



11.0 Sustainability

11.1 Overview

This Housing Strategy presents an important opportunity to consider how Yarra Ranges can transition to a more environmentally sustainable future, with specific regard to housing.

The policy landscape is changing towards an increased sustainability emphasis at all levels of government, as seen by the recent State Government announcement of no gas to new homes requiring a planning permit from 1 January 2024, and upcoming changes to the National Construction Code for enhanced sustainability outcomes through the building regulatory system.

The need to plan for housing relates to environmental sustainability issues on multiple levels, including:

Proactive planning	Site level	Reducing environmental impacts from new buildings
		Better energy performance
		Designing and constructing in a way that is more responsive to climate change
	Broader area/region	Reducing car dependency by focussing opportunities for medium and high-density housing near shops, services and public transport
		Avoiding urban growth in areas of environmental risk
		Planning for more tree planting in urban areas to address the heat island effect
		Managing waste and recycling issues
Reactive planning		Responding to natural disasters and emergencies
		Arranging interim housing for households whose residence is destroyed or damaged by natural disasters

With an increasing need for a robust response to managing climate change risks by governments, Yarra Ranges Council has a dual challenge: how to support communities already being harmed by climate change related impacts such as natural disasters of increasing scale and frequency, while also seeking to reduce carbon emissions into the future.

Transitioning to a more sustainable future brings benefits for housing at a local level, such as:

- Increased affordability of running costs due to enhanced design and construction techniques, and use of renewable energy.
- Housing that is more resilient to change, such as change experienced through rising energy prices, cost of living pressures, and changes to transportation patterns, as well as designed for habitation under changing climate conditions.
- Housing that promotes environmental awareness and responsibility

In December 2022, a new local policy was included in the Yarra Ranges Planning Scheme requiring new residential development to demonstrate an adequate response to environmental sustainability, such as through measures to improve energy performance and minimise environmental impacts (Clause 15.01-2L **Environmentally Sustainable Development**). The newly introduced Clause mirrors similar policies being implemented in Local Government planning schemes across Victoria. This is discussed in more detail under Section 11.2 Planning Approaches to Sustainability.

This Chapter further discusses environmental sustainability issues for residential land use and development in Yarra Ranges under the following three themes:



Planning approaches to sustainability



Planting and biodiversity



Emergency and disaster housing

11.2 Planning Approaches to Sustainability

11.2.1 Urban Structure

At a broad scale, environmental performance is enhanced by a sustainable urban form, based on the principles of the 20-minute neighbourhood, which encourages increased housing density in locations residents can reasonably be expected to meet most of their daily needs within a 20-minute return walk from home.⁴⁷ This encourages walking and cycling as an alternative to car travel, reducing carbon emissions and simultaneously improving other outcomes such as social, health and economic outcomes.⁴⁷

This Housing Strategy supports the principles of a 20-minute neighbourhood by identifying residential areas in and surrounding activity centres as the priority locations for medium and high-density housing.

However, in increasing housing densities, care must be taken not to worsen the heat island effect in urban areas, which is caused by a reduction in tree canopy cover and an increase in impermeable surfaces such as asphalt, concrete and brick.^{48(p.22)}

Trees on private land currently comprise 77% of the total canopy cover within Yarra Ranges' urban and township areas,^{48(p.15)} showing the importance of private land in mitigating the heat island effect. However, the canopy cover in these areas decreased by roughly 3% between 2014 and 2018^{48(p.16)}, showing the need for Council action to encourage the retention of existing trees and planting of new ones. In responding to this, Council's Draft Tree Canopy Strategy seeks to achieve an increased canopy cover across all activity centres by 2042.^{48(p.37)}

11.2.2 Clause 15.01-2L Environmentally Sustainable Development

In December 2022, a new Clause 15.01-2L (Environmentally Sustainable Development) was introduced into the Yarra Ranges Planning Scheme to ensure new residential development responds appropriately to environmental sustainability measures, including:

- Energy performance: reducing energy use and peak demand through building orientation, design and construction measures.
- Integrated water management: reducing potable water usage and improving the quality, velocity and volume of stormwater run-off and increased rainwater harvesting.
- Indoor environmental quality: achieving a healthy indoor environment through design measures for airflow, daylight, thermal comfort, toxicity of materials and noise.
- Transport: designing development to promote active transport such as walking, cycling and linkages with public transport as well as preparing for the transition to electric vehicles.
- Waste management: Promoting waste avoidance, reuse and recycling at all stages of a development.
- Urban ecology: protecting and enhancing biodiversity through design and landscaping, planting which supports local indigenous biodiversity, passive solar heating and cooling, and food production areas.

The introduction of this Clause was assisted by Yarra Ranges' membership in the Council Alliance for a Sustainable Built Environment (CASBE), with numerous other member council's also introducing similar policies into their planning schemes. The Clause requires an assessment of development applications of defined scales against sustainability scorecard systems.

In coordination with CASBE, Yarra Ranges Council will monitor the effectiveness of Clause 15.01-2L in achieving environmentally sustainable development outcomes, with a view to future refinements if necessary.

11.2.3 Additional Planning Issues for Sustainability

Despite the introduction of Clause 15.01-2L **Environmentally Sustainable Development**, there are sustainability issues not addressed by this Clause that Council may need to consider creating policy guidance on, such as:

1. Street Lighting – in subdivisions of various sizes, lighting is required by developers within common areas and new streets. However, guidance may be needed from Council over appropriate lighting for wildlife and for people.
2. Passive design – as Yarra Ranges becomes home to more medium and high-density development, there is a need to consider preferred strategies for passive design, to minimise use of mechanical heating and cooling.
3. Food production areas – smaller garden areas for medium and high-density housing will mean significantly less space for domestic vegetable patches per dwelling. There is a need for Council policy direction on how food production areas can be accommodated within medium and high-density development.

An action of this housing strategy will be to explore the need for Council policy guidance on issues additional to those addressed by Clause 15.01-2L **Environmentally Sustainable Development**.

11.2.4 Areas of Environmental Risk

Yarra Ranges contains extensive areas subject to environmental risks, such as bushfire, landslide and flood. Development in these areas is governed by the application of land management planning overlays (Bushfire Management Overlay, Erosion Management Overlay and Land Subject to Inundation Overlay), to determine acceptable locations and construction standards for new buildings. A revision to these requirements is beyond the scope of this Housing Strategy and is periodically carried out, however the Strategy seeks to avoid any intensification of allowable development in areas of identified risk.

On an ongoing basis, Council will assist to monitor the effectiveness of these planning controls in coordination with relevant State Government agencies.



11.3 Planting and Biodiversity

As part of the revised approach to neighbourhood character proposed by this Housing Strategy, planning applications for residential development will need to demonstrate an acceptable landscaping response. The amount of new planting required in a new development will depend on the preferred future character of a specific area, with less planting needed in areas prioritised for medium and higher density housing. This is because these areas will have less ground-level surface area available for planting, which will result in fewer and smaller trees than can be accommodated than in other neighbourhood character precincts.

However, these built-up areas are also the locations that are at the most risk of the urban heat island effect. For example, Lilydale has daytime land surface temperatures 6.9°C above the non-urban baseline^(48,p.23). Therefore, Council will need to prioritise opportunities to increase public realm planting within the consolidation precincts identified in Chapter 8. In these areas any planting on private land associated with urban development will typically occur in small, constrained areas and will need specific guidance from Council to maximise its benefits. For example, planning decisions will need to ensure there is adequate permeable surface area provided per tree to support tree health, and sufficient spatial separation of future trees from buildings and infrastructure. Council's **Neighbourhood Character Study 2021** contains direction on these issues.

The Urban Heat Island Effect refers to warmer temperatures experienced in urbanised areas as compared to surrounding rural areas.

Species selection will also be key. Council will need to provide direction on situations where use deciduous or evergreen species is most appropriate. For instance, deciduous trees may be best used for providing shade to north facing windows in summer while allowing winter sun to reach habitable rooms in winter. Conversely, evergreen trees may be better used for shading east and west facing windows to provide consistent shade year-round.^{49(p.9)}

In low density suburban and rural township settings, the neighbourhood character provisions will require tree retention where possible and extensive tree planting and landscaping that will improve environmental values. In any new planting regime, species selection will be critical to maximising biodiversity and habitat benefits. Indigenous plants are recognised as being most effective in creating habitat for birds, insects and other biodiversity⁵⁰. In these areas, landscape approaches should maximise the value of existing features such as large trees, open drainage lines, or areas of remnant vegetation⁵⁰.

Species selection will also need to consider long-term viability of trees. Climate change is anticipated to result in increased extreme weather events and higher average temperatures, which not all native and indigenous trees will adapt successfully to^{48(p.26)}.

Planning for bushfire is another factor to consider. Species selection in areas of identified bushfire risk should prioritise low flammability species, particularly in proximity to buildings.

To assist in species selection associated with land development, Yarra Ranges has Landscape Guidelines adopted in 2010, however these need updating with specific species selection and landscape design recommendations to inform a variety of development scenarios.

In areas of identified environmental significance, specific requirements apply through the application of the Environmental Significance Overlay (ESO) in the Yarra Ranges Planning Scheme, to retain existing indigenous vegetation and includes requirements for offset planting in instances where loss of trees cannot be avoided.

11.4 Emergency and Disaster Housing

Since 2019, governments at all levels across Australia have experienced dramatically increased pressure to respond to community needs arising from natural disasters.

Part of Council's role in responding to disaster events is to coordinate relief and recovery at the municipal level, including the arrangement of emergency shelter and accommodation for displaced households, and interim accommodation for households whose primary residence is destroyed or damaged.

To this end, Council works collaboratively with the Eastern Metropolitan Council's Emergency Management Partnership, Department of Families, Fairness and Housing (DFFH) and emergency accommodation providers to secure emergency shelter and accommodation options. Arrangements are detailed in emergency plans and agreements, including the Yarra Ranges Municipal Relief Plan and Recovery Plan, and are relevant to both minor and major events causing displacement of households. Examples of major events in Yarra Ranges include bushfires, floods and severe weather.⁵¹

As the relief stage of a major emergency response transitions into a recovery stage, Council has a role in advocating to the Minister for Planning for planning scheme changes that will enable and expedite community needs for rebuilding. A recent example of this occurred following the June 2021 storm event.

In response to the anticipated increase in the frequency and severity of natural disasters due to climate change, Council will need to continue its advocacy to the Minister for Planning for agile and responsive planning scheme changes to support social recovery through the provision of housing and accommodation.

11.5 Actions

- 1.** In coordination with the Council Alliance for the Sustainable Built Environment (CASBE), monitor the effectiveness of Clause 15.01-2L (Environmentally Sustainable Development) in achieving environmentally sustainable development outcomes, with a view to future refinements if necessary.
- 2.** Consider the need for additional strategies for inclusion in Clause 15.01-2L (Environmentally Sustainable Development) in the Yarra Ranges Planning Scheme, for lighting in new subdivisions, passive design strategies, and food production areas.
- 3.** Prioritise opportunities to increase public realm planting within the Urban Consolidation precincts identified in Chapter 8.
- 4.** Update the Yarra Ranges Landscape Guidelines, 2010 to include specific tree species and landscape design recommendations to inform a variety of development scenarios, as well as definitions of large, medium and small trees. Include this as a background document to the Yarra Ranges Planning Scheme.
- 5.** In the aftermath of natural disasters, advocate to the Minister for Planning as required for agile and responsive planning scheme changes to support social recovery through the provision of housing and accommodation.