

WHITEHORSE PLANNING SCHEME

AMENDMENT C [insert amendment number]

EXPLANATORY REPORT

Who is the planning authority?

This amendment has been prepared by the Whitehorse City Council, which is the planning authority for this amendment.

The amendment has been made at the request of Whitehorse City Council.

Land affected by the amendment

The amendment applies to all land in the municipality of the City of Whitehorse.

What the amendment does

The amendment introduces a new Particular Provision relating to Environmentally Sustainable Development (ESD) into the planning scheme and makes changes to existing local policy. The Particular Provision contains ESD Objectives and Standards which implement measures that facilitate best practice ESD and support zero carbon development outcomes.

The ESD Objectives and Standards address:

- Operational Energy (energy efficiency, performance and greenhouse gas emission reduction)
- Embodied Carbon (greenhouse gas emission reduction and resource efficiency)
- Sustainable Transport (electric vehicles and bicycles)
- Integrated Water management (water efficiency and integration)
- Green infrastructure (lot scale vegetation and urban ecology)
- Climate resilience (climate change adaptation, urban heat mitigation)
- Waste & Resource Recovery (recycling and waste management)

The amendment includes the following changes to the planning scheme:

	Brief description/overview of the proposal	List of the proposed changes to the planning scheme
Insert	<ul style="list-style-type: none">• Insert a new Elevated Environmentally Sustainable Development particular provision into the planning scheme containing Objectives and Standards relevant to the delivery of ESD.	<ul style="list-style-type: none">• Amend Clause 53 to insert the new ESD Objectives and Standards.
Insert	<ul style="list-style-type: none">• Insert a new Background Document titled "<i>Guidelines for Sustainable Building Design</i>" in the planning scheme to assist in understanding the rationale behind the proposed Standards and to support application of the proposed Decision Guidelines.	<ul style="list-style-type: none">• Amend Schedule to Clause 72.08 to include the <i>Guidelines for Sustainable Building Design</i> as a Background Document within the planning scheme.
Amend	<ul style="list-style-type: none">• Amend the Municipal Strategic Statement to identify municipal outcomes which provide the basis for ESD requirements and the facilitation of zero carbon development in the planning scheme.	<ul style="list-style-type: none">• Amend Clause 21.05 Environment to reference ESD requirements, net zero outcomes and climate change adaptation.

Strategic assessment of the amendment

Why is the amendment required?

Function and intent

The amendment introduces ESD planning measures into the planning scheme. The measures notably include a series of Objectives and Standards that are detailed within a stand-alone clause within the Particular Provisions of a council's planning scheme.

No new permit triggers are proposed as part of this amendment. Existing permit triggers provide the basis for a planning permit application that is then assessed against the proposed Objectives and Standards outlined within the Particular Provision.

This includes new development incorporating ESD measures that further enhance energy efficiency and performance, water efficiency and integrated water management, low carbon and sustainable transport, circular economy, materials and sustainable waste management, urban greening, biodiversity and green infrastructure, and climate resilience and adaptation.

With a development incorporating the ESD measures in order to meet the detailed objectives and standards, a development should also be able to demonstrate and achieve a reduction in overall greenhouse gas emissions, a response to climate resilience and risk minimisation, and a pathway towards achieving zero carbon development exercised via the planning framework.

Existing environmental and sustainability requirements

This amendment improves existing environmental and sustainability requirements within the planning scheme.

The existing requirements are detailed primarily within the Victoria Planning Provisions, directed towards residential development (i.e. ResCode), and the Planning Policy Framework more broadly.

Council has an existing local ESD Policy within the local provisions of the Planning Policy Framework (Clause 22.10 of the Whitehorse Planning Scheme). The existing local ESD Policy was gazetted in November 2015. The ESD requirements reflected in the local ESD Policy served as baseline standards when preparing this amendment. This amendment incorporates, updates and refines the existing, local, ESD Policy requirements to ensure greater ESD outcomes that support the transition towards zero carbon development and industry best practice. Requirements detailed within the existing local ESD Policy have been incorporated within the Particular Provision that serves as a part of this amendment.

In order to facilitate clearer and more precise development outcomes, the ESD requirements have been articulated within the Victoria Planning Provisions, Particular Provisions of the planning scheme.

This is to also ensure that all ESD requirements are consolidated and detailed within a specific and tailored area of the planning scheme which supports user familiarity and efficient navigation to the respective requirements.

Net community benefit

The amendment delivers a net community benefit ensuring that planning achieves positive environmental, societal and economic outcomes through:

- Providing direct and indirect community benefits which address climate change mitigation and adaptation through building climate resilience and future proofing future development and housing;
- Reducing greenhouse gas emissions and the management of climate change risk within the built environment system;
- Cost savings by improving climate resilient housing now, rather than retrofitting later at a higher cost;
- Ensuring that 'best practice' policies and expectations continue to be addressed over time, with the 'elevation' of ESD policy requirements that may already exist throughout the scheme;
- Providing greater certainty, consistency and delivery of ESD outcomes and towards net zero carbon development;

This amendment in conjunction with proposed NCC 2022 changes supports energy efficiency and the Victorian State government's proposed 7-star energy efficiency rated homes by:

- Maximising the benefits of solar panels;
- Supporting all-electric homes; and
- Facilitating economic, health and climate benefits from ambitious energy efficiency standards.

This amendment delivers outcomes that support and align with Local and State government climate change pledges, the State Climate Change Strategy, and Adaptation Action Plans pursuant to Part 5 of the *Climate Change Act 2017* (Vic). Furthermore, this amendment supports council's obligation under the *Local Government Act 2020* (Vic) and the overarching governance principle to ensure economic, social and environmental sustainability of the municipal district, including mitigation and planning for climate change risks.

These legislative requirements are necessary for council to support and promote net community benefit.

Purpose

This amendment has been prepared and pursued for the following reasons with particular respect to the built environment:

- To support council's endorsed and seriously entertained collection of Environmental, Sustainability and/or Climate Change Strategies, Policies and Action Plans including Council's Sustainability Strategy 2016-2022, Interim Climate Response Plan 2020-2022, Whitehorse Community Vision 2040, and Council Plan 2021-2025;
- To enable council, in the performance of its statutory role, to have appropriate and demonstrated regard to economic, social and environmental sustainability of the municipal district, including mitigation and planning for climate change risks pursuant to the overarching governance principles under the *Local Government Act 2020* (Vic);
- To ensure that ESD requirements within the planning system are continually reviewed to align with and articulate best practice industry measures for development to address;
- To assist Victorian government frameworks that require reducing greenhouse gas emissions and preparing for climate change impacts, that result from and affect, the built environment. This acknowledges that, within Australia, the built environment accounts for approximately 20% of the nation's emissions (Australia's Emissions Projections 2018 (Department of the Environment and Energy, 2018)). The Victorian government framework requires that the State address an overarching emissions reduction target of carbon neutrality by 2050;
- To aid the Victorian government's sustainable transport directives which includes the uptake of zero emission vehicles (ZEVs), active transport and supporting infrastructure. This also entails supporting further reforms to make new buildings ZEV-ready and setting a target of 50% of new light vehicle sales to be zero emissions by 2030 (Victoria's Zero Emissions Vehicle Roadmap (Department of Environment, Land, Water and Planning, 2021));
- To promote the Victorian government's circular economy directives that seek to divert waste from landfill and ensure resource recovery and efficiency (Recycling Victoria – A New Economy (Department of Environment, Land, Water and Planning, 2020));
- To complement the Victorian government's framework towards urban greening, cooling and enhancing biodiversity; and
- To further appropriate practices in waste avoidance, reduction, and recycling, the management and treatment of stormwater including integrated water management, and reduce emissions to air from development and associated activities. This includes having regard to the Environmental Reference Standard (ERS), environmental values, beneficial uses and community impacts in support of the General Environmental Duty (GED) and environment protection principles outlined under the *Environment Protection Act 2017* (Vic).

Strategic studies and reports

Several studies were commissioned to inform and support the development of the objectives and standards included within this amendment. A list of the relevant studies and reports and accompanying synopses include:

Study/ Report	Synopsis
Sustainability Planning Scheme Amendment Background Research – Part A: Technical ESD and Development Feasibility (Hip v. Hype Partnership, 2021)	A technical analysis that tests each proposed standard on various development typologies to determine their practical suitability and functionality and indicative capital cost impact.
Sustainability Planning Scheme Amendment Background Research – Part B: Planning Advice (Hansen Partnership, 2021)	An urban planning review of the proposed objectives and standards which takes into consideration the technical feasibility and cost-benefit viability studies. Recommendations were also put forward to ensure the standards are fit for planning purposes within the Victorian planning framework.
Sustainability Planning Scheme Amendment – Cost-Benefit Analysis (Frontier Economics, 2021)	A cost-benefit analysis of the standards that have been incorporated as part of this amendment. This includes direct costs as well as a preliminary review of direct and indirect economic and societal benefits.
Moreland City Council Renewable Energy Standard (Low Impact Development, 2021)	A study conducted into the development of metrics and standards for new development to incorporate minimum amounts of solar photovoltaic systems and relevant design considerations. The metrics and standards have been adopted as a part of this amendment.
Moreland City Council Low Emissions and Electric Vehicles Standard (Low Impact Development, 2021)	A study conducted into the development of metrics and standards for new development to incorporate electric vehicle infrastructure and relevant design considerations. The metrics and standards have been adopted as a part of this amendment.
The Advisory Committee and Panel Report for Environmentally Efficient Design Local Policies (Planning Panels Victoria, 2014)	<p>The Advisory Committee and Panel report for the original planning scheme amendment that introduced a local ESD Policy within the planning scheme of six councils in Victoria.</p> <p>Since this planning scheme amendment, several councils have used this report to serve as the evidentiary basis to support the introduction of their own local ESD Policy within their planning scheme. A total of 20 councils throughout Victoria have a local ESD Policy within their planning scheme.</p>
Greenhouse Alliance Planning and Environment Act Report	<p>An independent report commissioned by the Victorian Greenhouse Alliances and CASBE has identified a raft of reform opportunities for Victoria's planning system, to ensure it is aligned with the State's legislated emission reduction targets and supports climate resilient communities. It also identifies opportunities to ensure the delivery of zero-carbon infrastructure, building on Victoria's leadership role on taking action on climate change. The report –Climate Change and Planning in Victoria: Ensuring Victoria's planning system effectively tackles climate change-recommends a suite of reforms that:</p> <ul style="list-style-type: none"> - Recognise the fundamental role that a Planning Scheme and the <i>Planning and Environment Act 1987</i> (Vic) play in guiding decision-makers, and their weight as statutory law instruments

Study/ Report	Synopsis
	<ul style="list-style-type: none"> - Ensure that the scheme and its application of controls is consistent with the scientific evidence base on climate change and best practice - Focus on changes that will assist in getting the fundamentals of future development areas right

Appropriate jurisdiction

The appropriateness of addressing ESD considerations within the planning framework have been well established.

Six councils originally pursued a planning scheme amendment to incorporate a local ESD Policy within each council's planning scheme. The Advisory Committee and Panel Report for Environmentally Efficient Design Local Policies (Planning Panels Victoria, 2014) resolved that the planning framework, as distinct from the building framework, is suitable and equipped to require that development incorporate ESD measures through the planning permit application process. The original six local ESD Policies were gazetted in 2015.

Since the gazettal of the original six local ESD Policies, a total of 20 councils throughout Victoria have a local ESD Policy within their respective planning scheme.

Additional planning scheme amendments have also been successfully pursued that require the integration and adoption of ESD outcomes within development proposals. For example, Amendment C190more Better Outcomes for Two Dwellings on a Lot whereby ESD requirements serve as a part of the City of Moreland's VicSmart application process, and Amendment GC81 whereby detailed, precinct wide, ESD measures are required for development within Fishermans Bend, located within the City of Port Phillip and the City of Melbourne.

In addition, the Victoria Planning Provisions have also introduced heightened ESD measures within the planning framework beyond that of the standard ResCode requirements. This is primarily demonstrated through the introduction of the Better Apartments Design Standards (BADS) in 2017. Performance measures detailed within BADS, in relation to energy efficiency and cooling load requirements for apartments, similarly cover thermal performance requirements detailed within the National Construction Code (NCC) that is administered under the building framework.

With the planning framework serving as a precursor to the building framework, the Objectives and Standards outlined within this amendment continue to affirm ESD's fundamental role ensuring resilient future development. ESD considerations should be embedded as a part of the initial design process within the planning framework, prior to undertaking detailed design as occurs within the building phase. This is to ensure ESD benefits can be maximised by embedding holistic design considerations early in the design process rather than retrofitting ESD at a later stage in the development process. The benefits of this approach include:

- This process aims to limit increased costs by having clear ESD expectations for the development at the commencement of the development process and as a part of planning process.
- ESD outcomes are optimised, as ESD measures are considered alongside development site constraints and limitations are carefully considered and integrated into the initial design, avoiding costly retrofits at a later stage.

Whilst the NCC is tailored towards establishing the minimum energy efficiency requirements for a development to address, the ESD requirements detailed within the planning framework and as a part of this amendment include much broader coverage of ESD. The amendment has been carefully drafted to continue to complement the NCC through higher order planning framework requirements rather than conflict with the building framework for complementary aspects. This enables the building framework to continue to administer detailed design elements, building services and construction techniques.

In addition to energy efficiency, the ESD measures within the planning framework and part of this amendment address thematic categories such as integrated water management, indoor

environmental quality, sustainable transport, green infrastructure, waste and resource recovery, climate resilience, embodied carbon. These thematic categories are not covered in detail within the NCC or building instruments. The planning framework has been recognised as the more suitable and established jurisdiction that has successfully been endorsed by authorities as the appropriate arena to 'cover the field' with respect to holistically address ESD requirements.

How does the amendment implement the objectives of planning in Victoria?

The amendment implements the objectives of planning in Victoria given that ESD fundamentally addresses key foundational principles of sustainability which underpin the objectives of planning. ESD requires consideration of the triple-bottom-line – environmental, societal and economic impacts, as well as, balancing the needs of the present with that of future generations; particularly when determining environmental impact by applying the precautionary principle.

The delivery of more robust ESD outcomes through the planning scheme strongly align with the objectives of planning in Victoria which include:

- To provide for the development of land with fair, orderly, economic and sustainability considerations (see Section 4(1)(a) of the *Planning and Environment Act 1987* (Vic) ('*P&E Act*'). This includes considering the equity of planning decisions, economic and societal functions as well as matters regarding the inherent sustainability of development. It is noted that the facilitation of development in Victoria is only supported where in alignment with specified objectives.
- To provide for the protection of natural and man-made resources and the maintenance of ecological processes and genetic diversity, noting the current threats to these resources and processes posed by climate change and the contribution that improved ESD outcomes can make to the protection of resources and ecological processes (see Section 4(1)(b) *P&E Act*).
- To secure a pleasant, efficient and safe working, living and recreational environment for all Victorians and visitors to Victoria, noting specific consideration of climate change adaptation and indoor environmental quality through this amendment (see Section 4(1)(c) *P&E Act*).
- Seeking the delivery of affordable housing, noting the application of affordability in its broadest sense, encompassing more than just the purchase price of an individual property, and including not only homeowners but also renters (see Section 4(1)(fa) *P&E Act*).
- Balancing the present and future interests of all Victorians, particularly regarding environmental impact and minimising greenhouse gas emissions, as well as, addressing climate resilience and the adaptability of new development within the built environment (see Section 4(1)(g) *P&E Act*).

More specifically, the objectives of planning in Victoria are supported in the following areas having regard to the Objectives and Standards included in this amendment:

- Energy and water efficiency, as well as, and waste and resource recovery Standards support waste minimisation, reduction, reuse and recycling and therefore promote the protection of natural and man-made resources (see Section 4(1)(b) *P&E Act*).
- Integrated Water Management and Green Infrastructure Standards support both the protection of natural resources and ecological processes, as well as, contributing to the delivery of a pleasant and safe environment for Victorians and visitors to Victoria (see Section 4(1)(b), (c) *P&E Act*).
- Improved energy efficiency through passive design standards and measures such as natural ventilation and promoting energy efficiency through a hierarchy. This hierarchy prioritises the importance of energy efficient design first and foremost through thermal performance and comfort, followed by onsite then offsite renewable energy generation. This fosters a pleasant, efficient and safe working, living and recreational environment within development (see Section 4(1)(c) *P&E Act*).
- Energy and water efficiency and the adoption of broader integrated water management measures, as well as, the utilisation of on-site renewable energy systems minimises the strain placed on public utilities and other assets given reduced resource and utility demand and promotion of a development's self-sufficiency. This also enables the orderly provision and

co-ordination of public utilities and other facilities for the benefit of the community (see Section 4(1)(e) *P&E Act*).

- Recognition and consideration of the capital cost expenditure involved in addressing the Standards as part of their development whilst also recognising the overall benefit with reduced operating costs of development experienced by future residents, owners or tenants having due regard to housing affordability matters (see Section 4(1)(fa) *P&E Act*).

How does the amendment address any environmental, social and economic effects?

The amendment enhances ESD requirements and importantly, ensures new development advances the ambitions of zero emissions outlined in Victoria's *Climate Change Act 2017* (Vic), ensuring the built environment contributes appropriately to the legislated target of zero emissions. It also assists council supporting its community by planning for the adaptation of these communities to climate changes, and the delivery of adopted and community endorsed council goals related to emissions reduction. Such measures deliver significant environmental benefits and effects, as well as direct and indirect social and economic outcomes.

The amendment included consideration of the economic effects in a number of ways. The Technical Assessment of the amendment tested the proposed Standards against a range of typologies and contexts to determine their practical suitability and functionality and indicative capital cost impact. The Cost Benefit Analysis focused on the direct costs associated with addressing the Standards against the same development typologies which was accompanied by a breakeven analysis to demonstrate value to the community.

The assessments considered the individual development costs and the potential impact on the purchase component of housing affordability. This was in conjunction with the broader economic development costs of delivering more sustainable development which addresses climate change adaptation and mitigation, as well as social effects; many of which require deeper analysis and investigation to quantify and measure at lot scale. The assessments underpinned a number of changes made to ensure that the Standards proposed did not impact on development viability.

The effects of this amendment were also tested through a series of internal and external consultation sessions. Internal consultation was scoped to include authorities comprising 31 councils throughout Victoria, the Municipal Association of Victoria (MAV) and the Council Alliance for a Sustainable Built Environment (CASBE) that collectively support this amendment. This included the authorities providing input and feedback to deliverables that serve this amendment. Officers that provided input and support from these authorities included individuals from multi-disciplinary teams and skillsets (e.g. strategic and statutory planning, urban context, sustainability, transport, waste, stormwater, and landscape).

External consultation was scoped to include key industry practitioners from architectural, ESD and urban planning backgrounds through targeted stakeholder engagement. This supported the consideration of effects from a wide variety of perspectives and resulted in further refinement of Standards as initially drafted.

Environment effects

Key environmental areas or thematic categories addressed via this amendment include a development directly responding to and incorporating:

- **Operational energy** – which entails development prioritising energy efficiency initiatives in line with the following hierarchy:
 - Thermal performance and passive design measures;
 - Energy efficient systems (e.g. heating, cooling and ventilation) and appliances;
 - Onsite renewable energy generation;
 - Offsite renewable energy purchasing and/or carbon offsets.

These measures address and aim to minimise a development's demand on the energy grid and peak energy, as well as, emissions to air through fossil fuel reduction which is attributed towards greenhouse gas emissions and climate change impacts.

- **Embodied carbon** – which entails the use and sourcing of materials and design techniques to reduce the amount of embodied carbon embedded in Victoria’s buildings.
- **Sustainable transport** – which entails the adoption of sustainable transport and low emission vehicle measures such as electric vehicle infrastructure, as well as, an increase in active transport and end of trip facilities such as bicycle parking and storage spaces;
- **Integrated water management** – which includes water efficiency and potable water demand reduction, as well as, the management to holistically address stormwater quantity and quality onsite prior to stormwater discharge from the development to local waterways;
- **Climate resilience** – which includes considering a development’s risk to climate change impacts such as the urban heat island effect, flooding and the management of stormwater, as well as, peak energy and potable water demand
- **Green infrastructure** – which involves the implementation of green infrastructure design measures, including tree canopy retention, amelioration and planting of appropriate species, to positively contribute towards the ecological value, biodiversity, health, and public realm amenity of a development, as well as, societal and communal impacts;
- **Indoor environment quality** – which comprises thermal comfort and safety requirements, natural ventilation and access to clean, fresh, air, with minimal exposure to harmful indoor air pollutants, as well as, ensures that key areas of a development have access to daylight and sunlight to improve amenity, liveability and workability functions; and
- **Waste and resource recovery** – which entails the consideration and selection of appropriate materials which have limited environmental and transportation impact, as well as, support the waste hierarchy through waste avoidance, minimisation, reuse, recycling and recovery.

Social effects

In addition, the Objectives and Standards included within this amendment indirectly promote and number of outcomes which relate to social effects including:

- High quality and commensurate urban design and architecture outcomes;
- Greenhouse gas emission reduction, mitigation and adaptation approaches towards climate change impacts that respond to associated risks including societal, liveability, human health, financial and economic impediments;
- Self-sufficient and reliable development by reducing a development’s demand on local utilities and associated infrastructure such as energy and water resources through the uptake of renewable energy systems, rainwater harvesting and stormwater treatment methods;
- A reduction in the operative and running costs for residents, owners, and tenants associated with the development. This also supports housing affordability and maintaining quality of living standards for low income or financially strained individuals. For example first home buyers, retirees and disadvantaged community members;
- Communal and societal benefits through the incorporation of green infrastructure design measures that enhances public realm amenity within development;
- The general health and wellbeing of occupants and users through increased consistency and levels in access to fresh air, natural ventilation, daylight and direct sunlight where appropriate;
- A cleaner energy mix in terms of Victoria’s energy grid and transportation methods which is associated with a reduction in air quality emissions and supports broader community health benefits.

Economic effects

The requirement for development to address the Objectives and Standards detailed within this amendment supports economic development via:

- Value to the community when considered at a broader scale;

- Growth of specialised and skilled services;
- Knowledge and educational development in an already established yet rapidly growing market;
- Job creation and employment in new and emerging fields, including current workforce and youth employment prospects;
- Innovation and technology growth to support development with addressing the relevant objectives and standards where reasonable; and
- Holistically serving as a part of a local and whole of government COVID-19 / post COVID-19 response plan to support economic stimulus.

Does the amendment address relevant bushfire risk?

The amendment does not affect any areas within a Bushfire Management Overlay or designated bushfire prone area. Additionally, the amendment does not increase bushfire risk from the current levels.

More broadly, it is noted that the proposed means of increasing green infrastructure on sites is through a tool (the Green Factor Tool) which includes inbuilt flexibility to allow an applicant to deliver green infrastructure in a manner which can respond to the constraints of a site, including bushfire risk, rather than through prescriptive measures. In addition, the current hierarchy of planning in Victoria is such that responses to bushfire risk, where relevant, would continue to have precedence over that proposed Standards.

The amendment however includes objectives and standards that supports and encourages development to address minimising greenhouse gas emissions and incorporate climate resilience and adaption design principles and/or measures. These measures are aimed at curtailing a development's direct and indirect societal risk to climate change sensitivities such as urban heat and climate change induced bushfire risk.

Does the amendment comply with the requirements of any Minister's Direction applicable to the amendment?

The amendment is consistent with the following Ministerial Directions:

- Ministerial Direction on the Form and Content of Planning Schemes under Section 7(5) *P&E Act*;
- Ministerial Direction No.9 Metropolitan Strategy (Plan Melbourne 2017-2050) under Section 12(2)(a) *P&E Act*;

Ministerial Direction No. 9 – Metropolitan Planning Strategy seeks to ensure that planning scheme amendments have regard to *Plan Melbourne 2017-2050: Metropolitan Planning Strategy* (Department of Environment, Land, Water and Planning, 2017) and *Plan Melbourne 2017-2050: Addendum 2019* (Department of Environment, Land, Water and Planning, 2019).

The amendment is in line with relevant directions within the strategy, in particular:

- Outcome 3: Melbourne has an integrated transport system that connects people to jobs and services and goods to market
 - Direction 3.1 – Transform Melbourne's transport system to support a productive city with particular respect to cycling infrastructure
- Outcome 4: Melbourne is a distinctive and liveable city with quality design and amenity
 - Direction 4.3 – Achieve and promote design excellence
- Outcome 5: Melbourne is a city of inclusive, vibrant and healthy neighbourhoods
 - Direction 5.2 – Create neighbourhoods that support safe communities and healthy lifestyles.

- Outcome 6: Melbourne is a sustainable and resilient city
 - Direction 6.1 – Transition to a low-carbon city to enable Victoria to achieve its target of net zero greenhouse gas emissions by 2050
 - Direction 6.2 – Reduce the likelihood and consequences of natural hazard events and adapt to climate change
 - Direction 6.3 – Integrate urban development and water cycle management to support a resilient and liveable city
 - Direction 6.4 – Make Melbourne cooler and greener
 - Direction 6.5 – Protect and restore natural habitats
 - Direction 6.6 – Improve air quality and reduce the impact of excessive noise
 - Direction 6.7 – Reduce waste and improve waste management and resource recovery

Outcome 6 and the listed Directions are of significant relevance to the amendment.

- Ministerial Direction No.11 – Strategic Assessment of Amendments under Section 12(2)(a) *P&E Act*;

Ministerial Direction No. 11 – Strategic Assessment of Amendments seeks to ensure a comprehensive strategic evaluation of a planning scheme amendment and the outcomes it produces. A strategic assessment of the proposed amendment has been undertaken in accordance with this Ministerial Direction in this Explanatory Report.

- Ministerial Direction No.19 – Preparation and content of Amendments that may significantly impact the Environment, Amenity and Human Health under Section 12(2)(a) *P&E Act*;

Ministerial Direction No. 19 – Preparation and content of Amendments that may significantly impact the Environment, Amenity and Human Health requires planning authorities to seek the views of the Environment Protection Authority (EPA) in the preparation of planning scheme that could result in use or development of land that may result in significant impacts on the environment, amenity and human health due to pollution and waste.

The Direction does not specifically apply to an amendment to the Victoria Planning Provision however significantly and positively impacts the Environment, Amenity and Human Health. The proposed amendment seeks to promote waste avoidance, reduction, and recycling, improve the management and treatment of stormwater on development sites, and reduce emissions to air. This requires having regard to the Environmental Reference Standard (ERS), beneficial uses and community impacts in support of the General Environmental Duty (GED) principle and principles of environment protection, exercised under the *Environment Protection Act 2017* (Vic).

How does the amendment support or implement the Planning Policy Framework and any adopted State policy?

The amendment supports and gives effect to the Objectives and Strategies of the Planning Policy Framework (PPF). The PPF at Clause 10 includes the following components of relevance:

- Clause 11 Settlement, whereby planning is to recognise the need for, and as far as practicable contribute towards a high standards of urban design and amenity, energy efficiency, prevention of pollution to land, water and air, and protection of natural resources with Strategies including to provide for the development of sustainable and liveable areas;
- Clause 12 Environmental and landscape values, whereby planning should help to protect the health o ecological systems and the biodiversity they support, including its protection;
- Clause 13.01-1S Natural hazards and climate change, whereby the Objective includes to minimise the impacts of natural hazards and adapt to the impacts of climate change which requires the consideration of climate change risks in planning;

- Clause 15.02-1S Energy and resource efficiency, whereby the Objective seeks to encourage land use and development that is energy and resource efficient and minimises greenhouse gas emissions via:
 - Improving energy, water and waste performance of buildings and subdivisions via ESD;
 - Reducing the urban heat island effect through retention of existing vegetation, and additional vegetation and greening in urban areas;
 - Facilitating a greater use of renewable energy technologies;
 - Support low energy forms of transport such as walking and cycling;
 - Reduce the urban heat island effect by greening urban areas, buildings, transport corridors and open spaces with vegetation;
 - Encourage retention of existing vegetation and planting of new vegetation as part of development and subdivision proposals.
- Clause 18.02-1S Sustainable personal transport, whereby the Strategies include development providing adequate bicycle parking and related facilities, as well as, encouraging the use of walking and cycling;
- Clause 19.01-2S Renewable energy, whereby the provision of renewable energy development is promoted and facilitated;
- Clause 19.03-3S Integrated water management, whereby the Objective involves managing water supply, water resources, drainage and stormwater through an integrated water management approach. This includes minimising stormwater quality and quantity related impacts; and
- Clause 19.03-5S Waste and resource recovery, whereby the Objective details to reduce waste and maximise resource recovery, diverting waste from landfills and in the process minimising environmental, community and public health impacts.

The amendment also supports the following policies released and adopted by the State government and associated authorities:

- The Environmentally sustainable development of buildings and subdivisions: A roadmap for Victoria's planning system (Department of Environment, Land, Water and Planning, 2021) ('ESD Roadmap') the details proposed ESD changes to the PPF;
- The State government's overall and interim greenhouse gas emission reduction targets, Climate Change Strategy, Sector Pledges, and Adaptation Action Plans that have been made pursuant to the *Climate Change Act 2017* (Vic);
- Victoria's Zero Emissions Vehicle Roadmap (Department of Environment, Land, Water and Planning, 2021) the supports further reforms to make new buildings ZEV-ready and setting a target of 50% of new light vehicle sales to be zero emissions by 2030);
- Victoria's Recycling Victoria – A New Economy policy (Department of Environment, Land, Water and Planning, 2020) that outlines the Victorian government's circular economy directives that seek to divert waste from landfill and ensure resource recovery and efficiency); and
- The fundamental General Environmental Duty principle detailed within the *Environment Protection Act 2017* (Vic) and further integrated within supporting instruments such as the Environment Reference Standard (ERS).

How does the amendment support or implement the Local Planning Policy Framework, and specifically the Municipal Strategic Statement?

The planning scheme provides the overarching strategic framework for environmentally sustainable outcomes in the municipality. The Local Planning Policy Framework includes numerous references to ESD principles and sustainability, including within the Municipal Strategic Statement at:

- Clause 21.05 (Environment) where reference is made to achieving best practice in ESD principles, enhancing tree canopy cover, reducing car dependence and encouraging sustainable modes of transport;
- Clause 21.06 (Housing) which supports ESD and innovation in new housing development; and
- Clause 21.07 (Economic Development) which encourages environmentally sustainable industrial development.

Additionally, within the Local Planning Policy Framework, Clause 22.10 (Environmentally Sustainable Development) sets out local ESD requirements. This policy was introduced in November 2015 and continues to apply to most new developments. The policy forms a key part of planning permit application assessment and sets out ESD objectives, application requirements and decision guidelines for various development types.

Does the amendment make proper use of the Victoria Planning Provisions?

A municipal council and/or planning authority is entitled to prepare an amendment, for authorisation by the Minister, to the Victoria Planning Provisions (VPP) that involves the inclusion of a provision in the State standard provisions (see Sections 4B(2), 10(1) *P&E Act*).

The amendment makes proper use of the VPP as the appropriate tool to achieve the ESD and zero carbon development outcomes.

The supporting studies and reports recommended that councils seek a single ESD Particular Provision in a new clause under Clause 53 of the planning scheme. A provision of this nature does not currently exist within the suite of the VPP, however, this is considered to be the most appropriate planning mechanism to implement the Elevated ESD Objectives and Standards.

In determining suitability and propose use of the VPP, a range of planning mechanisms were considered to implement the elevated ESD Standards including a Local Planning Policy and Design and Development Overlay (DDO).

A Local Planning Policy was not considered an appropriate tool as it cannot include detailed and mandatory requirements, does not move beyond the current policy approach and give greater statutory weight to elevated sustainability requirements.

A DDO was not considered an appropriate tool as they are generally designed to apply to specific locations within a municipality and are not the preferred tool for a requirement that applies across a whole municipality.

The Particular Provision, as the appropriate tool outlined in the amendment, provides for greater direction, certainty and clarity for the development community to address the expectations held for development. This is provided through a format that allows for mandatory Objectives and discretionary Standards, operational instructions and definition of key terms, as well as, a consistent and standardised format aligned with other Particular Provisions such as Clause 53.18 Stormwater Management in Urban Development.

The amendment is supported by Guidelines for Sustainable Building Design, a Background Document that will assist development to address the Objectives and Standards as a part of the amendment.

In preparation of the amendment, there has been adherence to Ministerial Direction on the Form and Content of Planning Schemes under Section 7(5) *P&E Act*.

How does the amendment address the views of any relevant agency?

Pre-amendment consultation was not undertaken. The views of relevant agencies will be formally considered as part of any exhibition process.

Does the amendment address relevant requirements of the Transport Integration Act 2010?

The amendment is not expected to have any significant impact on the transport system.

The amendment however supports the objectives of the *Transport Integration Act 2010* (Vic) ('TIA'). This is in relation to the objectives and standards that are introduced by this amendment requiring development to incorporate electric vehicle infrastructure and low emission forms of transport, as well as, increase the amount of facilities for bicycles and other sustainable transport modes.

The TIA objectives of relevance to this amendment, by way of association with the 'physical components' of the transport system which include motor vehicles and bicycles, include:

- Environmental sustainability (see Section 10 TIA) through:
 - Protecting, conserving and improving the natural environment;
 - Avoiding, minimising and offsetting harm to the local and global environment, including through transport-related emissions and pollutants and the loss of biodiversity;
 - Promoting forms of transport and the use of forms of energy and transport technologies which have the least impact on the natural environment and reduce the overall contribution of transport-related greenhouse gas emissions;
 - Improving the environmental performance of all forms of transport and the forms of energy used in transport; and
 - Preparing for and adapting to the challenges presented by climate change.
- Integration of transport and land use (see Section 11 TIA) through:
 - Maximising access to residences, employments, markets, services and recreation;
 - Planning and developing the transport system more effectively;
 - Reducing the need for private motor vehicle transport and the extent of travel;
 - Facilitating better access to, and greater mobility within, local communities;
 - Having regard to the current and future impact on land use, development and operation of the transport system; and
 - Supporting the changing land use and associated transport demand.
- Economic prosperity through increasing efficiency, reducing costs, improving timeliness, and fostering competition by providing access and growth of new and innovative markets, particularly the electric vehicles sector, and, as a result, facilitating investment in Victoria that supports the financial sustainability and viability of such emerging markets (see Section 9 TIA); and
- Safety and health and wellbeing through promoting forms of transport and the use of forms of energy which have the greatest benefit for, and least negative impact on, health and wellbeing (see Section 13(2)(c) TIA).

In addition, the TIA decision making principles have been applied when preparing the objectives and standards related to this amendment. This includes:

- Integrated decision making with relevant internal and external government stakeholders including interdisciplinary transport, sustainability and planning departments, as well as, private industry through stakeholder engagement (see Sections 15 and 20 TIA);
- A triple bottom line assessment having considered environmental and cost-benefit outcomes through relevant studies (see Section 16 TIA);
- Consideration of equity and user perspectives across varying demographic profiles (see Section 17 and 18 TIA);
- The precautionary principle in relation to reducing vehicle and greenhouse gas emissions for the betterment of Victorians (see Section 19 TIA);

Additionally, this amendment aligns and assists with the commitments detailed within the Victorian Transport Sector emissions reduction pledge, which serves a part of Victoria's Climate Change

Strategy, pursuant to Part 5 of the *Climate Change Act 2017* (Vic). Details within the pledge include the promotion of zero emission vehicles (ZEVs) and active transport throughout Victoria.

Resource and administrative costs

What impact will the new planning provisions have on the resource and administrative costs of the responsible authority?

The amendment is not expected to increase the number of planning permit applications as it does not propose to introduce any new planning permit triggers. However, the amendment requires development applications to be assessed against the Objectives and Standards detailed within the Particular Provision. While council already has an ESD policy which requires a similar assessment process, the amendment may require some additional resourcing requirements for implementation.

The Particular Provision will apply to applications under a provision of a zone to construct a building, or construct or carry out works, with a few specified exemptions (including VicSmart applications, works associated with one dwellings on a lot and works associated with a relatively small floor area). Applications lodged prior to the approval date of any amendment that introduces the provision are exempt from assessment, including amendments to an existing planning permit. As such transitional provisions do apply.

Additionally, the amendment is not expected to unreasonably increase resource requirements or administrative costs for permit applicants to undertake ESD assessments. Supporting material is prepared to support this amendment that may reduce costs for some applicants. This is by providing easy to use guidelines and templates which allow for smaller development to more easily generate information required by council to respond to the Objectives and Standards detailed within the Particular Provision.

For example, the Guidelines for Sustainable Building Design will support applicants by providing consistency across councils applying the elevated ESD Standards. The Guidelines for Sustainable Building Design will be included as a Background Document within the planning scheme. This will provide more explicit technical information, appropriate alternatives for responding to performance criteria, real-life case studies/examples, standardised templates and application requirements.

The Guidelines for Sustainable Building Design are an important resource which will support better regulations and a consistent approach between councils. The guidance and supporting materials will clearly articulate expectations and ultimately reduce delays and costs for both applicants and councils; ensuring that the required information can be provided efficiently.

The Guidelines for Sustainable Building Design and accompanying templates will support council staff to convey and request upfront that the correct information is provided, reducing the need for Requests for Further Information. It will also assist applicants; particularly those who may not be frequent users of the planning system, to understand what information and support material needs to be provided to support council decision making. This will ultimately allow council to assess applications more efficiently.

Examples of these templates to support applicants include:

- Sustainable Design Assessments (SDAs) and Sustainability Management Plans (SMPs) templates that outline content and expectations of a SDA and SMP, including the level of detail required for different development typologies;
- Waste Management Plan (WMP) templates for smaller developments conveying 'best practice' to applicants and building capacity with effective ways for development to manage their waste. For larger scale developments more typical WMPs will still be required, with relevant updates and endorsement to follow as per planning permit requirements which is reflective of current practice; and
- Construction waste management templates that are similar to the approach for WMPs however will assist smaller developments, including tips for best practice.

The amendment also proposes the introduction of a requirement to deliver zero carbon emissions at operation stage. This will be achieved through Permit Conditions requiring Sustainability Certificates at Construction and Operational stages. The Sustainability Certificate – Operation is required once, 12

months after the occupation of the development. These certificates confirm that the requirements of the endorsed sustainability management plan are met. This approach provides consistency across all councils applying the Elevated ESD Standards.

It is anticipated that planning permit applications, that are required to address the Objectives and Standards included in this amendment, are assessed by council's planning officer/s and/or Environmental, Sustainability or ESD officer/s.

For larger scale developments or where resources exist, to assist council's planning officer with efficient assessment, referrals will be issued to council's Environmental, Sustainability or ESD Officer(s) given their technical expertise and efficiency to assess the ESD commitments and design measures proposed as a part of the development application.

Given the existing allocation of council resources and council's familiarity with ESD processes within the planning framework, this may result in an additional day a week in officer time to manage planning permit application referrals and undertake ESD assessments against the measures outlined in this amendment. Further time allocation will be considered, should assistance be required, to manage an increase in the amount of referral numbers and associated workload.

Opportunities exist for the funding and use of shared resources to support the provision of referral comments. Funding of such a role/s could also support increased capacity of planning staff to undertake relevant assessments independently.

Where you may inspect this amendment

The amendment can be inspected free of charge at the Whitehorse City Council website at www.whitehorse.vic.gov.au/xxxYourSay

And/or

The amendment is available for public inspection, free of charge, during office hours at the following places:

▪ Locations to be inserted.

The amendment can also be inspected free of charge at the Department of Environment, Land, Water and Planning website at www.planning.vic.gov.au/public-inspection.

Submissions

Any person who may be affected by the amendment may make a submission to the planning authority. Submissions about the amendment must be received by [insert submissions due date](#).

A submission must be sent to:

Amendment CXXX Strategic Planning Unit Whitehorse City Council Locked Bag 2 NUNAWADING VIC 3131	Or via: YourSay/xxx Or via email: customer.service@whitehorse.vic.gov.au
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Panel hearing dates

In accordance with clause 4(2) of Ministerial Direction No.15 the following panel hearing dates have been set for this amendment:

- Directions hearing: [insert directions hearing date](#)
- Panel hearing: [insert panel hearing date](#)

Planning and Environment Act 1987

[INSERT PLANNING SCHEME NAME] PLANNING SCHEME

AMENDMENT C [INSERT AMENDMENT NUMBER]

INSTRUCTION SHEET

The planning authority for this amendment is the **[insert planning authority]**.

The **[insert planning scheme name]** Planning Scheme is amended as follows:

Planning Scheme Ordinance

The Planning Scheme Ordinance is amended as follows:

1. In **Local Planning Policy Framework** – replace Clause 21.05 with a new Clause 21.05 in the form of the attached document.
2. In **Particular Provisions** – insert new Clause **[insert particular provision clause number]** in the form of the attached document.
3. In **Operational Provisions** – Clause 72.08, replace the Schedule with a new Schedule in the form of the attached document.

End of document

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53.XX ELEVATED ENVIRONMENTALLY SUSTAINABLE DEVELOPMENT

Purpose

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To ensure that new buildings and significant alterations and additions are planned and designed in a manner which incorporate environmentally sustainable development (ESD) principles, mitigates and adapts to climate change, protects the natural environment, reduces resource consumption and supports the health and wellbeing of future occupants.

53.xx-1 Application

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This clause applies to an application under a provision of a zone to construct a building, or construct or carry out works, other than the following applications:

- An application under a provision of the Farming Zone, Green Wedge Zone, Green Wedge A Zone, Low Density Residential Zone, Public Conservation and Resource Zone, Transport Zone 2, Transport Zone 3, Rural Activity Zone, Rural Conservation Zone, Rural Living Zone or Urban Floodway Zone.
- A VicSmart application.
- An application to construct or carry out works associated with one dwelling on a lot.
- An application for development associated with the use of land for agriculture or earth and energy resources industry.
- An application to alter, extend or make structural changes to an existing building provided the gross floor area of the building is not increased by more than 1000 square metres.
- An application to construct a building with a gross floor area not exceeding 50 square metres.
- An application to construct or carry out works with an area not exceeding 50 square metres.
- An application lodged before the approval date of Amendment XX.
- An application for an amendment of a permit under section 72 of the Act, if the original permit application was lodged before the approval date of Amendment XX.

For the purpose of this provision:

Other non-residential uses includes development associated with the following uses:

- Education Centre
- Leisure & Recreation
- Place of Assembly
- Hospital

Net zero carbon emissions means the amount of carbon emissions associated with the building's operational energy on an annual basis is zero or negative.

Operational energy use means any energy required to facilitate the day-to-day operations of the development.

Residual operational energy means any additional energy required by the development to operate which remains after accounting for energy efficiency and onsite renewable energy infrastructure.

Green Infrastructure means planned elements of building and landscape design that are designed and managed to deliver a wide range of ecosystem services, generally in the form of vegetation.

EV enabled means development that has been constructed to include the enabling infrastructure for EV charging facilities through the installation of end point charging infrastructure to be provided at a future point in time.

Equivalent standard development means a development which shares similar characteristics to the proposed development but has only undertaken the minimum steps to meet any applicable targets or requirements of relevant regulatory controls.

53.xx-2 Operation

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The provisions of this clause contain:

- **Objectives.** An objective describes the desired outcome to be achieved in the completed development.
- **Standards.** A standard contains requirements to meet the objective. A standard should normally be met.

53.xx-3 Requirements

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An application to construct a building or construct or carry out works:

- Must meet all of the objectives of Clauses 53.XX-4 to 53.XX-11.
- Should meet all the Standards or performance measures specified in this clause. However, if the responsible authority is satisfied that an application for an alternative solution meets the objective, the alternative solution may be considered.

An application must be accompanied by details of proposed environmentally sustainable development measures, including a response to the Standards of this clause, in a Sustainability Management Plan.

53.xx-4 Operational Energy

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Objectives

To ensure new development achieves net zero carbon emissions from operational energy use.

To support the inclusion of renewable energy generation and ensure a transition to renewable energy sources.

To ensure higher levels of energy efficiency and reduce pressure on energy networks.

To support effective energy load management and storage.

To support development that demonstrates innovation in the delivery of carbon positive emission outcomes.

Standards

Standard A1

All residential developments should achieve an average 7 Star NatHERS rating.

Standard A2

All developments should provide the following minimum requirements for onsite renewable energy generation:

DEVELOPMENT	REQUIREMENT
Single dwelling, Two or more dwellings on a lot (multi- dwellings other than apartments)	A 3kW minimum capacity solar photovoltaic (PV) system should be installed for each 1-2 bedroom dwelling and an additional 1.0kW per bedroom for each bedroom there-after.
Apartment development	Provide a solar PV system with a capacity of at least 25W per square metres of the development's site coverage, OR 1kW per dwelling.
Office, Retail, Place of Assembly.	Provide a solar PV system with a capacity of at least 25W per square metres of the development's site coverage.
Industrial & Warehouse	A solar PV system that is sized to meet the energy needs of the building(s) services (lighting, air-conditioning, industrial processes). When no industrial process is proposed, minimum 1.5kW per tenancy plus 1kW for every 150m ² of gross floor area must be provided, OR Where an energy intensive industrial process is likely, maximised based on the available unencumbered roof area.

Note: Alternative renewable energy sources where it can be established that the generation would be equal or greater than that generated by solar PV on site are acceptable.

Standard A3

All development should be designed to reflect the following hierarchy in achieving net zero carbon emissions from all operational energy use:

1. Design buildings to be all electric;
2. Design building orientation, envelope and openings to increase energy efficiency;
3. Selection of energy efficient systems, equipment and appliances;
4. Onsite generation of renewable energy;
5. Purchase of offsite renewable energy.

Standard A4

All new development should be designed to avoid consumption of natural gas or other onsite fossil fuels.

Standard A5

All developments should prioritise the use of passive design to maximise thermal comfort while minimising energy consumption for heating and cooling, including through the following:

- Optimising building siting and orientation.
- Optimising building envelope design to access winter warming sun, limit summer solar heat gain and access dominant cooling breezes.
- Managing wall to glazing ratios.
- External design which uses elements such as wingwalls, balconies, external shading devices to provide effective external shading of glazing in habitable rooms from summer solar heat loads.

- Design which allows for containment of spaces that are artificially heated and cooled.

Standard A6

All development should be designed to minimise energy use including:

- Provision of clotheslines to allow natural drying of clothes and bedlinen, that do not impact the amenity of external secluded private open space, or internal room function.
- Provision of appropriate energy management systems (such as load management) to support use of renewable energy generated onsite and efficient energy consumption throughout the day.

Standard A7

All development should maximise potential utilisation of solar energy and where appropriate, wind, through the following measures:

- Ensuring electrical systems are designed to optimise the onsite consumption of generated electricity.
- Optimising roof form, pitch and orientation for photovoltaic arrays and/or solar air or water heating.
- Minimising shading and obstructions.
- Designing for appropriate roof structure to accommodate and access equipment.
- Consider spatial requirements for future renewable energy storage or other energy management systems.

Standard A8

All residual operational energy should be 100% renewable, purchased through government accredited off-site Green Power, power purchasing agreement or similar.

53.xx-5 Embodied Carbon

Objectives

To encourage development that considers the lifecycle impacts of resource use and supports lower carbon emissions.

Standards

Standard B1

Development should reduce the impact of embodied carbon emissions in materials used through a combination of the following measures:

- Reusing all, or part, of existing buildings.
- Use of reclaimed or repurposed materials where appropriate.
- Use of new materials with a recycled content.
- Identifying opportunities to substitute high impact materials, such as concrete or steel, with materials with lower embodied carbon.
- Selecting materials from sources which have undertaken offsetting of any carbon emissions.

Standard B2

Development should demonstrate consideration of the potential for future adaptation and / or alternate uses where relevant, in the design of buildings.

Standard B3

Development should contribute to the reduction in future embodied carbon through careful material selection, including:

- Utilising materials that are durable, reducing need for replacement.
- Utilising materials and construction methods which facilitate future recycling of materials.
- Considering the application of 'design for disassembly' principles.

53.xx-6 Sustainable Transport

Objectives

To ensure development supports sustainable and equitable transport patterns through the provision of transport infrastructure that prioritises active transport.

To support and encourage zero emissions transport.

To support development that is designed to encourage behavioural changes to reduce transport related emissions and congestion.

To ensure that development is designed to accommodate the expected increase in use of lower emission modes of transport through the provision of infrastructure that is efficient and can adapt to meet changing needs and innovations in transport technology.

Standards

Standard C1

All development should provide the following rates of bicycle parking:

DEVELOPMENT	REQUIREMENT
New residential development	<p>A minimum of one secure undercover bicycle space per dwelling. Where a lesser provision of bicycle parking is proposed, development should demonstrate how additional space (i.e. car parking spaces) could be repurposed for bicycle parking should demand arise.</p> <p>A minimum of one visitor bicycle space per 4 dwelling.</p>
New retail development	<p>A minimum of one secure undercover employee bicycle parking space per 100 sqm net leasable area.</p> <p>Visitor bicycle spaces equal to at least 5% of the peak visitors capacity.</p>
New development associated with a Place of Assembly	<p>A minimum of 2 secure staff bicycle spaces per 1500 sqm of a place of assembly.</p> <p>A minimum of four visitor spaces for the first 1500 sqm and 2 additional spaces for every 1500 sqm thereafter.</p>
New office development	<p>A minimum of one secure undercover staff bicycle parking space per 100 sqm net leasable area of office.</p> <p>A minimum of one visitor space per 500 sqm net leasable area of office.</p>
For all other non-residential uses	Provide bicycle parking equal to at least 10% of regular occupants.

Standard C2

All non-residential developments should provide:

- One shower for the first 5 employee bicycle spaces, plus 1 to each 10 employee bicycle spaces thereafter.
- Personal lockers are to be provided with each bicycle space required if 10 or more employee bicycle spaces are provided.
- If more than 30 bicycle spaces are required, then a change room should be provided with direct access to each shower. The change room may be a combined shower and change room.

Standard C3

All development should be designed to support the use of electric vehicles through the provision of:

DEVELOPMENT	REQUIREMENT
Single dwellings / Two or more dwellings on a lot	Appropriate infrastructure and cabling to support at least moderate speed, efficient EV charging (with / without the EV charger unit) in each garage / carport.
Apartment development	<p>Electrical capacity capable of supporting the provision of an appropriate moderate speed, efficient EV charging outlet to all car parking spaces.</p> <p>Appropriate EV infrastructure and cabling must be provided to ensure peak demand is managed for example, distribution boards, power use metering systems, scalable load management systems, and cable trays or conduit installation.</p>
Non-residential development under 5,000 sqm gross floor area	<p>Electrical capacity capable of supporting the provision of an appropriate moderate speed, efficient EV charging outlet to 20% of all staff car parking spaces (or a minimum of one space).</p> <p>Appropriate EV infrastructure and cabling must be provided to ensure peak demand is managed, for example, distribution boards, power use metering systems, scalable load management systems, and cable trays or conduit installation.</p>
Non-residential development over 5,000 sqm gross floor area	<p>Installed EV charging infrastructure complete with chargers and signage to 5% of all car parking spaces.</p> <p>Electrical capacity capable of supporting the provision of an appropriate moderate speed, efficient EV charging outlet to 20% of all staff car parking spaces (or a minimum of one space).</p> <p>Appropriate EV infrastructure and cabling must be provided to ensure peak demand is managed for example, distribution use metering systems, scalable load management systems, and cable trays or conduit installation.</p>

Standard C4

All bicycle parking facilities should be designed for convenient access, including:

- Locating the majority of bicycle parking facilities for occupants at ground level, where this does not compromise other relevant objectives.
- For bicycle parking not at ground level, providing the majority within 10 metres of vertical pedestrian access ways (i.e. lifts, stairs).
- Providing safe access to bicycle parking facilities in basement carparks via a separate line of travel or by clearly signalling cycle priority through surface treatments and to facilities accessed via lanes by providing suitable lighting and surveillance.
- Ensuring any lifts used to access bicycle parking areas are at least 1800mm deep.
- Ensuring at least 20% of residential bicycle parking facilities are of a type which support equitable access through a combination of well-spaced ground level facilities to

support ease of use and provision of parking spaces to accommodate a diverse range of bicycles (such as cargo bikes or three wheeled bikes).

Standard C2

All car parking facilities should be designed to support the charging of shared or visitor vehicles through:

- The provision of a minimum of one EV enabled shared parking space if visitor or shared parking spaces are proposed.
- Locating shared EV charging space(s) in highly visible, priority locations.
- Providing clear signage indicating that EV charging is available at the shared space(s).

Standard C3

All car parking facilities should be designed to support the charging of motorcycle, moped, electric bicycle or scooters through:

- Providing electrical capacity for appropriate charging outlets at the parking / storage area.
- Providing a general power outlet for every six vehicle parking spaces to support charging.

Standard C4

All development should be designed to support modal shift to more sustainable forms of transport through:

- Locating low and zero emission vehicles in a prominent, accessible locations within parking facilities.
- Designing car parking facilities to be adaptable to other uses.
- Adopting flexibility in the allocation of car parking spaces to facilitate adaptable uses or transfer of ownership.

53.xx-7 Integrated Water Management

Objectives

To support development that minimises total operating potable water use.

To support development that reduces the amount of stormwater runoff on site, and improves its quality of stormwater, and impacts for stormwater that leaves a development.

To ensure development considers and addresses the impact of future climate conditions in the management of water resources.

To encourage development that supports innovation in the use and reuse of water

Standards

Standard D1

All development should be designed to reduce potable water use on site by at least 30% in interior and irrigation uses, in comparison to an equivalent standard development, with use of roof harvested rainwater supply prioritised in the delivery of reductions.

Standard D2

Design developments to use water resources efficiently through a range of measures, including;

- Collection of rainwater from above ground catchments, and appropriate filtering for on-site use for toilet flushing as a minimum, and additional uses such as laundry, irrigation, wash down facilities, etc.
- Capture of fire-test water for on-site reuse.
- Collection of stormwater for on-site reuse.
- Considering opportunities for onsite recycling of wastewater through the installation of approved greywater or blackwater systems.
- Reducing potable water use for irrigation by selection of drought tolerant landscaping, design for passive irrigation, and selection of efficient irrigation systems where needed.
- Connecting to a precinct scale Class A recycled water source if available and technically feasible (including a third pipe connection to all non-potable sources).
- Providing water efficient fixtures, fittings and equipment.

Standard D3

Reduce the volume and flow of stormwater discharging from the site by appropriate on-site detention and on-site retention strategies, consistent with catchment scale IWM objectives and targets.

Standard D4

Improve the quality of stormwater discharging from the site by meeting best practice urban stormwater standards.

53.xx-8 Green Infrastructure**Objectives**

To deliver development that protects existing landscape values on and adjoining the development site, including canopy, vegetation, and habitat for biodiversity.

To deliver development that increases vegetation, particularly indigenous and native vegetation, and enhances existing landscape values, connects biodiversity corridors and increases the resilience of ecosystems.

To ensure landscaping proposed as part of development will be resilient to future climate conditions and supports integrated water management and energy efficiency outcomes.

To support development that increases amenity, improves connections to surrounding natural landscapes and supports health and wellbeing.

To encourage development that provides opportunities for on-site food production.

Standards

Standard E1

All new development should achieve a Green Factor score of 0.55 (0.25 for industrial and warehouse uses)

OR

A minimum of at least 40% of the total site coverage area (20% for Industrial or Warehouse) must comprise green cover (external landscaping) that delivers at least one of the following:

- A minimum of 65% of the required green cover area as new or existing canopy planting and a minimum of 35% as understory planting. Canopy planting and understory planting can overlap.
- Species selection and associated planting arrangement comprising native and / or indigenous species which provides habitat for native fauna.
- Green cover which is located to provide maximum benefit in relation to the cooling of the adjoining public realm. Green walls or facades under this pathway must benefit the public realm and be on the lower levels of the building.

Standard E2

Green infrastructure should:

- Support the creation of complex and biodiverse habitat.
- Provide a layered approach, incorporating both understory and canopy planting.
- Provide either native, indigenous and/or climate change resilient exotic plants that provide resources for native fauna.
- Support the creation of vegetation links between areas of high biodiversity through planting selection and design.
- Ensure species selection is appropriate to address expected future climate conditions.

Standard E3

Siting of buildings should seek to retain existing mature canopy trees (excluding invasive species) or significant areas of other green cover which contribute to biodiversity corridors and habitat.

Standard E4

Development should ensure appropriate measures are integrated to support the establishment and ongoing maintenance of landscaping

53.xx-9 Climate Resilience

Objectives

To improve the resilience of the built environment to climate change related hazards and natural disasters.

To deliver development that reduces the urban heat island effect.

Standards

Standard F1

Provide at least 75% of the development's total site area with a combination of the following elements to reduce the impact of the urban heat island effect:

- Green infrastructure.
- Roof and shading structures with cooling colours and finishes that have a solar reflectance index (SRI) of:
 - For roofing with less than 15 degree pitch, a SRI of at least 80.
 - For roofing with a pitch of greater than 15 degrees, a SRI of at least 40
- Water features or pools.
- Hardscaping materials with SRI of minimum 40.

Standard F2

New development should demonstrate that future climate impacts have been considered and addressed in any design response.

Standard F3

Pedestrian pathways should be designed with thermal comfort in mind. This includes incorporating landscaping (tree canopy and other vegetation), shading and covered structures.

53.xx-10 Indoor Environmental Quality

Objectives

To support development that achieves safe and healthy indoor environments, specifically addressing:

- Thermal comfort.
- Thermal safety.
- Access to clean, fresh air.
- Access to daylight and sunlight.
- Harmful indoor air pollutants.

To deliver development that considers the impact of future climate conditions on indoor environment quality.

Standards

Standard G1

Buildings should be designed to be able to provide appropriate levels of thermal comfort without reliance on mechanical heating and cooling systems, as follows:

DEVELOPMENT	REQUIREMENT
Single dwellings	All habitable rooms should be cross ventilated.
Two or more dwellings on a lot (other than apartments)	
Apartment development Residential Buildings	60% of all apartments should be effectively naturally ventilated, either via cross ventilation, single-sided ventilation or a combination At least 40% of apartments on every floor to be cross ventilated.
Non-Residential development	All regular use areas of non-residential spaces should be effectively naturally ventilated; or commensurate mechanical measures provided.

Standard G2

Buildings should achieve a daylight level across the entirety of every habitable room of 100 lux and of 50 lux across the entirety of any other regularly occupied space.

Standard G3

Internal spaces in buildings should utilise natural light to minimise the use of artificial lighting during daylight hours, unless the proposed use of the room is contrary to the provision of glazing.

Standard G4

Primary living areas of at least 70% of all dwellings in a development should achieve direct sunlight for 2 hours on the 21st day of June to at least 1.5m deep into the room through glazing.

Standard G5

Development should include openable external windows to circulation corridors and lift lobbies to facilitate natural ventilation for residential development below six storeys.

Standard G6

Development should use materials which are low toxicity in manufacture and use, and that do not cause harm to people or ecosystems.

53.xx-11 Waste and Resource Recovery**Objectives**

To facilitate development that supports functional waste recovery and management.

To enable the continuous improvement of sustainable waste management and resource recovery.

StandardsStandard H1

Development should include:

- Adequate waste and recycling infrastructure to manage the waste demand of the development in a sustainable manner and to support recycling, such as an appropriate number of bins, waste chutes, and cleaning facilities.
- Waste and recycling infrastructure and enclosures which are:
 - Adequately ventilated.
 - Integrated into the design of the development.
 - Located and designed for convenient access by occupants and made easily accessible to people with limited mobility
 - Signposted to support recycling and reuse.
- Adequate facilities or arrangements for bin washing.

Standard H2

Development should be designed to facilitate:

- Collection, separation and storage, and where appropriate, opportunities for on-site management of food waste through composting or other waste recovery as appropriate.
- Collection, storage, and reuse of garden waste, including opportunities for on-site treatment, where appropriate, or off-site removal for reprocessing.
- Collection and storage of glass recycling
- Collection and storage of containers under any Container Deposit Scheme as appropriate for the proposed use and scale.
- The provision of adequate circulation space on site to allow waste and recycling collection vehicles to enter and leave the site without reversing.
- Waste and recycling separation, storage and collection designed and managed in accordance with an approved Waste Management Plan, if required by the responsible authority.
- For apartment development, the provision of space for communal storage of additional waste streams including E waste, hard waste and textiles.

Standard H3

An application should demonstrate through the provision of a Construction / Demolition Waste Management Plan, if required by the Responsible Authority, that all practical and feasible practices and activities to minimise waste and increase resource recovery will be implemented.

53.xx-12 Decision guidelines

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Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider:

- *The extent to which the development meets the objectives and requirements of this policy from the design stage through to construction and operation.*
- *Whether alternative design responses to the identified Standards would achieve greater alignment with precinct specific objectives related to environmental sustainability.*
- *Whether the proposed environmentally sustainable development initiatives are reasonable having regard to the type and scale of the development and any site constraints.*
- *The response to any other matters relating to environmentally sustainable development outlined in this planning scheme.*
- *Any relevant water and stormwater management objective, policy or statement set out in this planning scheme.*
- *The contribution the development makes to mitigation of the urban heat island effect and adaptation to changing climatic conditions.*
- *The feasibility and approach to maintenance of proposed green infrastructure.*
- *The quality of the integrated water management approach proposed for the development.*
- *The impact of the removal of any mature canopy trees or vegetation which contributes to natural ecosystems and the measures proposed to mitigate these impacts.*

31/07/2018
VC148

SCHEDULE TO CLAUSE 72.08 BACKGROUND DOCUMENTS

1.0

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Background documents

Name of background document	Amendment number - clause reference
City of Whitehorse Student Accommodation Strategy - Background Paper, (August 2018)	C213whse
City of Whitehorse Student Accommodation Strategy, (August 2018)	C213whse
Guidelines for Sustainable Building Design, (XXXXXXX, 20XX)	CXXX - 53.XX