## **URBAN DESIGN GUIDELINES**

### **NEIGHBOURHOOD DESIGN MANUAL**

Version 1.0 September 2023



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Westfield Plenty Valley, South Morang

## 1. Introduction

"Good urban design is central to ensuring the liveability of our cities and regional towns."

Office of the Victorian Government Architect (OVGA)

Urban design is more than just well-designed buildings. It requires careful consideration and integration of spaces between buildings, infrastructure, landscape and streetscape elements. Good urban design positively and extensively impacts our lives. It improves physical and mental health, vitality and viability of town centres, property values, perception of safety and maintenance cost of public spaces.

Good design does not cost more across the project lifetime, yet it significantly affects the function and operating costs of a place. It has a lasting effect on our communities and neighbourhoods, and should not be treated as an afterthought.

The Victorian Government and City of Whittlesea's policies and strategies call for quality urban environments. Good urban design is not optional, it is a requirement, in order to:

- Create urban environments that are safe, healthy, functional and enjoyable and that contribute to a sense of place and cultural identity (Clause 15.01-1S Urban Design's objective, Whittlesea Planning Scheme)
- Create a distinctive and liveable city with quality design and amenity (Clause 15.01-1R Urban Design's objective, Whittlesea Planning Scheme)
- Create more great public places across Melbourne (Direction 4.1, Plan Melbourne 2017-2050)

#### **About the Guidelines**

The Neighbourhood Design Manual's Urban Design Guidelines (the Guidelines) set out urban design objectives and guidelines to plan for and deliver attractive, safe, inclusive, functional and sustainable developments in the City of Whittlesea.

The Guidelines build on the City of Darebin's *Good Design Guides* and Merri-bek City Council's *The Good Design Advice Sheets*.

#### **Relevant policies and standards**

The Guidelines have been prepared to support policies and strategies from the Victorian Government and the City of Whittlesea, including but not limited to:

- Whittlesea Planning Scheme
- Plan Melbourne 2017-2050
- Urban Design Guidelines for Victoria
- Gender Equality Act 2020
- Disability Act 2006, and Inclusive Victoria: State Disability Plan (2022-2026)
- City of Whittlesea Integrated Planning Framework

#### How to use the Guidelines

Each chapter contains a series of objectives that state a thematic outcome to be achieved, followed by recommendations and tips to achieve them.

Diagrams and photographs of real-life examples are provided to further illustrate Council's expectations and how to implement the recommendations. Ziebell's Farmhouse Museum, Thomastown

# 2. Glossary of Terms

#### **Integrated Water Management (IWM)**

IWM is a collaborative approach to planning that brings together all elements of the water cycle including sewage management, water supply, stormwater management and water treatment, considering environmental, economic and social benefits.

#### **Non-contributory**

Non-contributory places or elements of a heritage place have no identifiable cultural heritage significance. Examples include sheds or plantings that are not consistent with the original heritage place.

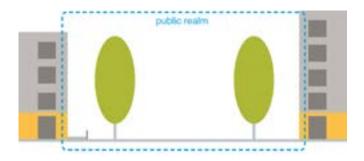
#### **Paper road**

Paper road is a narrow unformed public road reserve created on a Plan of Subdivision and provides access for pedestrians and emergency services vehicles. Paper roads are used to facilitate pedestrian access to residential developments that front reserves and provide activation and passive surveillance to the reserve.

#### **Public realm**

Public realm comprises spaces and places that are open and freely accessible to everyone, regardless of their economic or social conditions. These spaces can include streets, laneways and roads, parks, public plazas, waterways and foreshores.

Public realm also includes facades of buildings and everything that can be seen at eye level. See below image adapted from *The City at Eye Level* (Hans Karssenberg et al.).



#### Town centres

Town centres are often referred to as 'activity centres'. They vary in scale, from the Metropolitan Activity Centres that supports regional areas with services and jobs to the Neighbourhood Activity Centres with smaller catchment areas, such as the local shopping strips.

In the City of Whittlesea, town centres are found in our established suburbs, growth and rural areas, including the Whittlesea Township.

#### **Tree Protection Zone (TPZ)**

TPZ is an exclusion zone designed to protect all trees and stags identified for retention in a development.

#### Water Sensitive Urban Design (WSUD)

WSUD integrates the urban water cycle into urban design to minimise environmental damage and improve recreational and aesthetic outcomes.



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## **3. Town Centre Environments**

Town centres are at the heart of Whittlesea's communities, serving as economic, cultural and social hubs.

They reflect the unique characteristics of their natural environment and the diverse make-up of the communities they serve. Despite their varying scale, all town centres provide access to our daily needs, services and employment opportunities. Town centres also play an important economic and social role, which contribute to the wellbeing of our residents and liveability of our neighbourhoods.

As a vital part of Whittlesea's urban fabric, town centres should be designed to be safe, inclusive, accessible and sustainable places for all.

## Relevant policies and standards, in addition to those listed on page 5:

- Clause 15.01 Built Environment (Whittlesea Planning Scheme)
- Movement and Place in Victoria (Department of Transport)
- Street Activities Guidelines (City of Whittlesea)
- *Public Toilet Amenities Plan* (City of Whittlesea)
- ESD Guidelines (City of Whittlesea)
- City of Whittlesea Lighting for Shared User Paths (ARUP)
- Urban Street Design Guide (NACTO)
- Global Street Design Guide (GDCI)

Design each town centre to reflect its unique position, environment, cultural heritage and diverse communities

#### Guidelines

- [a] Encourage best practice public realm design that supports the distinct role and function of town centres.
  - For example: wide footpaths, tree pits and grates, bespoke materials, paving, street furniture and outdoor dining areas.
  - Town centres must be designed as attractive, safe, inclusive, accessible and green places to support a comfortable, welcoming and vibrant environment.
  - Consider the town centre's hierarchy to determine the scale of investment.
  - Town centres often require higher level of maintenance and more robust materials due to greater number of visitors, foot traffic and litter generated compared to other land uses.
- [b] Collaborate with local Aboriginal community and traditional custodians to integrate Aboriginal art, heritage and culture in public realm design.
- [c] Reflect the local cultural identity in public realm design.
- [d] Select trees and plants appropriate to the town centre's local cultural identity.
  - Consider the suitability of selected plants to local climate and place character, including their softening and cooling effects, hardiness and durability.





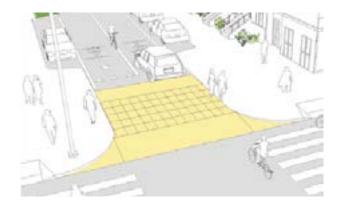


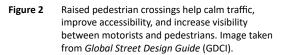
Figure 1 Woodlea Town in Aintree uses kerbless streets, bespoke materials, paving and street furniture to emphasise its distinct role and function as a town centre.

# Create a well-connected and pedestrian-friendly town centre

#### Guidelines

- [a] Provide direct pedestrian connections between town centres and nearby key uses.
  - For example: public transport, community facilities, parks, schools and other educational facilities.
- [b] Provide raised pedestrian crossings based on the shortest routes to and from town centres.
- [c] Provide dedicated and direct pedestrian paths through car park to main building entries.
- [d] Subject to vehicle size, tighten kerb corners to slow turning vehicles and shorten pedestrian crossing distance.
- [e] Narrow traffic lanes to slow vehicle traffic and maximise space for landscaping, retail and pedestrian activities.
- [f] Provide canopy trees to create a comfortable and inviting space for pedestrians.
- [g] Use tree pits (and grates) with structural soils in areas with heavy foot traffic.
  - Tree pits (and grates) promote healthy growth of trees in paved areas.
  - Structural soils increase the soil volume available for healthy tree growth to maturity.







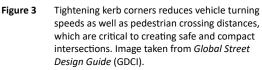
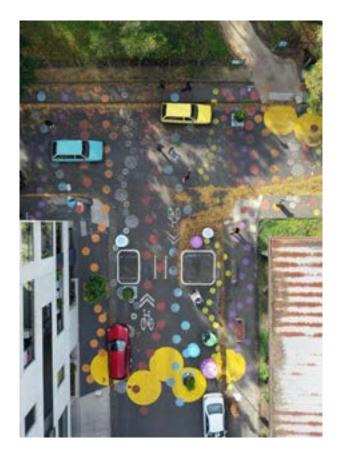




Figure 4 Narrow lanes reduce speeds and minimise crashes by reducing the right-of-way and making drivers wary of traffic and adjacent users. Image taken from *Global Street Design Guide* (GDCI). [h] Consider kerbless street design.

- Kerbless streets promote a seamless pedestrian environment and increase accessibility, especially for people with impaired mobility.
- To maintain equality among road users, kerbless streets should adopt a low-speed environment (30 to 40 km/h speed limit).
- Consider tactile and material changes to enhance navigation and safety, especially for people with vision impairment.
- Consider converting kerbless streets to shared zones to further enhance pedestrian mobility and safety.
- Adopt safe stormwater management practices and ensure overland flows and drainage network inlets do not pose a risk to pedestrians.
- [i] Consider interim design strategies to create pedestrian-friendly public spaces, encourage active transport modes and inform permanent public realm investments.
  - For example: temporary kerb extensions, parklets, street closures, shared zones and public plazas.
  - Ensure the delivery of any strategies accords with all relevant Federal and State requirements.
  - Interim design strategies can be used to assess the project's impacts in real time and realise its benefits faster.



- Figure 5
- The temporary shared zone at the intersection of Albert Street and Hutchinson Street, Brunswick East is delivered as a trial and uses materials that can be modified or removed. Photo by the Merri-bek City Council.

### Support active transport movements to and from town centres

#### Guidelines

- [a] Integrate local shared and/or bike path network in town centres.
  - Kerbs provide physical protection for cyclists and support higher rates of confidence in bike riding.
  - Dedicated bike and footpaths are preferrable, especially on main roads. Separating bikes from pedestrians provides a safer walking environment and reduces delays for cyclists.
- [b] Provide end-of-trip facilities in town centres.
  - For example: bicycle parking, drinking fountains, bicycle pump station, e-bike charging station, public seating area, gender-inclusive and family-friendly public showers and changing rooms.



Shared lane: 16% confident



Figure 6 Concern for safety is the most significant barrier preventing cautious and unconfident bike riders from commuting to work. City of Melbourne's research found physically protected lanes support higher rates of confidence in cycling. Image taken from *Transport Strategy 2030* (City of Melbourne).



Figure 7 Bicycle hoops at the Mernda Town Centre.

# Create a safe town centre environment

#### Guidelines

- [a] Minimise areas with limited passive surveillance, blind spots and hiding spots.
  - Plant selection, location and future growth should not negatively impact passive surveillance.
- [b] Avoid enclosed space with no means of escape.
  - Long, narrow and enclosed corridors may induce a sense of entrapment.
- [c] Consider pick-up and drop-off areas for taxis and rideshares that are clearly visible from pedestrian paths and nearby buildings.
- [d] Consider public toilets in accessible and active areas with high visibility to the streets and public spaces.
  - Ensure entrances have direct sightlines from public spaces to allow for passive surveillance.
  - Facilities located in secluded or obscured areas feel unsafe and may be avoided.
- [e] Maximise passive surveillance opportunities in and around town centres.
  - Maximise provision of clear glass retail windows.
  - Avoid placing stickers and other objects on or next to retail windows that prevent visual connection between the retail's interiors and the streets.
  - Orientate surrounding buildings' windows, balconies and habitable rooms towards town centres to provide additional passive surveillance.
  - When residential buildings front town centres, use low fence to ensure visual permeability and passive surveillance.







Figure 8 Retail windows should be kept clear as much as possible to maximise passive surveillance opportunities.

- [f] Use lighting to enhance perception of safety in town centres.
  - Use warmer colour lighting colour, instead of cold and multi-coloured lights.
  - Create consistent and layered lighting across town centres.
  - Use lighting to highlight key buildings as landmarks to help orientation and improve wayfinding.
  - Light gaps and dark corners to enable awareness of environment and increase feelings of safety.
  - For more information, refer to *City of Whittlesea Lighting for Shared User Paths* (ARUP).
- [g] Use materials in different colours and sheens to create contrast, visibility and improve perception of brightness.
  - Light coloured materials look brighter and reflect more light across an area, improving the perception of safety.
  - Create consistent and layered lighting across town centres.

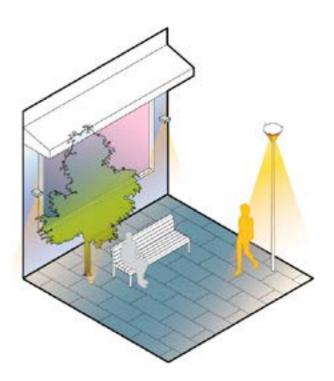


Figure 9 Layered lighting employs more than one light source at varying levels to provide consistent luminous surfaces and continuous visibility. It lights not only horizontal but also vertical surfaces to aid people with vision impairment. Image taken from *City of Whittlesea Lighting for Shared User Paths* (ARUP).

# Provide inclusive wayfinding in each town centre

#### Guidelines

- [a] Create view lines to aid navigation and wayfinding.
  - Lay out street and block patterns to create view lines to landmarks and landscape features.
- [b] Use visual cues to help orientation.
  - For example: landmarks, public artworks, bold colours, distinctive buildings and street furniture, tree species or public realm design.
- [c] Provide signs at key decision points to help wayfinding.
- [d] Ensure signs are legible and easy to notice.
- [e] Use languages other than English in neighbourhoods with diverse cultural backgrounds.
- [f] Provide a map on key signs that shows local destinations, distances, and time to walk.
- [g] Use braille.
- [h] Provide online information to help the visually impaired plan visits to town centres.
  - For example: shops location and details, nearest public transport nodes and services.
- [i] Provide tactile paving along all routes to and from town centres.
- [j] Incorporate local cultural identity in wayfinding design.



Figure 10 A wayfinding sign on Church Street, Whittlesea Township showing a map with local destinations, public transport and public facilities. It is located at a key decision point, the intersection of Church Street and Lime Street.



Figure 11 The Public Purse, a public artwork at the corner of Bourke Street Mall and Elizabeth Street, provides a visual cue to help orientation.

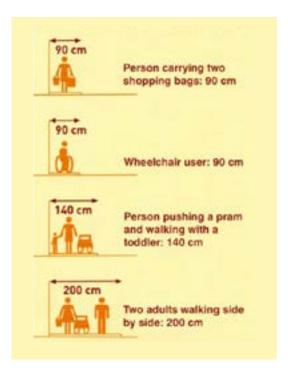
### Provide equitable access for different types of movement and needs in town centres

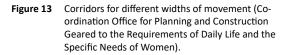
#### Guidelines

- [a] Design public spaces for people with diverse needs to create an inclusive community.
  - Identify different design needs in the community.
  - An appropriate design for one group, like people with physical disabilities, may not suit others, such as people with cognitive and sensory disabilities.
- [b] Locate pram-only car spaces in areas with easy and direct access to town centres.
- [c] Consider (community) bus parking spaces with easy access to town centres.
- [d] Provide kerb ramps to assist people with impaired mobility and prams.
  - For example: next to pram-only car spaces, at pedestrian crossings and intersections.
- [e] Provide comfortable walking conditions for different users, in addition to dedicated space for trading, street furniture, utilities and plantings.
  - To ensure equitable access, footpaths should support different users and types of movement. A minimum footpath width of 2 to 2.5m is preferred in town centre environments.
  - Additional footpath space is required for outdoor dining, advertising, temporary barriers and signs.
  - Wide footpaths improve perception of safety, especially among women.
- [f] Consider providing pet drinking stations or bowls.



Figure 12 Pram-only car spaces with easy and direct access to the Mernda Town Centre's main entrance.





Provide street furniture that is comfortable for people of all ages and abilities to rest and socialise in town centres

#### Guidelines

- [a] Consider provision of seating every 100m.
  - A 100m interval between each seating area allows for more accessible resting areas for shoppers and people with impaired mobility.
- [b] Provide seats with backs and arm rests in easily accessible locations for people with impaired mobility.
- [c] Place seats in active areas where people gather and linger, and at locations with clear views of activities and entries.
- [d] Design seats and street furniture with different heights for children and adults.
- [e] Utilise street furniture to separate pedestrians from vehicle traffic and car parks.
  - Tables and seats, planter boxes, bollards, or temporary barriers provide pedestrians with protection from vehicle traffic.
  - Consider setting street furniture back at least 600mm from the kerb to allow space for opening car doors.
- [f] Provide trees and landscaping around seating areas to provide shade and comfort.



Figure 14 Seats and landscaping separate pedestrians from vehicle traffic on Highlands Road in Thomastown Neighbourhood Activity Centre.



Figure 15 Temporary barriers, tables and seats protect pedestrians from vehicle traffic on Hazel Glen Drive in Doreen.

# Create an environmentally sustainable town centre

#### Guidelines

- [a] Use sustainable finishes and materials.
  - Use light-coloured and/or low heat retention finishes and materials to minimise heat absorption and use of air conditioners.
  - Use low emission or carbon neutral building materials.
  - Consider recycled and reclaimed building materials. Refer to <u>Buy Recycled Directory</u> (Sustainability Victoria) for recycled materials suppliers and product options.
  - For more information, refer to *ESD Guidelines* (City of Whittlesea).
- **[b]** Offset awnings from the centreline of the trees to support their growth to maturity.
- [c] Maximise greening and tree canopy to improve amenity and minimise heat island effect.
  - Incorporate multiple layers and scales of tree planting.
  - Aim for significant shade within the road, footpath network, forecourts, car parks, rest and gathering zones.
- [d] Incorporate passive forms of WSUD practices.
  - For example: buffer strips, swale drains, oneway crossfall, passively irrigated tree pits and landscaping.
- [e] Use permeable pavement for outdoor spaces with minimal or no vehicle movements.
  - For example: car parking spaces, footpaths, and public squares.
- [f] Use solar lighting.

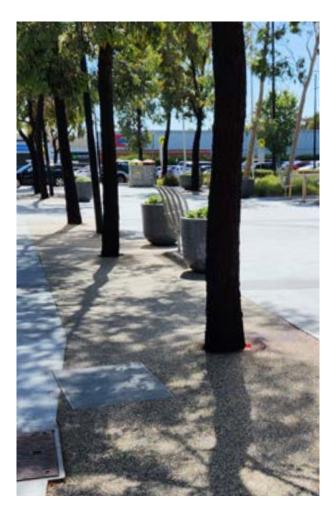


Figure 16 Passively irrigated tree pits off Tanderrum Way, Broadmeadows.

Darebin Creek Trail, Thomastown

## 4. Open Spaces

Open spaces are public spaces where people can relax, exercise, play and enjoy the natural environment.

Green spaces promote active lifestyles, improve access to exercise opportunities and assist with stress recovery. They also support our biodiversity and ecosystems, and mitigate the effects of climate change.

Open spaces should be designed to be safe, accessible and sustainable to support the health and wellbeing of our community.

## Relevant policies and standards, in addition to those listed on page 5:

- Open Space for Everyone Open Space Strategy for Melbourne Metropolitan 2021 (DELWP)
- Living Melbourne Our Metropolitan Urban Forest (The Nature Conservancy and Resilient Melbourne)
- Protecting Victoria's Environment Biodiversity 2037 (DELWP)
- Approved Precinct Structure Plans, Structure Plans and Development Plans
- City of Whittlesea Open Space Strategy (City of Whittlesea)
- *Greening Whittlesea: City Forest Strategy 2020-2040* (City of Whittlesea)
- Planning for Biodiversity Strategy (City of Whittlesea)
- Public Toilet Amenities Plan (City of Whittlesea)

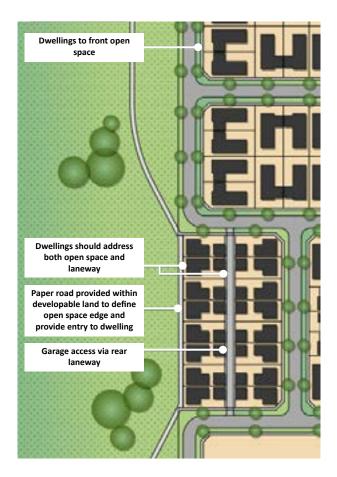
#### **Open Spaces chapter content**

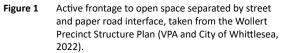
- 4.1 Tree reserves
- 4.2 Transmission line easements
- 4.3 Stony rises
- 4.4 Hills
- 4.5 Waterways
- 4.6 Conservation reserves

# Design safe and accessible open spaces

#### Guidelines

- [a] Provide streets separating developments from open spaces.
  - Streets must front conservation reserves, waterways, sporting reserves, parks, electricity and gas transmission easements.
  - Conservation reserves must have street frontages. Paper road frontages are not acceptable.
- [b] Where a street frontage is not possible, a paper road should be provided as the primary point of access along the lot frontage.
  - Paper roads can only be provided along medium density developments with rear vehicle access.
  - Paper roads provide public access for pedestrians, bicycles, postal and emergency services to the developments and open spaces.
- **[c]** Maximise passive surveillance opportunities to open spaces from surrounding developments.
  - Provide buildings with active frontages to overlook open spaces.
  - Minimise side and rear fence interface to open spaces.
  - Orientate windows, balconies and habitable rooms to front open spaces.
  - Consider permeable and/or low side fences for improved passive surveillance and perception of safety.
- [d] Minimise areas with limited passive surveillance, blind spots and hiding spots.
  - Plant selection, location and future growth should not negatively impact passive surveillance.





- [e] Avoid open spaces bounded by developments on three sides or more. Where this is not possible, provide a local link to the nearest streets.
  - Local links should be at least 10m wide. They improve access and connectivity to open spaces, provide landscaping and prevent areas of entrapment.
  - Footpaths must be provided through the open space without encroaching within the TPZ. Where this cannot occur, other footpath construction methods that do not impact on the TPZ may be considered.
  - The TPZ should be fully located within public open spaces.
- [f] Use lighting to enhance perception of safety in open spaces.
  - Use warmer colour lighting temperatures, instead of cold and multi-coloured lights.
  - Create consistent and layered lighting.
  - Light gaps and dark corners to enable awareness of environment and increase feelings of safety.
  - For more information, refer to *City of Whittlesea Lighting for Shared User Paths* (ARUP).
- [g] Provide public toilets in accordance with Council's requirements and guidelines.
  - For more information, refer to <u>City of Whittlesea</u> <u>Open Space Strategy</u> (City of Whittlesea) and *Public Toilet Amenities Plan* (City of Whittlesea).





Figure 2 A local link through a River Red Gum reserve at 28W Goadby Drive, Mernda.

# **Create environmentally sustainable open spaces**

#### Guidelines

- [a] Incorporate passive forms of WSUD practices.
  - For example: pavers, passively irrigated tree pits and landscaping.
- [b] Apply Biodiversity Sensitive Urban Design (BSUD) practices.
  - For example: maintain and introduce habitat through revegetation works, aid dispersal of animals by incorporating habitat corridors, and facilitate natural ecological processes by protecting and enhancing pollinator habitat.
- [c] Provide habitat opportunities through planting.
- [d] Increase tree canopy cover to contribute to Council's target.
  - For established suburbs, aim for 57.45% increase on Council lands, or 37.5% on non-Council lands.
  - For growth suburbs, aim for 39.86% increase on Council lands, or 30% on non-Council lands.
  - For rural suburbs, aim for 3.09% increase on Council lands, or 1.5% on non-Council lands.
  - For more information, refer to <u>Greening</u> <u>Whittlesea: City Forest Strategy 2020-2040</u> (City of Whittlesea).
- [e] Encourage the use of carbon neutral and circular economy materials.





Figure 3 At the Botanica Park in Bundoora, a WSUD asset (sediment pond) is complemented with pedestrian paths, a playground and a sheltered seating area that increase the park's accessibility and frequency of use.



## 4.1 Tree reserves

Native trees, such as River Red Gums, *Eucalyptus viminalis* and *Eucalyptus melliodora*, have significant environmental and heritage value. Native trees are essential in preserving biodiversity and creating healthy ecosystems that clean water, purify air, maintain healthy soil and regulate the climate. They also provide shade and attract wildlife, which increase the amenity and economic values of our neighbourhoods. In the past, Aboriginal people caused scars on native trees by removing bark to build temporary shelters and make tools. Scarred trees indicate where Aboriginal people lived and serve as an important cultural link for Aboriginal people today.

Native trees are protected under the Whittlesea Planning Scheme and they should be integrated and enhanced in the design of our neighbourhoods.

#### Relevant policies and standards, in addition to those listed on pages 5 and 21:

• Clause 12.01-1L River Red Gum Protection Policy and Clause 56.06 Urban Landscape (Whittlesea Planning Scheme)

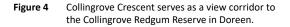
### Retain and ensure long-term viability of juvenile and mature native trees in urban areas

#### Guidelines

- [a] Maximise the retention, protection and incorporation of juvenile and mature native trees into the design of any developments or subdivisions.
  - Retain juvenile and mature native trees in public open spaces.
  - Provide planting around the TPZ's periphery to discourage access under tree canopies.
- [b] Consider additional buffer around the TPZ.
  - Buffer size to be determined in consultation with Council officers, and in consideration of the trees' age, health, local weather pattern and soil condition.
- [c] Create view corridors to tree reserves to highlight and celebrate trees in our urban landscape.
  - For example: through street layouts, block patterns and locations of open spaces.







### 4.2 Transmission line easements

Transmission line easements refer to public and private land surrounding transmission lines. Where easements are required and publicly owned, they should be used to provide additional green space in our neighbourhoods and improve our open space and active transport networks.

Relevant policies and standards, in addition to those listed on pages 5 and 21:

- A Guide to Living with Transmission Line Easements (Ausnet Services)
- Your Guide to Planting Near Electricity Lines (Ausnet Services)

# Integrate transmission line easements with urban areas

#### Guidelines

- [a] Encourage co-location with drainage assets and/or other open spaces to increase open space provision and amenities.
  - Co-location with open spaces could better integrate easements into the urban structure. Open spaces provide canopy trees, landscaping and street furniture, whereas these uses are restricted within the easement.
  - Co-location with drainage assets is only possible where the easements are situated on low points.
- **[b]** Encourage provision of low lying vegetation, mounding and shared paths to increase open spaces amenities.
  - Use of easements is restricted to prevent hazards from powerlines and ensure safety.
  - Choice of vegetation must be in accordance with A *Guide to Living with Transmission Line Easements* (Ausnet Services).
- [c] Provide landscape buffer between the edge of easements with arterial and collector roads.
  - Landscape buffers soften the appearance of transmission facilities.
- [d] Consider integrating shared paths to improve accessibility and use.

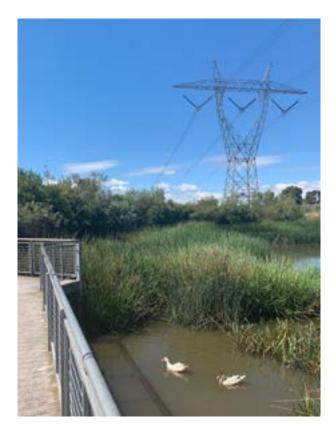


Figure 5 A transmission line easement is co-located with a drainage asset at the Chocolate Lilly Street Lake in Epping.

## 4.3 Stony rises

Stony rises are areas of rocky ground that are recognised for their environmental and heritage significance. The difficulty of farming the rocky terrain has allowed the survival of important remnant vegetation and fauna that were cleared from the more easily cultivated soils. Stony rises are commonly associated with substantial assemblages of Aboriginal cultural heritage, which make them places of importance for Wurundjeri Woi Wurrung people.

Stony rises are an important visual element that contribute to the history and character of neighbourhoods. Many of them are protected and should be integrated into our urban landscape.

#### Relevant policies and standards, in addition to those listed on pages 5 and 21:

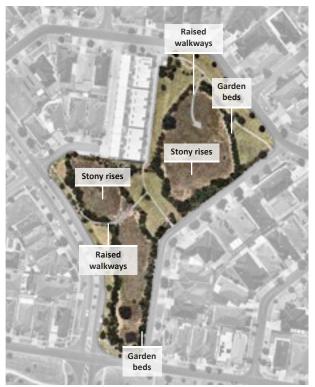
- Clause 15.03 Heritage and Clause 42.01 Schedule 5 Environmental Significance Overlay River Red-Gum and Grassy Woodlands (Whittlesea Planning Scheme)
- Cultural Heritage Strategy 2019-2025 (City of Whittlesea)
- Aboriginal Heritage Act 2006 and Aboriginal Heritage Regulations 2018

# Protect and integrate stony rises into urban areas

#### Guidelines

- [a] Protect stony rises in consideration of their cultural heritage and environmental values.
  - The preparation of both Cultural Heritage Management Plan (CHMP) and Conservation Plan must consider stony rises' cultural heritage and environmental values, and avoid conflicting recommendations.
- [b] Retain and protect stony rises in public open spaces.
  - Stony rises are encumbered and do not form part of public open space contributions.
  - For their protection, surround stony rises with garden beds to restrict public access.
  - The garden beds should be designed to include native species.
- [c] Provide a fire buffer between stony rises and residential developments.
  - Buffer size and type to be determined in consideration of the stony rise's size and in consultation with Council officers.
  - Fire buffers must not be deducted from the public open space contribution.
  - Fire buffer ensures surrounding residential developments are safe from ecological burning regularly performed to maintain stony rises.
  - Particular attention should be paid to residential developments to the south east and north east of stony rises, which are more prone to fire damage due to prevalent wind direction.







- [d] Revegetate areas of stony rises with low lying native grasses to minimise potential spread of fire.
  - For example: Wallaby, Spear and Weeping Grasses.
- [e] Use low fuel load or fire-retardant native species for landscaping adjacent to stony rises.
  - For example: native Saltbushes.
- [f] Where possible, link stony rises with adjacent open spaces to create connected open space networks and view corridors.
- [g] Ensure any landscape embellishments within stony rises do not compromise their maintenance requirements, cultural heritage and environmental values.
  - Boardwalks, interpretive signages, benches, or other items must respond sensitively to and enhance stony rises.



## 4.4 Hills

Hills are a striking landscape feature with significant environmental and heritage values. They provide a backdrop to our neighbourhoods and serve as a visual relief and interest among our developments. They support a diverse range of native plants and animals, which are part of our ecosystems. In the past, Aboriginal people used hills as a transit route and a camping site, as evidenced by findings of Aboriginal tools.

The City of Whittlesea is home to many hills that define the character of our landscapes and urban settlements. Hills are an important part of our natural environment, which should be protected, integrated and enhanced in our urban developments.

# Connect and integrate hills with surrounding developments

#### Guidelines

- [a] Where a street or paper road frontage is not possible, provide 3m shared paths around the hills.
  - A 3m shared path is needed for future maintenance and emergency purposes.
  - Provide appropriate drainage to protect private lots from flooding.
- [b] Create view lines to summits and ridgelines.
  - For example: through street layouts, block patterns and locations of open spaces.
- [c] Provide green links to the hills.
- [d] Where abutting or visible from a public space, discourage retaining walls greater than 1m.
- [e] Cover service infrastructure with screens to minimise its visual prominence.
  - For example: water tanks.



Figure 7 The linear Everard Road creates a view line to Harmony Hill's summit.





Figure 8 176W Everard Road, Mernda serves as a green link to Harmony Hill.

## 4.5 Waterways

Waterways are important environmental, cultural and social assets. They support a diverse range of native plants and animals and underpin a healthy ecosystem. They also provide educational and recreational opportunities, which contribute to our local communities' wellbeing.

Waterways are prominently featured in our urban structure and landscape. As our neighbourhoods turn to face and celebrate waterways, our buildings need to activate their interface to waterways to enhance their use and safety.

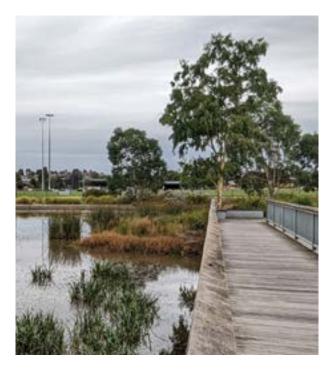
Relevant policies and standards, in addition to those listed on pages 5 and 21:

- Clause 12.03 Water Bodies and Wetlands, and Clause 56.05 Urban Landscape (Whittlesea Planning Scheme)
- Healthy Waterways Strategy 2018-2028 (Melbourne Water)
- Whittlesea Water For All: Our Water Strategy 2020-2030 (City of Whittlesea)
- Design, Construction & Maintenance of WSUD 2011 (Melbourne Water and City of Whittlesea)

## **Connect and activate waterways** with surrounding developments

#### Guidelines

- [a] Ensure appropriate buffers between waterways and developments.
  - For example: vegetated buffers, swales and other WSUD/IWM practices.
  - Avoid directly connected impervious surfaces to waterways.
- [b] Provide breaks between buildings to maintain views towards waterways.
  - The breaks provide visual and, when appropriate, physical connection from the hinterland to waterways.
- [c] Co-locate open spaces with waterways to maximise provision of and access to public open space.
- [d] Provide shaded shared paths or trails along waterways to encourage active transport.
- [e] Where waterways abut cul-de-sacs, provide local links to improve connectivity.
- [f] Provide street connections and/or pedestrian crossings every 400m.
  - Waterways can act as a physical barrier and hinder movements of people and goods.



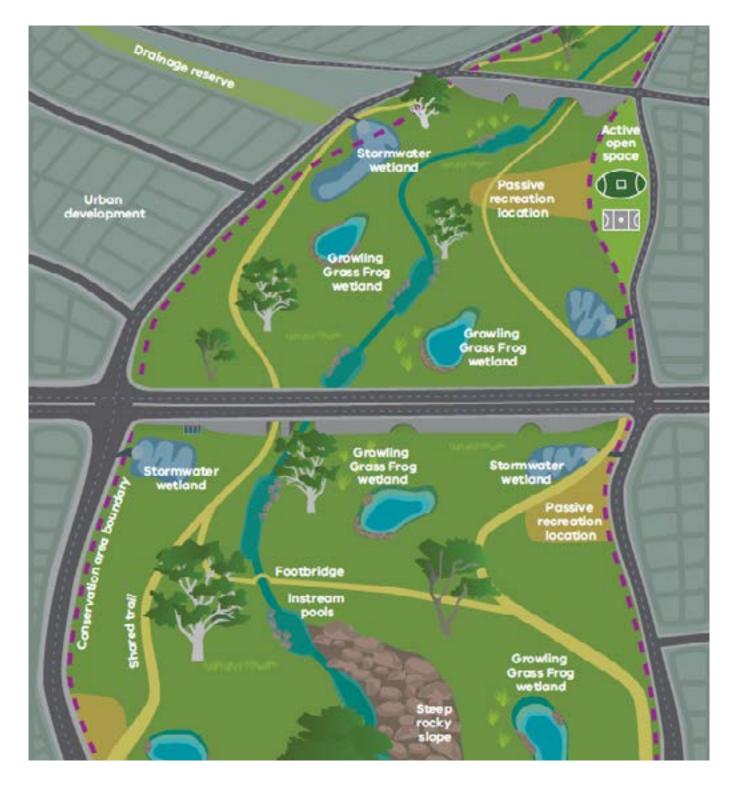




Maximise waterways' biodiversity, amenity values and stormwater treatment

#### Guidelines

- [a] Protect and enhance remnant vegetation in and around waterways.
  - This includes encouraging diverse native vegetation.
- [b] Ensure quality and volume of water inputs into waterways are suitable for the ongoing management of threatened species habitat.
  - For example: Growling Grass Frog habitat.
  - Meet target trajectories outlined in the *Healthy Waterways Strategy* (Melbourne Water) by applying appropriate IWM or WSUD techniques in the catchment.
- **[c]** Separate habitat creation for threatened species from sediment control or filtration infrastructure to prevent negative environmental impacts.



#### Figure 10

Growling Grass Frog conservation area overview, taken from the Growling Grass Frog Habitat Design Standards (DELWP, 2017). Due to their different spatial and functional requirements, Growling Grass Frog habitats should be separated from stormwater wetlands.

### 4.6 Conservation reserves

Conservation reserves are an environmentally significant part of our municipality. They mitigate the impacts of climate change, protect healthy ecosystems and local biodiversity and provide important habitat linkages through our neighbourhoods. These reserves act as critical refuges for native vegetation and animals to survive and adapt, reducing the extinction risk for our native species. They also provide our communities with opportunities for recreation and to appreciate our natural environment.

The City of Whittlesea's conservation reserves have varying biodiversity values and are not confined to the commonly seen Grassy Eucalypt Woodland. These reserves should be protected and integrated into our urban developments and their interface needs to be activated to help our community engage with nature.

#### Relevant policies and standards, in addition to those listed on pages 5 and 21:

- Clause 52.17 Native Vegetation (Whittlesea Planning Scheme)
- Guidelines for the Removal, Destruction or Lopping of Native Vegetation (DELWP)

## Protect and enhance conservation reserves

#### Guidelines

- [a] Establish conservation reserves for the protection of locally significant biodiversity assets.
  - For example: native trees and vegetation.
- [b] Locate fire buffers outside conservation reserves.
- [c] Improve the extent and condition of native vegetation within conservation reserves.
  - For example: by undertaking revegetation with suitable species around native vegetation patch.
- [d] Control weed species to improve native vegetation quality.
  - Use methods appropriate for the species.
- [e] Avoid the introduction of weed species within developments surrounding conservation reserves.
  - For example: by implementing weed hygiene and wash-down measures.
- [f] Provide interpretative signage, pedestrian access and paths in conservation reserves.
  - These help the community engage with conservation reserves, which in turn increases their sense of ownership.

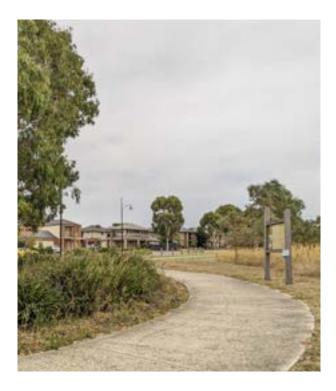


Figure 11 Interpretative sign and pedestrian path at the Epping North Conservation Reserve in Epping.

High Street, Thomastown

## 5. Residential Developments

Residential developments form a large part of our municipality and play an integral role in creating attractive, safe, connected and sustainable neighbourhoods.

Good residential development design is a combination of various elements that work well together, including site layout, public realm interface, movement and access, landscaping, building appearance, materials, and site services. The synergy of these elements creates welldesigned developments that contribute to attractive public realm outcomes, enhanced activation and surveillance of public space, improved perception of safety and the liveability of our neighbourhoods.

This chapter is structured in order of decision-making timeframes. Matters that fundamentally impact design and cost, such as building siting and massing, are addressed early in the chapter, followed with more detailed design items, such as built form and articulation.

### Relevant policies and standards, in addition to those listed on page 5:

 Clause 15.01-1L Urban Design in the City of Whittlesea, Clause 15.01-2L Environmentally Sustainable Design, Clause 16.01-1L Housing Supply in Established Areas, and Clause 53.18 Stormwater Management in Urban Development (Whittlesea Planning Scheme)

#### **Residential Developments chapter content**

5.1 Medium Density Developments

### **5.1 Medium Density Developments**

Medium density developments contribute to a more compact and sustainable city with multiple social, economic and environmental benefits. They encourage positive social interaction and diversity, enhance economic viability of infrastructure delivery, and create opportunities for efficient use of resources and materials. Medium density developments also help with greater choice and affordability of housing, which are needed to create a more equitable and accessible city.

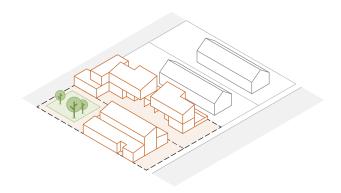
In Whittlesea, medium density developments contribute to a significant proportion of planning application in established suburbs. This trend is in line with policies and strategies from the Victorian Government and the City of Whittlesea, which seek to increase density in areas with good access to service.

This sub-chapter focuses on quality design outcomes for higher density housing products. Recommendations are provided to encourage sustainable practice, better public realm quality, and higher safety and walkability among others.

### Explore site consolidation to improve neighbourhood and site amenity

#### Guidelines

- [a] Maximise provision of greening, shared facilities and open spaces.
  - For example: tree canopies, landscaping, communal open spaces and community gardens.
- [b] Provide high quality communal open spaces to promote social interaction.
  - Locate communal open spaces in areas with adequate activation and passive surveillance.
  - Provide tree canopies, landscaping and seating to improve the spaces' useability and promote social interaction.



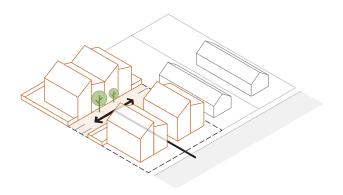


Figure 2 Illustrative examples of consolidated sites with less driveways and more landscaping and communal facilities.



Figure 3 Communal open space with landscaping and seating encourages social interaction.

## Improve walkability in the neighbourhood

#### Guidelines

- [a] Provide pedestrian and cycling connections through development sites to improve walkability.
  - Ensure sufficient width to accommodate footpath, landscaping, lighting and clear sightline.
  - This applies to lots with double frontage and longer than 120m.
  - When deciding on the connection's placement, consider surrounding key destinations.

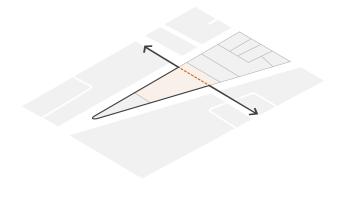


Figure 4 New pedestrian connections through large sites can improve walkability in the neighbourhood.

## Minimise vehicle impact on the public realm

#### Guidelines

- [a] Minimise the number of driveways and crossovers to improve safety for pedestrians and cyclists, and enhance public realm amenity.
  - In higher density developments, provide shared driveways or laneway access.
  - In lower density developments, consolidate driveways.
- [b] Minimise length of driveways to allow more space for communal open space and reduce car dominance within private lots.
  - For example: by providing communal parking, instead of car parking attached to dwellings.
- [c] Ensure vehicles are contained within the lot.
  - Ensure driveways are at least 5.5m long to prevent vehicle overhanging on the footpaths.
- [d] Design driveways as shared spaces with pedestrian priority.
  - For example: with textured materials and landscaping.
  - Concrete driveways create a harsh environment and an unwelcoming entry.
- [e] Minimise visual dominance of garages and car parks from the street.
  - Set garages back 500mm from the main dwelling line.
  - Where possible, ensure garages are no more than 40% of the dwelling frontage.
  - Recessed garages look less dominant and highlight the buildings instead of garage doors.

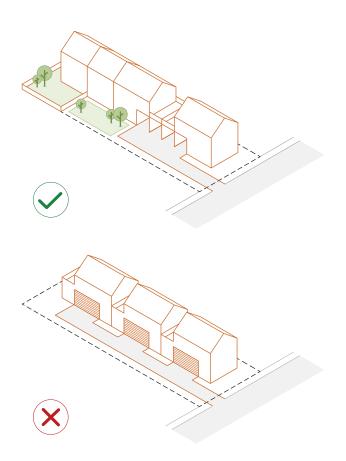
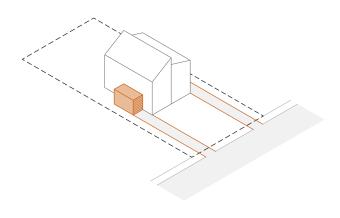
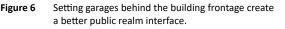


Figure 5 Long driveways created by car parking attached to dwellings results in a hostile environment dominated by cars and garage doors.

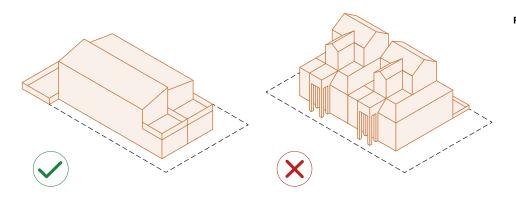




## Create simple and well-proportioned built form

#### Guidelines

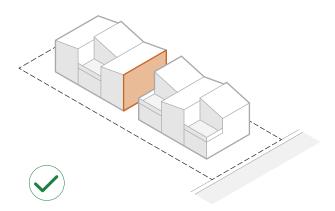
- [a] Design a simple building design and roof form to create a visually appealing look.
  - A simple form without unnecessary modulation results in a clean presentation to the streets.
  - Complex roof forms increase cost and maintenance.



#### Figure 7 Unnecessary articulation and setbacks create a cluttered and disjointed look.







- [b] Provide built form breaks every three to six lots to minimise visual bulk.
  - Built form breaks should be provided at the ground and fully separate the buildings.
  - Long, continuous rows of buildings create a domineering and overwhelming presence.

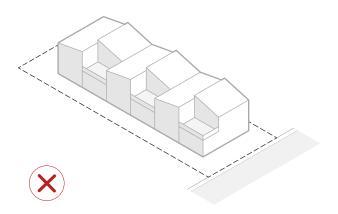




Figure 8

Built form breaks minimise visual bulk and result in higher public realm quality.

#### RESIDENTIAL DEVELOPMENTS

#### **Objective W22**

### **Respect local context, existing and preferred neighbourhood character**

#### Guidelines

- [a] Provide consistent street setback.
  - In a heritage context, ensure the street wall respects the scale, proportion and rhythm of adjoining heritage buildings.
- [b] Retain prominent built form rhythm and enhance existing landscape patterns on the street.
  - Consider existing built form character, front and side setback, landscaping in the front yard and between properties.
- [c] Respect the appearance of surrounding properties, natural and built environments.
  - Developments don't have to replicate surrounding built form and architectural design. They could provide a different design response that still reflects and respects its local context.
  - Draw design inspirations from local history, culture, plants, building materials and natural features.
- [d] Emphasise street corner through change in facade articulation and expression.
  - Locate balconies and windows on building corners to further emphasise street corners, address both streets and maximise passive surveillance.



Figure 9 The use of bricks and pitched roof pays respect to the development's local context and Thomastown's neighbourhood character.





Figure 10 Lack of articulation and windows only addresses one street and creates a blank interface on the other.

## Enhance safety and quality of adjacent public realm

#### Guidelines

- [a] When buildings front the street, ensure their main entries are facing the primary frontage.
- [b] Create well-articulated building entries with canopy covers and landscaping to ensure visibility, provide weather protection and promote social interaction.
- [c] Orientate buildings to face the front and rear when primary living spaces are provided on upper levels.
  - Orientating balconies to the front and rear ensures passive surveillance, enhances perception of safety in the neighbourhood, and reduces the need for privacy screens.
- [d] Orientate windows, balconies and habitable rooms to front the public realm.
  - Maximise the number of windows, balconies and habitable rooms fronting the public realm to enhance passive surveillance.
  - Provide windows to both streets on corner dwellings to address the corner.
- [e] Use low fences or plants along public realm to maximise passive surveillance.
  - Avoid providing Secluded Private Open Space (SPOS) within the front setback to facilitate low fences and passive surveillance.
- [f] Minimise provision of blank walls.
  - Blank walls contribute to poor public realm quality, anti-social behaviour and perceived lack of safety.

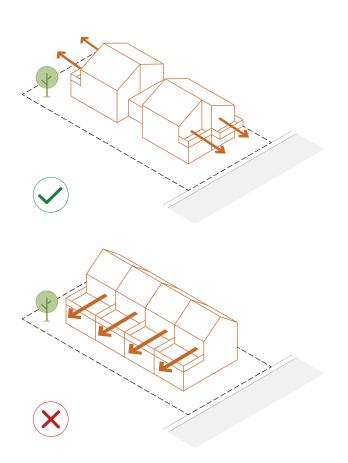


Figure 11 Orientating habitable rooms with windows and balconies to the street ensures passive surveillance and higher perception of safety in the neighbourhood.

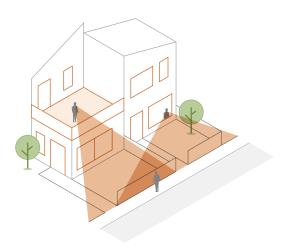


Figure 12 Windows, balconies, and habitable rooms combined with low fences or plants facilitate passive surveillance that increases perception of safety.

## Balance the need for privacy and access to amenity

#### Guidelines

- [a] Minimise overlooking and direct views through careful design of windows and facades.
  - Use planter beds and horizontal louvres to restrict downward view while still maintaining natural light, outlook of the dwellings and long distance views.

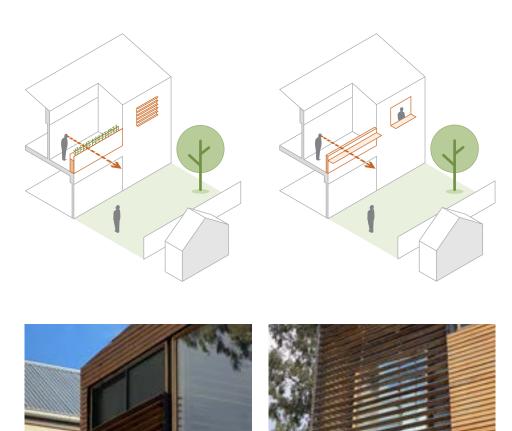


Figure 13 Planter beds and horizontal louvres limit downward views while providing distant views and outlook.

Provide variety between buildings to create visual interest along the streets and laneways

#### Guidelines

- [a] Provide vertical rhythms, as well as variety, in facade and roof design.
  - For example: vertical projections and windows.
- [b] Use a consistent material palette to create a cohesive look throughout the site.









Figure 14 Vertical rhythm combined with variations in roof design and articulation add visual interest to the streets and laneways.

### **Design well-articulated facades**

#### Guidelines

[a] Design windows and framing with similar shape and proportion to create a coherent and integrated facade.

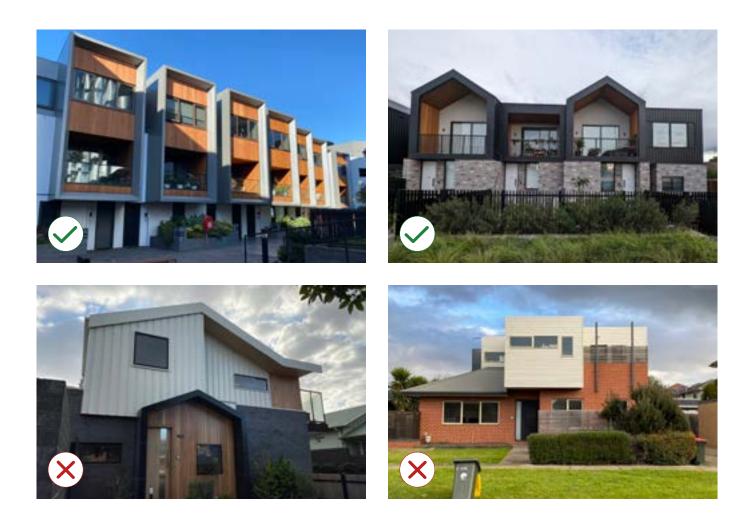


Figure 15 Disproportionate windows create a disjointed facade.

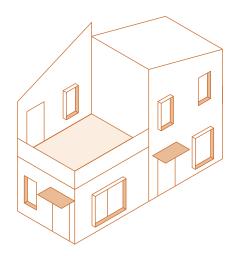


Figure 16 Projections for windows, canopies and balconies create depth and articulation in the facade.





Figure 17 Tactile brick walls are visually appealing and create an interplay of shadow and light.

- **[b]** Create depth to articulate the facade.
  - For example: by incorporating balconies, recesses, extruded frames to windows, and/or upper level setbacks.
  - Accentuate change in depth by using different materials.
  - Avoid flat facades with flushed windows.
- [c] Incorporate textures and details in the facade to enhance visual interest.
  - Ensure ample textures and details on the first three floors, where meaningful interactions between pedestrians and buildings occur.
  - For example: by using recycled brick walls and tactile surfaces.

# Integrate mailbox, bin storage and site services into the overall built form and landscaping design

#### Guidelines

- [a] Consider co-locating mailboxes with service utilities and amenities.
  - For example: lighting and benches.
- [b] Locate mailboxes in safe and accessible space.
  - Where possible, provide mailboxes away from vehicular traffic.
- [c] Enclose gas meters, water meters and other services with high quality materials to improve presentation to the street.
- [d] Minimise visibility of bin storage from the public realm to improve streetscape quality.
  - For example: by using a bin enclosure or tucking the bins away from the streets.

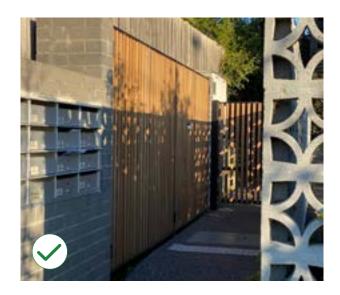






Figure 18 Enclosed gas meters, water meters and other services provide a better look for residents and improve presentation to the street.

### Use high quality and robust materials

#### Guidelines

- [a] Apply a quality over quantity approach to facade materials.
  - Fewer materials result in less cluttered and confused appearance.
  - High quality and robust materials include: corrugated metal sheets, bricks, lightweight metal cladding, textured bricks, cement sheets, aluminium cladding, Besser blocks and treated hardwood.
  - High quality materials require minimal maintenance and age well with time.
- [b] Choose materials that respect existing and preferred neighbourhood character.





Corrugated metal sheets





Lightweight metal cladding

Textured bricks

Bricks





Cement sheets





Besser blocks

Treated hardwood



Examples of high quality and robust building materials.

## Create environmentally sustainable developments

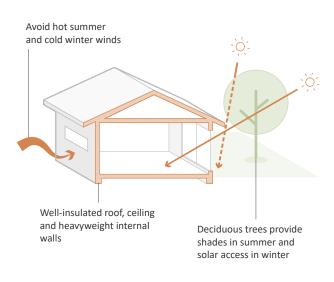


Figure 20 Passive heating principles are especially useful in reducing energy bills in cool or cold climates. Image adapted from *Your Home* (Australian Government).

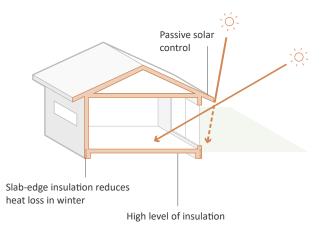


Figure 21 Slab insulation reduces heat loss to the ground over the winter months, increasing comfort and energy efficiency. Image adapted from *Your Home* (Australian Government).

#### Guidelines

- [a] Maximise provision of tree canopies and plants.
  - For example: along driveways, in the front setback and backyard.
  - Aim for 500mm clearance along driveways to allow sufficient space for small shrubs.
  - Provide ground cover plants, instead of mulch or synthetic turf, to garden bed areas.
- [b] Consider passive building design strategies.
  - For more information, refer to <u>Your Home</u> (Australian Government).
- [c] Maximise the use of light-coloured and/or earth-tone materials to minimise urban heat impacts and use of air conditioners.
  - For example: on roofs, building facades, driveways and other outdoor surfaces.
  - Prioritise light-coloured roof materials. They cover a large surface area and heavily influence internal building temperature.
  - Dark colours absorb and radiate more heat than light colours, contributing to increased urban heat.
- [d] Use sustainable finishes and materials.
  - Use low emission or carbon neutral building materials.
  - Consider recycled and reclaimed building materials.
  - Refer to <u>Buy Recycled Directory</u> (Sustainability Victoria) for recycled materials suppliers and product options.
  - For more information, refer to <u>Sustainable Design</u> <u>Assessment in the Planning Process (SDAPP) fact</u> <u>sheets</u>.



[e] Provide external shading device to maximise access to sunlight and minimise solar gain.

- For example: windows with hoods, external blinds, louvered or screened shutters.
- Doors, windows and balconies facing east and west should provide external shading devices to provide greater sun control in various seasons.
- Large windows with hoods allow for winter sun while restricting summer sun on the northern facade.
- Small and protected windows or windows with louvered screens can help reduce solar gain on the western facade.
- [f] Incorporate innovative and practical WSUD solutions.
  - For example: rainwater tanks, permeable paving and passive irrigation.
- [g] Incorporate on-site renewal energy systems.
  - For example: rooftop solar PV panels and EV charging infrastructure.



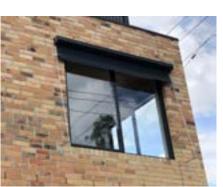






Figure 22 External blinds, louvered or screened shutters provide greater sun control in various seasons.





Figure 23 Windows with hoods maximise access to winter sun and minimise the heat of summer sun, especially





- Small and protected windows or Figure 24 windows with louvered screens minimise solar gain on the western facade.
- on the northern facade.

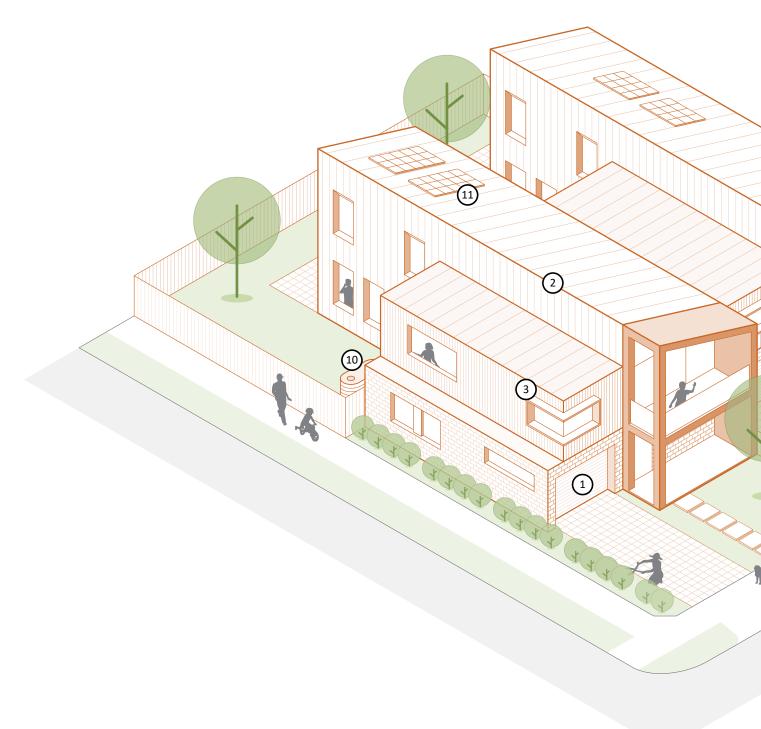


Figure 25 Illustrative diagram of well-designed residential developments and the implementation of the guidelines.

This illustrative diagram provides an example on how to implement the following guidelines.

#### (1) W2

W20e

Minimise visual dominance of garages and car parks from the street.

#### (2) W21a

Design a simple building design and roof form to create a visually appealing look.

#### (3) W22d

Emphasise street corner through change in facade articulation and expression.

#### (4) W23b

Create well-articulated building entries with canopy covers and landscaping to ensure visibility, provide weather protection and promote social interaction.

#### (5) W23e

7

6

4

9

5

Use low fences or plants along public realm to maximise passive surveillance.

#### W25a

(6)

Provide vertical rhythms, as well as variety, in facade and roof design.

#### (7) W26b

Create depth to articulate the facade.

#### (8) W27a

Consider co-locating mailboxes with service utilities and amenities.

#### (9) W29a

Maximise provision of tree canopies and plants.

#### (10) W29f

Incorporate innovative and practical WSUD solutions.

#### (11) W29g

Incorporate on-site renewal energy systems.

Thomastown Lutheran Church, Lalor

## 6. Heritage Places

The City of Whittlesea's rich heritage is inextricably linked to the cultural customs of the traditional owners of the lands, the Wurundjeri Willum Clan and Taungurung People.

From sacred scarred trees to place names such as Bundoora, Mernda, Wollert and Yan Yean, the history of our First Nations people continues to inform and influence the present. European settlement in the 1840s and '50s, as well as the wave of post-World War II migration, has further enriched the municipality's heritage.

As the city continues to grow and change, we need to protect and celebrate our history and heritage to ensure its future relevance.

### Relevant policies and standards, in addition to those listed on page 5:

- Clause 15.03 Heritage Conservation, Clause 43.01 Heritage Overlay, Clause 52.33 Post Boxes and Dry Stone Walls, and Clause 56.05 Urban Landscape (Whittlesea Planning Scheme)
- *City of Whittlesea Heritage Study* 1991 (Meredith Gould and Associates)
- City of Whittlesea Heritage Study 2013 (Context Pty Ltd)
- City of Whittlesea Archaeological Study 2009
  (Context Pty Ltd)
- Stage Two Dry Stone Wall Study: Thematic History and Precincts 2020 (David Moloney)
- *City of Whittlesea Cultural Heritage Strategy 2019-2025* (City of Whittlesea)
- Heritage Act 2017
- Aboriginal Heritage Act 2006 and Aboriginal Heritage Regulations 2018
- Approved Precinct Structure Plans, Structure Plans and Development Plans

### Protect and enhance the integrity and character of heritage places

#### Guidelines

- [a] Integrate heritage places into the urban structure and respect their curtilage as set out in the Heritage Overlay.
  - Acknowledge the Heritage Overlay's existence and plan new development around conservation and enhancement. Do not assume that demolition or removal will be possible.
- [b] Retain original use, or adapt and reuse heritage places to maximise their contribution to community.
  - Consider restoration, selling to new owners and adaptive re-use to community, retail, commercial or other uses subject to the Schedule to Clause 43.01 Heritage Overlay.
- [c] Seek professional advice to ensure changes to heritage places do not detract from heritage significance, character or appearance.
  - Respect the exterior, built form, bulk and finishes of heritage places.
  - Minimise visual impacts of new on-site car parking, signs, ancillary services and equipment.
  - Consider removal of non-contributory elements of the place.







Figure 26 The Ziebell's original farmhouse, barn and other buildings were restored and opened as a Councilowned museum that introduces visitors to 19<sup>th</sup> century German immigration and settlement in Australia. Top and bottom photos by David Johns Photography.

- [d] When restoring heritage place, incorporate materials, colours and finishes that are consistent and complementary with architectural style and period of the place.
  - Paving, seating and screening can provide subtle heritage links through appropriate materials and interpretative details.
  - Use materials, colours and finishes that allow the heritage place to be identifiable and distinguishable from extensions and additions.
- [e] Secure heritage places at the earliest practical stage of the development process.
  - Ensure ongoing use throughout development process and stages to prevent damage, support viability and security.
- [f] Protect views and vistas to and from significant heritage places.
  - Understand each place's broader landscape setting, original setting, urban structure and environment.
- [g] Protect significant trees and vegetation.
  - Seek arboricultural advice on retention and maintenance of the vegetation's health, appearance or significance.
  - Replant with native, indigenous, contextual or historically appropriate plants.







Figure 27 The Former Creed's Farm, Epping uses consistent and complementary materials, colours and finishes to refurbish its homestead buildings and barn. Original peppercorn trees are retained, and a tractor is embedded in the front yard as a nod to its former use.

