6. Guidelines

6.1 Overview

The purpose of these guidelines is to promote the Garden City concept in the City of Monash, to retain and enhance the landscape qualities of the municipality, to provide for an appropriate balance between built form and planted areas, and to support a substantive canopy vegetation cover.

The *Garden City Character* is referred to in a contemporary context of achieving future liveability, community health and wellbeing, and resilience by providing for:

- Increasing the presence of trees and overall greenness to improve the liveability of the city. This includes increasing summer shade and improving the microclimate relief from urban heat, which will increase with climate change.
- Maintain and strengthen sustainable greenness in the context of forecast growth and increased urban densities.
- Strengthen the sense of identity and point of difference compared to other parts of Melbourne, particularly in the Monash National Employment and Innovation Cluster.
- Visual relief from built form by ensuring there continues to be a presence of natural features and greenness in the city. This includes canopy trees, garden beds, shrubs, climbers and grassed surfaces, which becomes especially important as urban redevelopment occurs at a more intense scale.
- Biodiversity and habitat for local flora and fauna.
- Protection of the historical and contemporary cultural landscape heritage values of the city including promoting inclusive sustainable access and greening to the streetscapes and open space.

These Guidelines are to be read as a whole. They include the Existing and Preferred landscape character types for each Landscape Character Precinct in Appendix A. The guidelines are applicable to public and private land and will be used by public and private land owners.

6.1.1 Strategy objectives

a) Protect and enhance the green *Garden City Character* within the contemporary context of climate change and forecast urban growth and change.

b) Increase urban greening to create a more resilient landscape that contributes to community health and wellbeing now and in the future.

c) Increase canopy tree cover across public and private land from 22% to 30% by 2040 to create a more liveable, sustainable and resilient city.

d) Strengthen the biodiversity values along the waterway corridors by increasing the presence of indigenous vegetation on both public and private land.

e) Maximise the retention of existing healthy mature large canopy trees on public and private land to support liveability and cultural heritage values.

f) Increase the presence of large canopy trees and greening in high density precincts including activity centres and the Monash National Employment and Innovation Cluster.

g) Council to provide a leadership role with best practice tree planting and management on public land to promote sustainable inclusive access for all to open space and the streetscapes.

h) Develop a cohesive vision for the landscape character across the public and private land and update the relevant regulatory controls and planning scheme to give effect to the vision.

6.2 Guideline 1
Achieve an appropriate balance between built form and planted areas

6.2.1 Private land

Guideline 1.1

Maximise planted surfaces to improve liveability, community health and wellbeing, and resilience to climate change. Use planted and grassed areas for open space areas in setbacks and between buildings where space permits.

Guideline 1.2

Where paved surfaces are required position trees and built form to ensure these are at least partially shaded during Summer. Encourage the use of permeable paving surfaces where feasible to assist with overall soil moisture content.

Guideline 1.3

Canopy vegetation is to be of a suitable size and height which emerges above the roofline of existing and proposed built form in the residential areas. This will provide shading and greening to the built form including the roof form, which achieves an urban heat mitigation and visual improvement. Refer to the guidelines in Table 6-6 and Figure 6A.

Figure 6A *Preferred front setback with minimum 60 per cent grassed and planted surfaces*

Guideline 1.4

Encourage passive irrigation to assist tree health and growth and also with overall cooling via evapotranspiration.

Guideline 1.5

For residential use, the front setback is to have grassed and planted areas comprising a minimum of 60 per cent of the total area, with a preference for 70 per cent where feasible. This can include a combination of garden beds, grassing and/or native revegetation and excludes any porous or permeable paving and synthetic grass/painted paved surfaces as part of the minimum 60 per cent.

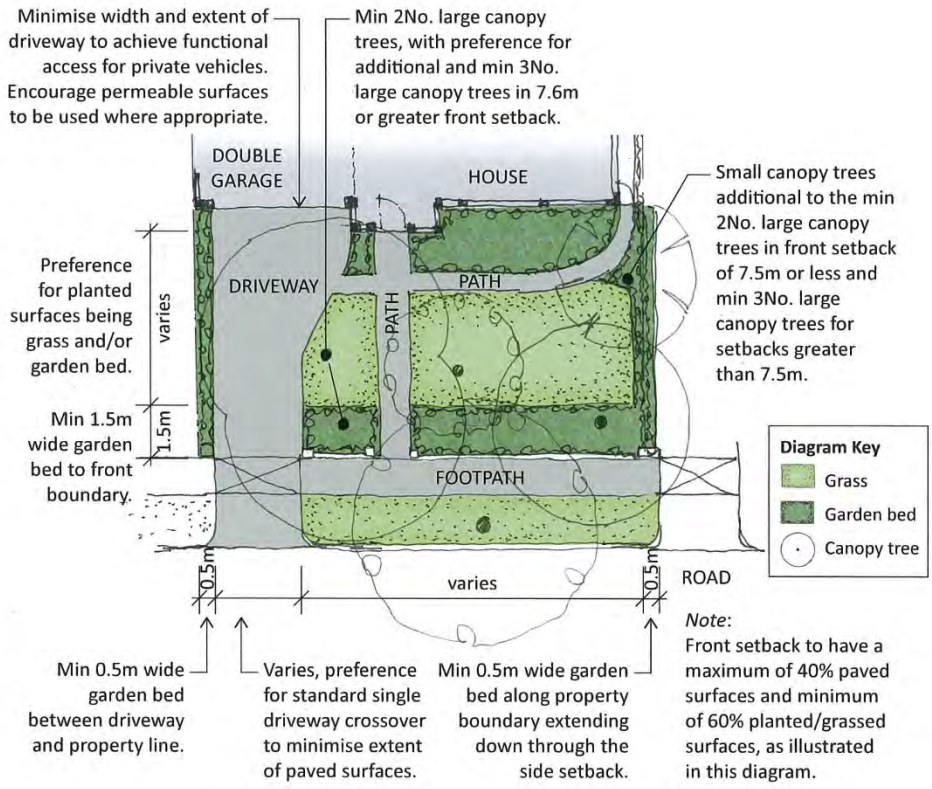

Figure 6B *Preferred front setback with minimum 60 per cent grassed and planted surfaces*

Guideline 1.6

For residential use, low or no front fencing is preferred to maximise the contribution of private gardens to the urban greening and *Garden City Character*. As shown in Figure 6B, a garden bed with a minimum of 1.5 metre width to the front boundary of properties is preferred. The garden beds are to include a range of canopy vegetation including ground covers, shrubs and trees.

Guideline 1.7

For residential sites, the side setback is to have some vertical greening to create the effect of the buildings sitting in a landscaped setting. This will preferably include trees, however where trees are not feasible, as a minimum shrubs or climbers on fences/walls are to reach a minimum of 1.8 metres high. Refer to Figures 6C for side setbacks.

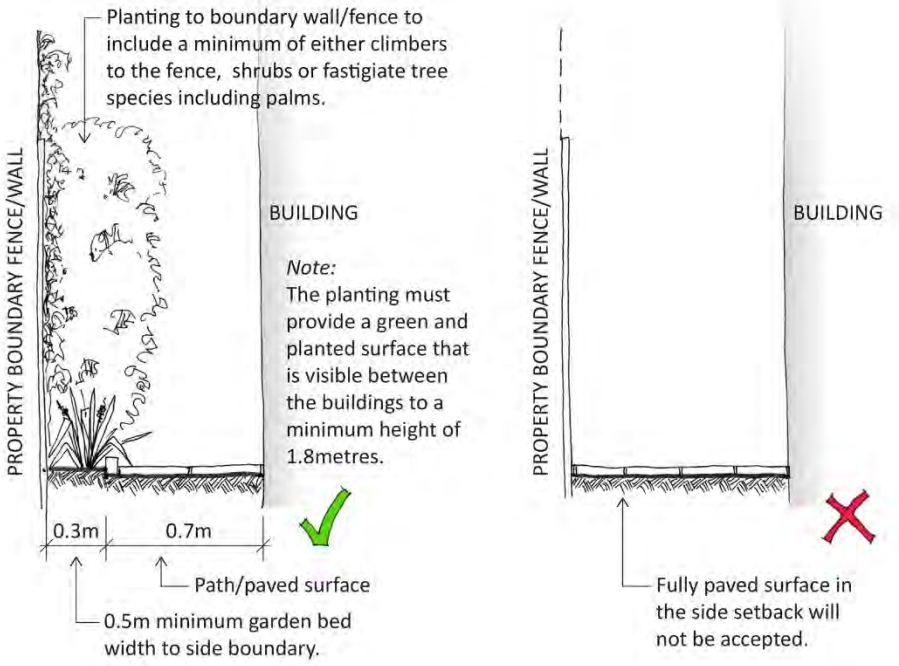

Figure 6C *Side setback guidelines*

6.2.2 Public open space

Guideline 1.7

When designing public open space:

- Retain existing and plant new long-lived large canopy trees. New tree species selection is to meet the criteria and guidelines listed in Table 6-6.
- Tree selection, placement and management to promote accessibility for all and meet the CPTED principles.
- Maximise natural green surfaces – being grass, garden beds and revegetation areas in addition to canopy trees.
- Select garden bed plant species that tolerate urban and drought conditions, without the need for excessive water use and complement the Preferred landscape character type precinct description.
- Propose indigenous species to improve biodiversity values where the open space is located in an Indigenous Tall Eucalypt Landscape Character Type precinct.
- Maximise the use of permeable paving treatments where these are required in the open space. This is to increase the overall moisture content of the soil that is available for the healthy establishment of trees and for effective evapotranspiration.

- Incorporate sustainable water use principles into open space design, with a focus on passive irrigation for trees and garden beds.
- Where new built features and car parking is proposed, demonstrate that Environmentally Sustainable Design principals have been applied and minimise the built and paved footprint within the green open space.
- Where synthetic sports surfaces are proposed, off set the decrease in natural planted surfaces by maximising opportunities for canopy tree planting to achieve some shading of these surfaces.

6.3 Guideline 2
Urban greening in activity centres, commercial/industrial precincts and the Monash National Employment and Innovation Cluster

6.3.1 Monash National Employment and Innovation Cluster and Garden commercial/industrial landscape character precincts

Guideline 2.1

Maximise the retention of existing large canopy trees on public and private land and promote urban greening to assist with resilience to climate change and impacts of urban heat island effect.

Guideline 2.2

As redevelopment occurs, the front landscape setbacks are to be designed as follows:

- Spaces that encourage people outdoors to socialise and exercise before, during and/or after work. This includes provision of facilities that will be publicly accessible such as seating, fitness equipment, paths and play equipment, sculptural features/elements.
- Where a café/kiosk is provided, this use is to directly adjoin the landscape setback with an outdoor seating area extending to be partially located inside the landscape setback.
- Planted with long-lived large canopy trees that meet the criteria in Table 6-6.
- Proposed new canopy vegetation in medium and high density areas is to include long-lived large canopy trees to soften and address the scale of the built form, recognising that any building over 18 metres in height is unlikely to have emergent canopy trees above the roofline.
- Integrate the design with the adjoining streetscape taking into consideration the established street trees.
- Incorporate environmentally sustainable design principles, particularly in relation to sustainable water use and creating landscapes that are effective at mitigating urban heat build up.

- On-site parking is to be limited and to comprise a maximum of 15 per cent of the landscape setback only. A green landscaped area between the car park and property boundary is to be a minimum width of 3 metres to allow planting of large canopy trees between the car park and the footpath. Preferably all parking is to be provided outside the landscape setback.

Guideline 2.3

Side and rear landscape setbacks to be designed to:

- Include large canopy trees for shade and character to parking and vehicle loading and unloading areas, and the perimeter of the site.
- Incorporate WSUD principles into the design of the whole site including use of permeable surfaces where feasible to increase moisture content available for trees and planting areas in the site.

6.3.2 Suburban commercial/industrial precincts

Guideline 2.4

Front landscape setbacks to be designed to:

- Include large canopy trees for shade to parking and vehicle loading and unloading areas.
- Minimum of 2.5 metre wide green frontage between the footpath and built form within the minimum 7.6 metre front setback. The green frontage of minimum 2.5 metre wide is to include at least one row of large canopy trees with a maximum spacing between the trees of 5 metres and meet the criteria in Table 6-6.
- Perimeter fencing is strongly discouraged with the built form to adequately incorporate necessary security features as part of the building fabric. Where fencing is proposed, preference will be for it to be low and transparent.
- Incorporate WSUD principles into the design of the whole site including use of permeable surfaces where feasible to increase moisture content available for trees and planting areas in the site.

6.3.3 Urban commercial/industrial precincts

Guideline 2.5

Promote urban greening in the existing commercial/industrial precincts including:

- Large canopy trees to be incorporated into local access streets where feasible, including consideration of planting them into roadside tree wells/cut outs to maximise opportunities to include footpaths in the road reserve.
- Where sites are redeveloped, encourage activated, landscaped setbacks that promote liveability principles and improve the shading and greening of the outdoor environment to encourage workers to take a break outdoors. These setbacks are to exclude car parking, with parking to be retained as on-street, or provision of off-street parking to the rear of the site.

6.3.4 All activity centres, high density precincts and strategic sites

Guideline 2.6

Retain and protect large mature trees on private and public land consistent with the guidelines in Section 6.4.

Guideline 2.7

When planting new trees on private land, recognise that in some cases, large canopy trees in front setbacks of sites greater than 4-stories in height may include some species that are more conical and columnar in shape, however broad-spreading canopy trees are preferred.

Guideline 2.8

In the public realm including road reserves:

- Road Reserves to be designed with adequate width to incorporate a boulevard treatment with broad spreading large canopy trees on major roads and commercial precincts within the activity centres. Council to review the minimum design requirements for Civil works, and then allow for adequate space to plant large canopy trees in the road reserve without compromising the civil clearances for underground and above ground services.
- Large canopy trees to be incorporated into local access streets where feasible, including consideration of planting them into roadside tree wells/cut outs to maximise opportunities to include footpaths in the road reserve.
- Urban plazas and public meeting spaces are to maximise opportunities to integrate urban greening including canopy trees, garden beds and grassing, well integrated with paved surfaces in high use environments. Urban greening to integrate sustainable water use principles to contribute to sustainability and urban cooling.

Guideline 2.9

Within the private landscape setbacks in the retail/commercial precincts:

- Maximise greening with a preference for canopy trees and garden beds so they contribute to urban greening, and retain suitable sightlines for safety. Trees and garden beds along with grassing where appropriate are to integrate sustainable water use principles to contribute to sustainability and urban cooling.
- In addition to trees and garden bed planting, other features such as green walls will be considered, however they will need to demonstrate they meet best practice sustainability principles.

6.3.5 Local strip shopping centres

Guideline 2.10

Within smaller commercial precincts - i.e. the small strip shopping precincts, identify opportunities to plant additional large canopy trees in these centres to improve the urban greening and *Garden City Character*. Tree species selection is to respond to the landscape character type where possible.

6.4 Guideline 3
Preferred landscape character types

Guideline 3.1

Use the Preferred landscape character type to guide proposed site development. The Preferred landscape character type sheets for each precinct are located in Appendix A. A diagram of the Preferred landscape character types is shown in Figure 6D and summarised in Figure 1A of this Strategy. The development application is to demonstrate how it meets Preferred landscape character type.

Guideline 3.2

In preparation of future design plans, refer to the Guideline 1 which identifies criteria for improved greening on private land.

For each preferred landscape character type precinct, the new planting is to demonstrate how it responds to the Preferred landscape character type. In all the character areas, there is a focus on increasing canopy vegetation in order to meet the target of 30% tree canopy cover by 2030 and to increase the overall urban greening to protect and improve the *Garden City Character.* This includes retention and planting to:

- Strengthen the biodiversity values along the waterway corridors through the use of indigenous species.
- Review the adequacy of building setback and design in sites directly adjoining waterway corridors or bushland reserves, to minimise the requirement for trimming and removal of trees in the adjoining bushland.
- Support a stronger framework of large canopy trees in both the streetscapes and on private land that reinforces the native tall Eucalypt style landscape character which is mainly present in the north and eastern parts of the municipality.
- Strengthen a framework of large non-native deciduous and evergreen trees and garden styles mainly in the south and western parts of the municipality.
- Improve tree canopy cover and introduce substantial greening in the non-residential and mixed use areas of the municipality.

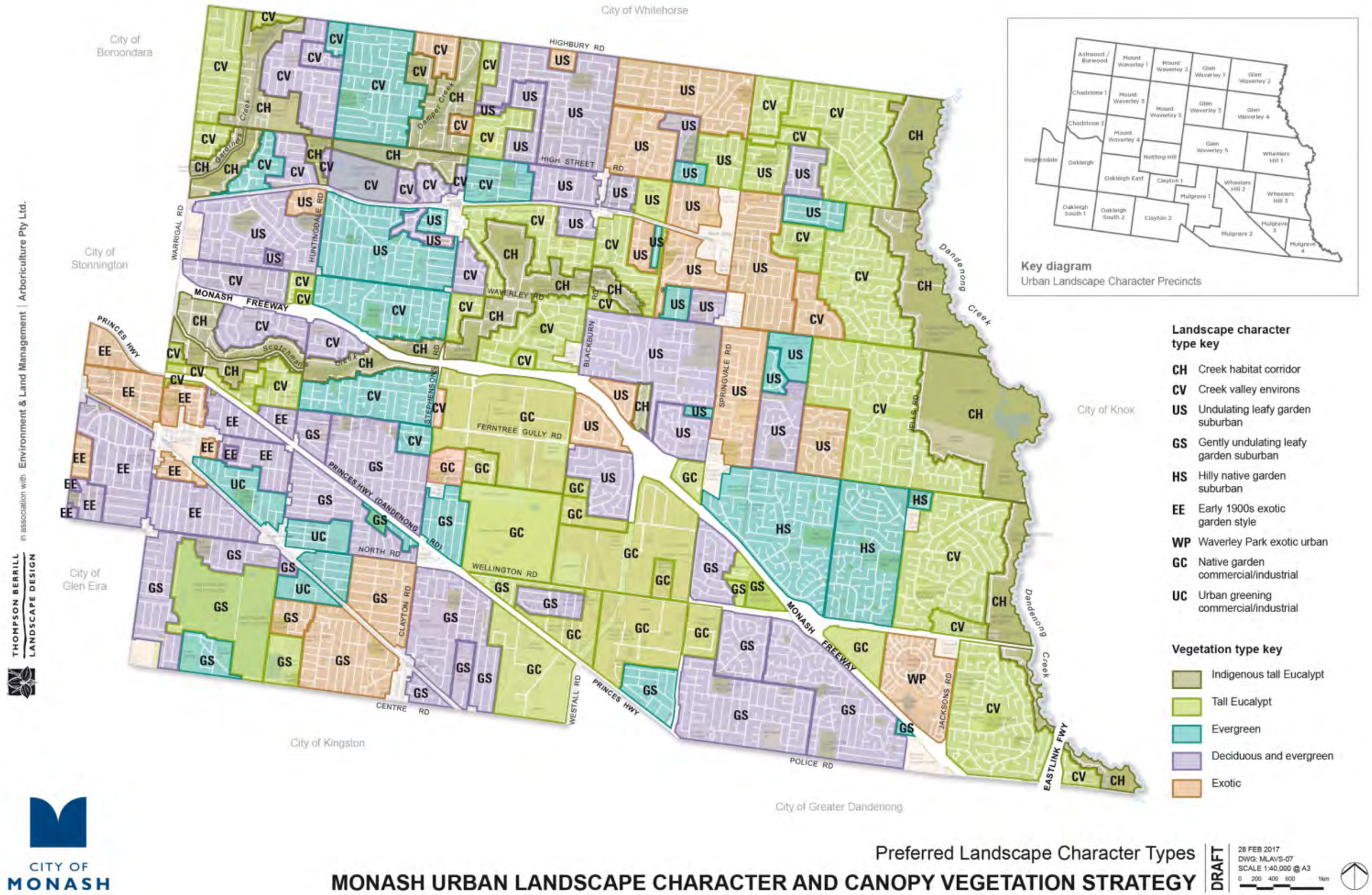

Figure 6D *Preferred landscape character types*

6.4.1 Indigenous tall Eucalypt vegetation type

For the extent of this vegetation type, refer to Figure 6D. It extends over the waterway corridors and the major bushland reserves in the municipality, and includes private land that directly adjoins or is opposite the waterway or bushland reserves.

a) Encourage the use of local provenance indigenous species including large canopy trees in the public open space, the streetscapes and on private land to improve the biodiversity values of the City of Monash.

b) Encourage the use of local provenance indigenous and native shrub and ground layer planting in private landscaping (non-residential) and gardens (residential). As a minimum, the use of non-invasive exotic species is required.

c) Where indigenous species do not meet the specific requirements of the site, then native species are to be selected to demonstrate they will not detrimentally impact on the indigenous vegetation values.

d) Street tree planting in close proximity to the waterways will complement the biodiversity values in the adjoining open space. This may include planting indigenous species, large canopy trees, or landscape treatment that assists the role of the streetscape as an effective bushfire buffer zone where this is required.

e) Indigenous species are to be of local provenance to the local area.

Table 6-1 List of typical trees for use in the Indigenous tall Eucalypt vegetation type

Botanical name	Common Name	Approx size (H x W)
Acacia melanoxylon	Blackwood	8 x 6 m
Allocasuarina littoralis	Black Sheoak	5-8 x 4-5 m
Allocasuarina verticillata	Drooping Sheoak	9 x 5 m
*Banksia serrata**	Saw Banksia*	10 x 5 m
Eucalyptus cephalocarpa	Sliverleaf Stringybark	8-20 x 10-15 m
Eucalyptus goniocalyx	Bundy	8-12 x 4-6 m
Eucalyptus melliodora	Yellow Box	10-15 x 8-10 m
Eucalyptus radiata	Narrow-leaf Peppermint	15-20 x 8-12 m
*Eucalyptus yarrarensis***	Yarra Gum	12 x 8 m

** Indigenous to Hughesdale, Oakleigh, Oakleigh East and Oakleigh South only.*
*** Indigenous only to the Dandenong Creek environs.*

Note – preference will be given to the use of indigenous species, however where a suitable indigenous species cannot meet the design criteria, then species from the following table can be used.

Botanical name	Common Name	Approx size (H x W)
Angophora costata	Smooth-barked Apple Myrtle	12 x 8 m
Corymbia citriodora	Lemon-scented Gum	15-20 x 15 m
Corymbia citriodora 'Scentuous'	Dwarf Lemon Scented Gum	7 x 5 m
Corymbia eximia	Yellow Bloodwood	12 x 10 m

Botanical name	Common Name	Approx size (H x W)
Corymbia eximia 'Nana'	Dwarf Yellow Bloodwood	8 x 6 m
Corymbia maculata	Spotted Gum	20 x 18 m
Eucalyptus melliodora	Yellow Box	10-15 x 8-10 m
Eucalyptus radiata	Narrow-leaf Peppermint	15-20 x 8-12 m
Eucalyptus sideroxylon	Ironbark	15-20 x 15 m
Eucalyptus sideroxylon 'Rosea'	Red Ironbark	15 x 6-10 m

Criteria for suitable canopy vegetation types for use in Indigenous tall Eucalypt vegetation type:

- Preferably indigenous, and of local provenance.
- Where indigenous species do not meet the specific requirements of the site, then native species are to be selected to demonstrate they will not detrimentally impact on the indigenous vegetation values.
- Native species are to complement the bushland character of Landscape Character Type - for example, if the site adjoins a waterway corridor, then the native species are to complement the riparian corridor values.

6.4.2 Tall Eucalypt vegetation type

For the extent of this vegetation type, refer to Figure 6D. This vegetation type mainly corresponds with the Creek valley landscape character type and the Garden commercial/industrial landscape character type. They are generally overlooking the waterway corridors, but does not directly adjoin it, or is within the future Monash National Employment and Innovation Cluster or nearby in Mulgrave and Notting Hill.

This vegetation type is also applied to areas that have a significant presence of tall Eucalypt style emergent species that frame the overall character on the precinct.

a) Where space permits, strengthen existing street tree plantings to utilise tall Eucalypt style species in public open space, the streetscapes and on private land.

b) Strengthen existing shrub and ground layer planting, which is a combination of exotic and native species.

Table 6-2 List of typical character species suitable for the tall Eucalypt landscape character type

Botanical name	Common Name	Approx size (H x W)
Angophora costata	Smooth-barked Apple Myrtle	12 x 8 m
Corymbia citriodora	Lemon-scented Gum	15-20 x 15 m
Corymbia citriodora 'Scentuous'	Dwarf Lemon Scented Gum	7 x 5 m
Corymbia eximia	Yellow Bloodwood	12 x 10 m
Corymbia eximia 'Nana'	Dwarf Yellow Bloodwood	8 x 6 m
Corymbia maculata	Spotted Gum	20 x 18 m

Botanical name	Common Name	Approx size (H x W)
Eucalyptus melliodora	Yellow Box	10-15 x 8-10 m
Eucalyptus radiata	Narrow-leaf Peppermint	15-20 x 8-12 m
Eucalyptus sideroxylon	Ironbark	15-20 x 15 m
Eucalyptus sideroxylon 'Rosea'	Red Ironbark	15 x 6-10 m

Criteria for suitable canopy vegetation types for use in tall Eucalypt vegetation type:

- Trees to be predominantly evergreen and have a similar tall branching habit with a foliage density similar to the character of the Eucalypts - i.e. allows some filtered sunlight to penetrate during winter.
- Where deciduous trees are proposed due to sunlight access and overshadowing issues, these are to be used as feature trees and where possible complement the native landscape character. For example, the *Lagerstroemia* 'Natchez' has a smooth bark and small foliage which can complement many of the Australian native trees.
- Shrubs and ground covers are to be native to Australia, with contrasting texture and foliage. Where non-native species are used, they are to be used as a feature rather than dominate the planting palette.

6.4.3 Evergreen vegetation type

For the extent of this vegetation type, refer to Figure 6D. The precincts respond to the established evergreen landscape character, which is predominantly a combination of native and non-native evergreen species. While this includes tall Eucalypt style species, the dominance is achieved with the medium and smaller sized trees.

a) The preferred character will strengthen this by increasing the presence of medium to large canopy evergreen trees along with some deciduous trees in the mix. This includes in public open space, streetscapes and on private land.

b) In this landscape character type areas include residential gardens with a dominance of shaped cypress and conifers. This is particularly evident in parts of Wheelers Hill and Mulgrave.

Table 6-3 List of typical character species suitable for the Evergreen vegetation type

Botanical name	Common Name	Approx size (H x W)
Angophora hispida	Dwarf Apple Myrtle	8 x 7 m
Banksia integrifolia	Coast Banksia	8 x 4 m
Brachychiton acerifolius	Illawarra Flame Tree	12 x 6 m
Callistemon salignus	Willow Bottlebrush	6 x 4 m
Cupaniopsis anacardioides	Tuckeroo	8 x 7 m
Ficus rubiginosa	Port Jackson Fig	10 x 15 m
Hymenosporum flavum	Native Frangipani	8 x 4 m

Botanical name	Common Name	Approx size (H x W)
Lophostemon confertus	Brush Box	12-15 x 10 m
Magnolia grandiflora	Bullbay Magnolia	10 x 8 m
Phoenix canariensis	Canary Island Date Palm	12 x 6-8 m
Trachycarpus fortunei	Windmill Palm	8 x 3 m
Tristaniopsis laurina	Kanooka	8 x 6 m
Waterhousia floribunda	Weeping Lily Pily	12 x 12 m

Criteria for suitable canopy vegetation types for use in Evergreen vegetation type:

- Trees to be predominantly evergreen with a variety of textures and characteristics and can be both exotic evergreen and native evergreen species.
- Where deciduous trees are proposed due to sunlight access and overshadowing issues, these are to be used as feature trees, with more than 50% of proposed trees to comprise evergreen species.
- Shrubs and ground covers can be a combination of exotic and or native species.

6.4.4 Deciduous and evergreen vegetation type

For the extent of this vegetation type, refer to Figure 6D. This vegetation type includes the combination of deciduous and Eucalypt style and other evergreen trees. Much of this style is consistent with pre-1965 urban development. In the Oakleigh area, the style is characterised with alternating evergreen and deciduous avenue style street tree plantings. In the Chadstone and Mount Waverley areas, the character is influenced by the garden styles, along with mixed street tree planting styles.

a) The future preferred vegetation type will strengthen this style, including with consideration of extending the alternating evergreen and deciduous avenue style street tree plantings given the excellent balance they achieve between winter sun and summer shade in east-west oriented streets.

b) Other features of this landscape character type will be to strengthen the presence of the large broad spreading deciduous canopy trees on private land.

Table 6-4 List of typical character species suitable for the deciduous and evergreen landscape character type

Botanical name	Common Name	Approx size (H x W)
Evergreen		
Angophora costata	Smooth-barked Apple Myrtle	12 x 8 m
Angophora hispida	Dwarf Apple Myrtle	8 x 7 m
Banksia integrifolia	Coast Banksia	8 x 4 m
Brachychiton acerifolius	Illawarra Flame Tree	12 x 6 m
Callistemon salignus	Willow Bottlebrush	6 x 4 m
Cupaniopsis anacardioides	Tuckeroo	8 x 7 m

Botanical name	Common Name	Approx size (H x W)
Ficus rubiginosa	Port Jackson Fig	10 x 15 m
Lophostemon confertus	Brush Box	12-15 x 10 m
Tristaniopsis laurina	Kanooka	8 x 6 m
Waterhousia floribunda	Weeping Lily Pily	12 x 12 m
Deciduous		
Acer palmatum	Japanese Maple	7 x 6 m
Acer x freemanii 'Jeffersred'	Autumn Blaze Maple	15 x 10 m
Ginkgo biloba	Ginkgo	12 x 8 m
Lagerstroemia indica x 'Natchez'	Crepe Myrtle (White flowering)	6 x 4 m
Lagerstroemia indica x 'Tuscarora'	Crepe Myrtle (Pink flowering)	8 x 4 m
Malus species and cultivars	Crabapples	6 x 6 m
Melia azedarach 'Elite'	White Cedar	12 x 10 m
Pistacia chinensis	Chinese Pistachio	8 x 8 m
Platanus orientalus	Oriental Plane	15 x 10 m
Platanus x acerifolius	London Plane	20-25 x 15-20 m
Quercus canariensis	Algerian Oak	15 x 10 m
Quercus cerris	Turkey Oak	15 x 10 m
Quercus robur	English Oak	10 x 8 m
Ulmus parvifolia	Chinese Elm	10 x 10 m
Zelkova serrata 'Green Vase'	Japanese Zelkova	15 x 10 m

Criteria for suitable canopy vegetation types for use in deciduous and evergreen vegetation type:

- Minimise the use of Eucalyptus species in these areas, however *Corymbia sp.* and *Angophora sp.* are suitable. Evergreen trees are preferably to have large textural or glossy green leaves and with characteristics that complement the deciduous trees.
- Deciduous trees are to be proven to be relatively hardy in more extreme weather events including strong winds and extended heat.
- Shrubs and ground covers to preferably have a greener and more exotic character, however they can include native and indigenous species.

6.4.5 Exotic vegetation type

For the extent of this vegetation type, refer to Figure 6D. This vegetation type is where the dominant planting character is both evergreen and deciduous species that does not have a strong presence of identifiable 'native' character that is typically generated by the Eucalyptus style and 'dryer' bushland species.

a) Encourage additional large canopy non-Eucalypt style evergreen and deciduous trees on private land.

Table 6-5 List of typical character species suitable for the exotic landscape character type

Botanical name	Common Name	Approx size (H x W)
Evergreen		
Brachychiton acerifolius	Illawarra Flame Tree	12 x 6 m
Cupaniopsis anacardioides	Tuckeroo	8 x 7 m
Ficus rubiginosa	Port Jackson Fig	10 x 15 m
Hymenosporum flavum	Native Frangipani	8 x 4 m
Magnolia grandiflora	Bullbay Magnolia	10 x 8 m
Olea europaea 'Swan Hill'	Swan Hill Olive	7 x 7 m
Phoenix canariensis	Canary Island Date Palm	12 x 6-8 m
Trachycarpus fortunei	Windmill Palm	8 x 3 m
Deciduous		
Acer palmatum	Japanese Maple	7 x 6 m
Acer x freemanii 'Jeffersred'	Autumn Blaze Maple	15 x 10 m
Ginkgo biloba	Ginkgo	12 x 8 m
Lagerstroemia indica x 'Natchez'	Crepe Myrtle (White flowering)	6 x 4 m
Lagerstroemia indica x 'Tuscarora'	Crepe Myrtle (Pink flowering)	8 x 4 m
Malus species and cultivars	Crabapples	6 x 6 m
Melia azedarach 'Elite'	White Cedar	12 x 10 m
Pistacia chinensis	Chinese Pistachio	8 x 8 m
Platanus orientalus	Oriental Plane	15 x 10 m
Platanus x acerifolius	London Plane	20-25 x 15-20 m
Quercus canariensis	Algerian Oak	15 x 10 m
Quercus cerris	Turkey Oak	15 x 10 m
Quercus robur	English Oak	10 x 8 m
Ulmus parvifolia	Chinese Elm	10 x 10 m
Zelkova serrata 'Green Vase'	Japanese Zelkova	15 x 10 m

Criteria for suitable canopy vegetation types for use in exotic vegetation type:

- Minimise the use of Eucalypt style species in these precincts. Evergreen trees are preferably to have large textural or glossy green leaves and with characteristics that complement the deciduous trees and are not identifiably 'Native Australian'.
- Deciduous trees are proven to be relatively hardy in more extreme weather events including strong winds and extended heat.
- Shrubs and ground covers to preferably have a greener and more exotic character, however they can include native and indigenous species.

6.5 Guideline 4
Maximise the retention of existing canopy trees

Guideline 4.1

Prioritise the retention of significant and large canopy trees on private land. Where there are a number of trees on the site, the retention of large canopy trees is to be prioritised over the medium and small canopy trees. This is irrespective of whether there is a proposal to develop the site or not.

Guideline 4.2

Require assessments lodged with tree removal applications to demonstrate how the application has minimised the loss of trees on the basis that Council is seeking to maximise the retention of existing mature canopy trees. This is to include a site context report with reference to the existing and preferred landscape character of the site and location and it may include remedial arboricultural works to be carried out to prolong the health of the tree, as described in Recommendation 7.4.1.

Guideline 4.3

Developments are to incorporate the requirements of Australian Standards *AS 4970-2009 Protection of trees* (or its equivalent current Australian Standard) and *AS 4373-2007 Pruning of amenity trees* for remedial works to the tree canopy.

Decision guidelines for retaining large canopy trees:

a) Avoid removal of existing long-lived large canopy trees.

b) Prioritise remedial action in preference to removal in accordance with the new guidelines recommended to be prepared by Council as described in Recommendation 7.4.1 in the Strategy. For example undertake remedial arboricultural works or modify the built form/structural foundations/footings/road/ footpath construction technique to allow retention of the tree where possible.

c) If removal is the only option, then planting and maintenance of at least 3 trees of the same species, or a species specified by Council will be required on the site as compensation for the loss.

6.6 Guideline 5
Plant new canopy trees

6.6.1 Private land

Guideline 5.1

Plant a minimum number of large canopy trees in the front setback in accordance with the performance criteria in Table 6-6.

Guideline 5.2

Provide an adequate side boundary setback to retain and plant medium to large canopy trees between properties and achieve emergent canopy to break up the roofline of built form.

Guideline 5.3

Use the Australian Standards *AS2870-2011 for Residential slabs and footings* to determine the minimum area required for the tree to establish in terms of minimum off-set from adjoining built form.

Guideline 5.4

Refer to the key performance criteria and typical species palettes suitable for each of the Preferred vegetation types. Refer to the performance criteria for the selection of appropriately sized trees in Table 6-6 in this Strategy.

Table 6-6 Performance criteria for new trees in Monash (excluding street trees)

Setback and tree size	Criteria
Standard residential	
1. Front setback 7.6 metres or greater Minimum of 3No. large canopy trees in the front setback and a minimum of 2 No. small canopy trees. Where only 2No. large canopy trees are feasible, then a minimum of 3No. additional medium sized trees are required. Minimum of an additional 2No. large canopy tree or 4No. medium canopy trees elsewhere on the lot (i.e. in the side and rear setback)	a) Large canopy tree (as defined in this Strategy) b) Long-lived tree (80 years plus) c) Structurally sound, good quality planting stock free of structural defects to maximise public safety. d) Provide summer shade and winter sunlight access to paved surfaces and north and west facing windows of the main areas of the dwelling/workplace. This may include sparse shade that is typically provided by Eucalypt species e) Demonstrate they are suitable for the existing soil profile. This includes demonstrating that the building and footing design takes into account the proposed tree location and demonstrates it meets the relevant Australian Standards including *AS2870-2011 for Residential slabs and footings*, in relation to the proposed footing and building design. f) Demonstrate they are suitable for the proposed planting location, available space and method in the streetscapes

Setback and tree size	Criteria
	to minimise impacts on footpath and road pavement surfaces. g) Provide a natural soil/garden bed/grassed area around the tree of at least 15 square metres. Where this is not feasible, demonstrate that the planting conditions will be conducive to the growth and ultimate size of the tree h) Are suitably hardy enough to grow without irrigation in non-drought conditions (other than during the first two years of establishment) i) Mature tree canopy will emerge above the roofline of the proposed built form to provide adequate shade and break up the built form (with the exception of 4-storeys plus) j) The conditions will allow for the proposed tree to assume its natural form within reason and not require hedging or pollarding k) Selected tree species is consistent with the Preferred landscape character type described in Section 5.5.
2. Front setback of between 7.5 and 4.0 metres Minimum of 2No. large canopy trees in the front setback and 2 No. medium and small sized trees elsewhere on the lot. Minimum of 1No. large canopy tree or 2No. medium canopy trees elsewhere on the lot (i.e. in the side and rear setback)	a) Medium canopy tree (as defined in this Strategy) b) Long-lived tree (50 years plus) c) Refer to all criteria listed in above from 1(c) to 1(k)
3. Front setback of less than 3.9 metres Minimum of either 1No. large canopy trees, or 2No. medium canopy trees. Minimum of an additional 1No. medium canopy tree or 2No. small canopy trees elsewhere on the lot (i.e. in the side and rear setback)	a) Small canopy tree (as defined in this Strategy) b) Long-lived tree (30 years plus) c) Refer to all criteria listed in above from 1(c) to 1(k)
Medium to high density residential	
4. All front setbacks Minimum of 2No. large canopy trees. Minimum of some planting, either fastigiate trees/hedges to side and rear setbacks, or as a minimum a combination of shrubs/ground layer planting and climbers in the side and rear setbacks to provide greening.	a) Large canopy tree (as defined in this Strategy). b) Long-lived tree (80 years plus) c) Refer to all criteria listed in above from 1(c) to 1(k)

Table 6-6 Performance criteria for new trees in Monash (excluding street trees) *continued...*

Setback and tree size	Criteria
All residential types	
5. Canopy trees located in the 35 square metres of private open space Minimum of 1No. large canopy tree or 2No. small canopy trees.	a) Provides summer shade and winter sunlight access to all living areas of the dwelling. b) Emergent above the roofline of the proposed dwelling. This is likely to result in the use of a tall columnar species rather than a broad spreading canopy tree. c) Long-lived tree species (50 years plus). d) Adjacent slab and footings are designed to meet the requirements of the tree. The plans are to demonstrate the building is designed to allow for the mature size of the proposed tree in accordance with the relevant Australian Standards including *AS2870-2011 for residential slabs and footings*.

6.6.2 Public open space

Guideline 5.5

Plant new long-lived large canopy trees in the parks and reserves, guided by design plans for the open space. Plant trees in appropriate locations that will maximise their health and longevity, while retaining areas for recreational use. For example, open grassed areas in open space are important for informal recreational activities. Rather than plant trees through the open grassed areas which would interrupt their use, planting them to the perimeter to frame these areas will improve their character, provide shade and make them more attractive to use. Additionally, demonstrate the trees have been appropriately selected and located to retain clear sight lines at key entry points into open space and along key pedestrian routes.

Guideline 5.6

New tree species selection to be guided by the Preferred landscape character type and vegetation type in which the open space is located. For overall guidelines on selection of appropriate large canopy trees, refer to Table 6-6, Item 1.

Guideline 5.7

Where appropriate, increase the diversity of tree species planted in the open spaces, particularly given that conditions in the parks are usually more favourable for tree growth where there is more space.

6.6.3 Streetscapes

Guideline 5.8

Increase the presence of large canopy trees in streetscapes where there is suitable space for them to establish. This will include a greater emphasis on site preparation for planting including the use of passive irrigation (WSUD) and other measures if required including structural soils and root barriers where space is limited in high density precincts. Refer to Table 6-7 for performance criteria for street trees.

Table 6-7 Performance criteria for street trees

Naturestrip width	Criteria
2.5 metres wide or greater	i) Large canopy tree (as defined in this Strategy) ii) Long-lived tree (80 years plus) iii) Structurally sound, good quality planting stock free of structural defects. iv) Tolerant of urban and dry conditions. v) Selected tree species is consistent with the Preferred landscape character type described in this Strategy and the tree lists included in the Monash Street Tree Strategy. vi) Consider alternating deciduous and evergreen planting styles in east-west streets for summer shade and winter sunlight to the streetscapes.
From 2.4 to 2.0 metres wide	i) Medium canopy tree (as defined in this Strategy) ii) Long-lived tree (50 years plus) iii) Structurally sound, good quality planting stock free of structural defects. iv) Tolerant of urban and dry conditions. v) Selected tree species is consistent with the Preferred landscape character type described in this Strategy and the tree lists included in the Monash Street Tree Strategy. vi) Consider alternating deciduous and evergreen planting styles in east-west streets for summer shade and winter sunlight to the streetscapes.
From 1.9 to 1.5 metres wide	i) Small canopy tree (as defined in this Strategy) ii) Long-lived tree (30 years plus) iii) Structurally sound, good quality planting stock free of structural defects. iv) Tolerant of urban and dry conditions. v) Selected tree species is consistent with the Preferred landscape character type described in this Strategy and the tree lists included in the Monash Street Tree Strategy vi) Consider alternating deciduous and evergreen planting styles in east-west streets for summer shade and winter sunlight to the streetscapes.
Less than 1.4 metres wide	i) Consider the option of planting trees into roadside cut-outs where the road pavement width is a minimum of 6 metres wide. The road pavement cut-outs will be able to accommodate Medium to Large street trees.

Naturestrip width	Criteria
No naturestrips Trees planted into road pavement cut-outs/tree wells	i) Large and Medium canopy trees (as defined in this Strategy) relative to the road pavement width. Road pavements greater than 7 metres width to have Large canopy trees, and less than 7 metres may have Large or Medium sized canopy trees. ii) Long-lived trees (Large 80 years plus, Medium 50 years plus) iii) Structurally sound, good quality planting stock free of structural defects. iv) Tolerant of urban and dry conditions. v) Selected tree species is consistent with the Preferred landscape character type described in Section 6.4 and Appendix A of this Strategy and the tree lists included in the Monash Street Tree Strategy vi) Consider alternating deciduous and evergreen planting styles in east-west streets for summer shade and winter sunlight to the streetscapes.

6.7 Guideline 6
Requirements for landscape plans

Guideline 6.1

Landscape plans are required to be submitted to Council as part of the planning permit process and will need to be consistent with current Monash Landscape Plan Guidelines and will include a minimum of:

- Scaled, accurate Existing Conditions Plan preferably based on a feature and level survey. The Plan will clearly show and label all existing trees and vegetation areas to be retained and removed.
- Where the site has existing trees, a report prepared by a qualified Arborist.
- Landscape Plan/s showing the proposed works, including clearly showing all proposed surface treatments, existing vegetation, vegetation to be removed and proposed new vegetation. The Landscape Plan is to include at least a brief design statement that explains how the plan is consistent with the Preferred landscape character type, as described in Appendix A of this Strategy.

6.8 Guideline 7
Permit conditions

Guideline 7.1

Permit conditions will be included for approved applications to ensure nominated trees are retained and that landscape plans are endorsed and implemented. Appropriate conditions include, but are not limited to:

- Preparation and endorsement of a landscape master plan/detailed landscape plan. Normally a detailed landscape plan will be the requirement but both types of plans will be required for larger sites with masterplans/multiple lots.
- Landscape works are to be completed.
- Establishment and maintenance of landscaping, with minimum of 2 years maintenance prior to hand over to Council, where the works are undertaken on public land.
- Tree retention including minimum of 12 months maintenance of the retained tree following completion of works to confirm it has not been damaged as part of the works. Where the retained tree is to be handed over to Council, a minimum of 2 years maintenance will be required prior to hand over.
- Tree protection during construction in accordance with Australian Standard *AS 4970-2009 Protection of trees on development sites* (or successor).
- Prohibited works within the tree protection zone.
- Pruning of trees by a qualified arborist in accordance with Australian Standard *AS4373-2007 – Pruning of Amenity Trees* (or successor).
- Storage and disposal of landscaping materials.
- Removal, replacement and planting of street trees.