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Volume 1

Development Plan Submission

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78 Middleborough Road, Burwood East

Development Plan

Figures

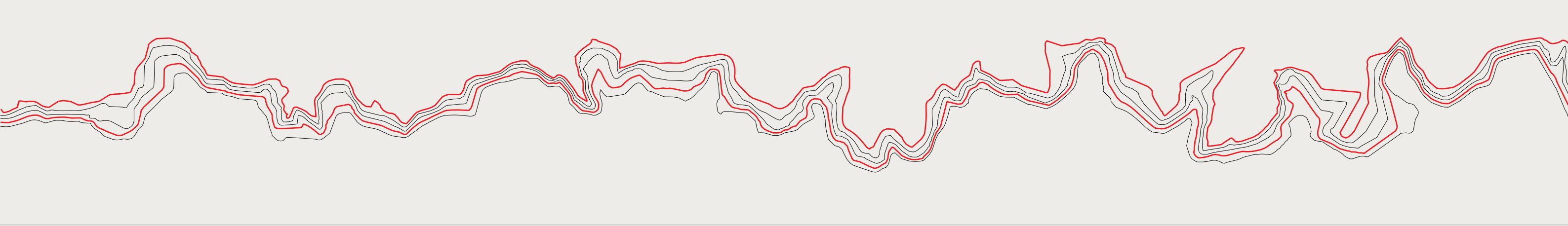
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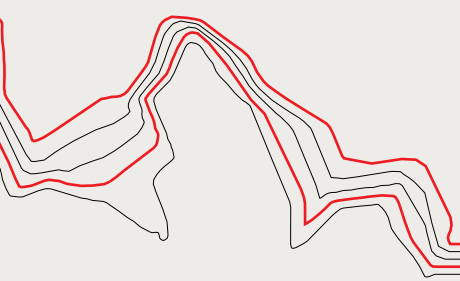
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1. INTRODUCTION

1.1 Vision for 78 Middleborough Road, Burwood East

The Vision for 78 Middleborough Road, Burwood East is summarised into three distinct guiding and interrelated elements as expressed in the Master Plan and Urban Design Report (January 2015).

Local

‘Local’ recognises that the development of Burwood East sits within the context of an established neighbourhood and must respond to and build upon its distinct local character. A high level of consideration has therefore been given to providing appropriate points of transition and integration with this surrounding context, whilst at the same time recognising that the development represents a unique opportunity to add amenity and breathe new life into an established community.

Activated

‘Activated’ in large part responds to this opportunity by championing the creation of a social hub and meeting point for the new and established community. Quality civic design gestures and public spaces will encourage social interaction and provide the stage for Burwood life to unfold.

Place

‘Place’ encourages the construction of a truly distinctive address that represents the highest quality of urban development, laying the foundations for a connected community. The future residents of Burwood East will feel a sense of ownership and a sense of place with the neighbourhood they live.

These guiding principles are tied together by ‘tried and tested’ urban design principles of walkability, health, mixed use, social interaction, connectivity, character and housing diversity resulting in a best practice, model neighbourhood for this strategic infill site.

The development will transform this significantly underutilised site into to an exciting mixed use development and draw upon the existing urban layout and land uses, including key transport connections and the Burwood Heights Shopping Centre, whilst also creating an opportunity for a new diverse neighbourhood for the Burwood East community.

The development promotes varied, engaging and high architectural quality building forms, a balanced mix of land uses, and a pedestrian focused environment. The development also addresses a need for well serviced and connected housing, community services, and diverse employment opportunities within the City of Whitehorse. The development integrates a central park, as well as a range of small pocket parks embedded through the residential areas. The main boulevard, lined with tall native trees acts as a core connector between the open space, community, residential and retail spaces.

LOCAL ACTIVATED PLACE

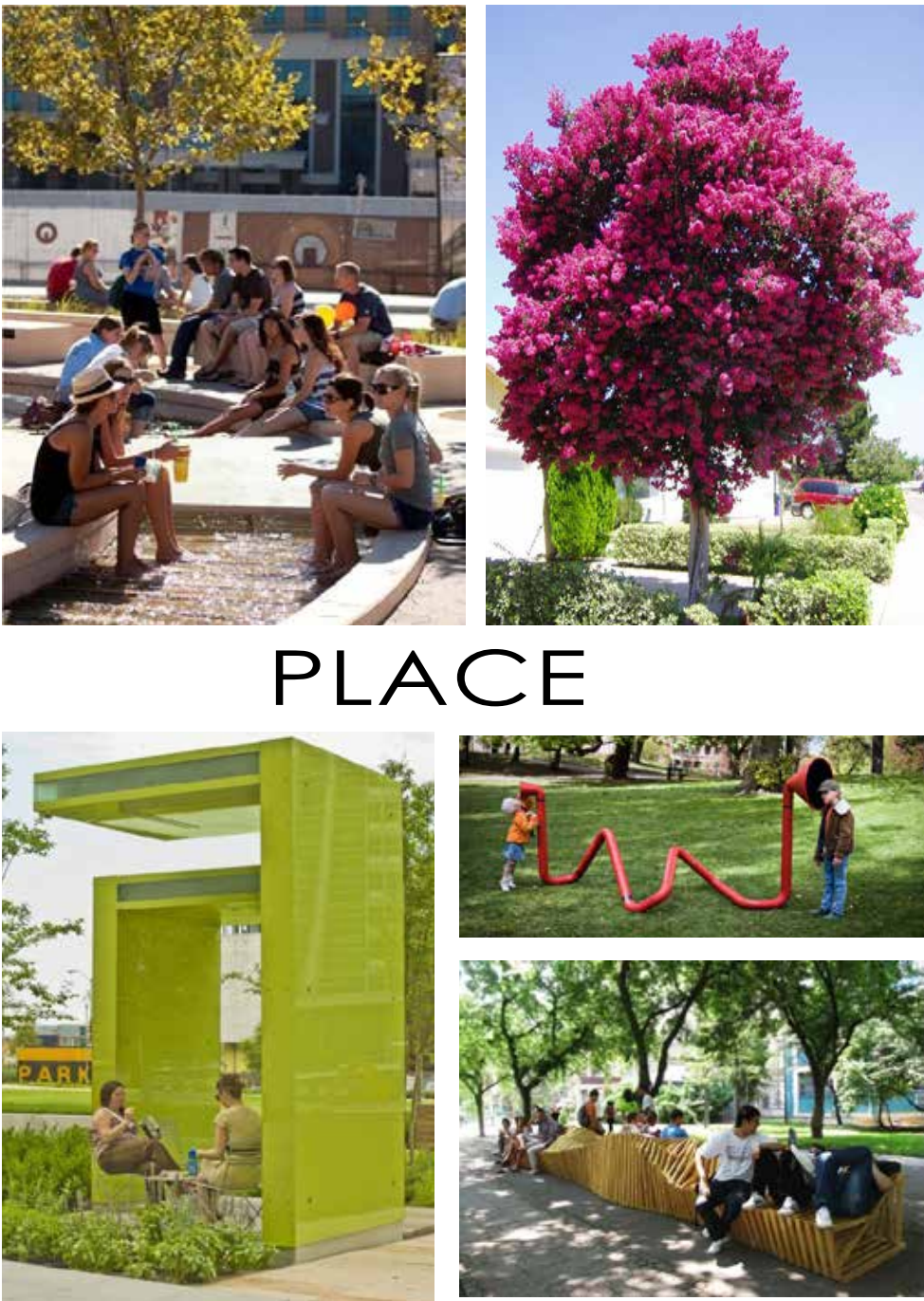
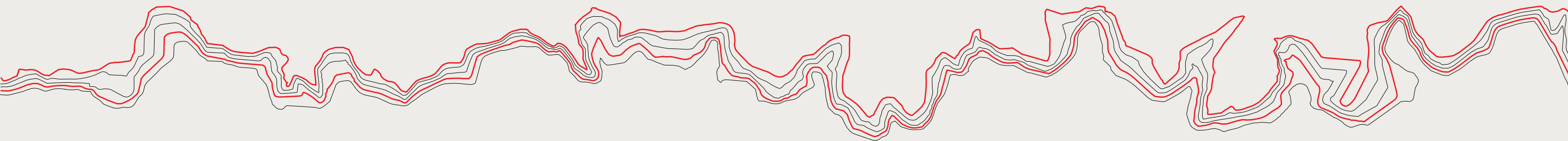


Figure 1. Indicative Vision photos of 78 Middleborough Road, Burwood East



1.2 Development Plan Overview

The 78 Middleborough Road, Burwood East Development Plan provides a framework for the redevelopment of 20.5 hectares of the former brickworks manufacturing site. The site has several lengthy frontages and is formally identified as 78 Middleborough Road, 21-49 Burwood Highway, part of Old Burwood Road and 14 Eley Road, Burwood East, and is commonly referred to as the 'Former Brickworks Site'. The overall site is currently presented as one large irregular shaped lot and tightly bounded by the RSPCA animal facility and housing. The site is approximately 15 kilometres east of the Melbourne CBD and forms part of the middle ring of eastern metropolitan Melbourne, wedged several kilometres between the Lilydale/Belgrave and Glen Waverley railway corridors. The location of the land is illustrated in Figure 2 – Locality Plan.

Under the Whitehorse Planning Scheme's Local Planning Policy Framework, the land is identified as a strategic redevelopment site. Specifically, local policy Clause 22.12 Former Brickworks Site, 78 Middleborough Road, Burwood East envisions the site to become a new mixed-use development in the Activity Centre that provides residential, retail, commercial, community services and leisure opportunities in a built environment that is exciting, engaging and diverse.

Following the Gazettal to approve Amendment C170 to the Whitehorse Planning Scheme on 10 September 2015, the land was rezoned from a Priority Development Zone to the General Residential Zone, Residential Growth Zone and Commercial 1 Zone. Development Plan Overlay - Schedule 6 (DPO6) was also applied to the site. An Environmental Audit Overlay was previously applied and continues to cover the site.

This Development Plan has been prepared in accordance with the provisions of DPO6 - *Former Brickworks Site, Burwood East*. Specifically, the details presented across the indicative concept, building height and housing mix plans within Schedule 6 of the DPO are represented within the master plan.

The Development Plan also reflects the provisions of local planning policies in the Whitehorse Planning Scheme which apply to the site, in particular, the policies and objectives of Clause 22.11 Burwood Heights Major Activity Centre and Clause 22.12 Former Brickworks Site, 78 Middleborough Road, Burwood East.

1.3 Purpose of Development Plan

The Development Plan implements the objectives and provisions of Schedule 6 to the Development Plan Overlay and the policy statements which apply to the land.

Specifically, the Development Plan seeks to:

- Provide for the use, development and subdivision of the Former Brickworks Site generally in accordance with:
 - Clause 22.11 – Burwood Heights Activity Centre;
 - Clause 22.12 – Former Brickworks Site, 78 Middleborough Road, East Burwood;
 - Burwood Heights Activity Centre Structure Plan;
 - Burwood Heights Master Plan and Urban Design Report (January 2015) (the Masterplan); and the Indicative Concept, Building Height and Housing Mix Plans contained in DPO6.
- Facilitate the integrated development of the Former Brickworks Site and its evolution as an integral part of the Burwood Heights Activity Centre (the Activity Centre).
- Provide opportunities for a range of housing, retail, commercial, leisure, health and well-being, and community uses in a mixed use development.
- Enable future use and development that complements existing retail and commercial use within the local area.
- Strengthen and broaden the economic base of the Activity Centre and the City of Whitehorse.
- Provide opportunities for sustainable travel and increased use of public transport.
- Provide an integrated network of roads and paths that improves local accessibility through the site for surrounding and new residents of the site.
- Encourage high quality architectural, urban design and landscape outcomes that are responsive to the site's features and characteristics, as well as the wider Activity Centre.
- Apply Water Sensitive Urban Design treatments and best practice Environmentally Sustainable Development initiatives in all aspects of the site's design and development.

- Promote activity throughout the site and create vibrant streets and public spaces.
- Promote Crime Prevention Through Environmental Design (CPTED), Supportive Environments for Physical Activity (SEPA) and universal design and accessibility principles through urban design of public spaces and in the design of buildings.
- Promote permeability in the layout of buildings, open spaces and the design of the vehicle and pedestrian access network in the retail centre.

1.4 Development Plan Content

The 78 Middleborough Road, Burwood East Development Plan comprises two volumes, being:

Volume 1 - Development Plan framework response

Volume 2 - Specialist reports

The specialist reports contained within Volume 2 have been prepared to respond to the requirements of Section 3 of DPO6. In particular, the specialist reports address the following issues:

- Design and built form
- Landscape and public realm
- Open space
- Retail and economic impact
- Site and Staging of the development
- Pedestrian, cycling and traffic management
- Ecological sustainable development
- Site contamination and remediation
- Housing diversity
- Community and social infrastructure
- Physical services and infrastructure

Where relevant, extracts of these reports (usually the executive summary and key findings) are included in the text of this document. Volume 2 should be read in conjunction with this document.



Site Boundary



Figure 2. Locality Plan

2. RELEVANT PLANNING PROVISIONS

2.1 Amendment C170 to the Whitehorse Planning Scheme

Amendment C170 to the Whitehorse Planning Scheme was approved on 10 September 2015 by the Minister for Planning. The purpose of the rezoning was to guide the future use and development of the site for a mix of purposes, including residential, retail and public open space areas. Specifically, the amendment sought to:

- Facilitate the use of a strategically significant infill site that is currently vacant;
- Provide much needed additional housing in an established urban area in close proximity to public transport, services and facilities;
- Enable enhanced provision of local convenience services and social hub in proximity to established residential areas and which complement the existing Burwood Heights Shopping Centre;
- Increase the amenity of the area and improve the streetscape of Middleborough Road and Burwood Highway; and
- Provide connections and linkages to and through the site and create new public spaces.

The amendment changed the Whitehorse Planning Scheme by rezoning the land from a Priority Development Zone to part Commercial 1 Zone, part General Residential Zone and Residential Growth Zone and applying a Development Plan Overlay (DPO6) over the land.

Priority Development Zone - Amendment C63

The site had previously been rezoned under Amendment C63 from a Special Use Zone (Extractive Industry) to a Priority Development Zone (PDZ) in 2006. The requirements set within the Priority Development Zone were considered not to provide the range and distribution of land uses necessary to facilitate appropriate redevelopment of the site. Furthermore, State Government zone reforms proposed to remove this zone from the Victorian Planning Provisions.

The revised planning controls administered by Planning Scheme Amendment C170 will deliver a neighbourhood development suited to the current and future Burwood East community and sought by Whitehorse City Council.

The Environmental Audit Overlay (EAO) was applied across the site under Amendment C63 and continues to remain on the majority of the site, as indicated under figure 7.

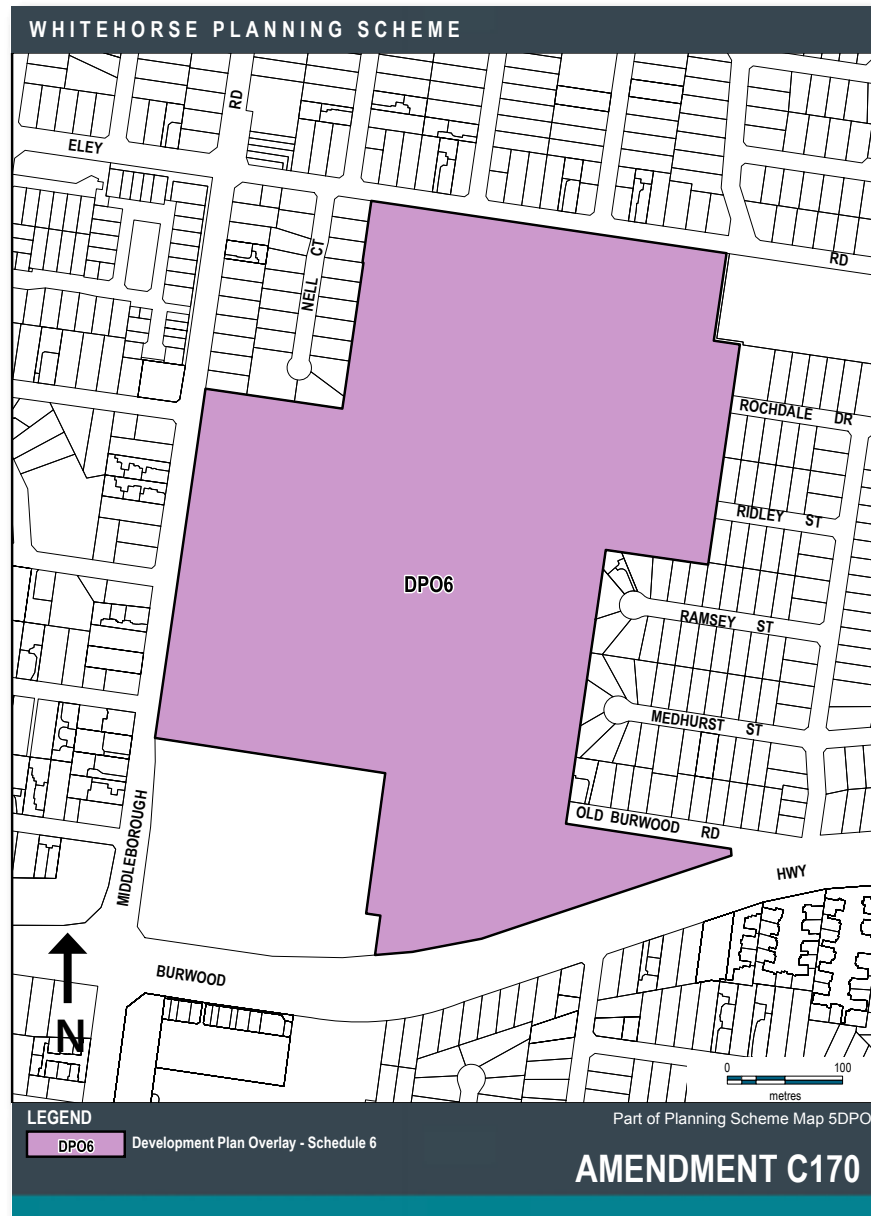


Figure 3. Amendment C170 DPO6 Plan

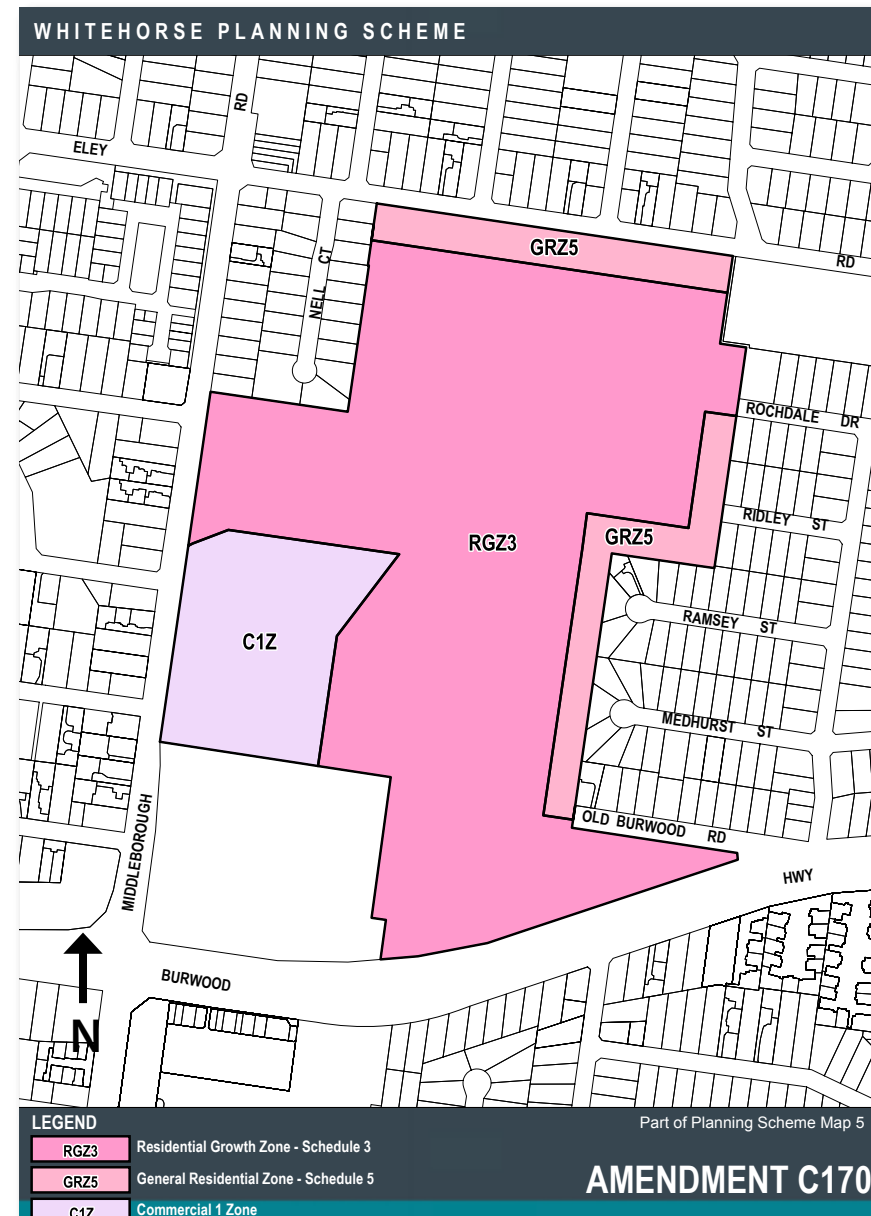


Figure 4. Amendment C170 Zone Plan

2.2 Planning Policy Framework

The Development Plan has been produced in accordance with Schedule 6 to the Development Plan Overlay having regard to the following key State and Local Planning Policies:

S: Statewide Policy R: Regional Policy

- Clause 11.03-1S Activity centres

"To build up activity centres as a focus for high-quality development, activity and living for the whole community by developing a network of activity centres."

- Clause 11.02S Managing growth

"To ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses."

- Clause 15.01-1S Urban Design

"To create urban environments that are safe, functional and provide good quality environments with a sense of place and cultural identity."

- Clause 15.01-2S Building design

"To achieve building design outcomes that contribute positively to the local context and enhance the public realm."

- Clause 15.01-3S Subdivision design

"To ensure the design of subdivisions achieves attractive, liveable, walkable, cyclable, diverse and sustainable neighbourhoods."

- Clause 15.01-4R Healthy neighbourhoods

"To achieve neighbourhoods that foster healthy and active living and community wellbeing."

- Clause 15.01-4S Healthy neighbourhoods - Metropolitan Melbourne

"Create a city of 20 minute neighbourhoods, that give people the ability to meet most of their everyday needs within a 20 minute walk, cycle or local public transport trip from their home."

- Clause 15.01-5S Neighbourhood character

"To recognise and protect cultural identity, neighbourhood character and sense of

place."

- Clause 15.02-1S Energy and resource efficiency

"To encourage land use and development that is consistent with the efficient use of energy and the minimisation of greenhouse gas emissions."

- Clause 16.01-1S Integrated housing

"To promote a housing market that meets community needs."

- Clause 16.01-1R Integrated housing - Metropolitan Melbourne

"Provide certainty about the scale of growth by prescribing appropriate height and site coverage provisions for different areas and allow for a range of minimal, incremental and high change residential areas that balance the need to protect valued areas with the need to ensure choice and growth in housing."

- Clause 16.01-2S Location of residential development

"To locate new housing in designated locations that offer good access to jobs, services and transport"

- Clause 16.01-2R Housing opportunity areas- Metropolitan Melbourne

"To identify areas that offer opportunities for more medium and high density housing near employment and transport in Metropolitan Melbourne, to manage the supply of new housing to meet population growth and create a sustainable city by developing housing and mixed use development opportunities in locations including urban-renewal precincts and sites, to facilitate increased housing in established areas to create a city of 20 minute neighbourhoods close to existing services, jobs and public transport and to direct new housing to areas with appropriate infrastructure"

- Clause 16.01-3S Housing diversity

"To provide for a range of housing types to meet increasingly diverse needs."

- Clause 16.01-4S Housing affordability

"To deliver more affordable housing closer to jobs, transport and services."

- Clause 17.02-1S Business

"To encourage development that meets the communities' needs for retail, entertainment, office and other commercial services."

- Clause 18.01-1S Land use and transport planning

"To create a safe and sustainable transport system by integrating land-use and transport."

- Clause 18.01-2S Transport system

"To coordinate development of all transport modes to provide a comprehensive transport system."

- Clause 18.02-1S Sustainable personal transport

"To promote the use of sustainable personal transport."

- Clause 18.02-2S Public transport

"To facilitate greater use of public transport and promote increased development close to high-quality public transport routes."

- Clause 18.02-2R Principal Public Transport Network

"To maximise the use of existing infrastructure and increase the diversity and density of development along the Principal Public Transport Network, particularly at interchanges, activity centres and where principal public transport routes intersect."

- Clause 18.02-3S Road system

"To manage the road system to achieve integration, choice and balance by developing an efficient and safe network and making the most of existing infrastructure."

- Clause 18.02-4S Car parking

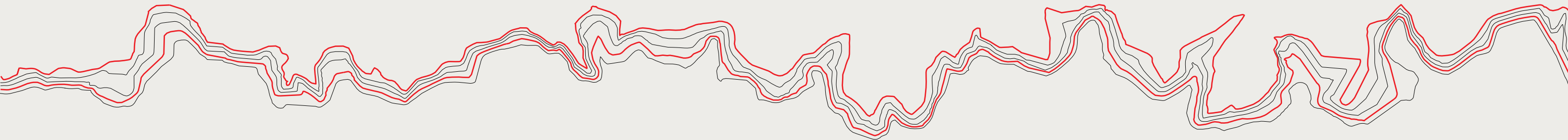
"To ensure an adequate supply of car parking that is appropriately designed and located."

- Clause 19.02-1S Health facilities

"To assist the integration of health facilities with local and regional communities."

- Clause 19.02-2S Education facilities

"To assist the integration of education facilities with local and regional communities."



- Clause 19.02-4S Social and cultural infrastructure
"To provide fairer distribution of and access to social and cultural infrastructure."
- Clause 19.02-6S Open space
"To assist creation of a diverse and integrated network of public open space commensurate with the needs of the community."
- Clause 19.03-3S Water Supply, Sewerage and Drainage
"To plan for the provision of water supply, sewerage and drainage services that efficiently and effectively meet State and community needs and protect the environment."
- Clause 19.03-4S Stormwater
"To reduce the impact of stormwater on bays, water bodies and catchments."
- Clause 19.03-5S Telecommunications
"To facilitate the orderly development, extension and maintenance of telecommunication infrastructure."
- Clause 21.03 A Vision for the City of Whitehorse
The "vision" in the Council Plan is to aspire to be an inclusive, vibrant, prosperous and sustainable community.
- Clause 21.05-3 Environment Objectives
'To protect and enhance areas with special natural, environmental, cultural or historic significance for the future enjoyment of the community.
To develop main thoroughfares as attractive boulevards with improved advertising signage, landscaping and building design.'
To reduce automobile dependency and encourage sustainable transport use.'
- Clause 21.06-3 Housing Location (substantial change areas)
'Support increased residential densities, housing choice by allowing for a diversity of dwelling types, sizes and tenures to suit a range of household types and facilitate a new, preferred character for these areas over time through quality developments.
Support the master planning of larger sites to facilitate the development of diverse, high amenity precincts which have an identifiable sense of place.

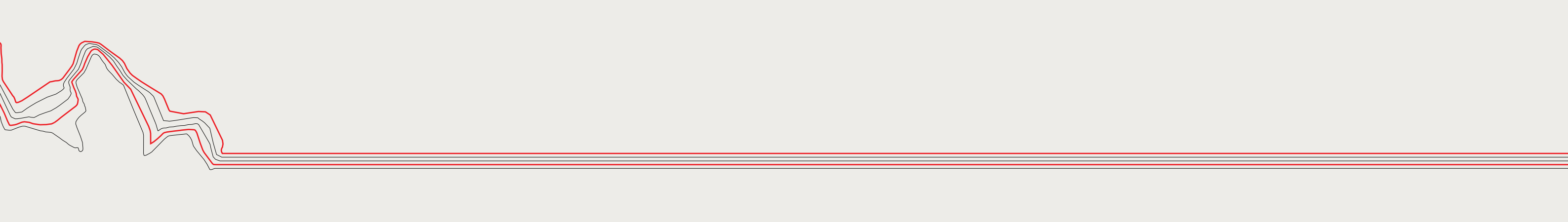
Encourage the provision of shop-top dwellings and low scale apartment developments in activity centres, particularly within key Neighbourhood Activity Centres and on sites abutting the Principal Public Transport Network and main roads.'

- Clause 21.06-4 Housing Diversity
'Diversify the variety of housing types in the City of Whitehorse.'
- Clause 21.06-6 Housing Design
'To enhance the design quality and character of residential development.'
- Clause 21.07-3 Objectives of Economic Development
"To facilitate the timely redevelopment and enhancement of the Burwood Heights Major Activity Centre including the Strategic Redevelopment Site through implementation of the Structure Plan."
- Clause 21.08-3 Objectives of Infrastructure
'To ensure that adequate road capacity is provided to meet the future needs of the City.
To obtain appropriate and sustainable developer contributions for infrastructure.
To ensure that the needs of the community are met by alternative transport services.'
- Clause 22.06-2 Objectives of Activity Centres
'To ensure that land use and development in activity centres reinforce, and are appropriate to, the role of the centre.
To ensure that each centre responds to the needs of the community.
To ensure that new retail floorspace reflects retail demand and considers the impact on the retail hierarchy and the planned role and function of other activity centres.
To maintain and enhance the role of activity centres as a community focus.
To improve the appearance and amenity of all activity centres.'

2.3 Local Planning Policies – former Brickworks Site and Burwood East Activity Centre

The Local Planning Policy Framework sets out two clauses specific to the redevelopment of the former brickworks site. In conjunction with the requirements set within DPO6, the objectives of the two local planning policies detailed below and their policy requirements have informed the preparation of this Development Plan.

- Clause 22.11 Burwood Heights Activity Centre
Objectives of Clause 22.11 are:
'Promotes an inclusive and vibrant area.
Reinforces the existing sense of community and neighbourhood spirit.
Contributes to a wide mix of uses.
Complements the role and function of other activity centres in the region and the range of services currently available in the Activity Centre.
Is easy to get to by public transport and is easy and comfortable to move through.
Is served by well defined, designed and active walking and cycling networks.
Integrates with and respects the character and amenity of its surrounds.
Embraces the topographical, physical and environmental features of the locality.
Contributes to the Activity Centre as an attractive and memorable place that integrates strong built form and landscape elements.'
- Clause 22.12 Former Brickworks Site, 78 Middleborough Road, Burwood East
Objectives of Clause 22.12 are:
'To facilitate redevelopment of the Former Brickworks Site as an integrated and integral part of the wider Activity Centre.
To ensure that use and development on the site complements the existing uses within and the ongoing role and function of the Burwood Heights Activity Centre and other existing activity centres in the region.
To ensure that the scale and intensity of development that occurs on the site provides and supports the infrastructure that is required for the redevelopment of the site.



To provide for land uses and development on the Former Brickworks Site that:

Strengthen the connections and networks within and to the Activity Centre, particularly for sustainable transport options.

Contribute to the establishment of a vibrant mixed use Activity Centre.

Provide diverse and usable public spaces.

Promote excellence in the design of new buildings and the public realm.

Provide for residential development.

Contribute to residential amenity.

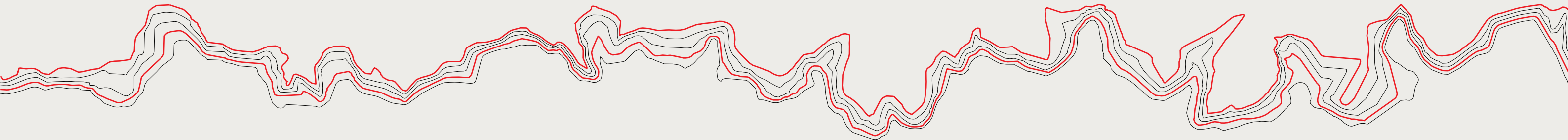
Integrate effectively with the transport network, providing opportunities for multimodal access.

Incorporate ecologically sustainable development principles.

Provide an appropriate level of community services that responds to the needs of the broader existing local population as well as future residents.

Promote increased public transport use and non-car based travel.

Provide a local access network that supports sustainable travel, especially non-motorised travel for short trips.'



2.4 Zone

2.4.1 Clause 32.04 - Mixed Use Zone

The site is covered by three different zones.

- General Residential Zone - Schedule 5
- Residential Growth Zone - Schedule 3
- Commercial 1 Zone

The **General Residential Zone (GRZ)** affects the north and east edges of residential land across the site. The purpose of the General Residential Zone is:

- *'To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.'*
- *To encourage development that respects the neighbourhood character of the area.*
- *To implement neighbourhood character policy and adopted neighbourhood character guidelines.*
- *To provide a diversity of housing types and moderate housing growth in locations offering good access to services and transport.*
- *To allow educational, recreational, religious, community and a limited range of other nonresidential uses to serve local community needs in appropriate locations.'*

Schedule 5 to the GRZ does not specify any variations to the requirements of Clause 54 and 55 in regards to minimum street setback; site coverage; permeability; landscaping; side and rear setbacks; walls on boundaries; private open space; front fence height and maximum building height.

The **Residential Growth Zone (RGZ)** affects the majority of residential land across the site. The purpose of the RGZ is:

- *'To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.'*
- *To provide housing at increased densities in buildings up to and including four storey buildings.*

- *To encourage a diversity of housing types in locations offering good access to services and transport including activities areas.*
- *To encourage a scale of development that provides a transition between areas of more intensive use and development and areas of restricted housing growth.*
- *To allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs in appropriate locations.'*

Schedule 3 to the RGZ does not specify any variations to the requirements of Clause 54 and 55 relating to minimum street setback; side and rear setbacks and maximum building height.

The Residential Design Guidelines in Section 6 provide guidance on the siting and built form requirements for all housing types across the development.

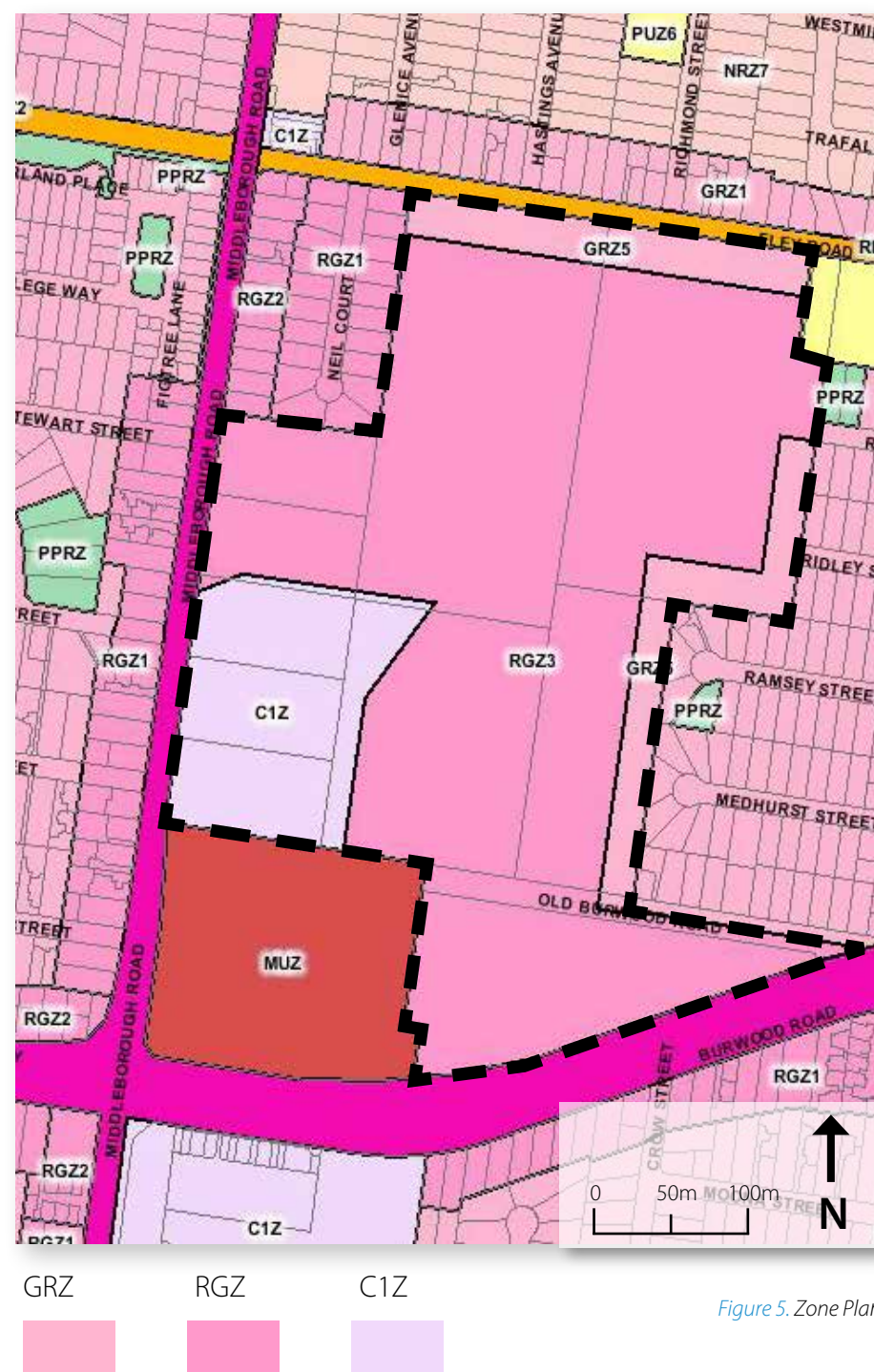
The **Commercial 1 Zone (C1Z)** is applied to that part of the land to be occupied by the retail centre. The purpose of the C1Z is:

- *'To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.'*
- *To create vibrant mixed use commercial centres for retail, office, business, entertainment and community uses.*
- *To provide for residential uses at densities complementary to the role and scale of the commercial centre.'*

The Development Plan is consistent with the purpose of each zone.

The Development Plan will assist in the implementation of the objectives of the zones by encouraging a range of uses, including residential development at higher densities.

Refer to Figure 5 - Zone Plan.



Site Boundary



2.5 Overlays

The site is subject to three (3) overlays. These are:

- Significant Landscape Overlay - Schedule 9 (SLO9)
- Development Plan Overlay - Schedule 6 (DPO6)
- Environmental Audit Overlay (EAO)

2.5.1 Clause 42.03 Significant Landscape Overlay 9

The purpose of this Clause is:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To identify significant landscapes.
- To conserve and enhance the character of significant landscapes.

It is noted that the requirements of this overlay cease to have effect after 31 December 2018.

Refer to Figure 6 – SLO Plan

2.5.2 Clause 43.04 Development Plan Overlay 6

The purpose of this Clause is:

- “To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.
- To identify areas which require the form and conditions of future use and

development to be shown on a development plan before a permit can be granted to use or develop the land.

- To exempt an application from notice and review if it is generally in accordance with a development plan.’

This Development Plan implements the objectives and provisions of Schedule 6 to the Development Plan Overlay and the policy statements which apply to the land. The objectives of DPO6 are listed on page 6 of this report.

Refer to Figure 7 - DPO6 Plan

2.5.3 Clause 45.03 – Environmental Audit Overlay

The purpose of this Clause is to ensure that potentially contaminated land is suitable for a use which could be significantly adversely affected by any contamination.

The EAO requires that before a sensitive use (residential use, child care centre, preschool centre or primary school) commences or before the construction or carrying out of buildings and works in association with a sensitive use commences, either:

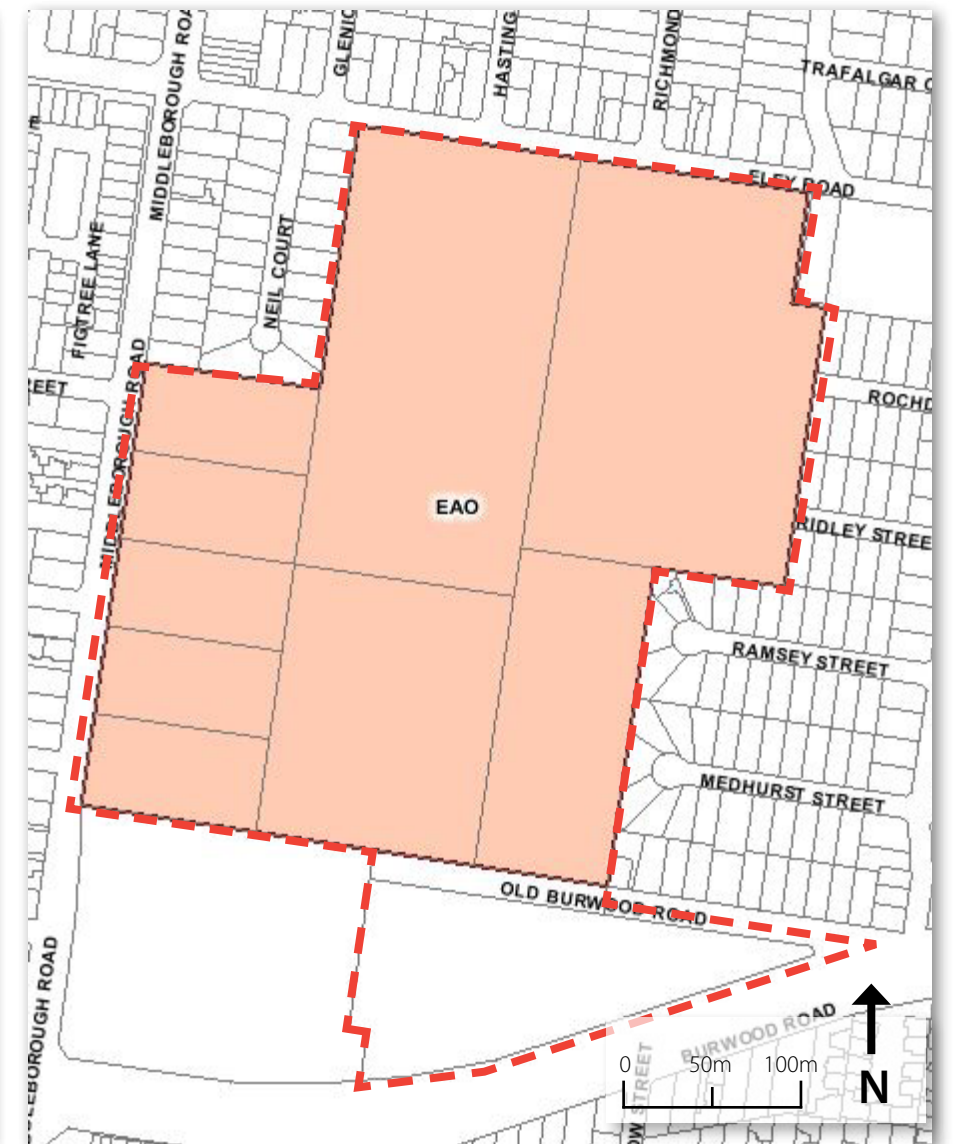
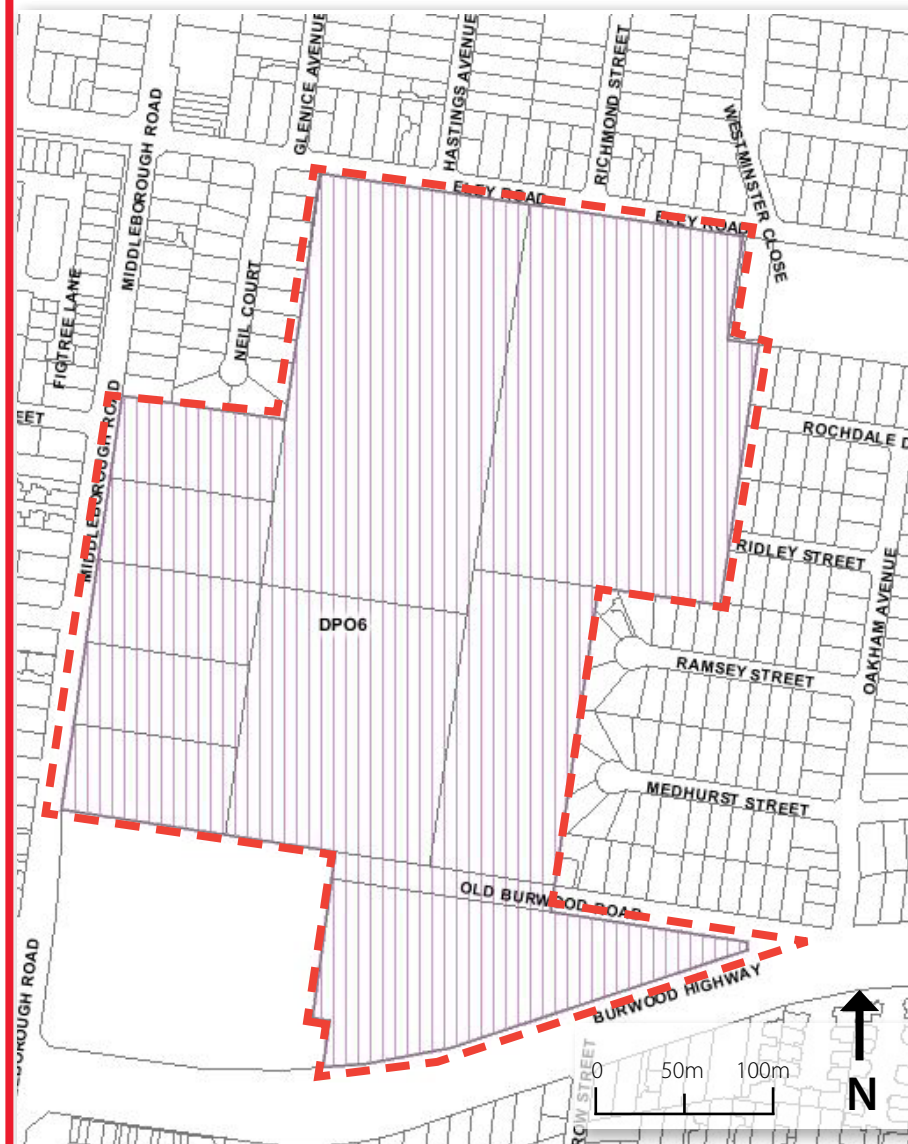
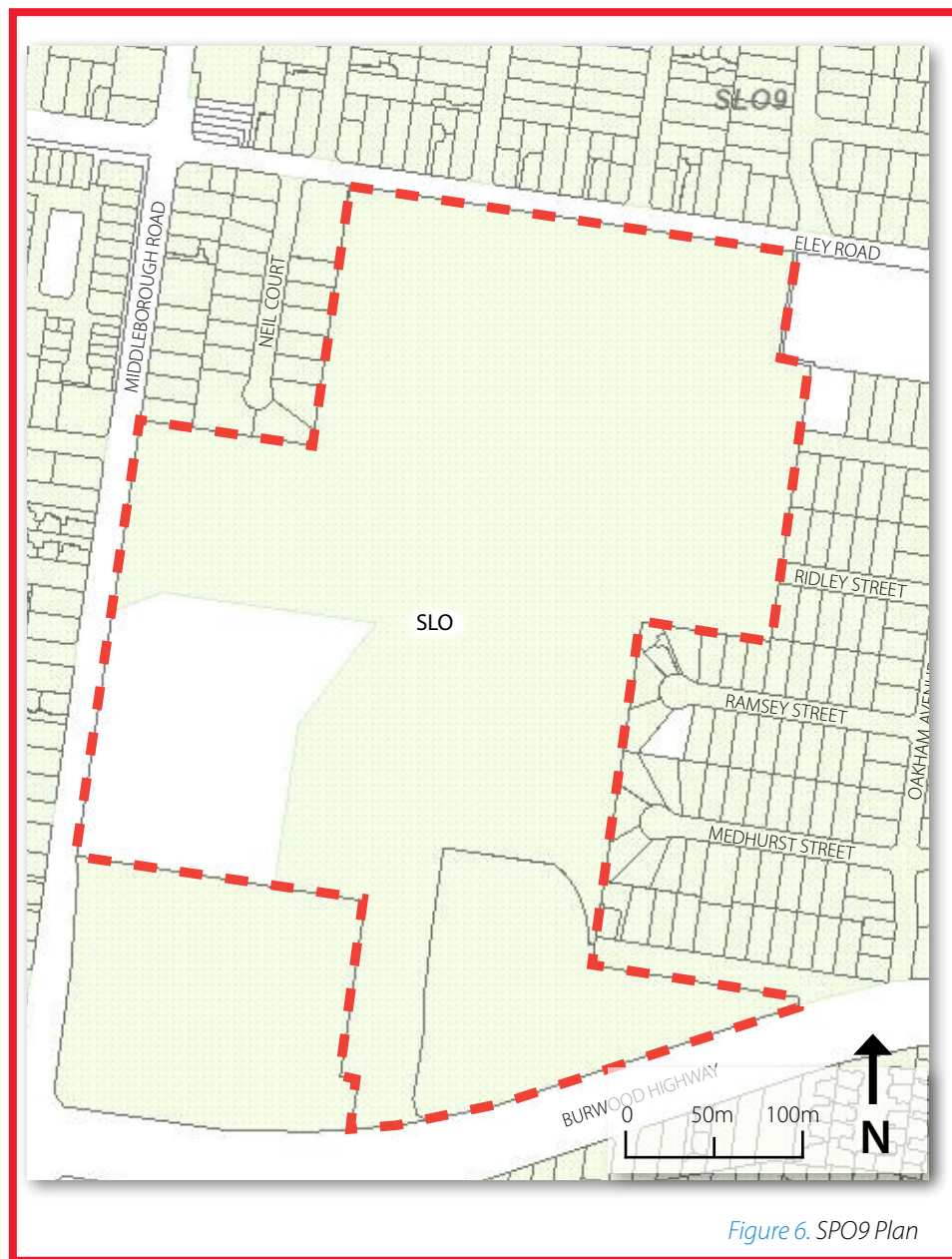
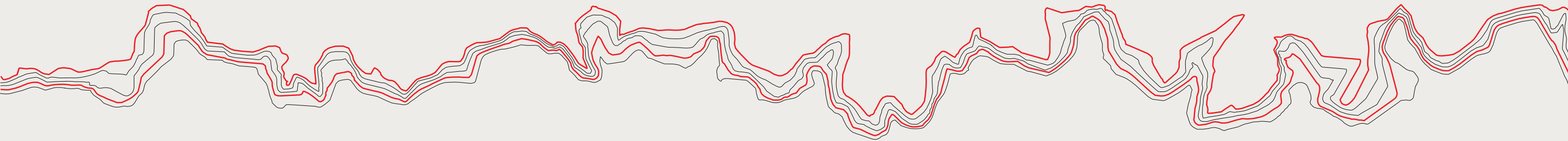
- A certificate of environmental audit must be issued for the land in accordance with Part IXD of the Environment Protection Act 1970; or
- An environmental auditor must make a statement in accordance with Part IXD of that Act that the environmental conditions of the land are suitable for the sensitive use.

In accordance with the intent and requirements of this clause, a preliminary environmental assessment of the site has been undertaken. A Site Remediation Strategy has been prepared and details the ongoing works required to appropriately remediate the site for the intended use.

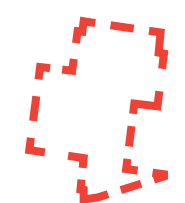
Refer to Figure 8 – EAO Plan

2.5.4 DPO6 - Indicative Concept Plans

As part of DPO6, an indicative concept plan, preferred building heights and housing mix plan were approved. The Master Plan, design principles and guidelines within this report have been prepared in response to these plans within DPO6.



Site Boundary



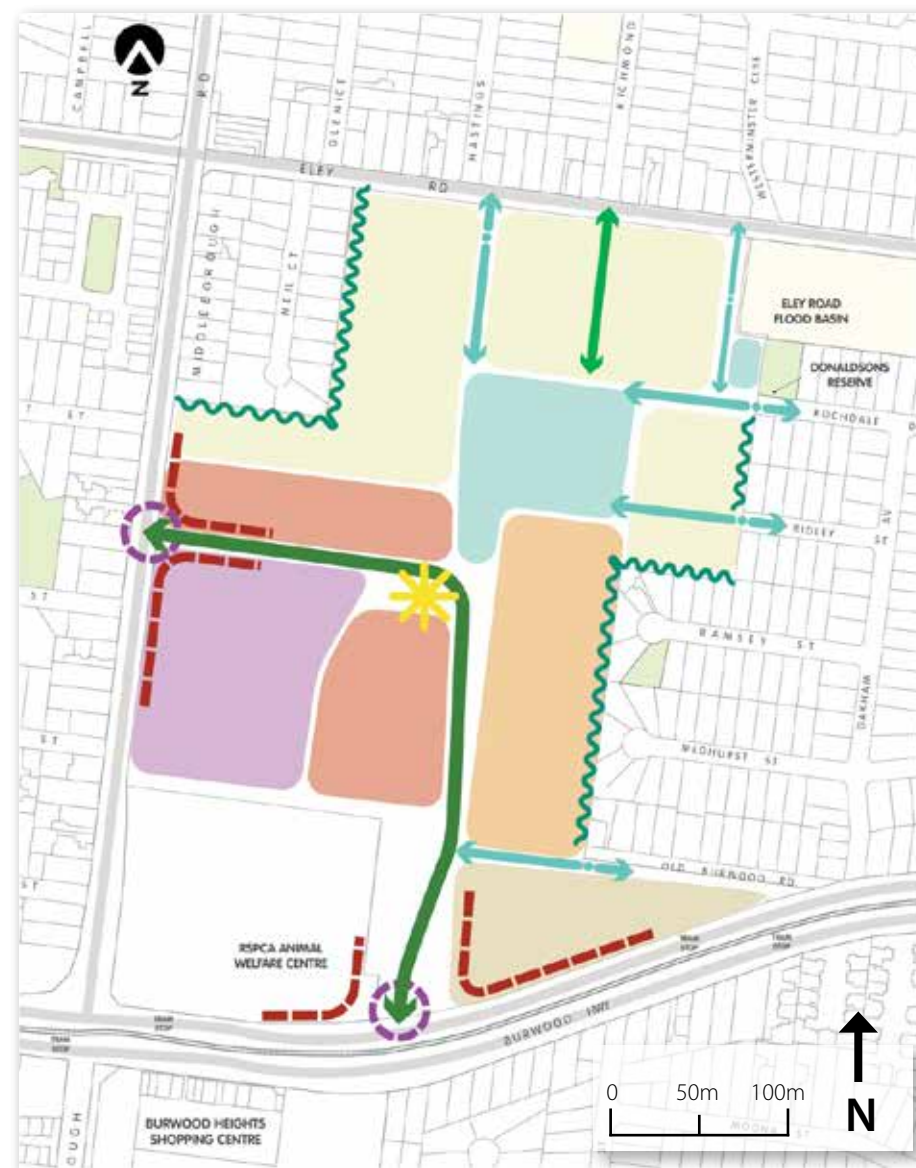


Figure 9. DPO6 Indicative Concept Plan

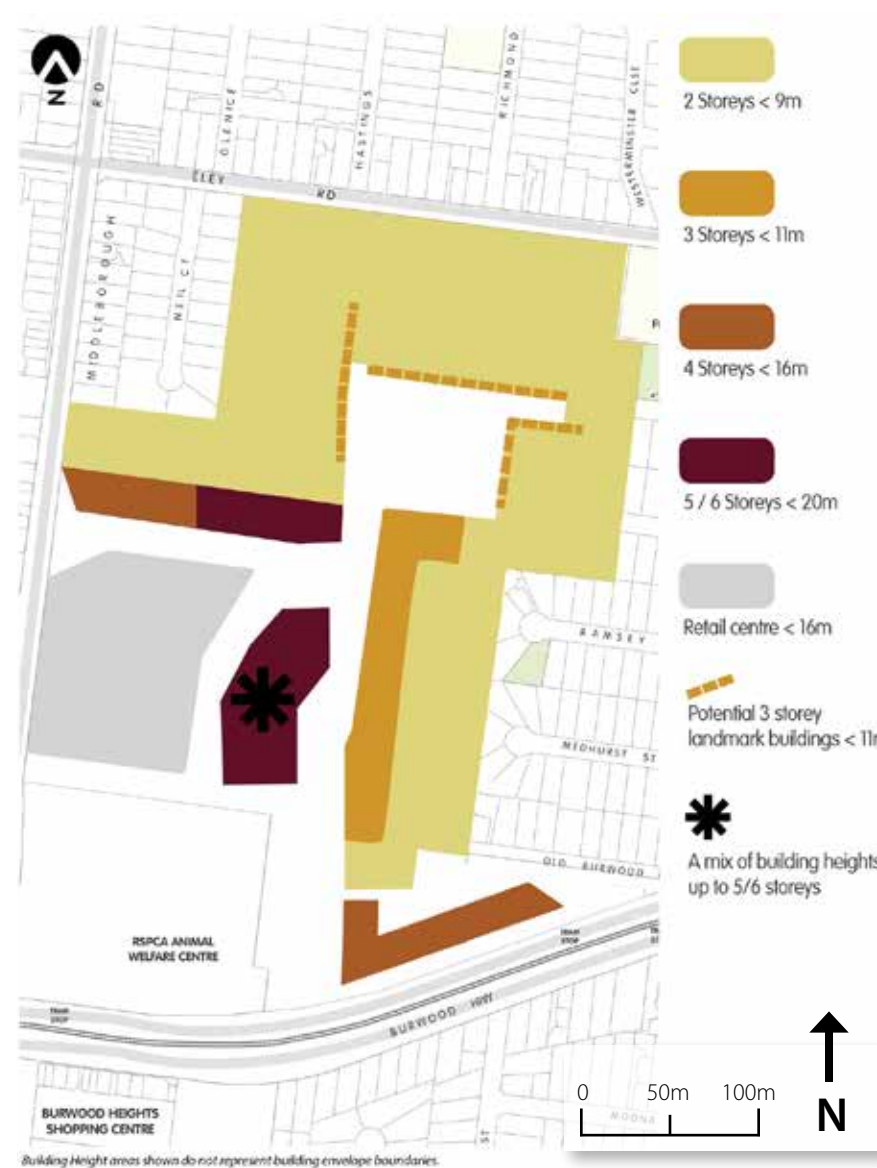


Figure 10. DPO6 Building Height Plan

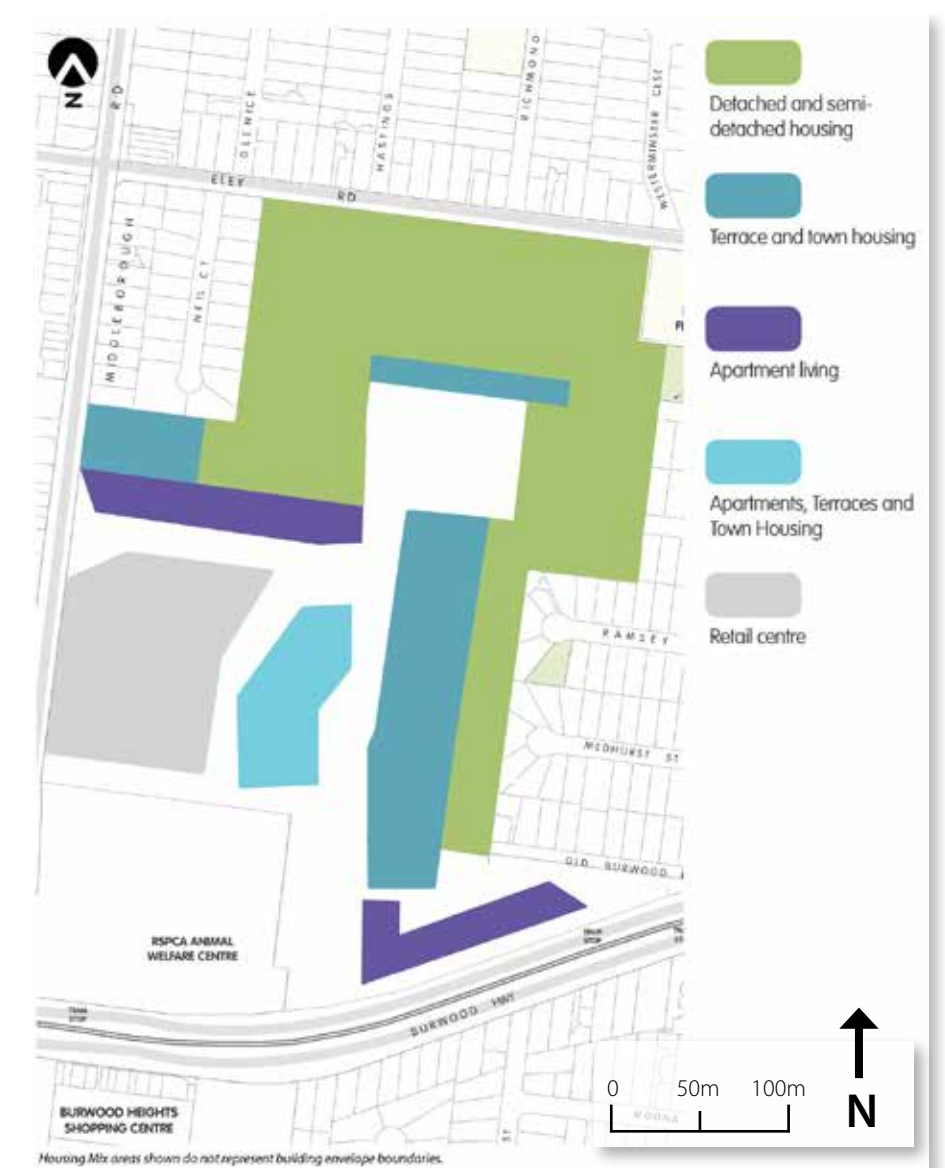


Figure 11. DPO6 Housing Mix Plan



2.6 Particular Provisions

2.6.1 Clause 52.06 (Car parking)

The purpose of Clause 52.06 is:

"To ensure that car parking is provided in accordance with the State Planning Policy Framework and Local Planning Policy Framework.

To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality.

To support sustainable transport alternatives to the motor car.

To promote the efficient use of car parking spaces through the consolidation of car parking facilities.

To ensure that car parking does not adversely affect the amenity of the locality.

To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use."

The Development Plan ensures that the purposes of Clause 52.06 are satisfied by providing sufficient car parking demand and design layouts which meet the demands of the proposed development, as well as providing good access to the pedestrian and bicycle network.

2.6.2 Clause 52.34 – Bicycle Facilities

The purpose of this clause is to encourage bicycles as a mode of transportation as well as ensuring that there are safe and accessible storage facilities provided.

Storage facilities for bicycles will be provided within the car parks of the residential and commercial buildings as well as public open space and community areas.

2.6.3 Clause 53.01 – Public open space contribution and subdivision

This clause requires that a proponent seeking to subdivide land must make a contribution to the Council for public open space as required under Section 18 of the Subdivision Act 1988.

More specifically, clause 53.01 requires that *"A person who proposes to subdivide land must make a contribution to the council for public open space in an amount specified in the schedule to this clause (being a percentage of the land intended to*

be used for residential, industrial or commercial purposes, or a percentage of the site value of such land, or a combination of both)."

The schedule to clause 53.01 requires the subdivision of land on a strategic site (as defined by the Whitehorse Open Space Strategy or Council or State Government) to contribute a minimum of 4%. A contribution rate greater than 4% is subject to negotiation of a development plan.

As detailed in the Open Space and Public Realm section of this report, the development contributes well in excess of the minimum 4% public open space requirement. The Development Plan ensures that the purposes of clause 53.01 will be satisfied during future planning permit applications for the site.

2.6.4 Clause 53.10 – Uses with adverse amenity potential

The redevelopment of the subject site to a sensitive use does not encroach or impact on any buffer requirements under Clause 53.10 EPA buffer provisions.

2.6.5 Clause 54 - One dwelling on a lot and residential buildings

Clause 54 applies when developing a single dwelling on a lot less than 300 sqm.

The purpose of Clause 54 is as follows:

"To achieve residential development that respects the existing neighbourhood character or which contributes to a preferred neighbourhood character.

To encourage residential development that provides reasonable standards of amenity for existing and new residents.

To encourage residential development that is responsive to the site and the neighbourhood."

2.6.6 Clause 55 - Two or more lots on a lot and residential buildings

The purpose of Clause 55 is as follows:

"To achieve residential development that respects the existing neighbourhood character or which contributes to a preferred neighbourhood character.

To encourage residential development that provides reasonable standards of amenity for existing and new residents.

To encourage residential development that is responsive to the site and the neighbourhood."

The Development will achieve high quality on and off site residential amenity and a building form responsive to the site and the surrounding neighbourhood in accordance with the objectives of Clause 54 and Clause 55.

2.6.7 Clause 56 – Subdivision of Land

The Development Plan ensures that the purposes of Clause 56 are satisfied. This is primarily achieved through:

- Providing a framework for a livable and sustainable neighbourhood that offers a range of housing stock within close proximity to public open space, within an identified Activity Centre and other community facilities and services in Burwood East.
- Supporting the use of public transport, pedestrian and cycling use through the provision of new links via the central Boulevard connecting Burwood Highway and Middleborough Road, as well as dedicated on and off-road cycling paths, shared pedestrian and cycling paths and footpaths.
- Providing a framework for a future residential subdivision that appropriately responds to the site and its context.
- Managing the site's constraints to ensure good solar orientation of lots and solar access for future dwellings.
- Ensuring streets and houses promote passive surveillance of public open spaces.
- Providing attractive and continuous landscaping in streets and public open spaces that contributes to the character and identity of the existing and future neighbourhood.
- Creating a unique sense of place and urban identity.
- Providing an internal road and pedestrian network that ensures a high level of permeability.
- Adopting Water Sensitive Urban Design initiatives that integrate stormwater into the landscape system.

Integration and compliance with Clause 56 will be achieved across this development.



2.7 Other Planning Considerations

2.7.1 Whitehorse Housing Strategy (April 2014)

The purpose of the Whitehorse Housing Strategy is to identify what types of housing should be provided to support Whitehorse's growing and changing population.

The Housing Strategy identifies locations suitable for different rates of housing change, (substantial, natural and limited change) to direct development into areas with capacity for growth, and limit change in areas with established heritage and neighbourhood character values.

The site is designated as part of an 'activity centre with a structure plan or urban design framework'. According to the Strategy and goals of this activity centre, the site will provide significant opportunities for housing growth within the municipality by facilitating a mix of housing through predominantly medium and higher density dwelling types.

The Development Plan is consistent with this designation as it provides a framework for medium to high density dwellings within the site.

2.7.2 Burwood Heights Structure Plan (June 2006)

The purpose of the Burwood Heights Structure Plan is to provide a clear Vision for the centre and establish strategic principles by which to achieve this vision, and make recommendations to manage future change and development in the centre and surrounds over time.

The Vision in this plan is:

'Burwood Heights will evolve as an inclusive and vibrant Activity Centre that reinforces the existing sense of community and neighbourhood spirit. It will comprise a wide mix of uses that complement the role and function of other Activity Centres in the region and the range of services currently available in the existing centre.'

Burwood Heights will be easy to get to by public transport and will be easy and comfortable to move through via well defined, designed and active walking and cycling networks.

The centre will integrate and respect the character and amenity of its surrounds. It will embrace the topographical, physical and environmental features of the locality and develop as an attractive and memorable place that integrates strong built form and landscape elements.'

The Plan focuses on the following key areas:

- Existing local shopping centre with a mix of retail and commercial uses.
- Royal Society for the Protection of Cruelty Against Animals (RSPCA), Victorian Head Office and animal welfare facilities.
- Major strategic redevelopment site at the Former Brickworks Site at 78 Middleborough Road (20.5ha).
- Located on the Principal Public Transport Network (PPTN) and served by a tram and bus services.
- Connections to regional linear open space networks.
- Surrounded by an established, low rise residential area.

The Structure Plan encourages a mix of uses to be incorporated into any redevelopment proposed on the Former Brickworks Site. The structure plan acknowledges that the Former Brickworks Site presents as a strategic redevelopment opportunity that is quite unique in the context of a metropolitan Melbourne Major Activity Centre.

The Development Plan supports the aims of the Burwood Heights Structure Plan by revitalising 78 Middleborough Road, Burwood East for mixed use development and providing a range of housing densities, commercial and retail uses and open spaces.

2.7.3 Whitehorse Neighbourhood Character Study 2014

The Whitehorse Neighbourhood Character Study 2014 describes the preferred physical characteristics of each residential neighbourhood in Whitehorse (known as Character Precincts) in a Preferred Character Statement, and proposes ways to ensure new development respects these valued characteristics through Design Guidelines.

There are three different neighbourhood character types which encapsulate the broad landscape and built form elements that are important within the municipality:

- Garden Suburban
- Bush Suburban
- Bush Environment

The site is classified as a 'non-residential area' under the Neighbourhood Character Study and therefore the guidelines established under each character precinct type do not apply to the site. This Development Plan

includes Residential Design Guidelines specifically prepared to guide future development of this site.

2.7.4 Whitehorse Integrated Transport Strategy (2011)

The purpose of the Whitehorse Integrated Transport Strategy 2011 is to provide a framework to consider the different modes of transport available to the Whitehorse community and provides direction to facilitate travel options and networks that are sustainable, convenient, accessible and safe.'

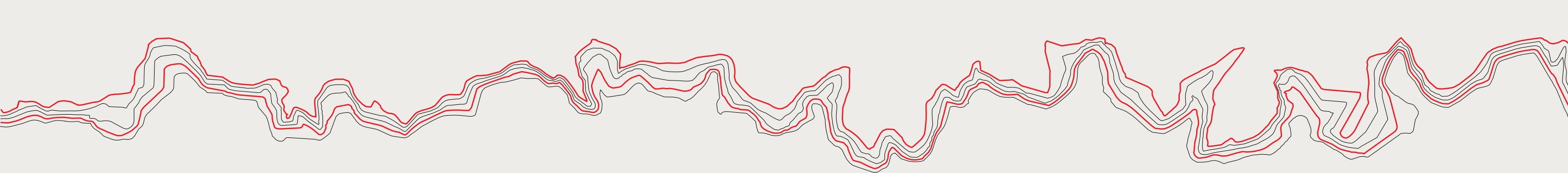
Specific goals of the Strategy are:

- Improve the links between transport modes for the efficient and convenient movement of people and goods
- Increase the use of sustainable transport modes of transport to minimise the impact of transport on the environment
- Increase the use of sustainable transport modes that promote healthy lifestyles, such as walking and cycling
- Increase the safety of residents and commuters who travel within and through the municipality
- Promote economic development and social connectedness within our community.

The four key objectives are:

- Encourage walking
- Maintain and improve the cycling network
- Encourage an increased shift toward public transport
- Provide safe and efficient movement of vehicles.

The development supports the aims of the Integrated Transport Strategy 2011 by encouraging the uptake of more sustainable transport modes through well positioned and designed shared pedestrian and cycling paths and footpaths. The main boulevard and local streets will also be designed to allow for safe and efficient movement of vehicles within and into and out of the new precinct.



2.7.5 Whitehorse Bicycle Strategy Report 2007

The strategy aims to:

- Create an urban environment in Whitehorse that supports the safe use of bicycles for transport and recreation and includes providing safe, useful and well signed routes, sufficient and secure bicycle parking and public information on bicycle facilities.
- Reduce conflict between cars and bicycles.
- Guide Council in setting up an implementation process for more cycling in Whitehorse.
- Improve safety and useability through the identification of key bicycle routes within Whitehorse, their links with adjoining municipalities and their integration with the existing network, which includes the VicRoads Principal Bicycle Network.
- Increase the amount of cycling in Whitehorse.
- Promote and improve community health through the encouragement of recreational or commuter cycling and completing tasks such as shopping or visiting others.
- Improve and connect existing designated paths and routes.

The development will deliver these key objectives through the implementation of on and off-road cycling paths and shared pedestrian and cycling paths.

It is noted that Whitehorse City Council are currently preparing a new cycling strategy. The key focus of the strategy will be to ensure that the needs of everyone who uses a shared path, road, footpath and other public places are taken into account, including cyclists, pedestrians, motorists and public transport users.

2.7.6 Whitehorse Open Space Strategy 2008

The Whitehorse Open Space Strategy provides Council and the broader Whitehorse community guidance on its public open space program to 2021. Specifically the strategy delivers the strategic analysis behind Council's minimum open space contribution amount of 4%.

The overall vision of the Open Space Strategy is to:

"Continue to provide a diverse linked network of open space with people of all ages

recreating, socialising and enjoying the outdoors"

In accordance with the strategy, the development provides a diverse linked network of open space allowing people of all ages to enjoy outdoor recreational and social activities. Furthermore the development contributes well above the minimum public open space contribution specified under the strategy.

2.7.7 ESD Management Plan and Green Travel Plan

An ESD Management Plan and Green Travel Plan is required for all larger developments comprising 10 or more new residential dwellings, or non-residential developments of more than 1000m² Gross Floor Area (including alterations or additions). The aim of both these documents is to ensure future development, and any future travel behaviours derived from the development are environmentally sustainable.

Detailed consideration of the requirements of both the ESD Management Plan and Green Travel Plan will guide development of the site.

2.7.8 Municipal Wide Tree Study

The Municipal Wide Tree Study provides options and recommendations for policy and controls and other (non-statutory) mechanisms that will aim to ensure the future retention and regeneration of tree canopy.

The study recommends extending the Significant Landscape Overlay, and is included as a reference document to the Significant Landscape Overlay - Schedule 9.

3. SITE ANALYSIS

3.1 Site Location

The site is located within the Burwood Heights Major Activity Centre. The Activity Centre is focussed on the intersection of Middleborough Road and Burwood Highway.

Significant land uses within the centre are the Burwood Heights Shopping Centre and associated car parking south of Burwood Highway and the RSPCA Animal Welfare Centre and Head Office on the north eastern corner of Burwood Highway and Middleborough Road.

The Burwood Heights Shopping Centre comprises strip shopping along the Burwood Highway and Middleborough Road frontages, a stand alone Woolworths supermarket at the eastern end of the site and a car parking area to the rear.

The Former Brickworks site is a significant land holding which together with residential precincts, occupies the balance of the Activity Centre area.

There are small pockets of public open space located within the residential areas and the Activity Centre is accessible to significant areas of public open space including Gardiners Creek Reserve, Wurundjeri Walk, Eley Park and Bally Shannassy Park via walking and cycling tracks. Donaldson Reserve adjoins the north eastern boundary of the site.

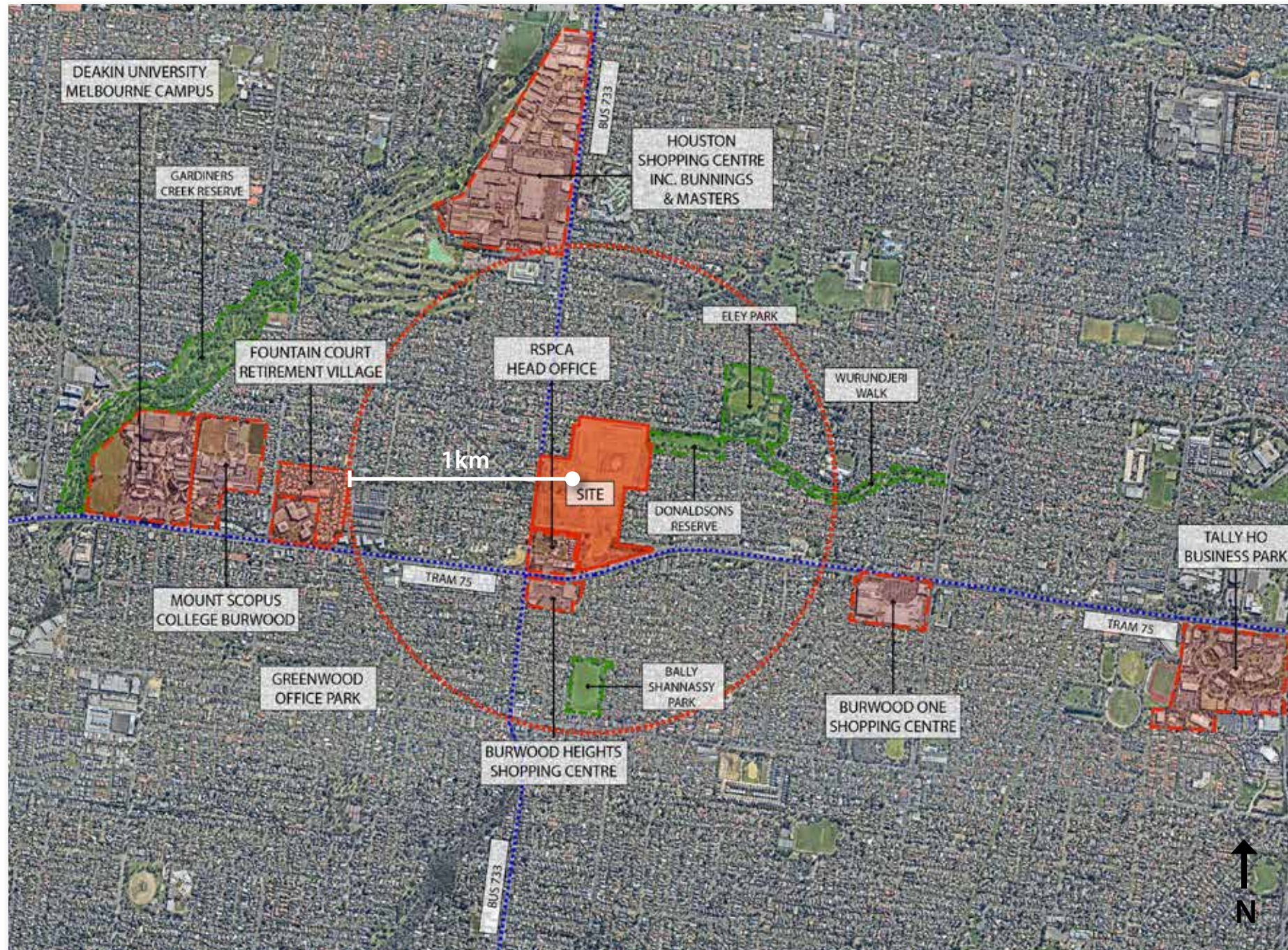
Major sites and land uses in the region close to the Activity Centre include:

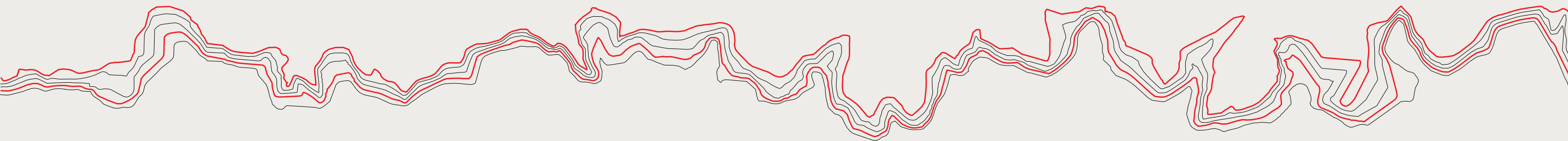
- Greenwood Office Park, Burwood Highway/Station Street (Burwood)
- Tally Ho Business Park, Burwood Highway/Springvale Road (Burwood East)
- Burwood One Shopping Centre, Burwood Highway (Burwood East)
- Deakin University Melbourne Campus, Burwood Highway (Burwood)
- Mount Scopus College (Burwood)
- Fountain Court Retirement Village, Station Street (Burwood).

The Activity Centre is accessed via two Principal Public Transport Networks, one on Burwood Highway, (tram) and one on Middleborough Road, (bus).



Figure 12. Aerial Plan





3.2 Site Features

The former brickworks site occupies approximately 20 hectares of land located on the eastern side of Middleborough Road, Burwood. The land wraps around the RSPCA complex (on the north east corner of Middleborough Road and Burwood Highway) and extends eastwards along Burwood Highway. The northern boundary of the site fronts Eley Road whilst the eastern boundary abuts residential properties. Land on the south eastern corner of Eley and Middleborough Roads is separate from the site and is occupied by a number of residential properties.

Subject Site



Figure 13. Site Features

Former Brickworks and Quarry

The site was formerly used for brick manufacturing and associated quarry works and is subject to a staged Environmental Audit. To assist in managing the assessment, the site was previously separated into a series of designated audit areas which reflect the site's key features, as illustrated in Figure 13. Geotechnical assessments have confirmed that once appropriately remediated, the entire site is suitable for a range of sensitive uses, including residential, commercial and retail and open space.

Area 1

The ex-manufacturing area comprises approximately 6 ha of land parallel to Middleborough Road that was used in the brick manufacturing process. It housed the majority of infrastructure on the site including the mill, mixing shed, kilns and the workshop. It has undergone extensive environmental assessment and been partially remediated.

Area 2A, 2B & 3

Areas 2A, 2B and the central part of Area 3 is the former quarry pit, comprising approximately 10 ha of land through the centre and northern portion of the site. It was the source of clay for brick manufacture at the site. It has been environmentally assessed, remediated, validated and backfilled.

The eastern batter of Area 3 comprises approximately 0.85 ha of land in the north eastern portion of the site. Upon exhaustion of the clay material in this area it was backfilled and required rehabilitation.

The western batter of Areas 3 comprises approximately 1.3 ha of land. Upon exhaustion of the clay material in this area it was backfilled. This was the first area remediated as part of past works. The assessment, remediation and validation of this area is complete.

Area A

This area comprises approximately 3.0 ha of undeveloped land in the southern portion of the site. This area has been environmentally assessed and received a Certificate of Environmental Audit in 2009. No further remediation works are required in this area although earthworks are underway to facilitate development.

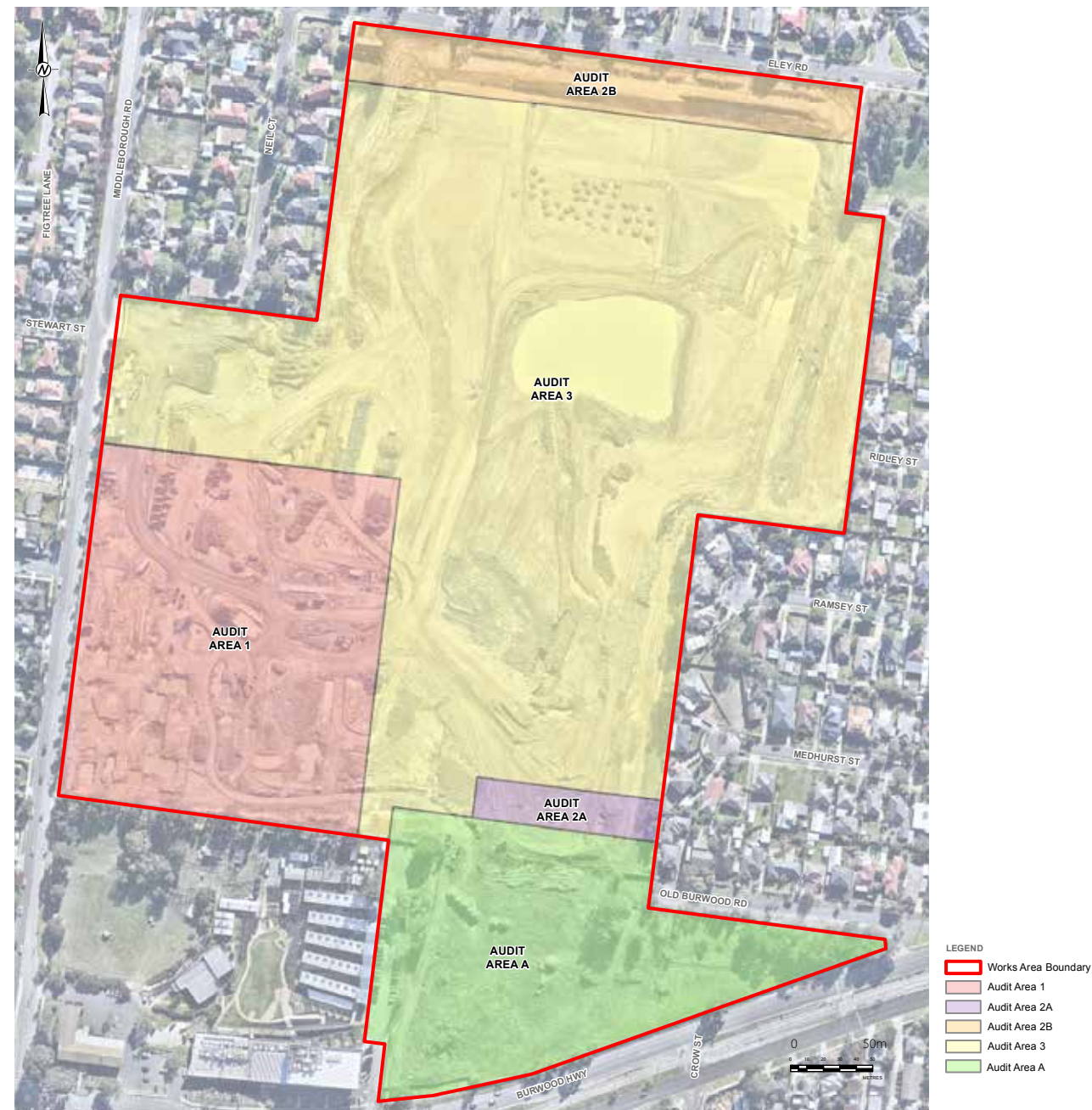
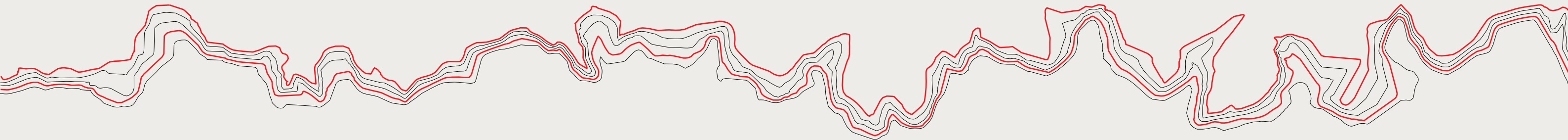


Figure 14. Audit Areas



3.3 Landfill and Remediation

The land is subject to various levels of site contamination. An environmental audit has been conducted across the site and identified the remediation works required. Assessments reveal that the site can accommodate the proposed uses as identified on the master plan, subject to the appropriate remediation actions. Actions include:

- Demolition of the remaining hardstand.
- Off site disposal of material considered unsuitable for reuse in the former quarry pit.
- Backfilling of the area to achieve design levels.
- Pre-classification of the material in-situ to assess its suitability for reuse
- Pre-classification, excavation and sorting of fill

Earthworks, vegetation removal and site restoration works are also needed to prepare the site for its future use and development.

Key points from the geotechnical report are as follows:

- A through environmental assessment for potential contamination of the entire site has been conducted;
- Soil and groundwater testing revealed elevated levels of dissolved materials, such as manganese associated with the former brickworks quarry;
- Once appropriately remediated, land can accommodate the proposed uses of the Development Plan.
- Any fill material imported onto the site will be confirmed suitable by an environmental assessment and the overall audit process. The fill will be of high grade and where used to facilitate the development of residential land, be tested to comply with residential building codes and any conditions of a certificate of environmental audit.

Various levels of remediation are required on different areas of the site. Some areas have been fully remediated and others are currently finalising their remediation works.

Prior to the commencement of any sensitive land use, a certificate or statement will be issued to confirm that the land is suitable for the proposed

use, buildings and works. This process will be undertaken in accordance with the aims and requirements setout within the Environmental Audit Overlay of the Whitehorse Planning Scheme:

Purpose of Clause 45.03 Environmental Audit Overlay:

“To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.

To ensure that potentially contaminated land is suitable for a use which could be significantly adversely affected by any contamination.”

Requirement of Clause 45.03 Environmental Audit Overlay:

‘Before a sensitive use (residential use, child care centre, pre-school centre or primary school) commences or before the construction or carrying out of buildings and works in association with a sensitive use commences, either:

- *A certificate of environmental audit must be issued for the land in accordance with Part IXD of the Environment Protection Act 1970, or*
- *An environmental auditor appointed under the Environment Protection Act 1970 must make a statement in accordance with Part IXD of that Act that the environmental conditions of the land are suitable for the sensitive use.”*

3.4 Site Opportunities

3.4.1 An urban renewal opportunity

The former brickworks site is recognised as a significant strategic redevelopment site.

In the broad picture, the redevelopment of the site acts as a local demonstration of sustainable density to achieve the Plan Melbourne aspirations of density and sustainability. With new development, the site could potentially become a crucial driver of urban renewal to the area, reknitting the different uses surrounding the site. The site will also stimulate social connections between the site and these surrounding areas. A robust public realm network will be fundamental to achieving this.

Importantly, the redevelopment of 78 Middleborough Road, Burwood East can stimulate connections across the community and support key community facilities such as Deakin University, Tally Ho Business Park and Burwood Heights Shopping Centre.

In accordance with the aims of Clause 22.11 Burwood Heights Major Activity Centre and Clause 22.12 Former Brickworks Site, 78 Middleborough Road, Burwood East, the site represents an opportunity to provide diverse and usable public spaces, excellence in building design, a vibrant activity centre and public realm, as well as contributing to the need for additional housing and community services for the Burwood East and broader Whitehorse population.

The development will also promote the use of existing transport networks and services, such as local bus and tram routes, as well as the Burwood Heights Shopping Centre. The proposed development incorporates a network of well linked shared pedestrian and cycling paths, footpaths and on and off-road cycling paths, promoting sustainable travel throughout the neighbourhood.

4. THE DEVELOPMENT PLAN

4.1 Policy context

In accordance with the provisions of Schedule 6 to the Development Plan Overlay, the adopted *Burwood East Master Plan and Urban Design Report (January 2015)* includes the following vision and design and built form principles:

4.2 Vision

Three guiding and interrelated elements have been established. These are 'Local', 'Activated' and 'Place'.

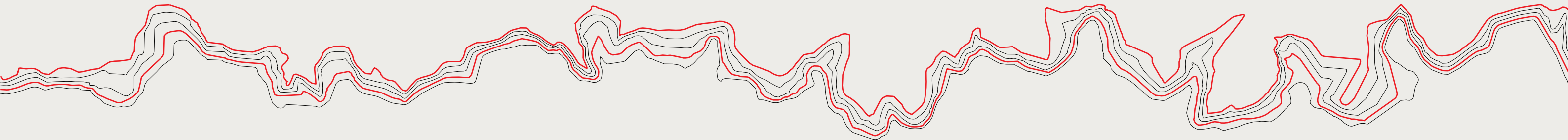
- **'Local'** recognises that the development of 78 Middleborough Road, Burwood East sits within the context of an established neighbourhood and must respond to and build upon its distinct local character. A high level of consideration has therefore been given to providing appropriate points of transition and integration with this surrounding context, whilst at the same time recognising that the development represents a unique opportunity to add amenity and breathe new life into an established community.
- **'Activated'** in large part responds to this opportunity by championing the creation of a social hub and meeting point for the new and established community. Quality civic design gestures and public spaces will encourage social interaction and provide the stage for Burwood life to unfold.
- **'Place'** encourages the construction of a truly distinctive address that represents the highest quality of urban development, laying the foundations for a connected community. The future residents of this development will feel a sense of ownership and a sense of place within the neighbourhood they live.

These guiding principles are tied together by 'tried and tested' urban design principles of walkability, health, mixed use, social interaction, connectivity, character and housing diversity resulting in a best practice, model neighbourhood for this strategic infill site.

These principles support the objectives and principles of the approved Development Plan Overlay Schedule 6 *Former Brickworks Site, Burwood East*.



Figure 15. Images from Roberts Day Master Plan and Urban Design Report (January 2015)



4.3 Master Plan

The Master Plan proposes a vibrant neighbourhood with a diverse range of activities, housing types and recreational opportunities for future and nearby existing residents. Key attributes of the proposal include:

- “Rehabilitation and regeneration of a local long term undeveloped site*
- Diverse mix of housing to cater for a variety of household types*
- Retail and social hub fostering social interaction and engagement*
- Usable high value open spaces for the whole community*
- Cycle connections and pedestrian prioritisation encouraging healthy lifestyles*
- Sensitive interfaces and transitions with compatible development forms and scales.*
- New infrastructure and amenities that service the broader community*
- 10,500 square metres of retail with food and beverage activating an urban plaza*
- Between 850 and 950 homes comprising a mix of dwelling types, including apartments, terrace housing and detached and semi-detached homes*
- Low rise apartments concentrated around the retail hub with a maximum height of 6 storeys*
- Commitment to achieving a 5 star Greenstar Communities certification.”*

Each of these features is described in the following section and visually represented on ‘78 Middleborough Road, Burwood East Development Plan’ - Figure 15.

4.4 Key Features

4.4.1 Land Use

The proposed land use includes a mixture of residential, retail, entertainment (such as a 6 screen cinema or 10-pin bowling), community and recreational open spaces.

Residential

The development includes a mixture of residential densities and types, including apartments, townhouses and more traditional detached dwellings.

The distribution of these dwelling typologies is shown in Figure 20 on page 31. Details regarding the numbers of each dwelling type will be resolved as a part of future planning permit applications in response to market conditions. Approximately 850 to 950 homes are proposed overall.

Commercial and Retail

Approximately 10,500sqm of retail and 2,456sqm of non-retail and commercial floor space. This includes a mix of retail, local services, entertainment, medical and community facilities. In particular the development integrates a full-line 4,200sqm supermarket and ancillary speciality stores. A dining precinct with different food offerings will also be integrated along the adjoining urban plaza.

Open Space

A mixture of large and small local open spaces for passive and active outdoor activities. The neighbourhood is centred around a large open space area which includes a small waterbody.

4.4.2 Movement Systems and Access

Successful movement systems and access is delivered by a multimodal and integrated transport system.

Boulevard and Transport Links

A main boulevard avenue linking through from Burwood Highway to Middleborough Road will be an avenue of tall trees and act as a central, connective core between the different land use precincts within the neighbourhood.

Pedestrian and Cycling

The neighbourhood integrates a series of well distributed north-south and east-west pedestrian and cycling links. Dedicated off-road cycling paths will also be fixed along key local connector roads.

A series of smaller, more traditional local streets with footpaths, generous street width and front setbacks will provide a more traditional streetscape feel amongst the lower density residential areas.

Road Network

The internal road network has been carefully considered to promote pedestrian and cycling travel. Sensible traffic movement and speeds into and within the site are also proposed. Adverse traffic mitigation measures include

intersection upgrades. This ensures safe and appropriate vehicle movement is achieved within and surrounding the neighbourhood.

Car Parking

A combination of off-street car parking, front and rear loaded garages / carports, basement car parking and/or podium car parking will be integrated into the development for residents, workers and visitors to the neighborhood. The site will accommodate a sufficient number of car parking spaces (in accordance with statutory planning requirements) to avoid any adverse off-street parking and traffic management issues.

4.4.3 Open Space and Public Realm

The development includes a range of open space and public realm areas for a range of activities.

Publicly accessible open space on the site is approximately 2.1 hectares. There is clear hierarchy of open and public realm spaces, each with a distinct appearance, character and role:

Green Links

Green links and smaller open space areas will connect the neighbourhood precincts and provide interesting alternatives to the standard road network. Significant road reservations will also contribute to the open space network.

Local Open Space

Local open spaces with a mixture of treatments will define local character and provide opportunities for a range of activities. These include:

- A central neighbourhood open space reserve
- Local open space areas that are neighbourhood parks and linking spaces.
- Small local open space areas such as informal bush land areas or neighbourhood parks.
- Opportunities for play in addition to the existing play space in the expansion of Council’s Donaldson Reserve and the central open space.

Central Open Space and Waterbody

The development is centred upon a large informal open space area which incorporates a retarding basin and small waterbody. This space opens up the overall development, creating a permeable neighbourhood, with easy, clearly visible and enjoyable connections between residential and commercial precincts.



Urban Plaza

Civic space will incorporate a multifunctional urban plaza as a central 'heart.' The pedestrian links within the urban plaza connect with the pedestrian focussed retail centre, helping to activate the building facades and encourage a range of activities.

4.4.4 Community Facilities

The development includes significant community contributions including:

- The establishment of a large neighbourhood park incorporating a waterbody, retarding basin and associated recreation space, such as a playground, seating, BBQs and shade structures.
- Expansion of Donaldson's Reserve on the north eastern boundary of the subject site into a larger local open space reserve.
- An urban plaza, able to facilitate community gatherings such as festivals and market. This area would be mostly a hardscaped area with appropriate landscaping treatments. Along with the central open space area, this urban/civic hub provides a transition space between the retail, residential and boulevard road network.
- A series of smaller open spaces and linking spaces
- A modest multipurpose community meeting space of approximately 100sqm for functions and events within the central retail and civic area. This would provide the local residents a flexible community meeting space.
- Installation of public art across open space locations to create visual interest and a focal point for any community gatherings.
- Improvements to existing pedestrian and cycling links. The installation of pedestrian signalisation along Middleborough Road and shared pedestrian and cycling paths through the development will also improve the overall permeability of the broader Burwood East suburb.

4.5 Development Plan

The '78 Middleborough Road, Burwood East Development Plan' is represented in Figure 15.

The details of the development is described in the following sections of this report.



Figure 16. Development Plan

4.6 Design Principles

The Development Plan is informed by several key design principles:

4.6.1 Amenity and Connectivity

Three key design elements deliver a high-amenity, connected space:

- A multi-modal boulevard connecting Burwood Highway and Middleborough Road
- Extension of the surrounding grid network by way of pedestrian and cycle paths.
- Two large new public spaces: a large high quality central open space providing useable and flexible recreation space and taking advantage of the natural low point of the site; and a north facing civic space overlooking the central open space and providing a key meeting space for the neighbourhood.

Substantial investments in quality streetscaping and public space will make this a high quality, high amenity precinct.

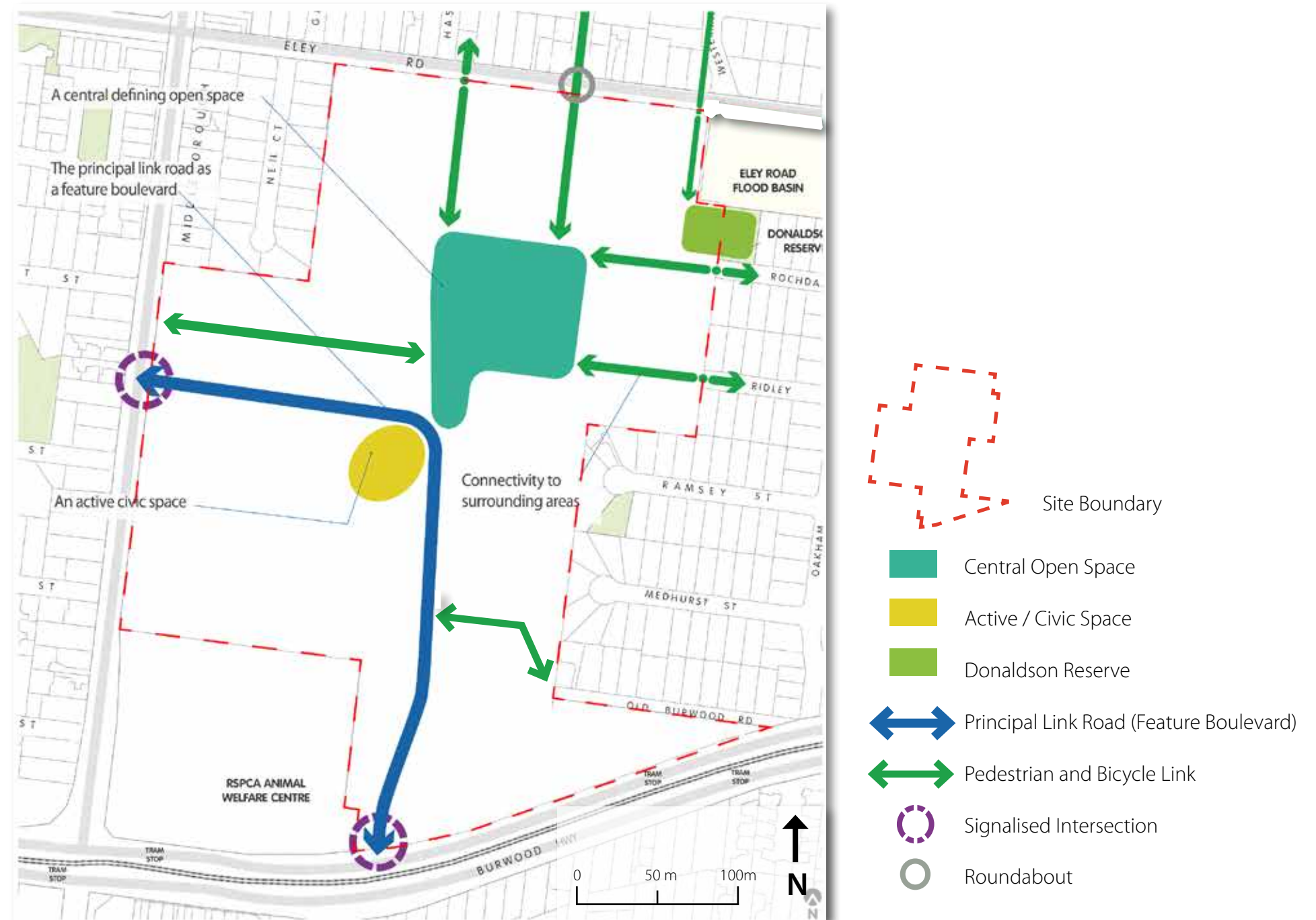


Figure 17. Amenity and Connectivity Principle

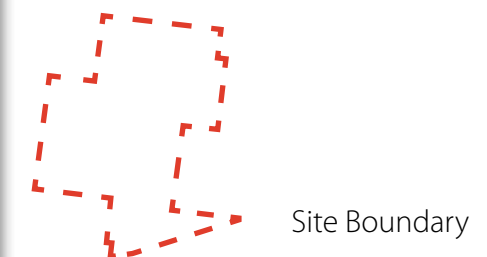
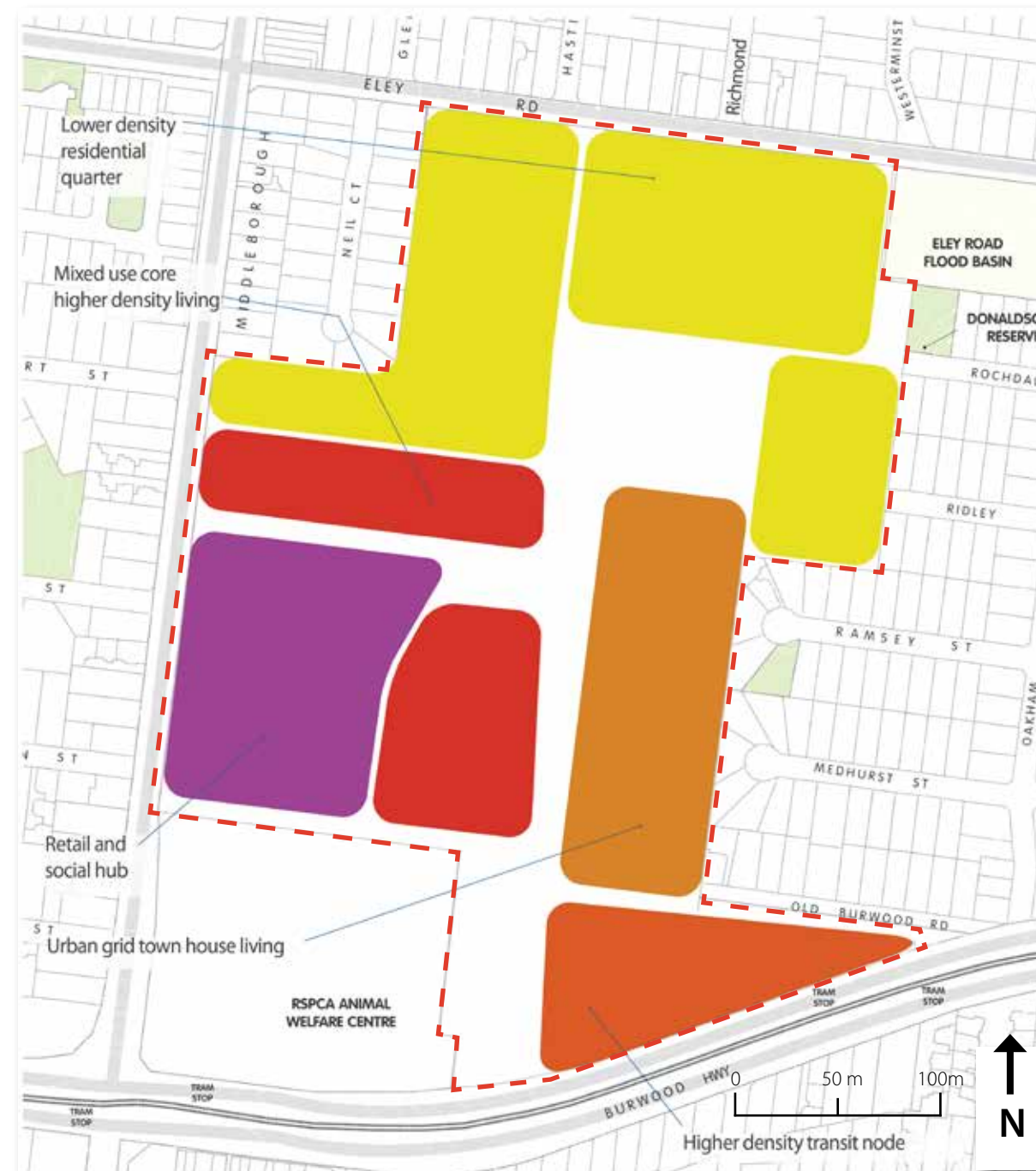
Adapted from the Masterplan and Urban Design Report (January 2015)

4.6.2 Activation and Urbanism

This principle refers to the range of land uses on the site, which together create the intensity and mix of activity that gives successful spaces their sense of place. Five distinct character areas are proposed:

- A lower density residential quarter in the north of the site which adjoins existing residential areas and surrounds the central open space. This area is characterized by mostly semi-detached and detached housing set along traditional residential streets and overlooking and engaging with the central open space.
- A medium density urban grid adjoining the north-south entry boulevard. It is characterized by terrace and town housing set around compact mews courtyards and landscaped laneways. Detached and semi-detached housing abutting the existing residential properties to the east.
- A higher density transit node adjacent to Burwood Highway, benefiting from high frequency bus and tram routes and is characterized by low rise apartment buildings in a landscape setting.
- A higher density mixed use core adjacent to the boulevard and adjoining the retail core is characterized by higher rise apartment buildings that overlook the urban civic spaces and active edges of the retail centre.
- The 'retail and social hub' of the local centre will be a contemporary retail centre that combines the convenience of local shopping with dining and social experiences. Overlooking and activating the civic spaces will be cafes and restaurants with alfresco dining areas and specialty retail units.

The neighbourhood structure will therefore exhibit a transition from residential uses with low activation on the site's northern boundary to areas of high activation and urbanity on the site's southwestern border. These character areas will help to create sub-neighbourhoods within the development and may be used to inform the detailed design elements of the future built form.



- Low Density Residential Quarter
- Medium Density Urban Grid Townhouse Living
- High Density Transit Node
- Mixed use core high density living
- Retail and social hub

Figure 18. Activation and Urbanism Principle

Adapted from the Masterplan and Urban Design Report (January 2015)

4.6.3 Urban Character and Place Shaping

A network of parks, green links, and large public spaces will lend a sense of character to the neighbourhood, while delivering very high amenity. These spaces will be publicly accessible, thereby improving accessibility to green spaces for the wider neighbourhood.

Three civic space typologies are proposed:

- Small local green spaces and pocket parks in each sub-neighbourhood;
- Linear parks and green movement wedges for pedestrians and cyclists that link sub-neighbourhoods to the central open space and retail hub.
- Civic plazas in the retail hub which will provide a distinctly urban feel to the sub-neighbourhood

The development will also offer opportunities for water sensitive urban design (WSUD), by encouraging permeable green spaces throughout the entire site, including the central park.

The principles and overall vision which inform the different spaces are as follows:

- Linear parks and green movement wedges for pedestrians and cyclists that link sub-neighbourhoods to the defining central park and the activity, services and facilities of the future local centre.
- Small local green spaces and pocket parks in each sub neighbourhood, providing a pleasant outlook for dwellings and areas for impromptu meetings and passive recreation;
- Opportunities for water sensitive urban design (WSUD), by encouraging permeable green spaces throughout the entire site, as well as the central waterbody and park;
- The civic plaza located in the local centre provides a distinctly urban feel to the neighbourhood and is framed by the built form of the retail centre and adjoining apartment buildings.

The development also integrates a range of native and exotic trees along local streets and the main boulevard. The main boulevard will be lined with tall canopy trees, creating a welcome, vibrant and leafy entrance into the neighbourhood.

Figure 19. Urban Character and Place Shaping Principle



4.6.4 Edges and Transition

This key principle recognises that the proposed development must sensitively integrate into an existing urban environment. Three key edge treatments help enable this integration and provide an appropriate transition between new and existing development :

- New dwellings will mostly back onto established residential areas, with adequate separation between new buildings and existing backyards.
- Dwellings along Eley Road will be of a traditional larger housing character, with appropriate design, scale and setbacks to reflect and enhance the existing streetscape.
- Gateway elements will define the entry points to the site with appropriate architecture and landscaping treatments.

Design principles which inform the treatment of edges and transitional spaces are included in the Residential Design Guidelines, found in Section 6 of this report.

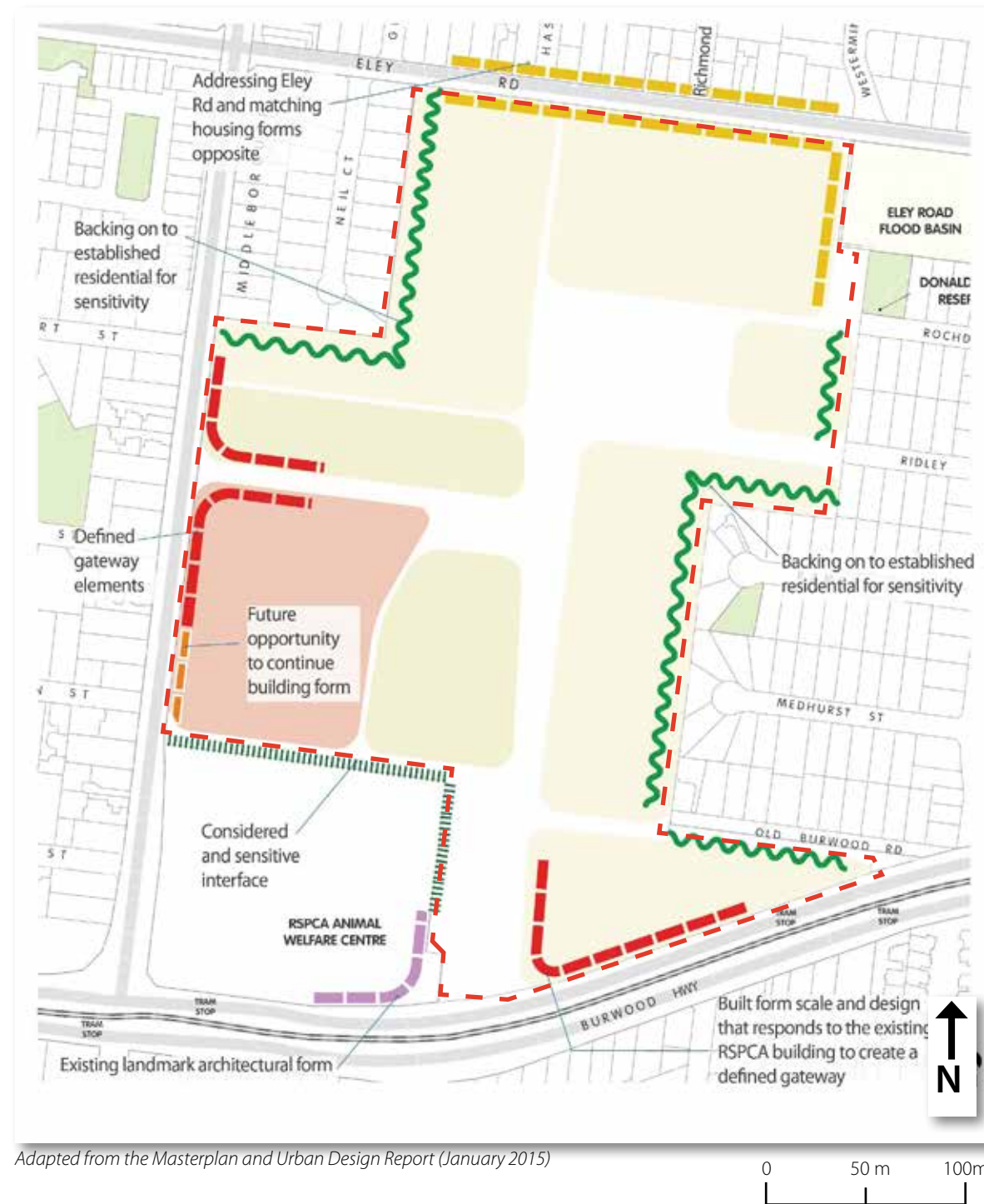


Figure 20. Edges and Transition Principle

Adapted from the Masterplan and Urban Design Report (January 2015)

4.6.5 Housing Diversity

The careful delivery of a variety of housing will ensure this neighbourhood is sensitive to its surroundings, while encouraging a diverse population, acknowledging changing demographics in the Melbourne context and responding to the existing demand for housing in the Burwood area.

Housing types will include detached houses, semi-detached, townhouses, terraces, mews courtyards and apartments.

Each housing type is carefully located to acknowledge existing land uses, the buildings role in framing streets and areas of public open space and the transitioning of higher density housing toward the retail hub.

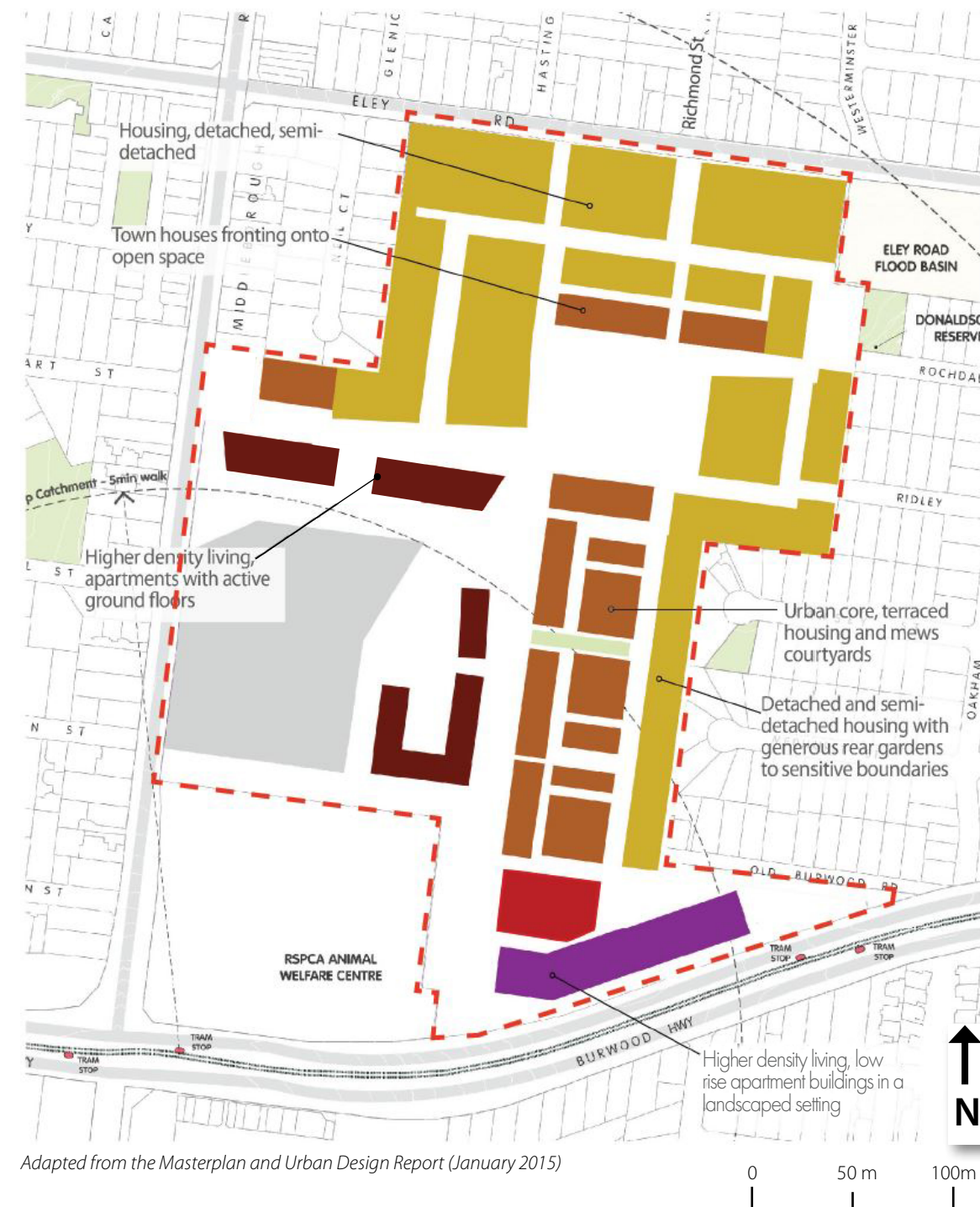
This will provide for a legible transition in density and dwelling types with high quality architecture and an exceptional level of amenity for future residents.

Affordable Housing and Housing for People with Additional Needs

The development will offer a selection of housing choices for diverse sectors of the community, including a range of affordable housing options to accommodate lower income households.

Housing types vary from single bedroom apartments through to five bedroom homes, with a concomitant range of dwelling prices and dwelling styles catering for various sectors of the housing market such as single person households and co-generational family living.

Dwelling types will include the capacity for flexible layouts and internal rearrangement to accommodate changes in household structure and the requirements of people with additional needs. The proposal also includes the development of aged care and retirement living, provided a targeted response to the needs of that sector of the community.



4.6.6 Streets, Connections and Car Parking

The proposed movement network provides a highly permeable and interconnected neighbourhood that encourages slow moving vehicle traffic, walking and cycling.

The key features of this network are:

- A multi-modal tree lined entry boulevard connecting with Burwood Highway and Middleborough Road;
- A series of dedicated, high-quality pedestrian and cycling paths that are separate from the road network;
- A series of strategic pedestrian and secondary cycle paths designed to align with green spaces, local roads and the surrounding neighbourhoods;
- A secondary access point to Middleborough Road;
- A series of traditional residential streets incorporating street trees, footpaths and on street parking;
- Off street car parking for each dwelling and in association with the retail hub.

The urban plaza, also known to be the civic hub will integrate a shared surface treatment at the junction where the urban plaza connects with the central park, retail core and residential interfaces along the main boulevard. The treatment will promote a pedestrian-friendly realm, with traffic calming and pedestrian-prioritising techniques at this core connection point of the neighbourhood.

Pedestrian links within the retail core and integrated with the urban plaza will be safe, well connected and enjoyable pedestrian thoroughfares. (Refer to Retail Design Report).

Additional street, connection and parking design principles are included in the Residential Design Guidelines, contained in Section 6 of this report.



Figure 22. Streets, Connections and Car Parking Principle

5. STAGING

5.1 Rationale and infrastructure delivery.

The 'on the ground' implementation of 78 Middleborough Road, Burwood East takes several years of careful and considered staging.

This staging plan ensures important social infrastructure is delivered to support the everyday needs of the future and existing residents, workers and visitors to the neighbourhood. The plan also considers the critical engineering calculations and strategies needed to achieve successful roll out of the development. This includes water management, infrastructure, servicing and reticulation, site cut and fill and other key influences on the staging of the development.

The first phase of work involves significant earth and remediation works. These remediation and site preparations have a significant bearing on the development program for the site and the first phases of the development are focussed towards land least impacted by this activity.

In line with this staging and with the vision to promote early activity of the site and engagement with the surrounding community, the development of the retail centre will be undertaken as part of the first stage creating a vibrant social hub for both the emerging community and the surrounding established residents. This first stage of development will also include residential development along Eley Road and in the southern portion of the site.

The second phase will deliver residential neighbourhoods in the central part of the site as well as the central retarding basin/wetlands park, another significant asset for both the emerging community and for the surrounding neighbourhoods. The following phases will see the orderly development of the site around these established assets.

5.1.1 Construction Management Plan

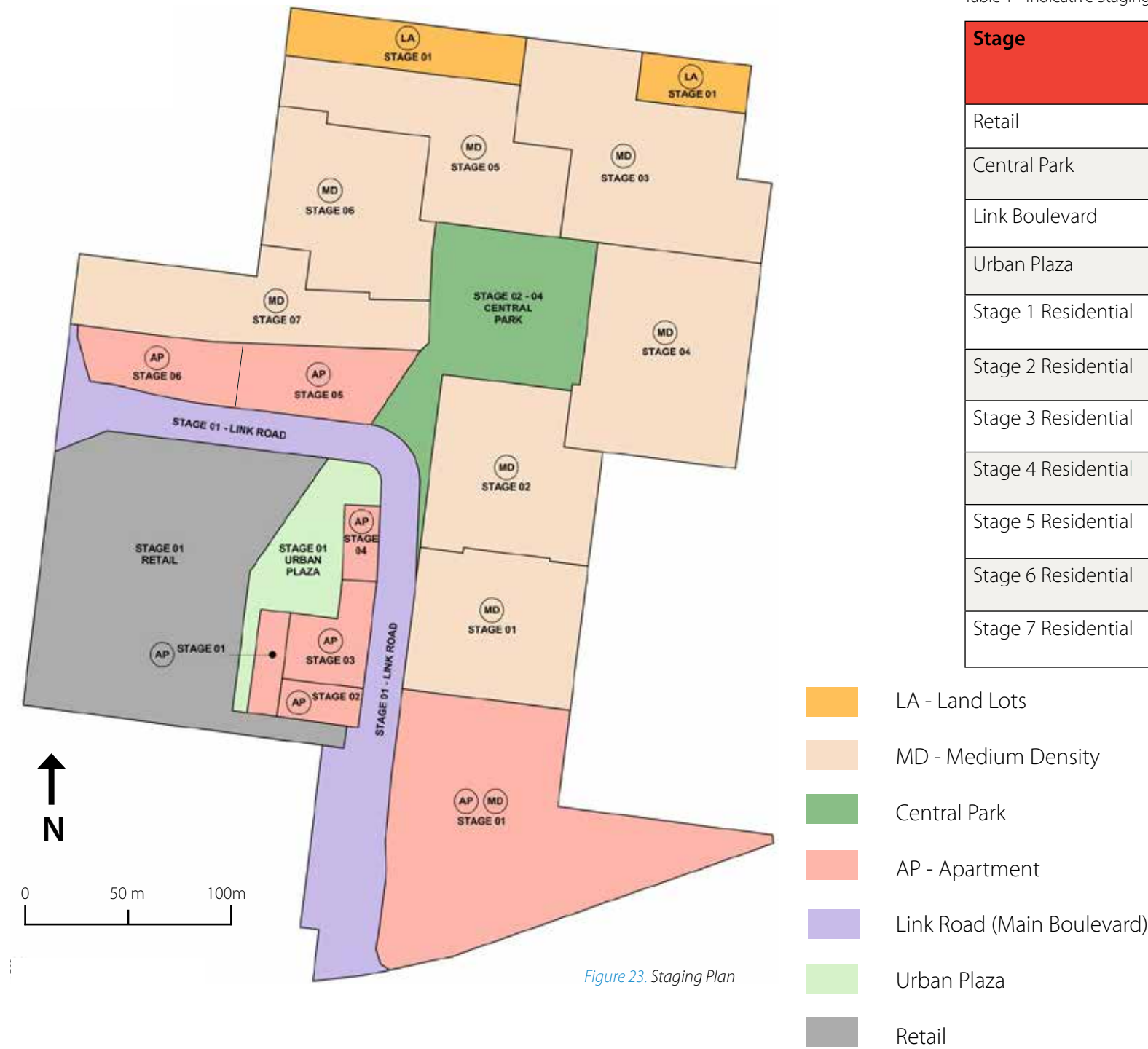
Prior to the commencement of any works, a detailed Construction Management Plan in line with Council's Construction Management guidelines will be prepared and approved by Council and relevant authorities. All works will be constructed in a safe and sustainable manner and in accordance with any planning and building permit conditions to minimise the impacts on adjoining and nearby sites.

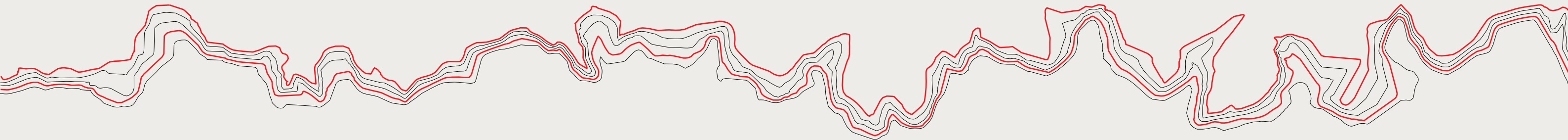
5.1.2 Timing

The table below details the proposed timing of each stage. The balance of the site will be fenced and managed in accordance with the Construction Management Plan. This timing and staging should be considered as indicative as development staging for a project of this nature, which is implemented over an extended time frame, is subject to prevailing market conditions and may therefore require adjustment in the future.

Table 1 - Indicative Staging Timing

Stage	Commencement and Completion Date (Civil and Built Form)
Retail	2018 - 2020
Central Park	2020
Link Boulevard	2018 - 2019
Urban Plaza	2019 - 2020
Stage 1 Residential	2018 - 2020
Stage 2 Residential	2018- 2021
Stage 3 Residential	2019 - 2021
Stage 4 Residential	2019 - 2022
Stage 5 Residential	2020 - 2023
Stage 6 Residential	2020 - 2024
Stage 7 Residential	2021 - 2025





6. RESIDENTIAL DESIGN GUIDELINES

6.1 General Principles Policy Context

The proposed building heights and setbacks, architectural form and public realm treatments aim to deliver a vibrant and connected local neighbourhood.

Buildings will be designed to achieve a scale, mass and heights which appropriately respond to the existing built form and character of adjoining streets.

Consistent with the building heights plan in DPO6, the development integrates a preferred height of 2 storeys along the sensitive existing residential interfaces to ensure amenity provisions regarding solar access and overlooking are achieved. The development integrates higher building heights close to the urban/civic areas with 3-4 storey townhouse or apartment style living overlooking the boulevard and central open space. Landmark 3-4 storey apartments are built up along Burwood Highway and the development includes 5-6 storey apartments within the retail precinct.

6.2 Residential Design Guidelines

These Design Guidelines provide guidance on the siting and built form requirements for all housing types across the Development Plan area. The guidelines include requirements for various internal and external amenity provisions, including setbacks, building height, provision of car spaces and private open space, site services and access. The guidelines are set out as follows:

6.2.1 General Objectives and Design Guidelines

The general objectives describe the outcome to be achieved across all residential types.

The general design guidelines provide direction as to how residential buildings, including apartments, terraces, townhouses, semi-detached and detached dwellings should be designed to achieve high quality amenity for residents and adjoining uses and meet the general objectives. The design guidelines focus on the following key areas:

- Building Design
- Internal Amenity
- Landscaping and Private Open Space
- Building Access

- Vehicle Access
- Site Services
- ESD
- Foundations of Community

6.2.2 Specific Design Guidelines

This section details specific objectives and design guidelines which apply to a residential category or location. The categories are:

- Detached and semi-detached housing
- Terraces and Townhouses
- Apartment Living
- Burwood Highway Interface

6.2.3 How to use these Residential Design Guidelines

Future planning permit applications for the construction of a dwelling or residential building will be assessed against these objectives and guidelines.

Where there is no specific design guidance, planning applications will be assessed against the provisions of the Whitehorse Planning Scheme Clause 54 and Clause 55 residential requirements and the Guidelines for Higher Density Residential Development, as relevant to the proposal.

The guidelines include images which are for illustrative purposes only.



6.3 General Objectives

6.3.1 Building Siting and Design

Ensure a high standard of urban design, architecture, and building materials that maximise opportunities for passive design (daylighting, natural ventilation and solar energy), good amenity and facilities for residents and respects the amenity and development potential of adjoining sites.

Ensure a range of dwelling types from one bedroom apartments to detached homes to accommodate a range of household types and income levels, including those on lower incomes.

Ensure appropriate dwelling types include the capacity for flexible layouts and internal rearrangement to accommodate changes in household structure and people with additional needs. For example, the potential inclusion of aged care and retirement living accommodation.

6.3.2 Character

Ensure a new strongly unified character which is respectful of the existing character of Burwood East.
Ensure development provides for sensitive interfaces and appropriate transition to existing developments.

6.3.3 Landscaping and Private Open Spaces

Encourage a high standard of landscape architecture and space for tree planting.

Landscaping must be integrated across the overall site, respond to the surrounding context and enhance the public realm and private open space areas.

All dwellings must be able to easily access functional private open space, and desirably, communal space.

6.3.4 Building Access

Entrances to buildings must be clear, easy to access and provide a comfortable transition space between the public and private realm.

6.3.5 Vehicle Access and Car Parking

Vehicle access areas is to be designed to avoid conflict with pedestrian spaces and reduce their visual dominance onto street frontages. Sufficient and appropriately located car parking will be provided for all residents and anticipated visitor numbers.

6.3.6 Site Services

Buildings must be designed to accommodate easy to access and functional site services, including storage areas and waste management facilities.

6.3.7 ESD

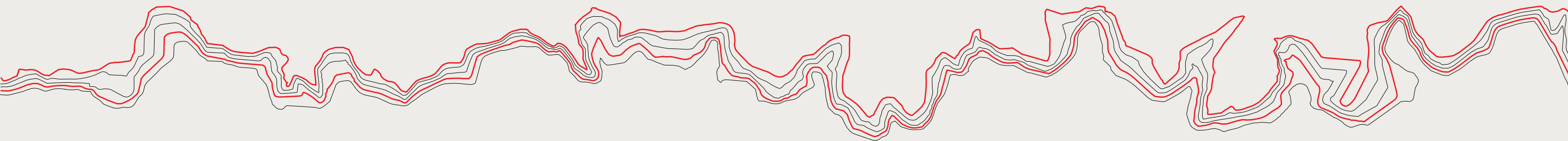
Ensure that building designs, site services and waste management incorporate ESD measures in accordance with the requirements of the Greenstar Communities rating tool, the ESD strategy for the development, and Council's ESD policy (Clause 22.10 of the Whitehorse Planning Scheme).

6.3.8 Internal Amenity

Ensure that all dwellings provide a high standard of internal amenity.

6.3.9 Foundations of Community

Ensure the highest quality of urban development that considers a balance of social make up and healthy community lifestyle.



6.4 General Design Guidelines

6.4.1 Building siting and Design

- Buildings must be oriented to optimise solar access to habitable rooms and private open space areas.
- Buildings must be oriented and include façade treatments which provide a clear delineation between private and public land.
- Buildings must be designed and sited to ensure an appropriate response to vistas and public open space.
- Buildings must maximise outlooks and opportunities for public surveillance.
- Buildings at corners must enhance the legibility of the urban form.
- Building orientation and separation, including upper level setbacks must be designed to maximise daylight and direct sunlight onto publicly accessible areas, including pedestrian links, communal and public open space areas.
- Buildings must be configured to allow for natural ventilation and good breeze path between openings within rooms.
- Building design must minimise screening as a means of addressing overlooking.
- Buildings must be oriented, setback and openings created in the building form which encourage passive heating and cooling opportunities throughout different times of the year and reduce reliance on mechanical heating and cooling systems. Buildings must be designed for seasonal shading (e.g. use of eaves).
- Buildings must be sited and designed to promote crime prevention through Environmental Design (CPTED), supportive environment for physical activity (SEPA) and universal design and accessibility principles.



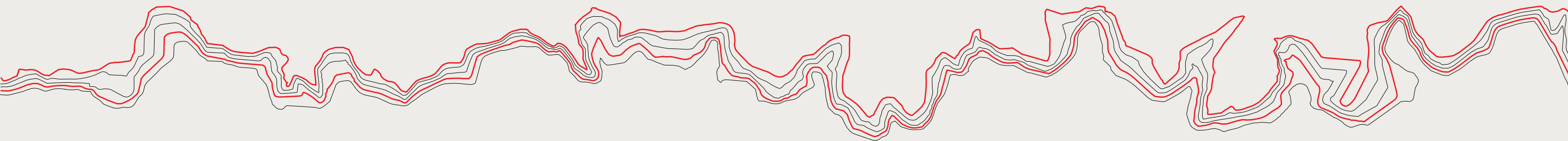
6.4.2 Internal Amenity

- Dwellings should include the potential for flexible internal rearrangement (i.e alteration to internal walls to accommodate different dwelling configuration).
- Ceiling heights are to provide a sense of openness within dwellings and allow opportunities for daylight and natural air flow.
- Dwellings must be designed to provide an appropriate level of internal acoustic amenity.

6.4.3 Building Materials

- Facade design will include selected external building materials to achieve an approach that balances creativity with the demands for innovative design and construction solutions. Providing a diverse range of building materials will also assist with satisfying the needs and aspirations of the new and evolving community.
- An overall colours and materials palette theme will be provided to achieve a cohesive streetscape. A more detailed palette will be assembled for each stage of the development.
- Facade materials will include:
 - Face brick
 - Masonry or concrete blocks
 - Render
 - Painted and natural horizontal/vertical lightweight cladding
 - Painted and natural lightweight panel systems
 - Timber battens/screening systems
 - Perforated screening systems
 - Semi-translucent panel systems.
- Roofing material will support a simple roof form that is contemporary in style and integrated into the overall building design.
- Roofing materials will include:
 - Colorbond or zinc alume metal roofing
 - Low profile or slimline tile roofing (terracotta or concrete).





6.4.4 Landscaping and Private Open Space

- Buildings will be sited to provide opportunities for significant vegetation and canopy trees on sites with appropriate building setbacks.
- Pervious surfaces will be encouraged through the use of grassed areas, rain gardens, permeable pavement, garden beds and on-site water detention systems as appropriate.
- Landscape design must integrate plant species and soil structures which respond to the site's levels and encourage good water management across the site and adjoining interfaces.
- All dwellings must be provided with access to private open space of appropriate size and dimension in the form of either ground level open space or courtyard, balcony or upper level courtyard or rooftop area. The provision of communal space for apartment buildings is desirable
- Private open space must be clear of site services.
- Landscaped and public open space areas will be designed to promote permeability and facilitate pedestrian activity and movement, promote crime prevention through Environmental Design (CPTED), supportive environmental for physical activity (SEPA) and universal design and accessibility principles.
- Dwellings must generally have no front fences except in circumstances where a fence is required for security purposes and is visually permeable.
- Where side boundary fences project beyond the front of the house they should reduce from 1.8m high to 1m high.
- Side fences along pedestrian links, open space areas and main roads will be visually permeable.



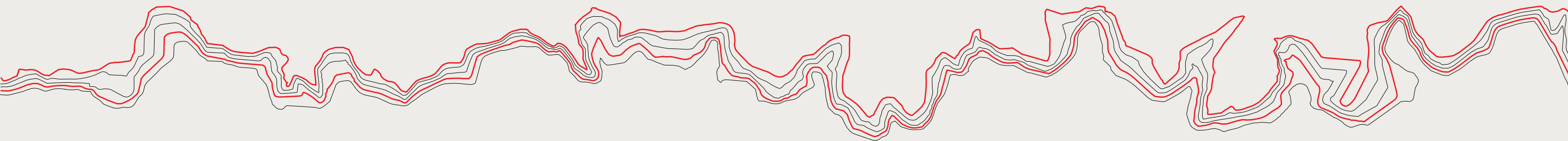
6.4.5 Building access

- Entrances must be clearly defined and identifiable from the street
- Apartment building entrances and internal building spaces, hallways, lobby and elevators and car parking areas must cater for people of all abilities and provide adequate space for prams, bicycles and wheelchairs.

6.4.6 Vehicle Access

- Vehicle access areas must be designed to prioritise the safety of pedestrian areas and minimise pedestrian-vehicle conflict.
- Vehicle entrances must be clearly marked with the appropriate signage to alert drivers, cyclists and pedestrians of the vehicle entry/exit point.
- Car parking and vehicle accessways must be designed in accordance with the requirements of Clause 52.06 Car Parking of the Whitehorse Planning Scheme and the Integrated Transport Plan.
- Visitor spaces to dwellings must be provided at a rate of 1 space per 5 dwellings.





6.4.7 Site Services

- All dwellings must include easily accessible and sufficient internal and external storage space.
- Buildings must include appropriate provision of car and bike storage.
- All bike and vehicle storage requirements will be designed in accordance with Clause 52.06 Car Parking and Clause 52.34 Bicycle Facilities of the Whitehorse Planning Scheme.
- Waste management areas must be easily accessible for collection services, allow separation between recyclables and non-recyclables and encourage opportunities for composting and green waste.
- Waste management areas must not directly abut sensitive habitable room openings or cause adverse amenity impacts on residents or adjoining uses.
- Where possible, building services such as substations, fire services etc must be appropriately screened and located to the rear or sides of buildings.
- Letter boxes and meter boxes must be located to ensure that they do not obstruct sightline triangles described in Clause 52.06 Car Parking of the Whitehorse Planning Scheme.
- Clotheslines must be located or screened to ensure that they are not visible from the front street of the dwelling.



6.4.8 ESD

Building design must:

- Orientate all buildings to maximise sun and daylight access;
- Provide adequate measures for passive heating and cooling (e.g. seasonal shading by fixed building design elements to appropriate habitable room windows);
- Ensure buildings allow for natural ventilation;
- Orientate buildings to allow for solar absorption; and
- Use building materials which avoid or reduce environmental impacts (eg. insulation, screen shading where appropriate, weather stripping etc.)

Building service design must:

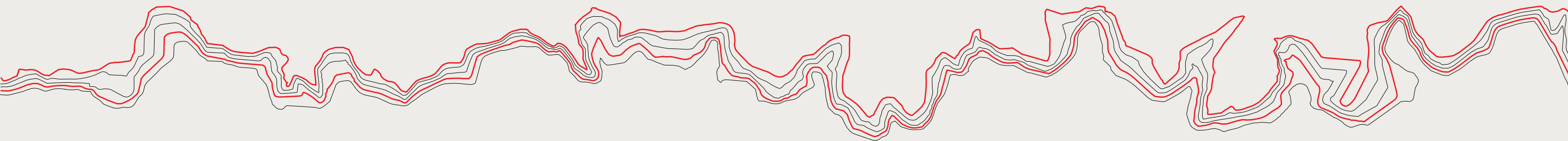
- Use efficient heating and cooling systems;
- Install water saving fixtures;
- Include rainwater collection and reuse systems (e.g. piping to connect to WCs or garden taps);
- Ensure energy efficient electrical design; and
- Incorporate building management systems which include energy monitoring and lighting control.

Design of the waste management system must include a multi-stream waste collection system incorporating the collection of recyclable material and the opportunity for green waste and composting areas in appropriate locations.

6.4.9 Foundations of Community

- Ensure precincts are planned to facilitate social interaction by including formal and informal meeting, recreation and green spaces.
- Ensure the cohesive integration of uses.
- Ensure neighbourhoods promote walkability and access to facilities by pedestrians and cyclists.
- Ensure integration with the surrounding neighbourhoods through appropriate built form and visual connections.
- Provide legible and usable pedestrian and cyclist connections with the existing, surrounding urban fabric and through the site.





6.5 Detached and semi-detached housing

6.5.1 Preferred Character

Detached and semi detached housing which exhibits a more traditional residential character with larger homes and generous building setbacks and garden character, including opportunities for landscaped front gardens with canopy trees.

6.5.2 Guidelines

Bedrooms

Dwellings will generally have 3 to 5 bedrooms.

Building heights

Building height will generally be no higher than 9 metres (2 storeys) unless otherwise shown on the building height plan in DPO6.

Front setbacks

Include a garage where there is a front driveway. Any garage must be setback a minimum of 5.5 metres from the front property boundary. Dwellings fronting Eley Road must be setback a minimum of 4 metres. Dwellings fronting other roads must be setback a minimum of 3 metres.

Car parking

Dwellings must accommodate a minimum of 2 car parking spaces accessed from the front of the property.

Lot sizes

Lot sizes will generally be between 250 to 430 square metres and should accommodate an area of secluded private open space and site services at the ground level.

Interface

Dwellings that share a rear lot boundary with established housing areas must be setback 5m from the rear boundary; and will include back yard, private open space that allows for the planting of a canopy tree with a mature height of 8 metres.

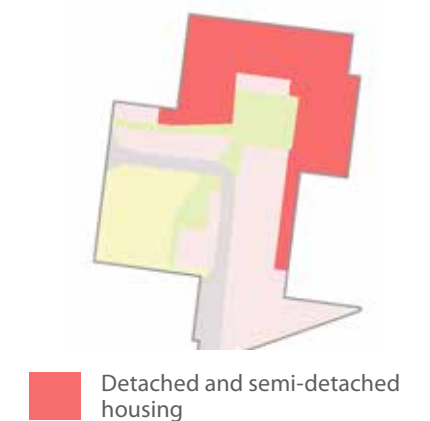
Dwellings that directly interface with established housing areas must have suitable architectural presentation, avoiding sheer walls and providing appropriate building articulation.

Open space

Dwellings must be provided with a minimum 35 m² secluded private open space with a minimum dimension of 5 metres.

Landscaping

Each dwelling must include planting of at least one canopy tree with a mature height of 8 metres, and not planted within an easement.



6.6 Terraces and Townhouses

6.6.1 Preferred Character

Terraces and townhouses up to three storeys with high quality building finishes, good internal amenity and attractive front façades and landscaping. The dwellings may include ground and upper level private open spaces, including balcony areas to take advantage of views.

6.6.2 Guidelines

Bedrooms

Dwellings will generally have 2 to 4 bedrooms.

Building Heights

Building heights will vary from 2 to 3 storeys as specified in DPO6.

Front Setbacks

Dwellings must be setback a minimum of 3 metres from the front property boundary. Garages must be setback 5.5 metres from the front property boundary.

Car Parking

Dwellings must accommodate 2 car parking spaces for dwellings with 3 or more bedrooms and 1 car parking space for each dwelling with 1 or 2 bedrooms. Rear laneway access may be provided to car parking areas.

Lot Sizes

Lot sizes are generally between 100 to 240 square metres and accommodate private open space and site services on the ground or upper floor levels.

Interface

Dwellings that share a rear lot boundary with established housing areas must be setback 5m from the rear boundary; and will include back yard, private open space that allows for the planting of a small canopy tree.

Dwellings that directly interface with established housing areas must have suitable architectural presentation, avoiding sheer walls and providing appropriate building articulation.

Open space

Private open space must be provided in accordance with the requirements of the Whitehorse Planning Scheme.

Landscaping

Each dwelling must include planting of at least one canopy tree with a mature height of 5 metres, and not planted within an easement.



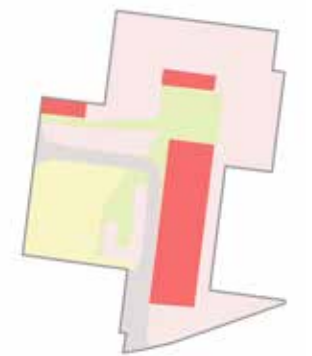
Terraces and Townhouses - front boundary accessway and garage and ground level private open space



Rearloaded Terraces and Townhouses - garage as part of the main building envelope and balcony private open space.

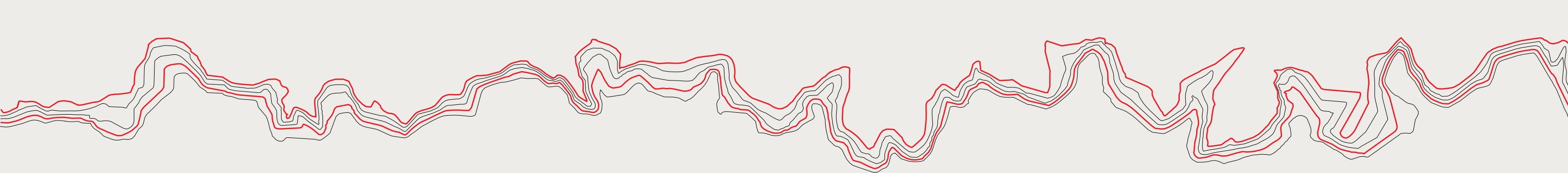


Rearloaded Terraces and Townhouses - separate garages along laneway



Terraces and townhouses





6.7 Apartment Living

6.7.1 Preferred character

Apartment style living conveniently located adjacent to the retail core and existing shops, services and public transport and designed to form part of the activated civic centre overlooking onto the tree lined boulevard and public open spaces.

6.7.2 Guidelines

Bedrooms

Dwellings will generally have 1 and 2 bedrooms.

Building Heights

Building heights will vary from 4 to 6 storeys as identified in DPO6.

Front Setbacks

Buildings must be setback a minimum of 3 metres from the front property boundary and roads (other than Middleborough Road). Buildings must be setback 7 metres from Middleborough Road.

Refer to section 6.8.2 regarding setbacks at the Burwood Highway interface.

Car Parking

Car parking must be provided at the rate of 2 car parking spaces for dwellings with 3 or more bedrooms and 1 car parking space for each dwelling with 1 or 2 bedrooms. Car parking will be provided at basement and/or podium levels.

Visitor parking must be conveniently located and well signed.

Apartment Size

One (1) bedroom apartments will be between 40 to 75 square metres. Two bedroom dwellings will be between 60 to 95 square metres. The provision of communal space is desirable.

Balcony/terrace private open space must be provided for each apartment.

Built Form

Dwellings at ground level will include appropriate design treatments including layouts which encourage live/work/home enterprises such as home office, consulting suites, yoga studio, cottage industry, home catering and creative digital arts industry opportunities facing the urban plaza, to allow for passive surveillance and an appropriate visual connection between public and private spaces.

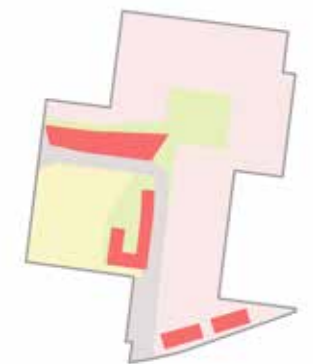
Buildings that face two public spaces (eg. the urban plaza and the boulevard road) must have appropriate facade treatments to each public interface.


Buildings at key corners must be sited to allow reasonable space for pedestrians and sightlines and to identify arrival points.

Any fencing at ground level must be visually permeable.

Building Separation

Buildings must be separated by a minimum of 9 metres unless otherwise agreed by the responsible authority for apartment buildings adjoining the urban plaza.



 Apartments



6.8 Burwood Highway Interface

6.8.1 Preferred Character

A series of contemporary buildings up to four storeys in height set within a landscaped setting with attractive and articulated facades fronting onto Burwood Highway, the boulevard and Old Burwood Road.

6.8.2 Guidelines

The following guidelines for the Burwood Highway interface apply in addition to the relevant guidelines for apartment living in Section 6.7.

Building Heights

Building heights will be no higher than 16 metres as identified in DPO6.

Front Setbacks

Buildings must be setback a minimum of 7 metres from Burwood Highway and 5 metres from Old Burwood Road.

Built Form

Scale and design must respond to the existing RSPCA building to create a defined gateway and must be sensitively designed at the northern interface to the medium density precinct and existing dwellings on Old Burwood Road.

Fencing, where required for security purposes, must be visually permeable.

Landscaping

Buildings must be set within a generously landscaped setting which includes canopy trees.

Trees located along the Burwood Highway frontage must be indigenous species.



 Burwood Highway Interface



Figure 24. Design Guidelines

7. ECONOMIC IMPACT ASSESSMENT

7.1 Policy Context

An Economic Impact Assessment has been prepared in accordance with the provisions of Schedule 6 to the Development Plan Overlay. The report has been prepared by Urbis and includes an assessment of the existing and future retail demand generated from the proposed development, the feasibility of proposed uses and their impact on uses in the local area and in the region generally.

7.2 Overview of Development and Socio-Economic Profile

The proposed development will include a mix of housing, a new shopping (retail) centre and open space areas. The shopping centre component of the development is planned to provide around 10,500 sqm of retail floorspace, including a 4,200 sqm full-line supermarket, plus approximately 2,456 sqm of non retail uses.

With good levels of population density in the area, the centre will serve a sizeable catchment of over 43,000 residents by 2021. The development alone will provide another 2,050 residents in the primary sector of the development who will generate significant demand for retail uses and services.

The socio-economic profile of trade area residents indicates a generally established and older aged market with lower incomes but likely good asset wealth. The trade area is in a process of change with an increasing ethnic population (notably persons from Asia) and improving incomes in areas in proximity to Burwood East. In the future, the expectation is for an increasing rate of regeneration and gentrification of older households, with the expectation of new families and higher income households moving into the area, driving increased retail spending

7.3 Retail Facilities and Expenditure

In 2017, residents within the Burwood East catchment area generated \$561 million (incl. GST) in expenditure on retail goods and services. With forecast population growth and increases in real spending per capita, the available resident retail spending market is forecast to grow to some \$612 million by 2020, and \$717 million by 2026.

The growing and changing market will generate demand for a greater range and better quality of retail and services in the area. The development can serve as an integral piece of infrastructure to address future market demand

and provide a quality community hub that delivers a different type of amenity to that of other centres in the area.

A detailed review of the existing supply of retail facilities and services in the area indicates the area includes a range of shopping centres and shopping strips providing mainly day-to-day convenience retail and services needs. The majority of these are represented by older format neighbourhood based centres and small to mid-sized shopping strips, most of which are quite dated in their physical appearance and have issues with the level of amenity in the offer. In this regard there is a market need for a good quality shopping centre that provides a significantly better experience for shoppers and the local community.

It is noted that the Burwood One Shopping Centre, comprising a full line 24 hour Coles supermarket and Kmart, speciality shops and eateries has recently expanded and undergone significant refurbishments. This retail centre sits on the periphery of the retail trade area, to the east along Burwood Highway and will experience a very minor impact in consumer expenditure, as detailed in Section 7.5. Forest Hill Chase Shopping Centre has also undergone a recent expansion. However Forest Hill Shopping Centre does not form part of the primary or secondary retail trade area for 78 Middleborough Road, Burwood East development.

Figure 24 highlights the local retail trade area.

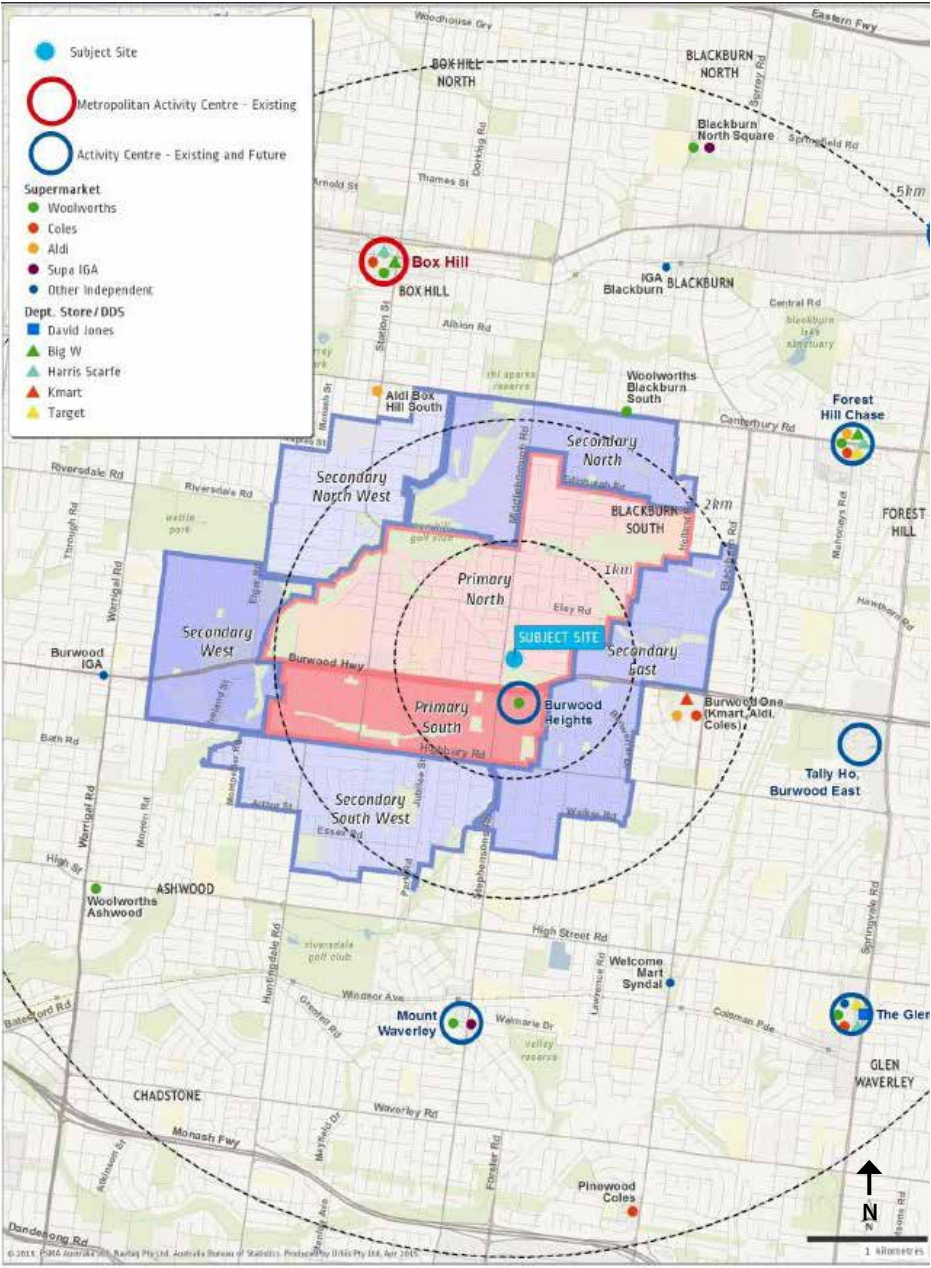


Figure 25. Retail Trade Area

7.4 Market Needs and Demands

The proposed development addresses many market needs and demands including:

- A mix of retail, non-retail and local services. In particular, the development addresses the need for another full-line supermarket in a market where there is a lower than typical supply of supermarket floorspace, particularly in the catchment area to the west of the site.
- The potential inclusion of cinemas which would be provided in tandem with the range of cafes and restaurants would provide a new social hub during the day and evenings. The cinemas would address a market gap in Burwood and surrounding region, especially in Burwood and to the west and north of the centre.
- Delivery of a high quality shopping experience for the exiting and future community, both in terms of the selection of goods on offer but also an up-to-date and modern shopping environment achieved by good internal and external building design.
- A highly convenient shopping destination with a good provision of carparking and easy site ingress and egress.
- An appealing environment which would provide a superior ambience and capitalises on the natural features of the area (e.g. planned adjoining plaza), including a high amenity food and beverage dining precinct.
- The development would also vastly improve the visual appeal, amenity and economic profile of the area. This will have an immediate positive impact for residents in the adjoining houses and the overall growth and role of the Burwood Heights activity centre.

7.5 Trading Impacts

There is market capacity to support the proposed development and the 9,910 sq.m of retail tenants have the potential to achieve \$84.5 million in turnover in 2020, which is the assumed opening year of the retail development. This retail turnover includes approximately \$58.6 million of turnover by food tenants and \$25.9 million of turnover by non-food tenants. Market shares required to support the potential turnover are 17% of spending from the primary trade area (Burwood East) and 11% of spending by residents from the main trade area (broader Eastern Metropolitan Melbourne). These market shares are consistent with the market penetration of centres with a similar retail role and scale. Figure 24 shows the primary and broader trading area of the development.

It should be noted that the assessed turnover potential of the Burwood East Centre assumes that one quarter of the planned 950 dwellings in the site are completed by the expected opening trading year. Accordingly the analysis does not truly incorporate the benefit of retail demand generated by residents moving into the completed development. It is estimated that the residents of the 950 dwellings could potentially generate around \$35 million in annual retail expenditure (2017 dollars, incl. GST).

The assessed trading impacts are within manageable levels for the affected centres. Some centres would continue to achieve an average trading level similar to or above their current estimated trading level. The centre expected to accrue the highest percentage impact is the existing Burwood Heights shopping centre. This centre will continue to trade at a level some 9% above the average for a supermarket based centre (based on the Urbis Shopping Centre Benchmarks for supermarket based centres) and the majority of the impact is expected to be on the estimated strong trading Woolworths supermarket. Centres that are forecast to trade at a level below their estimated current trading rate following the Burwood Brickworks development include Burwood Heights Shopping Village (-9.1%), Woolworths Blackburn South and strip retail (-2.2%), Burwood One (-1.7%) and Middleborough Road & Mirabella Crescent (-0.9%).

The introduction of a new centre at 78 Middleborough Road, Burwood East will result in some transfer of spending away from Burwood One but the one-off impact (which in volume terms is the highest impact) is within an acceptable and sustainable range. It is noted that the sizeable expansion of the Burwood One centre in 2012 is understood not to have had an adverse impact on other centres in the area, including Burwood Heights shopping centre.

Forecast market growth in the trade area would be expected to largely offset the impacts and provide the opportunity for existing centres to make improvements in response to the new competition. In fact, the affected centres, as is the case in any healthy competitive environment, have the opportunity to recapture lost market share through, for example, refinements to the tenant mix, upgrades to the centre's presentation/signage and/or expansion of retail floorspace.

It is also relevant to note that this development will have a lower overall impact compared with the previously approved Reading proposal. The amount of retail turnover generated by the development will be half that forecast for the previous development proposal for the site. In the previous assessment a greater share of the impacts were assessed to fall on the larger shopping centres in the broader region. The impacts on neighbourhood scale centres estimated in the previous assessment were within a similar range to that assessed for the current development.

7.6 Net Community Benefit

The first consideration in identifying whether there is a net community benefit from this development is identification of trading impacts on existing centres and any negative implications resulting from these. Section 7.5 of this report indicated that the turnover impacts are within an acceptable range for the affected centres in the region. None of the assessed trading impacts on individual centres would result in a loss of shops or services to the community.

With no loss of services expected at other centres the introduction of a new range of services would have an overall net community benefit. The proposed Frasers Property Group development would have the following benefits:

7.6.1 Choice and competition

More retail floorspace available in the catchment brings with it more choice and more competitive pricing in the products and services offered to existing residents. The additional population growth within the local area as well as the existing strong trading supermarket at Burwood Heights drive demand for additional retail floorspace in the vicinity. In addition, we understand Frasers Property Group plans to secure retailers with a point of difference from the existing Burwood Heights centre and other centres in the area so as to complement rather than compete with the existing retail offering.

7.6.2 Amenity

The development proposal will improve a site that has sat dormant for almost twenty years and been a blight on the local area. The 78 Middleborough Road, Burwood East Development Plan includes between approximately 950 dwellings, a retail and social hub and new public space, all of which will improve the overall amenity of the Burwood Heights activity centre. The activity generated by the development will attract more visitors to the area as a whole which will have flow-on benefits to the balance of the Burwood Heights centre in terms of commercial activity and improved perceptions of safety and security. The development is also expected to act as a catalyst for new investment in the area.

7.6.3 Community retail focus

The development proposes a well designed and integrated community retail focus that will provide a high level of amenity. Many of the existing centres consist of ageing shopping centres and shopping strips that straddle main roads (e.g. Blackburn South, which is bisected by Canterbury Road). It will also provide an important piece of infrastructure that will address the need for another supermarket, more retail floorspace and services and cater to the demand generated by the residents that will occupy the new dwellings and existing residents in the area.

7.6.4 Meeting changes in needs and demands

Most of the existing activity centres in the area are not necessarily well equipped to respond to changes in consumer needs and demands and to deliver an overall desired improved level of amenity (e.g. upgrades to the presentation, quality of retailers, etc.). Without significant improvements to the centres over time and introduction of a new higher quality development as proposed by this development, the community will be increasingly underserved and likely direct an increasing share of their expenditure to centres further away. This outcome reduces the levels of local activity and associated benefits as well as results in residents travelling longer distances for their regular shopping and services requirements. This can have adverse economic, social and environmental impacts.

7.6.5 Multi-purpose trips

The addition of a planned range of non-retail uses and community services will increase the community's opportunity for linked trips within the Burwood Heights activity centre. Non-retail uses are yet to be finalised but could include entertainment uses (such as cinema or 10-pin bowling), gym/personal training, childcare centre, medical centre/hub –which add to the overall vitality of the centre, help support the retail shops and bring new services and greater choice to the market.

7.6.6 Employment

The proposed development will have a positive impact on employment opportunities, both locally and in the broader economy. The employment generated by the development falls into two broad categories:

- 1. Total ongoing employment generated from the operation of the centre, both in the supermarket and the specialty shops, offices and community uses. There would also be flow-on employment (multiplier effects generated by increased demand for goods and services as a result of increased consumption by the employees at the centre.
- 2. Employment generated during the construction phase of the project and its flow-on effects on employment. The flow-on employment results from increased demand for materials, services and products from a range of suppliers during the construction of the centre.

It is estimated that the total shopping centre floorspace of 12,956 sq.m will create demand for around 498 ongoing jobs. However, some of these positions will be transferred from existing employers (e.g. if a business relocates to Burwood East). In our view, a reasonable allowance for transferred jobs is 15%, which suggests that the net increase in employment at 78 Middleborough Road, Burwood East would be closer to 423 jobs. The anticipated direct employment figures are detailed in Table 2.

In addition to retail employment, the redevelopment is expected to result in approximately 1,267 direct construction jobs (for one year). This is based on a projected construction cost of \$160 million for the residential development, \$60 million for the retail development, and \$90 million for general civic works. The figures for all employment generated from the development is detailed in Table 3.

Type of use	Employment per 1000 sqm	Retail Centre	
		GLA (sqm)	Employment (no. of people)
Supermarket	40.8	4,200	171
Mini-majors	23.5	2,364	56
Speciality stores	60.7	3,936	239
Non retail/external	13.0	2,456	32
Total		12,956	498

Table 2 - Direct Employment Benefits from Development - retail employment

Development Option / Type of Employment	Direct Employment (no. of people)	Supplier Employment (multiplier effect) - (no. of people)	Total Jobs
Construction Phase	1,267	1,994	3,261
- Retail Centre	346	544	889
- Residential	921	1,450	2,372
Retail Centre Employment Increase	423	337	760
Total	1,690		

Table 3 - Total Employment Impact of Development - all employment

8. RETAIL DESIGN

8.1 Policy Context

A Retail Design Report has been prepared in response to the requirements of Schedule 6 to the Development Plan Overlay. The report has been prepared by NH Architecture and Tract Consultants and includes a description of the overall function and layout of the retail component of the development.

Please refer to the separate Retail Design Report for additional details regarding the form, function and design features of the retail component of the development.

8.2 The Retail Centre

The proposed retail centre is located in the south western portion of the site, with frontages to Middleborough Road and the new boulevard road. The centre is focused on the urban plaza and will incorporate active frontages along the boulevard and to the fringe of the plaza space. The plaza provides a central, active focus for the activities within the centre and forms an integral component of these uses by providing an outdoor circulation and congregation space in proximity to the retail hub.

8.3 Principles for a quality retail centre

The proposed retail centre at Burwood East is an integral part of the overall development proposal and addresses many market needs and demands including:

- A mix of activities that will meet the daily and weekly needs of households. This includes a mix of retail, entertainment, services, medical and community facilities. In particular, the development addresses the need for another full-line supermarket in a market where there is a lower than typical supply of supermarket floorspace and generally above benchmark trading stores.
- A highly convenient shopping destination with pedestrian and bicycle connections to surrounding neighbourhoods both on- and off-site as well as provision of car parking to support the range of uses on the site, split across locations at-grade and below ground.
- Improved connectivity to the Burwood Heights shopping centre through pedestrian movements along Middleborough Road and a signalised intersection at Burwood Highway and the new boulevard road.
- A unique and appealing environment within an integrated development providing a civic ambience which capitalises on distant views and the adjoining public plaza and includes a high amenity dining precinct and physical and visual linkages to the open space network on the site.

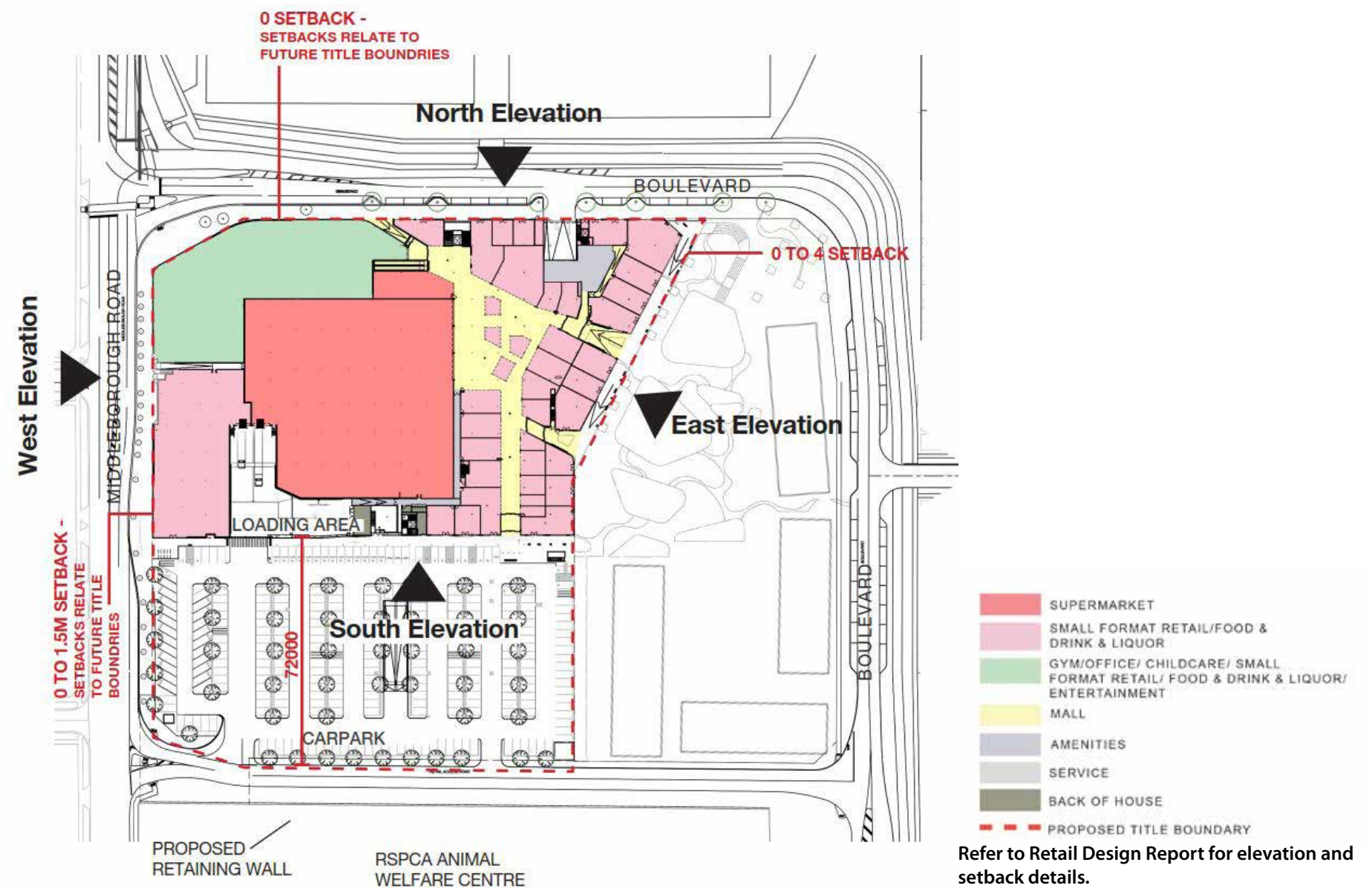
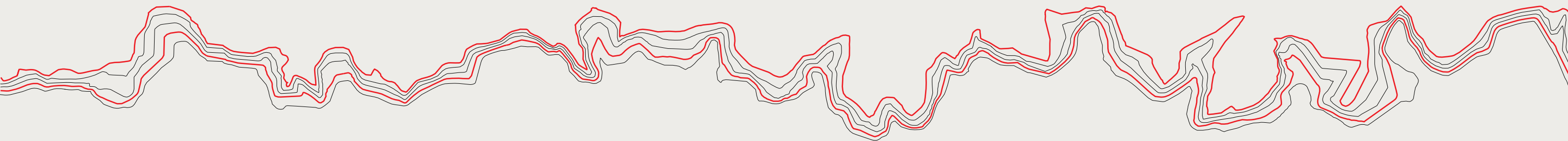


Figure 26. Retail Centre Plan



The proposed retail centre will improve the visual appeal, amenity and profile of the area. This will have an immediate positive impact for residents in the adjoining area and the overall growth and role of the Burwood Heights activity centre.

The addition of a planned range of non-retail uses, non-retail and local services will increase the community's opportunity for linked trips within the Burwood Heights activity centre. The specific mix of non-retail uses is yet to be finalised but could include entertainment uses (such as a cinema or 10-pin bowling), gym/personal training, offices, a childcare centre and medical centre/hub – all of which will add to the overall vitality of the centre, help support the retail shops and bring new services and greater choice to the market.

The retail centre proposes to provide in the order of 10,500sqm of retail and 2,456sqm of other uses. The mix of uses is intended to provide a multi-functional centre that satisfies the range of retail, leisure and services needs of the community. The centre will include:

- A minimum 4,200 sq.m full-line supermarket.
- Everyday speciality services and other retail uses.
- Approximately 3,936 sq.m of speciality shops, including a dining precinct taking advantage of the adjoining proposed urban plaza.
- A range of commercial and community uses, such as entertainment uses (e.g. a cinema or 10-pin bowling), a gym/personal training, commercial offices, child care and medical centre (the precise mix of uses is yet to be determined).

It is proposed to develop the retail centre as part of the first stage of development in order to promote early activity of the site and engagement with the surrounding community. This will result in the early creation of a vibrant social hub for both the emerging community and the surrounding established residents. This first stage of development will also include residential development along Eley Road and in the southern portion of the site. The staging plan shown in section 5 illustrates the progressive development across the site.

8.4 Movement across the retail hub

Movement networks are a critical component of the overall site and ensure connections beyond and within the site boundaries. A high quality built/landscape frontage will provide a sense of address to the Middleborough

Road frontage whilst the permeable and connected nature of the precinct ensures strong linkages between the retail centre and activity on the balance of the site.

The boulevard that forms the northern boundary of the retail centre and north-eastern boundary of the urban plaza is easily accessible by foot, bicycle, car and public transport whilst the boulevard and the urban plaza also provide opportunities for community interaction and connections. Pedestrian movement in particular is facilitated by linkages to and through the retail centre and urban plaza and across the boulevard, connecting the retail centre to residential and open space precincts elsewhere on the site. A slow point where the boulevard road changes alignment will prioritise pedestrian crossing of the road and facilitate movement between the urban plaza and the link to the village green.

These features of the movement network are identified in Figure 25.

8.5 Response to landscape and public realm plan

The siting and design of the retail centre has been carefully considered in the context of the urban design and landscape principles which apply across the whole of the site. These overarching principles to the public realm are described in Section 4, 6 and 9 of this report and the means by which they are implemented in the retail centre area are detailed below. More details, including cross sections are included in the full Retail Design Report, Volume 2 and should be referred to for additional details. .

8.5.1 Boulevard

The arrival experience from the west off Middleborough Road will be marked by the retail buildings along the southern side of the Boulevard. This approach is an important arrival to the core retail complex or Market Hall. While the northern edge of the Boulevard will be focussed towards resident access, the southern side reflects its retail abuttal and includes a mix of active retail tenancy frontages, arcade entries, the urban plaza and car park access.

Uses along the Boulevard will be determined by proximity to Middleborough Road to the west and the plaza frontage at the core of the site. Entertainment (such as cinema) and service businesses (such as medical, office) are expected to locate towards the Middleborough Road end whilst a concentration of food outlets and alfresco dining opportunities will occur adjacent to the plaza. Car parking areas are discretely located behind sleeve retail uses and/or below grade.

A generous footpath and tree planting allowance together with a slow point for vehicles will be provided to the Boulevard to create a pedestrian oriented

environment. In addition, parallel parking along the street is provided to manage vehicle speeds and provide short term convenience parking. (Further details are provided in the Integrated Transport Plan).

Pedestrian access locations along the north elevation provide access to both the Market Hall and the urban plaza. These will require steps and ramps in response to the site topography. All building entries and access to retail tenancies will be designed to meet the DDA requirements of the Building Code of Australia.

8.5.2 Middleborough / Gateway

Middleborough Road displays a diverse character along its length, including residential, traditional strip shops, large format retail, education, parkland and other services. Residential uses are located opposite the site on the western side of Middleborough Road whilst the RSPCA complex adjoins the site to the south. Middleborough Road itself provides an important arterial transit role which must be recognised in any development on the site.

The gateway to the site from Middleborough Road will incorporate signalised access and incorporate gateway treatments to highlight the site entry for residents and visitors to the retail / social hub. This gateway corner will support a prominent service or retail business opportunity with a prominent marker incorporated into the building structure.

The significant car volumes along Middleborough Road influence the scale and form of use along this frontage. In this context, a landscape interface will help to define the south west corner adjoining the RSPCA exercise area. Diffused sightlines into the site from this location will be encouraged through the use of level changes and the planting of clear trunk trees. The south west corner elevation of the retail centre itself will include retail uses and provide direct pedestrian entry to the centre.

Allowance has been made for a footpath and hard and soft landscape treatments along Middleborough Road in appropriate locations. Opportunities for soft landscaping, including new street trees, will be managed to ensure satisfactory levels of public safety and surveillance. Pedestrian east – west links are provided to allow direct and safe access south of the retail centre, with markers in appropriate locations to improve wayfinding and legibility. The Middleborough Road elevation will incorporate an integrated recessed feature wall equivalent to 25% or more of the façade with climbing plants to provide a textural and visual break in the façade. Other treatments on the Middleborough Road façade will help to activate this frontage. These may include treatments relating to sustainability, the history of the site, or the community.

8.5.3 Landscaped Car Park

A balanced approach between basement and at-grade car parking will be used within the retail centre to support a high quality amenity for public use. The site is unique in offering public frontages to all approaches and therefore necessitates appropriate design attention and quality, respectful of the RSPCA land to the south, taller retail buildings on the north and sightline considerations into and from the site (in the context of the topographic conditions of the site and adjoining land).

The on grade car park will be considered within a landscaped setting suitable for this location and with reference to the significant level change at the boundary interface to the RSPCA land to the south. A combination of structural and engineering treatments such as shotcrete, blockwork, gabion cage stacks and terraced walls are all potential treatments to be applied to the structural elements. These would be integrated with plantings, vertical screens and green elements to provide visual interest and provide an appropriate transition to the RSPCA land where car parking, a paddock and service areas are located.

On a day to day basis, the car park has a specific and defined purpose in supporting the retail centre and also plays an important role in providing access for loading and waste removal areas. The loading dock is recessed within the building fabric and all loading activities are concealed by a screen wall with an architecturally interesting treatment. Vehicular turning movements are restricted to within the loading area. A gate separates the loading area from the carpark area. Appropriate measures to deal with amenity impacts and operational issues should be included (particularly in relation to the RSPCA site to the south), with details to be resolved at the planning permit stage.

Access through the car park will be assisted with designated pedestrian pathways to all edges and where appropriate, the use of way-finding markers to assist legibility.

8.5.4 Urban Plaza and Interface

In response to the open space feedback received, the Frasers design team has consolidated the key open space environments to enhance useability and function. In particular, the urban plaza has now been re-oriented to capitalise on the integration opportunities with the new retail edge and celebrate the gateway to the north, connecting to the other open space experiences to the north of the boulevard. The design uses dimension and visual separation to provide a transition from the retail food and beverage active edge of the retail centre through to the residential uses on the other side of the plaza which

will incorporate layouts and design treatments to allow for appropriate uses, passive surveillance and visual connection between public and private spaces.

Located at the heart of the new neighbourhood, the urban plaza brings together the local and district population and provides a social meeting hub. Its role as a civic event space and informal urban dining address is a key objective of the master plan. A variety of spaces are to be provided within the urban plaza to ensure a range of activities can occur there. The space will also provide for legible and logical movement paths to promote community interaction and a sense of place. The urban character and function of this civic space is influenced by the higher density urban setting that frames and complements it. Pedestrian connections to the plaza will be provided from the car park at the south of the retail centre, via a convenient and accessible pathway between buildings. This connection is illustrated in the image below. The broad frontage of the plaza to the Boulevard, particularly at the vehicular slow point, provides a pedestrian-friendly focus for this public space and ensures easy pedestrian access from a number of different locations.



The larger scale of the urban plaza addresses potential conflicts between living and retail environments through greater dimension and separation between the functions and the planting and soft scape environments which will assist with diversity of experience and manage heat and noise effects.

Retail uses fronting the plaza will be active and dominated by alfresco dining in a range of small and large scale tenancies. The alfresco dining areas are physically separated from the urban plaza by the difference in levels between these spaces, with the dining area slightly elevated at the northern end.

Entry to the retail centre will be possible from multiple points along the eastern elevation. Enhanced urbanisation on the other side of the plaza will support activation and programming of the plaza space. The entry to ground floor apartments will provide a sense of entry and arrival off the urban plaza, with the potential for live / work home office outcomes. The layout and design of residential buildings fronting the plaza encourages activation and urban uses by directly addressing the urban plaza edge at ground level. At upper levels, the apartments will include articulated facades and balconies / decks to encourage passive surveillance and CPTED principles. The building elevations will provide visual interest through articulation and cohesive use of high quality materials such as glass, timber, metal, concrete and brick finishes which will be used to define the building exteriors.

8.6 Market-style Hall

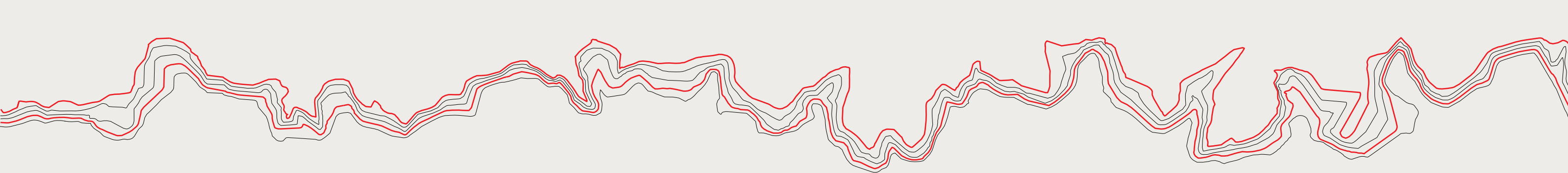
The everyday fulcrum of the retail centre will be the central market-style hall, a generously scaled network of spaces which complement the adjoining urban plaza. The physical link between the key indoor and outdoor places will be reinforced through sightlines at key nodes and arcade links. While a primary convenience retail model will dominate use of the hall, the various larger and arcade spaces also support the opportunity for temporary undercover civic and pop-up retail opportunities. Significantly the hall will provide the capacity for flexibility to respond to different retail operations in time.

8.6.1 Market-style hall built form objectives

- The market-style hall should be a significant, large scaled space referencing the former industrial scaled buildings on the site.
- Access to the market-style hall shall be clearly legible from the north, south and east approaches.
- Visual connections to the boulevard and/or urban plaza should be possible from the hall.
- The space should be designed to accommodate a variety of flexible retail spaces, including opportunities for temporary and pop-up civic and retail activities.

8.7 Architectural Approach and Integrated Landscaping

The entire retail area, including all building elements, public realm and landscaping will be an integrated, eclectic and visually engaging public space. The architectural



9. LANDSCAPE AND PUBLIC REALM CONCEPT PLAN

The final architectural treatment will be developed in partnership with the surrounding urban context and respond directly to the existing site conditions. The architectural treatment is based on the vision of the Living Building Challenge, the Building Research and Development's most rigorous for buildings, standards inspired by the buildings, and the site's history. The multiple facets of the site, its urban and industrial history, and its landscape are all integrated into the design. The landscape is an integral feature of the design, and the design is a direct response to the Living Building Challenge imperatives.

9.1 Policy Context

A Landscape and Public Realm Concept Plan master plan has been prepared by Group GSA in accordance with the provisions of Schedule 6 to the Development Plan Overlay.

9.2 Existing Conditions

The landscape concept has been influenced by the existing site conditions and the context established by the surrounding residential setting. Much of the site has been cleared of its former site features, including ground surfaces as they were related to the former brickworks and quarry use. In order to facilitate the appropriate earthworks, trees fronting Burwood Highway have also been removed.

The redevelopment of this former brickworks site will introduce a range of natural features, including a mix of native and exotic trees, wetlands area and informal green spaces – a much greater level of natural landscaping in comparison to what had previously been on site, which mostly consisted of a void, bare and concrete site with little vegetation.

9.3 Landscape Principles

The Landscape Concept Plan provides direction and guidance for the public realm and open space areas. The following principles have guided the development of the Plan.

Contemporary

Contemporary, classic urban character that reinforces the sense of place and identity.

Attractive

An attractive and well used network of open spaces and urban places.

Logical

A logical hierarchy of open space areas with a range of functions.

Diverse

A range of open space areas with a diverse character and attributes that engage the senses and delight the mind.

Safe

Safe places where people can feel secure and comfortable.

Legible

Legible and connected spaces that provide easy access to various destinations

Flexible

Flexible open space areas that can readily accommodate a variety of community activities.

Sustainability

An environmentally sustainable development.

Accessible

Provide ease, safety and choice of access for all people.

9.4 Landscaping Themes

The landscape concept plan draws upon four key landscaping themes:

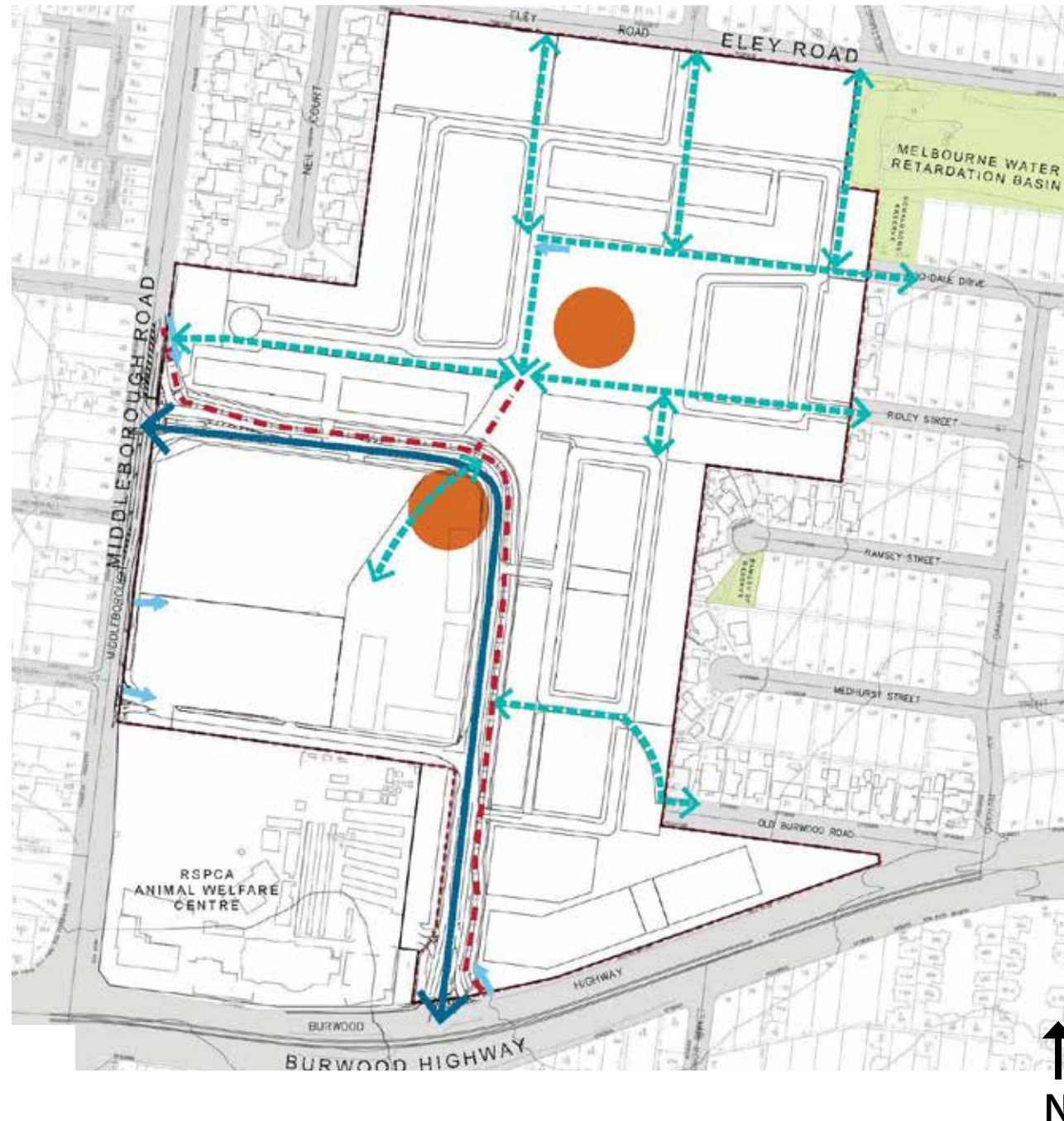
9.4.1 Links

Maximizing linkages throughout the site by providing multiple pedestrian, cycling and vehicle crossings across and into the site. These linkages will improve connections with existing adjacent residential areas, public transport stops, Burwood Heights Shopping Centre, and the urban plaza and new open space areas within the development

Key pedestrian and cycling linkages include:

- North / south links from Eley Road through the proposed residential areas to Burwood Highway and public transport connections. There is a significant level difference (approximately five metres) between the main link boulevard and the Village Green which necessitates some deviation of a direct north / south route. Ongoing detailed design work with the engineers will ensure DDA compliant access is provided across this area. This area is also an intersection with a lot of activity. As such, it will be designed as a common zone with pedestrians, cyclists and motorists sharing the space. Appropriate way finding and transport management will be designed to ensure legibility, safety and connectivity.
- A significant diagonal pedestrian / cycle link through the development site connecting the Urban Plaza, the Village Green and neighbourhood parks with the existing residential neighbourhoods and the RSPCA (via Middleborough Road).
- East / west links from Middleborough Road through the commercial centre, residential areas and open space reserves to adjoining existing residential neighbourhoods to the east.

- **NODES:** Two main nodes at key intersections: the Urban Plaza (a civic space) and the Village Green (mixed use open space).
- **BOULEVARD LINK ROAD**
(includes pedestrian connection)
- - - **DEDICATED OFF-ROAD BICYCLE PATH**
- - - **SHARED PEDESTRIAN AND CYCLE CONNECTIONS**
- **PEDESTRIAN CONNECTIONS**



Site Boundary



Figure 27. Links Landscape Guideline

9.4.2 Boulevard

The feature boulevard acts at the central activity corridor, linking Burwood Highway with Middleborough Road.

This boulevard is the core multi-modal transport corridor, inclusive of shared pedestrian and cycling paths and private vehicles movements in both directions. The boulevard provides good visual connections to the centrally located urban plaza, local open space wetland park, as well as openings to small local green spaces and pocket parks.

The landscape plan proposes an integrated street tree character along the boulevard with a strong set of unifying species (eg, Pin Oaks) along the boulevard.

The Pin Oaks (indicative at this point and subject to Council approval), are a continuous line set out in a consistent space to implement a rhythmic pattern along the boulevard. Additionally alongside the Pin Oaks, the boulevard will be planted with native tree species to define the character and program.

The section of the feature boulevard off Burwood Highway is characterised by a level change of approximately six metres, an embankment adjoining the RSPCA complex and apartment and town house dwellings. This section is principally a transition zone to the central activities area, but will include landscape elements such as a retaining wall, pedestrian and cycling paths and planting to provide amenity.

Detailed design of retaining walls proposed on public land or at the public interface in the development will need to be accompanied by structural and design reports to Council's satisfaction.

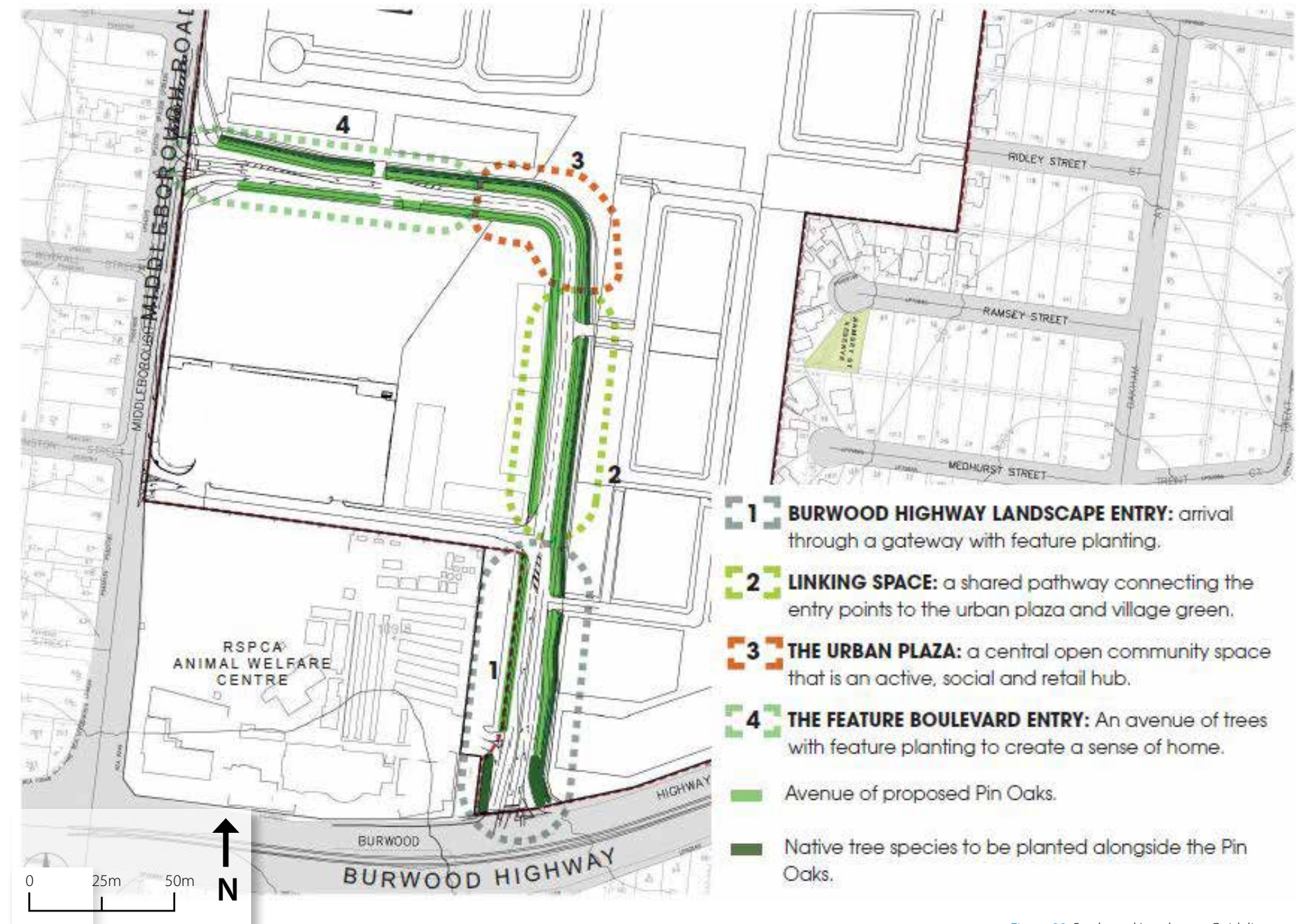


Figure 28. Boulevard Landscape Guideline

9.4.3 Interface

The development requires special attention to the edges of the development, ensuring that future buildings and landscape treatments are sensitively designed to integrate with existing residential properties, the RSPCA complex to the south and streetscape character.

Landscaped interface treatment along Middleborough Road will be designed to ameliorate the impact of the car parking area at the activity centre and also to provide some relief for pedestrians.

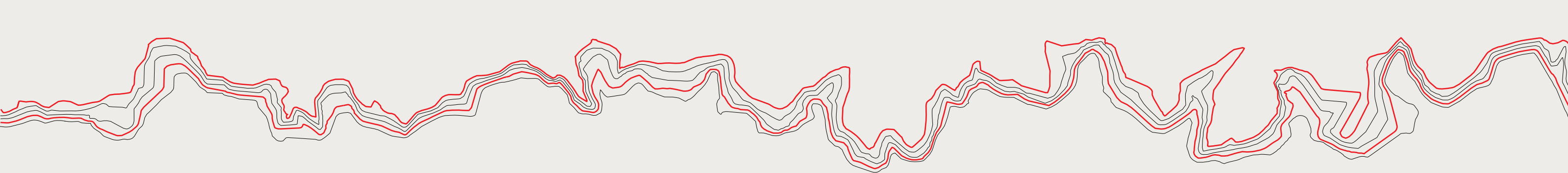
Detailed principles are described in the separate Landscape and Public Realm Concept Plan (Volume 2) to ensure an integrated setting along the Burwood Highway interface. The architecture for the Burwood Highway interface will be designed to enhance this landscape setting. The specific tree and plant species details will be confirmed during the detailed planning permit application phase.

- SHARED BOUNDARY:** Ensure the landscape assists with the integration of the new development with the existing residential neighbourhoods, including the treatment of level changes
- INTERFACE:** Provide an appropriate interface with the RSPCA Animal Welfare Centre
- ROAD EDGE:** Integrate landscape to enhance street character
- ENTRY:** Two key entry points with defined gateway elements



Site Boundary

Figure 29. Edges and Transition Landscape Guideline



9.4.4 Street Tree Character

The development will include a majority of native trees to streets and in open spaces to link with biodiversity corridors - the retarding basin and vegetation corridor to the north-east and indigenous vegetation to the south east along Burwood Highway.

Specific guidelines to achieve strong street tree character include:

- Deciduous trees to mark the changing of the seasons are combined with a majority of native trees to provide shade in summer and contribute to native biodiversity.
- Colour, form, shape, bark to create variation, interest and place shaping
- Human residential scale, with streets scaled to the pedestrian, offering a diversity of density, open spaces, pathways, with easy access to both the home and facilities.
- Historical references including productive fruit trees could be included in public open spaces
- Ecological values, with indigenous vegetation to Burwood Highway frontage

Maintenance and Utility Services

The landscape treatment will be subject to a detailed design development in consultation with Council. Alongside matters concerning the visual presentation of trees along the streetscapes, trees will also be assessed upon their necessary maintenance programs, including costs and ongoing works. The location of trees will be carefully designed to avoid conflict areas with under and over ground utility services.

- New Native Street Tree Planting
- New Exotic Street Tree Planting
- Open space areas with predominantly Native Trees
- Open space areas with predominantly Exotic Trees



Site Boundary



Figure 30. Street Tree Character Landscape Theme

9.5 Public realm treatment and planting

Public realm treatment and planting are proposed in accordance with an overall Urban Design Concept for the site. This concept incorporates planting, materials, lighting, furniture, art and play elements for the various public realm and open spaces on the site.

The proposed treatments and planting proposed by these elements contributes to a range of functional, welcoming public open spaces and also ensures each space is used as their intended purpose.

9.5.1 Planting

Trees play an important part in defining the local character and identity, and particular attention will be paid during detailed design to select species that are appropriate for their setting, and also provide environmental benefits. The trees below have been selected as they help to define the street scape character and overall development. Species include:

- Quercus palustris (Pin Oak) with native trees to the main feature boulevard (subject to council approval)
- Gleditsia triacanthos (Honey Locust) to the urban plaza and civic spaces (subject to council approval)
- Indigenous eucalypts to the Burwood Highway frontage and landscaped reserves.

Ground cover and shrub planting will also be selected for each particular landscape setting, and will consider maintenance requirements, CPTED principles (clear sight lines and security) along with environmental and visual amenity.

9.5.2 Materials

The selected urban and open space ground and built material palette will entice a rich sense of place and identity. The materials will be robust, strong and durable over time and use and be selected in accordance with requirements of the City of Whitehorse's public realm treatment preferences and subject to Council approval.

Materials may include a range of timber, concrete and steel elements, as highlighted in the photos to the right.



Figure 31. Potential Tree - Gleditsia triacanthos



Figure 32. Potential Tree - Quercus palustris (Pin Oak)



Figure 33. Planting in local garden

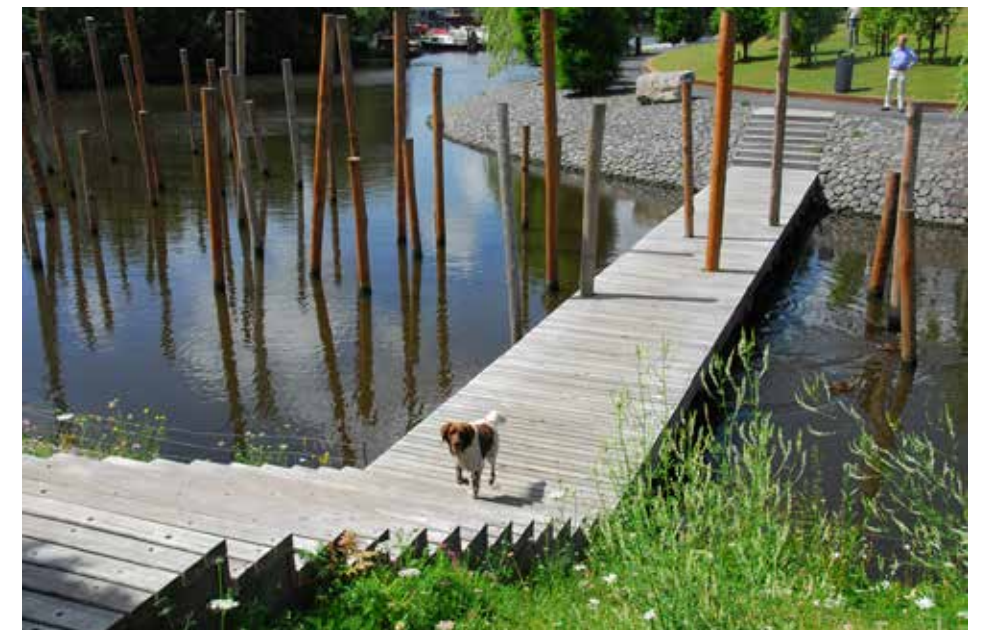
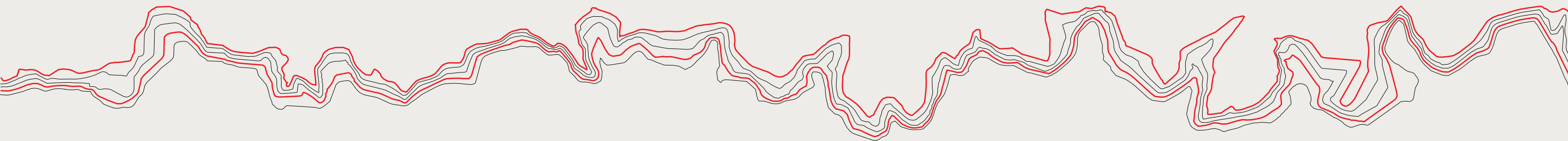


Figure 34. Indicative Materials



9.5.3 Furniture

Site furniture for use in the landscaped areas will be determined at detailed design stage, but will be based on Council's standard palette for ease of asset management and subject to Council approval.

These items will include:

- light poles and luminaires
- rubbish containers
- drinking fountains
- seating
- bicycle racks

9.5.4 Public Art

Opportunities exist to incorporate public art into the landscape to reinforce local identity and sense of place. Public art can be incorporated and integrated into landscape settings as functional elements e.g. hand rails, seating and shelter and paving details. Or it can be feature elements that make more of a statement about the local community and place. Other possibilities include the design of play elements as artworks and subtle gestures within the landscape (background art).

Further discussion with Council will confirm the style and location of public art throughout the development.

9.5.5 Play elements

Play elements will provide interest and delight across the development, instilling the pedestrian link through the network of open spaces and encouraging outside activity.

Elements may include subtle motifs or graphics along paved surfaces, forming a language of story-telling or aesthetic interest. Larger interactive sculptures or other place animators may form part of these play elements, providing a focal point or being an intrinsic part of meeting spaces.

In addition to these scattered play elements, further play spaces will be considered; an integrated open space area based on an upgrade of Donaldsons Reserve, and another dedicated neighbourhood play space in the Village Green. The scale, location and age ranges of these dedicated play spaces require further detail and resolution and will be determined in conjunction with Council.



Figure 35. Potential Public Realm Features



10. OPEN SPACE

10.1 Policy Context

In accordance with the provisions of Schedule 6 to the Development Plan Overlay, an open space plan forms part of the Group GSA Landscape and Public Realm Plan. This document can be found within Volume 2 and should be referred to for additional information. The following is a summary of the key issues.

10.2 Role of Open Space

Open space provides a wide range of amenity and opportunities. This development considers multiple uses for the landscape, including the open space areas and public realm spaces. The landscape provides opportunities for:

Community Building

Providing open space areas for activities such as local festivals, markets, outdoor cinema and barbecues.

Visual amenity

A reflection of the seasons, attractive treed and planted areas that integrate the built form.

Recreational Activities

Informal, active and passive forms of recreation.

Environmental Improvements

Shade in summer, shelter in winter, reducing the heat island effect, Water Sensitive Urban Design and carbon and urban pollutant absorption.

Pride of Place

Creating a sense of local character and identity that residents are proud to call home.

Community Safety

Ensuring CPTED principles are included in the design of the landscaped areas and urban plazas.

Creating Meeting Places

Enhancing social capital by encouraging people to get outside and interact with others in the community.

Walkability

Attractive neighbourhoods and suitable paths so that residents will want to get out to walk and exercise.

This landscape concept plan is intended to provide the framework for the rationale, structure and design guidance for all the public domain and open space elements in the former brickworks site development.

10.3 Whitehorse City Council Open Space Strategy

The proposed open space concept has been guided by the requirements of the City of Whitehorse Open Space Strategy. The strategy clearly defines the open space requirement and hierarchy for this redevelopment site. The development proposal has interpreted the requirements as follows:

- A central urban plaza that is a civic space.
- A central Local Open Space Reserve - containing a waterbody, retarding basin and formally planned and laid out park facilities.
- Local Open Space areas - formal open space areas that are neighbourhood parks.
- Small Local Open Space areas - that are informal bushland areas or neighbourhood parks.
- Linking spaces that provide local connections.

The total proposed open space provision is approximately 2 Ha and is to be at least 10% of the total site area. Open space provision is subject to further review and detailed design and Council approval.

10.4 Open Space Contribution

The overall site offers a total of approximately 2 hectares of open space. This includes traditional public open space 'green' areas as well as the urban plaza. The total amount significantly surpasses the City of Whitehorse's open space area contribution requirement of 4 percent. As a strategic redevelopment site, it is appropriate that a development provide open space that exceeds the standard requirement.

The different open space typologies and area contributed to each are detailed in Table 4. Land proposed as open space contribution is subject to Council approval. Open space must meet the open space assessment criteria set out in the Whitehorse Open Space Strategy to Council's satisfaction and the Schedule to Clause 52.01 of the Whitehorse Planning Scheme.

Open Space	Contribution Amount
Local Open Space	5,044 m2
Small Local Open Space	4,571 m2
Linking Space	6,007 m2
Total (Green) Open Space	15,622 m2
Urban Plaza	5,028 m2
Excluding allowance for substation reserves	150 m2
Total Open Space	20,500 m2

Table 4 - Proposed Open Space Contributions

The 2.05 hectares of open space proposed excludes substation reserves which will be located in open space areas as required. Individual open space areas nominated will therefore vary dependent on planning for individual reserves as part of the staged development of the project.

10.5 Role of Open Space

The development integrates passive and active open space areas, able to accommodate a range of activities for people of all ages.

These include:

Linking Spaces

A local connection or link between streets or open spaces

Nature Conservation

Reserve areas with new planting of indigenous species

Urban/Civic

A community and commercial area providing landscape amenity to enhance the urban setting.

Waterbody

The presence of an ornamental waterbody.

Informal

A less structured area allowing residents and visitors to meet or sit

Possible Community Garden

Explore providing garden beds for community gardening, subject to further consideration.



Site Boundary

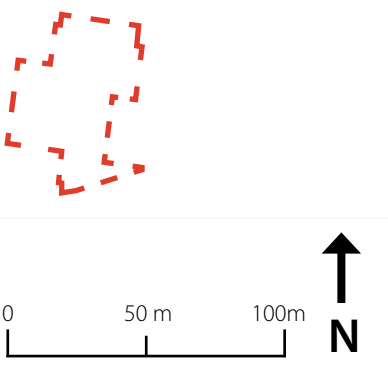


Figure 36. Proposed Open Space and Public Realm



10.5.1 Linking Spaces

These reserves provide local links and connections between streets and individual open space reserves. They provide alternative routes between neighbourhood pockets, and can delight and surprise with well landscaped edges and spaces.

10.5.2 Nature Conservation

Native bushland areas contributes to the overall character of the reserves, with opportunities for the restoration of local vegetation to provide habitat. These areas have been incorporated into the overall master plan as an integral component of the urban design logic and place making.

10.5.3 Urban/Civic

The urban plaza will be an active place to be with contemporary urban character finished with clean, crisp design styles for streetscape elements. The space will include a formal layout of trees and furniture. This space will be flexible and adaptable for a variety of uses and activities, such as a meeting place for coffee, shopping, markets, business and community events.

10.5.4 Waterbody

The village green introduces a water body and local open space to the heart of the neighborhood. The presence of a waterbody makes a significant contribution to the character and use of this reserve, and the overall layout is set out in a planned and structured manner.

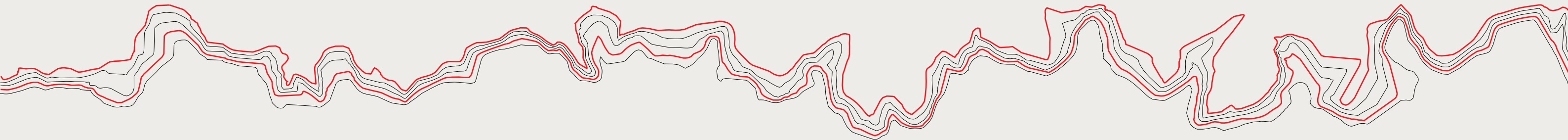
10.5.5 Informal small open spaces and community garden

A mix of informal and formal planned and structured spaces and pocket parks provide an area for locals to congregate and enjoy with neighbours. The open space reserves provide a connection between streets or individual open space reserves, and contribute to the open space network for visual relief and passive recreational use. Some small open space may be considered as a community garden.

Each open space area serves a unique function and will require different landscape treatments, including vegetation and hard surface pavements.

10.6 Management and Maintenance

The overall management and maintenance of public open space areas will be managed by either a private owners corporation or Council. Further discussions with Council will determine the suitable management of the open space.



11. INTEGRATED TRANSPORT PLAN

11.1 Policy Context

In accordance with the provisions of Schedule 6 to the Development Plan Overlay, an Integrated Transport Plan (ITP) has been prepared by Traffix Group. This document can be found within Volume 2 and should be referred to for additional information.

11.2 Transport Objectives and Standards

Clause 18 of the Whitehorse Planning Scheme outlines the State Government’s transport objectives. These objectives have informed the preparation of the Development Plan. The key objectives are summarised as follows:

- Create a safe and sustainable transport system by integrating land-use and transport.
- Coordinate development of all transport modes to provide a comprehensive transport system.
- To promote the use of sustainable personal transport.
- To integrate planning for cycling with land use and development.
- Upgrade and develop the Principal Public Transport Network and local public transport services in metropolitan Melbourne to connect activity centres, link activities in the employment corridors and link Melbourne to regional centres.
- To manage the road system to achieve integration, choice and balance by developing an efficient and safe network and making the most of existing infrastructure.
- To ensure an adequate supply of car parking that is appropriately designed and located.

The overall aims and specific features of the Development Plan meet the objectives of Clause 18. This has been achieved by providing a walkable, cycle friendly urban environment through the provision of a connected and legible pedestrian and cycle paths, including dedicated off road cycling paths. These paths connect with the existing Burwood Heights Shopping Centre, tram and bus stops and local services, and will encourage residents, workers and visitors to access the site by sustainable transport modes, rather than private vehicle. The designation of a large mixed use development along an existing arterial road with good access to employment, services and existing activity

centres supports State Government objectives aimed at integrating existing infrastructure along the Principal Public Transport Network.

The development provides an efficient and safe road system by introducing a new link road between Burwood Highway and Middleborough Road to allow easy and safe access onto the site; introduces several local streets with good on-street parking to enable convenient access; and improvements to intersection treatments, including pedestrian crossings to facilitate for safe vehicle and pedestrian environment.

The development will deliver the necessary amount of car parking spaces, in accordance with the car parking standard specified under Clause 52.06 of the Whitehorse Planning Scheme. There is no intention as part of the Development Plan to seek a waiver of car parking requirements, and it is proposed to provide residential apartment car parking within basements or podiums.

Overall, the development will provide an integrated sustainable transport system that provides access to social and economic opportunities, contributes to environmental sustainability, and coordinates reliable and safe movements of people and goods through walking, cycling and the private motor vehicle.

The proposed transport plan is detailed in Figure 36.

11.3 Existing Conditions

11.3.1 Road Network

Burwood Highway

Burwood Highway is a declared Road Zone Category 1 under the Planning Scheme. Burwood Highway is generally aligned in an east-west direction and connects Belgrave- Gembrook Road in the east (Belgrave) with Warrigal Road in the west (where it continues as Toorak Road).

In the vicinity of the subject site, Burwood Highway is configured as a dual carriageway providing for a central tram reservation and three (3) through traffic lanes in each direction.

A posted speed limit of 70kmh applies to Burwood Highway.

No stopping restrictions apply outside of Clearway periods, which operate 4pm-7pm Monday to Friday on the eastbound carriageway and 6:30am-9:30am Monday to Friday on the westbound carriageway. A limited number of indented parking bays are located on the westbound approach to Middleborough Road on Burwood Highway, at the frontage to Burwood Heights Shopping Centre.

Middleborough Road

Middleborough Road is a declared Road Zone Category 1 under the Planning Scheme. Aligned in a north-south direction, Middleborough Road extends north to the Eastern Freeway continuing as Wetherby Road, and south to Highbury Road continuing as Stephenson’s Road.

In the vicinity of the subject site, Middleborough Road is constructed with a pavement width of 12.7 metres and affords two (2) lanes of through traffic in each direction. Middleborough Road has a posted speed limit of 60kmh and parking along the site’s frontage is unrestricted.

Eley Road

Eley Road is a Road Zone Category 2 collector road providing a connection between Blackburn Road in the east with Station Street in west. Eley Road bounds the subject land to the north and intersects with Middleborough Road north-west of the subject land.

Eley Road has a pavement width of 7.7 metres and provides a through traffic lane in each direction. Eley Road operates with a posted limit of 50kmh which is partly controlled with speed cushions east of the Middleborough Road intersection.

Intersections and Peak Demand

The intersections of Burwood Highway and Middleborough Road, and Middleborough Road and Eley Road are signalised.

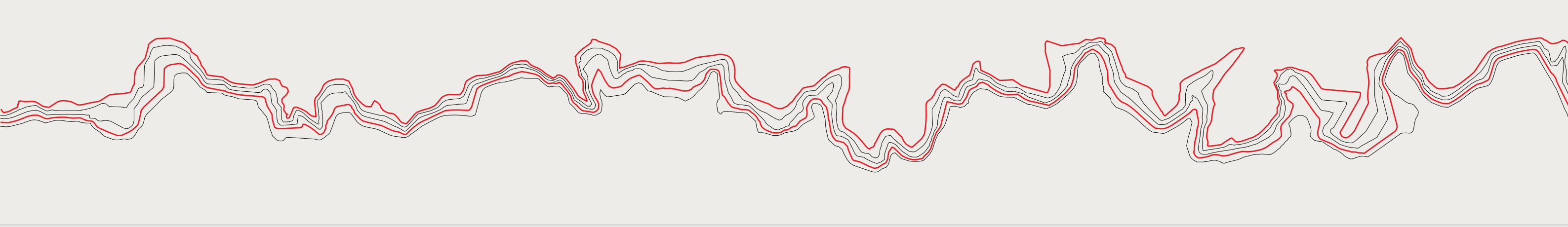
The Burwood Heights Shopping Centre is provided with signalised access to Burwood Highway at the eastern boundary of the RSPCA. The RSPCA access falls within the intersection but is not signalised and does not permit right turns from the RSPCA. More information on existing intersection performance is provided below.

Existing traffic demand has been based upon VicRoad data. Critical peak times are during Friday commuter peak hours and Saturday lunch time. Based upon the traffic movements between Burwood Highway, Middleborough Road, Eley Road and the Burwood Heights Shopping Centre, the existing peak traffic times are:

- AM PEAK: Friday 7.45am – 8.45am
- PM PEAK: Friday 4.45pm – 5.45pm; and
- PEAK: Saturday 12.30pm – 1.30pm.



Figure 37. Transport Plan



Existing Intersection Performance

To understand the existing performance of surrounding intersections, SIDRA analysis was conducted.

SIDRA is a computer program originally developed by the Australian Road Research Board, which can be used to analyse the operation of intersections. Key findings for surrounding existing intersection performances are as follows:

Burwood Highway / Middleborough Road Intersection

The analysis suggests that the Burwood Highway / Middleborough Road intersection is, as expected, experiencing a level of congestion during commuter peak periods, with lengthening queues and delays in peak directions. This level of congestion is not unusual for intersecting arterial roads within inner suburban areas during peak times.

It is noted that the right turn queues on the Middleborough Road north approach extends to the full length of the available storage during all commuter peak times. All other movements at this intersection operate within capacity and existing geometry of the intersection.

Burwood Highway / RSPCA / Woolworths Intersection

The analysis suggests that the Burwood Highway / Burwood Heights Shopping Centre intersection is generally operating within capacity. It is noted however, that the left and through movements exiting Burwood Heights currently experience some delay in the afternoon peak hour.

This is due to the signal coordination with the Burwood Highway / Middleborough Road intersection, which allocates a significant portion of green time to the critical through movement to allow these movements to continuously travel through at both intersections.

All other movements at this intersection operate within capacity and existing geometry of the intersection.

Middleborough Road / Eley Road Intersection

The analysis reveals that the intersection operates with a biased allocation of green time in favour of Middleborough Road.

In this regard, the right turn movement on the east approach can encounter some level of delay and queue beyond the available storage. Due to the geometry of the east approach, the right turn movement can interfere with the westbound through movements. As a result of the green

time allocated to Middleborough Road, northbound and southbound traffic experience relatively little congestion at this intersection.

11.3.2 Public Transport

The subject land is well serviced by public transport, with tram routes on Burwood Highway, and bus routes on Middleborough Road and Burwood Highway. A summary of the available services is outlined below:

- Tram route 75 operates on the Burwood Highway frontage and provides services between Etihad Stadium / Bourke Road Docklands and Vermont South via the CBD, Richmond, Hawthorn and Burwood. Services operate from 5am-1am Monday to Thursday and Sunday, and till 2am on Friday and Saturday at 10-20 minute intervals. The closest tram stops are at the intersection of Burwood Highway and Middleborough Road. There are also stops immediately to the east of the site near to the intersection of Old Burwood Road with pedestrian signals on Burwood Highway.
- Bus route 733 operates between Oakleigh and Box Hill via Clayton, Monash University and Mt Waverley, Monday to Sunday from 6am till 10pm at approximately 15 minute intervals during peak times. Major nodes include Box Hill, Mt Waverley, Clayton and Oakleigh Railway Stations, Burwood East and Clayton Shopping Centres and Monash University (Clayton). The nearest stop is located on the Middleborough Road frontage.
- Bus route 732 runs services to Upper Ferntree Gully and Box Hill Railway Stations, Deakin University (Burwood), Vermont South, Knox City and Mountain Gate Shopping Centres and operates past the Burwood Highway frontage. The nearest stop is situated at the RSPCA frontage. This service operates Monday to Sunday from 5am till 10pm.
- Bus route 735 provides a service between Box Hill and Nunawading via Station Street, Eley Road and Fulton Road. This service operates Monday to Sunday commencing at 6am and ceasing at 10pm. This service operates through Forest Hill Chase Shopping Centre, Nunawading and Box Hill Railway Stations and Deakin University (Burwood). The nearest stop to the site is located on the Eley Road frontage.

The above bus services provide direct connections to Box Hill, Laburnum and / or Mt Waverley Railway Stations.

The development is advantageously positioned to utilise these existing public transport services.

11.4 Trip Generations

Overall traffic generation

The development will generate a substantial number of trip movements within and beyond the site. In order to understand the anticipated distribution of trip movements, ABS Census 2011 'Method of travel to work data' for the Burwood East population were reviewed.

Mode	% Current Burwood East population	Target % for future residents in new development
Car (driver & passenger)	65.5%	54%
Public Transport	16%	20%
Bicycle	0.5%	5%
Walked	1.6%	5%
Motorcycle	0.3%	16%
Taxi	0.1%	
Worked at Home	3.7%	
Did not go to Work	9.3%	
Method of travel Not Stated	1.4%	
Other	1.2%	

Table 5 - Method of Travel to Work (ABS 2011)

Private vehicle travel will be the most common travel method for many people who live within and outside the site. Additional walking and cycling connections through the site is expected to increase the number of residents, workers and visitors choosing to access and move around the site by sustainable modes of transport.

Traffic Generation

In assessing the potential traffic generation produced from the development, average residential car movements were applied. These rates were selected with reference to the Road Traffic Authority (RTA) of New South Wales Guide to Traffic Generating Developments; Institute of Transportation Engineers ‘Trip generation’; and the Inner Metropolitan Regional Association ‘Inner Municipalities Parking Study’.

An average rate of 0.5 movements per dwelling was applied to all residential areas, factoring in the different housing typologies.

Retail traffic movements applied a rate of 4.6 movements per 100 square metres for the PM and Saturday peak, and 1.15 movements (25% of the peak rate) per 100 square metres for the AM peak. Non-retail traffic movements applied a rate that is 50% of the adopted retail traffic generation rate.

These rates were then applied across the retail and residential areas to gather traffic movement during AM and PM peak times.

The development is expected to generate 624 vehicle movements in the morning peak hour, and 1,014 vehicle movements in the afternoon and Saturday peak hours.

Trip Type	Units / Area	AM Peak	PM & SAT Peak
Residential	950 dwellings	475 vph	475 vph
Retail	10,500 sqm	121 vph	483 vph
Non-Retail	2,456 sqm	28 vph	56 vph
Total		624 vph	1,014 vph

Table 6 - Projected Peak Hour Traffic Volumes

It is generally accepted by traffic standards that the peak time only represents 10% of the overall traffic movement.

On this basis, the development could generate **10,144 vehicle movements per day**, with 50 movements associated with service vehicles per day.

To understand the distribution of traffic within the development, the site was considered in five key precincts. The dwelling type and subsequent number

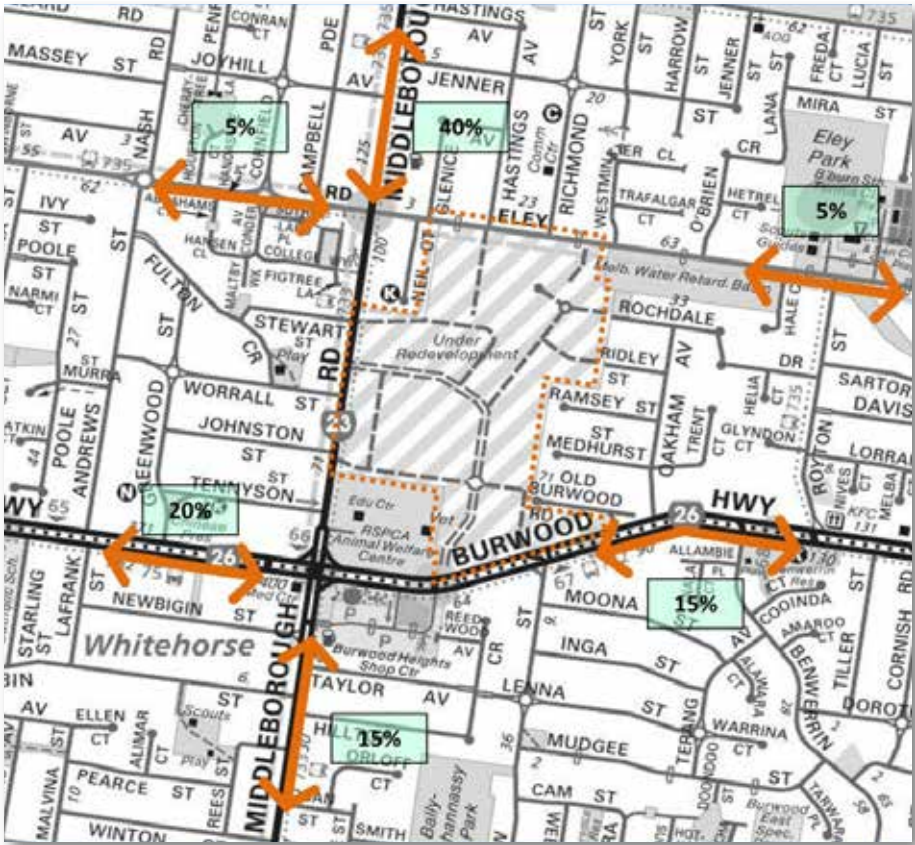


Figure 38. Traffic Distribution (Residential)

of dwellings achieved throughout a particular precinct were key determinants in this assessment. For example, the northern precinct contains approximately 175 dwellings which will utilise Eley Road to access the ‘site’. The majority of dwellings (approximately 775) will be accessed via the boulevard from Burwood Highway and Middleborough Road. The uses and projected traffic generation from each block within the site is summarised in the Integrated Transport Plan, in Volume 2.

11.5 Distribution of Traffic

The anticipated distribution of traffic, impacted by both entering and exiting vehicles are shared across the following factors:

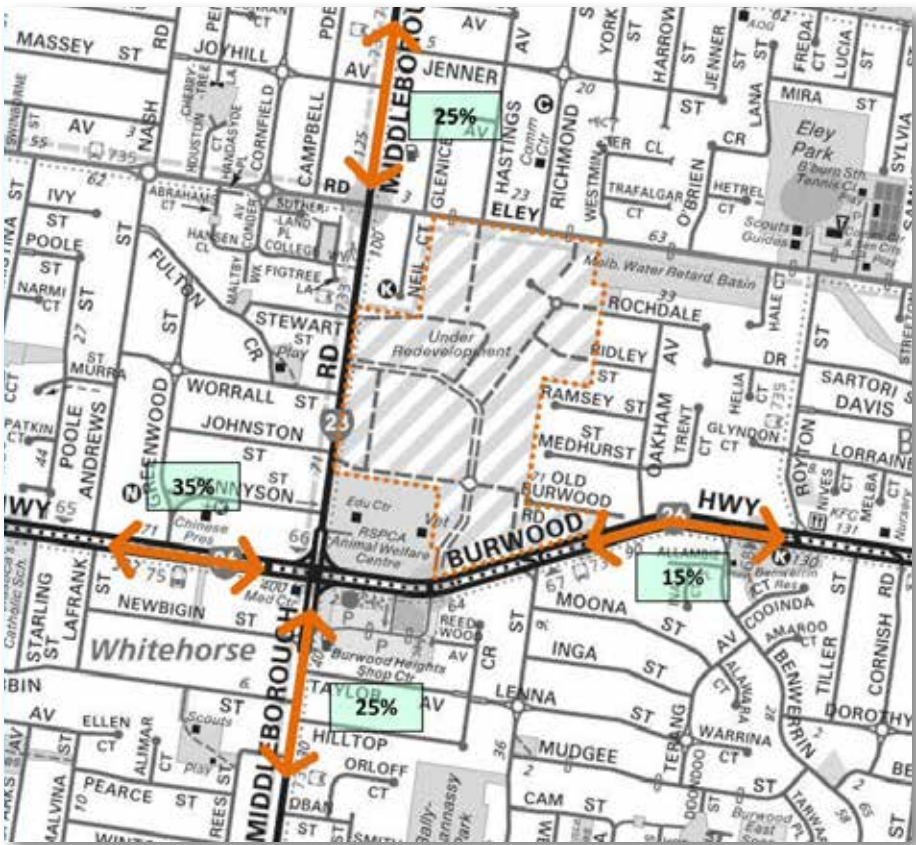


Figure 39. Traffic Distribution (Retail)

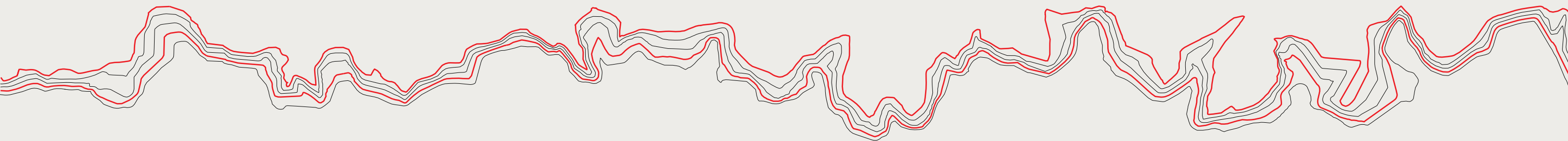
Residential Traffic

- 20% arrivals and 80% departures and 60% arrivals and 40% departures in the morning peak and afternoon peak hours respectively

Retail Traffic

- 50% arrivals and 50% departures in both the morning and afternoon peak hours and Saturday

Figures 37 and 38 highlight the distribution of traffic across the surrounding road network.



11.6 Impact on road network and mitigation works

To assess the impact of the development on the existing intersections of Middleborough Road and Burwood Highway, and Middleborough Road and Eley Road, the projected peak hour development traffic volumes have been superimposed on existing traffic volumes.

Burwood Highway / Middleborough Road Intersection

The intersection of Burwood Highway and Middleborough Road is presently operating under stressed conditions during peak periods due to heavy traffic volumes in the peak direction on Burwood Highway.

In this regard, and following discussions with VicRoads, it is considered that a base year of 2014 will provide the most suitable analysis to determine the level of impact from the proposed development.

The level of works should also be reflective of the quantum of traffic that the development may add. That is, if the percentage increase of intersection traffic is relatively small, then the level of mitigation works should also be relatively inexpensive.

Overall the development is projected to add 467 movements in the PM peak hour, when the intersection already accommodates 6,080 vehicles. This relates to approximately an 8% increase, which is relatively minor, and accordingly the levels of mitigation works should be reflective of such a modest increase.

A review of the intersection reveals that there is limited scope to provide additional capacity for through movements, however there is an opportunity to lengthen the right turn storage capacity on both the north and east approaches, allowing greater storage, and the ability for turning motorists to enter the turn lanes earlier (in effect allowing better access from the back of developing through queues).

It is therefore proposed to lengthen the right turn storage on the east approach from 75 metres to 100 metres, and on the north approach from 40 metres to 60 metres.

Middleborough Road / Eley Road Intersection

Additional traffic volumes can be accommodated with no material change to the operation of the intersection. Therefore remedial works at this intersection are not necessary as a result of the development.

11.7 Traffic Management

Site access intersections

The development will introduce multiple mitigation measures. These primarily include additional or upgrades to existing intersections across the site's key access points. The site proposes four key entry points:

- Burwood Highway / Site Access / Burwood Heights Shopping Centre Intersection
- Middleborough Road / Northern (Boulevard) Site Access Intersection
- Middleborough Road / Southern Retail Access Intersection (south of Middleborough Road)
- Eley Road / Northern Access Intersection (opposite Richmond Street)

Burwood Highway / Site Access / Burwood Heights Shopping Centre Intersection

It is proposed to provide a fourth (northern) leg to the existing signalised intersection of Burwood Highway and Burwood Heights Shopping Centre. Additionally, improvement works are proposed to minimise changes to existing 'green time' afforded to Burwood Highway. Specifically, it is proposed to widen the southern carriageway of Burwood Highway to provide for a 2nd right turn lane into the site link road. The northern carriageway of Burwood Highway will be locally widened on the approach to the intersection to accommodate a left turn lane.

The intersection arrangement is expected to include:

- A second 60 metre right turn auxiliary lane on the Burwood Highway east approach. The widening will be to the southern side of Burwood Highway. The widening will impact on two (2) trees on the westbound approach to the intersection. The trees will be replaced by new trees.
- A 75 metre left turn auxiliary lane on the Burwood Highway west approach.
- Three departure lanes on the northern leg, comprising a right turn lane; a shared through and right turn lane; and a left turn slip lane.
- Reconfiguration of traffic signalling to include, bonus left turns on the Burwood Highway west approach, and an additional phase to

serve movements on the north approach. That is, the north and south approaches will operate under a split phase arrangement.

- Signalised pedestrian facilities will continue to be provided to link the site with Burwood Heights Shopping Centre.

Figure 40 illustrates the proposed layout for the intersection of Burwood Highway, the link road and Burwood Heights Shopping Centre access.

Middleborough Road / Northern (Boulevard) Site Access Intersection

The intersection will be a signalised T-intersection and will incorporate localised widening of Middleborough Road to facilitate auxiliary turn lanes. This widening will necessitate approximately a 3 - 4 metre width along the Middleborough Road site frontage to be transferred to road reservation. It is also noted that the widening will necessitate the relocation of existing electrical services within the eastern verge of Middleborough Road. The intersection arrangement is expected to include:

- A 75 metre right turn auxiliary lane on the Middleborough Road south approach.
- A left turn slip lane (55 metres) on the Middleborough Road north approach.
- A left turn slip lane (55 metres) and two (2) right turn lanes on the east approach of the boulevard, reducing to a single lane approximately 70 metres east of Middleborough Road.

The right turn lane on the south leg will extend beyond Worrall Street, situated on the west side of Middleborough Road. To mitigate risks associated with right turn movements, Worrall Street will be reconfigured to restrict movements to left-in / left-out, consistent with the existing approved ITP.

Motorists currently turning right in to Worrall Street are likely to divert to Stewart Street and Johnston Street. Similarly, existing motorists turning right from Worrall are likely to divert to Johnston Street.

Middleborough Road /Southern Retail Access Intersection

The intersection will be designed as a T-intersection and be restricted to left-in / left-out.

The intersection will be provided with a left turn deceleration lane and the inclusion of a splitter island to facilitate exit movements onto Middleborough Road and pedestrian movements across the retail access.

The access has been designed to accommodate the swept path of a 19 metre semi-trailer. Specific details involving loading activities will be confirmed during the planning permit application phase when more information about building siting and design will be available.

Eley Road / Northern Access Intersection

The access to Eley Road is sited opposite Richmond Street and will form a cross intersection that is proposed to be constructed with a roundabout to manage vehicle speeds and movement.

The proposed roundabout has been designed with an annulus of 8.8 metres diameter, including a centre annulus of 4.8 metres diameter. These dimensions are similar to the dimensions of the existing roundabout at Bronte Avenue and Clanbrae Avenue to the west of the site.

It is proposed to implement “no parking” along the south side of Eley Road between Westminster Close and Middlebrough Road as part of the development.

Internal Roads

The street network is based on the provision of a link road connecting Middleborough Road and Burwood Highway, and no vehicle connection between the northern and southern precincts to constrain traffic impacts on Eley Road. Individual allotments will be provided with access from local streets or laneways. The street network will be designed to ensure that reversing of emergency and service vehicles will not occur.

The proposed cross sections of the different street types are as follows:

Connector Street – Link Road

For Connector Streets, the MPA suggests a road reserve of 25 - 31 metres.

The master plan envisages a 25.9 metre wide road reservation for the link road. The reservation is to comprise a 12 metre pavement, a 4.5 metre verge on one side and a 9.8 metre verge on the opposite side. The road pavement will consist of a 2.5 metre parking lane and 3.5 metre traffic lane in each direction. Footpaths will be provided on both sides of the link road, and the wider verge will accommodate a separate 3.0 metre two-way off-road cycle path.

Threshold treatments will be provided in appropriate locations to create a low vehicle speed environment.

Access Street – Level 1 (<2,000vpd)

It is proposed that the local streets will be provided with a 14.5 metre reservation to contain a centrally located 7.3 metre pavement, affording a 3.6 metre verge on each side. Footpaths will generally be provided on both sides, with the exception of streets that abut public open space.

The pavement width exceeds the suggested minimum requirement of 5.5 metres stipulated within Clause 56.06-7, and will provide the opportunity for on-street parking on both sides of the road, whilst maintaining a single traffic lane.

Laneways

Some housing is likely to be provided with access to car parking at the rear, accessed via laneways. It is proposed that laneways will be provided with a minimum reservation of 6.5 metres to allow a minimum pavement width of 5.5 metres and intermittent street tree planting and space for placement of bins for collection.

The proposed width exceeds the minimum width of 5.5 metres as specified for an Access Lane under Clause 56.06-7 of the Planning Scheme.

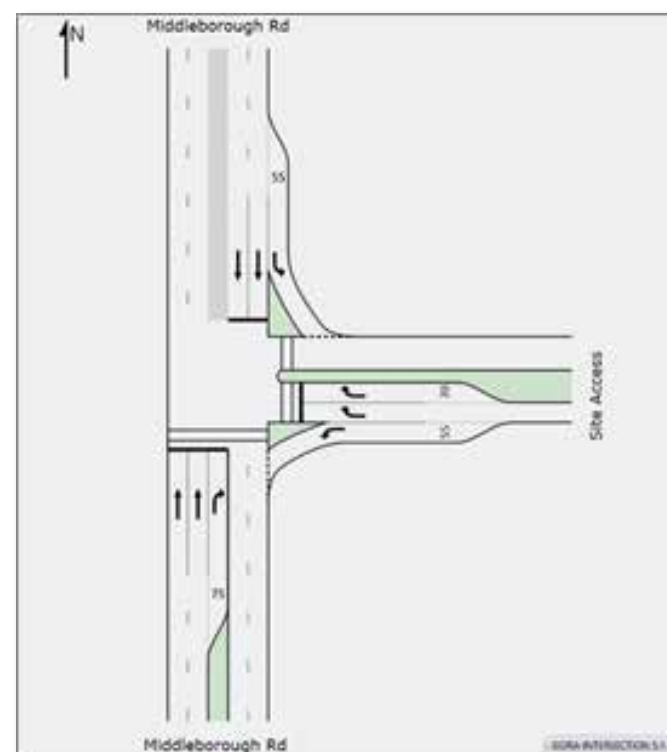


Figure 40. Middleborough Road /Boulevard Access Intersection

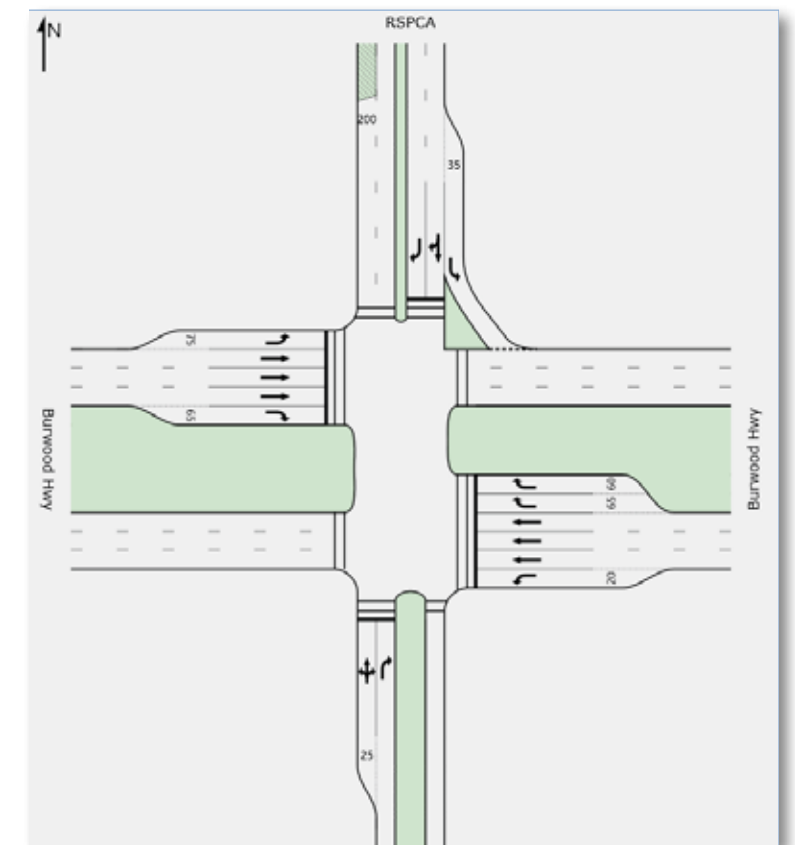
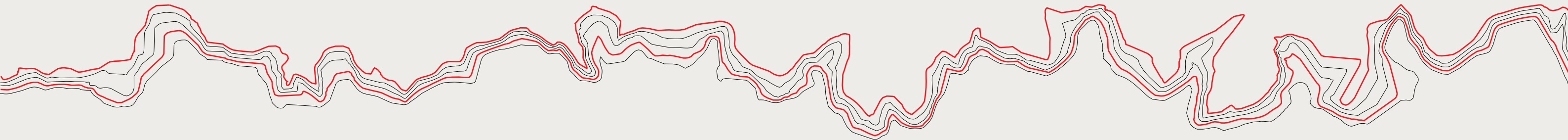


Figure 41. Burwood Highway/ Burwood Heights Shopping Centre/ Link Road Proposed Intersection Configuration

Pathways

The internal access network will include shared and dedicated pedestrian and cycle paths with minimum dimensions as follows:

- 1.5 metre wide pedestrian footpaths (1.0 metre wide for laneways, 1.2 metre wide for roads with less than 300 vehicle movements per day)
- 2.5 Metre wide shared paths; and
- 3.0 Metre wide dedicated cycle paths.



11.8 Public Transport

As described under section 11.3, the site is well situated in relation to available public transport services and over 95% of the site is situated within 400 metres of available existing public transport services. In this regard it is not necessary for the diversion of existing bus routes to travel through the site.

The master plan has ensured that convenient pedestrian connections are provided to the existing tram stops on Burwood Highway and bus stops on Middleborough Road, Burwood Highway and Royton Street (via Rochdale Drive).

All bus stop locations are to be to the satisfaction of PTV and VicRoads

Development of the site will also provide more convenient connections for the existing neighbourhood to the north to access the tram on Burwood Highway, thereby improving public transport connectivity and accessibility.

11.9 Bicycle and Pedestrian Movement

A pedestrian and cycle focus has been a guiding principle in the evolution of the Master Plan. The movement and access strategy is to provide a comprehensive network of pedestrian and cycle paths to allow movement between neighbourhoods, through the site, and to the proposed open space, community and retail facilities.

Specifically, footpaths will generally be provided on both sides of local streets (except where streets abut a public open space). There will be off-road bicycle paths for the length of the link road, connecting Middleborough Road and Burwood Highway. There will also be off-road connections to the north to connect to Eley Road, which is on the Principal Bicycle Network, and pedestrian connections to existing residential streets to the east, including Rochdale Drive and Ridley Street.

Presently the site is fenced off, and consequently acts as a barrier between the existing neighbourhood to the north and Burwood Highway where access to the tram stops and Burwood Heights Shopping Centre is provided. Development of the site will significantly improve pedestrian and cycle accessibility for the broader community to the north. The proposed bicycle network and pedestrian connections are illustrated on Figure 36.

11.10 Parking

Car parking will be provided in accordance with Clause 52.06 of the Whitehorse Planning Scheme. In the context of likely visitor demand and car ownership levels, the following car parking rates are considered supportable for the proposed development:

- 1 & 2 bedroom dwellings – 1 space per dwelling.
- 3 or more bedroom dwellings – 2.0 spaces per dwelling.
- Residential Visitors – 0.2 spaces per dwelling.
- Retail / Shop – 4 spaces per 100 square metres.
- Supermarket – 5 spaces per 100 square metres.
- Cinema based entertainment complex – 0.3 spaces per patron.

The road network will allow for on-street parking, which will cater to the projected residential and visitor parking demands and will support the dedicated retail parking.

11.11 Loading and Unloading

The Development Plan proposes a service road at the southern boundary of the development off Middleborough Road. The primary purpose of the service road is to provide access to the retail at-grade parking and loading areas.

It is expected that retail loading will be primarily undertaken at this location, however there is likely to be intermittent activity along The Boulevard consistent with strip retail centres throughout Melbourne.

11.12 Sustainable Travel

The development promotes sustainable travel modes within and to the site. This mixed use development integrates well designed and spacious pedestrian and cycling links, including dedicated off-road cycling links connecting the residential, retail and open space components of the site. The site is well situated to provide convenient access to existing public transport services, including the tram network on Burwood Highway and bus routes on Middleborough Road, Burwood Highway and Royton Street (via Rochdale Drive).

As part of the planning application process, a Green Travel Plan will be

submitted. The Green Travel Plan Initiatives will include a range of walking, cycling, public transport and car pooling measures to encourage sustainable travel behaviour for residents, workers and visitors.

The development will promote sustainable green travel modes and reduced dependency on cars by:

- Providing bicycle and pedestrian trails and end of trip facilities;
- Encouraging public transport patronage;
- Promoting carpooling;
- Providing incentives for participants; and
- Providing information and events to drive the strategies above.

Key strategies may include:

Walking

Maps and signs showing walking routes with time to key sites and local services; provision of change of clothes areas; and improving footpaths and connections to nearby attractions.

Cycling

Secure, easy to access bicycle parking; bicycle route maps and affordable and accessible repair and service centres and supplies.

Public Transport

Timetable information online, leaflets and on notice boards, and encouraging businesses to use public transport.

Car Pooling

Allocating priority parking to car pooling and car pooling databases. Liaising with car operators to provide publicly available car share pods within the site.

Implementation of the Green Travel Plan will be regularly monitored and reviewed throughout the detailed design, construction and occupancy of the development.



12. ECOLOGICALLY SUSTAINABLE DESIGN (ESD) STRATEGY

12.1 Policy Context

In accordance with Schedule 6 to the Development Plan Overlay, Organica Engineering has prepared an ESD strategy. The purpose of the report, which is contained within Volume 2, is to present a description of ESD strategies and initiatives that could be implemented across the former brickworks site 78 Middleborough Road, Burwood East.

The development will incorporate a range of Ecologically Sustainable Development (ESD) and Water Sensitive Urban Design (WSUD) initiatives and meet or exceed all relevant Federal and State Government statutory obligations with regard to energy and water conservation, passive design of buildings, waste management, water sensitive urban design and planning.

12.2 Green Star Community Assessment Tool

The identification of sustainable principles, initiatives and targets for the development has been based upon the Green Star Communities rating tool.

Green Star Communities has been developed by the Green Building Council of Australia – it represents consensus around Australia between industry and government on the best ways of applying sustainability principles in precinct developments. This project is committed to achieving a 5 Star Certified Green Star Communities Rating. 5 Stars represents Australian Excellence – a level of sustainability that will become a leading example of excellent sustainable design nationally. Green Star Communities meets and exceeds the requirements of the Whitehorse Planning Scheme for sustainability.

12.3 ESD Principles

Key principles of the green Star Community Rating are:

- Enhance liveability
- Create opportunities for economic prosperity
- Foster environmental responsibility
- Embrace design excellence
- Demonstrate visionary leadership and strong governance
- Innovation

12.4 Performance Targets and Design Response

Environmental sustainable targets will be tested against the initiatives and targets specified under the Green Star Communities initiatives. They include the following categories and initiatives.

12.4.1 Governance

The purpose of the Governance category is to encourage developers and projects to be engaged, transparent and committed to delivering positive economic, environmental, and social outcomes. Specific initiatives of this category include:

- Corporate Responsibility
- Sustainability Awareness
- Engagement and Stakeholder Engagement
- Adaption and Resilience
- Environmental Management

The development will achieve these targets by promoting sustainable and measurable design and environmental management techniques, and also engaging with key stakeholders, including Council and the community throughout the design, construction and occupancy of the site. Key tasks which have or will be undertaken in the near future by Frasers Property Group are:

- Appointment of a Green Star Accredited Professional to advise on how structure, timing and processes of the development can achieve a 5 star green rating.
- Stakeholder engagement early in the planning process with Council and the local community.
- Development of a Climate Adaptation Plan (CAP). (More details in the ESD report, contained in Volume 2.)
- Corporate Responsibility Plan addressing: Organizational Governance; Human Rights; Labour Practice; Environment; Fair Operating Practices; Consumer Issues; and Community Involvement & Development.
- Creation of a Community Users Guide for all land owners and tenants, including residential, commercial, retail, education, office etc. Through this, community participation and governance of the new

neighbourhood will be encouraged.

- Current certification of the company to the international environmental management standard ISO 14001.

12.4.2 Design

The Design category aims to promote sustainable planning principles to create compact and connected places for people.

The location, orientation and overall design of new buildings across the development have been carefully considered in relation to the overall layout of pedestrian, cycling and road networks and will ensure public spaces are connected, easy to access and entice people to come together to enjoy the space.

A detailed design review process between Council and the developer will facilitate for sustainable development. The development will promote sustainable residential buildings and ensure 50% of dwellings on site achieve certification in accordance with the Livable Housing Australia Design Guidelines.

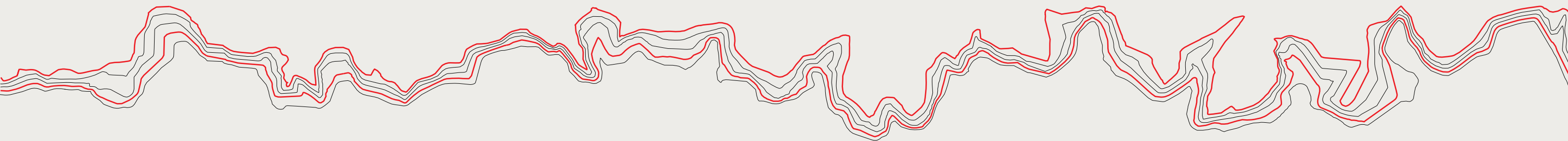
12.4.3 Liveability

Liveability aims to deliver safe, accessible and culturally rich communities. Key initiatives are:

- Access to Amenities
- Community Development
- Healthy and Active Living
- Access to Fresh Food
- Safe Places

The initiatives focus on providing a range of high quality services and amenities close to where people live; creating good pedestrian, cycling and vehicle connections; and maximising visibility and activity within public spaces.

The development will have a range of local services and activities, including a full-range supermarket within the central and easily accessible retail core. These activities will be well connected to the surrounding open space and residential quarters via a series of pedestrian, cycling and road linkages, including the main boulevard.



The development will ensure passive surveillance through natural and illuminated lighting and encourage passive and active recreational activities to occur at most hours of the day. Key features of the development which respond to liveability are:

- Footpaths in accordance with the requirements of the Australian Model Code for Residential Development (AMCORD) and meeting the Green Star Communities requirement.
- Close and easy access to a public park for all residents, workers and visitors to the site.
- Wayfinding elements through architectural treatments and signage to improve navigating the site by foot or alternative transport;
- Encouraging social interaction through public art, interesting places, safety, and accessible features for all.
- Access to fresh food, safe places, a range of high quality amenities (eateries, schools, entertainment).

12.4.4 Community Development

A Community Development Plan will be prepared which addresses key issues that are important to the community. The key issues are decided as part of the community consultation process, addressing issues such as community connection and cohesiveness, local culture, dispute resolution, and environmental management issues. A community development officer will be employed to implement the Community Development Plan for the project. They will be employed/contracted for at least 1 day per week after 50% of dwellings are occupied.

Frasers Property Group will facilitate the establishment of a community group that contributes to the implementation of the Community Development Plan (e.g., residents, business reps, education reps). This group will be established by the time approximately 50% of dwellings are occupied.

Community information through notice boards in public spaces and online forums will also be available to the community.

12.4.5 Economic Prosperity

Economic Prosperity strives to create positive economic growth through creating business diversity; spaces for innovation and education; and reducing energy consumption levels. Specific initiatives are:

- Employment and Economic Resilience

- Education and Skills Development

- Community Development

- Affordability

- Reducing Electricity Demand

The development is located less than 1 kilometre from Deakin University, as well as other training institutes nearby. The site is situated within 5 minutes drive, bus or tram ride) to a range of employment opportunities, including education, light manufacturing, office, retail and other commercial work, and also has reasonable access to Melbourne CBD based jobs. The following features of the development promote the principles of economic prosperity:

- Provide state of the art internet broadband access to all buildings on the site.
- Provide a free Wireless Local Area Network (Free Wi-Fi) at the retail centre.

The development also seeks to reduce peak electricity demand for residents and businesses.

12.4.6 Environment

The Environment category encourages resource management and efficiency by promoting infrastructure, transport, and buildings with reduced ecological footprints. Initiatives include reducing the Heat Island Effect and greenhouse gas intensity, and ensuring materials, water and waste management are considered under a framework which protects the environment.

Specific targets include using recycled building materials; utilising non-potable water; increasing areas with significant vegetation; and reducing building construction and demolition waste. The development strives to meet all these targets through a range of activities, including:

- A bio-retention area contained within the commercial / retail service area for the water quality treatment of the commercial / retail area.
- 80% of reinforcing steel, asphalt and concrete used in site-wide works to be sourced from reinforcing steel manufacturing facilities, asphalt batching plants and concrete batching plants that have an accredited ISO 14001 Environmental Management System (EMS) in place.
- A Waste Reduction Plan for site-wide works; and more than 80% of the construction and demolition waste associated with site works to be recycled or reused on site or elsewhere.

12.4.7 Innovative

Innovation encourages innovative strategies and new technologies that will contribute towards sustainable development in Australia and around the world. Initiatives under this category also need to respond to the challenges proposed by the Green Building Council of Australia (GBCA) and consider innovative methods to achieve the objectives and initiatives outlined in the Green Star Communities framework.

The development will work with Council and Green Building Council of Australia to consider alternative and innovative methods to achieve the 5 star Green Star target.

12.5 Implementation

Implementation and ongoing monitoring of the ESD strategy will be considered throughout the various phases of the development. These include:

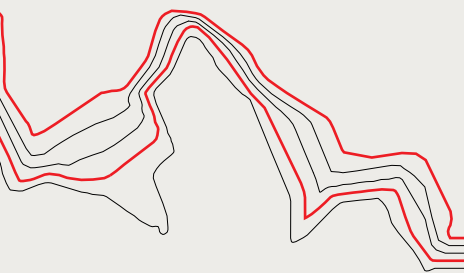
- Preliminary considerations and planning
- Schematic design phase
- Detailed design and contract documentation phase
- Construction phase
- Occupancy phase

12.6 Performance Review

This development will also undertake third party certification of the Green Star Communities performance standards, to ensure that the standards are integrated into the design.

The Green Building Council will assess the project in two stages: the first is a review of the masterplan and preliminary design documentation, and the second assessment is to review the project in three years' time once the first stages are completed. The assessment by the GBCA will be undertaken by an independent panel of assessors, and the assessment process will review each of the credits claimed by the project as outlined.

The ESD Strategy in Volume 2 sets out in detail the means by which ESD principles will be incorporated into the use and development of the site, including a description of the Green Star Communities Pathway, available credits to achieve certification, and targets for credit compliance.



13. SERVICES AND ENGINEERING INFRASTRUCTURE

13.1 Policy Context

A Services and Engineering Infrastructure report has been prepared in accordance with the provisions of Schedule 6 to the Development Plan Overlay in the Whitehorse Planning Scheme. The report has been prepared by Reeds Consulting and the assessment addresses all necessary infrastructure needs. This includes drainage, water supply, sewerage, electricity / lighting, telecommunications and gas.

Overview

The Services and Engineering Infrastructure report prepared by Reeds and the Stormwater Strategy report prepared by Incitus concluded that all necessary infrastructure is available to the site and where the upgrade or augmentation of certain services is required to meet the demands of the overall development, this can be done to suit the proposed staging and timing of the development. Copies of these reports are contained in Volume 2.

13.2 Existing and Proposed Infrastructure

13.2.1 Drainage - Water Supply and Sewerage

Potable water reticulation

Yarra Valley Water is the authority responsible for water in this area. They confirm that potable water supply is available to the proposed development from the existing mains in Eley Road, Middleborough Road and Burwood Highway.

Recycled water

Yarra Valley Water advises there is no requirement to provide recycled water (third pipe) facilities for the development, nor is there an established authority- based public recycled water system within the region.

Sewerage reticulation

Yarra Valley Water advises there are two sewer points available for the connection of sewerage flows from the development being manhole ELY28 located in Eley Road and manhole STS7-103 located to the west of Middleborough Road.

The existing sewer in Eley Road at ELY28 is currently at capacity and will not be able to cater for flows from the development until it is upgraded. The upgrade is scheduled for completion at the end of 2017. The upgrade of the Eley Road Branch together with the existing Station Street Branch Sewer will later form the full sewerage flow requirements of the ultimate development proposed in the development plan.

13.2.2 Electricity / Street Lighting

The existing overhead and underground electricity assets located within the Burwood Highway road reserve, Middleborough Road and Eley Road together with the existing substations currently servicing the existing business and residences will form the basis of the infrastructure required to supply to the proposed development. The detailed design of electrical works, cabling, lighting and the final siting of kiosk substation/s will be undertaken on a stage by stage basis in accordance with the proposed network scope and general requirements of United Energy.

Street lighting and in particular the type of pole and light fittings internal to the development will be subject to approval of Council and United Energy and externally, in the arterial road network, lighting will require VicRoads' approval.

Consistent with 'The Whitehorse Sustainability Strategy (2008 – 2013)' the development will include energy conservation measures to reduce greenhouse gas emissions and provide long term energy savings in its infrastructure. The specific measures are detailed in Section 12 of this report.

13.2.3 Telecommunications

NBN Co is the responsible agency for telecommunications networks to the site. An approved NBN Co provider will design and install the infrastructure within the development on a staged basis and also install the extension of the network or backhaul to the development as required. Telstra has various existing assets within the surrounding road network abutting the subject land and these assets will form the basis of supply for the proposed NBN network for the development.

13.2.4 Gas Supply

Multinet Gas is the responsible authority of gas in the area. They have existing high and medium pressure gas mains located in Burwood Highway and Middleborough Road and an existing medium pressure main located in Eley Road. It is expected these mains will form the basis of gas supply for the proposed development. Multinet Gas will provide gas reticulation to the development on a stage by stage basis, generally at no cost to the developer. It is proposed that the gas works will be constructed concurrently with the water supply works and the developer will be required to provide trenching and backfill requirements to the gas company's current requirements.

13.3 Stormwater Management

Catchment / Hydraulic Considerations

Melbourne water has considered the proposal in relation to Catchment and Hydraulic considerations and have provided 'in principle' support for the (development) proposal and noted the effect of the development on the existing system including the minor increases in the flood level and flow at its Eley Road RB which are offset by the reduction of overland flows to the north and North West.

Drainage

All lots and buildings within the development will be designed with appropriate freeboard above the relative flood levels to the approval of Council and Melbourne Water.

Retardation

The preliminary siting and spatial requirements of the retarding basin have been planned and designed in conjunction with the project Urban Designer and Landscape Architect, to integrate this element as a key part of the amenity of the open space reserve having due consideration to the recreation and access uses of the reserve by the public and the proposed drainage function. Therefore particular regard has been given to the proposed levels, grading and treatment of the reserve, the location of inflow and discharge points and the potential variation in flood levels for various storm events. Refer to Figure 41 Central Retarding Basin. Melbourne Water has accepted the proposal to relocate the wetland to its existing Eley Road retarding basin and to enhance the facility with new paths, viewing deck, seating, fencing and other landscape elements that would provide local residents with additional amenity. This has enabled the redesign of the proposed central reserve to achieve a better outcome for this key open space. Approvals in relation to the retarding basin are subject to further detail and consultation with Council and Melbourne Water. Future management/maintenance responsibilities have not been established yet.

13.4 Water Sensitive Urban Design

The development will consider the following WSUD elements:

- A wetland integrated with the Melbourne Water retarding basin treating the majority of the residential development area. The wetland will include a sediment basin and other facilities based on the requirements of Melbourne Water 'Constructed Wetlands Guidelines'. Storm water overflow, sediment control and potential impacts onto the surrounding open space and residential quarters are detailed in the *Engineering Services and Stormwater Management Report*, contained in Volume 2. Figure 41 illustrates the proposed wetland retarding basin.

- On-site stormwater treatment exceeding best practice for the retail site.

Other considerations include:

- The use of porous paving and other water quality measures within car parking area and certain road elements;
- The use of rainwater tanks for toilet flushing and garden watering / irrigation in housing and other areas of the development;
- The use of other water treatment measures such as rain gardens and porous pavement areas in housing and other areas of the development;
- Grey water reuse in housing and other parts of development;
- Planting and landscape in public and private areas designed with water conservation and sustainability objectives as key considerations;
- Promoting water conservation and waterway health issues and strategies for residents and occupiers of the development via public signage and other promotional material.

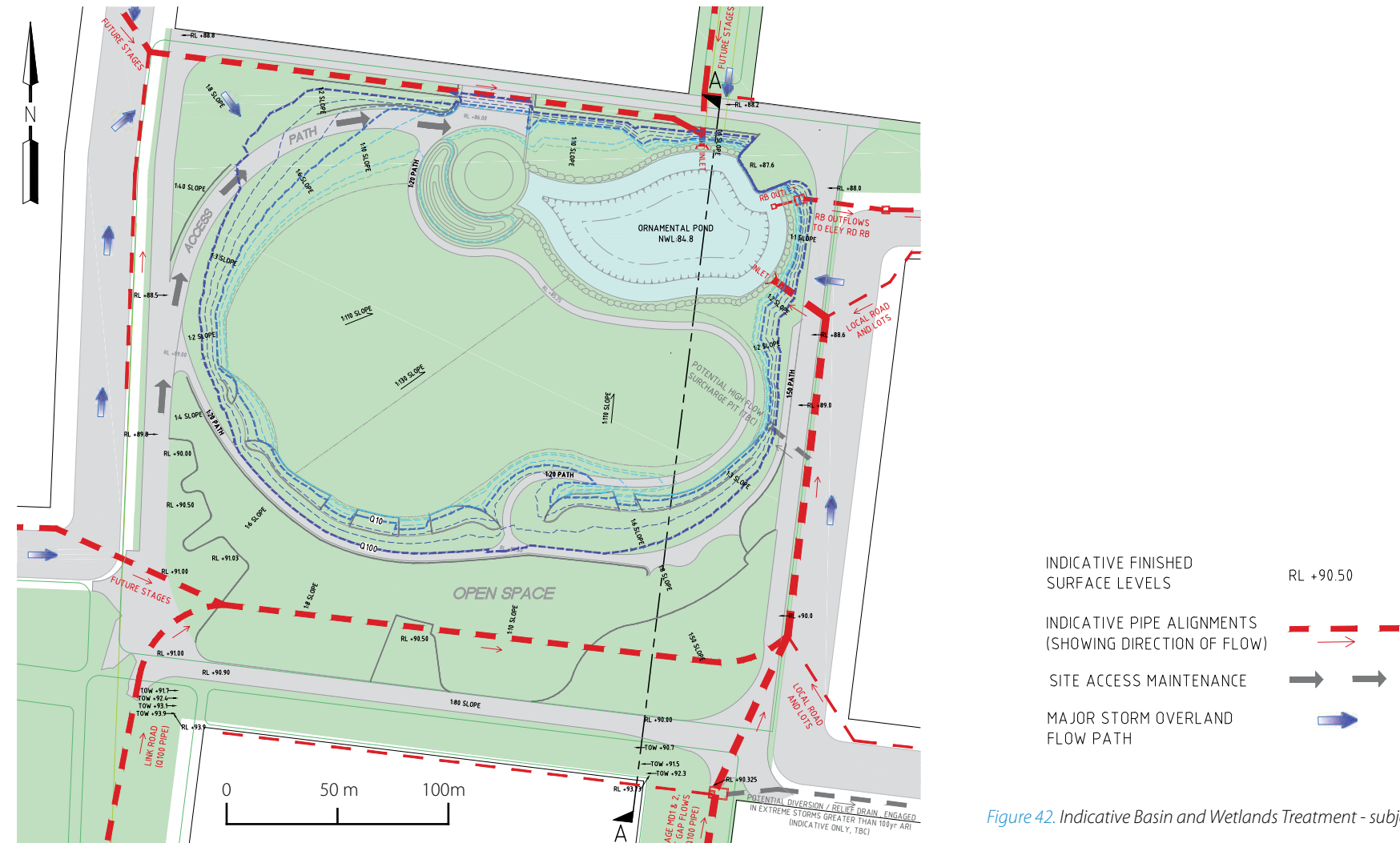


Figure 42. Indicative Basin and Wetlands Treatment - subject to further design review

14. COMMUNITY INFRASTRUCTURE

14.1 Policy Context

A community Infrastructure assessment has been prepared in accordance with the provisions of Schedule 6 to the Development Plan Overlay in the Whitehorse Planning Scheme. The report has been prepared by ASR Research and includes an assessment of the demand for community facilities. A full copy of the report is contained in Volume 2.

14.2 Community Infrastructure Audit

As part of the assessment, the report provides a detailed audit of existing community infrastructure. These include;

- 1) Early years services;
- 2) Open space (active and passive);
- 3) Community meeting spaces, libraries and learning centres;
- 4) Indoor recreation facilities;
- 5) Educational facilities;
- 6) Health services;
- 7) Police & Emergency services; and
- 8) Residential aged care.

14.3 Catchment Area

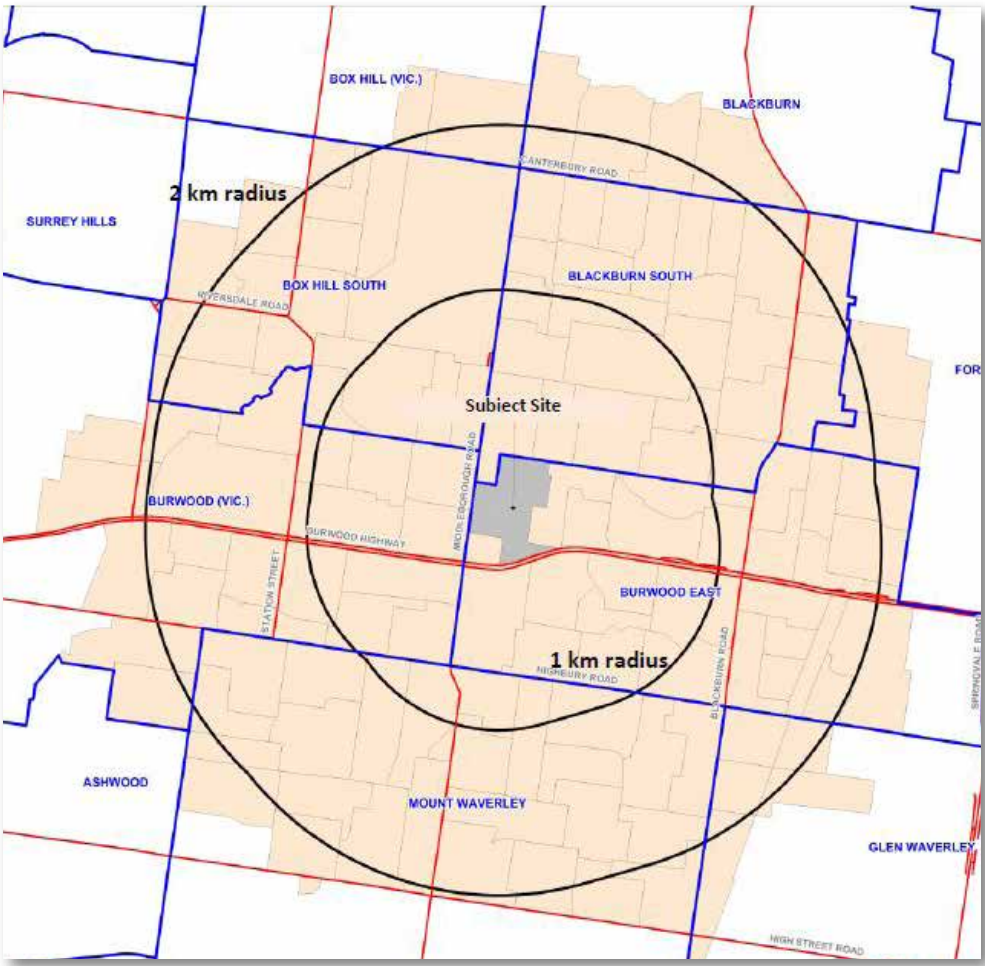
The audit focused on the local community within a 2 kilometre catchment from 78 Middleborough Road, Burwood East. The catchment area focused primarily on Burwood East, as well as the following areas:

- Blackburn and Blackburn South to the north;
- Box Hill and Box Hill South to the north-west;
- Burwood to the west;
- Mount Waverley to the south; and
- Glen Waverley to the South East.

Based on the 2011 ABS Census, the Burwood East 2 kilometre catchment area contained a total of 20,759 dwellings and 52,677 people.

The dwelling yield likely to be generated by the Burwood East development scenario would increase the number of dwellings in the 2 kilometre catchment area by approximately 5% (based on 2011 ABS Census figures, and excluding other residential development which may occur within the catchment).

The population yield likely to be generated by the Burwood East development scenario would increase the number of people living in the 2 kilometre population catchment by approximately 4% (based on 2011 ABS Census figures, and excluding population to be derived from other residential development within catchment).

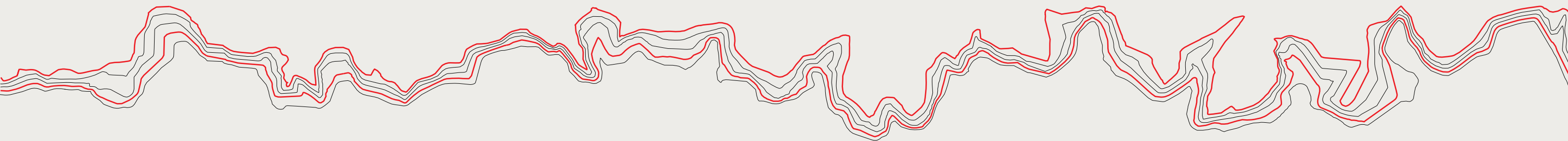


Age Cohort	Relevant Community Infrastructure by Age Cohort	Approx. no. of people
0-3	MCH, Playgroups	76
4	4 Year Old Kindergarten	19
0-6	Long Day Child Care & Occasional Child Care	130
5-11	Primary School enrolments, out of school hours care	119
5-14	Junior Participation in organised sports	170
15+	Senior Participation in organised sports	1,786
15-24	Participation in higher education	366
25+	Participation in higher education	1,419
12-17	Secondary School enrolments	106
70+	Residential & home based aged care services	180
Total Population		2050
Total Dwellings		958

Table 7 - Community Infrastructure Projections (by age)

The above table breaks down the key community infrastructure projections (by age cohorts) for the proposed development.

Figure 43. Community Infrastructure Catchment Area



14.4 Existing and Future Community Infrastructure Assessment

14.4.1 Early Years

Other than Maternal & Child Health services, the overall supply and distribution of early services and venues is very satisfactory across most service types within the 2 kilometre catchment, and there appears to be some spare capacity to absorb additional demand generated by the Burwood East development for early years services. However, this assumption will need to be confirmed with Whitehorse City Council.

The development also offers an opportunity to enter into dialogue with Council about the future proposed local services, to consider future ongoing requirements around Retail and Social hub services such as Maternal & Child Health and a contribution towards kindergarten services, proportionate to the impact of the development.

14.4.2 Open space implications

The overall supply and distribution of open space is generally very satisfactory within the 2 kilometre population catchment, but is significantly dominated by passive open space provision. As per the previous Development Plan the Burwood East proposal will increase the supply and diversity of public open space within the local area, as well as improve linkages to existing surrounding open space reserves.

However, in relation to active open space provision, the Community Infrastructure Assessment recommends that an off-site financial contribution toward increasing the capacity of an existing reserve is warranted.

14.4.3 Community meeting spaces, libraries and learning centres

The overall supply and distribution of community meeting spaces and learning centres within the 2 kilometre catchment appears very satisfactory.

Although there are no libraries within the 2 kilometre population catchment a number of libraries are located within 3 or 4 kilometres of the site including the Mount Waverley Library (City of Monash), Box Hill Library and Blackburn Library.

The assessment supports the inclusion of a social hub adjacent to the urban plaza or within the retail centre (or as otherwise agreed with Council). This will provide a modest multipurpose community meeting space of 100 square metres ideally comprising an open format room, a kitchenette and a toilet facility. Management of this space will be determined in conjunction with Council.

14.4.4 Indoor recreation implications

The location of the recently redeveloped Box Hill Aqualink leisure centre, approximately 3 kilometres north west of the site, as well as the good supply of indoor high ball courts at nearby facilities such as the Nunawading Basketball Centre suggests that local indoor recreation centre provision is more than satisfactory.

Other than the potential for more private provision (e.g. fitness clubs), the pursuit of indoor recreation provision opportunities at 78 Middleborough Road, Burwood East appears not to be warranted.

14.4.5 Education facility implications

The existing profile of primary, secondary, higher education, special needs and language based education facilities is especially significant within the 2 kilometre population catchment. However, overall enrolment trends have decreased slightly over the past five years and there appears to be sufficient spare capacity to absorb additional enrolment demands generated by Burwood East.

The presence of Deakin University (Burwood Campus) within the 2 kilometre population catchment may generate strong demand for student rental housing within Burwood East. Although it is noted that Deakin University has independent plans for additional student accommodation facilities.

14.4.6 Health service implications

Despite the lack of primary and acute health facilities within the 2 kilometre population catchment, provision within 3 or 4 kilometres of Burwood East appears to be very satisfactory, particularly the number of private hospitals and the relatively close proximity of the public Box Hill Hospital.

However, the development is likely to generate interest from all forms of the health sector, especially due to its proximity to existing nearby acute facilities. There are 9 general practice clinics located within the 2 kilometre catchment of the subject site, 4 of which are located within 1 kilometre. Overall provision within the 2 kilometre population catchment (0.17 clinics per 1,000 people) is much lower than the average for the Inner East Health Region (0.37 clinics per 1,000 people), and suggests that commercial interest in establishing a private medical centre within the development may be significant.

This assessment encourages the developers to engage with the Department of Health and private health providers to explore the potential of complimentary health care services.

14.4.7 Police, Justice & Emergency service implications

Although the Box Hill SES is the only facility in this broad category located within the 2 kilometre population catchment, response times for other emergency services to the subject site appear more than satisfactory due to their generally close proximity just outside the 2 kilometre radius.

14.4.8 Aged Care

The supply of residential aged care beds within the 2 kilometre population catchment is less than Federal Government benchmarks aspire to, and suggests that additional aged care needs may generate commercial interest from existing residential aged care providers.

14.5 Key Findings

Key findings of the Community Infrastructure Assessment are as follows:

- The development should establish a community meeting space of approximately 100 square metres adjacent to the urban plaza or within the retail centre.
- There is the potential for a long day child care facility in the retail centre.
- Demand estimates generated from the project appear not to warrant a new kindergarten facility within the development, however further discussions with Council may be required in relation to the level of contribution towards kindergarten services.
- Subject to discussions with Council, the Maternal and Child Health demand estimates appear not to warrant a new MCH facility within the development.
- Most schools and higher educational providers appear to have capacity to absorb additional enrolments. The provision of a new education facility and library space in the development is not warranted,
- The development should consider the inclusion of additional health care services, as well as provision for a residential aged care facility.
- The development should make an off-site financial contribution towards increasing the capacity of an existing nearby active open space reserve.



15. SECTION 173 AGREEMENT

15.1 Policy Context

Schedule 6 to the Development Plan Overlay states that:

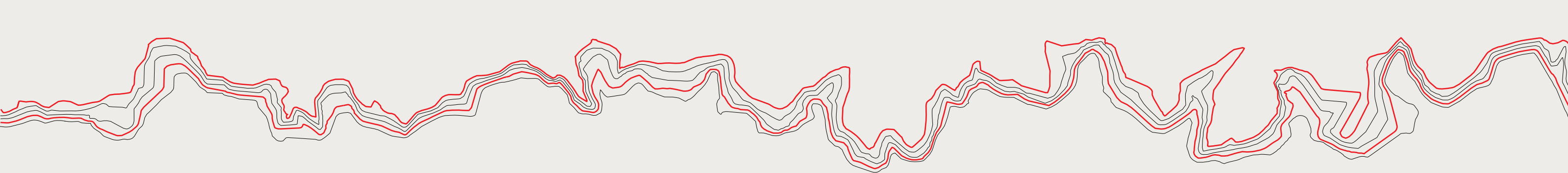
'Prior to the approval of a Development Plan, an agreement under Section 173 of the Planning and Environment Act 1987 to the satisfaction of the responsible authority must be entered into between the owner of the Former Brickworks Site at 78 Middleborough Road, East Burwood and the responsible authority. The agreement must identify the broad obligations required by the responsible authority to be imposed by way of future agreements under Section 173 of the Planning and Environment Act 1987 between the owner of the Former Brickworks Site and the responsible authority.'

All costs associated with preparing, reviewing and registering any agreements under Section 173 of the Planning and Environment Act 1987 must be paid for in full by the owner(s).'

15.2 Section 173 Agreement

A draft Section 173 Agreement has been prepared and forwarded to Council separate to this Development Plan.

The Agreement will be finalised prior to approval of this Development Plan.



16. CONCLUSION

The development of 78 Middleborough Road, Burwood East is consistent with State and Local Government Policy which supports the revitalisation of strategic redevelopment sites and urban consolidation.

The development will offer a vibrant and sustainable residential community that will integrate with the existing urban environment and make good use of the existing services across Burwood East.

The development will also provide community benefits in addition to residential, retail, and commercial facilities. A significant green link boulevard and several large open space areas, such as the retarding basin / wetlands area adds to the network of open space in the neighbourhood and improves pedestrian and cycle networks. Community facilities will add to the diversity of activity on the site whilst ongoing employment associated with the- retail centre has the potential to provide direct community benefit.

The land represents a significant opportunity for a high quality infill development of a mixed nature comprising residential, retail, and open space activities that will provide a unique neighbourhood identity.

Development of 78 Middleborough Road, Burwood East, in accordance with this Development Plan ensures that the site is realised in a manner which respects the existing character of the area whilst setting a new benchmark for sustainable infill development.