1949, p 4
2	37 Bridgeford Ave, Blackburn	T37	John Rivett, 1948 *Age*, 17 March 1948, p 3
3	164 Central Road, Nunawading	V225	Robert Spence, 1948 *Age*, 1 September 1948, p 10
4	15 Charlotte Street, Blackburn South	T35	Robert Spence, 1948 *Age*, 11 February 1948, p 3
5	15 Elm Street, Blackburn	V39	John Rivett, 1948 *Age*, 7 July 1948, p 4
6	13 Essex Street, Blackburn North	V255	Neil Clerehan, 1953 *Age*, 11 May 1953, p 6
7	10 Florence Street Blackburn	T276	Neil Clerehan, 1951 *Age*, 19 September 1950, p 5
8	18 Goodwin Street, Blackburn	T319	Robert Hodgson, 1950 *Age*, 19 April 1950, p 5
9	8 Hamilton Avenue, Blackburn	V213	Robert Demaine, 1947* [unpublished design]
10	2 Kingsclere Court, Vermont	T314	Claude Dainton, 1950 *Age*, 3 August 1949, p 4
11	2 Lexton Road, Box Hill North	T2130	Kenneth Hardcastle, 1953** *Age*, 5 October 1953, p 6
12	26 Loddon Street, Box Hill North	T288	Robin Boyd, 1951 *Age*, 28 March 1951, p 7
13	62 Owen Street, Mitcham	T331	Peter McIntyre, 1952 *Age*, 24 June 1952, p 7
14	5 Ronald Street, Mont Albert North	T2125	Rex and Lionel Jones, 1953*** *Age*, 8 March 1954, p 7
15	7 Ross Street, Mitcham	V233	Neil Clerehan, 1949 *Age*, 16 February 1949, p 6
16	47 Somers Street, Mitcham	T328	Robert Spence, 1954 *Age*, 14 June 1954, p 6
17	270 Springfield Road, Nunawading	V234	George Mitchell, 1949 *Age*, 2 March 1949, p 6
18	714 Whitehorse Road, Mitcham	V221	Robert Demaine, 1948 *Age*, 7 April 1948, p 3

* *The date of this unpublished plan was determined by its sequence in relation to dated plans.*

** *This plan was the first prize winner (Class C) in the 1953 SHS design competition*

*** *This plan was an unplaced entry in the 1953 SHS design competition.*

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Current Images (March 2024) [preceded by original SHS perspective sketches]

19 Acacia Street, Blackburn
V241 (Robin Boyd, 1949)

37 Bridgeford Street, Blackburn
T37 (John Rivett, 1948)

164 Central Road, Nunawading
V225 (Robert Spence, 1948)

15 Charlotte Street, Blackburn
T35 (Robert Spence, 1948)

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15 Elm Street, Blackburn
V39 (John Rivett, 1948)

13 Essex Street, Blackburn North
V255 (Neil Clerehan, 1953)

10 Florence Street, Blackburn
T276 (Neil Clerehan, 1951)

18 Goodwin Street, Blackburn
T319 (Robert Hodgson, 1950)

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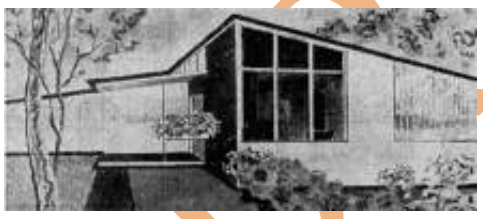
8 Hamilton Avenue, Blackburn
V213 (Robert Demaine, 1947)

2 Kingsclere Court, Vermont
T314 (Claude Dainton, 1950)



2 Lexton Road, Box Hill North
T2130 (Ken Hardcastle, 1953)

26 Loddon St, Box Hill North
T288 (Robin Boyd, 1951)

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62 Owen Street, Mitcham
T331 (Peter McIntyre, 1952)

5 Ronald St, Mont Albert North
T2125 (Rex / Lionel Jones, 1954)

7 Ross Street, Mitcham
V233 (Neil Clerehan, 1949)

47 Somers Street, Mitcham
T328 (Robert Spence, 1954)

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270 Springfield Road, Nunawading
V234 (George Mitchell, 1949)

714 Whitehorse Road, Mitcham
V221 (Robert Demaine, 1948)

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IDENTIFIER	SWEDISH PREFABRICATED HOUSES	**Citation Number**	P03
Other name/s	ASA Houses; Ormal Houses	**Melway reference**	Various
Address	30 Box Hill Crescent 26 Cameron Road 2 Olympiad Crescent 92, 98, 102, 104 and 108 Shannon Street BOX HILL NTH / MONT ALBERT NTH		
Date/s	1951; 1953-54		
Designer/s	Åmåls Sågverks Aktiebolag (Sweden)		
Builder/s	Ormal Constructions Pty Ltd		
Heritage Group	Residential buildings (private)		
Heritage Category	Houses		

Proposed places within group listing

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.3 Display villages and housing estates				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☐ Fair ☐ Poor ☑ Good ☐ Fair ☐ Poor		
Recommendation	Include on heritage overlay schedule as heritage serial listing ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries	☐ As indicated on diagram above			

Group History

This group of eight imported Swedish prefabricated timber houses comprises one example in Mont Albert North (1951) by an unknown manufacturer and seven others in Box Hill North (1953) by the firm known as ASA, imported and erected by a local company acting as ASA's agents.

In Australia, interest in prefabricated and other standardized dwellings burgeoned from 1945, when they were perceived as a solution to the housing shortage of the immediate post-WW2 era. While a number of dwelling prototypes were developed locally, such as the Indus House (1945), Myer House (1945), Beaufort House (1946) and Winwood House (1946), these met with mixed success. From the late 1940s, various authorities in Victoria explored alternatives from overseas, with the Education Department importing 'Bristol' prefabricated classrooms from Britain, the Railways Department sourcing its 'Operation Snail' staff housing also from Britain, and the Housing Commission of Victoria considering dwellings from suppliers in Britain, the Netherlands, France, Austria, Germany and Sweden. The last of these nations had become market leaders in prefabricated housing, partly due to the fact that Sweden remained neutral during WW2 and thus maintained a strong economy and a booming building industry during and just after the war.

In Australia, serious interest in Swedish prefabricated houses dates back to at least 1948, when a Swedish firm known as Stex joined forces with two Finnish counterparts, Puutalo and Puurakenne (described as "three of the world's leading manufacturers of timber prefabricated houses") to export factory-made timber houses to Australia (*Architecture* 12/1950:129). Six sample houses duly arrived, with one built in Canberra and the others in Sydney. In 1950, another Swedish form, Stockholms-Villor, exported twelve prefabricated houses to Melbourne. Specifically designed for Victorian conditions, these timber houses reportedly cost under £1,500, incorporated most fixtures and fittings, and could be assembled in 36 hours by a team of ten men (*Herald* 09/06/1950:10). The Swedish firm appointed local agents, which sought sites "within ten miles of the GPO" on which to develop the houses "complete and ready to move into" (*Herald* 16/06/1950:11).

In March 1950, a representative from another Swedish firm arrived in Australia for a month-long promotional tour. Torsten Bratt, export manager for Åmåls Sågverks Aktiebolag (ASA), stated that his firm, which offered not only houses but also blocks of flats and classrooms, could provide "immediate delivery of thousands of prefabricated houses to Australian housing authorities", citing recent success in supplying houses for oilfields in Saudi Arabia and Iran (*Age* 14/03/1950:3). Bratt's plan to visit Canberra and the state capitals "to discuss plans with housing officials" clearly met with success. In May, a new company, Ormal Constructions Ltd was registered in Melbourne, with Bratt as a subscriber, as local agents for ASA Houses (*Herald* 01/06/1950:6). In June, the firm secured a Commonwealth contract to provide an initial 1,000 houses, which resulted in an ongoing association that saw thousands more ASA Houses built at army camps across the country, RAAF bases in Williamtown, NSW, and East Sale, Victoria, and the *HMAS Penguin* naval base in Georges Heights, NSW. In August 1951, Bratt returned to Australia to sign a contract for a tender that Ormal Constructions secured for 500 houses for the Tasmanian government (*Age* 03/08/1951:4).

This rising interest in Swedish prefabricated houses manifested itself in the City of Whitehorse in 1951, when an example was erected at 30 Box Hill Crescent by Ulbe Siegersma, a Dutch migrant who had arrived in Melbourne earlier that year. While the property's rate card bears a scrawled note describing the house as a "Sweedish [*sic*] pre-fab", no drawings or other documentation have been located to confirm the identity of the manufacturer. It seems more than a coincidence that, during that same year, other Swedish prefabricated houses were built in the area as a speculative venture by Ernest Oscar "Ossie" Lundgren (1904-1981), one of Box Hill's best-known and most prolific builders, and himself a Swedish émigré. Most notable of Lundgren's local forays into Swedish prefabrication was his construction of a house in Wimmera Street, Box Hill, which had been custom-made by a Stockholm firm, Wallenberg, in accordance with a standard design (T289) supplied by the Age Small Homes Service (*Age* 13/10/1952:6).

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Encouraged by its government contracts, Ormal Constructions hoped to expand into the private housing market and, in July 1952, an ASA House was displayed at the annual Home Show at the Exhibition Building. Occupying prime position under the dome, the house was fully fitted out, staged "with contemporary furniture at budget prices" and set "amongst garden surroundings", promoted as "the answer to home seekers requiring a compact, efficiently planned home quickly at a reasonable price" (*Age* 22/07/1952:7). One lengthy feature article praised the house for its modular planning, natural lighting, "model kitchen", waterproof wallboard and extensive built-in furniture and storage (*Argus* 23/07/1952:9). Special attention was drawn to the exterior, noting that "one of the most attractive features of the house is the vertical boarding to the outside walls. To many this will appear unusual, but it is a very general type of finish in Europe and America". A display house, of a different design, was subsequently erected at Ringwood, at the corner of Whitehorse and Georges Road, which opened on 8 November for a fortnights' public inspection. It attracted much press attention, with one report observing that "it is erected in four-foot sections, rather like a child's building toy, at a cost of £3,200" (*Sun* 14/11/1952:10), and another drawing attention to its "strategically placed cupboards" (*Argus* 06/11/1952:7). During the first week, the display house was reportedly visited by 2,400 people.

During 1953, Ormal Construction began acquiring vacant land in Box Hill North to develop more ASA Houses. Rates records, helpfully indexed by the Box Hill Historical Society, confirm that the company acquired nineteen blocks in the area, including five sites along the north side of Shannon Street, and two others in adjacent Olympiad Crescent. All nineteen blocks were developed with ASA Houses during 1953-54. Surviving documentation from the City of Whitehorse's building permit archive shows that the company submitted standardized working drawings from Sweden, bearing the logo and title block of Åmåls Sågverks Aktiebolag. These also reveal that two different designs were represented, designated as Type 6000 (drawing dated 30 April 1952) and Type 6001 (drawing dated 5 May 1952). A third variation, Type 6071, was represented in Cameron Road (and probably elsewhere). Working drawings for a surviving example at No 26, dated 8 June 1953, differ slightly in that they bear the title block of Ormal Constructions Ltd and were presumably drafted specifically for the permit application. This house was built in 1954.

At least six ASA Houses had been completed by the end of July 1953, when a prominent illustrated advertisement appeared in a daily newspaper under the heading "Immediate occupancy at Box Hill" (*Age* 29/07/1953:14). It was further revealed:

> At Ringwood last year, 40,000 people inspected and appraised this attractive modern ASA Exhibition home. Now, six ASA weatherboard [*sic*] homes of identical and other designs are now available for IMMEDIATE OCCUPANCY at Shannon Street, Box Hill. They are all of the same high standard as the model home shown last year. All facilities supplied, ready for immediate living in. COMPLETE HOME IS PRICED LOWER THAN CURRENT BUILDING COSTS. Situated only ¼ mile from Box Hill station (on bus service). A unique opportunity to get a new COMPLETE home under current costs. Inspect at Shannon Street, Box Hill, this weekend. Representatives on site all day Saturday and Sunday.

Four weeks later, a second advertisement announced that these Box Hill houses had already been sold, although "a further three ASA weatherboard homes, of identical and other designs" were still available in the vicinity (*Herald* 28/08/1953:9). While documentation of subsequent schemes by Ormal Construction is sparse, a number of individual houses are known to have been erected elsewhere in Melbourne, including isolated examples in Nunawading and Blackburn. During the closing months of 1953, Ormal Constructions continue to advertise its ASA Houses, including promotion of a variation known as the ASA Weatherboard House, reported to have been designed specifically for rural Victoria (*Weekly Times* 28/10/1953:46). It was lauded as being

> unbeatable for long-lasting economy and solid all-round comfort… Particularly suited to the man on the land for his own dwelling, they also solve the staff housing problem. Craftsman built throughout, streamlined production and modern efficient erection methods mean that they compare favourably with homes twice their cost.

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The company's tireless promotion continued into 1954 (*Herald* 05/03/1954:17). In June, an ASA House was sold to well-known Melbourne architect Ronald Lyon, who built it in seven weeks on a site in Collins Street, Brighton, as a residence for his own family. This, evidently, was not enough to sustain the company's activities and, in late July, an ominous newspaper notice announced the forthcoming auction of remaindered stock of Ormal Constructions, comprising "33 prefabricated buildings suitable for weekend cottages, garages, workshops, sleep-out, etc" as well as various plumbing fixtures, windows and cupboard units. While the company ceased trading, the ASA House would receive its final hurrah towards the end of that year, when architect Ronald Lyon's own house in Brighton received a brief write-up in a newspaper (*Herald* 05/11/1954:12)

Since the 1980s, almost half of the ASA Houses that Ormal Constructions built in Box Hill North during 1953-54 have been demolished, while those that survive have typically been extended, and some heavily modified by replacement of original vertical timber boarding with conventional weatherboard, reconfiguration of fenestration and so on.

Physical Description

By their very nature as standardized prefabricated dwellings, the seven ASA Houses in Box Hill North are similar in appearance and, in some cases, of identical design. Broadly speaking, they are characterised by rectilinear plans, hipped roofs clad in terracotta tiles with red brick chimneys, and external cladding of ship-lapped vertical timber boards (which, as per contemporary reports, is believed to be Baltic Pine). Fenestration is simple and repetitive, clearly following the modular grid of the prefabrication system, with windows arranged as single, paired or tripartite bays of timber-framed double-hung sashes.

The following variations are evident in the three different standard plan types:

- **Type 6000** (92, 98, 102, 108 Shannon Street) (designed 1952; built 1953)
  Two-bedroom house with stepped rectilinear plan and asymmetrical double-fronted street façade incorporating a recessed corner verandah (squat rectangular) beneath the hipped roofline; brick chimney positioned along the long side wall.
- **Type 6001** (104 Shannon Street; 2 Olympiad Crescent) ((designed 1952; built 1953))
  Three-bedroom house with offset rectilinear plan and asymmetrical double-fronted street façade incorporating a recessed corner verandah (elongated and narrow) beneath the hipped roofline; brick chimney positioned along the street façade; entry porch has arched doorway and a porthole window to the side.
- **Type 6071** (26 Cameron Road) (designed 1953; built 1954)
  Two-bedroom house with L-shaped plan and elongated asymmetrical double-fronted street façade incorporating a partially recessed off-centre verandah (narrow); brick chimney positioned along the shorter side wall of the housel;

At some point, the exterior of the house at 108 Shannon Street, Box Hill North (ASA House Type 6000) was reclad in proprietary panelling in imitation of face brickwork, which has more recently been overpainted in a dark grey tone. Despite this alteration, the house is still considered to be substantially intact, as the original vertical timber cladding almost certainly survives underneath, and the original appearance of the house could be readily reinstated by its removal.

The house at 30 Box Hill Crescent, Mont Albert North, for which no original drawings have been found, represents a different design (and possibly a different manufacturer). It has a rectangular plan, a gabled roof clad in corrugated metal sheeting, and an asymmetrical double-fronted street façade with vertical timber boarding, recessed porch and multi-paned double-hung sash windows and french doors.

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Comparative Analysis

While it is unknown how many Swedish prefabricated houses may have been built in what is now the City of Whitehorse, rate records indexed by the Box Hill Historical Society confirm a closed set of nineteen examples of the ASA House that built in 1953-54 on sites that were acquired by Ormal Constructions in Box Hill North. The seven examples included in the group listing, in Shannon Street (Nos 92, 98, 102, 104 and 108), Olympiad Crescent (No 2) and Cameron Road (No 26), are considered the most intact surviving specimens. Virtually all of them have been extended to the rear (including one at 98 Shannon Street with a two-storey rear addition), and two others on corner blocks have had second dwellings erected behind them (92 and 102 Shannon Street), but these seven houses are otherwise considered to be substantially intact, retaining original vertical timber boarding, red brick chimneys, fenestration and distinctive details such as the arched porches and porthole windows. While the exterior of the house at 108 Shannon Street has been reclad with fake brick cladding, the original boarding is very likely remain underneath and the re-cladding could be readily removed to reinstate the original appearance.

Of the other twelve ASA Houses built in Box Hill North, four remain standing but have been more fundamentally altered by replacement of original vertical timber board cladding with conventional weatherboard. This alteration, which is not readily reversible, makes them difficult to interpret as ASA Houses, hence their exclusion from the group listing. These houses are located at 39 Cameron Road, 568 Elgar Road (aka 1b Derwent Street), 5 Horfield Avenue and 6 Olympiad Crescent. The other eight local examples, all demolished since the 1980s, stood at 2 and 8 Anthony Crescent, 30 and 32 Cameron Road, 129 Dorking Road, 7 Goulburn Street, and 11 and 13 Mitta Street.

Little is also known of the Swedish houses erected in 1951 by local builder (and later Mayor of Box Hill), Ossie Lundgren. The high-profile example erected to a standard design of the Small Homes Service, located at 37 Wimmera Street, Box Hill North, was demolished in the 1980s. When first offered for sale in December 1951, a newspaper advertisement described it as a "Swedish Baltic timber house", citing Lundgren's telephone number as the contact (*Age* 01/12/1951:27). The same issue also listed two other houses, with the same description and contact details, in Station Street, Box Hill, and Springfield Road, Blackburn. The exact addresses of these two houses have not been confirmed, although reference to aerial photographs suggests that neither still exists.

To date, the only other Swedish prefabricated houses located in the municipality are two examples in the former City of Nunawading, both identified by Tony Lee. They are both ASA Houses of the Type 6071 variation, with working drawings dated mid-1953, bearing the title block of Ormal Construction Ltd (rather than ASA). One of the houses, at 2 Ross Street, Mitcham, has been altered by the replacement of vertical timber cladding with weatherboard. The other, at 20 Morden Court, Nunawading, retains the original cladding but has been otherwise altered by overpainting of the red brick chimney and the insertion of an air-conditioning unit through the street façade.

Few Swedish houses have been identified elsewhere in Melbourne, or Victoria. The ASA display house built at Ringwood by Ormal Constructions, located at 2 Georges Road, was demolished in the 1980s. The example that architect Ronald Lyon built for himself still stands at 21 Collins Street, Brighton, albeit engulfed by a large addition. Newspaper references have been found advertising a "Swedish prefab" in Highett (*Age* 11/03/1953:16) and a "two-year-old Swedish prefab home" in Frankston (*Age* 21/05/1953:8), but, with no street addressed given, these cannot be easily located. ASA Houses from the early Commonwealth government contract were built at the army camp at Puckapunyal and the RAAF base in East Sale, but their current status is unknown. At East Sale, the first 24 houses were built in late 1951 (*Gippsland Times* 11/10/1951:2), with some reportedly still standing "in good condition" in 1994 (Lewis 33.33). The former *HMAS Penguin* naval base in Georges Heights, NSW, retains some surviving ASA Houses, comprising one at 7 Commonwealth Avenue and a group of four at 1201, 1202, 1203 and 1204 Middle Head Road. These five houses have statutory heritage protection via the Mosman Council's Local Environment Plan.

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Statement of Significance

What is significant?

This group of eight imported Swedish prefabricated timber houses comprises an early example at 30 Box Hill Crescent, Mont Albert North, erected in 1951, and seven others in Box Hill North, at Shannon Street (Nos 92, 98, 102, 104 and 108), Olympiad Crescent (No 2) and Cameron Road (No 26), erected in 1953-54. The examples at Box Hill North represent three different standard designs from the Swedish firm of Åmåls Sågverks Aktiebolag (ASA), marketed and erected by their local agents, Ormal Constructions Ltd, while the earlier example at Mont Albert North was supplied by an unidentified manufacturer. All eight houses are similar in form with rectilinear plans, simple rooflines, modular fenestration and vertical timber cladding

Significant fabric is defined as the exterior of the original houses. Specific elements of significance include the modular expression, vertical timber cladding, red brick chimneys, timber-framed double-hung sash windows, recessed porches and (for the ASA houses of Type 6001) arched doorways and porthole windows.

How is it significant?

This group of eight imported Swedish prefabricated timber houses in Mont Albert North and Box Hill North satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion D: Importance in demonstrating the principal characteristics of a class of cultural places and objects

Why is it significant?

The houses are historically significant for their broad associations with the burgeoning interest in prefabricated dwellings the developed after WW2, when they were perceived as a solution to the growing housing crisis. More specifically, the houses provide evidence of the parallel enthusiasm for sourcing prefabricated, pre-cut or other factory-made dwellings from Continental Europe and the UK, and especially from Sweden, then considered the market leader in prefabrication. The houses in this group listing, mostly supplied by ASA via their local agents Ormal Constructions, demonstrate the interest that Swedish housing firms had in breaking into the Australian market during the peak period from the late 1940s to the early 1950s, when the trend petered out as other mass-housing solutions became available. The houses in Box Hill North represent the most intact survivors from nineteen local ASA Houses, of which eight have already been demolished and four others much altered. (*Criterion A*)

The houses are significant as representative and substantially intact examples of what were, at the time of construction, generically referred to as prefabricated Swedish houses. While such houses were provided by a number of different manufacturers, they all reflected their common Swedish origins through their simple rectilinear forms, basic rooflines, modular planning and fenestration, and, particularly, the distinctive exterior cladding of vertical Baltic pine boards that, while ubiquitous in Northern Europe, was then rarely seen in Melbourne. (*Criterion D*)

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References

"1,000 pre-cut homes for Tasmania", *Age*, 3 August 1951, p 4.

ASA, "Ormal Constructions: House Type 6000", working drawings, dated 30 April 1952. Building Permit Nos 3085/1953 (98 Shannon Street), 3086/1953 (102 Shannon Street), 3087/1953 (108 Shannon Street) and 3561/1953 (98 Shannon Street). City of Whitehorse.

ASA, "Ormal Constructions: House Type 6001", working drawings, dated 5 May 1952. Building Permit Nos 3084/1953 (2 Olympiad Crescent) and 3560/1953 (104 Shannon Street). City of Whitehorse.

"Crowds flock to see house built by Swedes", *Argus*, 23 July 1952, p 9.

Ormal Constructions Pty Ltd, "Two bedroom house 6071", working drawings, dated 8 June 1953. Building Permit Nos 4387/1954 (26 Cameron Road). City of Whitehorse.

"Immediate occupancy at Box Hill", *Age*, 29 July 1953, p 14; 28 August 1953, p 9.

"This attractive ASA Weatherboard [*sic*] Home can now be yours", *Herald,* 5 March 1954, p 7.

"It began as a pre-fab", *Herald,* 5 November 1954, p 12.

City of Box Hill Rate Cards, 1947-53. West Ward, Assessment No 7509 (30 Box Hill Crescent); East Ward, Assessment Nos 169 (8 Anthony Crescent), 170 (6 Anthony Crescent), 172 (2 Anthony Crescent), 676 (26 Cameron Road), 678 (30 Cameron Road), 679 (32 Cameron Road), 690 (39 Cameron Road), 1421 (568 Elgar Road), 1737 (7 Goulburn Street), 2041 (5 Horfield Avenue), 3246 (13 Mitta Street), 3247 (11 Mitta Street), 3455 (6 Olympiad Crescent), 3257 (4 Olympiad Crescent), 4238 (108 Shannon Street), 4240 (104 Shannon Street), 4241 (102 Shannon Street), 4242, 4243 (98 Shannon Street), 4246 (92 Shannon Street). Box Hill Historical Society. Index online at <www.boxhillhistoricalsociety.com.au/wp-content/uploads/2017/05/Box-Hill-Rate-books.pdf>

Miles Lewis, "The Australian Aftermath", May 2016. Excerpt (Chapter 33) from unpublished survey of prefabricated buildings in Australia. Courtesy Professor Miles Lewis.

Scott Robertson, "Swedish Prefabricated Houses: Mosman, NSW". *National Register & New International Selection Minimum Fiche*, prepared for Docomomo Australia, Sept 2004. <https://docomomoaustralia.com.au/swedish-prefabricated-houses-mosman-1951>

Abdaulaziz Alshabib & Sam Ridgeway, "ASA 302 @ Georges Heights: Swedish Timber Prefabs in Australia", *Fabrications*, Vol 30, No 3 (2020), pp 323-345.

Previous Heritage Studies

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 2, graded A [this study identified the single example at 30 Box Hill Crescent, Mont Albert North]

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10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

Current Images (March 2024)

30 Box Hill Crescent,
Mont Albert North (1951)
Manufacturer unknown

26 Cameron Street,
Box Hill North (1953-54)
ASA House (Type 6071)

2 Olympiad Crescent,
Box Hill North (1953)
ASA House (Type 6001)

92 Shannon Street,
Box Hill North (1953)
ASA House (Type 6000)

98 Shannon Street,
Box Hill North (1953)
ASA House (Type 6000)

102 Shannon Street,
Box Hill North (1953)
ASA House (Type 6000)

104 Shannon Street,
Box Hill North (1953)
ASA House (Type 6001)

108 Shannon Street,
Box Hill North (1953)
ASA House (Type 6000)

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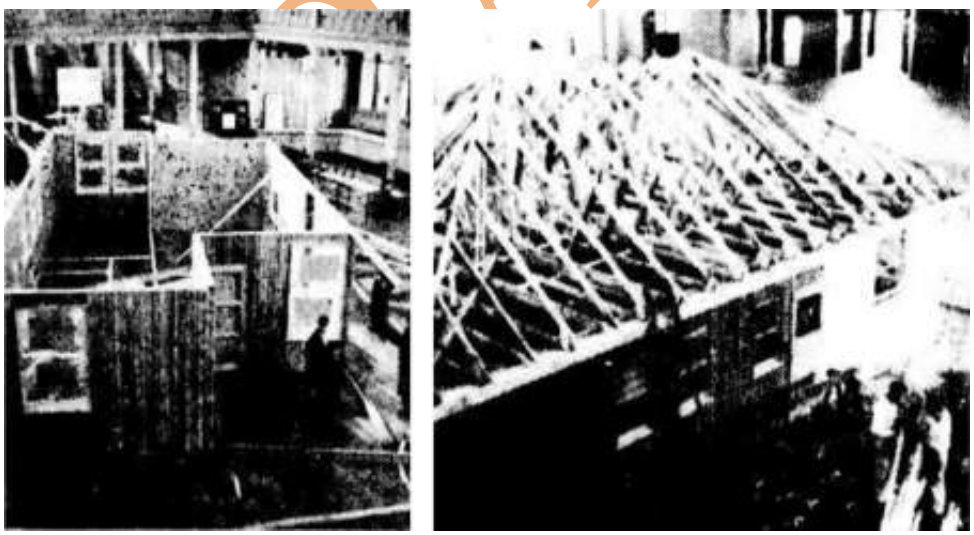
10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

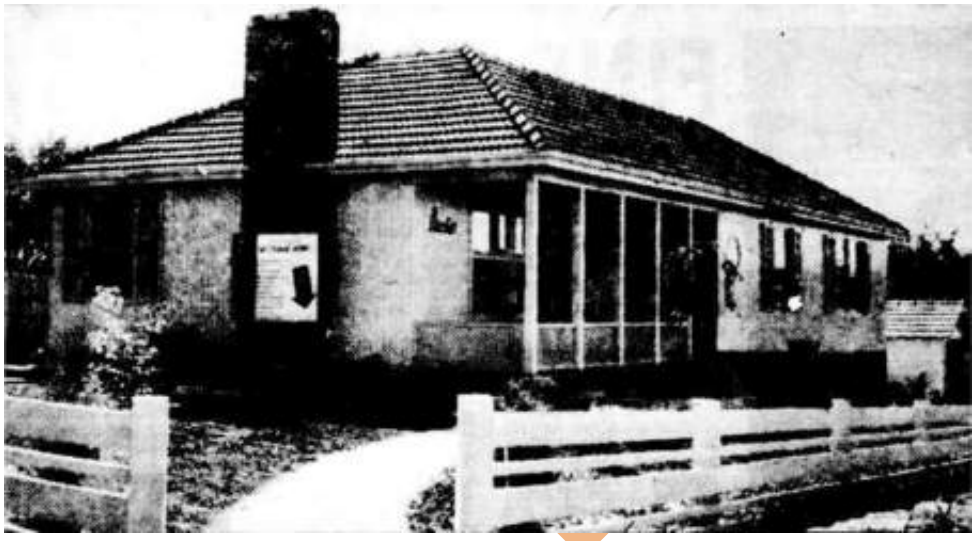
Historical Images

The early Swedish prefabricated house at 30 Box Hill Crescent (1951), photographed in 1978.
Source: Box Hill Historical Society



The ASA House (Type 6000) being assembled at the Exhibition Building for the 1952 Home Show
Source: Argus, 23 July 1952, p 9.

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage



The display model of the ASA House (Type 6001) at Ringwood, opened for public inspection in late 1952
Source: Sun, 14 November 1952, p 9.

One of the ASA Houses in Box Hill North, at 6 Olympiad Crescent (Type 6000) photographed in 1978.
Source: Box Hill Historical Society

10.5 – ATTACHMENT 2. City of Whitehorse Heritage Review 2024 Volume 2 Draft 18 June 2024, Built Heritage

IDENTIFIER	POST-WW2 MODERNIST HOUSES	**Citation Number**	P04
Other name/s		**Melway reference**	Various
Address	5, 6, 9 and 16 Andrew Street 29, 35, 42, 44, 46, 47, 49 and 59 Menin Road 68 and 68a Shady Grove FOREST HILL		
Date/s	1959-73		
Designer/s	Various; see tabulated list		
Builder/s	Various		
Heritage Group	Residential buildings (private)		
Heritage Category	Houses		

Proposed places within group listing

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.1 Modernist architecture and the architect-designed house				
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor
Recommendation	Include on heritage overlay schedule as heritage serial listing ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls				
Extent of HO	☑ To title boundaries ☐ As indicated on diagram above				

Group History

The area bisected by the southern ends of Shady Grove and Menin Road, straddling present-day boundary between Nunawading and Forest Hill, comprises Crown Allotments 116C and 116E of the Parish of Nunawading. These two elongated blocks, with frontage to the north side of Canterbury Road, spanned 40 areas and 20 acres respectively, were originally granted to T Jobbins (1 June 1871) and F A Voight (10 November 1871). There would be little change in this land until the 1910s, when the Melbourne & Metropolitan Board of Works (MMBW) commenced work on what became known as the O'Shannassy Aqueduct, a major new water supply pipeline from the Upper Yarra. A portion of the pipeline's route, extending south-west from Mitcham to Syndal, passed through local properties, sharply bisecting CA 116C and 116E.

During 1920, CA116C was subdivided to create the *Holberry's* [sic] *Paddock Estate*, named after local settler Robert Holbery (1837-1914), a retired coach driver who, until his death, lived at *Belmont* on the corner of Springvale Road and Canterbury Road (*BH Reporter* 24/07/1914:5). A new street, Shady Grove, was formed as an adjunct to the dog-leg halfway along existing Mount Pleasant Road, extending south across the MMBW easement. When advertised for auction in December, the new estate was described as "43 choice tree-clad blocks…. commanding a fine stretch of pretty countryside". Another decade passed before the adjacent CA 116E was similarly subdivided for residential development. Menin Road was created, extending south from Mount Pleasant Road and terminating at the MMBW easement, providing access to 37 allotments. The new subdivision, known as the *Hill 60 Estate*, was advertised for auction in 1929. As had been the case for *Holberry's Paddock Estate*, publicity emphasized the bucolic character of the area. A statement from a leading tourism expert was provided under the heading "A great homemaking proposition 'midst nature's own beautiful timber':

> During my recent rambles I found tucked away in the delightful Tunstall Hills, a perfect block of land subdivided read for sale… From any point, beautiful glimpses of the surrounding mountain may be obtained while all around are charming homes and flower gardens. Water and electric light combine to ensure idea conditions for the home-seeker away from the toil and moil of the metropolis.

Notwithstanding such endorsement, neither the *Hill 60 Estate* nor the *Holberry's Paddock Estate* experienced immediate success. An aerial photograph form 1945 shows only a few scattered houses had been built along Shady Grove by that time: a handful on the east side at the northern end (including inter-war bungalows still standing at Nos 11 and 19-21) and several others at the southern end, on both sides. Menin Road, by contrast, remained wholly undeveloped: not a single house had been built, the land had only partially been cleared of trees, and the road itself was an unsealed track. This setting became more pronounced south of the MMBW easement, where the alignments of Menin Road and Shady Grove both petered out into a series of winding bush pathways amidst even denser scrubland. An aerial photograph of 1951 shows that the number of houses at the northern end of Shady Grove had almost doubled, while the corresponding strip of Menin Road had finally become formalised as a trafficable (albeit still unsealed) roadway, with around twenty houses that included a few still under construction. However, the area to the south of the MMBW pipeline easement remained as the same undeveloped expanse of dense bushland.

This area was finally subdivided during 1956, with an aerial photograph from that year showing the bushland bisected by new extensions to both Shady Grove and Menin Road, along with the shorter linking roadways of Andrew Street (parallel to the MMBW easement), Fisher Street and Will Street (both parallel to Canterbury Road) and two cul-de-sacs, Valma Court and Jocelyn Court (flanking Shady Grove). The subdivision plan, gazetted in March 1957, shows that the new estate comprised 53 allotments, all fronting these newly-formed streets apart from four on Canterbury Road (LP 40154 and 40155, 27/03/1957).

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The first new houses on the estate, already apparent on the 1956 aerial photograph, were located on its south-western fringe, at what are now 2 and 6 Jocelyn Court, 73 Shady Grove and 1 Will Street. However, no houses are evident in the stretches of Shady Grove and Menin Road between Fisher Street and the MMBW easement, or the linking roadway of Andrew Street. One of the first houses in this area was built on a triangular-shaped block at 55 Shady Grove, abutting the angled MMBW easement. The residence of garage proprietor Lindsay Rose, it was designed by his friend, architect J Dale Fisher; although working drawings are dated 30 March 1955, construction had evidently not started at the time of the 1956 aerial photographs, which shows the site still vacant. The completed house is belatedly recorded in the directory listings in 1959.

The first new house in the parallel strip of Menin Road was No 49, erected in 1958 for Brian F Spears. Working drawings, dated December 1957, confirm that Spears (credited on the title block as "designer and draughtsman") designed the house for himself. Development of Andrew Street intensified in the late 1950s, with a house at No 16 that represented an early project for another talented non-architect, Alistair Knox. Subsequent settlement of Andrew Street was swift, with six more houses by 1960, at Nos 2, 5, 7, 9, 10 and 12. By then, the adjacent block of Menin Road had also developed further, with new houses at Nos 29, 38, 39, 43, 50, 54 and 61. Several houses had appeared along Fisher Street, and a few more in Shady Grove, including Nos 57, 59 and 70, near the Andrew Street corner. Expansion continued steadily into the early 1960s. Gerrit Hartland, a Dutch-born architect, purchased a vacant block at 6 Andrew Street in 1959 and prepared drawings for a house for his own family. However, due to problems in securing finance, he did not begin construction until 1961; his house was finished in late 1963. By then, a few more houses had been built in the same street (Nos 3 and 4), and in nearby Menin Road (Nos 33, 40, 45, 48 and 51).

The remaining vacant lots filled out from the later 1960s. In 1965, young architect William Luttrell (later famous as co-founder of the 1970s partnership of Carter & Luttrell) designed a house at 55 Menin Road. That year, architect Conrad Theodore, who had just opened his own sole practice after working in the office of Harry Norris & Partners, acquired land at 44 Menin Road and designed a house for himself. Laid out on a zoned courtyard plan, the house was profiled in the property column of a daily newspaper (*Herald* 22/04/1966:21). Soon after, a house was erected next door, at No 46 (architect unknown) and, around the same time, engineer Keith Trundle bought a vacant site at 68 Shady Grove. His elder sister, Ailsa Trundle was not only an architect but also a named partner in the major city practice then known as R S Demaine, Russell, Trundle, Armstrong & Orton. Although original working drawings have not survived, it is very likely that Keith Trundle's house was designed by Ailsa's firm, if not by Ailsa herself.

The later 1960s saw the rise of high-end project housing firms, and several would be represented in the Menin Road/Shady Grove area. Four houses in the vicinity were built to designs from Merchant Builders, Melbourne's leading exponent of high-end project housing. The first, at 59 Menin Road, was erected in 1966 to a popular standard design, the *Terrace TF* by architect Graeme Gunn. Three more Merchant Builders houses duly appeared at 42 Menin Road (1973), 57 Menin Road (1973) and 1 Andrew Street (c.1974). This phase saw two more houses in the vicinity built to designs from other project housing firms: one at 47 Menin Road by Glendaren Homes (1968) and another at 68a Shady Grove by Sibbel Bothers (1970). Another late addition, completed in 1972, was the house at 35 Menin Road. Working drawings, dated October 1971, confirm it as the work of a Prahran-based designer, M B Savage.

Thus, by 1974, virtually all of the blocks in this vicinity, comprises the stretches of Menin Road and Shady Grove between the MMBW pipeline and Fisher Street, and the connecting thoroughfare of Andrew Street, had been built upon. Both sides of Andrew Street were fully developed, with only two vacant sites remaining in Menin Road (Nos 41 and 52). At that time, many of the original property owners were still in residence, including architects Gerrit Hartland (6 Andrew Street) and Conrad Theodore (44 Menin Road), and designer Brian Spears (49 Menin Road)

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Most of the houses in the group have been extended to the rear, in some cases (6 and 16 Andrew Street, 66 Shady Grove) by the original designers. Since the 2010s, a few original houses have been demolished, including Merchant Builders project houses at 57 Menin Road and 1 Andrew Street, and another house of unknown designer (c.1960) at 31 Menin Road. Two noted architect-designed houses in the area, at 55 Shady Grove (J Dale Fisher, 1955-57) and 55 Menin Road (William Luttrell, 1965) have both been significantly altered, almost beyond recognition.

Physical Description

The fourteen houses in the group, despite having a diversity of design origins, and construction dates that span a period of some fifteen years (from c.1957 to c.1973), demonstrate a commonality in that they are all examples of post-war modernist residential architecture. As such, they share the broad modernist characteristics of low rooflines, stepped rectilinear plans and large windows.

Most houses have the quintessentially modernist flat roof, although two earlier ones have a steeper skillion (5 Andrew Street, 29 Menin Road), and three others have very low gable (49 Menin Road, 16 Andrew Street, 68a Shady Grove). The flat-roofed houses have broad eaves and wide fascias, imparting a strong sense of horizontality. Most houses are of masonry construction, typically face brickwork that varies from the grey tones of earlier examples in concrete or silica brick (48 Menin Road, 9 and 16 Andrew Street), through to clay bricks in beige (35 Menin Road, 68 Shady Grove), medium brown (47 and 59 Menin Road) and orange (47 Menin Road), to variegated clinker brick (42 Menin Road; 68a Shady Grove) in later examples. In three cases (44, 46 and 49 Menin Road), external brickwork has been overpainted in pale neutral tones. Three of the earliest houses in the group (c.1959-60) are of timber construction, with exterior cladding of boards that have been fixed either vertically (29 Menin Road, 6 Andrew Street) or horizontally (5 Andrew Street).

There is some variation in street frontages. Some houses (35, 42 and 46 Menin, 68a Shady Grove) effectively present a wide and flat façade to the street, while others have a projecting bay that creates asymmetry. All houses have large windows, most often in the form of full-height bays that extend across most of the street frontage (35, 42, 44, 46, 49 Menin Road, 9 and 16 Andrew Street). Others have full-height window bays alternating with areas of solid wall (47 and 59 Menin Road, 66 Shady Grove). Two houses (6 Andrew Street and 66a Shady Grove) are more introspective in that they present an effectively blank façade to the street, with large windows to the side, rear or a courtyard. Two houses (6 Andrew Street, 46 Menin Road) have H-shaped plans with courtyards that are apparent from aerial photographs and original drawings but not from the street; a third house (47 Menin Road) originally had a central courtyard but this has evidently been infilled.

Several houses in the group have integrated garages (35 Menin Road, 66 Shady Grove) but most have carports that project either from the side (42, 46, 49 and 59 Menin Road, 6 Andrew Street) or the front of the house (47 Menin Road, 16 Andrew Street, 68a Shady Grove). In two cases, the flat-roofed carport is recessed into the centre of the street frontage (9 Andrew Street, 44 Menin Road).

Comparative Analysis

Some houses in the group have direct comparators elsewhere in the City of Whitehorse. The one at 16 Andrew Street (Alistair Knox, 1959), with its plain brickwork, modular plan and low roofline, is typical of Knox's work at that time, evident in another example at 15 Acacia Avenue, Blackburn (1958). Merchant Builders project houses are well represented in the municipality, notably by the *Vermont Park* cluster housing at 531 Burwood Highway, Vermont South (1976) (HO118), which includes various standard designs by various architects. Other individual specimens are scattered around, such as 4 Murray Drive, Burwood (1968) and 50 Myrtle Grove, Blackburn (c.1973). Some houses in the group are less generic, notably the respective homes of Gerrit Hartland (6 Andrew Street) and Conrad Theodore (44 Menin Road), who were both architects that, while living in the municipality for many years, do not appear to have designed any other houses therein.

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The house at 68 Shady Grove, confidently attributed to Demaine, Russell Trundle, Armstrong & Orton, and likely designed by partner Ailsa Trundle (the client's sister), is a rare residential project by this large city-based corporate firm, best known for its hospitals. One of the few other houses known to have been designed by Ailsa Trundle was her own home in Surrey Hills (1946), where she lived with her mother and younger brother before he moved to Shady Grove. While the house still stands at 194 Union Road, this is just outside the boundaries of the City of Whitehorse.

There are few parts of the City of Whitehorse where post-war modernist houses, whether designed by architects or non-architects, proliferate in such proximity around a few select streets. The area in and around Menin Road/Shady Grove, which developed swiftly from the late 1950s but retained its bushland character, was already referred to as Forest Hill's "bellbird area" by the early 1970s (*Age* 07/04/1973:43). In this sense, it has much in common with the part of Blackburn that is more frequently referred to as the "bellbird area". This is generally considered to constitute the area south of the Blackburn railway line, loosely bordered by Fuchsia Street, Pakenham Street, Main Street and Gardiner's Creek. This vicinity, similarly characterised by remnant bushland, has been referred to as the "bellbird area" since at least the late 1950s (*Age* 27/02/1957:24).

Blackburn's "bellbird area" began to develop before WW2, but attracted an above-average number of modernist houses in the post-WW2 era. Research has identified twenty such houses known or suspected to have been architect-designed, of which only one is individually listed on the heritage overlay schedule: the Ednie House at 3a The Avenue (Grounds, Romberg & Boyd, 1955) (HO82). Others previously flagged as potential heritage places include 74 Main Street (Brian O'Connor, 1954), 35 The Avenue (Smith, Tracey, Lyon & Brock, 1957), 15 Acacia Avenue (Alistair Knox, 1958), 16 The Avenue (Murray Nankervis, c.1960), 51 Laurel Grove (Moore & Hammond, 1967) and 50 Myrtle Grove (Merchant Builders, c.1973). Others, not previously flagged, include 36 The Avenue (Peter McIntyre, 1956), 17 Linum Street (Richard Berryman, 1957) and a much-altered house at 18 Laurel Grove (Montgomery, King & Trengove, 1955-56). Five other architect-designed houses in the area are confirmed to be demolished, at 38 Main Street (Alexander Harris, 1954), 39 Laburnum Street (Smith, Tracey, Lyon & Brock 1956), 8 Laurel Grove (Ken Crozier, 1958), 18 Linum Street (Best Overend, 1959) and 20a Myrtle Grove (Chancellor & Patrick, 1960).

While the Bellbird Area at Blackburn was once characterised by a high proportion of post-war modernist houses, those that remain tend to be scattered thinly across a large area and do not have the same degree of proximity that is evident in Menin Road, Shady Grove and Andrew Street, where houses of this type are clustered together in small groups, or within sight of each other across those three streets. At Blackburn, there are few cases where such houses exist in the same street and, where they do (eg in The Avenue) they tend to be located some distance apart and are not as perceived as a coherent group.

The same is true of another part of Blackburn where similar housing flourished from in the 1950s and '60s. Further south-east, an enclave developed very much along the same lines as that defined by Andrew Street, Menin Road and Shady Grove. Spanning between Central Road and Blackburn Road, south of Alandale Road, this area remained remnant bushland until after WW2. Subdivided from the c.1950, it created Jeffrey Street, Naughton Grove and The Ridge, as well as Carey Court and (later) Norris Court. Research has identified a dozen modernist houses in this area, known or suspected to be architect-designed. They include one example on the heritage overlay schedule, at 7 Norris Court (Frances Seidel, 1967) (HO287), and two others in Naughton Grove recommended for such protection as part of the current study, at No 20 (John & Phyllis Murphy, 1954) and No 29 (Klaus Veltjens, 1962-64). Others recorded in the area include two houses still standing at 37 Naughton Grove (W Collinson Kerr, 1965) and 32 The Ridge (Geoffrey Woodfall, 1964), and two more that have been demolished in recent years, at 38 The Ridge (C Ian Turner, 1957) and 25 Jeffrey Street (Beatrice Burns, 1958). These modernist houses, however, tend to be scattered thinly across the area and do not present themselves as a cohesive group.

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Statement of Significance

What is significant?

The fourteen houses scattered around Menin Road (Nos 29, 35, 42, 44, 46, 47, 49 and 59), Andrew Street (Nos 5, 6, 9 and 16), and Shady Grove (Nos 68 and 68a), straddling the border between Nunawading and Forest Hill, comprise a group of single-storey detached houses in the post-war modernist style, dating from the late 1950s to the early 1970s, representing the work of various architects and designers, including some project houses.

Significant fabric is defined as the exterior of the original houses. Specific elements of significance include the low rooflines, broad eaves, original external cladding (mostly face brick; some earlier houses in timber), expansive bays of windows bays and original carports.

How is it significant?

This group of fourteen houses in Nunawading and Forest Hill satisfies the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion D: Importance in demonstrating the principal characteristics of a class of cultural places and objects

Why is it significant?

The houses are aesthetically significant as a cohesive cluster of houses that, while exhibiting a range of architectural origins and construction dates (from the late 1950s to the early 1970s), are all demonstrative of post-war modernist residential architecture. This is evident in the recurring use of low rooflines (various flat, skillion or low gables), stepped rectilinear planning (including some with integrated courtyards and recessed carports), stark wall surfaces (mostly face brick with a few painted brick and timber-clad houses) and expansive windows, invariably as full-height bays. Representing the work of architects, non-architects and project housing firms (and including three designer's own houses), the group is one of few parts of the municipality where such houses survive in such proximity, and in relatively intact states. (*Criterion D*)

References

J Dale Fisher, "Proposed residence at Shady Grove, Nunawading", working drawings, dated 30 March 1955. Courtesy the office of J Dale Fisher Architects, Toorak.

Lodged Plans No 40154 and 40155 (27 March 1957).

Brian F Spears, "Proposed residence, Lot 33 Menin Road, Forest Hill, for Brian F Spears", working drawings, dated December 1957. City of Whitehorse.

Alistair Knox, "… House, Forest Hill" [16 Andrew Street], working drawing, dated 10 January 1959. Knox Collection, RMIT Design Archive.

Gerrit Hartland, "House at Lot 4, Andrew Street, Forest Hill", working drawings, dated 1 August 1959. City of Whitehorse.

William Luttrell, "Residence at Lot No 36, Menin Road, Forest Hill," working drawings, dated 6 January 1965. Building Permit No 43003/1965, City of Whitehorse.

Conrad Theodore, "Proposed residence, Lot 18 Menin Road, Nunawading", working drawings, dated 9 April 1965. Building Permit No 43307/1965, City of Whitehorse.

"Planned with rooms overlook courts", *Herald*, 22 April 1966, p 21 [Conrad Theodore's house]

Graeme Gunn for Merchant Builders Pty Ltd, "New house… Lot 38 Menin Road, Forest Hill", working drawings, dated 15 June 1966. Building Permit No 2151/1966, City of Whitehorse.

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Glendaren Homes, "Proposed brick veneer dwelling… at Lot 32 Menin Road", working drawings, undated [c.1968]. Building Permit No 10814/1968, City of Whitehorse.

"Place to rest your mind", *Age*, 20 August 1969, p 26 [Alistair Knox house at 16 Andrew Street]

Sibbel Brothers, "Proposed brick veneer residence… at Lot 2 Shady Grove, Nunawading" working drawings, undated. Building Permit No 15535/1970, City of Whitehorse.

M B Savage, "Proposed brick veneer residence at Lot 26 Menin Road, Forest Hill", working drawings, dated August 1971. Building Permit No 20229/1971, City of Whitehorse.

Merchant Builders Pty Ltd, "Residence… Lot 37, Menin Road, Forest Hill", working drawings, dated 3 November 1972. Building Permit No 24100/1972, City of Whitehorse.

Merchant Builders Pty Ltd, "Residence… Lot 18, Menin Road, Forest Hill", working drawings, dated 17 January 1973. Building Permit No 24209/1973, City of Whitehorse.

R S Demaine, Russell, Trundle, Armstrong & Orton Pty Ltd, "Working drawing of new room at rear of existing residence… 68 Shady Grove, Forest Hill", working drawing, dated 8 February 1974. Building Permit No 29093/1974, City of Whitehorse.

Alistair Knox Pty Ltd, "Extension to… house, 16 Andrew Street, Forest Hill", working drawing, undated [c.1960s]. Knox Collection, RMIT Design Archive.

Built Heritage Pty Ltd, *Heritage Assessment of Hartland House, 6 Andrew Street, Forest Hill* (2017).

Interviews with Conrad Theodore, April 2017, and Gerrit Hartland, November 2017.

Previous Heritage Studies

Built Heritage, *City of Whitehorse Post-1945 Heritage Review* (2016) – Appendix 1, outline citation

List of places in group

Address	Date	Architect/designer	Notes
5 Andrew Street	c.1960	Unknown	
6 Andrew Street	1959-63	Gerrit Hartland	Architect's own house Additions by Hartland, 1973
9 Andrew Street	c.1960	Unknown	
16 Andrew Street	1959	Alistair Knox	Additions by Knox, 1960s
29 Menin Road	c.1959	Unknown	
35 Menin Road	1971-72	M B Savage	
42 Menin Road	1973	Merchant Builders	Project house
44 Menin Road	1965-66	Conrad Theodore	Architect's own house
46 Menin Road	c.1967	Unknown	Additions by Brian F Spears, 1975
47 Menin Road	1968	Glendaren Homes	Project house
49 Menin Road	1957-58	Brian F Spears	Designer's own house
59 Menin Road	1966	Merchant Builders (Graeme Gunn)	Project house: standard design, "Terrace TF"
68 Shady Grove	c.1967	Demaine, Russell, Trundle, Armstrong & Orton	Designed for architect Ailsa Trundle's brother, Keith Trundle. Additions by same firm, 1974
68a Shady Grove	1970	Sibbel Brothers	Project house

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Current Images [2024]

5 Andrew Street (c.1960)

6 Andrew Street (1959-62)

9 Andrew Street (c.1960)

16 Andrew Street (1959)

29 Menin Road (c.1959)

35 Menin Road (1971-72)

42 Menin Road (1973)

44 Menin Road (1965-66)

46 Menin Road (c.1967)

47 Menin Road (1968)

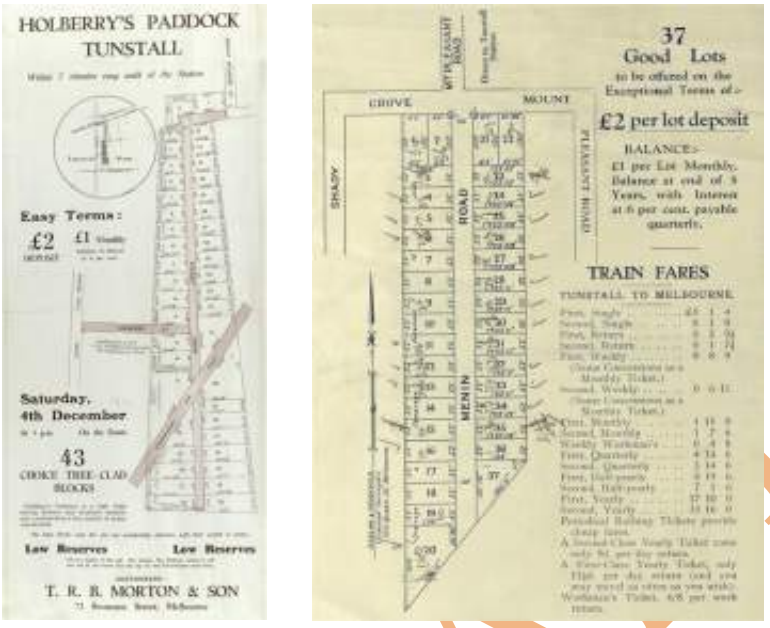
49 Menin Road (1957-58)

59 Menin Road (1966)

68 Shady Grove (c.1967)

68a Shady Grove (1970)

Historical Images



Contemporary publicity for auctions of the Holberry's Paddock Estate (1920) and the Hill 60 Estate (1929), the subdivisions that respectively created Shady Grove and Menin Road; note MMBW pipeline easement
Source: Map Collection, State Library of Victoria

Comparison between aerial photographs of 1945 (left) and 1951 (right), showing alignment of Shady Grove and Menin Road and bushland representing site of future development (triangular area outlined in red)
Source: City of Whitehorse Maps. <https://map.whitehorse.vic.gov.au/index.html>

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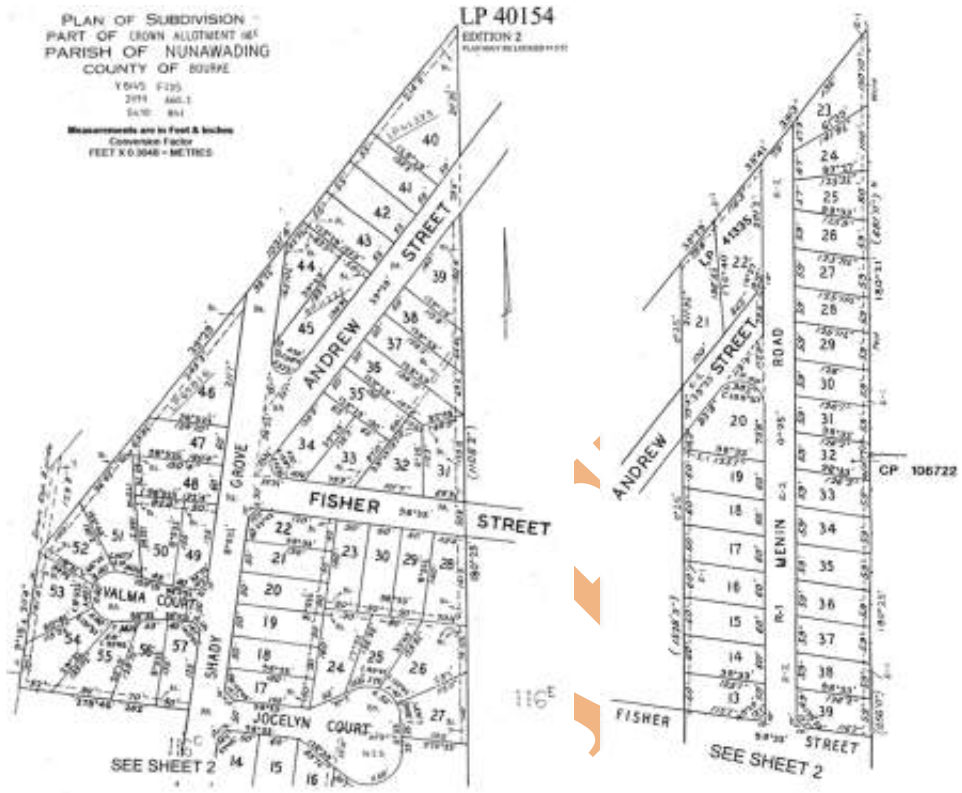

Excerpts of Lodged Plans No 40154 (left) and 40155, dated March 1957, showing subdivision that created extension to Shady Grove and Menin Road, Andrew Street, Fisher Street, Valma Court and Jocelyn Court
Source: <www.landata.com.au>

Excerpts of aerial photographs in (L-R) 1956, 1960 and 1970, showing ongoing residential development
Source: City of Whitehorse Maps. <https://map.whitehorse.vic.gov.au/index.html>

House at 16 Andrew Street, designed by Alistair Knox (1959), photographed at time of sale in 1969.
Source: Age, 29 August 1969, p 26

Perspective drawing of architect Conrad Theodore's own house at 44 Menin Road (1965-66)
Source: Herald, 22 April 1966, p 21.

Publicity drawing for Merchant Builders Terrace project house designed by Graeme Gunn (1965)
Source: Merchant Builders: Towards a New Archive (2015), p 39.

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IDENTIFIER	DISPLAY VILLAGE (FORMER)	**Citation Number**	P05
Other name/s	Blue Flame Project	**Melway reference**	Various
Address	2, 4, 6, 7 and 8 Shalimar Court 1, 2, 3, 6, 7, 8 and 9 Parkleigh Court 3 and 5 Fortescue Grove VERMONT SOUTH		
Date/s	1969 (designed) 1970-71 (built)		
Designer/s	Various; see list		
Builder/s	Deva Ideal Homes Pty Ltd		
Heritage Group	Residential buildings (private)		
Heritage Category	Houses		

Proposed places within precinct

Historical themes	6 CREATING WHITEHORSE'S SUBURBS 6.5 Development in the post-war era 6.5.3 Display villages and housing estates					
Significance	☑ Local ☐ State (potential)	**Condition** **Intactness**	☑ Good ☑ Good	☐ Fair ☐ Fair	☐ Poor ☐ Poor	
Recommendation	Include on heritage overlay schedule as heritage serial listing ☐ External paint controls ☐ Interior alteration controls ☐ Tree controls					
Extent of HO	☐ To title boundaries ☑ As indicated on diagram above					

Group History

The group of fourteen houses in Shalimar Court, Parkleigh Court and Fortescue Grove, are the survivors of twenty that were built in 1970-71 as a display village known as the *Blue Flame Project*, developed by Housing Service of the Royal Australian Institute of Architects (RAIA) and the Gas & Fuel Corporation, using designs by different architects that were entries in 1969 competition.

The Housing Service of the RAIA was the continuation of what had commenced operation in 1947 as the Small Homes Service of the RVIA (Royal Victorian Institute of Architects). Sponsored by the *Age* newspaper, with Robin Boyd as its first director, the service sought to address the post-WW2 housing crisis by offering a range of standard designs, contributed by various architects, for which working drawings could be cheaply purchased by prospective homebuilders. The service proved highly successful during its earliest years under Boyd, but its popularity and profitability wavered under subsequent directors Neil Clerehan (1953-61), Jack Clarke (1962-65), Daryl Jackson (1965-69), and Graham Whitford (1969-71). With the end of the post-WW2 housing crisis, and the rise of the booming project housing industry in the late 1950s and '60s, the Small Homes Service sought to respond to a changing market. In 1968, the word "small" was dropped from its title (reflecting the demand for larger family homes), and, with the RVIA since rebranded as the Victorian chapter of national architects' institute body, it became known as the Housing Services of the RAIA.

In 1953, the Small Homes Service had held a competition where architects were invited to submit designs for possible inclusion in the ever-expanding range of standard plans. While this generated much attention, the service would not hold another such competition until 1965. Sponsored by the Gas & Fuel Corporation, the competition was won by Peter Vaalburg, whose design was built by A V Jennings as a display house on its *Coolnda Estate* at Glen Waverley. Thereafter, competitions became a regular event, with both A V Jennings and the Gas & Fuel Corporation maintaining their association. Following the 1966 competition, not one by all three prize-winning entries were built by A V Jennings as display houses on estates at Glen Waverley, Frankston and Lower Plenty. The next competition, held in early 1968, resulted in four winning designs being built as display houses in a cul-de-sac in Lower Templestowe, this time by Inge Brothers rather than A V Jennings.

The 1969 competition proved even more ambitious. That year, the service was approached by a company, Lifemaker Pty Ltd, wishing to develop a display village in Vermont South (then still referred to as East Burwood). By involving the Housing Service and the Gas & Fuel Corporation, the scheme would generate much publicity for all parties; when the display village opened to the public, admission fees would go to charity. An agreement was reached and the Housing Service launched a competition in June, with separate categories for registered architects and students. Entrants had four weeks to submit entries, to be judged by a panel that comprised leading house architect Charles Duncan, along with Graham Whitford and Jack Clarke, the current and previous directors of the service. The top three winners in each category were announced in the service's weekly column on 25 August. The architects' section, with prize money donated by the Gas & Fuel Corporation, was won by John Adam (first), Peter Vaalburg (second) and J K Thompson (third) and the student section, with prize money donated by Inge Brothers, by Noel McKernan and Peter Brown (first), Michael Jan (second) and John Herniman (third). (*Age* 25/09/1969:11)

Following usual practice, most of the competition entries were introduced into the service's range, of standard plans, making them available for public purchase. The winning designs, also exhibited in the Housing Service's office in Princes Gate Arcade (part of the new Gas & Fuel building in Flinders Street), attracted much attention, with director Whitford stating that they "have already created a lot of interest among potential home builders, judging from the inquiries received at the Housing Service office" (*Age* 01/09/1969:10). At that time, it was also officially announced that the three winners in the architects' section, along with twenty other entries from both sections, had been chosen "for erection in a display village sponsored by the Gas & Fuel Corporation under the name *Blue Flame Project*" (*Age* 01/09/1969:10).

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All entries, as per the competition brief, were for a "four bedroom house of around 15½ squares, suitable for a small suburban block and capable of adaptation to suit a variety of site conditions". Whitford later observed common themes, noting that most entries emphasised private outdoor areas "all suitably screened from neighbours and located to capture sun and view'", providing screened service areas, and double carports located close to the street to maximise open space. While noting variation in internal planning, Whitford concluded that "no one has followed the traditional suburban approach of plonking the house in the centre of the block creating a front and back garden with an alleyway down each side".

At some point, the 23 shortlisted designs were reduced by eliminating the prize-winning entries of Adam, Thompson and Vaalburg. The 20 remaining designs, including an extra unplaced entry by Vaalburg, were published in a brochure that also depicted the intended location in Vermont South, with a site plan showing the houses on Lots 38 to 58, spanning Shalimar and Parkleigh Courts and the contiguous part of Fortescue Grove. Houses were identified by the alphanumeric plan codes that they had been allotted in the service range, with the names of the architects included.

The architects whose entries were to be built as part of the *Blue Flame Project* represented a mix of both established and emerging practitioners. The former included Albert Ross (1931-), who had worked for Robin Boyd in the 1950s and latterly became a named partner in the firm of Hipwell, Weight & Ross. Hugh Flockhart (1933-2002) and Russian-born Sergei Halafoff (1935-2002) both worked for Chancellor & Patrick from 1959, while Ronald Monsbourgh (1933-2007) had been in sole practice since around 1962. John Reid (1938-), son of well-known pre-war architect Keith Reid, worked in his father's firm and was elevated to partnership in 1962, while Ian Smith had worked for Earle & Associates before starting his own practice around 1965. David Dalrymple (1931-) and Desmond Bloink (1940-) were both architects in the public service. Student entrants included Peter Brown, Noel McKernan, John Herniman and Graham Reid (the much younger brother of fellow entrant John Reid) from the University of Melbourne, and Michael Jan from RMIT. Several entrants, across both categories, had entered design competitions before, with Bloink, Dalrymple, Smith and Vaalburg being winners in prior Housing Service competitions.

Originally, it was expected that the *Blue Flame Project* would be completed in February 1970, with the village open to the public daily for six months. Early publicity announced that

> all registered architects in Victoria, and architectural students, will be invited … to inspect the Exhibition Homes and the products/services contained therein. Members of the building and allied trades will also be invited. The general public will be encouraged to attend the exhibition to view the latest home designs, materials, appliances, by extensive advertising (and much free publicity because of the charitable aspect).

The village would be fenced, with access via a temporary pavilion (at the north corner of Shalimar Court and Fortescue Grove) that also served as a 'Purchasing Information Centre' to provide details of houses, products displayed or used therein, and plans available for purchase through the service. Admission fees, of 20 cents per adult, were donated to the Brotherhood of St Laurence.

The project was delayed, with building permit applications not made until June 1970. In July, the "first sod" was turned by the Minister for Housing, Hon E R Meagher (*Age* 11/07/1970:3). Permits for all twenty houses were issued in rapid succession in early August, and construction, by Deva Ideal Homes Pty Ltd, soon began. Costing between $12,000 and $15,000 each, the houses were equipped with the latest modern fittings by leading suppliers, including hot water services by Rheem, bathtubs by Malleys, basins and showers by Trimview, toilets by Royal Doulton and taps by Dorf. Interestingly, the designers themselves were barely involved in the building process, if at all. Michael Jan recalled visiting his house just once during construction, while John Herniman took a more active role, travelling to the site several times to ensure that work was being executed to an appropriate standard (interviews, 2014). Des Bloink, on the other hand, recalled that he was not even aware that his prize-winning design had been built (interview, 2014).

When the *Blue Flame Project* eventually opened in April 1971, Whitford lauded it as "possibly the largest display village erected in Melbourne, and there is no project builder involved – it is purely for exhibition purposes" (*Age* 05/04/1971:10). Of the individual houses, he observed "in effect, they represent twenty different architects' ideas on how the average family should live". Over the following months, a number of represented designs were individually profiled in Whitford's column as a "House of the Week", including those of Des Bloink (*Age* 05/04/1971:10), Peter Dale (*Age* 12/04/1971:8), Rod Thorley (*Age* 26/04/1971:11), John Herniman (*Age* 31/05/1971:12), Graham Reid (*Age* 28/06/1971:18) and Ron Monsbourgh (*Age* 12/07/1971:11).

Unfortunately, the project garnered less positive publicity when, in July 1971, Lifemaker Pty Ltd, went into voluntary liquidation with debts of $523,000. One report noted that the "collapsed *Blue Flame* charity housing project" left an "almost completed estate of 20 architect-designed houses in East Burwood standing empty" (*Age* 10/08/1971:3). After a Supreme Court writ, another firm took over and called tenders for tradesmen to complete the houses so that they could be sold. By the end of August, ten of the twenty houses were up for sale (*Age* 28/08/1971:55). The reception pavilion on the corner of Shalimar Court was demolished and a new house built there in 1972.

Despite the fate of the display village, one of its original houses, John Reid's V434 at 1 Parkleigh Court, continued to generate press attention for some time. In 1973, it was profiled by Whitford's successor, John Barker, as a "House of the Week" (*Age*, 28/05/1973: 10) and, the following year, appeared in the *Australian Women's Weekly* (*AWW* 18/09/1974:88-89). Around the same time, a photograph of the house graced the front cover of a book, titled *New Ideas for Homemaker Home Plans*, which illustrated numerous standard designs from the Housing Service range, including several that were represented by the *Blue Flame Project*. Several of the designs, including those by Bloink, Monsbourgh, Halafoff and Herniman, continued to be promoted for potential purchase in the Housing Service column well into the 1970s, with Herniman's V447 (evidently, a popular and frequently-purchased plan) being republished as late as 1979 (*Age* 28/05/1979:20).

The former display village remained intact until the early 2000s, when the house at 4 Parkleigh Court (designed by student Michael Jan) was demolished. The other nineteen houses were all still standing when the area was first flagged as a potential heritage precinct in 2014. However, since then, another five houses have been demolished: one in Parkleigh Court (No 5) and four more along the north side of Shalimar Court (Nos 3, 5, 9 and 11). Fourteen houses now remain.

Physical Description

The remnants of the former *Blue Flame Project* occupy Shalimar Court and Parkleigh Court, a parallel pair of cul-de-sacs off Fortescue Grove, Vermont South. Each of the two courts contained nine display houses (of which five now remain in Shalimar Court and seven in Parkleigh Court), with two more fronting Fortescue Grove. The site of the temporary reception building, at what is now 1 Shalimar Court, is occupied by a house built in 1972, unrelated to the *Blue Flame Project*.

By their very nature as designs that responded to a common brief, the houses in the group are similar in scale, as four-bedroomed dwellings under 15.5 squares in area. All were originally single storeyed house except for three (1 and 9 Parkleigh Court, 8 Shalimar Court) designed with partial second storeys. One of the single-storey houses (7Parkleigh) has a partial second storey addition dating from the 1990s. All houses are of brick construction, but with differences in colour and finish. Most are of face brick, variously beige (4 and 6 Shalimar Court, 9 Parkleigh Court), dark brown (2 and 8 Shalimar Court), red (7 Shalimar Court) and clinker (2 Parkleigh Court; 3 and 5 Fortescue Grove). Two others have a pale-coloured bagged-and-painted finish (1 and 3 Parkleigh Court), while another, with unusual textured bricks, is painted (7 Parkleigh Court). All of the houses have stepped rectilinear plans, some with courtyards.

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All of the houses have double carports that (as Whitford observed in 1969) are located close to the street frontage, sometimes integrated (3 Parkleigh Court, 8 Shalimar Court) or projecting from one side (9 Parkleigh Court), but more commonly projecting from the front (4, 6 and 7 Shalimar Court, 1, 6, 7 and 8 Parkleigh Court). Other recurring motifs include integration of verandahs and/or pergolas (6 Shalimar Court, 7 and 8 Parkleigh Court) and the projecting brick spur walls or wing walls to define courts, yards or terraces. Large fin-like brick piers have also been used in a few cases (7 and 8 Shalimar Court) to define porches, verandahs or carports.

Given that the houses were designed by different architects working in isolation, they otherwise exhibit diversity in their planning, form and detailing. Some have stepped footprints that can be described as T-shaped (6 Parkleigh Court), C-shaped (3 Fortescue Grove), H-shaped (6 Shalimar Court), J-shaped (2 Parkleigh Court) or Z-shaped (4 Shalimar Court). Some houses have spreading linear plans (7 and 8 Parkleigh Court) while others have more compact plans (1, 3 and 9 Parkleigh Court). Most of the houses have flat or low-pitched roofs, although a few have gables (1 and 3 Parkleigh Court, 3 Fortescue Grove). Several are distinguished by other roof profiles that include a steep skillions (7 Shalimar Court), traditional hip-and-valley (6 Parkleigh Court) or separate pyramidal hips (4 Shalimar Court). One of the flat-roofed houses has a pyramidal hip over part of the house (2 Parkleigh Court), while another includes a fashionable pop-up skillion clerestory (8 Parkleigh Court). Windows tend to be generous, typically expressed as full-height bays of timber-framed sashes (2, 4 and 8 Shalimar Court, 3, 7 and 9 Parkleigh Court).

Comparative Analysis

Post-WW2 project housing has been identified as an important historical theme in the City of Whitehorse. As 2024, it is represented on the heritage overlay schedule by two individual places and three precincts. The two places, both dating from the early era of project housing in the later 1950s (and both, coincidentally, designed by Robin Boyd) comprise a representative example of Boyd's seminal *Peninsula* project house at 4 Ian Grove, Burwood (1955) (HO286), and the FLER Company's prototype and former display house at 150 Canterbury Road, Blackburn South (1958) (HO284). One of the three precincts, at Spencer Street, Nunawading (1955) (HO280), is similarly demonstrative of early projecting housing, being a cul-de-sac of basic weatherboard houses that was one of the first new A V Jennings estates developed after WW2. A group of three houses at 234-238 Canterbury Road, Forest Hill (1969-71) (HO282) is a former display village for a project housing firm, Concept Constructions Pty Ltd, representing three different standard designs by three different architects. The ongoing theme of post-WW2 project housing is also demonstrated by the *Vermont Park* at 531 Burwood Highway, Vermont South (1976) (HO118), a Merchant Builders cluster housing estate, comprising various standard designs by a number of architects.

None of these examples, however, is directly comparable to the *Blue Flame Project*. While *Vermont Park* similarly comprises numerous houses by different architects, it was conceived as a housing development rather than a display village per se. While the Concept Constructions group in Blackburn South was intended as a display village, it is much smaller than the *Blue Flame Project*, which is likely the largest single display village ever established in the municipality. Nothing of comparable scale has yet been identified. Ultimately, the *Blue Flame Project* stands out, not merely for its scale but for the fact that it was an ambitious and high-profile undertaking by the RAIA Housing Service, with the house designs sourced via the medium of an architectural competition. This constitutes an exceptional scenario that is unique among project housing display villages in the City of Whitehorse, and uncommon across the broader metropolitan area.

Ultimately, the *Blue Flame Project* can only be directly comparable to its own antecedents: namely the houses that were built in various parts of Melbourne after the three previous Housing Service competitions. The design that won first prize for Peter Vaalburg the 1965 competition, erected the following year on A V Jennings' *Cooinda Estate* and promoted as the "Gas & Fuel Project House", stood at 94 Windella Crescent, Glen Waverley, but was demolished in the 2010s.

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The three prize-winning entries in the 1966 competition, submitted by Ian Smith, David Dalrymple and Des Bloink, were built the next year on three different Jennings estates. The three houses, each designated as a "Gas Project House", were located at 12 Grosvenor Avenue Mulgrave (Smith), 149 Karingal Drive, Frankston (Dalrymple) and 7 Wirrabara Court, Yallambie (Bloink), all remain standing. The Mulgrave house has been altered but the other two remain substantially intact. Only the Karingal Drive house has an individual heritage overlay (City of Frankston, HO71).

These examples, however, ultimately comprised one single house per estate, which can scarcely be compared to a display village that originally consisted of twenty dwellings (of which fourteen still remain). As such, the only true comparator for the *Blue Flame Project* is the similar but still much smaller development that followed the previous Housing Service competition of 1968. In that instance, the top four prize-winning designs, contributed by Whitford & Peck, Hugh Flockhart, David Dalrymple and Sergei Halafoff, were all built the following year in the same cul-de-sac in Templestowe Lower. These four houses were built at 1 Lignum Court (Halafoff), 3 Lignum Court (Flockhart), 6 Lignum Court (Whitford & Peck) and 8 Lignum Court (Dalrymple). The house at No 6 has been demolished but the other three remain standing, and seemingly intact, as of 2014.

Individually, the houses in the *Blue Flame Project* can be compared with other examples of the same standard designs. Following the remit of the Housing Service (and its prior iteration as the Small Homes Service), designs in the range were available for purchase by any prospective homebuilder. Research by architect and project house expert Steven Coverdale has identified numerous houses across Victoria that were built to Housing Service designs from the 1969 completion that were first showcased at the *Blue Flame Project*. There are a few metropolitan examples, in Bayswater North, Frankston, Greensborough, Hoppers Crossing, Keilor, Mentone, Mount Martha and Templestowe Lower, but surprisingly more in regional Victoria, including Ballarat North, Drouin, Lara, Maffra, Magpie (near Ballarat), Menzies Creek, Orbost, Rochester, Sale, Shepparton, Stawell, Strathdale and Traralgon. The only examples yet found in the City of Whitehorse are two copies of John Herniman's V447 design (as seen at 6 Shalimar Court), both also in Vermont South, at 3 Tanunda Street and 12 Mildara Street. A copy of Rod Thorley's V443 (as seen at 5 Shalimar Court, but since demolished) was built at 10 Queen Street, Surrey Hills, but this is across the municipal boundary in the City of Boroondara and, in any case, the house has also been demolished.

Statement of Significance

What is significant?

The fourteen houses in Fortescue Grove (Nos 3, 5), Parkleigh Court (Nos 1, 2, 3, 6, 7, 8 and 9) and Shalimar Court (Nos 2, 4, 6, 7, and 8), Vermont South, are the surviving components of a display village of twenty houses, known as the *Blue Flame Project*, which was developed in 1970-71 to standard plans from the RAIA Housing Service that were all entries in a 1969 design competition. Responding to a standard brief, the houses were necessarily similar in scale and materiality, but, designed by different architects (and architecture students), otherwise varied in style and form.

Significant fabric is defined as the exterior of the fourteen houses of 1970-71. Specific elements of significance include original roofs (flat, hipped, gabled or skillion), face brickwork (where intact), fenestration to the street, original carports and garages, recessed porches, and elements such as clerestory windows, brick piers, wing walls and pergolas represented by some but not all houses.

How is it significant?

The fourteen houses of the former *Blue Flame Project* in Vermont South satisfy the following criteria for inclusion on the heritage overlay schedule to the City of Whitehorse planning scheme:

- Criterion A: Importance to the course, or pattern, of our cultural history.
- Criterion B: Possession of uncommon, rare or endangered aspects of our cultural history.

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Why is it significant?

The fourteen remaining houses of the *Blue Flame Project* are historically significant for associations with development of post-WW2 project housing in the City of Whitehorse and specifically in Vermont South (then considered part of Burwood East), which remained defined by orchards until the region was rezoned for residential use in 1970. While Vermont South swiftly emerged as an epicentre for display houses, both individually and in groups, the *Blue Flame Project* was by far the largest display village in the developing suburb, as well as the most publicised. Even with six of the original houses demolished, it remains as the largest project housing display village ever built in the City of Whitehorse. (*Criterion A*)

The houses of the *Blue Flame Project* are historically and architecturally significant as a rare example of a display village that used standard plans from the RAIA Housing Service range, sourced through a high-profile design competition. While such competitions were used to expand the service's range as early as 1953, it was not until 1965 that prize-winning designs began to be built as display houses. Prior to the 1969 completion that launched the *Blue Flame Project*, display houses were built either individually (in 1966 and 1967) or as a small group (1968). The *Blue Flame Project*, comprising twenty houses (of which fourteen remain), was not only the largest and most ambitious of these initiatives to showcase prize-winning houses, but also proved to be the last. The development is unique in the City of Whitehorse and rare on a broader metropolitan scale, its closest comparator being a cul-de-sac of four display houses at Templestowe Lower. (*Criterion B*)

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"Prizes for students", *Age*, 1 September 1969, p 10.

"For display", *Age*, 1 September 1969, p 10

"The Blue Flame Project", *Age*, 19 September 1969, p 15.

"The Blue Flame Project", undated publicity brochure (circa 1970), unpaginated.

"Housing Minister launches the Blue Flame Project", 11 July 1970, p 3.

"House seeking public more discerning", *Age*, 5 April 1971, p 6.

"Well worth the admission price", *Age*, 16 April 1971, p 16.

"Charity house plan crashes", *Age*, 7 August 1971, p 1.

"Companies office acts over Blue Flame crash", *Age*, 10 August 1971, p 3.

"Two storeys give a sense of space", *Age*, 28 May 1973, p 10.

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New Ideas for Homemaker Home Plans (no date; c.1974).

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Previous Heritage Studies

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List of places in group

Address	Lot	Code	Architect	Date/s of publication
3 Fortescue Grove	Lot 48	V427	Ian J Smith	*Age*, 22 Sep 1969, p 21 *Age*, 25 May 1970, p 12
5 Fortescue Grove	Lot 49	V445	Noel F McKernan & Peter L Brown	*Age*, 1 Sep 1969, p 10
1 Parkleigh Court	Lot 50	V434	Keith & John Reid	*Age*, 8 Sep 1969, p 10
2 Parkleigh Court	Lot 58	V429	Stanley J Hunt	*Age*, 11 Nov 1969, p 16
3 Parkleigh Court	Lot 51	V436	David Dalrymple	*Age*, 20 Oct 1969, p 14
6 Parkleigh Court	Lot 56	V426	Hugh P Flockhart	*Age*, 27 Apr 1970, p 9
7 Parkleigh Court	Lot 53	V437	Kenneth Edmonds & Geoffrey Kaye	*Age*, 1 Sep 1969, p 10
8 Parkleigh Court	Lot 55	V448	Edward Chang	*Age*, 13 Sep 1971, p 13
9 Parkleigh Court	Lot 54	V422	Peter M Dale	*Age*, 12 Jan 1970, p 9
2 Shalimar Court	Lot 47	V423	Jon Friedrich	*Age*, 15 Sep 1969, p 12
4 Shalimar Court	Lot 46	V442	Peter Vaalburg	*Age*, 11 Jan 1971, p 12
6 Shalimar Court	Lot 45	V447	John R Herniman	*Age*, 12 Oct 1970, p 12 *Age*, 31 May 1971, p 12
7 Shalimar Court	Lot 41	V433	Desmond Bloink	*Age*, 5 Apr 1971, p 10
8 Shalimar Court	Lot 44	V440	Sergei Halafoff	*Age*, 17 Jan 1972, p 13

Demolished houses [for information only; not part of group]

Address	Lot	Code	Architect	Date/s of publication
4 Parkleigh Court	Lot 57	V446	Michael Jan	*Age*, 11 Oct 1971, p 11
5 Parkleigh Court	Lot 52	V431	Albert W Ross	*Age*, 26 Jan 1970, p 8
3 Shalimar Court	Lot 39	V424	Malcolm H Munro	*Age*, 13 Oct 1969, p 6
5 Shalimar Court	Lot 40	V443	Rodney Thorley	*Age*, 27 Oct 1969, p 14
9 Shalimar Court	Lot 42	V438	Ronald G Monsbourgh	*Age*, 12 Jul 1971, p 11
11 Shalimar Court	Lot 43	V449	Graham Reid	*Age*, 20 Jun 1971, p 18

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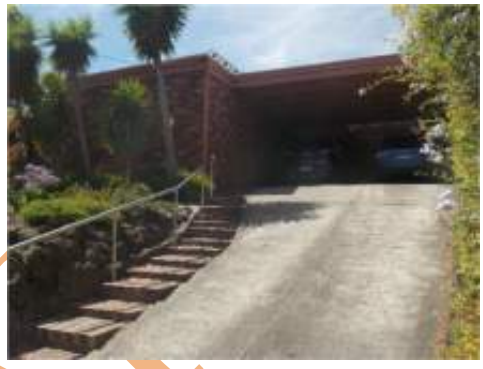
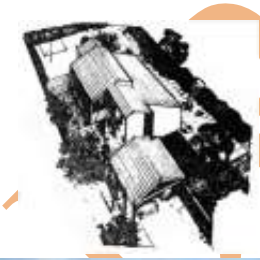
Current Images (March 2024) [preceded by original perspective sketches]

3 Fortescue Grove, Vermont South
V427 (Noel McKernan and Peter Brown, 1969)



5 Fortescue Grove, Vermont South
V445 (Ian J Smith, 1969)



1 Parkleigh Court, Vermont South
V434 (Keith & John Reid, 1969)

2 Parkleigh Court, Vermont South
V429 (Stanley J Hunt, 1969)

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3 Parkleigh Court, Vermont South
V436 (David Dalrymple, 1969)

6 Parkleigh Court, Vermont South
V426 (Hugh Flockhart, 1969)

7 Parkleigh Court, Vermont South
V437 (Ken Edmonds and Geoffrey Kaye, 1969)

8 Parkleigh Court, Vermont South
V448 (Edward Chang, 1969)

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9 Parkleigh Court, Vermont South
V422 (Peter M Dale, 1969)

2 Shalimar Court, Vermont South
V423 (Jon Friedrich, 1969)

4 Shalimar Court, Vermont South
V442 (Peter Vaalburg, 1969)

6 Shalimar Court, Vermont South
V447 (John R Herniman, 1969)

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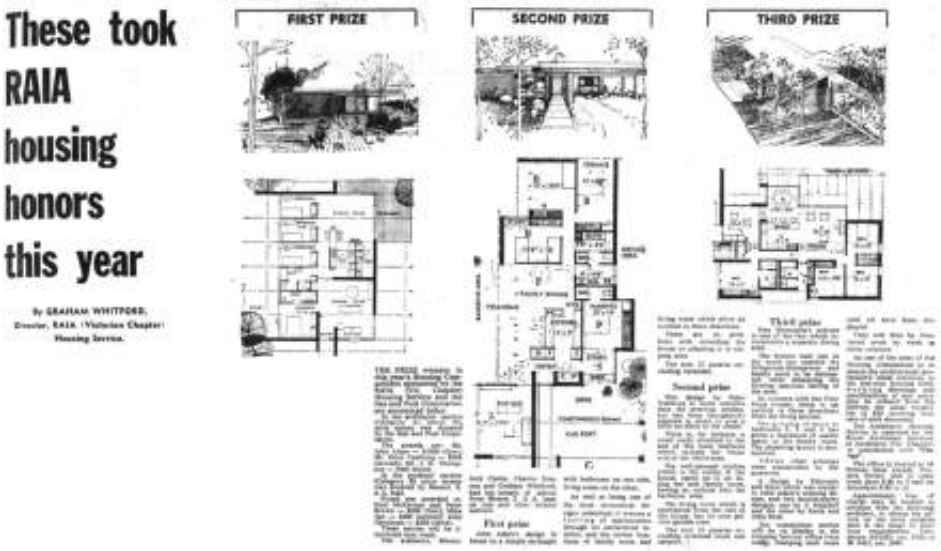
7 Shalimar Court
V433 (Desmond Bloink)

8 Shalimar Court, Vermont South
V440 (Sergei Halafoff)

Historical Images



Article announcing winners of the 1969 Housing Service competition that launched the Blue Flame Project
Source: Age, 25 August 1969, p 11.

THE BLUE FLAME PROJECT

AN EXHIBITION OF 20 SPECIALLY SELECTED ARCHITECT COMPETITION HOMES

Conducted in association with the "Architects Housing Service" of THE ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS.

- The 20 Selected Architect Competition Homes were designed by—

P. Dale
J. Friedrich
M. Monro
H. Flockart
S. Hunt
A. Ross
D. Blonk
K. & J. Reid
D. Dalrymple
Edmonds & Kaye
R. Monsborough
S. Halaloff
P. Vaalburg
R. Thorley
I. Smith
J. Heroiman
E. Chang
McKernan & Brown
M. Jan
G. Reid

- DEVA IDEAL HOMES PTY. LTD. has been appointed the Sole Building contractor to the project.
- Construction of the 20 Architect Competition Homes is to commence shortly. The exhibition is planned to open in March, 1970.
- Inclusion of Products-Services in the Architect Exhibition Homes can be arranged with members of the Specifications Committee, who will be calling upon selected companies, or Applications will be considered by sending details of Products-Services to:

The Blue Flame Project
10 Princes Gate Arcade,
Flinders Street, Melbourne, 3000.

Promotion of the Blue Flame Project, noting names of all of the architects represented
Source: Age, 19 September 1969, p 15.

The BLUE FLAME Project

ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS

Publicity brochure for Blue Flame Project (c.1970), with site plan showing all houses, citing the plan types and architects.
Source: Collection of Simon Reeves.

Hon E R Meagher, Minister for Housing, "turning the first sod" at site of Home No 8, Peter Vaalburg's V442 (4 Shalimar Court)
Source: Age, 11 July 1970, p 3.

Entry to the Blue Flame Project, with Parkleigh Court houses visible beyond
Source: Age, 7 August 1971, p 1.

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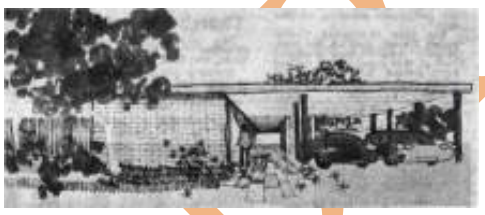
Two contemporary photographs of John Reid's much-published V434 design at 1 Parkleigh Court
Source: Collection of John Reid, Templestowe.

V424 by Malcolm Munro (2 Shalimar Court)

V431 by Albert Ross (5 Parkleigh Court)



V446 by Michael Jan (4 Parkleigh Court)

V438 by Ronald Monsbourgh (9 Shalimar Court)

V449 by Graham Reid (11 Shalimar Court)

V443 by Rod Thorley (5 Shalimar Court)

Perspective sketches for the six competition entries built at the Blue Flame Project that have been demolished
Source: Publicity brochure

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Context Pty Ltd, *City of Nunawading Heritage Survey Project*, 1 volume, October 1994.

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F: APPENDIX

F1 Annotated Masterlist of Place / Precincts of Potential Significance

The following represents the full Masterlist from which individual places were prioritized for further investigation, annotated with notes pertaining to date, architectural attribution and provisional assessment.

The grading system is as follows:

Grade 1 Place considered as high priority for individual HO; citation prepared for this study

Grade 1B Place considered for inclusion in group listing; citation prepared for this study

Grade 2 Place considered as high priority for further assessment as part of future study

Grade 3 Place considered potentially significant, pending further investigation/research; (includes places that cannot be assessed they are still not visible from the street)

Grade 0 Places previously considered potentially significant but are now no longer considered as candidates for further investigation, for the following reasons:

- Places that have been demolished (or have had a Demolition Consent issued);
- Places that have been significantly altered;
- Places that are considered merely representative examples of their type or era;
- Place otherwise not considered to reach the threshold for local significance;

In the following tabulated summary, places designated as **Grade 1A** or **Grade 1B** (ie, which have full citations in the present study) are indicated by yellow shading, and places designated **Grade 0** (ie, demolished or not otherwise recommended for further assessment) in grey shading.

Abbreviations as follows:

AW	Andrew Ward
BH	Built Heritage Pty Ltd
BHHS	Box Hill Historical Society
COW	City of Whitehorse
GB	Graeme Butler
IC	Ian Coleman / Coleman Architects
WHS	Whitehorse Historical Society

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INDIVIDUAL PLACES

Property	Address	Gr	Details
House (post-WW2)	30 Abbey Walk, Vermont	0	McAndrew, Burgess & Sprintz, 1966. *Representative example of mid-1960s modernist house.*
House	15 Acacia Avenue, Blackburn	3	Alistair Knox, 1958. *Intact; one of two surviving houses in COW designed by Knox in late 1950s. Knox is also represented by later houses in trademark mud-brick style from 1970s/80s*
House (Federation)	38 Adele Street, Vermont	1	Designer unknown, 1906 *Intact remnant orchard farmhouse; rare survivor in area*
House (Federation)	6 Agra Street, Mitcham	2	Designer unknown, circa late 1910s *Attic storey bungalow; unusual in Mitcham*
Paper Mill (Bowater Scott)	19 Ailsa Street Box Hill South	1	Farmer & Dark / Gregory Simpson, 1959 onwards *Vast industrial complex and major local employer. Designed by UK architects but supervised by local firm*
House (Victorian)	40 Albany Road, Surrey Hills	0	Demolition Consent 2016. *No further assessment.*
Flats (post-WW2)	4 Albion Road, Box Hill	0	Ben Alexander, c.1970 *Much altered - brickwork has been rendered,*
House (post-WW2)	10 Alern Court, Nunawading	0	Kevin Pethebridge, 1965 *Representative example of 1960s modernist house.*
Flats (post-WW2)	18 Alexandra Crescent, Surrey Hills	0	George Campbell, 1960 *Representative example of 1960s modernist flats.*
House (post-WW2)	6 Andrew Street, Nunawading	1B	Gerrit Hartland, 1959 (architect's own home) Assessed by BH on behalf of owner, 2016 *Included in Menin Road/Andrew Street Group Listing*
House (post-WW2)	2 Beatrice Court, Blackburn,	2	John G J Teunissen, c.1967 (architect's own home) *Above-average example with some unusual elements*
House (post-WW2)	6 Beatrice Court, Blackburn	0	David Maughan, 1968. Demolition consent 2017. *No further assessment.*
House (post-WW2)	8 Beatty Street, Mont Albert	0	Clarke, Hopkins & Clarke, 1967 (Neil Biggin) Architect's own home (Biggin was partner of CHC) *Much altered - original brickwork overpainted*
House (Victorian)	7 Beech Street, Surrey Hills	0	*Representative example of late Victorian house. Numerous other examples in the immediate vicinity.*
Project house	8 Beenak Court, Forest Hill	0	Holwerda & Hayes, 1967 - "Canberra" design *Representative example of late 1960s project housing*
Project house	5 Bellbird Crescent, Vermont	0	Glenvill Homes, 1970s – "Glenden" design *Representative example of 1970s project housing*
House (post-WW2)	8 Belmont Street, Surrey Hills	0	Architect and date unknown, circa 1980s. Possibly a late project house? Merchant Builders? *Altered – partial second storey addition*
House (Federation)	4 Bentley Street, Surrey Hills	1	Designer and date not previously recorded Confirmed (2014) as C Ernest Wright, 1908 Large sprawling Edwardian house on large site Widow's walk (rooftop platform) is very unusual *Unusual house- widow's walk is a rare feature, recalling time when Surrey Hills was highest point in Melbourne. Property was also flagged by the BHHS.*

Display house	10 Benwerrin Drive, Burwood East	0	'Women's Day Dream Home', 1963 Notable, but now altered almost beyond recognition
Project house	12 Benwerrin Drive, Burwood East	0	A V Jennings, 1963 – "Glenbrook" design Noted as not visible from street (2013) but foliage since been removed so that house is now visible. *Alerted – brickwork overpainted.* *Compare with more intact example 16 Cairo Road (qv)*
Roberts McCubbin Primary School	57 Birdwood Street, Box Hill South	2	Box Hill South State School, opened 1927. Standard departmental architecture. On par with other pre-war primary schools at Springvale Road, Nunawading (1926) (HO238) 294-298 Mitcham Road, Mitcham (1929) (qv) *All three buildings appear to warrant individual HO*
Bank branch (former ANZ)	1a Blackburn Road, Blackburn	0	Date and architect unknown, circa late 1950s. *Much altered. Cannot be interpreted as a former bank.*
Bank branch (former ES&A)	19 Blackburn Road, Blackburn	0	Barlow, van Rompaey & Kerr, 1956. *Much altered. Cannot be interpreted as a former bank.*
House (post-WW2)	33 Blackburn Road, Blackburn	0	Date and architect unknown, circa 1960s? *Representative example of this type of house – compare better examples such as 595 Middleborough Road (qv)*
House (inter-war)	133 Blackburn Road Blackburn	3	Designer and date unknown; reportedly 1920s Noted as not visible from street (2013); still (2024) *Cannot be properly assessed at this time*
Anglican Church of the Ascension (church, hall, link and hall additions)	370-376 Blackburn Road, Blackburn	0	Neville Mullett (local architect; likely congregant), 1968 (church/hall), 1970 (link); 1973 (hall addition) *Somewhat unusual design but there are numerous superior examples of post-WW2 church architecture*
Project house	394 Blackburn Road, Burwood East	0	Stewart Craig, 1971 – "Theme 71" design *Representative example of early 1970s project housing*
House (post-WW2)	11 Boisdale Street, Surrey Hills	2	Kerry Morrow & Associates, 1966 *Interesting Colonial-inspired design by this noted architect who later became leading academic in NZ*
House (post-WW2)	43 Boondara Road, Mont Albert North	0	John & Phyllis Murphy, 1956. *Much altered – additions and enclosure of balcony* *There are better/more intact examples of work by this important couple, notably 20 Naughton Grove (qv)*
House (post-WW2)	20 Boongarry Ave, Blackburn	3	Designer and date unknown, circa 1960s? Noted as not visible from street (2013); still (2024) *Cannot be properly assessed at this time.*
House (post-WW2)	95 Boronia Road, Vermont	3	Designer and date unknown, circa 1960s? Noted as not visible from street (2013); still (2024) *Cannot be properly assessed at this time.*
House (post-WW2)	103 Boronia Road, Vermont	3	Geoffrey Woodfall, 1967. (Adapted project house) Noted as not visible from street (2013); still (2024) *Cannot be properly assessed at this time.*
House (post-WW2)	7 Boulton Road, Blackburn	0	Architect unknown, 1965 (not named on drawings) Possibly Norman Hannaker – relative of client? *Barely visible from street but drawings suggest that it is representative example of a mid-1960s modernist house.*

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House (post-WW2)	30 Box Hill Crescent, Mont Albert	1B	Swedish prefab house – nominated by BHHS (2013) Confirmed as such in the rate records – built 1951 *One of several in the Box Hill North area – this house now forms part of broader group listing (qv)*
House (interwar)	41-43 Branksome Grove, Blackburn South	0	Designer and date unknown, circa 1920s. Identified via real estate listing, not heritage study Advertised as site for off-the-plan townhouses. *No further assessment.*
Project House	18 Brendale Avenue, Blackburn North	2	Ingle Construction Pty Ltd, 1964 – "Impala" design Not "Brendale Construction" as previously noted *Above-average example of a 1960s project house*
Bank branch (former SSB)	2 Brentford Square, Forest Hill	1	John McCorriston (SSB architect), 1971 *Notably early example of Brutalist architecture in COW*
House	28 Briggs Street, Mont Albert North	2	Robert K B Chan, 1960 Little is known of architect – early Asian graduate? *Above average example; seems unusual for its date.*
St Theodore's Anglican church	107 Broughton Road, Surrey Hills	0	Donald C Ward, 1964 (local resident – lived nearby) *Demolished in the 2010s.*
House (Victorian)	114 Broughton Road, Surrey Hills	0	*Representative example of late Victorian house.* *Numerous other examples in the immediate vicinity.*
House (Victorian)	127 Broughton Road Surrey Hills	0	*Representative example of late Victorian house.* *Numerous other examples in the immediate vicinity.*
House (for Susan Boyd)	132 Burwood Highway Burwood East	1	Robin Boyd, 1949 – house/studio for his mother *Notable as rare pre-partnership/solo commission by this esteemed architect, and for its unique family association.*
Presbyterian Ladies' College (school buildings)	141 Burwood Highway, Burwood	0	John F D Scarborough, 1956 onwards Masterplan comprising numerous buildings *Much altered – multiple phases of renovation/addition*
Presbyterian Ladies' College (sculpture)	141 Burwood Highway, Burwood	3	Andor Meszaros Memorial sculpture , classified by National Trust Not visible from street (2024); status unknown *Cannot be properly assessed at this time.*
Kmart	172-210 Burwood Hwy, Burwood East	0	First Kmart store in Victoria – opened 1969 *Much altered – original building cannot be interpreted*
Mount Scopus War Memorial College (original building)	245 Burwood Highway, Burwood East	0	Anatol Kagan & Ernest Fooks, 1953 Citation prepared by BH for heritage study (2016) *Demolished circa 2016.*
House	371 Burwood Highway, Burwood	3	Montgomery King & Trengove, 1958 Not readily visible from street (2014) *Cannot be properly assessed at this time*
Hotel Burvale	385 Burwood Highway, Vermont South	0	Assessed by IC and peer reviewed by BH (2016) Interim HO applied but subsequently moved. *No further assessment.*
Packing shed	431-439 Burwood Hwy, Vermont South	0	Demolition consent 2018. *Demolished by October 2018.*
House (HCV)	5 Cadorna Street, Box Hill South	0	Concrete house (Housing Commission Victoria). Demolition consent 2021. Since demolished.
House (HCV)	17 Cadorna Street, Box Hill South		Concrete house (Housing Commission Victoria). Demolition consent 2014. Since demolished.
House (HCV)	30 Cadorna Street, Box Hill South		Concrete house (Housing Commission Victoria). Demolition consent 2016. Since demolished.

House (HCV)	32 Cadorna Street, Box Hill South		Concrete house (Housing Commission Victoria). Demolition consent 2018. Since demolished.
House (HCV)	36 Cadorna Street, Box Hill South		Concrete house (Housing Commission Victoria). Demolition consent 2018. Since demolished.
Project house	16 Cairo Road, Mont Albert	3	A V Jennings, 1963 – "Glenbrook" design Intact example; unclear how many more exist CoW. Two others recorded are altered (12 Benwerrin Drive, qv) or demolished (16 Inglewood Avenue) *Intact example of this above-average 1960s project house.*
House	2 Calcutta Street, Mitcham	3	Architect and date unknown, circa 1951. *Representative example of Late Moderne style* *Better examples in Mont Albert – but rare in Mitcham?*
House (post-WW2)	19 Cam Street, Burwood East	3	Tom Ingham, 1971 (drawings sighted 2013) Little known of architect - MU graduate 1966. *Unusual plan form and jagged roofline* *Above-average example of early 1970s modernist house?*
Project house	65 Canterbury Road, Blackburn	0	Leith & Bartlett, 1958. Notably early project house / display house *Much altered - cream brick rendered since 2014.*
Project house	67 Canterbury Road, Blackburn South	0	Realty Development Corporation, 1969 *Demolished 2010s.*
Project house	226 Canterbury Road, Blackburn South	0	Contemporary Homes, 1955 – "Peninsula" design *Altered – second storey addition at one end* *More intact example at 4 Ian Grove, Burwood (HO286)*
Uniting Church Hall (at rear of church)	333a Canterbury Road, Forest Hill	0	Attributed to David Hopkins, 1980s (CoW) Architect confirmed as W H Smart, built in two stages in 1958-59, with north addition in 1971 by Clarke, Hopkins & Clarke (ie David Hopkins). *Not individually notable; could be re-graded as a contributory element existing HO25 (pre-war church)*
Project house	337 Canterbury Road, Forest Hill	0	Lewis Coote Homes, 1970s – "Model 51" design' *Representative example of a 1970s project house*
Public Hall	384 Canterbury Road, Forest Hill	0	Leonard Bullen, 1951-54 (not as old was assumed). *Much altered –original 1950s facade entirely concealed by front wing added in 1971. Early public halls better represented by East Burwood Hall (1926; HO234)*
Shop	693 Canterbury Road Surrey Hills	3	Date unknown, pre-WW2 *One of the more intact of a number of early shops in the strip (compare Nos 666, 668, 673, 675, 677) – also 699* *Possible assessment as a mini-precinct or group listing?*
Shop	699 Canterbury Road, Surrey Hills	3	Date unknown, pre-WW2 *One of the more intact of a number of early shops in the strip (compare Nos 666, 668, 673, 675, 677) – also 693* *Possible assessment as a mini-precinct or group listing?*
House (inter-war)	701 Canterbury Road, Surrey Hills	0	Designer and date unknown *Representative example of an inter-war bungalow w.* *Many similar house sin the immediate vicinity.*
House (inter-war)	715 Canterbury Road, Surrey Hills	0	Designer and date unknown *Representative example of an inter-war bungalow.* *Many similar house sin the immediate vicinity.*

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TV/radio relay tower	728 Canterbury Road Surrey Hills	0	Individual citation prepared by BH (2014) Withdrawn due to community opposition. No further assessment.
House (Federation)	760 Canterbury Road, Surrey Hills	1	Designer unknown, circa 1918. Large and prominent attic-storey bungalow, Later occupied as Lutheran Peace Memorial Home (for migrant children) from 1950 *Property has also been flagged by the BHHS.*
Office building and residence	893a Canterbury Road, Box Hill South	0	Brine Wierzbowski Associates 1963, *Much altered – remodelled virtually beyond recognition.*
Tally Ho Memorial Hall (aka 'clubrooms'; aka 'dining hall'; aka 'chapel')	27-29 Carrington Court, Burwood East	1	Individual citation preapred by IC (2016) Only surviving building of Tally Ho Boys Village . Date and architect unconfirmed at that time, and place misleading described as purpose-built chapel. *Research (2024) confirms building to be memorial hall (dining/meeting room with kitchen wing) by architect Alec Eggleston, 1929, converted into a chapel in 1961.* *New citation (2024) provides detailed re-assessment.*
House (post-WW2)	26 (24) Central Road, Blackburn	1	Alexander Johnson W Fergie, circa 1949 Architect's own house. Preliminary working drawings dated 1947. *Notbale early example of post-WW2 modernist house.*
Seventh Day Advent Homes for the Aged	163-65 Central Road, Blackburn	B	John & Phyllis Murphy, 1956 onwards. Demolition consent 2020. *Site has been extensively redeveloped. Aerial photos confirm that nothing now remain of the Murphys' work.*
Post Office	9 Chapel Street, Blackburn	1	Gregory Simpson & Associateson behalf of the Commonwealth Departmentt of Works, 1959 *Notable example of post-WW2 modernist government infrastucture, designed by architect from Surrey Hills .*
House (post-WW2)	13 Chester Street, Surrey Hills	1	Bernard Joyce, 1965. Published in a housing magazine, 1969. *Fine example of 1960s house by well-known practitioner.*
House	23 Chester Street, Surrey Hills	2	Cocks & Carmichael, 1977 (drawings sighted 2024) *Seems unusual – likely a fine example of architects' work*
House (architect's own)	2 Chilcote Court, Box Hill South	0	Alan Niven, 1959. Architect's own home. Demolished 2010s.
House (Victorian)	18 Churchill Street Mont Albert	B	One of few surviving grand Victorian houses in this subdivision. Rare also for railway frontage. *Compares well with listed counteprarts at 12 Stanhope Street (HO75) and 25 Hopetoun Parade (HO269)* *Above-average example of a large Victorian house.*
House	22 Churinga Avenue, Mitcham	2	Eastern Suburbs Drafting Service, 1973. Drawings suggest it was neither architect-designed, nor a standard project house/kit house design *Still, A-framed houses are atypical in the suburban context, so it is likely to be significant at a local level.*
Factory (Aerosol Industries Pty Ltd)	6 Clarice Road, Box Hill South	0	Paynter & Dixon, 1958-59 (a design/build firm) First stage finished by 1960; further stages followed *Partially demolished; seems only a representative example of post-war industrial architecture.*
House (Victorian)	98 Clyde Street, Box Hill North	0	Demolished in 2010s. New house on site.

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Factory (Terry Engineering Co)	Cook Road, Mitcham	0	Meldrum & Partners, 1958-59 (not 1960 as previous) *Much altered – buildings remodelled and extended* *Better and more intact examples exist at 8-12 Simla Street (qv) and 21-23 Joseph Street (qv)*
Project house	6 Coppabella Way, Burwood East	0	Astra Constructions, 1970 – unspecified design *Representative example of 1970s project housing.*
Project house	32 Creswell Crescent, Mitcham	0	Contemporary Homes, 1955 – "Peninsula" design. Many of these built – compare 4 Ian Grove (HO286) *Representative example of this early project house.*
House (SHS)	23 Dalmor Avenue, Mitcham	0	Small Homes Service - T213 (Ken Hardcastle) *Altered – front addition in matching style* *There are more intact surviving examples of SHS houses that have been recommended as part of a group listing*
House (post-WW2)	11 Deans Wood Road, Forest Hill	2	George Campbell, 1958. Intact house; profiled in a newspaper in 1958. *Above average example of a late 1950s modernist house*
House (post-WW2)	25 Denis Street, Mitcham	2	Charles Duncan, 1971. House designed for plumber/artist David Deam – he later adapted it as a galley and studio. Seems a a good example of organic style of this well-known architect *Above average example of early 1970s modernist house.*
House (Project house?)	4 Devlin Street, Vermont	0	Date and architect unknown, circa later 1960s? *Representative example of a later 1960s modernist house*
House (post-WW2)	58 Diosma Crescent Nunawading	1	Shorltisted in 2014 but architect not confirmed. *Since confirmed as David Hopkins, 1958 – house for his sister and the first ever commission for this well-known architect, later co-founde of Clarke, Hopkins & Clarke.* *Important house in unusually striking modernist style.*
Kerrimuir Primary School (original buildings)	178 Dorking Road, Box Hill North	0	PWD, 1959 – standardized classroom blocks. First stage completed by 1960; subsequent additions Appears intact but there are other examples of this departmental architecture elsewhere – compare Laburnum Primary, Nunawading South Primary *Representative example of standardized school design*
Kerrimuir Primary School (art room)	178 Dorking Road, Box Hill North	2	John Baird, circa late 1960s (attributed) Detached art room in SE corner of school site. Concrete block, square plan and pyramidal roof Appears to be standard design developed by Baird, from prototype built at Beaumaris North in 1966 *Possibly unique amongst state school sites in CoW*
House	205 Dorking Road, Box Hill North	0	Designer and date unknown, circa 1950s? Somewhat resembles a *Peninsula* project house. Demolished in the 2010s.
House (Federation)	62-64 Dunlavin Road, Nunawading	0	Demolition consent 2021. Demolished by November.
Project house	286 Elgar Road, Box Hill South	0	Haven Homes, 1965 – unspecified design. Demolished between 2010 and 2014.
RC Church of Our Lady of Perpetual Succour	311 Elgar Road, Surrey Hills	0	Architect unknown, 1963-64. Brick church on kite-shaped plan, prow-like front. *Much altered- frontage remodelled/extended by 2014*

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Box Hill TAFE (Elgar Campus)	465 Elgar Road, Box Hill	0	Designer unknown, circa mid/late 1920s. *Much altered - remodeled during 2014.* Demolition consent 2016.
House (Interwar) Old English	5 Elland Avenue, Box Hill	3	Clinker brick, tiled roof, half-timbered gable end. *Possibly a rare survivor in central Box Hill*
House	7 Elmhurst Road, Blackburn	0	Evan Walker, 1959 – architect's first commission Student commission – published in 1961. Demolished by 2018.
House	8 Eustace Street Blackburn	3	Geoff Trewenack, 1973. Gabled house, recycled brick. RAIA citation, 1973. Noted as not visible from street (2013); still (2024) *Cannot be properly assessed at this time*
House	31 Everton Grove, Surrey Hills	3	Date and architect unknown, circa later 1970s. Clinker brick house with partial upper storey *Somewhat unusual – potentially significant, pending confirmation of an architectural attribution.*
House	2 Felgate Parade, Vermont South	2	Serge Biguzas, 1983 (drawings sighted 2024) Early project for noted architect, co-founder of BBP Architects, 1987. Biguzas still practicing but did not respond to BH's email seeking further details. *Architect and client both of European descent – house is in "Immigrant Nostalgic" style, very unusual in COW.*
House (Federation)	1 Fellows Street, Mitcham	0	Demolition consent 2013.
House (Federation)	7 Florence Road , Surrey Hills	0	Designer and date unknown, circa 1910s? *Seems to be representative example of Edwardian house.* *One of a number of pre-war timber houses in this street.*
House (Inter-war)	31 Florence Road, Surrey Hills	0	Designer and date unknown, circa 1920s? *Seems to be representative example of Edwardian house.* *One of a number of pre-war timber houses in this street.*
House (Inter-war)	43 Florence Road, Surrey Hills	1	Designer and date unknown, circa 1919-20. *Unusual compared to oteer pre-war timber houses in this street (and in the broader vicinity, and across COW)* *Early bungalow-style residence of disitnctive form*
House (Inter-war)	51 Florence Road, Surrey Hills	0	Designer and date unknown, circa 1920s? *Seems to be representative example of Edwardian house.* *One of a number of pre-war timber houses in this street.*
House (post-WW2)	11 Forest Road (formerly Lake Road) Forest Hill	3	William Collinson Kerr, 1964. Published in a newspaper article. Seems intact *Good example of mid-1960s modernist house, but better ones elsewhere. Compare 7 Streeton Court (qv)*
Project house	1 Fortescue Grove Vermont South	0	Deva Homes, 1970 – standard design Gable-roofed white-painted brick house. Limited aesthetic interest. *Representative example of late 1960s/early 1970s project house.*
House (post-WW2) (architect's own)	31 Fowler Street, Box Hill South	0	David Chancellor, 1959. Architect's own home. Citation prepared (2013) but removed before panel. Demolished.
House	19 Francesca Street, Mont Albert North	1	Ace Drafting Service, 1947 (drawings sighted 2024) *Highly unusual Functionalist style. Rare in COW*

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House (post-WW2)	23 Francesca Street Mont Albert North	0	William Collinson Kerr, 1964. Demolished prior to October 2014.
House (inter-war) (Old English)	28 Fuchsia Street, Blackburn	3	Designer and date unknown, circa later 1930s? *Seems intact; possibly an above average example* *Architectural attribution would be useful*
Office building?	114-120 Fulton Road Blackburn South	0	Designer and date unknown, circa later 1970s *Does not appear to be particularly notable for its date.*
Shops (row)	122-130 Fulton Road Blackburn South	3	Designer and date unknown, circa 1950s Typical 1950s row shops but may be notable for its very high level of intactness – few alterations. *Requires comparative analysis with other examples*
House (Federation)	32 Gardenia Street, Blackburn	0	*Representative example of early 20th century house*
House	35 Gardenia Street, Blackburn	0	Date and architect unknown, circa 1950s? House altered/extended 1970s by architect owner, Graham Neilson of (PINK Architects) *Appears to be of limited architectural interest.*
House (Federation)	33 Gillies Street, Mitcham	2	Designer and date unknown, circa early 1900s? Remnant orchard farmhouse - but located on the outer edge of the Mitcham Township subdivision *Likely significant as evidence of early orchard settlement*
House (architect's own)	18 Gilmour Street, Burwood	1	Howard Hodgens, 1964. Architect's own home Citation prepared in 2013 but removed before panel *Still strong contender – house has had new owners since Hodgens' death in 2020. Updated citation preapred.*
House (post-WW2)	12 Glendale Street, Surrey Hills	0	Lionel King (Montgomery, King & Trengove, 1949. Drawings sighted (2024) confirm this earlier date. Architect's own modernist house for 40+years. *Notable but much altered by new owners in 1992– exterior entirely reclad and fenestration reconfigured.*
House (Federation)	18 Glenmore Street, Box Hill	0	Designer and date unknown, circa early 1900s *Representative example of Edwardian house*
House (post-WW2)	2 Gracefield Drive, Box Hill North	0	J N Taylor, 1956 (architect's own house) *Much altered – face brickwork has been rendered*
House	17-19 Grandview Road, Box Hill South	1	Chancellor & Patrick, 1954. Early house for this recently-former partnership, showing strong interest in work of Richard Neutra *Largely intact example of early project by notable firm (David Chancellor personal association with local area).*
House	17 Grange Street, Mont Albert	0	Bernard Joyce, 1967. Citation prepared by BH in 2013. Removed prior to panel due to extent of alteration *No further assessment.*
House	7 Grove Street, Vermont	0	Rosenfeldt, Gheradin & Associates, 1963 One of three houses in street by same architects – the other two (at Nos 3 and 6) are demolished *Representative example of early 1960s modernist house*

House	7 Gwenda Street Box Hill South	3	Designer and date unknown, circa ate 1940s Builder's own house - William Walters Recorded not visible from street (2013); still (2024) Sale notices describe as "English house, Devonshire style , stone, shingle" (1949) and "authentic English cottage, shingle roof, sandstone walls" (1969) *These are very intriguing descriptions but house cannot be properly assessed at this time.*
House (post-WW2)	43 Haig Street, Box Hill South	2	Designer and date unknown, as of 2013 Drawings (sighted 2024) confirm date as 1962 and architect as Murray Wilson; his own house. Worked for Buchan Laird & Buchan in Geelong, transferred to Melbourne in 1962 , thus the need for this house *Slightly altered but still above-average example of early 1960s house. Compare with 29 Naughton Grove (qv)*
House	6 Hamilton Avenue, Blackburn	0	L V Connell, 1968. *Representative example of late 1960s modernist house.*
House	10 Hamilton Avenue, Blackburn	0	Demolition consent 2016. Demolished by 2018
House (Inter-war)	2 Harding Street, Surrey Hills	0	Brick house with Tudor/bungalow influences *Representative example of an inter-war house.*
House (Inter-war) English	3 Harding Street, Surrey Hills	B	Red brick attic bungalow with bay window, huge shingled gable There appear to be relatively few houses of this type remaining in Surrey Hills Compare with similar (but probably superior) one at 744 Canterbury Road (HO24)
House	15 Harding Street, Surrey Hills	0	R M & M H King, 1967. (Drawings sighted 2024) Previously assumed to date from the early 1950s. However, design is unremarkable for the late 1960s. *Representative example of a post-WW2 house.*
House	20-20a Harold Street, Blackburn	1	Outline citation prepared by BH, 2016. Date /architectural origins could not be clarified. Confirmed (2024) to have been designed and built by émigré architect J B Chmielowoski. Much information provided by architect's daughters. *Highly unusual in a local context – unusual Functionalist syle and unusual duplex typology;*
House (Inter-war)	7 Heather Grove, Nunawading	1	Designer unknown, circa early 1930s. Bungalow with strong horizontality – elegant detailing, single-span verandah with end pergolas. *An outstandng example amongst inter-war bungalows*
House (post-WW2)	8 Heaton Court, Burwood East	0	David Dalrymple, 1968 (drawings sighted 2013) Seems to be an adaptation of project house that Dalrymple designed for Inge Brothers c.1968 (later added to RAIA Housing Service range as V3181) *Representative example of a later 1960s modernist house.*
Project house	17 Henwood Street, Blackburn South	0	Mutual Constructions, 1959 – unspecified design *Representative example of late 1950s project housing.*
Project house	19 Henwood Street Blackburn South	0	Mutual Constructions, 1959 – unspecified design *Representative example of late 1950s project housing.*

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House	52 Hibiscus Road Blackburn North	2	Designer and date unknown, circa early 1960s No architectural interest – historical associations only, as house where British train robber Ronnie Biggs lived during his fugitive years in Melbourne. *Associations have an international historical and/or pop cultural resonance – however, a heritage overlay may not be the most appropriate way to acknowledge this.*
House (Victorian)	213 Highbury Road Burwood	1	Designer and date unknown Confirmed by BHHS to have been buyilt in 1854 House listed in first rate book of 1863; thus making it one of the oldest surviving houses in COW. *Demonstrably of historical significance at the local level*
House (post-WW2)	27 Holland Road, Blackburn	0	Seemingly unremarkable triple-fronted brick villa Demolished in the mid-2010s
House (post-WW2)	43 Holland Road, Blackburn	2	Geoffrey Woodfall, 1964. Published in newspaper column. Seems intact. *Fine example of the work of this celebrated architect, but his award-winning house at 7 Streeton Court (qv) is considered to be a higher priority for now.*
House	27 Howard Street, Box Hill	0	*Representative example of Edwardian house.* *One of several early houses in street: compare others at No 11 (Vic) and 23 (Edw), 25 James Street (Edw)*
House (post-WW2)	3 Hunter Drive, Blackburn South	3	Date and architect unknown, circa early 1950s? Seems unusually large and intact house of the era. *Uncommon? Maybe significant, pending attribution*
House (SHS)	2 Ireland Avenue, Mitcham	3	Age Small Homes Service - T377 (Neil Clerehan) *Seems intact – but is a little too late for inclusion on priority group listing of early SHS houses (qv)*
House (Victorian)	5 Ireland Street, Burwood	1	Earliest surviving house in former Burwood Village *Historically significant at the local level*
House (War Service??)	15 Irving Avenue, Box Hill	0	Designer and date unknown, circa 1950s? Demolition consent 2016. Demolished circa 2017.
House	22 Jackson Avenue, Mont Albert North	2	Date and architect unknown, circa early 1960s. *Unusual – maybe significant, pending attribution?*
Project house	24 Jackson Street, Forest Hill	0	Contemporary Homes, 1955 – "Peninsula" design. Many of these built – compare 4 Ian Grove (HO286) *Representative example of this early project house.*
House	11 Jeffrey Street, Blackburn	0	Date and architect unknown, circa late 1970s? *Representative example of late 1970s style house*
House	25 Jeffrey Street, Blackburn	0	Beatrice Burns, 1958. Artist's own house. Demolished 2014
House	10 Jocelyn Street, Balwyn North	2	Whitford & Peck, 1968. Recorded not visible from street (2013); still (2014) *Cannot be properly assessed at this time*
Strathdon Aged People's Settlement	17 Jolimont Road Forest Hill	3	Earle, Shaw & Partners, 1967 Complex has been much altered/extended since. Original main building demolished but some of the units survive at rear (visible from Cheryl Street) *Possible of some interest architecturally or for historical associations with early purpose-built aged housing?*

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Factory (Bakaert Australia Ltd)	6-16 Joseph Street Blackburn North	0	Various designers, built in stages from c.1960 Peter Wille photograph shows interesting building but this has been much alerted or demolished. *Altered – remodelled, new buildings added. There are better and more intact examples of post-WW2 factories.*
Printing plant (W D Joynt & Co)	19 (21-23) Joseph Street Blackburn North	3	Rosman Hastings & Sorel, 1965 *Altered – sawtoothed roof rebuilt over rear building.* *Still evocativ examples of post-WW2 factory complex*
House (Victorian)	26 Kangerong Road, Box Hill	2	One of a number of Victorian houses in vicinity: compare grander examples in Watts Street at Nos 30-32 (HO88) and No 34 (HO190); simpler ones at 31 Watts, 22 Kangerong (HO186), 18 Kangerong *Possibly on par with these others - potential?*
House (post-WW2)	7 Karwitha Street, Vermont	0	Michael Morris, 1973 - of Morris & Pirotta. Brutalist two storey concrete block house. Demolition consent 2019.
House (Inter-war)	25B Kenmare Street, Mont Albert North	0	Demolition consent 2015. Demolished by 2018.
House (post-WW2)	64 Kenmare Street, Mont Albert	0	John & Phyllis Murphy, 1952. Early example! *Altered – largely engulfed by later additions.* *There are better/more intact examples of couple's work elsewhere – compare 20 Naughton Gove (qv)*
House (Victorian)	8 Kent Road, Box Hill	0	One of numerous modest Victorian houses in area. Compare adjacent example at No 10 (qv). Many others nearby: 17 James Street, 1, 3 and 5 Alexander Street, 495 Station Street; 467 Station Street (HO222) *Representative example of late Victorian house*
House (Victorian)	10 Kent Road, Box Hill	0	One of numerous modest Victorian houses in area. Compare adjacent example at No 10 (qv). Many others nearby: 17 James Street, 1, 3 and 5 Alexander Street, 495 Station Street; 467 Station Street (HO222) *Representative example of late Victorian house*
House (post-WW2)	57 Kerrimuir Street, Box Hill North	0	Designer and date unknown, circa 1950s? There are better examples of this type of house – compare with 595 Middleborough Road (qv) *Representative example of this somewhat old fashioned style of post-war housing.*
House (post-WW2)	56 Kitchener Street, Box Hill South	2	Designer and date unrecorded in 2013. Confirmed (2024) as Dack & Armstrong, 1958 *Above-average example of later 1950s modernist house*
House	22 Laburnum Street, Blackburn	3	Designer and date unknown, circa late 1950s?. *Unusual? Potentially significant, pending attribution*
House (Inter-war)	23 Laing Street, Mont Albert	2	Designer and date unknown, circa 1934 (S&M) *Interesting two-storey bungalow with quirky detials* *Seems a highly unusual example of an inter-war house.*
Kindergarten (City of Nunawading)	16 Larch Street Blackburn	0	Hank Romyn, 1960. Typical of modern kindergarten design – but theme may be better represented by earlier example at 18 Pope Road (qv) and later one at 20 Neil Court (qv) *Representative example of post-WW2 kindergarten*
Project house	10 Latham Court, Forest Hill	0	Consolidated Home Industries, 1961 Demolished circa 2010s.

House	37 Laurel Grove, Blackburn	3	Designer and date unknown, circa early 1950s? *Unusual? Potentially significant, pending attribution*
House	51 Laurel Grove, Blackburn (formerly listed 'Lot 51')		Moore & Hammond, 1967 Exact address could not be confirmed in 2013. Street number now confirmed (2024) as No 51. *Representative example later 1960s modernist house*
House	29 Leonard Street, Burwood	1	Stuart McIntosh & Alexander Harris, 1956. Rare private commission by architects who were colleagues in the ES&A Bank's Architectural Dept. *Altered – but still a very striking modnerist design*
House	3 Leons Court, Blackburn	3	D R Pearson (design/draftsman), 1972. *Somewhat quirky design representative of a trend in the early 1970s. Possibly significant?*
House	8 Lindisfarne Drive, Burwood East	3	Tom Jacobi, circa late 1960s? House was shortlisted for HIA competition, 1970 *Interesting example of later 1960s modernist house, but not as distinctive as others such as 9 Streeton Court (qv)*
Orana Babies' Homes (remnant buildings)	17 Livingston Close Burwood	1	Bates, Smart, McCutcheon, 1953 onwards. Citation prepared by Colemans (2016) but questions raised at panel hearing re kindergarten *Historical significant cannot be disputed – re-assessed with new citation as a group listing of four buildings.*
Livingstone Primary School	25-29 Livingstone Road Vermont South	1	PWD (Des Bloink, Michael Spivakovsky), 1976-77. Brutalist concrete block building on unusual plan; *Histoicla resonance - first state school in area, also uniquely designed tfor shared c ommunity facilities.*
House	19 Loraine Avenue Box Hill North	0	Age Small Homes Service – T226 (Neil Clerehan) Reported in a contemporary guidebook, 1956. Demolition consent 2018. Since demolished.
Flats (public housing)	41-49 Luckie Street, Nunawading	2	Housing Commission of victoria, 1964-65. Representative of a standard HCV flat design – far more common in inner suburbs; unique in COW *Likely to be significant at the local level*
MMBW Eastern Regional Depot	25-35 Lucknow Street, Mitcham	0	A K Lines, Marshall & McFarlane, 1970s Citation prepared by BH for 2016 study. Removed from study due to extent of changes. *No further assessment.*
Project house	121 Mahoneys Road, Forest Hill	0	N P Lewis & Son, 1966 – design by Frances Mason *Representative example of mid-1960s project housing.*
House	38 Main Street, Blackburn	0	Alexander Harris, 1954. Peter Wille photograph. Demolished.
House	74 Main Street , Blackburn	0	Brian O'Connor, 1954. Unlocated in 2013. Confirmed (2024) as No 74. Demolition consent 2021.
House	111 Main Street, Blackburn	0	Age Small Homes Service – T22 (Robin Boyd) Citation prepared by BH for 2016 study Notably early and intact SHS house – one owner! Removed from amendment. Demolished 2023.
House	28 Marchiori Road Blackburn North	0	Age Small Homes Service – V256 (Bernard Joyce) Unlocated in 2013. Confirmed (2024) as No 28. House confirmed to have been demolished c.2000.

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Shop	2 Market Street, Box Hill	0	Designer unknown, 1940. *Site is directly adjacent to proposed SRL railway station.* *No further assessment.*
Shop	4 Market Street Box Hill	0	Designer and date unknown. *Site is directly adjacent to proposed SRL railway station.* *No further assessment.*
Shop	6 Market Street Box Hill	0	Designer and date unknown. *Site is directly adjacent to proposed SRL railway station.* *No further assessment.*
House addition (architect's own)	9 Marlborough Street Mont Albert	0	Robert van Rompaey, 1949. Pre-war brick house with 1949 studio addition. Status of studio unclear –Not visible from street. Pre-war house is already protected as part of HO102 (Mont Albert Residential Precinct)
House	31 Masons Road, Blackburn	3	John R Kinsman, 1978 (drawings sighted 2024) Designer was the author of *Building a House* (1978) *Unusual – possibly significant, pending further investigation into designer's work and importance*
House (architect's own)	44 Menin Road, Forest Hill	1B	Conrad Theodore, 1966 (architect's own house). Reported in newspaper. *Part of proposed group listing of post-WW2 houses in Menin Road/Shady Grove/Andrew Street (qv)*
Project house	38 Middleborough Road Burwood East	0	J B Orioff, 1963 – design by Walter Embleton *Representative example of mid-1960s project housing.*
House (Postwar Moderne)	63 Middleborough Road Burwood	B	Architect and date unknown, circa late 1940s. *Notably intact setting. Above-average example of this type of early post-war house in lingering pre-war mode*
Shops (row of five)	102-110 Middleborough Road, Blackburn	0	Designer unknown, 1960 *Much altered – shopfronts all considerable remodelled.*
House	595 Middleborough Road, Box Hill North	3	Architect and date unknown, circa mid-1960s? Interesting details: curved window, metal railings. Greek migrant builder's own residence. *Above-average example of this housing; also demonstrative of post-war Greek migrant settlement*
House (Edwardian)	15 Middlefield Drive, Blackburn North	1	Designer unknown, circa 1910s. Remnant orchard farmhouse along creek corridor *The most northerly surviving example in COW*
Project house	5 Minerva Crescent, Vermont South	0	P D Pastellas, 1970 *Representative example of project housing of the era.*
Project house	7 Minerva Crescent, Vermont South	0	P D Pastellas, 1970 *Representative example of project housing of the era.*
Project house	9 Minerva Crescent, Vermont South	0	P D Pastellas, 1970 *Representative example of project housing of the era.*
Project house	25 Minerva Crescent, Vermont South	0	Morehouse Construction Company, 1970 – unspecified standard design by Marcus Gottlieb *Altered – brickwork rendered prior to 2013.* *Representative example of project housing of the era.*
Project house	27 Minerva Crescent, Vermont South	0	Morehouse Construction Company, 1970 – unspecified standard design by Marcus Gottlieb *Representative example of project housing of the era.*

Dr Stanley Cochrane Kindergarten	257 Mitcham Road, Mitcham	0	Robert Rolfe, 1955 – local architect Innovative modern design reflecting new thinking in post-war kindergarten planning *Altered – enlarged and remodelled in the 2010s.* *New work replicates old, which confuses interpretation.*
Mitcham Primary School	294-298 Mitcham Road, Mitcham	2	Mitcham State School, opened 1929. Standard departmental architecture On par with other pre-war primary schools at 96-106 Springvale Road, Nunawading (1926) (HO238); 57 Birdwood Street, Box Hill South (qv) *All three buildings appear to warrant individual HO*
House (Victorian)	304 Mitcham Road, Mitcham	2	Timber villa, return verandah, splayed corner. Two other early houses nearby (Nos 300 and 302). Compare also with Haines Street, No 33 (HO44) and 35 (HO45) but not No 38 (unlisted). Simpler timber villa at 381 Mitcham Road (HO59) *Unusual design stands out amongst the few surviving Victorian houses on Mitcham road (north)*
Doctor's Rooms	329 (not 327) Mitcham, Road, Mitcham	0	Raymond Berg, 1954. Address incorrectly cited in previous masterlist. Clinic stood on the south corner of Harrison Street (No 329) rather than the north corner (No 327). Clinic enlarged in 1960s, demolished in the 1980s.
House (inter-war) ["Watersheds Engineer's Brick Bungalow"]	452 (was 284) Mitcham, Road, Mitcham	1	Designer unknown, late 1920s. Preliminary research confirmed occupation by MMBW engineers from at least 1931 until 1970s. Rare example of purpose-built MMBW engineer's residence – unique in COW, rare in Melbourne *Definitely local significance – potentially state*
Demonstration house (James Hardie & Co)	531 Mitcham Road, Vermont	0	Demonstration house for James Hardie & Co, 1962 Seems to be the last survivor of a series of such demonstration houses in COW. Two others in Whitehorse Road have long since been demolished. *Altered – exterior has been entirely reclad* *Due to the recladding, house can no longer be interpreted as a demonstration / display of cement sheet products.*
Medical clinic (former)	547 Mitcham Road, Vermont	0	L R Saward, 1959 – local architect *Altered – residential conversion; brickwork rendered*
House	10 Molleton Street, Blackburn	0	Designer and date unknown, circa 1950s. There are better example of this style of house – such as 595 Middleborough road (qv) *Representative example of this somewhat old fashioned style of post-war housing.*
House (Victorian)	372 Mont Albert Road, Mont Albert	1	Designer unknown, 1893. One of few surviving 2-storey Vic houses in area. Compares favourably with 12 Stanhope (HO75) and 29 Erasmus Street (HO176) *Property was also flagged by BHHS.*
Flats	394 Mont Albert Road, Mont Albert	0	George Campbell, 1961 *Representative example of early 1960s flat design.*
House (Federation)	396 Mont Albert Road, Mont Albert	B	Designer and date unknown, circa 1910s. *Unusual proto-bungalow design. Compares favourably with similar house nearby at No 380 (HO150)* *Uncommon; few these sorts of houses in Mont Albert.*

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House	26 (26-28) Moore Road, Vermont	0	Designer and date unknown, circa 1980s? Intact, but of limited architectural interest. *Representative example of large homestead-style house*
House	43 Moore Road, Vermont	3	John & Phyllis Murphy, 1955. House on huge block – difficult to see from street More intact than most other Murphy houses in COW – compare more altered examples at 57 Orchard Grove (qv) and 43 Boondara Road (qv) Example at 20 Naughton Grove (qv) probably the more intact/striking example of couple's work *Possibly a candidate pending closer inspection*
Project house	56 Morack Road, Vermont	0	Inge Brothers, 1969 – "Oakwood Rustic" design *Representative example of late 1960s project housing.*
House "Cricklewood"	91 Morack Road, Vermont	0	Pethebridge & Bell, 1958 (Boyd addition, 1967) *Altered – original house remodelled, and new house built in front that conceals original house from public view.*
House	108 Morack Road, Vermont	0	Age Small Homes Service, 1949 - T259 (S Calder) Very intact when photographed by BH (29104) Demolished c.2015
House	59 Mount Pleasant Road Nunawading	3	Designer and date unknown, circa late 1940s? Reported not visible from street (2013); still (2024) *Interesting? Cannot be properly assessed at this time*
Nunawading South Primary School (additions)	105-107 Mount Pleasant Road, Nunawading South	0	Clarke, Hopkins & Clarke (David Hopkins), 1973 Brutalist-style concrete block addition to complex Published in *Architecture & Australia*, 1973 Demolished when school site upgraded 2014-2015.
House	4 Murray Drive, Burwood	3	Merchant Builders, 1968 (drawings sighted 2024) Two-storey version of Graeme Gunn's "Terrace T4" *Representative of Merchant Builders houses? Unclear if this two-storey version is common, uncommon or even a one-off adaptation. More comparative analysis needed.*
House (Federation)	1 Musk Street, Blackburn	2	Designer and date unknown. Described in an online advert as "*Amara*, c.1907" Former orchard property –large addition at rear *Likely to be a rare survivor of this sort of early farming settlement. Not as intact as other so this list.*
House	10 Musk Street, Blackburn	0	Designer and date unknown, circa early 1950s?. Demolition consent 2020.
House (post-WW2)	20a Myrtle Grove, Blackburn	0	Chancellor & Patrick, 1960 Demolished by September 2014.
House (post-WW2)	50 Myrtle Grove, Blackburn	0	Designer and date unknown, circa early 1970s? Described in online listing as "Merchant Builders" Unverified (drawings not sighted) but seems likely. *Representative example of a Merchant Builders house.*
House (post-WW2)	16 Nandina Street, Forest Hill	3	George Zalk, 1959. Detached studio at rear. Architect's own house for 60+ years (died 2020) *Some interesting details but there are better examples of late 1950s houses – compare 58 Diosma Crescent (qv)*

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House (post-WW2)	20 Naughton Grove, Blackburn	1	John & Phyllis Murphy, 1954. Seems most intact/best example of couple's work. Compare altered examples at 57 Orchard Grove (qv), 43 Boondara (qv), 64 Kenmare Street (qv) *Excellent example of 1950s house by noted architects*
House (post-WW2)	29 Naughton Grove, Blackburn	1	Kurt Veltjens, 1962-64. Architect's own home. Revised date sourced from drawings (sighted 2024) Only complete house ever designed by this noted migrant architect who worked for larger firms. *Excellent exmaqple of 1956s house by noted architect*
House (post-WW2)	37 Naughton Grove Blackburn	3	W Collinson Kerr, 1965 *Good example of this type of mid-1960s modernist house but example at 7 Streeton Court (qv) is better.*
Kindergarten (Sir Edgar & Lady Coles; Yooralla)	20 Neil Court, Blackburn	2	Ken Bethell, 1964. Specifically designed for handicapped children Published in at least two magazines. *Historically significant for associations with Yooralla and theme of child welfare in COW. Architecturally significant – elegant minimalist design. Intact.*
Box Hill & District Hospital (original building only)	51 Nelson Road, Box Hill	0	Leighton Irwin & Company, 1955. *Much altered - original cream brick buildings have been remodeled, engulfed by later additions/storeys* *Difficult to interpret original extent and form of hospital*
House (Federation?)	15 Newton Street, Surrey Hills	0	Designer and date unknown. Many similar houses nearby: compare 27 Erasmus, 396 Mont Albert (qv), better one at 6 Pembroke (qv) and several superior examples in Churchill Street: No 16 (HO136), No 36 (HO137), No 64 (HO29) *Representative example of this type of house*
House	11 Norway Avenue Blackburn	0	Designer and date unknown. Demolished circa 2017-2018.
House (post-WW2)	51 Olympiad Crescent Box Hill	0	R Durran & Associates, 1961 *Representative example of early 1960s modernist house*
House	57 Orchard Crescent, Mont Albert Nth	0	John & Phyllis Murphy, 1954. *Much altered – house has large front addition and original vertical boarding replaced by weatherboards*
House (architect's own)	36 Orchard Grove, Blackburn South	2	Donald G Graham, 1967 (drawings sighted 2013) Architect's own home. Little further information. Unusual form and regionalist style (Borland-esque) *Above-average example of late 1960s modernist house.*
Blackburn South Co-operating Church (former)	43-49 Orchard Grove, Blackburn South	0	R A Brown, 1956 (original church hall); K Murray Forster, 1971 (larger hall) *Collectively, not a particular distinctive example of post-war church architecture. Better examples elsewhere.*
Project House (for G Barwell)	3 Ottawa Avenue, Nunawading	2	Contemporary Homes, 1955 – "Peninsula" design Intact example of this seminal project house design, sensitively extended by Greg Burgess (1972) Reported in newspaper article and a book *Interesting example where standardized project house has received sympathetic update by a notable architect*

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House (Inter-war?)	6 Pembroke Street, Surrey Hills	3	Designer and date unknown. Online real estate advert suggests "c.1913",, but house looks later. Maybe early example of proto-bungalow dwelling. Compares with similar houses in Mont Albert Road at Nos 380 (HO150) and 396 (qv) *Potentially significant pending confirmation of date.*
House (Victorian)	12 Pembroke Street Surrey Hills	1	Unusual detailing – brickwork, timberwork, etc *Uncommonly embellished example of late Victorian villa.*
House (Victorian)	16 Pembroke Street Surrey Hills	2	Intact Vic villa – one of few built on this estate *Historically important but not as aesthetically striking as nearby house at No 12. Compare also No 14.*
House	21 (23) Penllyne Avenue Vermont	0	Designer and date unknown, apparently pre-WW2 Remnant orchard farmhouse still on a large block *Altered- engulfed by phases of post-WW2 additions* *There are better examples – compare 38 Adele Street (qv)*
House (Federation)	2 Peter Avenue, Blackburn North	1	Designer and date unknown, circa 1910s Remnant orchard farmhouse (to Springfield Road) Unusual details: gable end and banded chimneys *Early and intact market of local orchard activity* *WHS have expressed some concern about property.*
House (architect's own)	2 Phillip Street, Vermont	0	Ian Cole, 1969. Published in newspaper –entry in HIA contest *Representative example of late 1960s modernist house*
Blackburn Pre-school Centre	54 Pope Road, Blackburn	1	Designed by MU architecture student/s, 1950-52 *First post-war pre-school in COW to reflect new design trends. Far more intact than much-altered Stanley Cochrane Pre-School, Mitcham (1954)*
House (post-WW2)	7 Ravenswood Court, Nunawading	0	Date and architect unknown, circa early 1960s *Altered - Prominent second storey added since 2014*
Project house	4 Ritz Street, Vermont South	0	Spaceline Homes , 1970. *Representative example of early 1970s project house*
Project house	9 Ritz Street, Vermont South	0	Stewart Craig Pty Ltd, 1969 – "Albany" design *Representative example of late 1960s project house*
Project house	10 Ritz Street, Vermont South	0	Spaceline Homes , 1969 –design by W Embleton. *Representative example of late 1960s project house*
House (Victorian)	1212 Riversdale Road, Box Hill South	2	Possibly a former farmhouse – not an orchard. Few similar houses nearby – compare the much altered villa at 3 Gurrnoong Court (not listed) *Likely significant as marker of pre-war settlement in area*
House (Federation) & Tree	2 Roberts Avenue, Box Hill South	1	Early farmhouse - formerly fronted Eley Road Occupies double block with mature tree to the rear. *Significant as early marker of pre-war farming in area.*
House (post-WW2)	47 Robinlee Avenue, Burwood East	0	Designer and date unknown, circa early 1960s. *Altered – brickwork overpainted or rendered since 2014*
House (SHS)	5 Ronald Street, Box Hill North	1B	Age Small Homes Service – T2125 (R & L Jones) Intact / evocative example of modernist style plan *Included in group listing of intact early SHS houses*
Project house	121 Rooks Road, Mitcham	0	Moorabbin Builders. c.1957 – "Leader" design *Representative example of this early project house. Other examples of the same design have been identified.*

Project house?	5 Rosalind Crescent, Blackburn	0	Designer and date unknown, circa early 1960s. Looks like offset plan variation of a standard project house by Contemporary Homes *Representative example of this type of project house*
House (Victorian)	29 Rose Street, Box Hill	2	One of few intact surviving Vic villas on this estate BHHS has also flagged others at Nos 27, 31 and 35 Of historic interest but semi-detached pair 66-68 Rutland Road is of more architectural interest *Possibly consider as part of a group listing/precinct?*
House (Victorian)	31 Rose Street, Box Hill	3	One of few intact surviving Vic villas on this estate BHHS has also flagged others at Nos 27, 31 and 35 Of historic interest but semi-detached pair 66-68 Rutland Road is of more architectural interest *Possibly consider as part of a group listing/precinct?*
House (Victorian)	35 Rose Street, Box Hill	3	One of few intact surviving Vic villas on this estate BHHS has also flagged others at Nos 27, 31 and 35 Of historic interest but semi-detached pair 66-68 Rutland Road is of more architectural interest *Possibly consider as part of a group listing/precinct?*
House (post-WW2)	18 Rosslyn Street, Blackburn South	3	Date and architect unknown, circa early 1950s. Unusual design – elevated, stark walls, porthole. Seems a progressive design for the early 1950s *Somewhat unusual. Potentially significant, pending confirmed architectural attribution*
House (post-WW2)	69 Roslyn Street, Burwood	0	Rosman, Hastings & Sorel, 1958 . *Altered – substantial garage addition obscures facade*
House	17 Rostrevor Parade, Mont Albert North	C	Designer and date unknown. Online sales listing suggests built 1915 *Seems above-average example of proto-bungalow house*
House	52 Rostrevor Parade, Mont Albert North	0	Designer and date unknown, circa late 1950s. Once advertised as "master builder's own home" – confirmed to have been Laurence Godfrey Cook Interesting house with some unusual features Demolished 2023.
House (Victorian)	1 Russell Street, Surrey Hills	2	One of several remnant Vic dwellings in this street. Compare No 7-9 (HO152), Nos 21 and 26 (both altered), and brick villa at 9 Warrigal Road (HO159) *Above average or merely representative example??*
Project house	69 Russell Street, Surrey Hills	0	M W Rawings Pty Ltd, 1965. *Much altered – brickwork painted and terrace remodelled* Conventional design – compare adjacent No 67
Office building	36-36a Rutland Road, Box Hill	2	Pels, Innes Neilson & Kosloff, 1981-82. Late Modern building, curved corner, sloped glass *Possibly rare intact survivor of such commercial redevelopment in central Box Hill – further comparative analysis required to clarify local context*
House (Victorian)	66-68 Rutland Road, Box Hill	1	Bichromatic brick Victorian semi-detached pair *Unusual/rare/unique typology at the local level.* *Property has also been flagged by the BHHS*
House (Interwar)	5 Salisbury Avenue Mont Albert	2	Date and architect unknown, circa 1930s? Intact – not many houses like this on HO schedule Matching front fence and garage appear original *Above-average example of this type of inter-war house*

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House (inter-war?)	20 Salisbury Avenue, Mont Albert	1	Designer and date unknown, circa 1915 (S&M) Unusual design, form and detailing *Disitnctive and above-average example of 1910s house*
House (Interwar)	26 Saxton Street, Box Hill North	1	Designer and date unknown, circa 1921 Early house in area – aerial photographs show surrounding open land, but not built as farmhouse. Diamonf-pattenr roofing is unusual in COW *Disitnctive example of an early inter-war bungalow* *House has also been flagged by the BHHS*
House (Federation)	23 Scott Grove, Burwood	3	Designer and date unknown, circa 1910s Probably one of the earlier surviving house sin this part of Burwood, adjacent to original township. Compare earlier Edwardian house at No 26. *Potentially significant, pending confirmation of date and additional comparative analysis.*
House (Federation)	26 Scott Grove, Burwood	2	Designer and date unknown, circa early 1900s Probably one of the earlier surviving houses in this part of Burwood, adjacent to original township. *Likely significant, pending confirmation of its date– could it be oldest house this part of Burwood*
House (Federation)	27 Severn Street, Box Hill North	2	Designer and date unknown, circa early 1900s. One of several early houses in street: this one seems grander than smaller houses in brick at No 31 (qv) and timber at No 41 (qv). Also others not listed: No 36 (timber), No 63 (timber), also 14 Mersey (timber) *Stand-out, above-average example of this type of house*
House (Federation)	31 Severn Street, Box Hill North	3	Designer and date unknown, circa early 1900s. One of several early houses in street: this is on par with examples in brick at No 31 (qv) and timber at No 41 (qv). Also others not listed: No 36 (timber), No 63 (timber), also 14 Mersey (timber) *Potentially significant –might be above average when compared to other surviving Edwardian houses*
House (Federation)	41 Severn Street, Box Hill North	3	Designer and date unknown, circa early 1900s. One of several early houses in street: this is on par with examples in brick at No 31 (qv) and timber at No 41 (qv). Also others not listed: No 36 (timber), No 63 (timber), also 14 Mersey (timber) *Potentially significant –might be above average when compared to other surviving Edwardian houses*
House (post-WW2)	4 Sewell Street, Box Hill	0	Borland & Trewenack, 1958. Demolition consent 2017. Demolished 2018.
House (post-WW2)	3 Shady Grove, Nunawading	1	Karlis Blokmanis, 1954 (architect's own house) House designed (and hand-built) by Latvian émigré employed in Department of Works but never in sole practice only two known houses. *Astonishingly intact – retains original exterior finishes.* *Important example of an early 1950s modernist house*
House (Federation)	66 Shannon Street, Box Hill North	2	Designer and date unknown, circa 1900s. Remnant orchard farmhouse. Compare with others at 2 Peter Avenue (qv); 15 Middlefield Drive (qv) *Important marker of orchard settlement in this area*

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House (SHS)	17 Sheehans Road, Blackburn	0	Small Homes Service, 1958 - T2124 (Neil Clerehan) Citation prepared by BH for 2013 study but deleted prior to panel after clarification of facade changes. *Too altered for inclusion in SHS group listing*
House (Victorian)	5 St Georges Avenue, Mont Albert	0	One of several remnant Victorian villas in the area. Compare 3 St Georges Avenue. Such houses seem well represented in *Windsor Park Estate* (HO243). *Representative example of late Victorian house*
House (inter-war)	6 St Georges Avenue, Mont Albert	3	Noted not visible from street (2013) Partially visible now (2014) but still hard to see Research (2024) confirms two-storwy Colonial Revival house was architect Kingsley Ussher's own residence, circa 1928. *Very likely to be significant at local level, but full assessment cannot be undertaken without site access*
House (post-WW2) (architect's own)	12 Sherwood Road, Surrey Hills	0	Ian Lindsay, c.1960. Not visible from street (2013); still the case (2024) Photo published in journal shows simple house *Representative example of early 1960s modernist house.*
Factory (Masonite Fabricators)	8-12 Simla Street, Mitcham	1	Middleton & Talbot, c.1959. Published in an architectural magazine in 1960 *Notably intact, evocative example of 1950s factory*
House (post-WW2)	14 Slater Avenue, Blackburn North	2	R Bartlett, 1964 (drawings sighted at PROV, 2013) Designer appears to be Robin Bartlett – apparently not a not a registered architect; few works known Seems a relatively sophisticated design. *Above-average example of mid-1960s modernist house.*
House (architect's own)	7 Somers Street, Mitcham	1	Ajit Bhogal, 1963. (Architect's own home) Indian-born Bhojal worked for CSIRO – did not have his own practice. A rare sole project for him. *Intact and striking example of early 1960s modernist house*
House	409 Springfield Road Mitcham	0	Ronald Lyon, 1959. *Representative example of late 1950s modernist house*
Project house	437 Springfield Road, Mitcham	2	HAB Building Company, 1964. Cape Cod-style attic bungalow, dormer windows Stylistically unusual, probably early example of this American style that only became popular later. Unsure how many may have been built in COW? *Likely significant, pending further investigation into the standard design – and whether this was a display house*
Project house	390 Springvale Road, Forest Hill	0	Hallmark Homes , 1963 – unknown design *Representative example of early 1960s project housing*
Project house	394 Springvale Road Forest Hill	0	Beaumaris Constructions, 1964 – "Utopia" design *Representative example of early 1960s project housing*
Wobbies' World (remnants)	469-471 Springvale Road Forest Hill	0	1970s theme park. Unique developed in COW. Remnants (in 2013) included castellated entry. Since demolished – site entirely redeveloped.
Project house	6 Stanley Road, Vermont South	0	Built 1970 – company not credited in source *Representative example of early 1970s project housing*
Project house	8 Stanley Road, Vermont South	0	Viscount Homes, 1970 – standard design. *Representative example of early 1970s project housing*

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Project house	9 Stanley Road, Vermont South	0	Tomkin Homes, 1970 – standard design by I Cole. *Representative example of early 1970s project housing*
Project house ()	10 Stanley Road, Vermont South	0	Viscount Homes, 1970 – unknown standard design. *Representative example of early 1970s project housing*
Project house	11 Stanley Road, Vermont South	0	Tomkins Homes, 1970 –"Alamo" design *Representative example of early 1970s project housing*
Project house	19 Stanley Road, Vermont South	0	Holwerda & Hayes, 1970 – "Kentucky" design *Representative example of early 1970s project housing*
St Michael's Anglican Church	44 Station Street, Burwood	0	Designer and date previously unrecorded Confirmed (2024) as Keith J D Butler, 1970-71. *Representative example of 1970s church architecture*
Showroom (Daniel Robertson Bricks)	58-74 Station Street, Nunawading	0	Demolition consents 2015, 2019. Demolished
House (post-WW2)	336 Station Street, Box Hill South	0	W H Smart, 1963. Resembles Lend Lease "Sundowner" project home. *Representative (altered) example of early 1960s house*
Kingswood College (post-WW2 additions)	355 Station Street, Box Hill	1	Former *Gwynton Park* (1907) – already listed HO76 Post-war expansion –notable phase under principal Michael Norman (1964-71), new buildings by Earle Shaw & Partners. Standout example is junior school on Piedmont Street – designed by John Denton (DCM fame) while working in Earle's office Building published in magazine and newspaper. Innovative design for non-traditional teaching *Notable building in a municipal-wide context.*
House (Victorian)	459 Station Street Box Hill	0	Demolition consent 2019. **D**emolished by May 2019
Office building (for F T Jeffrey)	701 Station Street, Box Hill	0	Designer and date unknown, circa early 1960s. Office building for prominent local building firm *Some historic interest; otherwise of little aesthetic merit; merely representative of type its type;' has been altered*
St Paul's Lutheran Church	711 Station Street Box Hill	0	O'Connor & Brophy, 1952-54. Assessment undertaken by BH n 2017. Property sold by church 2018. *No further assessment (per heritage advisor's comment).*
Shops (post-WW2)	941-953 Station Street Box Hill North	0	John Gawler, 1957 – local architect, former mayor Row of shops on an unusual curving arc, designed by this leading architect/town planner. *Altered – individual shops all significantly remodelled*
St Timothy's RC Church (not school chapel)	17 Stevens Road, Vermont	0	Date and architect unrecorded in 2013 Confirmed (2024) as Paul Archibald, 1973-74. Confirmed also as RC parish church, not school chapel as has been noted in earlier masterlists *Representative example of 1970s church architecture*
Vincent de Paul Hostel	13-25 Strabane Avenue Box Hill North	0	Architect unknown, 1976. Brutalist concrete block building with low roofline. Demolition consents 2019, 2021. Demolished.
House (Federation?)	32 Strabane Avenue Mont Albert North	0	Bungalow style house on massive corner block with mature trees, etc Demolition consent 2021. Demolished late 2021.

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House (post-WW2)	7 Streeton Court, Mont Albert	1	Geoff Woodfull, 1964. (Drawings sighted 2014). Published in newspapers and magazines. Also won *Architecture & Arts* "Best House" award. One of several excellent houses by this noted architect. Compare others at *Award-winner is best local example of Woodfall's work*
House (post-WW2)	9 Streeton Court, Mont Albert	1	Kevin Borland, 1965 (drawings sighted 2014). Best surviving example of this noted architect. Four other houses in COW have been demolished. *Noted also for innovative timber structural system,* *Significant example of a mid-1960s modernist house*
St Aidan's Church of England (hall only)	10 Surrey Street, Box Hill South	0	Bates Smart McCutcheon, 1959. Photograph was published in a magazine advert. *Representative example of 1950s modernist church hall*
House?	59 Surrey Road, Blackburn North	0	Reported to be difficult to see form the street (2013) Demolished by November 2014.
Project house	2 Tarrangower Avenue, Mitcham	0	FLER Company, late 1950s? – Robin Boyd design *Altered – extended and modified version of this standard project house. Compare the more intact original FLER display house on Canterbury Road (HO284)*
House (post-WW2)	15 Tasman Avenue, Nunawading	0	A Reigers, 1966. *Representative example of mid-1960s modernist house.*
House (post-WW2)	4 Terrara Road, Vermont	0	William Smart, 1964. Local architect lived next door at 6 Terrara Road. Demolition consent 2015. Demolished by 2017
House (post-WW2)	16 Terrara Road, Vermont	0	Date and architect unknown, circa late 1970s Not visible from street (2013 and 2014). Concealed from view by new house (No 16a) built in front. *Cannot be properly assessed at this time*
House (Federation?)	28 Thames Street, Box Hill North	2	Designer and date unknown, circa 1915 (S&M) Stylistically progressive –proto-bungalow design *Seemingly unusual in this part of Box Hill.*
House (post-WW2)	16 The Avenue, Blackburn	2	Designer and date not recorded in 2013. Confirmed (2024) as Murray Nankervis. c.1960. Designed for Roy Grounds' nephew (!) *Above-average example of early 1960s modernist house*
House (post-WW2)	35 The Avenue, Blackburn	2	Designer and date not recorded in 2013. Confirmed (2024) as Smith & Tracey, 1957. *Above-average example of later 1950s modernist house*
House (post-WW 2)	10 The Ridge, Blackburn	0	Stanley Hunt, 1981 (Drawings sighted 2024) Split level house with jagged roofline – 1970s style *A representative and late example of this style of house*
House (post-WW2)	32 The Ridge, Blackburn	2	Geoff Woodfall, 1964. Published in a newspaper. *Good and intact example of this noted architect's work.* *Woodfall's award-winning house at 7 Streeton Court (qv) is considered the higher priority for the time being.*
House (post-WW2)	38 The Ridge, Blackburn	0	C Ian Turner & Associates, 1957. Profiled in newspaper article. Demolished 2023.

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House (post-WW2)	4 Thornhill Drive, Forest Hill	2	Peter Robinson, 1962 (Drawings sighted, 2013). No information has been located about this architect. Nevertheless – a bold sophisticated design. *Above-average example of early 1960s modernist house*
Industrial brickworks, rear of Southcorp site	4 Thornton Crescent, Mitcham	0	Address is not quite correct. Site at No 4 is now occupied by small factory dating from the 1970s. Apparent confusion with adjacent site to west – aerial photos show fragment of original brickworks (small building with double gabled roof) that was retained after 1970 but finally demolished in 2013.
House (Interwar) Spanish Mission	16 Valonia Street, Surrey Hills	2	Designer and date unknown, circa early 1930s? Appears a fine and substantially intact example of this popular inter-war style. Further analysis needed to compare with similar houses in the area. *Likely above-average example of Spanish Mission house*
House (architect's own)	6 Tie Street, Mont Albert North	0	Julian Serpell, c.1965 (Architect's own house) Demolition consent 2017.
House (Federation)	9 Tower Street, Surrey Hills	3	Designer and date unknown, circa early 1900s? House not visible from street - entirely concealed behind massive mature hedge. Aerial photo suggests large Edwardian house on double block *Cannot be properly assessed at this time*
House	3 Victoria Crescent, Mont Albert	0	Designer and date unknown, circa late 1970s. *Altered – new double garage and partial second storey* *Note that site already in existing precinct HO102.*
House (Victorian)	69 Victoria Crescent, Mont Albert	0	*Altered - aerial photo confirm major changes c.2014 Large two-storey rear wing (prominently visible from street) and attached gambrel-roofed garage.*
House (Federation)	83 Victoria Crescent, Mont Albert	0	Designer and date unknown, circa early 1900s? *Altered - aerial photo confirm that dormer facing street is not original, but part of major works in 1980s or '90s. This confuses interpretation of original house.*
House	87 Victoria Crescent, Mont Albert	1	Architect unknown, c.1941. Unusual style for this area, and few comparably large Moderne-style houses across entire C0W *Fine and mostly intact exmapel of underrepresented style*
House ,	5 View Road, Vermont	0	Mason & Weinstock, 1957. *Altered - brickwork rendered, new double garage, etc*
House ,	16 View Road, Vermont	3	McIntyre & McIntyre – no date cited. Early 1960s? Difficult to see from street – a few glimpses of flat roof, cantilevered roofline, timber cladding?? *Cannot be properly assessed at this time*
House (post-WW2)	35 Warrigal Road, Surrey Hills	0	Duncan C Barton, 1959 Relatively simple design – less sophisticated than comparable house at 35 The Avenue (qv) *Representative example of late 1950s modernist house.*
House (Interwar)	99 Warrigal Road, Burwood	2	Designer and date unknown, circa early 1920s. *Probably above-average amongst the relatively few large 1920s houses along this major roadway*

Funeral Parlour (former Primitive Methodist Church)	339 Warrigal Road, Burwood	0	Architect unknown, 1887. Gothic Revival church, adapted as funeral parlour Citation prepared by Coleman (2016) Rejected at panel due to extent of alterations. BH concur with panel: 19th century churches are less common in COW but there are five examples on HO schedule including three from this same period (1887-1890) that are far more intact. *Altered –front porch added for funeral parlour*
Kindergarten (Birralee Pre School Centre)	21 Weeden Drive, Vermont South	1	Designer and date not recorded (2013) Confirmed (2024) Pels Innes Neilson Kosloff, 1972 Quirky Baroque cross plan, vertical cladding and unusual pyramidal roofline. Extremely unusual. *Highly distinctive and unusual post-war kindergarten*
House (Federation)	17 Wellesley Street, Mont Albert	0	Designer and date unknown, circa early 1900s *Altered - second storey added circa 2010s*
House (post-WW2)	30 Whitehorse Road, Blackburn	0	R G Barnard & Sons, 1959 - a local builder *Representative example of a late 1950s modernist house*
Church of Latter Day Saints	55-59 Whitehorse Road Blackburn	0	Designer and date unknown, circa late 1950s. Like all such churches - built to a standard design by architects in the LDS head office in Utah, USA *Altered - original side wing (west of gabled hall) entirely rebuilt in the 1990s. This detracts greatly from the original form of the main building.*
House (post-WW2)	62 Whitehorse Road, Blackburn	0	Drayton & Coleman, 1960. House profiled in a newspaper article, for using a "new type of vibrated concrete block". However, use of concrete block itself is not especially early. Compare examples at 409 Springfield qv), 37 Laurel (qv), 14 Slater (qv), Nunawading Methodist Church *Representative example of early 1960s modernist house*
Ex pottery factory (Sikh Temple)	127 Whitehorse Road Blackburn	0	Arnold E Bridge, 1947-49. Citation prepared by BH in 2013 Rejected at panel for non-heritage reasons. *Altered - demolition of the aesthetically interesting front office building commenced 2024.*
Office building	208 Whitehorse Road, Blackburn	0	Peter Anderson, 1997. (Drawings sighted 2024) Building of much later date than assumed (c.1980s) *Representative example of late 1990s corporate design*
Nunawading Methodist (now Uniting) Church	355-357 Whitehorse Road, Nunawading	1	Earle & Partners, 1960-61. Unusual lozenge plan form – first post-war church in COW to depart from traditional rectilinear plan. Flat-roofed wing added 1990s – but not intrusive. *Excellent example of early 1960s church architecture*
Nunawading Civic Centre	397 Whitehorse Road Nunawading	0	Gerd & Renate Block, 1960s. Design won first prize in architectural competition. Completion in two stages: 1970 and then 1975. *Altered – much renovated, with infill between stages.*
House	640 Whitehorse Road (aka 50 York Street), Mont Albert	3	Designer and date unknown, circa early 1900s. Entirely obscured by dense foliage – cannot be seen *Cannot be properly assessed at this time*

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Box Hill TAFE (Nelson Campus) (former Holeproof)	853 Whitehorse Road, Box Hill	1	Gawler, Churcher & Blackett, 1947-48. Large two-storey factory in late Moderne style Built well-known local company / household name Early marker of post-WW2 industrial expansion. *Historically and aesthetically significant a tlocal level*
Former Post Office	957 Whitehorse Road, Box Hill	1	Commonwealth Department of Works, 1910-11. Oldest purpose-built post office in the CoW; *Historically / aesthetically significant at the local level* *Property has also been flagged by the BHHS*
St Peter's Peace Memorial Church of England	1030 Whitehorse Road Box Hill	1	Louis Williams, 1951-53 (drawings sighted 2024) Much earlier date – previously mis-cited as 1962 Rear additions in 1971 – designed same architect. Distinctive and substantially intact. Confirmed to be the first new church built in COW after WW2, and also first new church built since the mid-1920s. *Historically/ architecturally significant the local level*
St Frances Xavier RC Church (and school)	1075 Whitehorse Road, Box Hill	0	A A Fritsch, 1913 – original church Robert Harper, 1926 - current church (on corner) Earlier church later became part of adjacent school complex – now entirely engulfed by additions New church altered/extended in the 1960s *Much altered – church facade entirely remodelled and no longer resembles 1920s appearance. School complex cannot be easily interpreted due to muddle of additions.*
House (post-WW2)	1097 Whitehorse Road, Box Hill	0	L V Connell, 1963 Demolished by September 2014.
House (post-WW2)	6 (4) Wicking Court Blackburn South	0	Designer and architect unknown, circa 1960s? *Altered – face brickwork has been rendered*
House (Interwar)	39 Williams Road, Blackburn	3	Designer and date unknown. Online sales listing notes 1930 (but it looks later). Large Tudor Revival house mode seems unusual presence/early survivor in this part of Blackburn. *Potentially significant pending further investigation*
House	2 Windermere Court, Blackburn	0	Designer and date unknown, circa early 1960s Published in journal in 1962 but architect unnamed *Representative example of early 1960s modernist house.*
House	2 Windouran Drive, Mitcham	0	George Zalkauskas, 1961 – a local architect *Representative example of early 1960s modernist house.*
House (Federation)	33 Windsor Crescent, Surrey Hills	3	Designer and date unknown, circa 1915 (S&M) House of unusual form and detailing *Lower priority – already included in precinct HO243*
House (Victorian)	120 Windsor Crescent, Surrey Hills	3	One of a handful if Victorian villas in this part of Windsor Crescent and adjacent Charles Street. Unclear why this example is considered superior – it appears representative of its type and period Compare nearby houses at Nos 120, 122 (HO104), 124, 1236 and 128; also others in Charles Street *Possible candidate for a broader serial/group listing?*
House (Victorian)	124 Windsor Crescent, Surrey Hills	3	As previous
House (Victorian)	126 Windsor Crescent, Surrey Hills	3	As previous

House (Victorian)	128 Windsor Crescent, Surrey Hills	3	As previous
House	6 Wirreanda Court, Blackburn	0	Rosman, Hastings & Sorel, 1964. Published in a magazine. *Altered – blockwork has been rendered since 2005.*
House	131 Woodhouse Grove, Box Hill North	2	Designer and date unknown, circa later 1950s? Home of Cornelius (Neil) van der Weyden, a Dutch migrant builder (might have designed it himself?) *Seems an intact, distinctive and evocative 1950s house.*
Flats (villa units)	18 York Street, Mont Albert	1	L V Connell, 1963 (drawings sighted 2024) Built by the Catholic Guild of Housing for Elderly. *Very unusual design – especially the hipped roofline.*

PRECINCTS / GROUPS

TYPE	ADDRESSES	GR	DETAILS
Houses (post-WW2) [Age/RVIA Small Homes Service]	Various, across COW	1	Age/RVIA Small Homes Service Founded 1947 with Robin Boyd as first director; Innovative scheme to address early post-WW2 housing crisis: homebuilders purchased architect-designed houses from a standard range. Masterlist included **eight individual examples** (2013) **Four have been demolished; two altered** (2024). Recent research by Tony Lee (from 2019) marks COW (esp City of Nunawading) as major hotpot for SHS. Hundreds of houses identified in COW Many are now demolished, slightly/heavily altered. *Highly significant development – worthy of HO* *Houses do not exist as cohesive precincts but as scattered specimens – more appropriate to be protected as a group listing not a HO precinct. Research sought to identify the most intact surviving SHS houses from the service's initial boom period under Robin Boyd (1947-53)*
Houses (post-WW2)	Andrew Street, Forest Hill - No 6, 16, Nos 5, 9 Menin Road, Forest Hill - No 42, 44, 46 (maybe 50?) - No 29, 35, 47, 49, 55, 57, 59 Shady Grove - Nos 66, 8a (maybe 55?)	1	Cluster of post-WW2 modernist houses, mostly brick dwellings with low rooflines, late 1950s to early 1970s. The work of well-known, lesser-known and unknown designers. Three designers' own houses, and some project housing including Merchant Builders. Partially assessed for postWW2 study (2016) – a couple of houses have been demolished since. Some.additional examples identified in Shady Grove *Collectively, an excellent group of modernist houses in a bush-like street setting.*
Houses (post-WW2) [Swedish prefabs]	Box Hill Crescent - No 30 Shannon Street - Nos 92, 98, 102, 104, 108 Others nearby??	1	Another attempt to solve post-WW2 housing crisis – interest in prefabricated dwellings. Many different types available in Europe – but Sweden was the market leading. Different firms made them and tried to enter Australian market. Examples in Shannon Street – ASA houses, promoted locally by Ormal Constructions. Others in Box Hill North and elsewhere. Example at Mont Albert North flagged by BHHS (2013) –manufacturer unknown. Possibly involved E O Lundgren, Swedish-born local builder and city councillor (to be verified) *Historically significant – a snapshot of an unusual and short-lived development in early post-WW2 housing*

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Houses (post-WW2) 'Blue Flame Project'	Vermont South: Parkleigh Court - Nos 1, 3, 4, 6, 7, 8, 9 Shalimar Court - Nos 2, 3, 4, 6, 7, 8 Fortescue Road - Nos 3, 5	1	Display village of 20 project houses, 1969-71 Designs were all winners in competition held by RAIA Housing Service. Includes designs submitted by some well-known architects, lesser known ones and some architecture students Fully assessed forpost-WW2 study (2016) Recommendation for HO endorsed by panel – but no HO applied. Four houses demolished. *Highly significant development: still worth pursuing HO (precinct or group?) for remaining houses.*
Houses (*Neighbours* TV series location)	1-6 Pin Oak Court Vermont South	2	Initially identified by Heritage Alliance, 2008. Partially assessed by Built Heritage, 2013. More detailed assessment, 2022. Councillor resolution not to proceed with HO. *Precinct should be re-considered and re-assessed when production of Neighbours has permanently ceased.*
Houses (Victorian)	Windsor Cres, Surrey Hills - Nos 120, 122, 124, 126, 128 Charles Street, Surrey Hills - Nos 8, 10, 12, 14, 16 18	2	Two small clusters of Victorian timber dwellings (plus one Edwardian). Cohesive streetscapes of such houses probably rare survivors in this area 122 Windsor Crescent already listed (HO104) *Potential to expand this existing HO into a small precinct covering eleven houses. In both streets*
Shops	Canterbury Road, Surrey Hills - Nos 693, 699	2	Two shops of apparent pre-war origin Almost adjacent – the shops flank individually listed house at No 695-697 (HO133) Notably intact surviving shopfronts Compare other much-altered examples nearby *Potential serial listing as evidence of early retail strip??*
Houses (post-WW2) [War Services Homes]	Currie Street, Box Hill Nth east side; Nos 1-3, 7--9 Galt Street, Box Hill Nth west end, both sides? Inglis Street, Box Hill Nth west end, north side	0	War Service Homes, 1948-49 (returned servicemen) 34 brick houses built to standard designs Partially researched/assessed by Graeme Butler. Fieldwork (2014) confirmed numerous houses have since been demolished and other altered. *Streetscapes no longer sufficiently cohesive to be considered as a HO precinct.*
Houses (post-WW2)	Mall Court, Box Hill North Nos 1-11, 15-35; 2-24 (as noted in 2013)	0	Notably intact streetscape of brick veneer houses from later 1950s/early 1960s Partially assessed by BH, 2016 *Not architecturally important as such, but of interest as an intact and evocative snapshot of quintessential 'triple fronted brick veneer' suburban development.* Since 2013, seven houses have been demolished: (Nos 2, 3, 5, 21, 25, 26 and 29 Mall Court). *Streetscape is not as cohesive / uninterrupted as it once was. No longer appropriate candidate for a HO precinct.*
Houses (post-WW2)	Stewart Avenue, Blackburn South - No 1, 2, 3 4, 5 and 6 (as noted in 2013)	0	Cluster of six modest hip-roofed weatherboard houses dating from 1957. Nominated by WHS (2013) as a potential heritage precinct, noting that "some houses have been altered" By 2024 - further changes as follows: Demolished – houses at Nos 3, 4 and 6 New house built at No 2a (rear, 421 Lawrence St) *Due to these significant changes, it is no longer considered a contender for a HO precinct.*

Houses (post-WW2) {Project Housing]	Stanley Road, Vermont Sth - No 6, 8, 9, 10, 11, 19 (possibly others??) Ritz Street, Vermont South - No 4, 10, 11 (possibly others??)		A group of project houses from the late 1960s Various project housing companies represented including Viscount Homes, Tompkin Homes, Spaceline, Stewart Craig and Howerda & Hayes. Note that Stanley Road and Ritz Street are not Several of the original project houses in this vicinity have been demolished: Stanley Road: Nos 4, 13, 15, 21 and 23. Ritz Street: Nos 11, 13 and 15 The individually designated houses are of little interest as specimens in their own right. The Blue Flame Project (qv) is a far superior example of an early local display village of project housing.

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Properties where application of the Heritage Overlay is proposed by Built Heritage Pty Ltd (2024) *Draft City of Whitehorse Heritage Review 2024, Volumes 1 & 2*

Table 1: List of properties with a citation

Built Heritage Pty Ltd (2024) *Draft City of Whitehorse Heritage Review 2024, Volumes 1 & 2*

List No.	Suburb	Place Type	Address	Most recent previous Heritage Studies	Council Ward
1. **To be removed	Blackburn	House (post-WW2)	20 Naughton Grove, Blackburn	Post-1945 Heritage Review (2016) – Appendix 2	Lake
2.	Blackburn	House	20–20a Harold Street, Blackburn	Post-1945 Heritage Review (2016) - Appendix 2	Cootamundra
3.	Blackburn	House (post-WW2)	26 (24) Central Road, Blackburn	Coleman Architects, Whitehorse Heritage Review (2012) - Schedule 4	Lake

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4.	Blackburn	House (post-WW2, architect's own)	29 Naughton Grove, Blackburn	Post-1945 Heritage Review (2016) – Appendix 2	Lake
5.	Blackburn	Blackburn Pre-school Centre	54 Pope Road, Blackburn	Post-1945 Heritage Review (2016) – Appendix A	Cootamundra
6.	Blackburn	Post Office	9 Chapel Street, Blackburn	Post-1945 Heritage Review (2016) – Appendix 2	Lake
7.	Blackburn North	House (Edwardian)	15 Middlefield Drive, Blackburn North	Coleman Architects, Whitehorse Heritage Review (2012) - Schedule 2	Cootamundra
8. **To be removed	Blackburn North	House (Federation)	2 Peter Avenue, Blackburn North	Coleman Architects, Whitehorse Heritage Review (2012) - Schedule 2	Cootamundra
9.	Box Hill	St Peter's Anglican Church	1030 Whitehorse Road, Box Hill	Post-1945 Heritage Review (2016) – Appendix 2	Sparks
10.	Box Hill	House (Victorian)	66–68 Rutland Road, Box Hill	Coleman Architects, Whitehorse	Sparks

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				Heritage Review (2012) - Schedule 2	
11.	Box Hill	Former Holeproof Factory (now Box Hill Institute)	853 Whitehorse Road, Box Hill	Post-1945 Heritage Review (2016) – Appendix A	Elgar
12.	Box Hill	Former Box Hill Post Office	957 Whitehorse Road, Box Hill	Post-1945 Heritage Review (2016) – Appendix 2, graded A	Elgar
13.	Box Hill North	House (Inter-war)	26 Saxton Street, Box Hill North	Coleman Architects, Whitehorse Heritage Review (2012) - Schedule 2	Elgar
14.	Box Hill South	House	17–19 Grandview Road, Box Hill South	Post-1945 Heritage Review (2016) - Appendix 2	Sparks
15.	Box Hill South	Paper Mill (Bowater Scott)	19 Ailsa Street, Box Hill South	Post-1945 Heritage Review (2016) – Appendix 2	Wattle
16.	Box Hill South	House (Federation) & Tree	2 Roberts Avenue, Box Hill South	Coleman Architects, Whitehorse	Wattle

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				Heritage Review (2016) - Schedule 2	
17.	Box Hill South	Kingswood College Junior School	355 Station Street, Box Hill South	Coleman Architects, Whitehorse Heritage Review (2012) - Schedule 2	Sparks
18.	Burwood	House (for Susan Boyd)	132 Burwood Hwy, Burwood	Post-1945 Heritage Review (2016) – Appendix 2	Eley
19. **To be removed	Burwood	House (architect's own)	18 Gilmour Street, Burwood	Post-1945 Heritage Review (2016) – Appendix 2	Wattle
20.	Burwood	House (Victorian)	213 Highbury Road, Burwood	Coleman Architects, Whitehorse Heritage Review (2012) – Schedule 2	Wattle
21.	Burwood	House (Victorian)	5 Ireland Street, Burwood	Coleman Architects, Whitehorse Heritage Review (2012) – Schedule 2	Wattle

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22.	Burwood	House	29 Leonard Street	Post-1945 Heritage Review (2016) – Appendix 2	Wattle
23. **To be removed	Burwood East	Tally Ho Memorial Hall	27–29 Carrington Court, Burwood East	Coleman Architects, Whitehorse Heritage Review (2012)	Terrara
24.	Forest Hill	Bank (former SSB)	2 Brentford Square, Forest Hill	Post-1945 Heritage Review (2016) – Appendix 2	Mahoneys
25.	Mitcham	House (Inter-war)	452 Mitcham Road, Mitcham	Coleman Architects, Whitehorse Heritage Review (2012)	Walker
26.	Mitcham	House (post-WW2)	7 Somers Street, Mitcham	Post-1945 Heritage Review (2016) – Appendix A	Simpson
27.	Mitcham	Factory (Masonite Fabricators)	8–12 Simla Street, Mitcham	Post-1945 Heritage Review (2016) - Appendix 2	Walker

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28.	Mont Albert	Flats (villa units)	18 York Street, Mont Albert	Post-1945 Heritage Review (2016) – Appendix 2	Kingsley
29.	Mont Albert	House (Inter-war)	20 Salisbury Avenue, Mont Albert	Coleman Architects, Whitehorse Heritage Review (2012) – Schedule 2	Kingsley
30.	Mont Albert	House (Victorian)	372 Mont Albert Road, Mont Albert	Coleman Architects, Whitehorse Heritage Review (2012) - Schedule 2	Kingsley
31.	Mont Albert	House (post-WW2)	7 Streeton Court, Mont Albert	Post-1945 Heritage Review (2016) – Appendix A	Kingsley
32.	Mont Albert	House	87 Victoria Crescent, Mont Albert	Post-1945 Heritage Review (2016) Appendix 2	Kingsley
33.	Mont Albert	House (post-WW2)	9 Streeton Court, Mont Albert	Post-1945 Heritage Review (2016) – Appendix A	Kingsley

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34.	Mont Albert	House	18 Churchill Street	Coleman Architects, Whitehorse Heritage Review (2012) - Schedule 2	Kingsley
35.	Mont Albert North	House	19 Francesca Street, Mont Albert North	Post-1945 Heritage Review (2016) – Appendix 2	Kingsley
36.	Nunawading	House (post-WW2)	3 Shady Grove, Nunawading	Post-1945 Heritage Review (2016) – Appendix A	Walker
37. **To be removed	Nunawading	Nunawading Uniting Church	355–357 Whitehorse Road, Nunawading	Coleman Architects, Whitehorse Heritage Review (2012) - Schedule 2	Walker
38.	Nunawading	House (post-WW2)	58 Diosma Crescent, Nunawading	Post-1945 Heritage Review (2016) – Appendix 2	Walker
39.	Nunawading	House (Inter-war)	7 Heather Grove, Nunawading	Coleman Architects, Whitehorse Heritage Review (2012) – Schedule 2	Walker

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40.	Surrey Hills	House (Victorian)	12 Pembroke Street, Surrey Hills	Coleman Architects, Whitehorse Heritage Review (2012) - Schedule 2	Kingsley
41.	Surrey Hills	House (post-WW2)	13 Chester Street, Surrey Hills	Post-1945 Heritage Review (2016) – Appendix 2	Kingsley
42.	Surrey Hills	House (Federation)	4 Bentley Street, Surrey Hills	Coleman Architects, Whitehorse Heritage Review (2012) - Schedule 2	Kingsley
43.	Surrey Hills	House (Inter-war)	43 Florence Road, Surrey Hills	Coleman Architects, Whitehorse Heritage Review (2012) – Schedule 2	Kingsley
44.	Surrey Hills	House (Federation)	760 Canterbury Road, Surrey Hills	Coleman Architects, Whitehorse Heritage Review (2012) – Schedule 2	Kingsley

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45.	Vermont	House (Federation)	38 Adele Street, Vermont	Coleman Architects, Whitehorse Heritage Review (2012) - Schedule 2	Simpson
46.	Vermont South	Birralee Pre-School Centre	21 Weeden Drive, Vermont South	Coleman Architects, Whitehorse Heritage Review (2012) - Schedule 4	Terrara
47.	Vermont South	Livingstone Primary School	25-29 Livingstone Road, Vermont South	Post-1945 Heritage Review (2016) – Appendix 2	Terrara

10.5 – ATTACHMENT 3. City of Whitehorse Heritage Review 2024 - list of properties with a citation

Table 2: List of precincts/groups with a citation

Built Heritage Pty Ltd (2024) *Draft City of Whitehorse Heritage Review 2024, Volumes 1 & 2.*

Precinct / Group	**Address**	**Previous Heritage Studies**	Council Ward
1. Orana Peace Memorial Home **All properties to be removed	14-18 Livingstone Close, Burwood	Coleman Architects, Whitehorse Heritage Review (2012) — Appendix A	Wattle
	17 Livingstone Close, Burwood	Coleman Architects, Whitehorse Heritage Review (2012) — Appendix A — Part B	Wattle
	27 Livingstone Close, Burwood	Coleman Architects, Whitehorse Heritage Review (2012) — Appendix A	Wattle
2. Age/RVIA Small Homes Services Houses	19 Acacia Street, Blackburn	Post-1945 Heritage Review (2016) — Appendix 2	Cootamundra
	37 Bridgeford Ave, Blackburn North	Post-1945 Heritage Review (2016) — Appendix 2	Lake
	164 Central Road, Nunawading	Post-1945 Heritage Review (2016) — Appendix 2	Lake
	15 Charlotte Street, Blackburn South	Post-1945 Heritage Review (2016) — Appendix 2	Eley

10.5 – ATTACHMENT 3. City of Whitehorse Heritage Review 2024 - list of properties with a citation

	15 Elm Street, Blackburn	Post-1945 Heritage Review (2016) — Appendix 2	Lake
	13 Essex Street, Blackburn North	Post-1945 Heritage Review (2016) — Appendix 2	Lake
	10 Florence Street Blackburn	Post-1945 Heritage Review (2016) — Appendix 2	Lake
**To be removed	18 Goodwin Street, Blackburn (demolished)	Post-1945 Heritage Review (2016) — Appendix 2	Lake
	8 Hamilton Avenue, Blackburn	Post-1945 Heritage Review (2016) — Appendix 2	Cootamundra
	2 Kingsclere Court, Vermont	Post-1945 Heritage Review (2016) — Appendix 2	Simpson
	2 Lexton Road, Box Hill North	Post-1945 Heritage Review (2016) — Appendix 2	Elgar
	26 Loddon Street, Box Hill North	Post-1945 Heritage Review (2016) — Appendix 2	Elgar
	62 Owen Street, Mitcham	Post-1945 Heritage Review (2016) — Appendix 2	Walker
	5 Ronald Street, Mont Albert North	Post-1945 Heritage Review (2016) — Appendix 2	Elgar

10.5 – ATTACHMENT 3. City of Whitehorse Heritage Review 2024 - list of properties with a citation

**To be removed	7 Ross Street, Mitcham (demolished)	Post-1945 Heritage Review (2016) — Appendix 2	Walker
	47 Somers Street, Mitcham	Post-1945 Heritage Review (2016) — Appendix 2	Simpson
	270 Springfield Road, Nunawading	Post-1945 Heritage Review (2016) — Appendix 2	Lake
	714 Whitehorse Road, Mitcham	Post-1945 Heritage Review (2016) — Appendix 2	Simpson
3. Swedish Prefabricated Houses	30 Box Hill Crescent, Mont Albert North	Post-1945 Heritage Review (2016) — Appendix 2	Kingsley
	26 Cameron Road, Box Hill North	Post-1945 Heritage Review (2016) — Appendix 2	Elgar
	2 Olympiad Crescent, Box Hill North	Post-1945 Heritage Review (2016) — Appendix 2	Elgar
	92 Shannon Street, Box Hill North	Post-1945 Heritage Review (2016) — Appendix 2	Elgar
	98 Shannon Street, Box Hill North	Post-1945 Heritage Review (2016) — Appendix 2	Elgar
	102 Shannon Street, Box Hill North	Post-1945 Heritage Review (2016) — Appendix 2	Elgar

10.5 – ATTACHMENT 3. City of Whitehorse Heritage Review 2024 - list of properties with a citation

	104 Shannon Street, Box Hill North	Post-1945 Heritage Review (2016) — Appendix 2	Elgar
	108 Shannon Street, Box Hill North	Post-1945 Heritage Review (2016) — Appendix 2	Elgar
4. Post-WW2 Modernist Houses	5 Andrew Street, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
	6 Andrew Street, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
	9 Andrew Street, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
	16 Andrew Street, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
	29 Menin Road, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
	35 Menin Road, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
	42 Menin Road, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
	44 Menin Road, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys

10.5 – ATTACHMENT 3. City of Whitehorse Heritage Review 2024 - list of properties with a citation

	46 Menin Road, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
	47 Menin Road, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
	49 Menin Road, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
	59 Menin Road, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
	68 Shady Grove, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
	68a Shady Grove, Forest Hill	Post-1945 Heritage Review (2016) — Appendix 2	Mahoneys
5. Display Village (Former) Blue Flame Project **All properties to be removed	2 Shalimar Court, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara
	4 Shalimar Court, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara
	6 Shalimar Court, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara

10.5 – ATTACHMENT 3. City of Whitehorse Heritage Review 2024 - list of properties with a citation

	7 Shalimar Court, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara
	8 Shalimar Court, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara
	1 Parkleigh Court, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara
	2 Parkleigh Court, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara
	3 Parkleigh Court, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara
	6 Parkleigh Court, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara
	7 Parkleigh Court, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara
	8 Parkleigh Court, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara
	9 Parkleigh Court, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara
	3 Fortescue Grove, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara

10.5 – ATTACHMENT 3. City of Whitehorse Heritage Review 2024 - list of properties with a citation

	5 Fortescue Grove, Vermont South	Post-1945 Heritage Review (2016) — Appendix 3	Terrara

10.6 Australian Local Government Association - Motion to National General Assembly

Attachment 1 ALGA June 2026 Motion - National Social Prescribing Framework

10.6 – ATTACHMENT 1. ALGA June 2026 Motion - National Social Prescribing Framework

Whitehorse City Council
379–399 Whitehorse Road
Nunawading VIC 3131

Locked Bag 2
Nunawading VIC 3131

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Telephone: (03) 9262 6333
NRS: 133 677

ABN: 39549568822

Draft Motion for Australian Local Government Association (ALGA) June 2026 National General Assembly (NGA)

Councillor Name	**Councillor Griffiths**
Council	**Whitehorse City Council**
Proposed Motion Title	**National Social Prescribing Framework**
Date Endorsed	**23/02/2026**

Title:

National Social Prescribing Framework

The Motion (94 words):

This National General Assembly calls on the Australian Government to partner with the Australian Local Government Association to establish a **National Social Prescribing Framework**. This framework must provide sustainable federal funding for a **skilled Link Worker workforce** embedded within local government community infrastructure, such as libraries and community centres. By formalising non-medical referral pathways between primary care and local social assets, the Government can address the social determinants of health. This structural reform is essential to reduce the burden on the national healthcare system, combat loneliness, and improve health equity across all Australian communities.

National Objective (100 words):

The objective is to enhance the collaboration and coordination across Australian Government and local government by integrating local government's social infrastructure into a national social model of health. While the Australian Government manages clinical health funding, Local Government provides the essential spaces – parks, hubs, and community programs – where health and social connection occur. By creating a standardised, national system for social and community-based care

and funding Link Workers to operate within Council assets, the Federal Government can "unlock" existing local investments to address the non-medical drivers of poor health, reduce pressure on the health system and improve national health outcomes.

Key Arguments (150 words):

1. **Systemic Efficiency:** Social prescribing addresses the 20% of GP consultations that are for non-medical social issues, allowing clinical resources to be redirected toward acute medical needs.
2. **Structural Equity:** Federal funding for Link Workers ensures that access to preventative care is not determined by a resident's postcode, providing a consistent national service standard.
3. **Evidence-Based ROI:** International and local social prescribing pilot trials show that connecting patients to social support significantly improves mental health outcomes and reduces long-term healthcare expenditure.
4. **Leveraging Existing Assets:** Councils already manage thousands of community ‘health enablers’. A national framework formalizes these assets as part of a recognized, integrated health care neighbourhood.
5. **Policy Alignment:** This motion delivers on the *National Preventive Health Strategy 2021–2030* by focusing on upstream factors, such as social isolation and community resilience, and aligns with the *Measuring What Matters* (Wellbeing Budget) national agenda.

10.7 Statutory Planning Report December 2025

Attachment 1 Councillor Reporting Lodgements - December

Attachment 2 Councillor Reporting Delegated Decisions - December

Attachment 3 Councillor Reporting VCAT - December

Attachment 4 Councillor Reporting Ministerial Permits - December

10.7 – ATTACHMENT 1. Councillor Reporting Lodgements - December

Planning Permit Lodgements December 2025

Report Summary - A list of planning permit applications lodged within Whitehorse City Council received last mo
Note - The description for Permit Amendments does not reflect the amendment changes.

Total Lodged
102

Cootamundra **3**

Address	Application No	Application Type	Description	Lodged Date
25 Morrie Crescent BLACKBURN NORTH VIC 3130	WH/2025/954	VicSmart - Tree	Removal of one tree protected under the SLO9 and Clause 52.37	03-Dec-25
24 Raymond Street BLACKBURN NORTH VIC 3130	WH/2025/966	VicSmart - General Application	Construction of a front fence with 4 metres of protected trees	08-Dec-25
27 The Avenue BLACKBURN VIC 3130	WH/2023/913/A	Permit Amendment	Amendment to the dwelling location	08-Dec-25

10.7 – ATTACHMENT 1. Councillor Reporting Lodgements - December

Eley **6**

Address	Application No	Application Type	Description	Lodged Date
17 Harrow Street BLACKBURN SOUTH VIC 3130	WH/2025/956	Multi Dwelling and Use	32.09-7 – Construct two (2) dwellings 42.03 – Remove a tree 52.02 – Expunge an easement	03-Dec-25
100-104 Canterbury Road BLACKBURN SOUTH VIC 3130	WH/2025/955	Advertising Sign	The Development and Display of an Electronic Major Promotion Panel Sign	03-Dec-25
26 Benwerrin Drive BURWOOD EAST VIC 3151	WH/2025/980	Special Landscape Area	Buildings and works associated with a dwelling and vegetation removal within the Significant Landscape Overlay Schedule 9	10-Dec-25
20 Marama Street BLACKBURN SOUTH VIC 3130	WH/2025/1006	Multiple Dwellings	The construction of three (3) double storey dwellings, removal of protected trees and buildings and works in the SLO9	18-Dec-25
294A Middleborough Road BLACKBURN SOUTH VIC 3130	WH/2011/38/A	Permit Amendment	Amendment to Planning Permit WH/2011/38 issued for "Erection of a flood lit major promotion sign"	24-Dec-25
25 Grange Road BLACKBURN SOUTH VIC 3130	WH/2025/1026	VicSmart - Tree	Removal of one (1) tree within the Significant Landscape Overlay - Schedule 9	27-Dec-25

10.7 – ATTACHMENT 1. Councillor Reporting Lodgements - December

Elgar **13**

Address	Application No	Application Type	Description	Lodged Date
26 Orchard Crescent MONT ALBERT NORTH VIC 3129	WH/2025/944	VicSmart - Tree	To remove one (1) tree	02-Dec-25
902/2 Bruce Street BOX HILL VIC 3128	WH/2025/961	Subdivision	Transfer existing storage cage from Lot 9J to 17D on basement level 3	04-Dec-25
65 Orchard Crescent MONT ALBERT NORTH VIC 3129	WH/2002/13158/(	Permit Amendment	Amendment to Planning Permit WH/2002/13158 issued for three new dwellings	08-Dec-25
103 Clyde Street BOX HILL NORTH VIC 3129	WH/2025/972	Special Landscape Area	Buildings and works associated with a single dwelling within 4 meters of trees protected under the SLO9	09-Dec-25
42-44 Belgravia Avenue MONT ALBERT NORTH VIC 3129	WH/2025/979	Multiple Dwellings	Construction of five double storey dwellings and associated vegetation removal under the Significance Landscape Overlay (Schedule 9) and Clause 52.37 (Canopy Trees)	10-Dec-25
7 Wattle Street BOX HILL NORTH VIC 3129	WH/2025/992	VicSmart - General Application	Propose to build a front fence maximum 1.5m in height.	14-Dec-25
845-851 Whitehorse Road BOX HILL VIC 3128	WH/2014/1223/J	Permit Amendment	to convert part of the approved Hotel amenity areas (restaurant/function space and wellness/fitness area) to a Restaurant	15-Dec-25
52 Mersey Street BOX HILL NORTH VIC 3129	WH/2025/1008	Special Landscape Area	Buildings and works, associated with alterations and additions to an existing single dwelling, within 4 metres of trees protected under the SLO9	18-Dec-25
58 Belgravia Avenue MONT ALBERT NORTH VIC 3129	WH/2014/39/B	Permit Amendment	Amendment to Planning Permit WH/2014/39	18-Dec-25
1 Hillside Parade BOX HILL NORTH VIC 3129	WH/2025/1011	VicSmart - Subdivision	Two lot subdivision	18-Dec-25
12 Twyford Street BOX HILL NORTH VIC 3129	WH/2025/1018	VicSmart - Tree	To remove a tree	22-Dec-25
7 Valda Avenue MONT ALBERT NORTH VIC 3129	WH/2025/1024	Special Landscape Area	Buildings and works associated with alterations and additions to an existing dwelling, including works within the Significant Landscape Overlay – Schedule 9, removal of vegetation, and the construction of a front fence exceeding 1.0 metre in height within 3 metres of the street alignment.	24-Dec-25
29-31 Karen Street BOX HILL NORTH VIC 3129	WH/2016/587/A	VicSmart Permit Amendment	Proposal to construct a small verandah at backyard of the Dwelling 1	30-Dec-25

10.7 – ATTACHMENT 1. Councillor Reporting Lodgements - December

Kingsley **12**

Address	Application No	Application Type	Description	Lodged Date
13 Kenmare Street MONT ALBERT NORTH VIC 3129	WH/2025/941	Special Landscape Area	To construct a building (dwelling) and construct and carry out works (driveway and front fence) within 4m of the protected tree	01-Dec-25
138 Windsor Crescent SURREY HILLS VIC 3127	WH/2025/952	VicSmart - General Application	Buildings and works within 4 metres of trees under the Significant Landscape Overlay - Schedule 9	03-Dec-25
119 Victoria Crescent MONT ALBERT VIC 3127	WH/2012/446/B	Permit Amendment	Amendment to WH/2012/446, mainly changes to fencing and retaining walls.	04-Dec-25
17 Curlewis Street MONT ALBERT VIC 3127	WH/2025/960	VicSmart - Subdivision	Two lot subdivision	04-Dec-25
12 Sutton Parade MONT ALBERT NORTH VIC 3129	WH/2025/962	VicSmart - Tree	Removal of one tree	04-Dec-25
10 Carrick Street MONT ALBERT VIC 3127	WH/2025/985	VicSmart - General Application	Removal of one tree protected under SLO09	11-Dec-25
1/35 Tyrrell Street MONT ALBERT NORTH VIC 3129	WH/2025/508/A	Permit Amendment	Amendment to WH/2025/508 issued for Retrospective planning permit for front fence	11-Dec-25
138 Windsor Crescent SURREY HILLS VIC 3127	WH/1988/904331	VicSmart Permit Amendment	Amendment to Planning permit BH/1988/904331	12-Dec-25
7 Kinloch Avenue MONT ALBERT VIC 3127	WH/2025/1007	Special Landscape Area	To construct a building (dwelling addition), construct and carry out works within four (4) metres of vegetation	18-Dec-25
744 Canterbury Road SURREY HILLS VIC 3127	WH/2023/552/B	VicSmart Permit Amendment	Minor amendment to endorsed planning : WH/2023/552/A. Change to outbuilding window / door arrangement and update to front gates.	19-Dec-25
99 Warrigal Road SURREY HILLS VIC 3127	WH/2025/1025	Multiple Dwellings	Construction of six townhouses, vegetation removal and changes to access adjacent to a Transport Road Zone road	24-Dec-25
64-66 Churchill Street MONT ALBERT VIC 3127	WH/2025/1031	VicSmart - Tree	Removal of one (1) tree protected under the SLO9 and Clause 52.37	31-Dec-25

10.7 – ATTACHMENT 1. Councillor Reporting Lodgements - December

Lake **13**

Address	Application No	Application Type	Description	Lodged Date
32 Linden Street BLACKBURN VIC 3130	WH/2025/940	Subdivision	6 lot subdivision	01-Dec-25
226 Springvale Road NUNAWADING VIC 3131	WH/2025/968	Multiple Dwellings	To construct three (3) double storey dwellings on a lot, to remove trees and to construct a building and carry out works within four (4) metres of vegetation	08-Dec-25
21 Hartigan Street BLACKBURN VIC 3130	WH/2017/633/A	VicSmart Permit Amendment	Amendment to WH/2017/633 issued for construction of a single dwelling and garage in SBO	09-Dec-25
26 Halley Street BLACKBURN VIC 3130	WH/2025/976	VicSmart - Tree	Removal of 1 tree in the SLO2	10-Dec-25
2 Naughton Grove BLACKBURN VIC 3130	WH/2025/977	Special Landscape Area	Building Works in a Significant Landscape Overlay - Schedule 2	10-Dec-25
53 Maple Street BLACKBURN VIC 3130	WH/2025/997	VicSmart - General Application	Build 1.5M height front fence	16-Dec-25
13 Marilyn Court BLACKBURN NORTH VIC 3130	WH/2025/998	VicSmart - Tree	Removal of one tree under SLO9	17-Dec-25
42 Clifton Street BLACKBURN VIC 3130	WH/2025/1009	Special Landscape Area	Vegetation removal within the Significant Landscape Overlay Schedule 2 and pursuant with Clause 52.37 (Canopy Trees)	18-Dec-25
6 Yea Court FOREST HILL VIC 3131	WH/2023/665/A	Permit Amendment	Amendment to Planning Permit WH/2023/665 issued for 'Buildings and works associated with a dwelling and vegetation removal within the Significant Landscape Overlay Schedule 9"	22-Dec-25
163 Surrey Road BLACKBURN VIC 3130	WH/2025/1016	Multiple Dwellings	Construction of three (3) dwellings on a lot and associated buildings and works and tree removal within the SLO9	22-Dec-25
11 Jessie Street BLACKBURN NORTH VIC 3130	WH/2025/1019	VicSmart - Two Dwellings	construction of 2 dwellings and buildings and works within 4 metres of protected trees in the SLO9	23-Dec-25
11 Julie Street BLACKBURN NORTH VIC 3130	WH/2025/1020	Single Dwelling < 300m2 or 500m2	Single Dwelling - Buildings and Works in Significant Landscape Overlay	23-Dec-25
14 Parkside Street BLACKBURN VIC 3130	WH/2025/1028	VicSmart - Tree	Removal of one tree	28-Dec-25

10.7 – ATTACHMENT 1. Councillor Reporting Lodgements - December

Mahoneys **6**

Address	Application No	Application Type	Description	Lodged Date
32 Forest Glen Avenue BLACKBURN SOUTH VIC 3130	WH/2025/971	Special Landscape Area	Removal and lopping of trees under the Significant Landscape Overlay - Schedule 9	05-Dec-25
24 Vanbrook Street FOREST HILL VIC 3131	WH/2025/967	VicSmart - Tree	The removal of one (1) protected tree in the Significant Landscape Overlay - Schedule 9	07-Dec-25
8 Quentin Street FOREST HILL VIC 3131	WH/2025/989	VicSmart - Tree	To remove a tree	12-Dec-25
20 Christa Avenue BURWOOD EAST VIC 3151	WH/2025/1004	Multiple Dwellings	Construction of two attached three storey (including basement) dwellings, and associated tree removal	17-Dec-25
61 Shady Grove FOREST HILL VIC 3131	WH/2007/334/B	Permit Amendment	To amend the plans under Planning Permit WH/2007/334 for the construction of a replacement two-storey dwelling (on the corner lot) adjacent to an existing dwelling, construct and carry out works and to remove trees in the Significant Landscape Overlay 6	22-Dec-25
34 Thornhill Drive FOREST HILL VIC 3131	WH/2025/1027	Special Landscape Area	To construct a building (New NDIS Residential Accommodation), construct and carry out works within four (4) metres of vegetation	28-Dec-25

10.7 – ATTACHMENT 1. Councillor Reporting Lodgements - December

Simpson **9**

Address	Application No	Application Type	Description	Lodged Date
4 Osprey Street VERMONT VIC 3133	WH/2025/939	Special Landscape Area	To construct a new dwelling and remove vegetation	01-Dec-25
13 Langford Avenue MITCHAM VIC 3132	WH/2025/959	VicSmart - Tree	Removal of one tree	03-Dec-25
9 Rupert Street MITCHAM VIC 3132	WH/2025/963	Multiple Dwellings	Construction of five dwellings and buildings and works and removal of trees within a Significant Landscape Overlay Schedule 9.	05-Dec-25
25 Hopetoun Street MITCHAM VIC 3132	WH/2025/978	Subdivision	Removal of Easement E1 along the southern boundary	10-Dec-25
2/7 Lee Parade MITCHAM VIC 3132	WH/2025/168/A	Permit Amendment	s72 amendment of permit number WH/2025/168 to change the address to 2/7 Lee Parade, MITCHAM 3132 (Lot 2A PS549075)	10-Dec-25
21 Simpson Street MITCHAM VIC 3132	WH/2025/982	VicSmart - Two Dwellings	Construction of two dwellings on a lot	11-Dec-25
51B Glenburnie Road MITCHAM VIC 3132	WH/2025/996	Single Dwelling < 300m2 or 500m2	Works to replace an inground swim spa	16-Dec-25
16 Fuller Street MITCHAM VIC 3132	WH/2025/1001	Multiple Dwellings	3x multi unit development. Works within significant overlay	17-Dec-25
66-68 Heatherdale Road MITCHAM VIC 3132	WH/2025/1014	Multiple Dwellings	Construction of six dwellings on a lot Permit Triggers: Clause 32.09-7 Construct two or more dwellings on a lot Clause 42.03-1 To remove a tree and construct a building and carry out works Clause 52.37-2 To remove, destroy or lop a canopy tree	22-Dec-25

10.7 – ATTACHMENT 1. Councillor Reporting Lodgements - December

Sparks **17**

Address	Application No	Application Type	Description	Lodged Date
422 Station Street BOX HILL VIC 3128	WH/2025/942	Business	Buildings and works to the existing facade in Commercial 1 Zone; Building and works in Design and Development Overlay Schedule 4 and display business identification signage and internally illuminated signage.	02-Dec-25
97 Albion Road BOX HILL VIC 3128	WH/2025/958	Subdivision	Three (3) lot subdivision	03-Dec-25
519 Station Street BOX HILL VIC 3128	WH/2025/354/A	Permit Amendment	Amendment to original signage permit to include the display of two electronic signs	04-Dec-25
3 Haig Street BOX HILL SOUTH VIC 3128	WH/2025/964	Special Landscape Area	Buildings and works associated with the construction of a single dwelling under the SLO9 and SBO, and the associated tree removal	05-Dec-25
25-29 Prospect Street BOX HILL VIC 3128	WH/2019/1332/A	Permit Amendment	Amend Permit No. WH/2019/1332 to use and develop the land for a mixed-use, commercial, retail and residential development with associated services and facilities.	09-Dec-25
947 Canterbury Road BOX HILL VIC 3128	WH/2025/973	Advertising Sign	construction of signage	09-Dec-25
38 Haig Street BOX HILL SOUTH VIC 3128	WH/2025/974	Special Landscape Area	We are seeking approval for proposed works within a Significant Landscape Overlay (SL09) 4m no works zone and the removal of 3 trees with a SL09 trigger.	09-Dec-25
372 Station Street BOX HILL SOUTH VIC 3128	WH/2025/984	Change of Use	Use of land as a medical centre and associated buildings and works and front fence within 4 metres of protected trees, tree removal, alteration of access to a road in the Transport Zone 2 and construction and display of a business identification sign	11-Dec-25
30 Graham Place BOX HILL VIC 3128	WH/2025/986	VicSmart - Tree	Removal of one (1) tree protected under the SLO9 and Clause 52.37	11-Dec-25
41 Wellman Street BOX HILL SOUTH VIC 3128	WH/2025/994	VicSmart - Tree	Removal of one (1) tree under the Significant Landscape Overlay - Schedule 9	15-Dec-25
G 1/9 Prospect Street BOX HILL VIC 3128	WH/2025/993	Subdivision	Subdivided S2 and S3 lots on PS810993K to the current office layout to create 12 new titles in accordance with attached plans	15-Dec-25
959-963 Whitehorse Road BOX HILL VIC 3128	WH/2025/1003	Other	Planning permit for an existing business identification sign, including internal LED illumination, mounted to the building façade fronting Whitehorse Road, pursuant to Clause 52.05 (Signs) of the Whitehorse Planning Scheme.	17-Dec-25
36 Kintore Crescent BOX HILL VIC 3128	WH/2025/1000	VicSmart - Two Dwellings	Construction of two (2) double storey dwellings	17-Dec-25

10.7 – ATTACHMENT 1. Councillor Reporting Lodgements - December

Sparks **17**

Address	Application No	Application Type	Description	Lodged Date
1C Simpsons Road BOX HILL VIC 3128	WH/2025/1005	VicSmart - General Application	Planning permit of a 1.6m high brick batten front fence and gate.	17-Dec-25
28 Brougham Street BOX HILL VIC 3128	WH/2025/1017	Subdivision	Four lot subdivision of existing dwellings	22-Dec-25
18 Haig Street BOX HILL SOUTH VIC 3128	WH/2025/1023	VicSmart - Two Dwellings	Two Dwellings Development	23-Dec-25
37 Fowler Street BOX HILL SOUTH VIC 3128	WH/2025/1029	Multiple Dwellings	Construction of three dwellings on a lot (NRZ) and buildings and works within four metres of protected vegetation (SLO9)	29-Dec-25

10.7 – ATTACHMENT 1. Councillor Reporting Lodgements - December

Terrara **5**

Address	Application No	Application Type	Description	Lodged Date
4 Henley Avenue VERMONT SOUTH VIC 3133	WH/2025/969	Special Landscape Area	Application for Tree Permit – Works Within 4m of Tree 1 (Significant Landscape Overlay – Schedule 9)	08-Dec-25
502-514 Burwood Highway VERMONT SOUTH VIC 3133	WH/2002/13297/L	Permit Amendment	Use and development of a Retirement Village comprising not more than 217 dwellings, with altered access to a Road Zone Category 1, native tree removal and deletion of part of a carriageway easement	10-Dec-25
5 Myriong Avenue VERMONT SOUTH VIC 3133	WH/2025/991	Special Landscape Area	Vegetation removal within the Significant Landscape Overlay Schedule 9 and Clause 52.37 (Canopy Trees)	14-Dec-25
14 Sevenoaks Road BURWOOD EAST VIC 3151	WH/2025/1010	Subdivision	Vary the restrictive covenant C300213 in C/T Volume 12179 Folio 675 from not more than one private dwelling to not more than two private dwellings.	18-Dec-25
25 Stanley Road VERMONT SOUTH VIC 3133	WH/2025/1021	VicSmart - Subdivision	2 lot subdivision	23-Dec-25

10.7 – ATTACHMENT 1. Councillor Reporting Lodgements - December

Walker **14**

Address	Application No	Application Type	Description	Lodged Date
61 Quarry Road MITCHAM VIC 3132	WH/2025/957	VicSmart - Subdivision	Two lot subdivision	03-Dec-25
2 Olwen Street NUNAWADING VIC 3131	WH/2025/965	VicSmart - General Application	Buildings and works (verandah) within 4 metres of a protected SLO9 tree	06-Dec-25
23 Dawe Road MITCHAM VIC 3132	WH/2025/970	VicSmart - Tree	The removal of one (1) protected tree in the Significant Landscape Overlay - Schedule 6	09-Dec-25
6 Howard Street MITCHAM VIC 3132	WH/2025/975	VicSmart - General Application	To construct a building or construct or carry out works (shed) within 4 metres of vegetation	10-Dec-25
528 Whitehorse Road MITCHAM VIC 3132	WH/2025/981	VicSmart - General Application	Installation of solar panels within the Heritage Overlay - Schedule 161	10-Dec-25
20 Quarry Road MITCHAM VIC 3132	WH/2025/983	VicSmart - Two Dwellings	Proposed second dwelling	11-Dec-25
26 Outlook Drive NUNAWADING VIC 3131	WH/2025/987	VicSmart - Tree	Removal of one tree	12-Dec-25
19 Alexander Street MITCHAM VIC 3132	WH/2025/990	Multiple Dwellings	Construction of four, two-storey dwellings and vegetation removal	13-Dec-25
19 Sharrow Road MITCHAM VIC 3132	WH/2025/995	Single Dwelling < 300m2 or 500m2	The removal of five (5) canopy trees pursuant to Clause 42.03 and Clause 52.37	15-Dec-25
7 Hovea Street MITCHAM VIC 3132	WH/2025/999	Special Landscape Area	Buildings and works within the Bushfire Management Overlay and Significant Landscape Overlay - Schedule 6	17-Dec-25
13 Agra Street MITCHAM VIC 3132	WH/2025/444/A	Permit Amendment	Amendment to Planning Permit WH/2025/444 for tree removal and building and works associated with a new dwelling	19-Dec-25
57 Quarry Road MITCHAM VIC 3132	WH/2025/1013	Multiple Dwellings	Construction of two attached double storey dwellings and associated tree removal and buildings and works within 4 metres of protected trees	22-Dec-25
432 Whitehorse Road NUNAWADING VIC 3131	WH/2025/1022	Advertising Sign	Internally Illuminated Business Identification signage	23-Dec-25
13 Diosma Crescent NUNAWADING VIC 3131	WH/2025/1030	VicSmart - Tree	Removal of one tree	31-Dec-25

10.7 – ATTACHMENT 1. Councillor Reporting Lodgements - December

Wattle **4**

Address	Application No	Application Type	Description	Lodged Date
57 Burwood Highway BURWOOD VIC 3125	WH/2025/943	Change of Use	Retail Fuel Outlet (Service Station)	02-Dec-25
373 Highbury Road BURWOOD VIC 3125	WH/2025/953	Multiple Dwellings	Construction of three (3) triple storey dwellings, alteration of access to a road in a transport zone category 2, buildings and works within 4 metres of protected SLO9 trees and removal of vegetation	02-Dec-25
27 Edwards Street BURWOOD VIC 3125	WH/2025/988	Multiple Dwellings	Construction of 4 new dwellings	12-Dec-25
19 Christina Street BURWOOD VIC 3125	WH/2025/1002	VicSmart - Subdivision	Two lot subdivision	17-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Planning Permit Delegated Decisions December 2025

Total Decided 105

Report Summary - A list of planning permit decisions issued under Whitehorse City Council Delegation in the month prior.
Note - The description for Permit Amendments does not reflect the amendment changes.

Cootamundra 11

Address	Application No	Application Type	Description	Decision	Decision Date
16 Hamilton Avenue BLACKBURN VIC 3130	WH/2025/685	Multiple Dwellings	Construction of two (2) double storey dwellings including buildings and works within 4 metres of protected SLO9 trees and vegetation removal	Delegate Permit Issued	03-Dec-25
8 Southey Street BLACKBURN NORTH VIC 3130	WH/2025/933	VicSmart - Tree	Removal of a tree	Delegate Permit Issued	10-Dec-25
82 Katrina Street BLACKBURN NORTH VIC 3130	WH/2025/931	VicSmart - Tree	Removal of one tree	Delegate Permit Issued	16-Dec-25
33 Whitehorse Road BLACKBURN VIC 3130	WH/2025/921	Subdivision	Seven (7) lot subdivision	Delegate Permit Issued	24-Dec-25
24 Raymond Street BLACKBURN NORTH VIC 3130	WH/2025/966	VicSmart - General Application	Construction of a front fence with 4 metres of protected trees	Delegate Permit Issued	29-Dec-25
135-137 Whitehorse Road BLACKBURN VIC 3130	WH/2025/715	Advertising Sign	To display internally illuminated business identification signs	Delegate NOD Issued	04-Dec-25
9 Hirst Street BLACKBURN VIC 3130	WH/2025/456	Special Landscape Area	Removal of multiple trees protected under the SLO9	Delegate NOD Issued	04-Dec-25
52 Williams Road BLACKBURN VIC 3130	WH/2025/570	Multiple Dwellings	Construction of six (6) double storey dwellings including buildings and works within 4 metres of protected SLO9 trees	Delegate NOD Issued	19-Dec-25
13 Acacia Avenue BLACKBURN VIC 3130	WH/2025/345	Single Dwelling < 300m2 or 500m2	Buildings and works under the Significant Landscape Overlay - Schedule 1.	Delegate NOD Issued	18-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Cootamundra **11**

Address	Application No	Application Type	Description	Decision	Decision Date
22B Blackburn Road BLACKBURN VIC 3130	WH/2015/25/E	Permit Amendment	Construction of a four storey building for retail and residential uses, reduction in car parking, waiver of loading facilities, alteration of access to a road in a Road Zone, Category 1 and display of internally illuminated business identification signage	Delegate NOD - S72 Amendment	16-Dec-25
31 Fuchsia Street BLACKBURN VIC 3130	WH/2019/1019/B	Permit Amendment	Amend Permit WH/2019/1019/A issued for Construction of additions that exceeds the requirements of Significant Landscape Overlay, Schedule 2 and removal of Tree 14.	Delegate NOD - S72 Amendment	24-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Eley **7**

Address	Application No	Application Type	Description	Decision	Decision Date
18 Grange Road BLACKBURN SOUTH VIC 3130	WH/2025/924	VicSmart - General Application	Retrospective buildings and works associated with a front fence within 4 metres of trees protected under the SLO9.	Delegate Permit Issued	09-Dec-25
33 Lenna Street BURWOOD EAST VIC 3151	WH/2025/437	Multiple Dwellings	Construction of two attached double storey dwellings and associated building and works within 4m of protected trees and removal of vegetation	Delegate Permit Issued	15-Dec-25
11 Dundee Street BLACKBURN SOUTH VIC 3130	WH/2025/938	VicSmart - Tree	Removal of one tree in the SLO9	Delegate Permit Issued	17-Dec-25
4 Trent Court BURWOOD EAST VIC 3151	WH/2025/411	Multiple Dwellings	Development of two (2) double storey dwellings, building and works and removal of vegetation within Significant Landscape Overlay Schedule 9	Delegate Permit Issued	19-Dec-25
102 Middleborough Road BLACKBURN SOUTH VIC 3130	WH/2025/712	Advertising Sign	Construct and put up for display an internally illuminated business identification sign	Delegate NOD Issued	05-Dec-25
11 Moona Street BURWOOD EAST VIC 3151	WH/2024/1029	Multiple Dwellings	Construction of two (2) dwellings, buildings and works within 4 metres of protected SLO9 trees and vegetation removal	Delegate NOD Issued	10-Dec-25
23 Dorothy Street BURWOOD EAST VIC 3151	WH/2025/652	Multiple Dwellings	Construction two or more dwellings on a lot and buildings and works within four metres of protected trees in Significant Landscape Overlay, Schedule 9	Delegate NOD Issued	15-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Elgar **10**

Address	Application No	Application Type	Description	Decision	Decision Date
43 Karen Street BOX HILL NORTH VIC 3129	WH/2025/910	VicSmart - Tree	The removal of one (1) protected canopy tree pursuant to Clause 42.03 and Clause 52.37	Delegate Permit Issued	03-Dec-25
9 Inglis Street BOX HILL NORTH VIC 3129	WH/2025/886	VicSmart - General Application	Buildings and works within 4 metres of trees under the Significant Landscape Overlay - Schedule 9	Delegate Permit Issued	08-Dec-25
902/2 Bruce Street BOX HILL VIC 3128	WH/2025/961	Subdivision	Transfer existing storage cage from Lot 9J to 17D on basement level 3	Delegate Permit Issued	10-Dec-25
521 Belmore Road MONT ALBERT NORTH VIC 3129	WH/2025/773	Public Open Space	Buildings and works, associated with a kitchen extension (cool room), within the public park and recreation zone	Delegate Permit Issued	12-Dec-25
74 Peter Street BOX HILL NORTH VIC 3129	WH/2008/394/A	Permit Amendment	Amendment to Planning Permit WH/2008/394 issued for Construction of a single storey dwelling adjacent to an existing dwelling.	Delegate Approval - S72 Amendment	17-Dec-25
1 Hillside Parade BOX HILL NORTH VIC 3129	WH/2025/1011	VicSmart - Subdivision	Two lot subdivision	Delegate Permit Issued	23-Dec-25
15 Luther Street BOX HILL NORTH VIC 3129	WH/2025/872	Subdivision	Proposed application to remove part of the Drainage and Sewerage Easement affecting the Title. An additional purpose is to vary the section of Drainage and Sewerage Easement remaining, by extending the Easement to intersect with the western title boundary.	Delegate Permit Issued	23-Dec-25
30 Orchard Crescent MONT ALBERT NORTH VIC 3129	WH/2025/869	VicSmart - General Application	To construct a front fence within four (4) meters of vegetation	Delegate Permit Issued	23-Dec-25
48 Mersey Street BOX HILL NORTH VIC 3129	WH/2023/987	Multiple Dwellings	To construct three (3) dwellings on a lot and to construct and carry out buildings and works within four (4) metres of vegetation	Delegate NOD Issued	01-Dec-25
10 Packham Street BOX HILL NORTH VIC 3129	WH/2025/708	Special Landscape Area	Removal of trees protected under the SLO9 and Clause 52.37	Delegate NOD Issued	17-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Kingsley **7**

Address	Application No	Application Type	Description	Decision	Decision Date
17 Curlewis Street MONT ALBERT VIC 3127	WH/2025/960	VicSmart - Subdivision	Two lot subdivision	Delegate Permit Issued	05-Dec-25
12 Sutton Parade MONT ALBERT NORTH VIC 3129	WH/2025/962	VicSmart - Tree	Removal of one tree	Delegate Permit Issued	10-Dec-25
58 Boisdale Street SURREY HILLS VIC 3127	WH/2025/896	VicSmart - Tree	Removal one tree	Delegate Permit Issued	11-Dec-25
1/40 Strabane Avenue MONT ALBERT NORTH VIC 3129	WH/2019/685/B	Permit Amendment	To amend the plans to permit WH/2019/685 to remove a tree and undertake landscaping alterations and additions	Delegate Approval - S72 Amendment	12-Dec-25
1/18 Lorne Parade MONT ALBERT VIC 3127	WH/2013/652/A	Permit Amendment	Construction of four double storey dwellings including buildings and works within 4 metres of trees under the Significant Landscape Overlay - Schedule 9	Delegate Refusal - S72 Amendment	24-Dec-25
15 Florence Road SURREY HILLS VIC 3127	WH/2025/306/A	Permit Amendment	To amend the plans to permit WH/2025/306 which allows to construct a building and construct and carry out works for a dwelling extension within four (4) metres of vegetation	Delegate Approval - S72 Amendment	30-Dec-25
659-663 Whitehorse Road MONT ALBERT VIC 3127	WH/2016/1194/C	Permit Amendment	Amendment to condition 4 of the Carparking Management Plan (CPMP) to mitigate security concerns	Delegate NOD - S72 Amendment	12-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Lake **13**

Address	Application No	Application Type	Description	Decision	Decision Date
6 Kendall Street NUNAWADING VIC 3131	WH/2025/793	VicSmart - Tree	Removal of one tree	Delegate Permit Issued	02-Dec-25
12 Norris Court BLACKBURN VIC 3130	WH/2022/1042/B	VicSmart Permit Amendment	Removal of one (1) tree	Delegate Approval - S72 Amendment	09-Dec-25
2/288 Whitehorse Road NUNAWADING VIC 3131	WH/2025/771	VicSmart - General Application	Display of business identification flag signage	Delegate Permit Issued	11-Dec-25
22 Goodwin Street BLACKBURN VIC 3130	WH/2025/917	VicSmart - General Application	Buildings and works to construct a carport within 4 meters of a protected tree	Delegate Permit Issued	12-Dec-25
16 Halley Street BLACKBURN VIC 3130	WH/2025/743	VicSmart - General Application	Increase in hardstand and building within 4m of trees	Delegate Permit Issued	16-Dec-25
26 Halley Street BLACKBURN VIC 3130	WH/2025/976	VicSmart - Tree	Removal of 1 tree in the SLO2	Delegate Permit Issued	17-Dec-25
G 3/160 Whitehorse Road BLACKBURN VIC 3130	WH/2025/903	VicSmart - General Application	Buildings and works associated with the construction of a pergola	Delegate Permit Issued	17-Dec-25
21 Hartigan Street BLACKBURN VIC 3130	WH/2017/633/A	VicSmart Permit Amendment	Amendment to WH/2017/633 issued for construction of a single dwelling and garage in SBO	Delegate Approval - S72 Amendment	17-Dec-25
5 Langtree Court BLACKBURN VIC 3130	WH/2025/137/A	VicSmart Permit Amendment	Amendment to WH/2025/137 which was for buildings and works within four metres of protected trees in SLO9	Delegate Approval - S72 Amendment	17-Dec-25
17 Sussex Street BLACKBURN NORTH VIC 3130	WH/2025/772	Special Landscape Area	Buildings and works within 4 metres of trees under the Significant Landscape Overlay - Schedule 9	Delegate Permit Issued	19-Dec-25
34 The Ridge BLACKBURN VIC 3130	WH/2025/876	VicSmart - Tree	removal of one tree	Delegate Permit Issued	22-Dec-25
2/190-192 Whitehorse Road BLACKBURN VIC 3130	WH/2025/174	Advertising Sign	Advertising sign board	Delegate Permit Issued	24-Dec-25
32 Linden Street BLACKBURN VIC 3130	WH/2025/940	Subdivision	6 lot subdivision	Delegate Permit Issued	24-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Mahoneys **10**

Address	Application No	Application Type	Description	Decision	Decision Date
59-61 Betula Avenue VERMONT VIC 3133	WH/2025/774	Subdivision	Twenty-Eight lot subdivision in two stages (Stage 1 - 3 Lots)	Delegate Permit Issued	01-Dec-25
68 Betula Avenue VERMONT VIC 3133	WH/2025/916	VicSmart - Tree	Removal of one (1) tree protected under the SLO9 and Clause 52.37	Delegate Refusal Issued	02-Dec-25
53 Menin Road FOREST HILL VIC 3131	WH/2025/936	VicSmart - Tree	To remove one (1) tree	Delegate Refusal Issued	03-Dec-25
374-378 Springvale Road FOREST HILL VIC 3131	WH/2025/753	VicSmart - Tree	Removal of one (1) tree in the Significant Landscape Overlay, Schedule 9	Delegate Permit Issued	04-Dec-25
41 Mahoneys Road FOREST HILL VIC 3131	WH/2025/851	Business	Shopfront renovation with replacement of front door/window and signages	Delegate Permit Issued	09-Dec-25
42 Lee Ann Street FOREST HILL VIC 3131	WH/2025/905	VicSmart - Tree	Removal of one (1) protected tree under Clause 52.37	Delegate Refusal Issued	11-Dec-25
4 Gidgee Court FOREST HILL VIC 3131	WH/2025/932	VicSmart - Tree	The removal of one (1) protected boundary canopy tree pursuant to Clause 42.03 and Clause 52.37	Delegate Refusal Issued	11-Dec-25
6 Clifford Court FOREST HILL VIC 3131	WH/2025/742	Special Landscape Area	Construction of a single storey dwelling in the Significant Landscape Overlay - Schedule 9 and the removal of a tree	Delegate Permit Issued	12-Dec-25
8 Quentin Street FOREST HILL VIC 3131	WH/2025/989	VicSmart - Tree	To remove a tree	Delegate Refusal Issued	24-Dec-25
37 Lasiandra Avenue FOREST HILL VIC 3131	WH/2025/736	Multiple Dwellings	Construction of an additional dwelling where there is one existing dwelling on a lot including tree removal and buildings and works within 4 metres of trees within the Significant Landscape Overlay - Schedule 9	Delegate Permit Issued	30-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Simpson **8**

Address	Application No	Application Type	Description	Decision	Decision Date
34 Barbara Street VERMONT VIC 3133	WH/2025/483	Special Landscape Area	Tree removal and buildings and works, associated with a single dwelling, within 4 meters of trees protected under the SLO9	Delegate Permit Issued	15-Dec-25
2/7 Lee Parade MITCHAM VIC 3132	WH/2025/168/A	Permit Amendment	s72 amendment of permit number WH/2025/168 to change the address to 2/7 Lee Parade, MITCHAM 3132 (Lot 2A PS549075)	Delegate Approval - S72 Amendment	16-Dec-25
13 Langford Avenue MITCHAM VIC 3132	WH/2025/959	VicSmart - Tree	Removal of one tree	Delegate Permit Issued	17-Dec-25
507 Mitcham Road MITCHAM VIC 3132	WH/2021/703/B	Permit Amendment	Amendment to replace previous permeable areas with concrete and introduce a 2m² raingarden	Delegate Approval - S72 Amendment	19-Dec-25
1 Carramar Court VERMONT VIC 3133	WH/2018/162/C	Permit Amendment	Amendment to Construction of two (2) dwellings and removal of vegetation in SLO9	Delegate Approval - S72 Amendment	30-Dec-25
55 Percy Street MITCHAM VIC 3132	WH/2011/676/A	Permit Amendment	Amendment to Planning Permit WH/2011/676 (Issued for Construction of three double storey dwellings) to allow construction of a pergola within the secluded private open space of Dwelling 3	Delegate NOD - S72 Amendment	12-Dec-25
21 Walker Avenue MITCHAM VIC 3132	WH/2025/323	Multiple Dwellings	Construction of two double storey dwellings and associated removal of protected trees and buildings and works within 4 metres of protected trees	Delegate NOD Issued	09-Dec-25
1 Norman Street MITCHAM VIC 3132	WH/2024/705	Multiple Dwellings	Construction of two (2) double storey dwellings, tree removal and buildings and works within 4 metres of protected trees within the Significant Landscape Overlay - Schedule 9	Delegate NOD Issued	22-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Sparks **12**

Address	Application No	Application Type	Description	Decision	Decision Date
15-17 Prospect Street BOX HILL VIC 3128	WH/2025/266	Change of Use	Use of land as Place of Assembly (Internet and Gaming Centre) and reduction of car parking	Delegate Permit Issued	03-Dec-25
519 Station Street BOX HILL VIC 3128	WH/2016/1196/G	Permit Amendment	Development and use of the land for the construction of buildings and works, comprising retail premises, office, medical centre, childcare centre, a reduction in the requirements for car parking and alteration of access to a road in a Road Zone Category 1.	Delegate Approval - S72 Amendment	03-Dec-25
53-59 Bishop Street BOX HILL VIC 3128	WH/2025/900	VicSmart - General Application	Front fence in the SLO9	Delegate Permit Issued	04-Dec-25
1191 Riversdale Road BOX HILL SOUTH VIC 3128	WH/2025/883	VicSmart - General Application	Front fence in the SLO9	Delegate Permit Issued	05-Dec-25
824 Whitehorse Road BOX HILL VIC 3128	WH/2025/646	Advertising Sign	Display of two (2) internally illuminated, business identification signs	Delegate Permit Issued	10-Dec-25
25 Oxford Street BOX HILL VIC 3128	WH/2025/106	Special Landscape Area	Removal of protected vegetation and construction of buildings and works associated with a single dwelling within 4 meters of trees protected under the Significant Landscape Overlay, Schedule 9	Delegate Refusal Issued	19-Dec-25
30 Graham Place BOX HILL VIC 3128	WH/2025/986	VicSmart - Tree	Removal of one (1) tree protected under the SLO9 and Clause 52.37	Delegate Permit Issued	22-Dec-25
97 Albion Road BOX HILL VIC 3128	WH/2025/958	Subdivision	Three (3) lot subdivision	Delegate Permit Issued	24-Dec-25
41 Wellman Street BOX HILL SOUTH VIC 3128	WH/2025/994	VicSmart - Tree	Removal of one (1) tree under the Significant Landscape Overlay - Schedule 9	Delegate Refusal Issued	30-Dec-25
102 Carrington Road BOX HILL VIC 3128	WH/2024/735	Residential (Other)	Clause 32.07-6 - Construction of two or more dwellings on a lot.	Delegate NOD Issued	04-Dec-25
35 Birdwood Street BOX HILL SOUTH VIC 3128	WH/2025/661	Multiple Dwellings	Construction of three (3) double storey dwellings including buildings and works within 4 metres of protected SLO9 trees	Delegate NOD Issued	12-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Sparks **12**

Address	Application No	Application Type	Description	Decision	Decision Date
204 Elgar Road BOX HILL SOUTH VIC 3128	WH/1993/905072	Permit Amendment	Amendment to Planning Permit BH/1993/905072 Issued for Medical Centre (Dental Practice) with car parking.	Delegate NOD - S72 Amendment	09-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Terrara **4**

Address	Application No	Application Type	Description	Decision	Decision Date
3 George Road VERMONT SOUTH VIC 3133	WH/2025/922	VicSmart - Tree	Removal of one tree in the SLO9	Delegate Permit Issued	09-Dec-25
17 Torwood Drive VERMONT SOUTH VIC 3133	WH/2025/925	VicSmart - General Application	Development: Construction of a $1.5meter high front fence in a Residential Zone. Planning Trigger: The proposed height of $1.5m exceeds the maximum allowable height (typically $1.2m) for a front fence. This development is required on the grounds of exceptional child (autism) safety (at the terminal point of a T-intersection).and welfare.	Delegate Permit Issued	10-Dec-25
807 Highbury Road VERMONT SOUTH VIC 3133	WH/2024/406/A	Permit Amendment	Amendment to planning permit to allow alteration to access within the Transport Zone 2 (automatic gate) and landscaping changes.	Delegate Approval - S72 Amendment	19-Dec-25
397 Burwood Highway VERMONT SOUTH VIC 3133	WH/2013/535/C	Permit Amendment	Amendment of WH/2013/535 B to include two new food premises with ancillary storage	Delegate Approval - S72 Amendment	24-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Walker **12**

Address	Application No	Application Type	Description	Decision	Decision Date
123 Rooks Road NUNAWADING VIC 3131	WH/2025/796	VicSmart - General Application	Buildings and works associated with a front fence within 4 meters of protected trees	Delegate Permit Issued	02-Dec-25
61 Quarry Road MITCHAM VIC 3132	WH/2025/957	VicSmart - Subdivision	Two lot subdivision	Delegate Permit Issued	09-Dec-25
23 Dawe Road MITCHAM VIC 3132	WH/2025/970	VicSmart - Tree	The removal of one (1) protected tree in the Significant Landscape Overlay - Schedule 6	Delegate Permit Issued	16-Dec-25
3 Thornton Crescent MITCHAM VIC 3132	WH/2025/261/A	VicSmart Permit Amendment	Amend WH/2025/261 to knock down and rebuild the warehouse buildings and reduce car parking	Delegate Approval - S72 Amendment	16-Dec-25
2 Olwen Street NUNAWADING VIC 3131	WH/2025/965	VicSmart - General Application	Buildings and works (verandah) within 4 metres of a protected SLO9 tree	Delegate Permit Issued	16-Dec-25
2 Peel Street MITCHAM VIC 3132	WH/2025/681	Special Landscape Area	Removal of one (1) tree and pruning of one (1) tree protected under the SLO9 and Clause 52.37	Delegate Permit Issued	16-Dec-25
7 Dalmor Avenue MITCHAM VIC 3132	WH/2025/493	Special Landscape Area	Buildings and works for a single storey extension to the existing dwelling, including buildings and works within 4 metres of protected trees and associated tree removal	Delegate Permit Issued	16-Dec-25
9 Tourello Street MITCHAM VIC 3132	WH/2021/1003/B	Permit Amendment	Construction of two dwellings on a lot, associated buildings and works and vegetation removal within SLO6 and two lot subdivision, generally in accordance with the endorsed plans and subject to the following conditions.	Delegate Approval - S72 Amendment	18-Dec-25
528 Whitehorse Road MITCHAM VIC 3132	WH/2025/981	VicSmart - General Application	Installation of solar panels within the Heritage Overlay - Schedule 161	Delegate Permit Issued	23-Dec-25
26 Outlook Drive NUNAWADING VIC 3131	WH/2025/987	VicSmart - Tree	Removal of one tree	Delegate Refusal Issued	24-Dec-25
17 Winchester Road NUNAWADING VIC 3131	WH/2024/982	Multiple Dwellings	To construct two (2) double storey dwellings on a lot, tree removal and construct a building and construct and carry out works within four (4) metres of vegetation	Delegate NOD Issued	18-Dec-25
8 Savage Court NUNAWADING VIC 3131	WH/2024/933	Multiple Dwellings	Construction of two double storey dwellings and associated buildings and works within 4 metres of protected trees and tree removal	Delegate NOD Issued	24-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Wattle **11**

Address	Application No	Application Type	Description	Decision	Decision Date
40 Somers Street BURWOOD VIC 3125	WH/2025/799/A	VicSmart Permit Amendment	Reduction in proposed fence height	Delegate Approval - S72 Amendment	02-Dec-25
67 Elgar Road BURWOOD VIC 3125	WH/2025/79	Residential (Other)	Use and development of the land for a three (3) storey residential building (student accommodation), buildings and works within 4 metres of a protected tree under the Significant Landscape Overlay Schedule 9 and reduction of car parking requirement	Delegate Refusal Issued	09-Dec-25
141-155 Burwood Highway BURWOOD VIC 3125	WH/2025/816	Other	Building and works for the construction of an amenities block including buildings and works within 4 metres of protected SLO9 trees	Delegate Permit Issued	11-Dec-25
10 Peacock Street BURWOOD VIC 3125	WH/2025/17	Multiple Dwellings	Construction of two double storey dwellings and associated tree removal	Delegate Permit Issued	19-Dec-25
19 Christina Street BURWOOD VIC 3125	WH/2025/1002	VicSmart - Subdivision	Two lot subdivision	Delegate Permit Issued	19-Dec-25
28 Loudon Road BURWOOD VIC 3125	WH/2017/449/B	VicSmart Permit Amendment	Amendment to Planning Permit WH/2017/449/B (issued for construction of four dwellings, comprising two triple storey dwellings facing Alder Street and two double storey dwellings facing Loudon Road, and associated tree removal and buildings and works within 4 metres of protected trees) to construct a front fence within 4 metres of protected trees	Delegate Approval - S72 Amendment	19-Dec-25
141-155 Burwood Highway BURWOOD VIC 3125	WH/2025/829	Advertising Sign	The development and display of business identification signs, including an internally illuminated sign	Delegate Permit Issued	19-Dec-25
18 Eley Road BURWOOD VIC 3125	WH/2025/296/A	Permit Amendment	Amendment to Planning Permit WH/2025/269 issued for Construction of two (2) double storey dwellings and buildings and works within 4 metres of trees within the Significant Landscape Overlay - Schedule 9	Delegate Approval - S72 Amendment	22-Dec-25
18 McCubbin Street BURWOOD VIC 3125	WH/2025/898	Subdivision	Four (4) lot subdivision with Common Property & Owners Corporation.	Delegate Permit Issued	24-Dec-25
82 Parer Street BURWOOD VIC 3125	WH/2025/551	Single Dwelling < 300m2 or 500m2	Buildings and works within 4 metres of trees under the Significant Landscape Overlay - Schedule 9	Delegate Permit Issued	24-Dec-25

10.7 – ATTACHMENT 2. Councillor Reporting Delegated Decisions - December

Wattle **11**

Address	Application No	Application Type	Description	Decision	Decision Date
141-155 Burwood Highway BURWOOD VIC 3125	WH/2025/252	Change of Use	Use of land for an Indoor Recreation Facility, Open Sports Ground and Place of Assembly including associated buildings and works (car park extension)	Delegate NOD Issued	09-Dec-25

10.7 – ATTACHMENT 3. Councillor Reporting VCAT - December

WHITEHORSE CITY COUNCIL

Planning Applications at VCAT - December 2025 7

Report Summary
A list of planning permits currently at VCAT

Application_Number	Ward	VCAT Ref	Address	Description	Decision	Decision Date	Status
WH/2024/845	Cootamundra	P398/2025	13 Railway Road BLACKBURN VIC 3130	32.09-2 Use of the Land as a Rooming house	Delegate Refusal Issued	10/04/25	Waiting Decision
WH/2025/235	Cootamundra	P1054/2025	38 The Avenue BLACKBURN VIC 3130	The removal of vegetation and buildings and works associated with a new dwelling in the Significant Landscape Overlay, Schedule 2	Delegate Refusal Issued	20/11/25	Not Heard
WH/2024/844	Eley	P173/2025	7/10-40 Burwood Highway BURWOOD EAST VIC 3151	Display of an electronic major promotion sky sign	Delegate Refusal Issued	30/06/25	Waiting Decision
WH/2024/855	Kingsley	P1057/2025	382 Mont Albert Road MONT ALBERT VIC 3127	To construct two (2) double storey dwellings on a lot and to construct a building and construct and carry out works within four (4) metres of vegetation	Delegate NOD Issued	21/11/25	Not Heard
WH/2024/377	Lake	P950/2024	108 Lake Road BLACKBURN VIC 3130	Buildings and works in the Significant Landscape Overlay - Schedule 2	Delegate Refusal Issued	12/07/24	Waiting Decision
WH/2024/795	Lake	P432/2025	29 Alandale Road BLACKBURN VIC 3130	To remove two (2) trees	Delegate Refusal Issued	12/03/25	Not Heard
WH/2025/737	Lake	P1060/2025	34 Dickens Street BLACKBURN VIC 3130	Two lot subdivision	Delegate Permit Issued	02/10/25	Not Heard

10.7 – ATTACHMENT 4. Councillor Reporting Ministerial Permits - December

WHITEHORSE CITY COUNCIL

Ministerial Permit Register - December 2025

Planning Permits under Minister Delegation

1

Report Summary
A list of planning permits under Minister Delegation based off the Ministerial Planning Register for applications within Whitehorse City Council

Application number	Address	Description	Decision	Decision Date
PA2101392-4	141-169 Burwood Highway Burwood VIC 3125	S72 Amendment: amend the permit preamble. Amend plans (alterations to the endorsed Architectural, Signage and Landscape plans to reflect the retention of the crossover along Burwood Highway, Landscape Plan updated to propose some additional minor changes	Permit	

Referrals and Determinations - December 2025

Under Clause 52.20
Government Funded Housing Development

0

Report Summary
A list of referrals and determinations under Clause 52.20 within Whitehorse City Council

Application number	Address	Description	Date Received

10.7 – ATTACHMENT 4. Councillor Reporting Ministerial Permits - December

WHITEHORSE CITY COUNCIL

Ministerial Permit Register - December 2025

Planning Permits under Minister Delegation

Big Build

0

Report Summary
A list of planning permits under Minister Delegation based off the Ministerial Planning Register - Big Build for applications within Whitehorse City Council

Application Number	Address	Description	Date

Ministerial Permit Register - December 2025

Planning Permits under Minister Delegation

State Projects

0

Report Summary
A list of planning permits under Minister Delegation based off the Ministerial Planning Register - Stat Projects for applications within Whitehorse City Council

Project	Municipality	Description	Decision

10.10 Records of Informal Meetings of Councillors

Attachment 1	Pre Council Meeting Briefing - 2 February 2026
Attachment 2	Mandatory Professional Development - 9 February 2026
Attachment 3	Strategy Meeting - 16 February 2026

10.10 – ATTACHMENT 1. Pre Council Meeting Briefing - 2 February 2026

WHITEHORSE CITY COUNCIL

Record of Informal Councillor Meeting Form HPCM 21/183353

Pre Council Meeting Briefing – 2 February 2026 – 6.30pm – 6.41pm		
Matter/s Discussed: • 8 December 2025 Council Meeting Agenda	**Councillors Present** Cr Kirsten Langford Mayor Cr Kieran Simpson Deputy Mayor Cr Blair Barker Cr Prue Cutts Cr Andrew Davenport Cr Daniel Griffiths Cr Jarrod Gunn Cr Jason Martin Cr Ben Stennett Cr Hayley Weller	**Officers Present** S McMillan S White L Letic J Green S Cann V Ferlaino S Sullivan S Candeland A Wintle J Moore
Others Present: N/A		
Disclosures of Conflict of Interest: Nil		
Councillor /Officer attendance following disclosure: Nil		

10.10 – ATTACHMENT 2. Mandatory Professional Development - 9 February 2026

WHITEHORSE CITY COUNCIL

Record of Informal Councillor Meeting Form HPCM 21/183353

Mandatory Professional Development – 9 February 2026 – 6.30pm – 8.45pm		
Matter/s Discussed: • Working Together in a Council	**Councillors Present** Cr Kirsten Langford Mayor Cr Kieran Simpson Deputy Mayor Cr Peter Allan Cr Blair Barker Cr Prue Cutts Cr Andrew Davenport Cr Daniel Griffiths (Virtual) Cr Jarrod Gunn Cr Jason Martin Cr Ben Stennett Cr Hayley Weller	**Officers Present** S McMillan S White L Letic J Green S Cann V Ferlaino S Sullivan D Pascolo
Others Present: Peter Canny, Practice Leader, El Camino		
Disclosures of Conflict of Interest: Nil		
Councillor /Officer attendance following disclosure: Nil		

10.10 – ATTACHMENT 3. Strategy Meeting - 16 February 2026

WHITEHORSE CITY COUNCIL

Record of Informal Councillor Meeting Form HPCM 21/183353

Strategy Meeting – 16 February 2026 – 6.30pm – 10.30pm		
Matter/s Discussed: • Financial Sustainability Principles • 2026-27 Budget: Proposed Fees & Charges • Waste Service Charge • Draft Council Meeting Agenda*	**Councillors Present** Cr Kirsten Langford Mayor Cr Kieran Simpson Deputy Mayor Cr Peter Allan Cr Blair Barker Cr Prue Cutts Cr Andrew Davenport Cr Daniel Griffiths Cr Jarrod Gunn Cr Jason Martin Cr Ben Stennett Cr Hayley Weller	**Officers Present** S McMillan S Cann S Sullivan J Green S White L Letic V Ferlaino S Candeland K Marriott A Egan S Kinsey C Clark C Bolitho L Morris

Others Present: N/A

Disclosures of Conflict of Interest:

- **Cr Langford – Item 10.1:** General conflict of interest declared due to ownership of a business that may be impacted by the matter.
- **Cr Weller – Item 10.7:** Material conflict of interest declared as a family-owned property is included in the review.
- **Cr Gunn & Cr Griffiths – Item 9.1:** General conflicts of interest declared in relation to neighborhood houses, as both serve on the board.
- **Cr Griffiths – Fees and Charges:** Potential conflict of interest identified due to board membership of an organisation that utilises one of the Council facilities.

Councillor /Officer attendance following disclosure:

Left	Returned	Items Discussed	Councillor Name
8.40pm	8.44pm	Fees and Charges	Cr Jarrod Gunn
10.10pm	10.11pm	9.1	Cr Jarrod Gunn & Cr Daniel Griffiths
10.11pm	10.15pm	10.7	Cr Weller
10.20pm	10.25pm	10.1	Cr Kirsten Langford (Mayor)