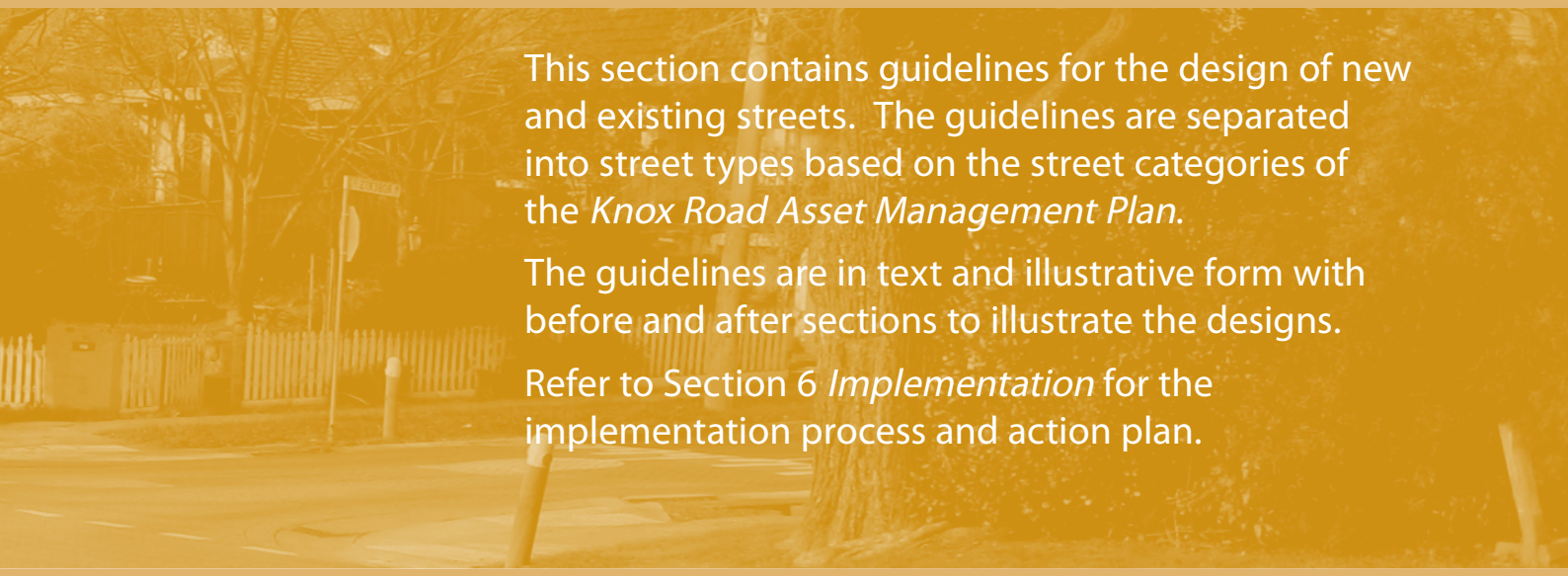
5

LIVEABLE STREETS DESIGN GUIDELINES



This section contains guidelines for the design of new and existing streets. The guidelines are separated into street types based on the street categories of the *Knox Road Asset Management Plan*.

The guidelines are in text and illustrative form with before and after sections to illustrate the designs.

Refer to Section 6 *Implementation* for the implementation process and action plan.

5.1 MANAGEMENT & STREET TYPES IN KNOX

The streets of Knox are managed by two main authorities, VicRoads and Knox City Council. Within the City of Knox various departments work together to plan, build, maintain and manage the streets.

VICROADS MANAGED STREETS

VicRoads manages all the main streets throughout Knox City. In these instances the City of Knox is a stakeholder and works with VicRoads to provide safe and amenable road environments.

VicRoads streets include:

Declared highways:

- Burwood Highway;
- Dandenong Valley Highway (Stud Road)
- Burwood Highway to Dandenong Creek;
- Monash Highway (Wellington Road) –Dandenong Creek to Stud Road

Declared Main Roads within the City of Knox are as follows:

- Stud Road
- Croydon Scoresby Road
- Dorset Road
- Boronia Road
- Ferntree Gully Road
- High Street Road
- Kelletts Road
- Lysterfield Road
- Napoleon Road
- Wantirna Road
- Wantirna-Sassafras Road (Mountain Highway)
- Wellington Road

CITY OF KNOX MANAGED STREETS

The streets managed by the City of Knox can be described as all streets within the muncipality other than privately owned roads and those managed by VicRoads.

Legend

- City of Knox Boundary
- East Link
- VicRoads

Knox City Council Streets

- Link Road
- Collector Road
- Industrial Road

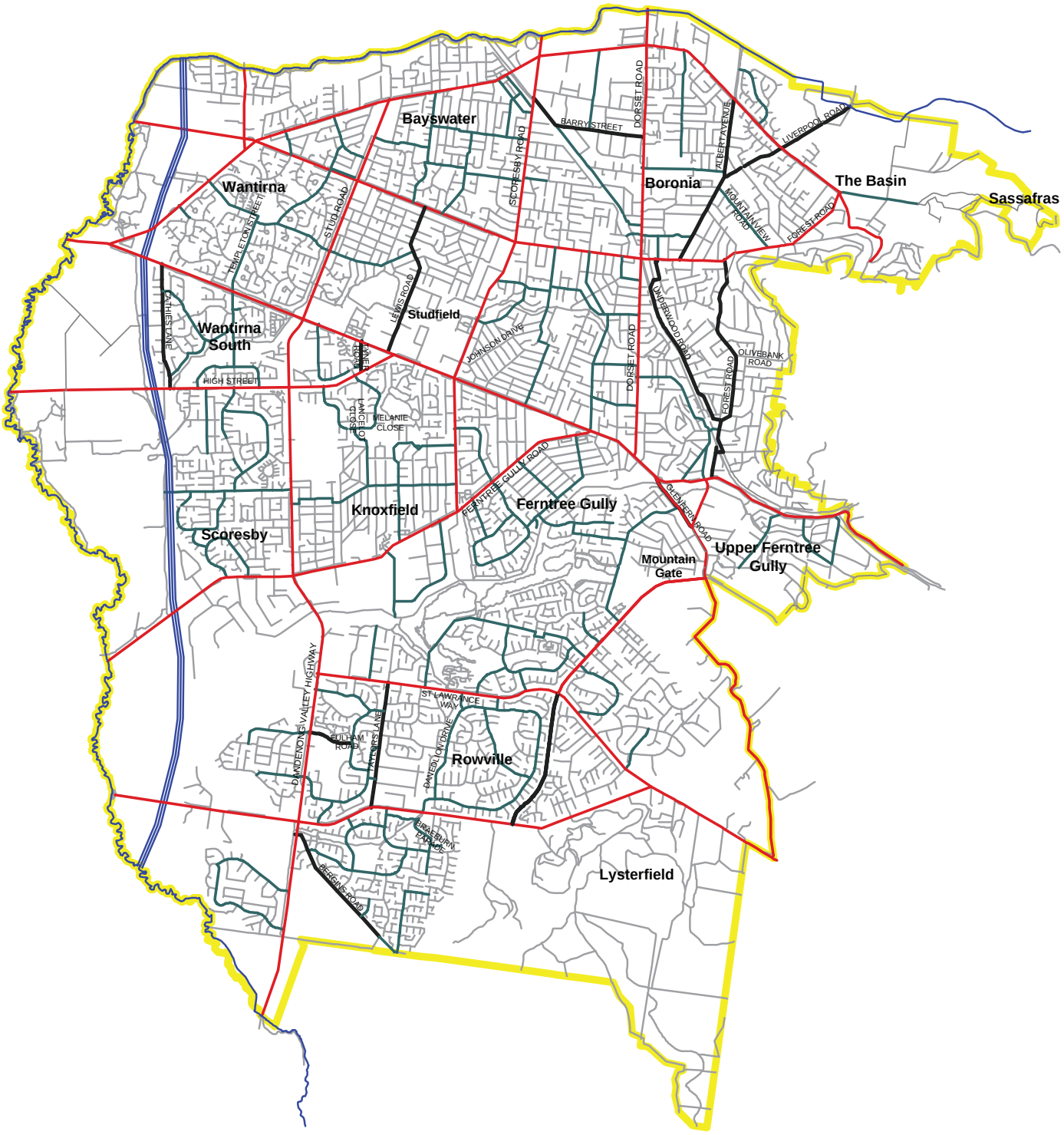


Figure 1: Map of VicRoads and Council Streets and Asset Management Hierarchy

5.1 MANAGEMENT & STREET TYPES IN KNOX

PROPOSED STREET TYPES HIERARCHY

The proposed street type hierarchy builds on the Road Asset Management Hierarchy and the Knox Urban Design Framework 2020, by addressing all scales of streets within the municipality.

The Knox Urban Design Framework 2020 recommends major street types:

- Dandenong Gateways;
- Bush Boulevards;
- Principle Avenues; and
- Path into the Hills

This Plan builds on these types by including:

- Community Link Streets;
- Neighbourhood Green Streets;
- Industrial Streets;
- Shopping Streets;
- Residential Foothill Streets;
- Residential Bush Suburb Streets;
- Residential Garden Suburb Streets;
- Residential Garden Court or Villa Court Streets; and
- Residential Home Zones Streets.

These street types reflect on the six character areas within the city, as identified by the City of Knox Neighbourhood Character Study (1999) and subsequent guidelines in the Knox Urban Design Framework 2020.

Legend

- City of Knox Boundary
- East Link
- Dandenong Creek Gateways
- Bush Boulevards
- Principle Avenues
- Paths into the Hills
- Community Link Streets
- Neighbourhood Green Streets

For the following streets, refer individual maps

- Industrial Streets
- Shopping Streets and
- All Home Street types

Figure 2: Proposed Street Types Hierarchy

5.1 MANAGEMENT & STREET TYPES IN KNOX

PROPOSED STREET HIERARCHY

Type	Streets	City of Knox Road Asset Management Plan Category	Owner/ Authority	Posted Speed Limit Traffic
Freeways	Eastlink	Declared state highways	Eastlink	100km/h
Bush Boulevards	Stud Road Monash Highway (Wellington Road) Ferntree Gully Road Burwood Highway Boronia Road Mountain Highway	Declared state highways and main roads	VicRoads	60-80km/h
Dandenong Creek Gateways	Boronia Road Burwood Highway Fern tree Gully Road Wellington Road Stud Road	Declared state highways and main roads and others	VicRoads	60-80km/h
Principal Avenues	Kelletts Road Napoleon Road Dorset Road High Street Road Scoresby Road Wantirna Road	Declared state highways and main roads	VicRoads	50-80km/h
	Albert Avenue Colchester Road Liverpool Road	Link roads	City of Knox	50-80km/h
Paths into the Hills	Mountain Highway Boronia Road / Forest Road Burwood Highway (east of Dorset Road) Wellington Road (east of Kelletts Road)	Declared state highways and main roads and others	VicRoads	50-80km/h

Type	Streets	City of Knox Road Asset Management Plan Category	Owner/ Authority	Posted Speed Limit Traffic
Community Link Streets	Bergins Road Taylors Lane Napoleon Road Fulham Road Glenfern Road Forest Road Underwood Drive Lewis Road Tyner Road Barry Street Cathies Lane	Link roads	City of Knox	50-80km/h
Neighbourhood Green Streets		Collector roads	City of Knox	50-60km/h
Industrial Streets		Industrial roads	City of Knox	50-60km/h
Shopping Streets	Fulham Road (Link Road) Braeburn Parade St Lawrence Way Any other street in which a commercial or retail focus occurs.		City of Knox	50-80km/h
Residential Foothills		Access roads and unsealed roads	City of Knox	40km/h
Residential Bush Suburbs		Access roads	City of Knox	40km/h
Residential Garden Suburb		Access roads	City of Knox	40km/h
Residential Garden Court or Villa Court		Access roads	City of Knox	40km/h
Residential Home Zones		Access roads	City of Knox	40km/h

5.2
LIVEABLE STREETS CHECKLIST

This checklist should be used to guide and assess the quality of all street projects, from large scale highway works to small scale residential streetscapes.The checklist should be filled out by the project officer and be reviewed by all associated cCouncil departments.

PLANNING PRINCIPLES	COMPLIANCE
Community consultation Appropriate community consultation in the planning, design and construction of the project has and will be taking place.	☐
Intra-Council consultation The project has involved the collaboration or review of all other relevant Council departments.	☐
City Development • Open Space and Landscape Design • Urban Design • Arborists • Sustainability **Engineering & Infrastructure** • Traffic Planning • Asset Management • Maintenance **Community services** • Community Wellbeing • Access and Equity • Community Safety • Arts and Culture	☐
Community Participation Is this project a possible candidate for community involvement? Have the community been encouraged to participate and initiate street design activities?	☐

DESIGN PRINCIPLES	COMPLIANCE
Inclusive design People are placed at the heart of the design so that no one person or function dominates the street design process. Integrate the widest range of people and functions into the street design. Design of the streets to encourage social interaction.	☐
Accessible design The street is accessible to all types of people.	☐
Safety for pedestrians The safety of pedestrians is paramount.	☐
Appropriate vehicle speeds The design promotes reduced vehicle speeds.	☐
Carriageway width The appropriate minimum carriageway width is chosen –ie. the carriageway width should be no wider than required.	☐
Integrated water management A holistic view of water management in the project. On-street water sensitive urban design treatments where possible.	☐
Street trees Street trees are to be appropriate (ie to consider habitat, shade, height, soil conditions) and the maximum number are to be planted. (Refer to *Action Plan.* Council to develop a street tree selection tool.	☐
Nature strips Investigate alternatives to grass such as indigenous vegetation, amenity planting and edible plants.	☐

5.2 LIVEABLE STREETS CHECKLIST

DESIGN PRINCIPLES	COMPLIANCE
Local character The street design is to be sympathetic to local character.	☐
Footpath width Footpath width is to be appropriate for existing and potential foot traffic.	☐
Maintenance and longevity Consider materials for ease of maintenance and improved longevity.	☐
Provision for access Provide only minimum provision for vehicles access and car parking.	☐
Public art Consider opportunities for public art in the streetscape design.	☐
Clutter The street is to have minimal road-related signage and wayfinding signage is to be kept clear and simple.	☐
Standards and legislative requirements Ensure all works comply with Australian Standards and associated standards as per Road Management Act.	☐
Service coordination Ensure design and works are coordinated with all service authorities.	☐
Maintenance Consider the maintenance of the street, nature strip planting, street trees and infrastructure.	☐

5.3 GENERAL GLOSSARY FOR DESIGN GUIDELINES

TERM	MEANING
Approach sight distance	The distance required for a driver to perceive markings or hazards on the road surface and to stop.
Car stopping sight distance	The distance required for a car driver to perceive an object on the road and to stop before striking it.
Crossfall	The slope at right angles to the alignment of the surface of any part of a carriageway.
Design speed	The speed adopted for the design of each element of the road.
Grade	The rate of longitudinal rise or fall of a carriageway with respect to the horizontal, expressed as a percentage.
High speed road	A road with off-peak operating speeds in the range 90-110km/h.
Hinge Point	The point on the cross section about which the pavement is rotated for superelevation development.
Intermediate speed road	A road with off-peak operating speeds in the range 70-90 km/h.
Low speed road	A road with off-peak operating speeds below 70 km/h.
Nature strip	Strip of land planted with grass or shrubs, or grassed strip of land between the front boundary of a residential block and the edge of the road.
Profile	The shape of a pavement surface measured in a vertical plane, along a specified horizontal alignment.
Road reserve	The road reserve includes the road, nature strip, and footpath.
Safe intersection sight distance	The distance required for a driver on a major road to observe a vehicle entering from a side road, and to stop before colliding with it.
Tree reserve	The area of a verge reserved for trees.
Verge	The cleared level space bordering the edge of a sealed road, or a grassed strip of land between the front boundary or a residential block and the edge of the road.

5.4 GENERAL GUIDELINES

The general guidelines are elements that are common to all street types. These items have been listed here for clarity, and to avoid repetition.

COMMUNITY INVOLVEMENT

The community is encouraged to be a participant in the activation and design of streets.

Refer to Section 6 *Implementation* for community actions.

MATERIAL SELECTION AND MAINTENANCE

Material selection is a key element in all street types. Materials will need to respond to character types of areas and surrounding function.

All materials should consider their sustainability, lifecycle, use, maintenance and availability.

New technology can be tested in streets by Council. These items could include emerging sustainable technologies such as road bumps that produce energy.

Other sustainable technologies should be phased into all streets once reliability and maintenance strategies have been addressed. These include solar lighting, permeable pavements and e-crete.

SERVICE AND INFRASTRUCTURE REQUIREMENTS

Service and infrastructure maintenance requirements need to be accounted for in all street design and material selection.

- Adequate space for vehicles to move through and turn around where necessary should be included from the outset.
- Busses, emergency vehicle access, street sweepers, rubbish trucks and waste collection are amongst critical service vehicles that need regular access across all street types.

SIGNAGE

- Prevent the intrusion of advertising signs into key view lines, green open space and valued creek valleys.

LIGHTING AND POWER (COMMON GUIDELINE)

- Control glare and light spill of light sources
- Place all new and, where possible, existing power and communications cables underground.
- Ensure that all pedestrian paths are lit.

WSUD AND SQUID

Water sensitive urban design and stormwater quality in urban design.

- Install appropriate WSUD treatments.
- Meet best practice for holding water.
- Designed in conjunction with Melbourne Water.

DESIGNED TO PASSIVELY IRRIGATE ALL VEGETATION.

- Where WSUD and guard rails are present, ensure the guard rail is on the kerb edge to allow safe maintenance to WSUD behind guard.
- Utilize permeable paving adjacent to significant trees when constructing streets.

GUARD RAILS AND WIRE ROPE

- Where WSUD and guard rails are present, ensure the guard rail is on the kerb edge to allow safe maintenance to WSUD behind guard.
- Guard rail and wire rope have different structural and material make-up. Consideration should be given to the amount of deflection required and the possibility of screening guardrail with vegetation.

REDEVELOPMENT OF RESIDENTIAL AREAS

- Encourage redevelopment of residential properties to be orientated to address the street frontage.
- Encourage visual interaction between the street and front gardens. E.g. no or low front fences.
- Encourage the vegetation of nature strips with Council guidance of plant and material types.

SPEED SLOWING DEVICES

Devices such as speed humps installed to slow vehicles needs to be constant across areas to streamline design for vehicles and maintenance.

PLANS AND POLICIES

Refer to relevant structure plans including the Boronia Structure Plan, Bayswater Activity Centre and the Mountain Gate Structure Plan.

Refer to relevant strategies and policies as noted throughout this Plan.

INDENTED PARKING

The community place great importance on the value of the nature strip as it makes a significant contribution to Knox's 'green and leafy' image. As such indented parking should only be considered where there is a significant net community benefit such as the provision of on-streets cycle lanes as shown in the following figure. Existing street trees and planting should not be removed for indented car parking.

5.5 DANDENONG CREEK GATEWAYS

AUTHORITY

VicRoads

STREETS

Boronia Road
Burwood Hwy
Ferntree Gully Road
Wellington Road
Stud Road

DESCRIPTION

Dandenong Creek Valley is a broad corridor of green space, separating Knox from adjoining suburbs. As the major streets listed above pass over the valley, this view forms the gateway to the municipality.

GOALS

- To maximise the visual landscape impact of the Dandenong Valley at Knox's entrances.
- To welcome residents and visitors to the City of Knox through its unique geographical location and character.

Dandenong Gateways are located along the Dandenong Creek Corridor

Legend

Dandenong Creek gateways

Figure 3: Location of Dandenong Creek gateways

5.5 DANDENONG CREEK GATEWAYS

DESIGN GUIDELINES

Pedestrian Safety and Amenity

- Provide 'transparent' (wire rope) balustrades on bridges to maintain views across the creek corridor.
- Where possible, provide a landscape buffer between vehicle movement and footpaths to improve pedestrian amenity.

Cycle Infrastructure

- Promote on-road bicycle lanes in conjunction with VicRoads to provide safe and direct travel corridors for cyclists.

Sightlines

- Where possible protect view lines into the adjacent or surrounding open space and creek lines, which are Council's visual landmark and gateway into the municipality.

Vegetation

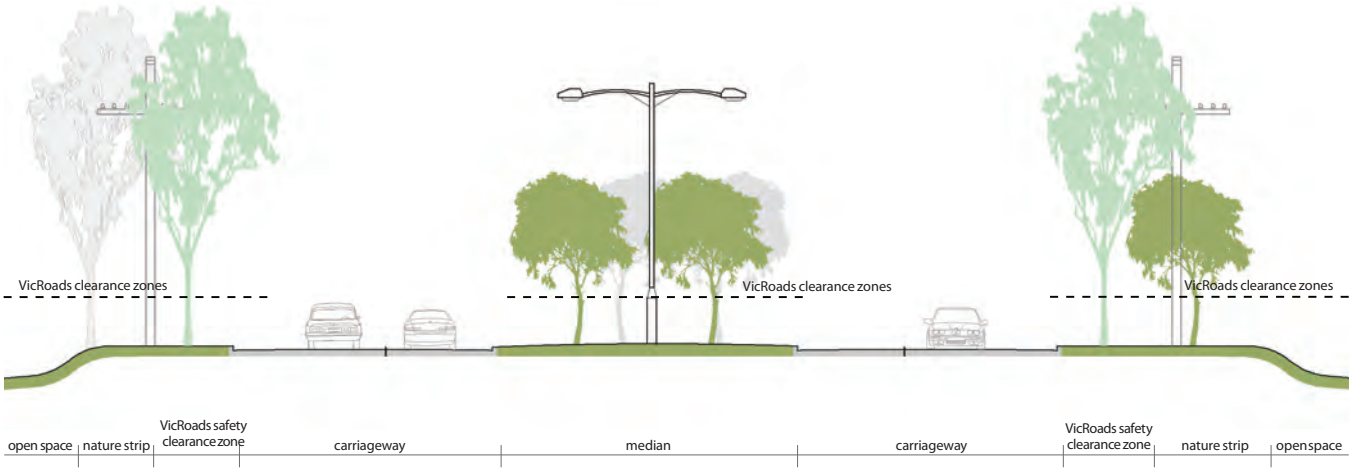
- Integrate the landscape character of the Dandenong Creek corridor into the planting and road design.
- VicRoads safety offset zones may restrict the proximity of planted vegetation to the road. Therefore utilise adjacent open spaces to achieve desired effect.
- Retain and protect indigenous trees and plant new indigenous vegetation including canopy trees.
- Do not plant trees in formal rows –.instead respond to naturalistic characteristics of the creek.
- Understorey material must enable clear views.

Water Sensitive Urban Design

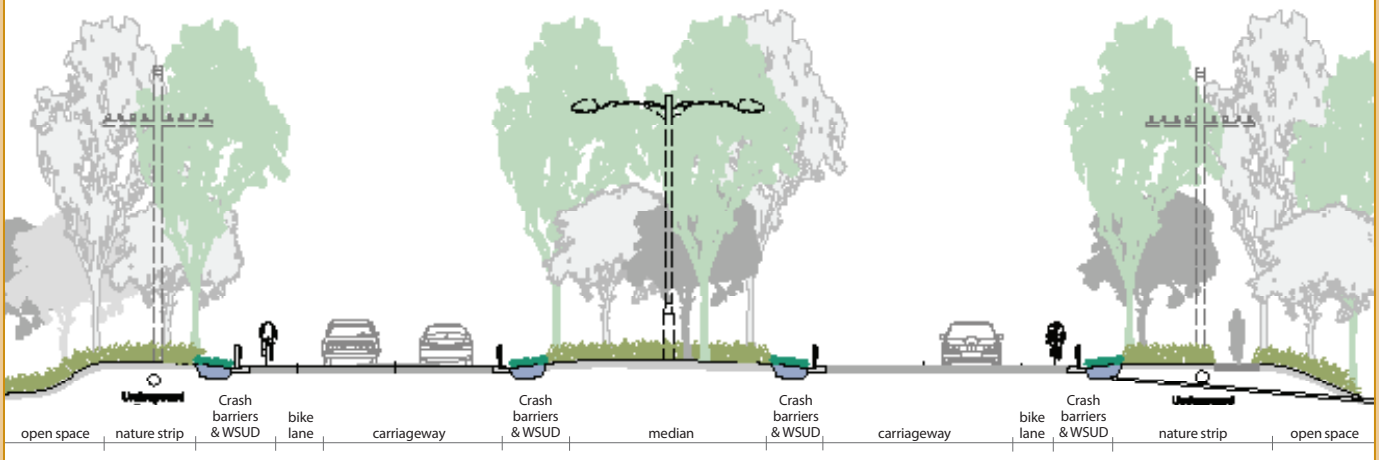
- Install WSUD features along roads to ensure that water is treated before it enters the creek system.

Ferntree Gully Road

Ferntree Gully Road



Typical cross-section of existing gateway.



Proposed cross-section of gateway.

5.6 BUSH BOULEVARDS

AUTHORITY

VicRoads

STREETS

Stud Road
Monash highway (Wellington Road)
Ferntree Gully Road
Burwood Highway
Boronia Road
Mountain Highway

DESCRIPTION

Knox's bush boulevards are arterial roads which all run east-west with the exception of Stud Road which runs north-south. They are usually three lanes wide in each direction, dual carriageway and with a wide road reservation.

GOALS

- To create a visually appealing corridor that expresses the transition in landscape character from that of the edge of the suburbs to that of the Dandenong Ranges foothills.
- To establish recognisable streets for orientation and community pride in its municipality
- To provide amenable major traffic routes throughout the municipality.

Boronia Road

Legend

Bush boulevards

Path into the hills

Figure 4: Location of bush boulevards (and their continuation as paths into the hills)

5.6 BUSH BOULEVARDS

DESIGN GUIDELINES

Pedestrian Safety and Amenity

- Develop shared paths in vegetated road reserves to provide pleasant and direct travel corridors for pedestrians and cyclists.
- Connect pedestrian networks (footpaths and shared paths) from bush boulevards into the surrounding streets.
- Implement consistent bus shelters and seating across the municipality.

Crossovers

- Promote shared driveways and access points onto main roads to reduce the number of access points.

Cycle Infrastructure

- Establish on-road bicycle lanes in conjunction with VicRoads to provide safe and direct travel corridors for cyclists.
- Where possible provide shade for shared paths.

Signage (common)

- Prevent the intrusion of advertising signs into key view lines (Refer planning policy)

Commercial Development

- Create a distinguishable edge for activity centres through formalised plantings of understorey vegetation, furniture and quality pavements. (Refer place management)

Redevelopment of residential areas

- Encourage redevelopment of residential properties to be orientated to address the roadway frontage. This may require negotiation with VicRoads and the installation of service roads.
- Screen residential backs or inappropriate development with tree and shrub planting.
- Refer planning policy

Vegetation

- Retain and protect indigenous trees and plant new indigenous vegetation including canopy trees and understorey species.
- Utilise clean-trunked trees that enable views to commercial sites and greater road safety.
- Where powerlines prevent large trees, plant formal rows of small trees under or beside power easements.

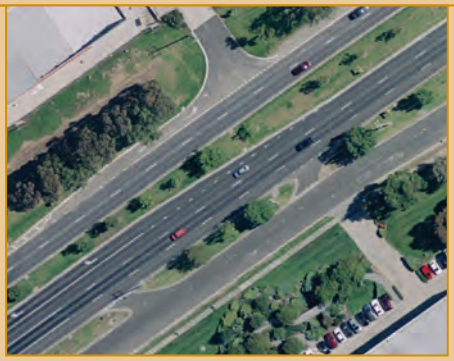
VicRoads Regulations

- Work with VicRoads on each landscape master plan and design to ensure safety offsets are met.
- Negotiate with VicRoads to maximise the amount of available area for planting and tree planting, through use of guard rails. Preference should be for wire rope rails as these provide a higher quality visual character.

Indicative images showing how a bush boulevard might look, with increased bicycle connections and additional planting.

Typical changes in width and adjacent land uses for a bush boulevard.

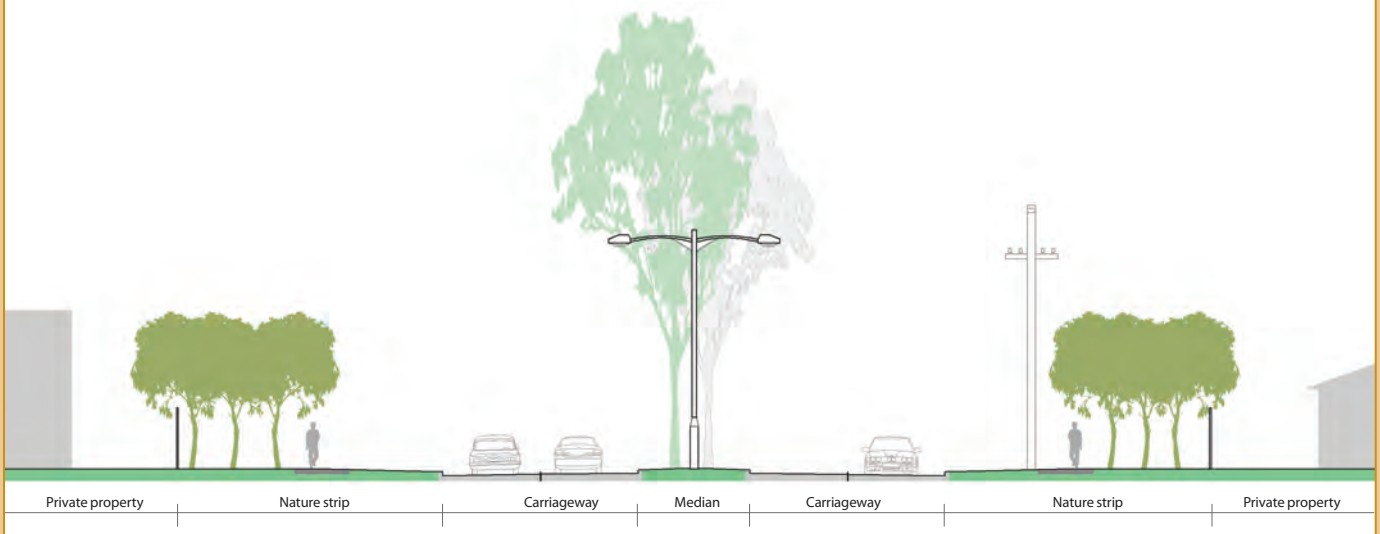
Ferntree Gully Road is here used as an example.



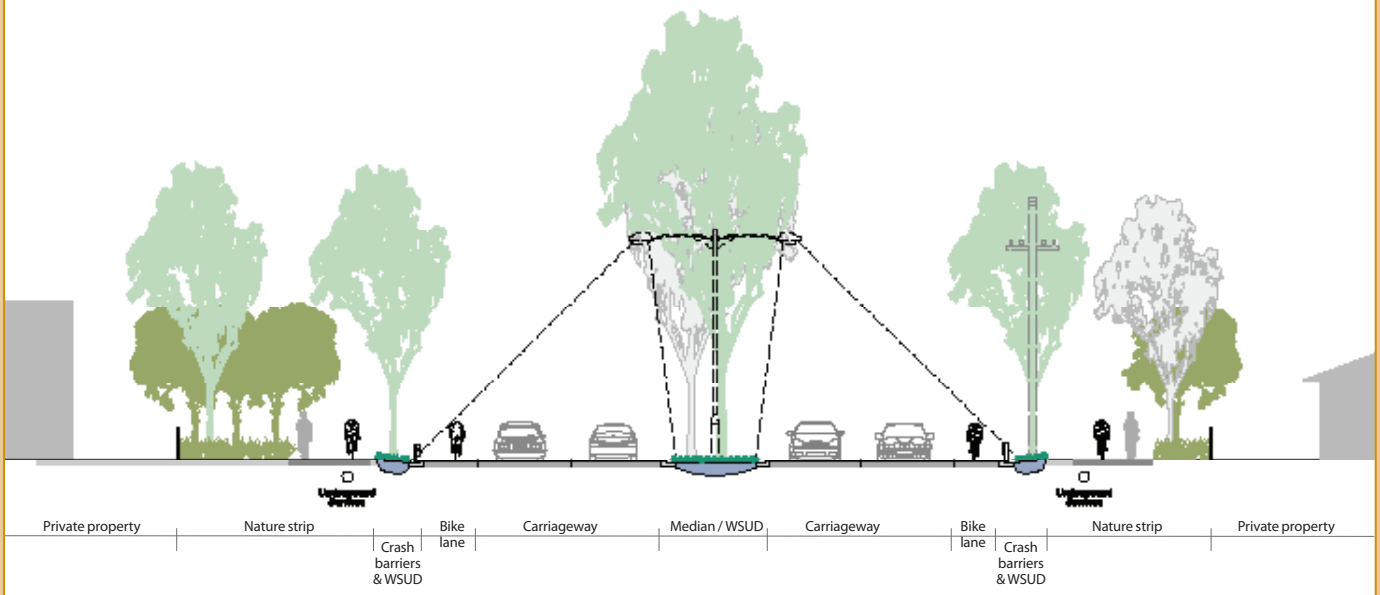
Commercial

Residential

Foothills



Typical cross-section of existing dual carriageway bush boulevard.



Proposed cross-section of dual carriageway bush boulevard.

5.6 BUSH BOULEVARDS

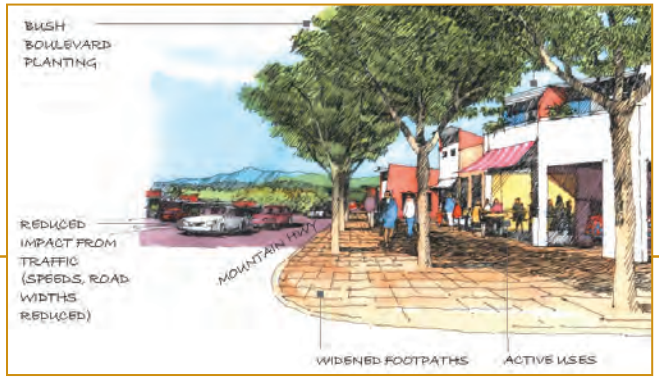


Image from *The Pedestrian Plan* (2005)

Bush boulevards are well developed along Mountain Highway. The exotic trees of the central median in general do not fit the street type, however in this instance they do not detract from the overall concept.

This is a good example of the challenges in creating bush boulevards in activity centres and shopping strips. The nature strip and medians are very narrow, there is extensive infrastructure and many access points to be incorporated.

Mountain Highway

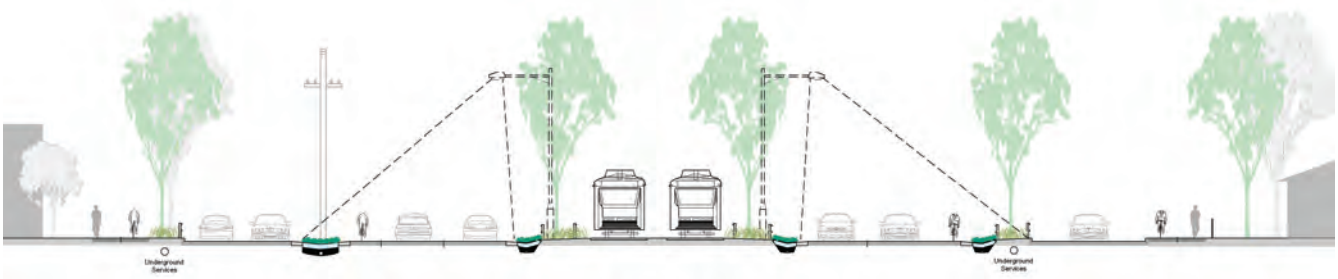
Mountain Highway at Bayswater

Planting distances no longer supported by VicRoads guidelines. Future tree plantings will either be required to be 8m back from the road, or crash barriers will have to be installed.

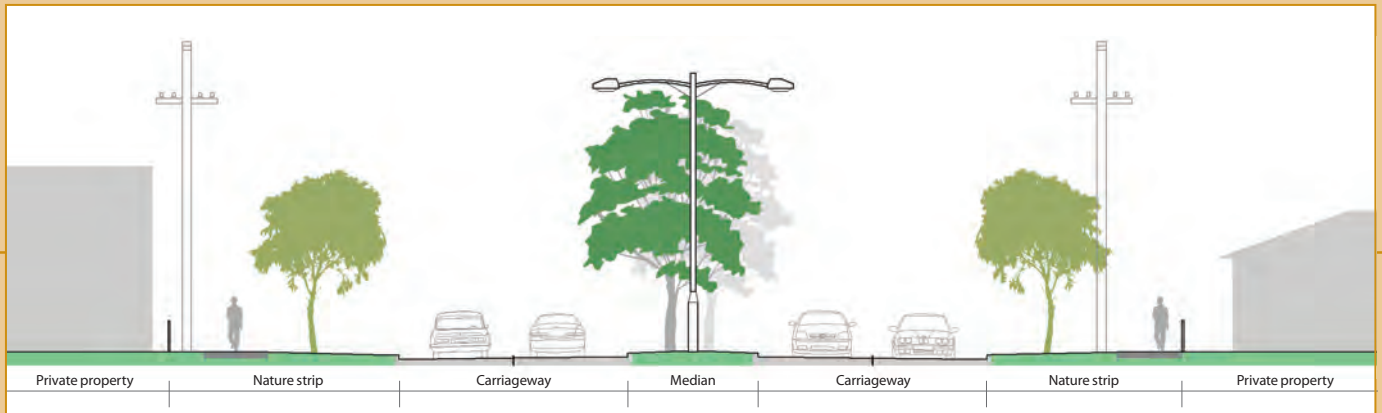
Stud Road is the only north-south oriented bush boulevard. Many parts of Stud Road have only limited street planting.

Boronia Road

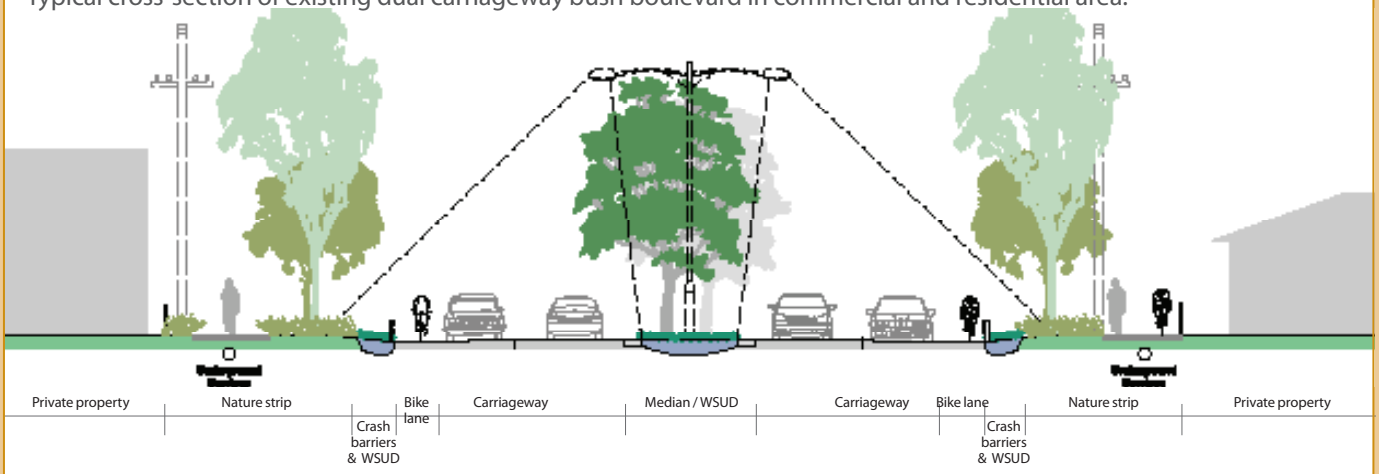
Stud Road



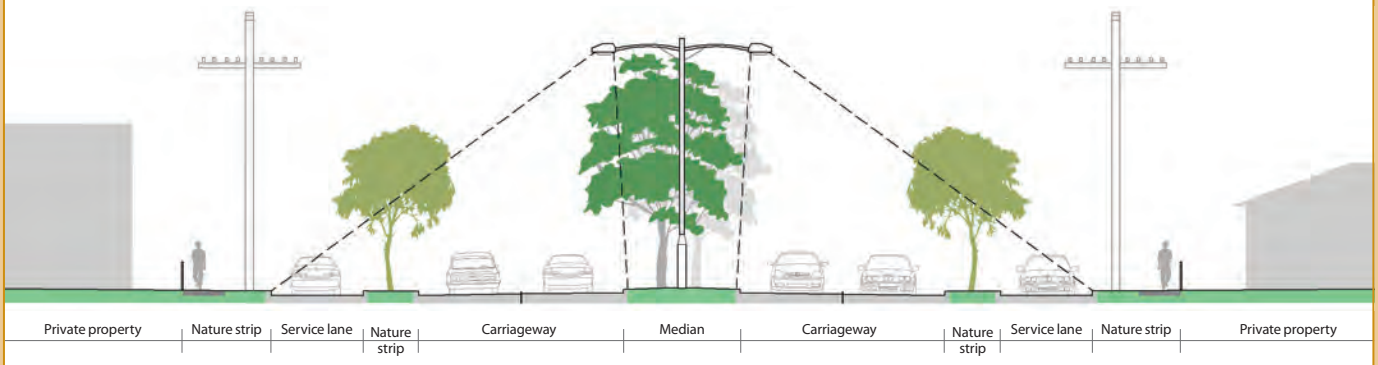
Indicative proposed cross-section – including potential tram extension to Knox City.



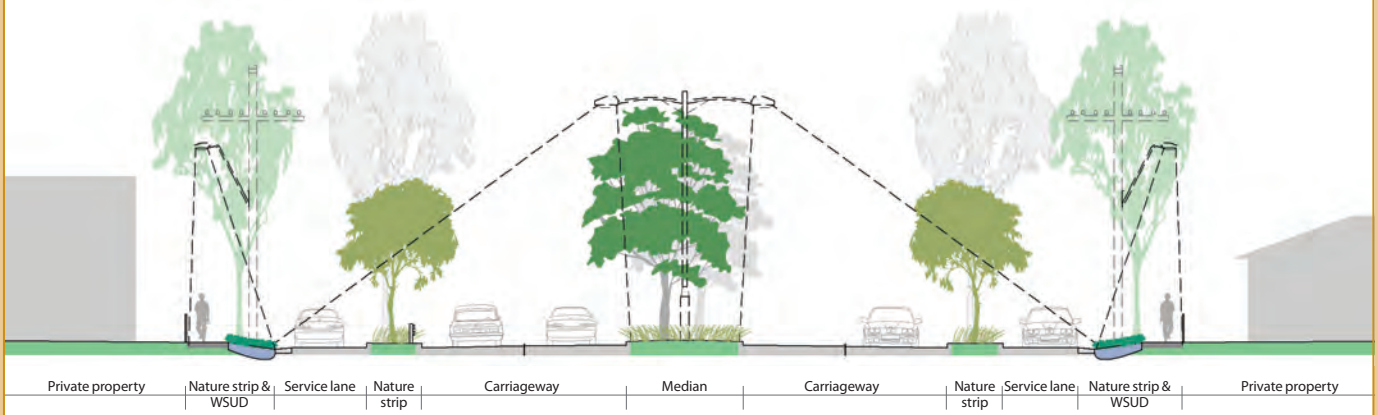
Typical cross-section of existing dual carriageway bush boulevard in commercial and residential area.



Proposed cross-section of dual carriageway bush boulevard in commercial and residential area.



Typical cross-section of existing dual carriageway bush boulevard with service lane in commercial and residential area.



Proposed cross-section of dual carriageway bush boulevard with service lane in commercial and residential area.

5.7 PRINCIPAL AVENUES

AUTHORITY

VicRoads and Knox City Council

STREETS - VICROADS

Kelletts Road
Napoleon Road (North of Kelletts Road)
Dorset Road

High Street Road
Scoresby Road
Wantirna Road

STREETS – KNOX CITY COUNCIL

Albert Av
Colchester Road
Liverpool Road

Napoleon Road (South of Kelletts Road)

DESCRIPTION

Principal avenues are major roads that usually have two lanes in each direction and are usually single carriageway (no central median), with a narrow easement.

GOALS

- To achieve consistent avenue planting along all main roads to enhance Knox's leafy green image and provide better amenity for pedestrians, cyclists, traffic commuters and residents.
- To establish recognisable streets for orientation and community pride in its municipality.
- To provide high amenity secondary traffic routes throughout the municipality.

Kellets Road, a Principal Avenue

Legend

Principal Avenues -VicRoads

Principal Avenues - Council

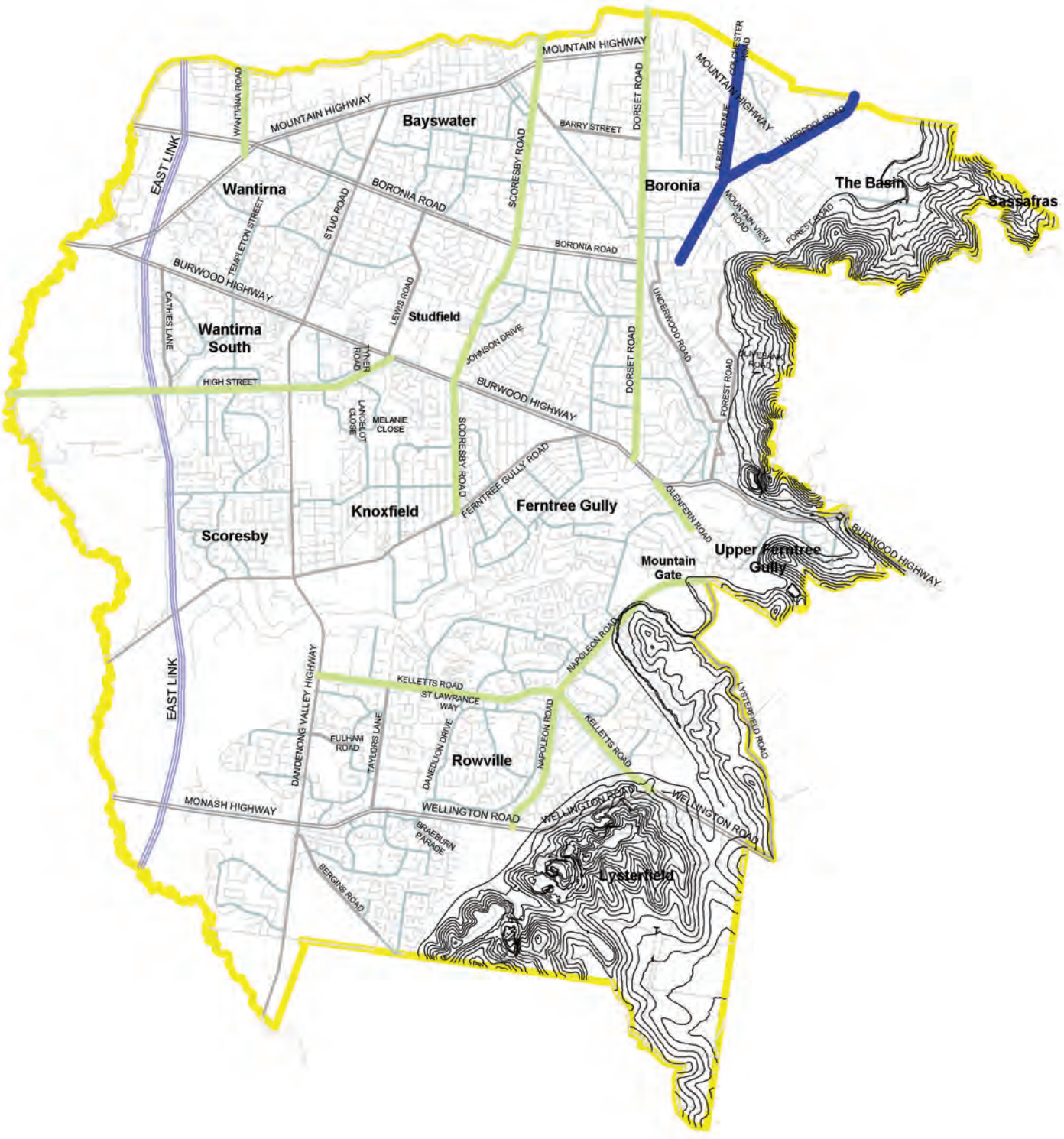


Figure 5: Location of Principle Avenues

5.7 PRINCIPAL AVENUES

DESIGN GUIDELINES

Pedestrian Safety and Amenity

- Improve paths in vegetated road reserves and nature strips, to provide pleasant environment for pedestrians.
- Connect pedestrian networks.
- Implement consistent bus shelters and seating along roads.
- Provide safe crossing points.

Cycle Infrastructure

- Establish on-road bicycle lanes in conjunction with VicRoads to provide safe and direct travel corridors for cyclists. It may be necessary to widen some carriageways to allow for dedicated bike lanes on road.
- Where possible develop an off-road shared path system.
- Cross reference with the pedestrian plan

Crossovers

- Minimise the number of driveways and access points onto main roads

Commercial Development

- Create a distinguishable edge for activity centres through understorey planting and furniture.

Redevelopment of Residential Areas

- Encourage redevelopment of residential properties to be orientated to address the roadway frontage. This may require negotiation with VicRoads and the installation of service roads.

Vegetation

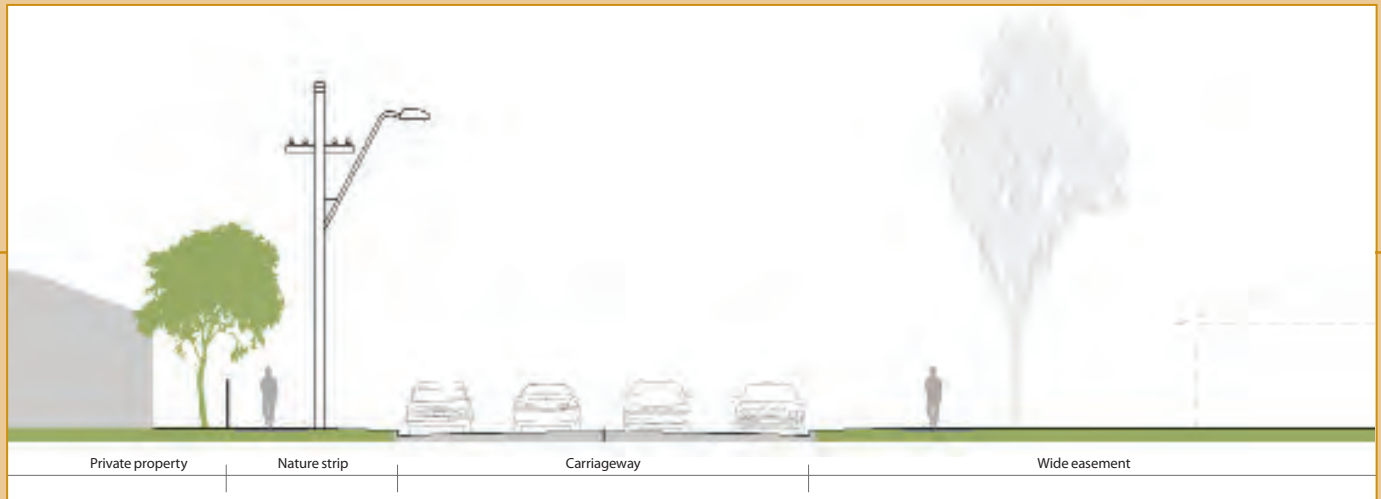
- Retain and protect indigenous trees and plant new indigenous canopy trees to form consistent avenues where possible.
- Plant suitable small trees in formal rows adjacent to, or beside, power easements.
- Utilise clean trunked trees that enable views to commercial sites and greater road safety.
- Install understorey vegetation to provide visual barriers to traffic from residential frontages.

VicRoads Regulations:

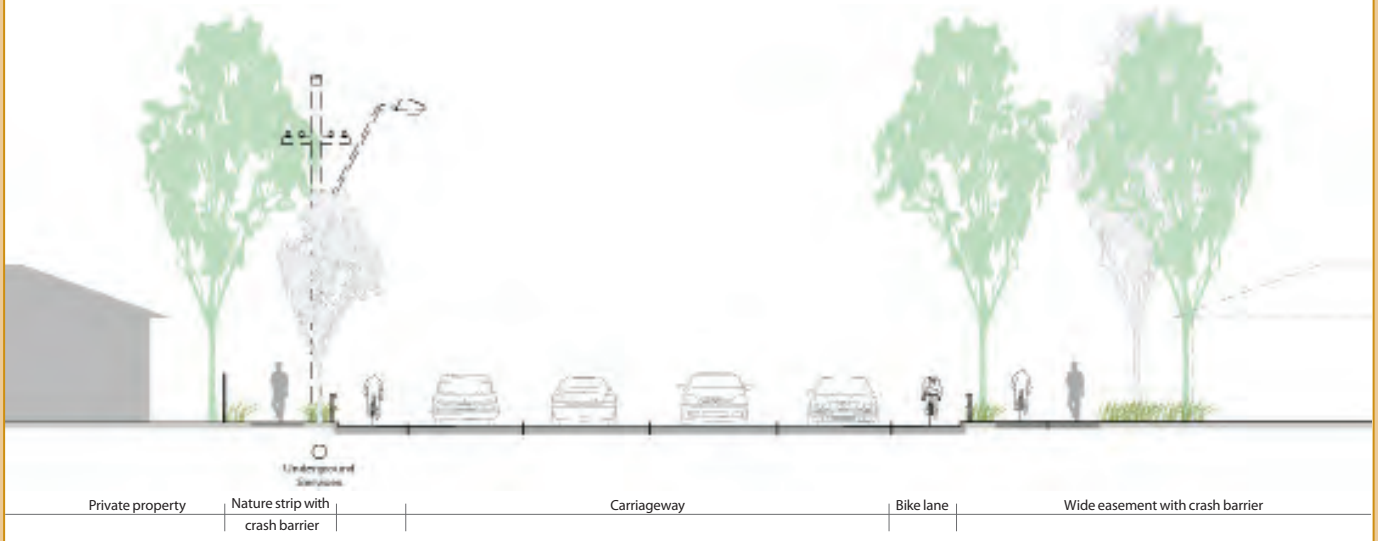
- Work with VicRoads on each landscape master plan and design to ensure safety offsets are met.
- Negotiate with VicRoads to maximise the amount of available area for planting and tree planting, through use of guard rails. Preference should be for wire rails as these provide a higher quality visual character.

Napolean Road, a Principal Avenue in Knox

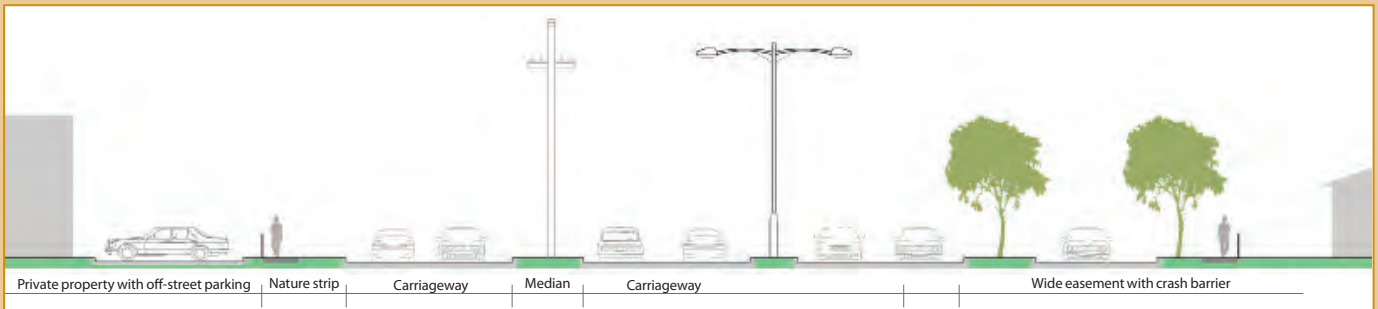
Wellington Road – Monash City Council - a good example of consistent tree planting



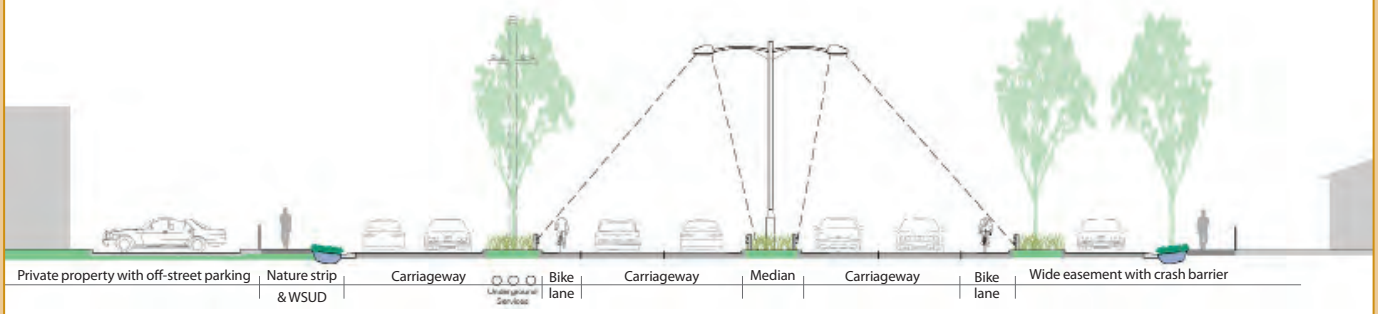
Typical cross-section of an existing residential, principle avenue with a wide easement.



Proposed cross-section of a residential, principle avenue with a wide easement.



Dorset Road: cross-section of existing road with service lane, in a commercial and residential area.



Dorset Road: proposed Ccross-section with service lane, in a commercial and residential area.

5.8 PATHS INTO THE HILLS

AUTHORITY

VicRoads

STREETS

Mountain Hwy
Boronia Road
Forest Road
Burwood Hwy (east of Dorset Road)
Wellington Road (east of Kelletts Road)

DESCRIPTION

Paths into the Hills are main roads which connect the suburban areas to the Dandenong Foothills. They have a single carriageway usually with one lane of traffic in each direction. Adjacent roadside verges contain remnant vegetation and revegetated areas of local and significant species of flora.

GOALS

- To integrate the road into the indigenous landscape character of the Dandenong Ranges and reinforce the distinctive character of the area.
- To establish recognisable streets for orientation and community pride in its municipality.
- To provide amenable secondary traffic routes throughout the municipality.

Mountain Highway, a path into the hill

Forest Road, The Basin

Burwood Highway (east of Dorset Road)

Legend

Paths into the hills - bush

Paths into the hills -rural

Figure 6: Location of paths into the hills

5.8 PATHS INTO THE HILLS

DESIGN GUIDELINES

Carriageway

- Integrate alignment and edge treatment with consideration to the topography.
- Prevent road widening for motorised travel – restricting carriageway to minimum requirements.
- Minimise the number of driveways and access points onto main roads, using shared roads where possible.

Pedestrian Safety and Amenity

- Improve shared path systems in verges with appropriate material choices.
- Connect pedestrian networks to residential areas and areas of open space.
- Implement consistent bus shelters and seating along roads.

Signage

- Incorporate interpretative and educational signage for pedestrians at key significant sites.

Cycle Infrastructure

- Provide well vegetated shared paths along both sides of the road where possible.
- Where shared paths are not possible or appropriate, establish on-road bicycle lanes in conjunction with VicRoads to provide safe and direct travel corridors for cyclists.

Commercial Development

- Create a distinguishable edge for activity centres through formal planting, furniture and easy and visual access for motorist and pedestrians.

Residential Areas

- Provide a thick buffer of indigenous vegetation to residential frontages.

Vegetation

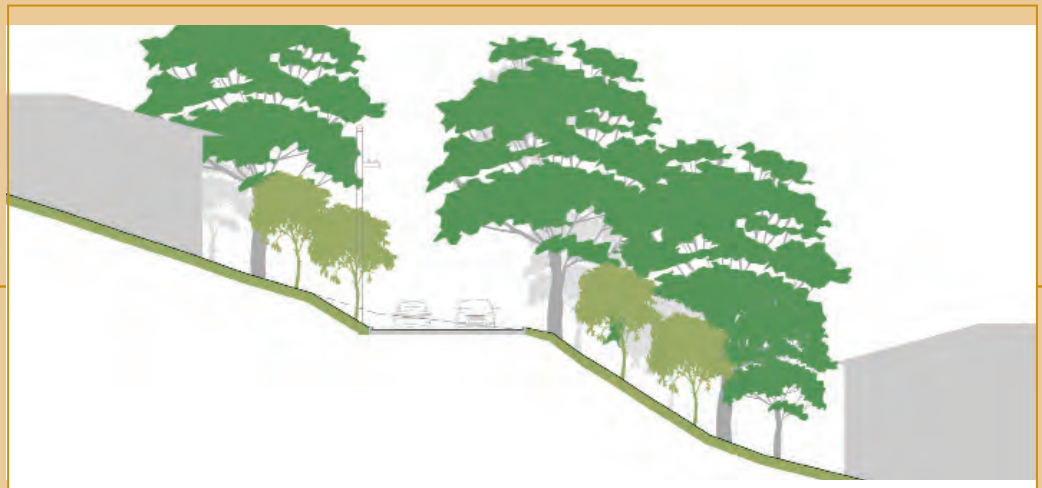
- Retain and protect indigenous trees and understorey planting.
- Plant suitable small trees and vegetation adjacent to, or beside, power easements as agreed with power authority.

VicRoads Regulations

- Work with VicRoads on each landscape master plan and design to ensure safety offsets are met.
- Negotiate with VicRoads to maximise the amount of available area for planting and tree planting, through use of guard rails. Preference should be for wire rails as these provide a higher quality visual character.

Typical Cross Section - Residential Frontage

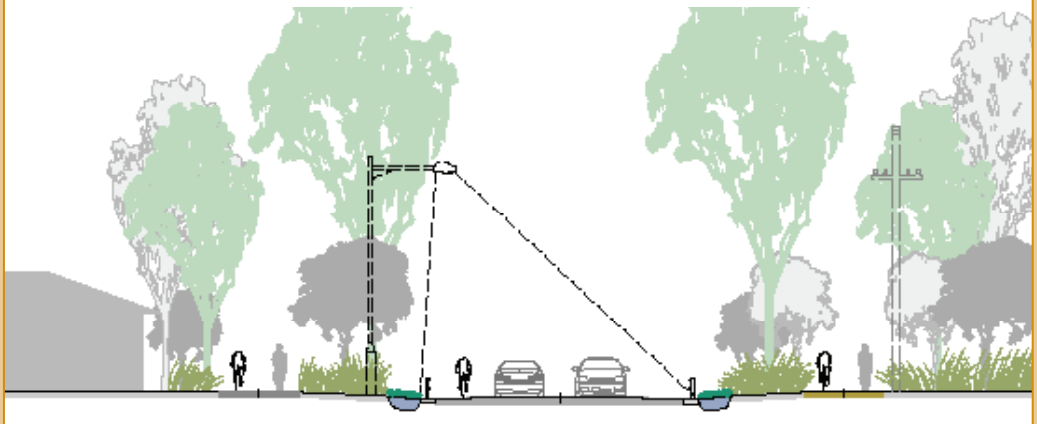
Proposed Cross Section -
Residential Frontage with Bike Lane and Gravel Path



Typical cross-section of existing path into the hills in steep terrain.

Proposed cross-section of path into the hills in steep terrain, with additional foot path and trees and under ground power

Typical cross-section of existing path into the hills with a wide easement and trails.



Proposed cross-section of path into the hills with a wide easement and trails, showing WSUD, guard rails and planting

5.9 COMMUNITY LINK STREETS

AUTHORITY

Knox City Council

STREETS

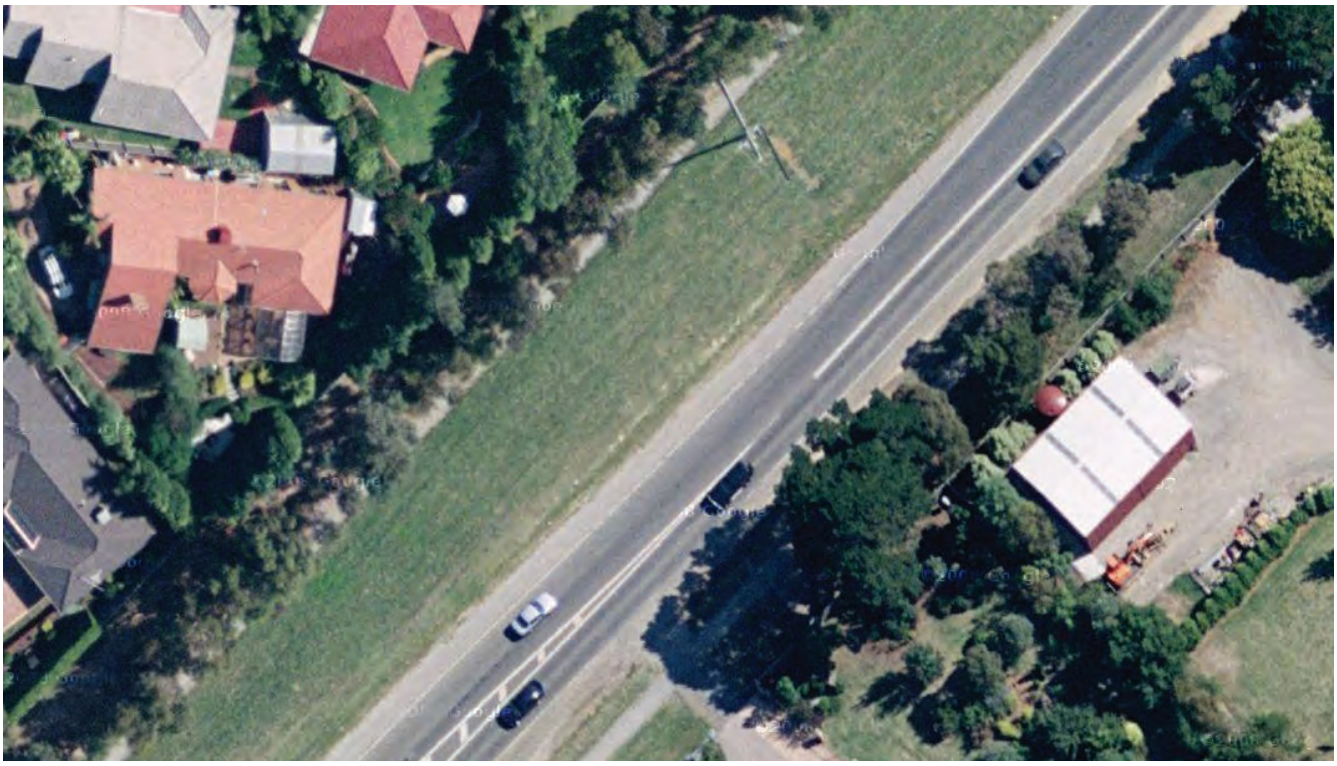
Bergins Road
Taylors Lane
Napoleon Road
Fulham Road
Glenfern Road
Forest Road (South of Boronia Road)
Underwood Road
Lewis Road
Tyner Road
Barry Street
Cathies Lane
Albert Avenue
Forest Road
Liverpool Road

DESCRIPTION

Community link streets are roads that connect adjoining suburbs. They are single carriage way roads where the easement varies in width.

GOALS

- To provide safe and pleasant connections between suburbs and establish strong local identity through vegetation choices.
- To connect home with surrounding facilities, destinations and friends. To promote local distinctiveness and identity.
- To provide amenable linking traffic routes throughout the municipality.



Napolean Road - a proposed Community Link Street

Legend

Community link streets

Figure 7: Location of Community Link Streets

5.9 COMMUNITY LINK STREETS

DESIGN GUIDELINES

Pedestrian Safety and Amenity

- Ensure all Community link streets have safe pedestrian access through provision of footpaths to both sides of street and adequate lighting.
- Improve nature strips and verges to provide pleasant environments for pedestrians
- Connect to pedestrian networks.
- Implement consistent bus shelters and seating along roads.
- Create pocket parks and pause points at appropriate locations to increase pedestrian amenity.

Crossovers

- Minimise the number of driveways and access points onto main roads, using shared access driveways where applicable. This allows for larger areas of nature strip and reduces infrastructure costs.

Cycle Infrastructure

- Establish on-road bicycle lanes to provide safe and direct travel corridors for cyclists. It may be necessary to widen the carriageway to achieve this. Where networks are part of the Principal Bike Network (PBN) coordinate with VicRoads.
- Alternatively, provide an off-road cycle option by realigning kerbs to allow a footpath to both sides and a shared path to one.
- Where possible establish shared path systems in a vegetated environment.

Shopping Areas

- Create a distinguishable edge for shops through understorey planting, furniture and maintaining clear views to buildings.

Vegetation

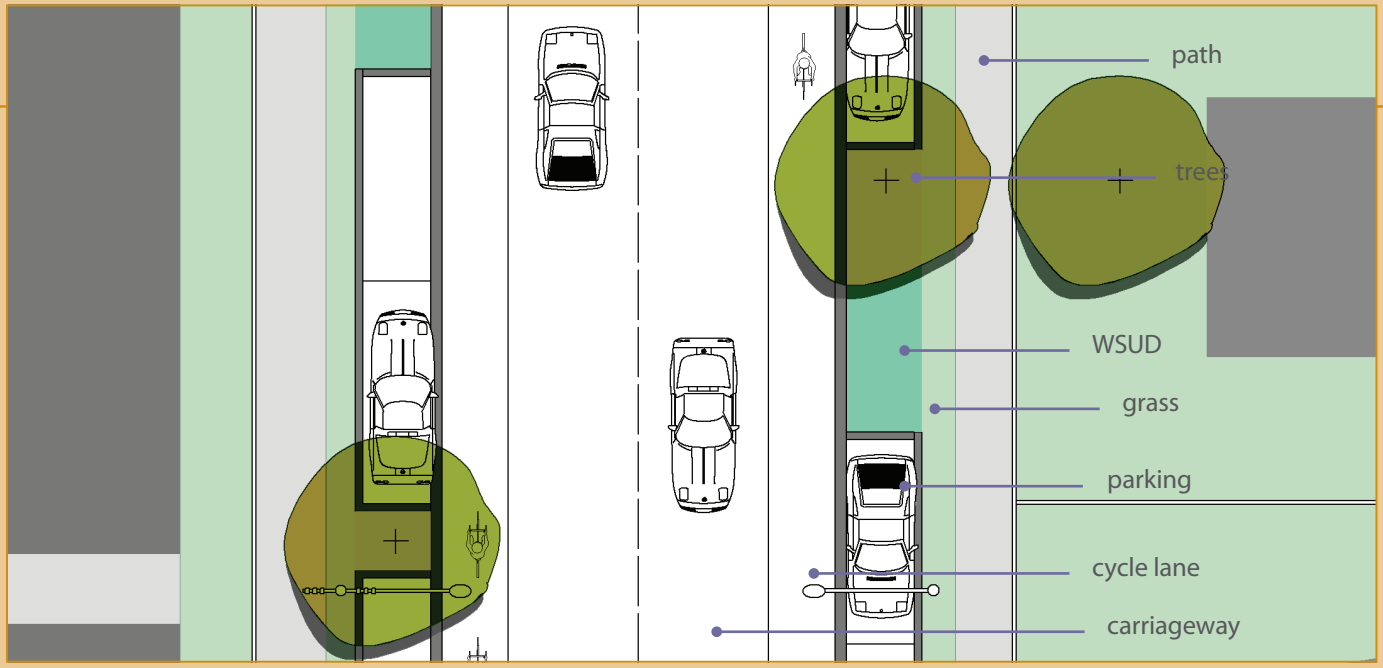
- Retain and protect indigenous trees and plant new indigenous canopy trees to form consistent avenues where possible.
- Plant suitable small trees in formal rows adjacent to, or beside power easements.

Indented Parking

The community place great importance on the value of the nature strip as it makes a significant contribution to Knox's 'green and leafy' image. As such indented parking should only be considered where there is a significant net community benefit such as the provision of on-streets cycle lanes as shown in the following figure. Existing street trees and planting should not be removed for indented car parking.

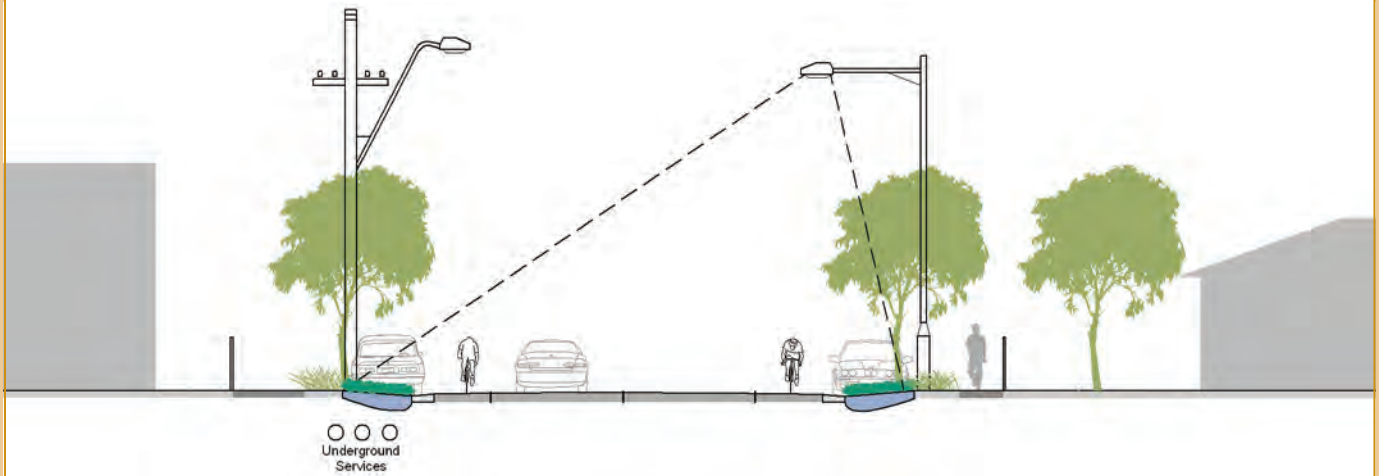
Forest Road, Ferntree Gully

Lewis Road, Wantirna



Indicative plan of proposed community link street

Typical cross-section of existing community link street in residential area and with on-street parking.



Proposed cross-section of community link street in residential area and with on-street parking.

5.10 NEIGHBOURHOOD GREEN STREETS

AUTHORITY

Knox City Council

STREETS:

Numerous streets across the municipality.

DESCRIPTION

Green neighbourhood streets are the collector roads within suburbs that connect neighbourhoods together. They connect homes with schools, shops, parks and community facilities.

GOALS

- To enable easy and safe connections throughout the neighbourhood to schools and other community facilities.
- To create a strong sense of place through tree and vegetation choice and through pocket park and pause points.
- To create an active community street that connects community facilities such as preschools, milk bars and community hubs.

O'Hea Street, Coburg a good example of a Neighbourhood Green Street

Legend

- Green neighbourhood streets
- Primary school
- Secondary school
- Recreational facilities
- Open space
- Shopping locations

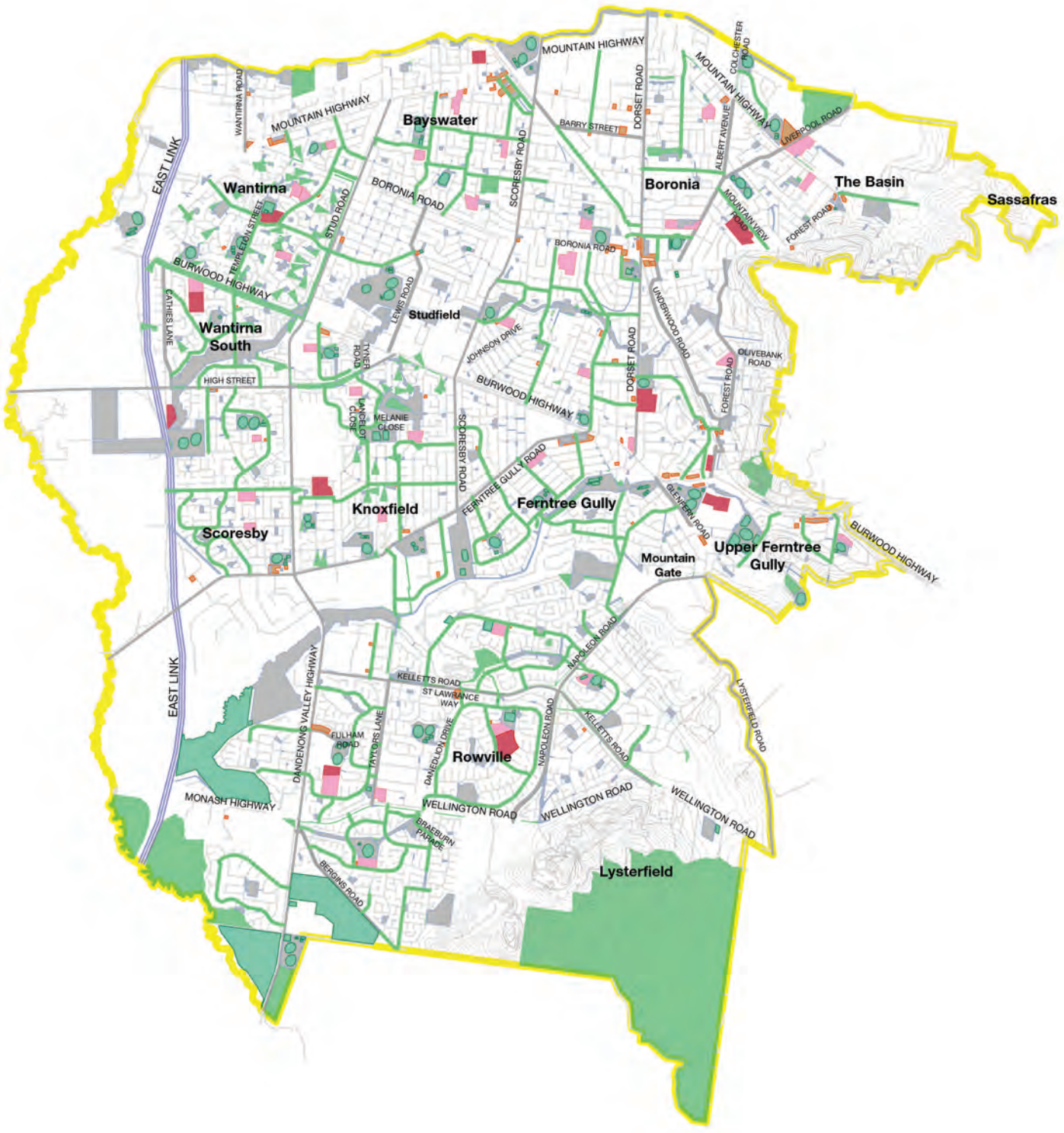


Figure 8: Location of neighbourhood green streets and proximity to community facilities

5.10 NEIGHBOURHOOD GREEN STREETS

DESIGN GUIDELINES

Pedestrian Safety and Amenity

- Ensure all green neighbourhood streets have safe pedestrian access on both sides of the street through footpaths or shared paths.
- Improve paths in nature strips and verges to provide pleasant environments for pedestrians.
- Connect pedestrian networks.
- Implement consistent bus shelters and seating along streets.
- Create pocket parks and pause points at appropriate locations to increase pedestrian amenity.
- Increase pedestrian crossing points where the pedestrian has priority. This can be done through raising the pedestrian crossing to footpath level and through change of surface material at these points.
- Pedestrian crossing points should be installed at all street intersections between a green neighbourhood street to a residential or home street. The carriageway turning radius should be minimised to force traffic to slow at turning points. Low understorey planting can be installed to highlight the carriageway width, but clear sightlines should be maintained.
- Raised pedestrian pavements on cross roads.

Carriageway, Intersection and Cycle

Infrastructure

- Minimise the number of driveways and access points onto main roads, using shared access driveways where applicable. This allows for larger areas of nature strip and reduces infrastructure costs.
- Narrow carriageways to one lane each way.
- Provide outstands to mark parking areas and provide additional planting and potential WSUD space.
- Provide an off-road cycle option by realigning kerbs to allow a footpath to both sides and a shared path to one.
- Alternatively, establish on-road bicycle lanes to provide safe and direct travel corridors for cyclists. It may be necessary to widen the carriageway to achieve this. Where networks are part of the Principal Bike Network (PBN) coordinate with VicRoads.

Recommended Design Configurations

- One lane traffic each way.
- Wide nature strips to accommodate street tree planting.
- Water sensitive urban design treatment beds on either side of street.
- Potential for central planted median if a wide street easement.
- On-road bike paths.
- Potential for off-road shared pathway on one side of road (see example, O'Hea Street).
- Small pedestrian pause points and pocket parks at regular intervals (approx. 100m) along street.
- Porous paving to be used in parking areas.
- Design a narrow intersection to reduce wide sweep paths.

Shopping Areas and other areas of note

Create a distinguishable edge for shops through understorey planting, furniture and parking areas that are attractive, tree planted and shady.

- Allow opportunity for cafés and outside spaces to be utilised within street easement and widened footpath.
- Provide bike parking facilities.

Redevelopment of Residential Areas

- Encourage redevelopment of residential properties to be orientated to address the street frontage.
- Encourage visual interaction between the street and front gardens.

Vegetation

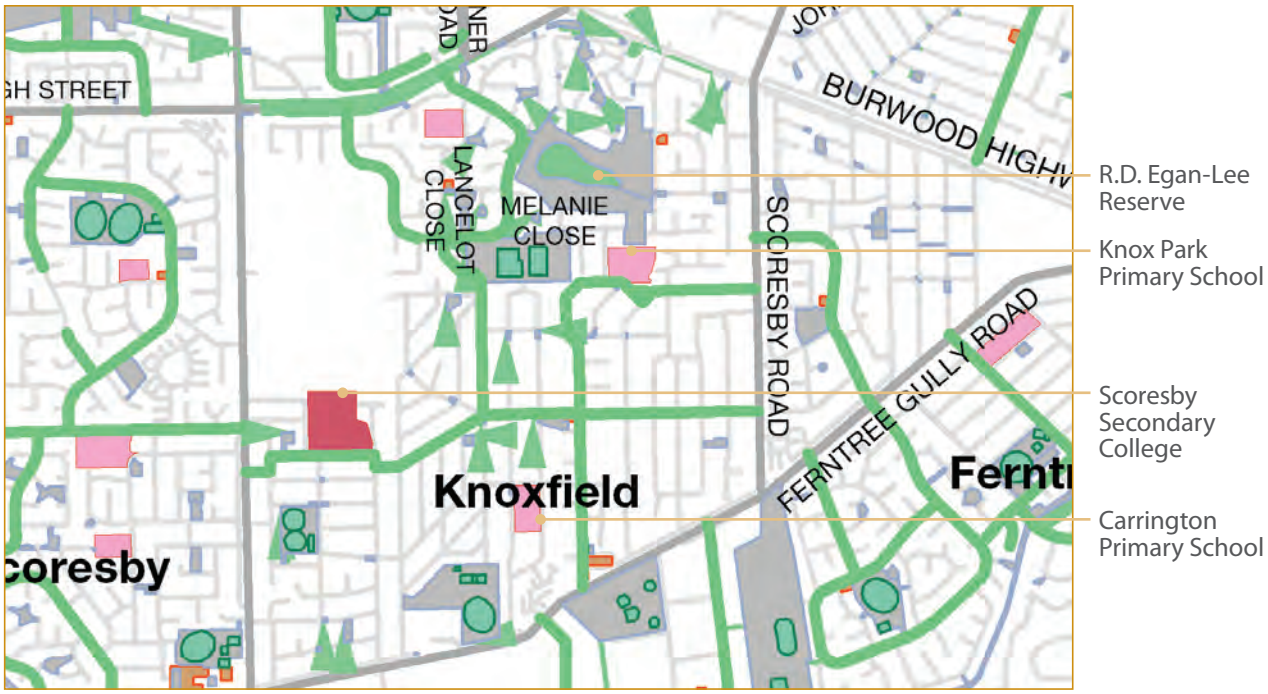
- Retain and protect indigenous trees and plant new indigenous canopy trees to form consistent avenues where possible.
- Refer to the Neighbourhood Character Study, Street Tree Policy and Nature Strip Policy for appropriate tree species selection.
- Plant suitable small trees in formal rows adjacent to, or beside power easements.

Examples of neighbourhood green streets

O'Hea Street, Coburg showing an off-road shared path, footpath and rain garden in mulched nature strip

Victoria Park, Sydney showing a wide foothpath and central planted swale

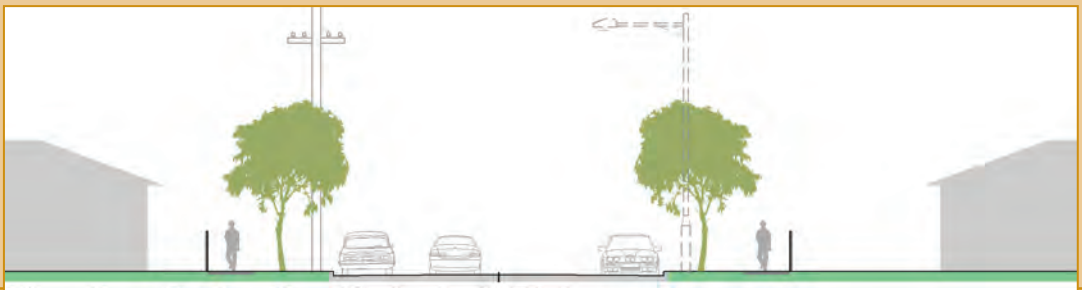
5.10 NEIGHBOURHOOD GREEN STREETS



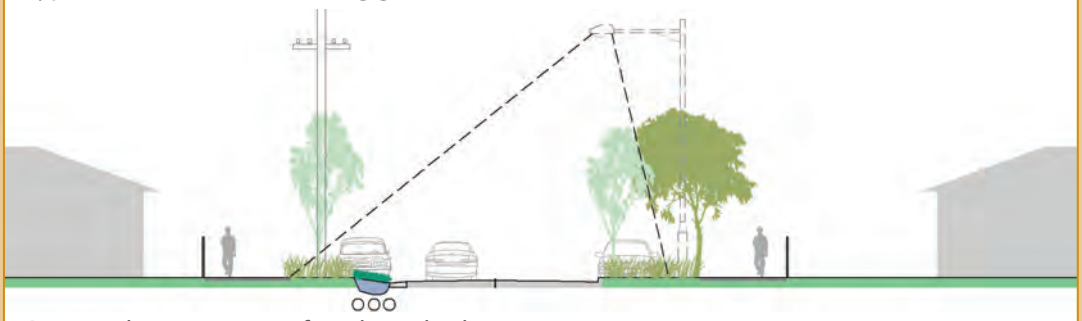
Plan of Neighbourhood Green Streets and how they link homes with key local community facilities and shopping

Typical cross-section of existing residential foothill street.

Proposed cross-sectionof residential foothill street.

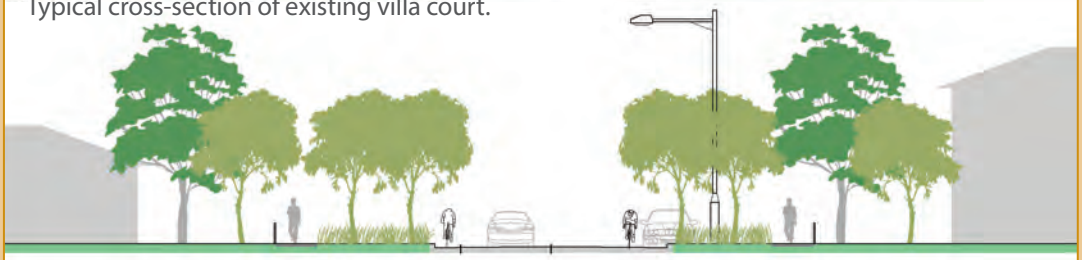


Typical cross-section of existing garden suburb street.

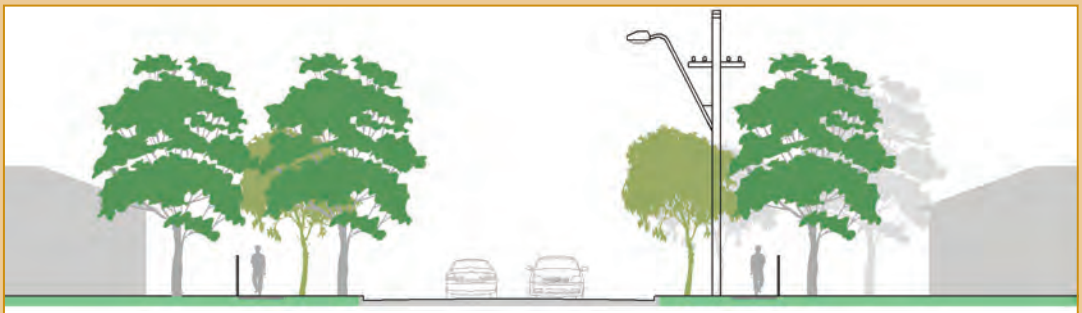


Proposed cross-section of garden suburb street.

Typical cross-section of existing villa court.



Proposed cross-section of villa court.



Typical cross-section of existing bush suburb street.

Proposed cross-section of bush suburb street.

5.11 HOME STREETS – GENERAL

AUTHORITY

Knox City Council

STREETS

Numerous streets across the municipality.

DESCRIPTION

Home streets are streets which service local access to homes. They are single carriageway streets, with enough room for parking, nature strips and footpaths.

Home street types within this design guide section have been grouped according to character areas outlined in the City of Knox Neighbourhood Study (1999) and the Knox Urban Design Framework 2020.

These guidelines build on and reinforce these two documents.

GOALS

- To create safe and accessible streets where pedestrian and bike use is prioritised and a strong sense of local character is expressed.
- To live in a safe, connected and friendly environment where there is a community spirit expressed through interaction within the street
- To proved amenable traffic access to residential homes.
- To create home zones in those streets that have the appropriate level of traffic to provide the highest quality community access street.

A typical home street in Bayswater

A proposed home street showing planted nature strips, a paved pedestrian crossing and a bike lane on road

Legend

Homel Streets

Figure 9: Location of home streets

5.11 HOME STREETS – GENERAL

GENERAL DESIGN GUIDELINES

Community involvement

Refer to Section 6 Implementation for community actions.

Pedestrian Safety and Amenity

- Improve the overall design of streets to be pedestrian friendly.
- Give pedestrians and cyclists priority and discourage vehicles speeding.
- Enable pedestrians to walk safely with crossing opportunities.
- Ensure street trees provide adequate shade for pedestrians.
- Provide driveway crossovers of only minimum width.
- Maintain and establish clear sightlines between house entrances and the street, to provide visual surveillance of the street to maximise neighbourhood safety.

Carriageway Design

- Design the width of the street carriageways to relate to traffic volume and ensure carriageway widths are no wider than necessary.
- Narrow carriageways through outstands for street tree planting and water sensitive urban design treatment beds.
- Make pavements that are porous or modular where possible to encourage stormwater infiltration.

Cycle Infrastructure

- Do not separate cycle paths when traffic levels are lower.
- Establish shared zones where bikes and pedestrian have priority. Refer to Austroad and VicRoad standards for specific criteria for implementation.

Redevelopment of Residential Properties

- Encourage redevelopment of residential properties to be oriented to address the road way frontage.
- Encourage visual interaction between the street and front gardens.

Lighting and Power

- Underground existing and proposed services, as this removes unsightly powerlines and allows unimpeded tree growth.
- Control glare and light spill of light sources to residential frontages.
- Ensure all pedestrian paths are safely lit while retaining views of the night sky and accommodating the needs of nocturnal species.

Vegetation

- Regularly space tree planting on both sides of the street to give it identity.
- Retain and protect indigenous trees and plant new street tree to be consistent with the Neighbourhood Character Study.
- Refer to the Neighbourhood Character Study, and the Street Tree and Nature Strip Policy, for appropriate species of understorey vegetation.
- Plant suitable small trees in formal rows adjacent to, or beside power easements.
- Improve nature strips through vegetation planting.
- Refer to the Liveable streets checklist

Water Sensitive Urban Design

- Install WSUD features along roads to ensure that water is treated before it enters the creek and river system.

Legend

Knox character precincts

- Foothills
- Bush suburban
- Rural parkland
- Garden suburban
- Garden court
- Villa court

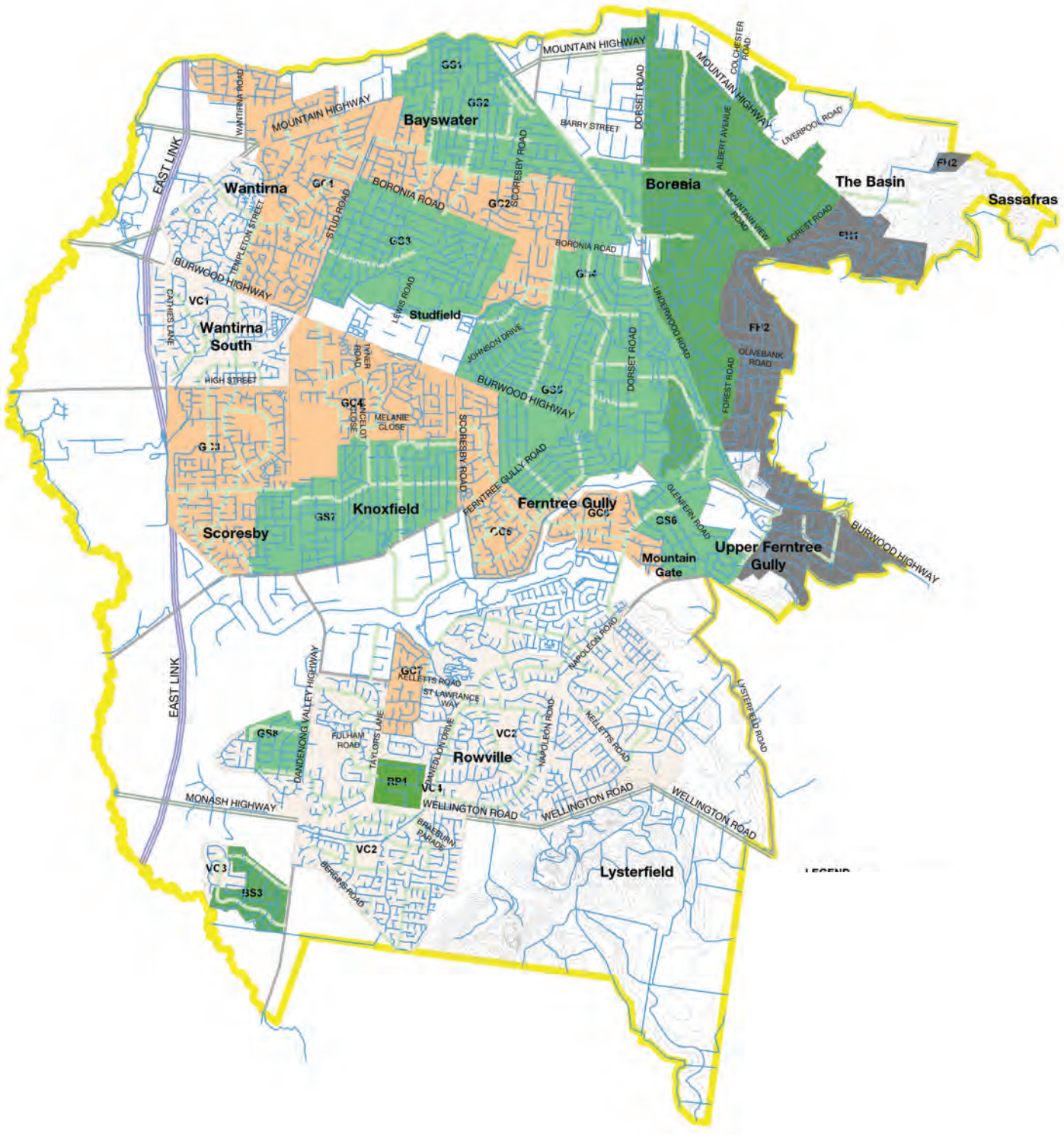


Figure 10: Residential streets and neighbourhood character

5.12 HOME STREETS – COURTS

AUTHORITY

Knox City Council

DESCRIPTION

Home courts are streets which service access to homes. They are single carriageway streets, with no through access for vehicles. They may have a large central island that may contain vegetation, parking and play facilities.

GOALS

- To create a unique small neighbourhood public space within the street easement.
- To maximise the space for pedestrians, play and vegetation.
- To create a shared or home zone.

A court in Knox

Legend

Residentail Streets

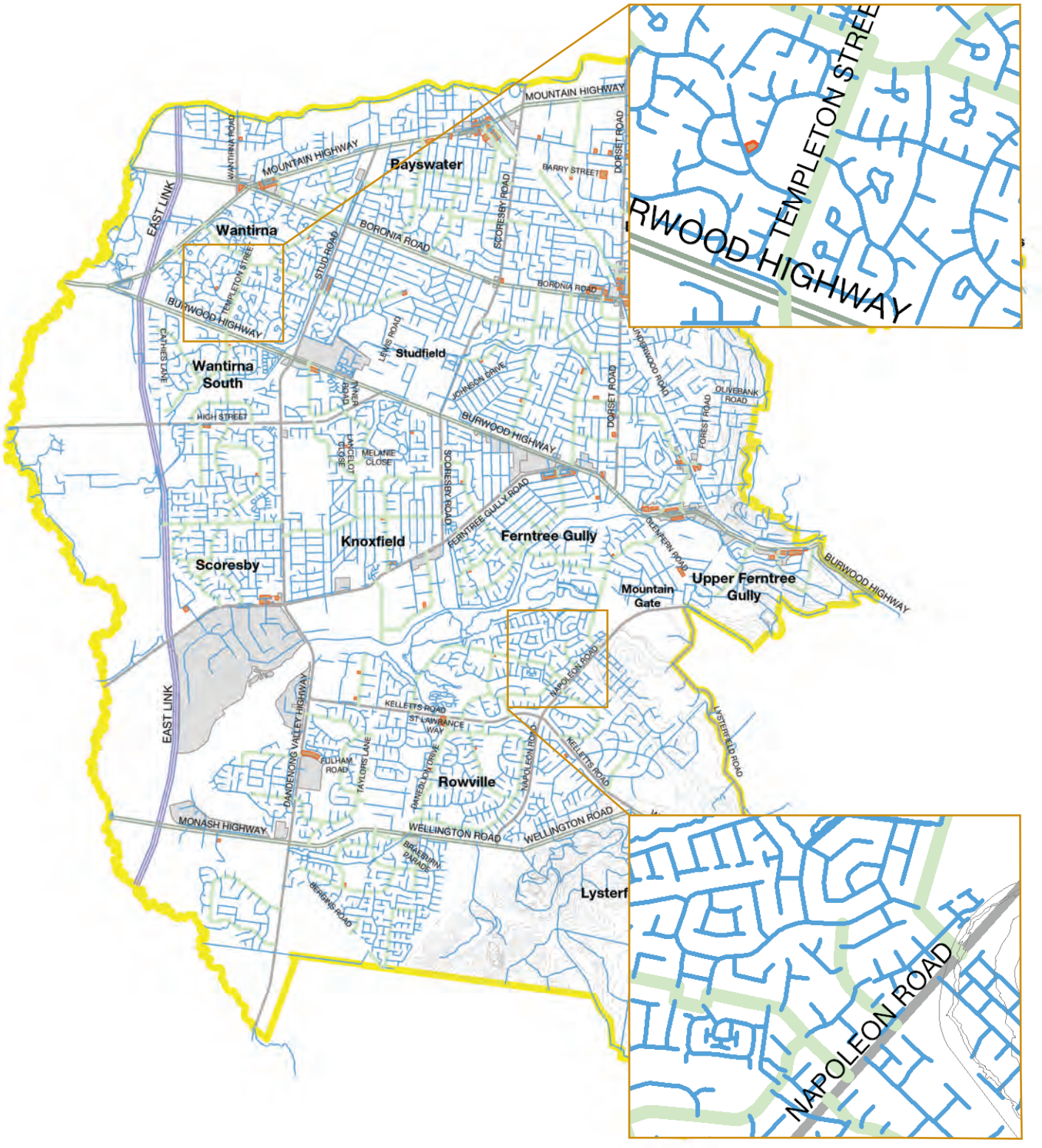


Figure 11: Home streets — courts are closed streets located throughout the muncipality, enlargement of Wantirna and Rowville

5.12 HOME STREETS – COURTS

DESIGN GUIDELINES

Carriageway / Parking

- Remove car parking from central island.
- Narrow carriageway to minimum width.
- Utilise porous paving systems around central island.

Cycle Infrastructure

- Establish shared zones where bikes and pedestrians have priority.

Vegetation

- Maximise the amount of indigenous planting in central green to provide additional biodiversity and habitat in the neighbourhood.

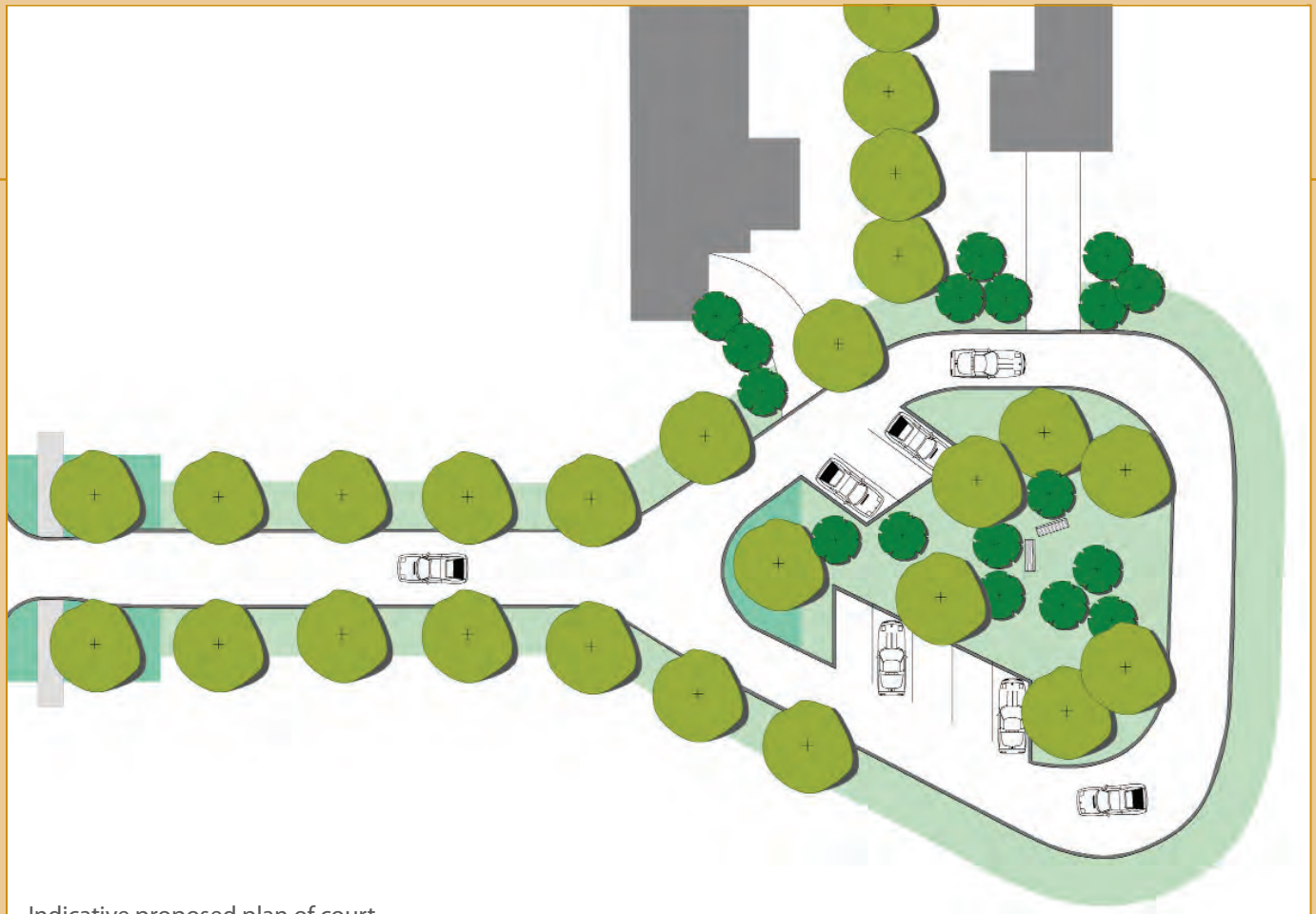
Kerbs

- Provide upstand kerbs to prevent off-road car parking in central public space.

Management and Maintenance

- Establish and negotiate joint community and Council management and maintenance.

A court in Knox



Indicative proposed plan of court.

Typical cross-section of existing court.

Proposed cross-section of court, with planting, seating and trees.

5.13 HOME STREETS – RESIDENTIAL FOOTHILLS

AUTHORITY

Knox City Council

DESCRIPTION

Residential foothill streets usually have a narrow carriageway. Often the streets can be windy and steep, with substantial tree coverage and vegetation.

GOALS

- To retain the indigenous vegetated coverage and low-key natural character of the area.
- To integrate the larger street, verges and gardens to create a bushland character so that homes are truly amongst the hills.
- To provide through the street easement a significant area for indigenous biodiversity and habitat.

Basin-Olinda Road

Legend

Foothills residentail street

Figure 12: Location of residential foothill streets

5.13 HOME STREETS – RESIDENTIAL FOOTHILLS

DESIGN GUIDELINES

Pedestrian Safety and Amenity

- Many foothill streets do not have formal pedestrian pathways and so the road becomes the pedestrians means of travel. Where this is unsafe, encourage pedestrian pathways of informal appearance.
- Provide gravel footpaths where nature strips and existing planting allow.
- Improve the overall design of streets to be pedestrian friendly, through minimised carriage way widths and a curvilinear alignment of the street.

Carriageway

- Retain the character of the informal street edges through use of unsealed edges, swales and roll-over kerbs.
- Include kerbs only when site constraints require their use, ie. for particular drainage solutions, or the protection of nature strips.
- Ensure that native vegetation is retained along the edge of the street during design, construction and maintenance.
- Do not clear verges for parking or paving.
- Utilise porous paving adjacent to significant trees when constructing streets.

Cycle Infrastructure

- Do not separate cycle paths as traffic levels are low.

Vegetation

- Retain and protect indigenous trees and plant new indigenous canopy trees.
- Where existing trees are not present, match planting of new trees and understorey to the naturalistic layouts of the original bushland.
- Blend plantings with those within adjacent bushland gardens.

Nature Strips

- Plant only indigenous species within nature strips.

Basin Olinda Road showing flush kerbs

Basin Olinda Road, showing rollover kerbs

Typical cross-section of existing residential foothills street.

Proposed cross-section of residential foothills street.

5.14 HOME STREETS – BUSH SUBURBS & RURAL PARKLAND

AUTHORITY

Knox City Council

DESCRIPTION

Bush suburb streets and rural parkland streets are characterised by frequent stands of high canopy indigenous and native vegetation and park-like landscape with occasional pockets of large native and exotic trees.

GOALS

- To retain the vegetated coverage and low-key infrastructure character of the area.
- To integrate the larger street, verges and gardens and create a bush-park character, so that homes are set within a green leafy environment.

Though not in a bush suburb, Riparian Way illustrates the character of a bush suburb street

Legend

Bush Suburbs

Rural parkland

Figure 13: Location of residential foothill streets

5.14 HOME STREETS – BUSH SUBURBS & RURAL PARKLAND

DESIGN GUIDELINES

Carriageway

- Retain the character of informal or curved street alignments.
- Use kerbs with minimal visual impact through the continued use of roll-over kerbs.
- Introduce less formal and asymmetrical arrangements of street elements if street reconstruction is required.
- Include kerbs only when site constraints require their use, ie. for particular drainage solutions, or the protection of nature strips.
- Utilise porous paving adjacent to significant trees when constructing streets.

Cycle Infrastructure

- Do not separate cycle paths as traffic levels are low.

Vegetation

- Ensure that native vegetation is retained along the edge of the street during design, construction and maintenance.
- Retain and protect indigenous trees and plant new indigenous canopy trees to be consistent with the Neighbourhood Character Study, and the Street Tree and Nature Strip Policy.
- Where existing trees are not present, match planting of new trees and understorey to the naturalistic layouts of the original bushland.
- Blend plantings with those within adjacent bushland gardens.
- Refer to the Neighbourhood Character Study, and the Street Tree and Nature Strip Policy for appropriate species of understorey and tree.
- Plant suitable small trees adjacent to, or beside power easements.

Springthrope Estate, Bundoora, showing incorporation of existing mature trees into street design.

Typical cross-section of existing bush suburb and rural parkland street.

Proposed cross-section of existing bush suburb and rural parkland street. For a diagram of parking nd outstands see section 5.9 community

5.15 HOME STREETS – GARDEN SUBURB

AUTHORITY

Knox City Council

DESCRIPTION

Garden suburb streets have Carriageways that are generous and small scaled street tree planting.

GOALS

- To enhance the indigenous and native character of the area with frequent stands of large native and exotic trees.
- To create a safe and pedestrian friendly environment.
- To create a sense of place consistent with the green and leafy image of Knox.

Bona Vista Road

Legend

Garden Suburb

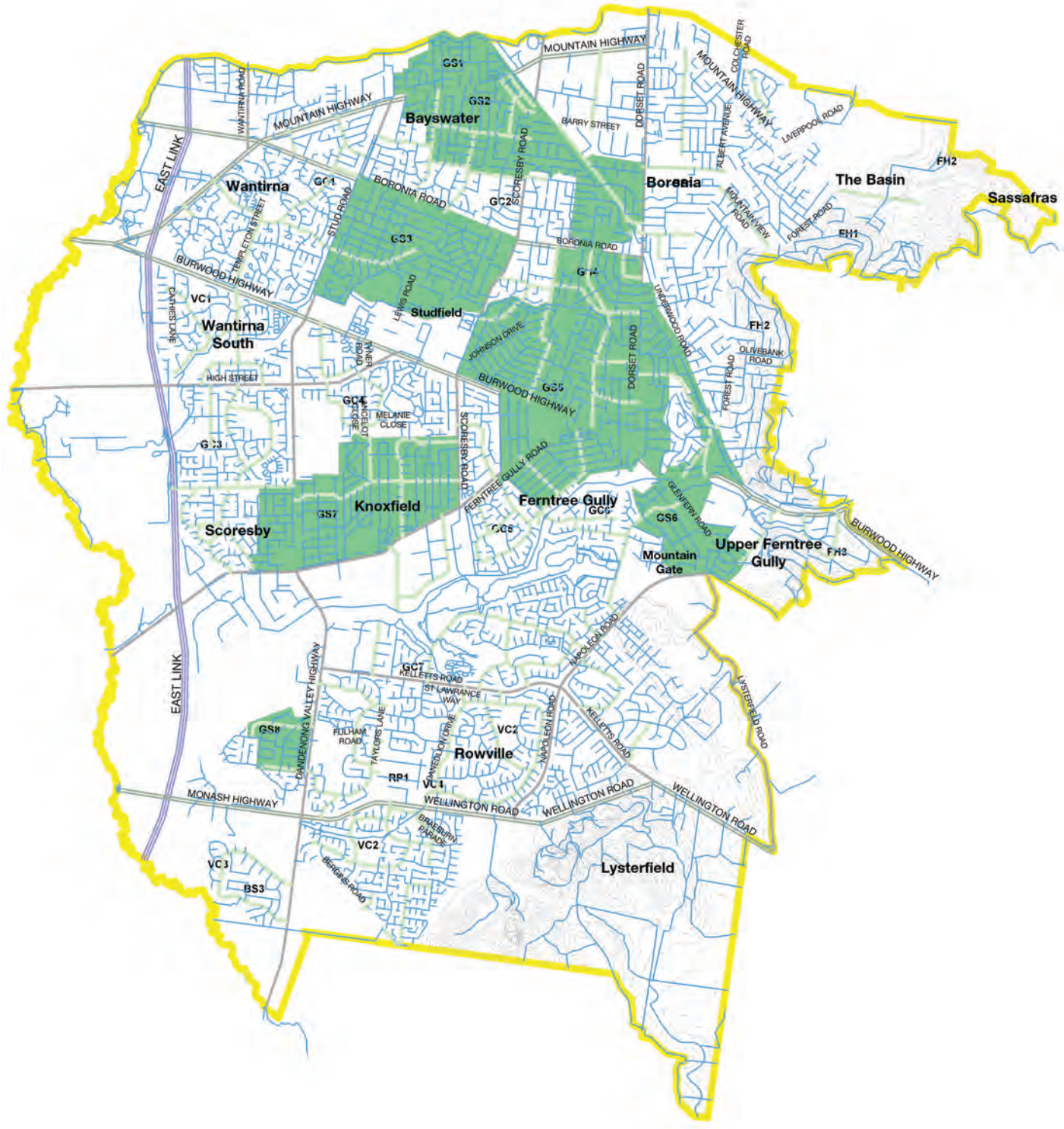


Figure 14: Location of garden suburb streets

5.15 HOME STREETS – GARDEN SUBURB

DESIGN GUIDELINES

Pedestrian Safety and Amenity

- Improve the overall design of streets to be pedestrian friendly. This can be done through narrower carriageways.
- Improve nature strips through vegetation planting.
- Improve shade.
- Connect pedestrian and shared path networks into the bush boulevards.
- Provide safe crossing points for pedestrians with raised crossings and a different surface paving material.

Carriageway

- Narrow the carriageway to one lane in each direction.
- Install planting and WSUD outstands and allow car parking in-between.
- Utilise porous paving adjacent to significant trees when constructing streets.
- Maintain the formal alignment and symmetry of the street.

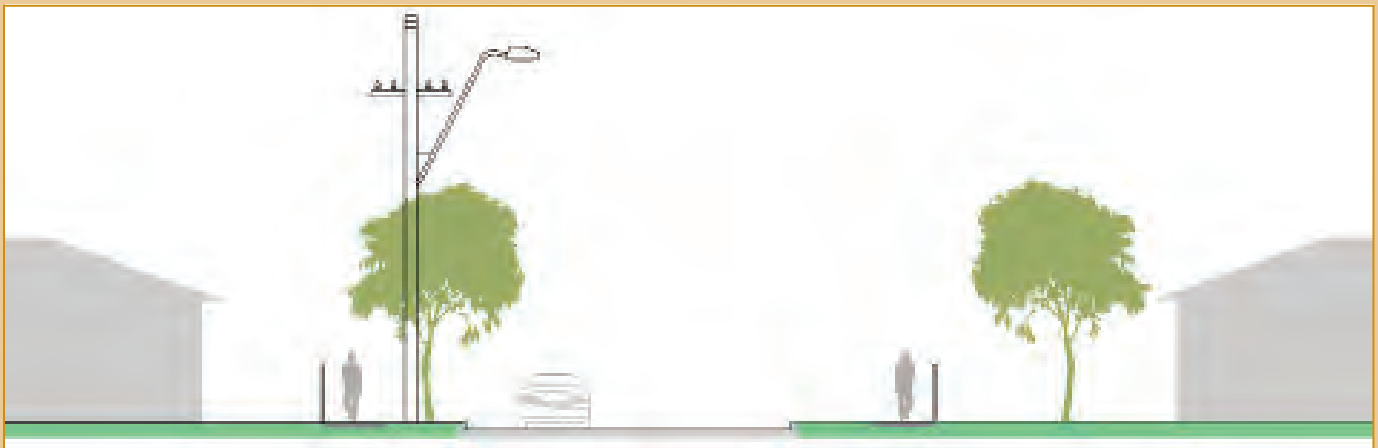
Cycle Infrastructure

- Do not separate cycle paths as traffic levels are low.

Vegetation

- Retain and protect indigenous trees and plant new indigenous canopy trees to be consistent with the Neighbourhood Character Study, and the Street Tree and Nature Strip Policy.
- Where existing trees are not present, match planting of new trees and understorey to the naturalistic layouts of the original Dandenong Creek corridor and foothills.
- Use a single dominant tree species for the whole street.
- Refer to the Neighbourhood Character Study, and the Street Tree and Nature Strip Policy for appropriate species of understorey and tree.
- Plant suitable small trees adjacent to, or beside power easements.

Armstrong Road



Typical cross-section of existing garden suburb street.

Proposed cross-section of garden suburb street. refer to 5.9 community, for a diagram of parking and outstands.

5.16 HOME STREETS – GARDEN COURT & VILLA COURT

AUTHORITY

Knox City Council

DESCRIPTION

Suburban residential streets have grassed nature strips and small street tree planting. They are single carriageway streets, with no through access for vehicles.

GOALS

- To enhance the indigenous and native character of the area.
- To create a safe and pedestrian friendly environment.
- To create a sense of place consistent with the green and leafy image of Knox.

Knox garden and villa court street

Legend

Garden Court

Villa Court

Figure 15: Location of garden courts and villa courts

5.16 HOME STREETS – GARDEN COURT & VILLA COURT

DESIGN GUIDELINES

Pedestrian Safety and Amenity

- Improve the overall design of streets to be pedestrian friendly. This can be done through narrower carriageways.
- Improve nature strips through vegetation planting.
- Improve shade.
- Connect pedestrian and shared path networks into collector and principal roads.
- Provide safe crossing points for pedestrians with raised crossings and a different surface paving material.

Carriageway

- Narrow the carriageway to one lane in each direction.
- Install planting and WSUD outstands and allow car parking in-between.
- Utilise porous paving adjacent to significant trees when constructing streets.
- Maintain sealed carriageways with roll over kerbs and informal curvilinear layouts.

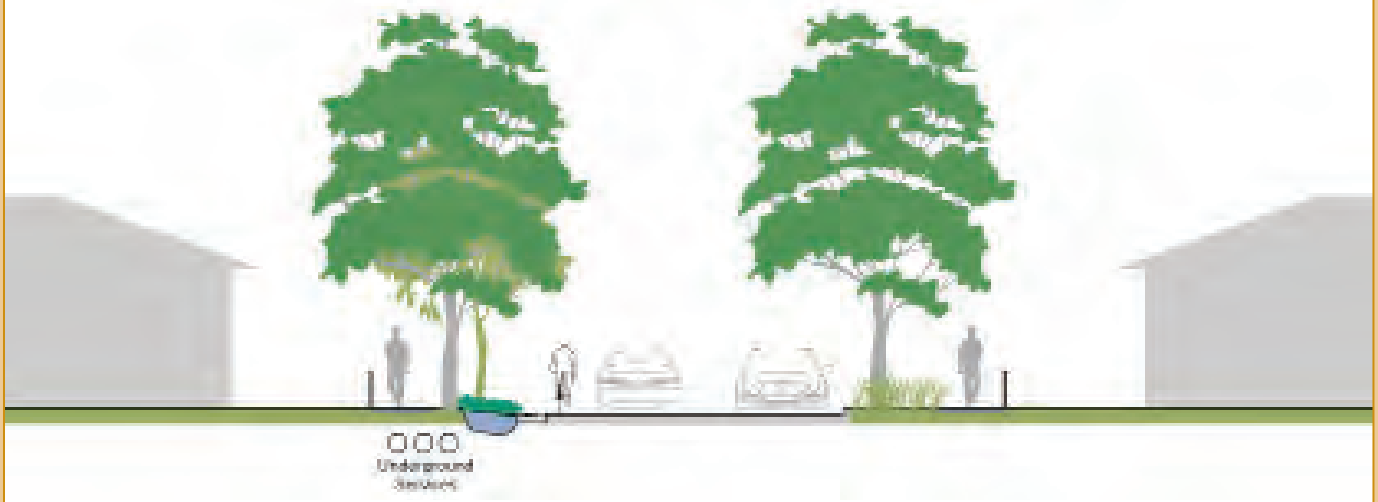
Cycle Infrastructure

- Do not separate cycle paths as traffic levels are low.

Vegetation

- Retain and protect indigenous trees and plant new indigenous canopy trees to be consistent with the Neighbourhood Character Study, and the Street Tree and Nature Strip Policy.
- Where existing trees are not present, match planting of new trees and understorey to the naturalistic layouts of the original Dandenong Creek corridor and foothills.
- Use a single dominant tree species for the whole street in informal and clumping arrangements.
- Prudently consider the use of exotic trees in relation to the context of the street's surrounds, creating thresholds, gateways and key planting areas.
- Refer to the Neighbourhood Character Study, and the Street Tree and Nature Strip Policy for appropriate species of understorey and tree.
- Plant suitable small trees adjacent to, or beside, power easements.

Typical cross-section of existing garden court or villa court.



Proposed cross-section of garden court or villa court.

5.17 HOME STREETS – HOME ZONES

AUTHORITY

Knox City Council

DESCRIPTION

Home zones are residential streets that have a low volume of traffic, or which have no through access for vehicles. These streets are being targeted to become shared spaces, where the street arrangement will be slightly changed to privilege the pedestrian and cyclist over the car.

Home zones are residential areas designed with streets to be places for people, instead of just for motor traffic. By creating a high-quality street environment, home zones strike a better balance between the needs of the local community and drivers. Involving the local community is the key to a successful scheme. Good and effective consultation with all sectors of the community, including young people, can help ensure that the design of the individual home zones meet the needs of the local residence.

Home zones are distinguished from other streets by having signed entry and exit points, which indicate the special nature of the street.

In existing streets, it is essential that the design of the home zone involves significant participation by local residents and that equal access for all is provided.

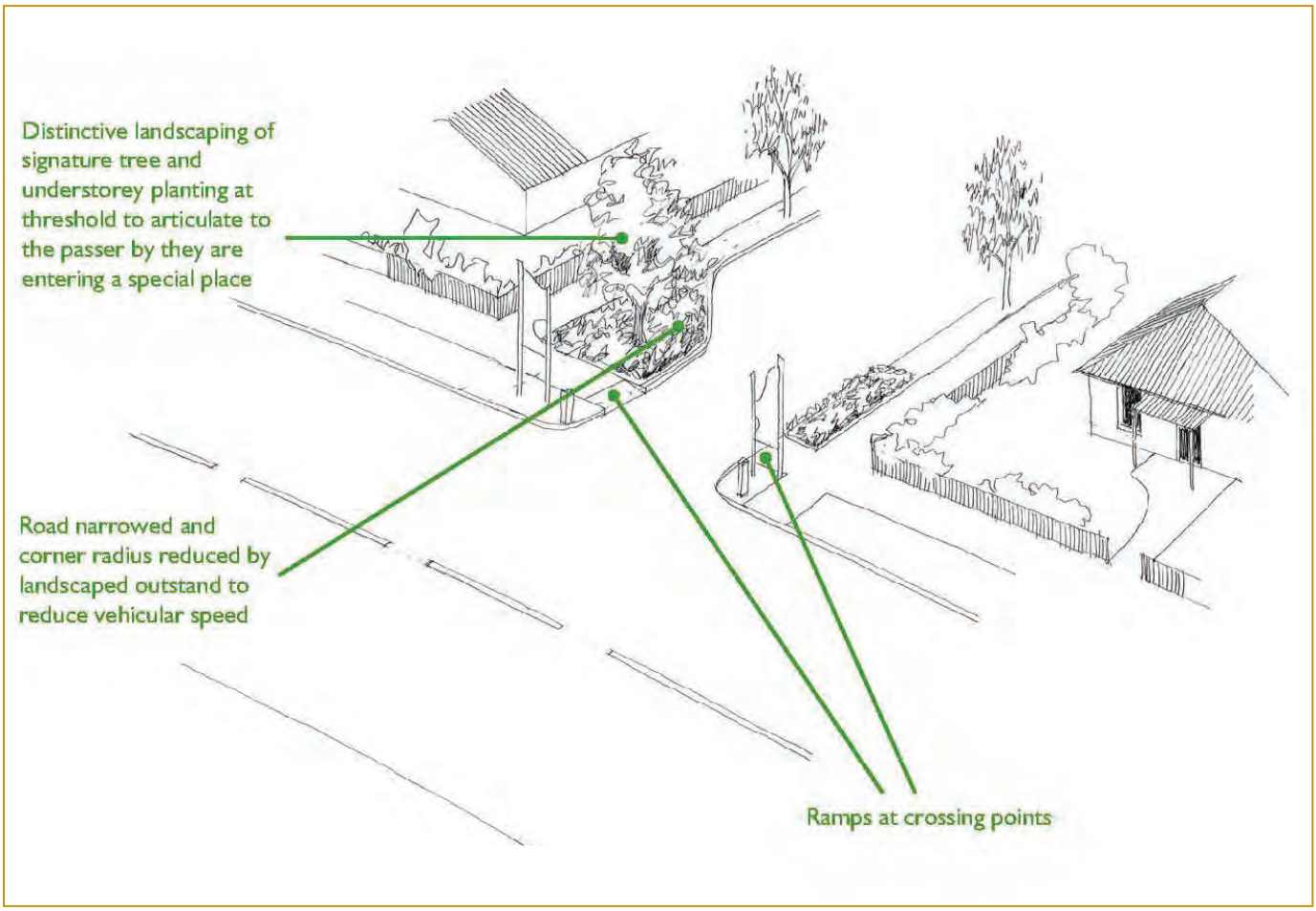
Home zones' principle for inclusive design

- Places people at the heart of the design process.
- Acknowledges diversity and difference.
- Offers choice where a single solution cannot accommodate all users.
- Provides flexibility in use.
- Provides higher quality environments.

GOALS

- To create a 'home zone' of safe streets which are inhabitable and friendly for neighbours and children.
- To slow the speed of cars and provide activity on the street.

Springthrope Estate, Bundoora. Example of a basic home zone treatment.



Knox Pedestrian Plan. Example of a threshold to a home zone treatment.
Source, Knox Pedestrian Plan Workbook, 2005

5.17 HOME STREETS – HOME ZONES

DESIGN GUIDELINES

- Improve planting through vegetation strips and insertions.
- Improve shade.
- Where possible have passive surveillance from residences facing the street.

Carriageway

- Create a shared pavement treatment that services pedestrians, traffic and cyclists, with no grade separation.
- Narrow carriageway
- Tree planting at each corner: threshold
- Remove raised footpaths
- Created planted areas
- Changes in materials rather than devices such as speed humps to slow traffic
- Create sharp bends

Signage

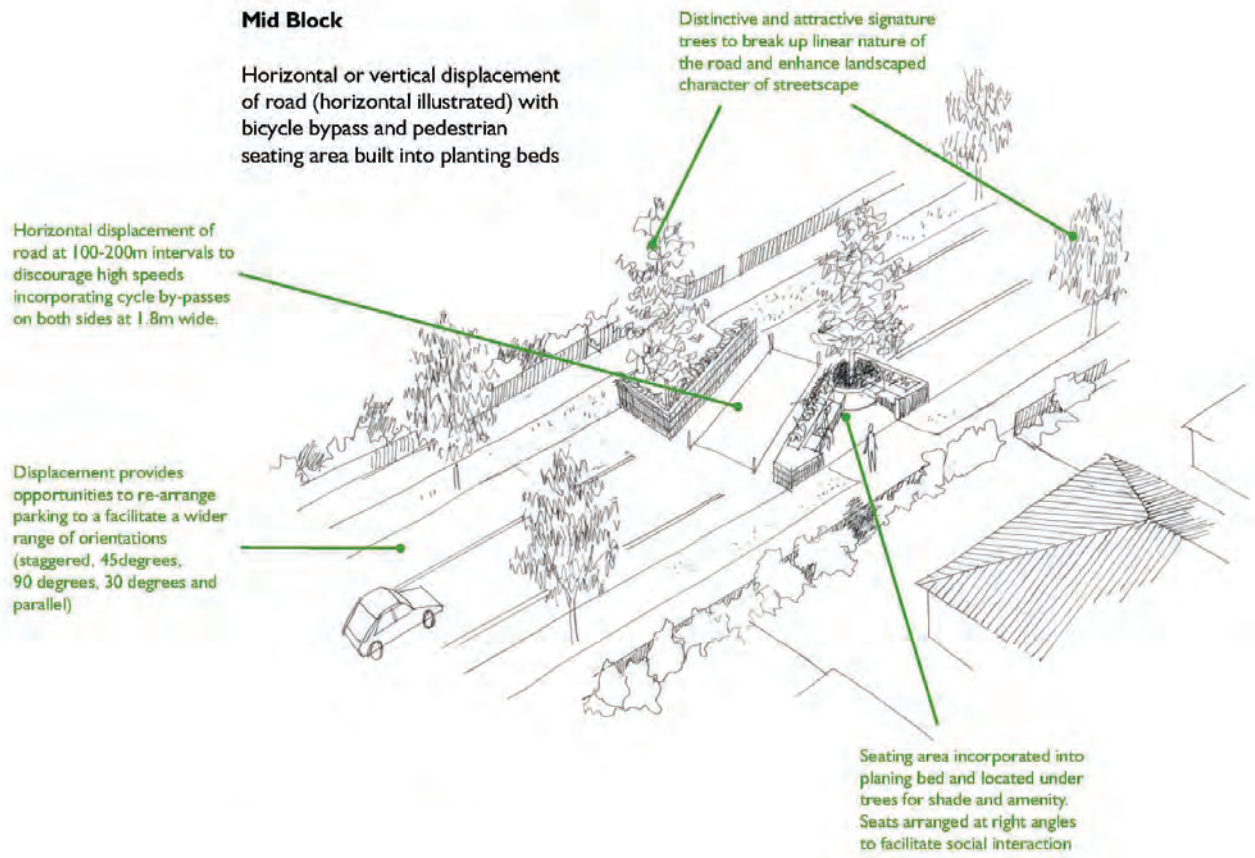
- Signed entry and exist points.

Vegetation

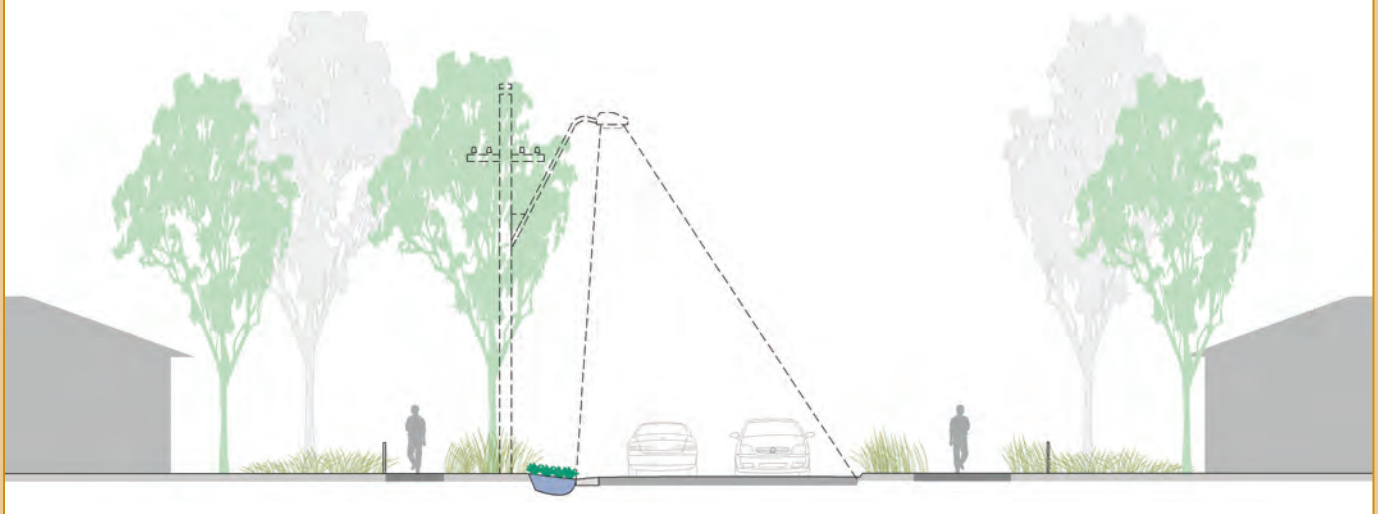
- Retain and protect indigenous trees and plant new indigenous canopy trees to be consistent with the Neighbourhood Character Study, and the Street Tree and Nature Strip Policy.
- Prudently consider the use of exotic trees in relation to the context of the street's surrounds, creating thresholds, gateways and key planting areas.
- Refer to the Neighbourhood Character Study, and the Street Tree and Nature Strip Policy for appropriate species of understorey and tree.
- Plant suitable small trees adjacent to, or beside, power easements.

Typical court in Knox that has the potential to become a home zone.

Low-volume streets, such as Walting Grove above, are excellent candidates for home zones.



Knox Pedestrian Plan. Example of a Home zone treatment, Source: Knox Pedestrian Plan, Workbook 2005.



Indicative proposed cross-section of a home zone.

5.18 INDUSTRIAL & BUSINESS PARK STREETS

AUTHORITY

Knox City Council

DESCRIPTION

Industrial streets are wide, single carriageway streets that allow for heavy vehicle movement.

GOALS

- To increase vegetation and canopy cover throughout to provide a pleasant working environment.
- To improve the economic sustainability of the street.

Typical older-style industrial street, with narrow nature strips and medium sized street trees.

Legend

Industrial and business parks

Figure 16: Location of main industrial and business park streets

5.18 INDUSTRIAL & BUSINESS PARK STREETS

DESIGN GUIDELINES

Pedestrian Safety and Amenity

- Ensure all industrial and business park streets have safe pedestrian access on both sides of the road.
- Improve paths in nature strips and verges to provide a pleasant environment for pedestrians.
- Connect pedestrian networks.
- Implement consistent bus shelters and seating along roads.
- Create pocket parks and pause points at appropriate locations to increase soft amenity and allow break-out spaces for workers.

Carriageway

- Increase outstands and reduce amount of parking.

Cycle Infrastructure

- Establish on-road cycle paths.

Vegetation

- Retain and protect indigenous trees and plant new indigenous canopy trees to form consistent avenues where possible.
- Refer to the Neighbourhood Character Study, and the Street Tree and Nature Strip Policy for appropriate species.
- Plant suitable small trees in formal rows adjacent to, or beside power easements

A business park street bereft of street tree planting.

Preferred quality street frontage.
Large street trees with native and drought tolerant understorey planting. Views to building are retained.

Existing typical street in an industrial area.

Image demonstrating improved car parking and pedestrian zone.

5.19 SHOPPING STREETS

AUTHORITY

VicRoads and Knox City Counci

DESCRIPTION

Streets or parts of streets where the main focus is retail and commercial activity.

GOALS

- To create streets that provides easy pedestrian access, amenity, and a high quality environment for shopping and commercial activity.
- To create places where activities associated with café's, market stalls and the like, and sitting and relaxing can be integrated to commercial frontages.
- To balance traffic, safety and pedestrian amenity.

Mixed commercial street with good quality street trees and low ground planting.

Legend

Shopping areas

Figure 17: Location of main shopping streets.

5.19 SHOPPING STREETS

DESIGN GUIDELINES

Pedestrian Safety and Amenity

- Pedestrians should have clear and safe access points across streets and to shops.
- Footpaths should be generous and be provided with seating opportunities, shade and vegetation.

Carriageway

- Where commercial and retail centres are located on major streets, investigate the reduction of speed limits through activity centres to improve pedestrian safety, reduce the impact of through traffic and to create a sense of arrival and departure to the centre.
- Where commercial and retail centres are located on major streets, investigate the reduction of lanes through the activity centre to slow traffic provide a safer pedestrian environment and enable the provision of a combination of widened footpaths, service lanes, increased on-street parking and bike lanes.
- Minimise and simplify traffic routes through parking and at off-street shops, for example by introducing one way traffic systems.
- Turning radii should be minimal to encourage slow movement of vehicles.
- Tree, WSUD and garden bed planting should be incorporated into parking and verge design to reduce the visual severity of road pavement, to provide shade, and to treat water.

Cycle Infrastructure

- Establish a clear and designated space for cyclists to move along and though a shopping area, and minimise crossing points.
- Provide adequate bike storage and parking facilities.

Shopping Areas

- Create a distinguishable edge for shops through understorey planting, furniture and attractive and shaded parking areas.
- Allow each shopping area to develop its own character through planting material and furniture.
- Allow opportunity for café/outside space to be utilised within road easement.

Vegetation

- Create formal or informal stands of clear-trunked trees to allow for good shade coverage and clear view to commercial fronts.
- Vegetation should be carefully considered to buffer patrons from vehicle movement, without obstructing view.
- Plant suitable small trees in formal rows adjacent to, or beside, power easements.
- Where applicable create outstands for larger tree planting.

Typical mixed commercial street.
Lack of street tree planting and low ground planting.

Mountain Highway, Bayswater. Limited amenity with narrow pavement alongside major highway and no room for larger trees.

Existing typical car park and street of a shopping centre.

Indicative plan of improved car park and pedestrian zone.

Boronia car park was retrofitted with water sensitive urban design and new street trees.

5.20 ENTRANCES & GATEWAYS

AUTHORITY

VicRoads and Knox City Council

DESCRIPTION

A special treatment within the streetscape alerting people that they are entering a new area or space.

GOALS

- Gateways must be integrated into their immediate and local context, being respectful of the 'sense of place' that exists or that is desirable
- Gateways should be a noticeable elements that carry a sense of amazement or discovery.
- Consider community integrated art. -Refer to the Knox City Council *Art Plan* (2003)
- For a gateway treatment to be successful, it needs to be visible. Consider location, size and form, and impression of 'belonging to its site and context.
- A gateway treatment needs to be easy to maintain and cost effective.
- Gateways should not 'date' a place by being overly architectural
- Gateways should not exclude people, but rather welcome people in.

Large entry walls and planting to Sovereign Crest estate in Knox.

Legend

- City of Knox Boundary
- East Link
- VicRoads

Knox City Council Streets

- Link Road
- Collector Road
- Industrial Road

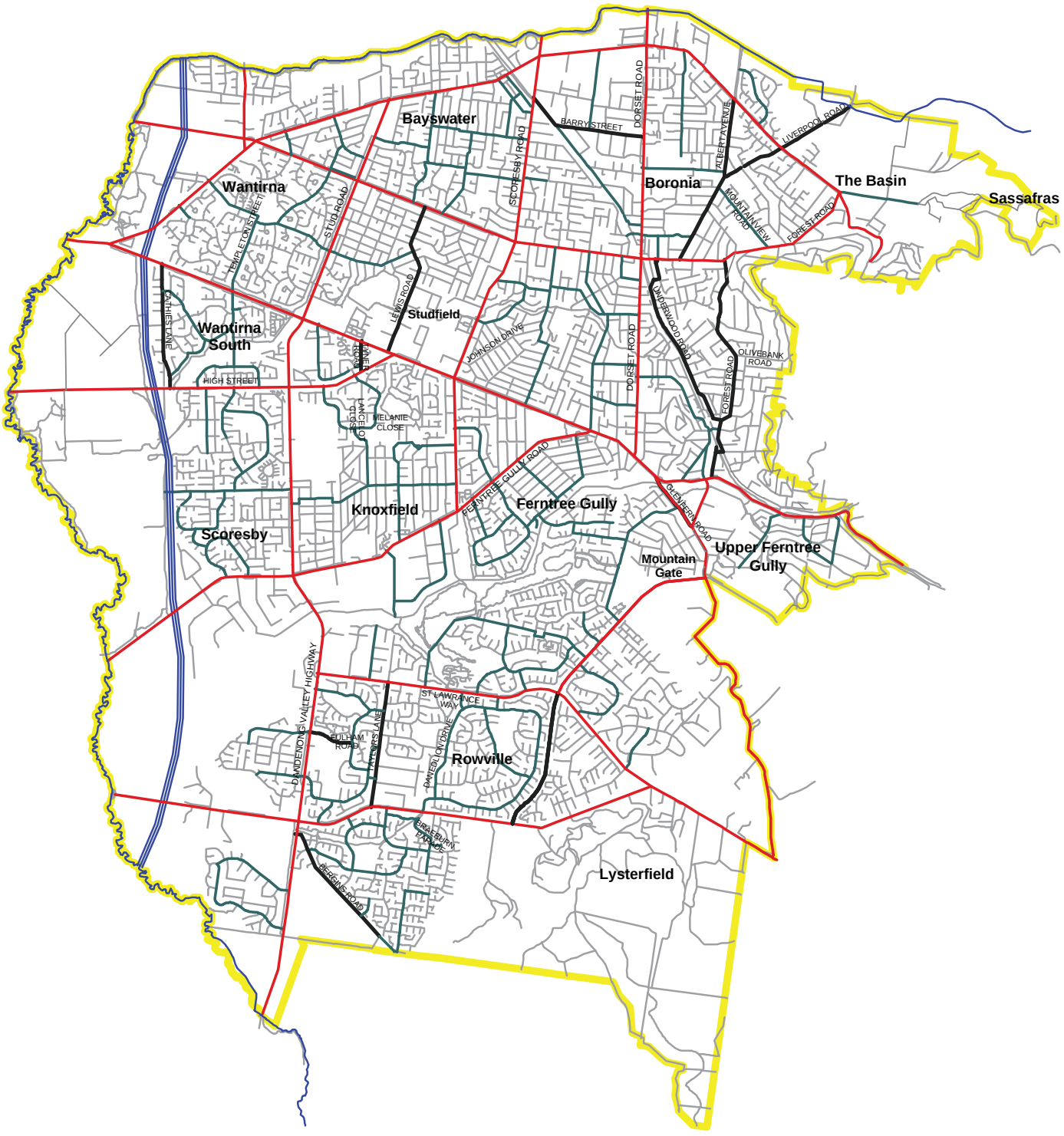


Figure 18: Entry treatments can be located throughout the municipality on different street types

5.20 ENTRANCES & GATEWAYS

DESIGN GUIDELINES

Integration into the immediate and local context

- Research into the place -immediate, local and regional context should be investigated .
- The local neighbourhood character and the Knox municipal character should be considered when designing a gateway.
- Municipal gateways should be treated on a large scale. Refer to the Dandenong Creek Gateways section. Consider also Knox identity and branding guidelines.
- Main Shopping precincts can be treated on a large scale, often operating on Bush Boulevards and Principal Avenues.
- Smaller shopping precincts, industrial estates and business parks, can respond more effectively at a slower vehicle speed and for pedestrians. Consider threshold treatments such as low walls and densely planted beds with canopy trees.
- Residential areas should create a welcoming feeling, not a gated community impression. Planting, low walls and good street trees are successful gateways into neighbourhoods
- Consider community integrated art.
- Refer to the Knox City Council *Art Plan* (2003)

Visibility

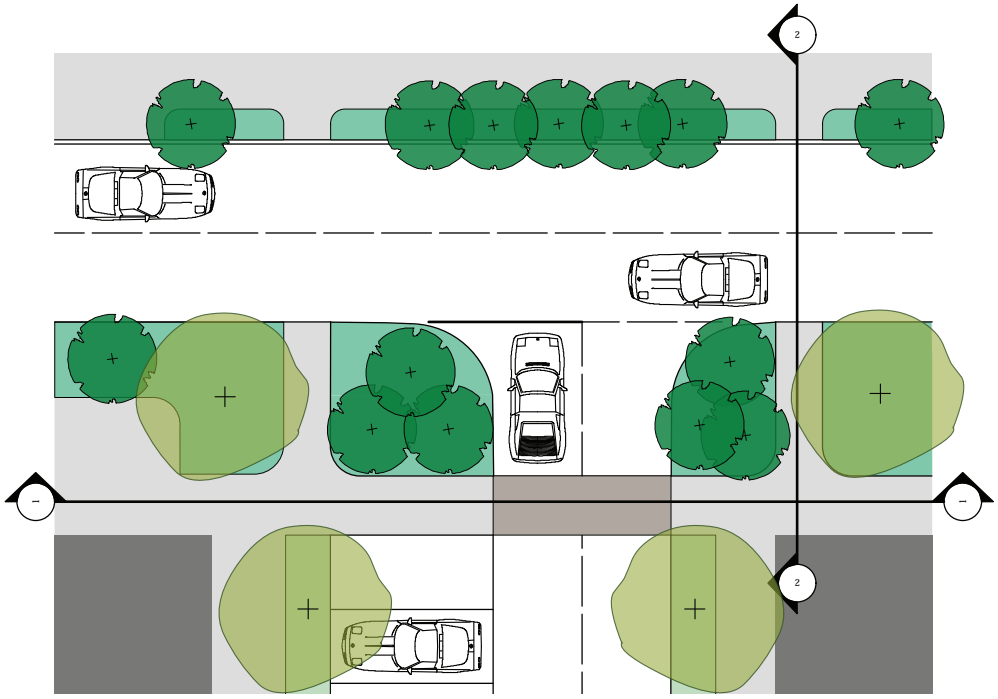
- For a gateway treatment to be successful, it needs to be visible. Consider location, size and form, and impression of 'belonging to its site and context.
- Where commercial and retail centres are located on major streets, investigate the reduction of speed limits through activity centres to improve pedestrian safety and reduce the impact of through traffic.
- Bring threshold planting such as large sized trees close to the carriageway, where possible.
- Consider the spatiality of a gateway rather than just a visual impact. A sense of arriving at an entrance, or moving through a threshold, can slow traffic speeds and alert passers by that they are entering a new space.

Materiality

- Gateways can be ephemeral, engaging with natural, elemental, shadows, and time.
- Vegetation should be considered as a gateway element, as it is in keeping with the desired character of the municipality.
- Create formal or informal stands of clear-trunked trees to allow for good shade.
- Create low scaled walls or built structures.
- Emphasise with mounding and planting.
- Choose local materials for pavements, mulch beds etc.
- Discourage large walls.
- Discourage 'fashionable' or overly architectural statements.
- Encourage materials that are easy to maintain, are robust and cost effective.

Gateway planting to Riparian Way in Ferntree Gully

Entry planting to Wantirna Mall Shopping Centre car parking



An example of an entry treatment arrangement

Section 1: Indicative proposed cross-section of an entry treatment