

Lake Narracan

Precinct Structure Plan

March 2015



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1.0 INTRODUCTION

The Lake Narracan Precinct Structure Plan (the PSP) has been prepared by Latrobe City Council and the Metropolitan Planning Authority in consultation with Government agencies, service authorities and major stakeholders.

The PSP is a long-term plan for urban development. It describes how the land is expected to be developed and how and where services are planned to support development.

The PSP:

- Sets out plans to guide the delivery of quality urban environments in accordance with the Victorian Government policies and guidelines (listed below).
- Enables the transition from non-urban land to urban land.
- Sets the vision for how land should be developed, illustrates the future urban structure and describes the outcomes to be achieved by the future development.
- Outlines projects required to ensure that the future community, visitors and workers within the area are provided with timely access to services and transport infrastructure necessary to support a quality, affordable lifestyle.
- Sets out objectives, requirements and guidelines for land use, development and subdivision.
- Provides Government agencies, the Council, developers, investors and local communities with certainty about future development.
- Addresses the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999).

The PSP is informed by the following policies and guidelines:

- State Planning Policy Framework set out in the Latrobe Planning Scheme.
- Local Planning Policy Framework of the Latrobe Planning Scheme.
- Precinct Structure Planning Guidelines (2009)
- Gippsland Regional Growth Plan (2014)
- Plan Melbourne: Metropolitan Planning Strategy (2014)

- Latrobe City Council Public Open Space Strategy (2013)

The following planning documents have been developed in parallel with the PSP to inform and direct the future planning and development of the precinct:

- Lake Narracan Development Contributions Plan (the DCP) that applies the requirements for development proponents to make a contribution toward infrastructure required to support the development of the precinct.
- Lake Narracan Native Vegetation Precinct Structure Plan (the NVPP) that sets out requirements for the protection and management of native vegetation within the precinct.
- Lake Narracan Background Report (the background report).

1.1 How to read this document

This PSP guides land use and development where a planning permit is required under the Urban Growth Zone or another provision in the Latrobe Planning Scheme that references this PSP.

A permit application and a planning permit must implement the outcomes of the PSP. The outcomes are expressed as the vision and objectives.

Each element of the PSP contains requirements, guidelines and conditions as relevant.

Requirements must be adhered to in developing the land. Where they are not demonstrated in a permit application, requirements will usually be included as a condition on a planning permit whether or not they take the same wording as in this PSP. A requirement may reference a plan, table or figure in the PSP.

Guidelines express how discretion will be exercised by the Responsible Authority in certain matters that require a planning permit. If the Responsible Authority is satisfied that an application for an alternative to a guideline implements the outcomes, the Responsible Authority may consider the alternative. A guideline may include or reference a plan, table or figure in the PSP.

Conditions in this PSP must be included in a planning permit as relevant.

Development that meets these requirements, guidelines and conditions will be considered to implement the outcomes of the PSP.

Development must also comply with other Acts and approvals where relevant e.g. the Environment Protection and Biodiversity Conservation Act 1999 in the case of biodiversity or the Aboriginal Heritage Act 2006 in the case of cultural heritage amongst others.

Not every aspect of the use, development or subdivision of land is addressed in this PSP. A Responsible Authority may manage development and issue permits as relevant under its general discretion.

1.2 Land to which this PSP applies

The PSP applies to approximately 604 hectares of land as shown on Plan 1 and on Latrobe Planning Scheme maps as Schedule 1 to the Urban Growth Zone.

The Lake Narracan PSP area is generally defined by Lake Narracan along the northern and eastern boundary, Becks Bridge Road along the western boundary and Moe North Road (Old Sale Road) and the Moe Yallourn Rail Trail along the southern boundary.

Plan 1 identifies the key features of the land.

1.3 Background information

Detailed background information on the PSP area including its local and regional context, history, landform and topography, drainage, biodiversity, open space and community facilities are contained in the background report. This information has informed the preparation of the PSP.

1.4 Development Contributions Plan

Development proponents within the Lake Narracan precinct will be bound by the Lake Narracan Development Contributions Plan (the DCP). The DCP sets out requirements for infrastructure funding across the Lake Narracan area and will be finalised and implemented separately to the PSP.

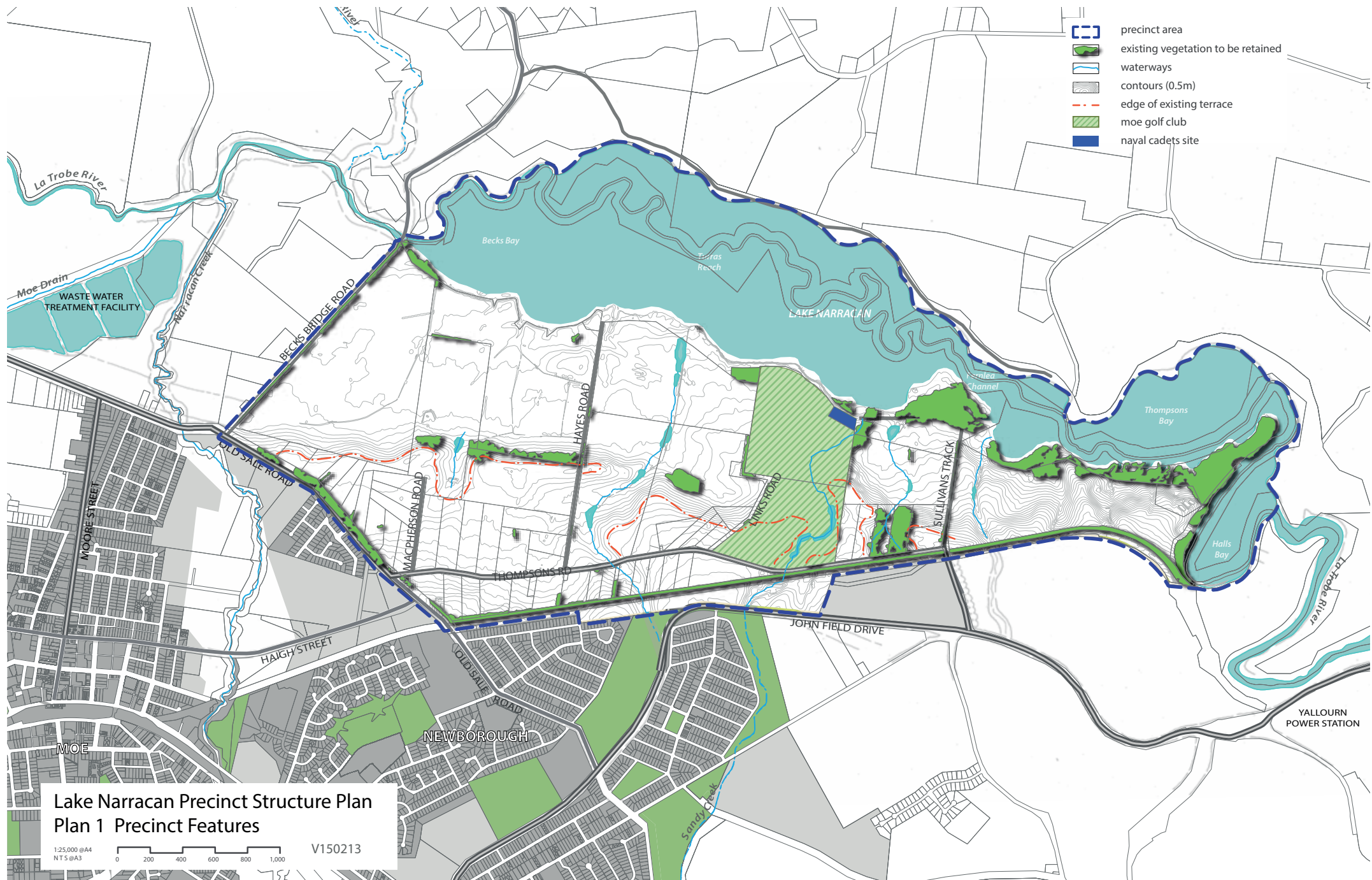
Once complete, the DCP will be a separate document incorporated into the Latrobe Planning Scheme and implemented through a Development Contributions Plan Overlay (DCPO).

Development proponents wishing to commence works prior to approval and gazettal of this instrument have the opportunity to enter into agreements with Latrobe City Council under Section 173 of the *Planning and Environment Act 1987* to expedite contributions.

1.5 Native Vegetation Precinct Plan

The Lake Narracan Native Vegetation Precinct Plan (the NVPP) has also been prepared concurrently with the PSP. The NVPP:

- Identifies native vegetation that may be removed without a planning permit, subject to the provision of secured offsets (as identified in the NVPP) by development proponents before the removal of such native vegetation can start.
- Is a separate document that is incorporated in the Latrobe Planning Scheme.



2.0 OUTCOMES

2.1 Vision

The Lake Narracan area is characterised by undulating farmland, prominent stands of trees, views to the lake and the hills beyond, and a number of locations for recreation access to the lake.

The future residential development of this area will retain the existing character of the lake foreshore, and provide for increased community access to the lake and creation of new recreational activities on and around the lake. A continuous foreshore treatment comprising parkland, pedestrian/cyclist paths and a foreshore road will be established along the southern side of the lake between Sullivans Track and Becks Bridge Road for the wider community to enjoy.

Key road and open space links will be created to more directly link the centre of both Moe and Newborough with the lake. An extensive network of pedestrian and cyclist paths will be established throughout the precinct, linking to the heart of existing Moe and Newborough.

New residential neighbourhoods will be established that take their identity from the existing areas of the lake, such as Becks Bay, Turras Reach, Fernlea Channel and Thompsons Bay. The development of this area also offers the opportunity to reference the previous township of Yallourn, by using key road names from the historic town such as 'Broad Way' and 'Centre Way', and open space names such as 'Monash Square'.

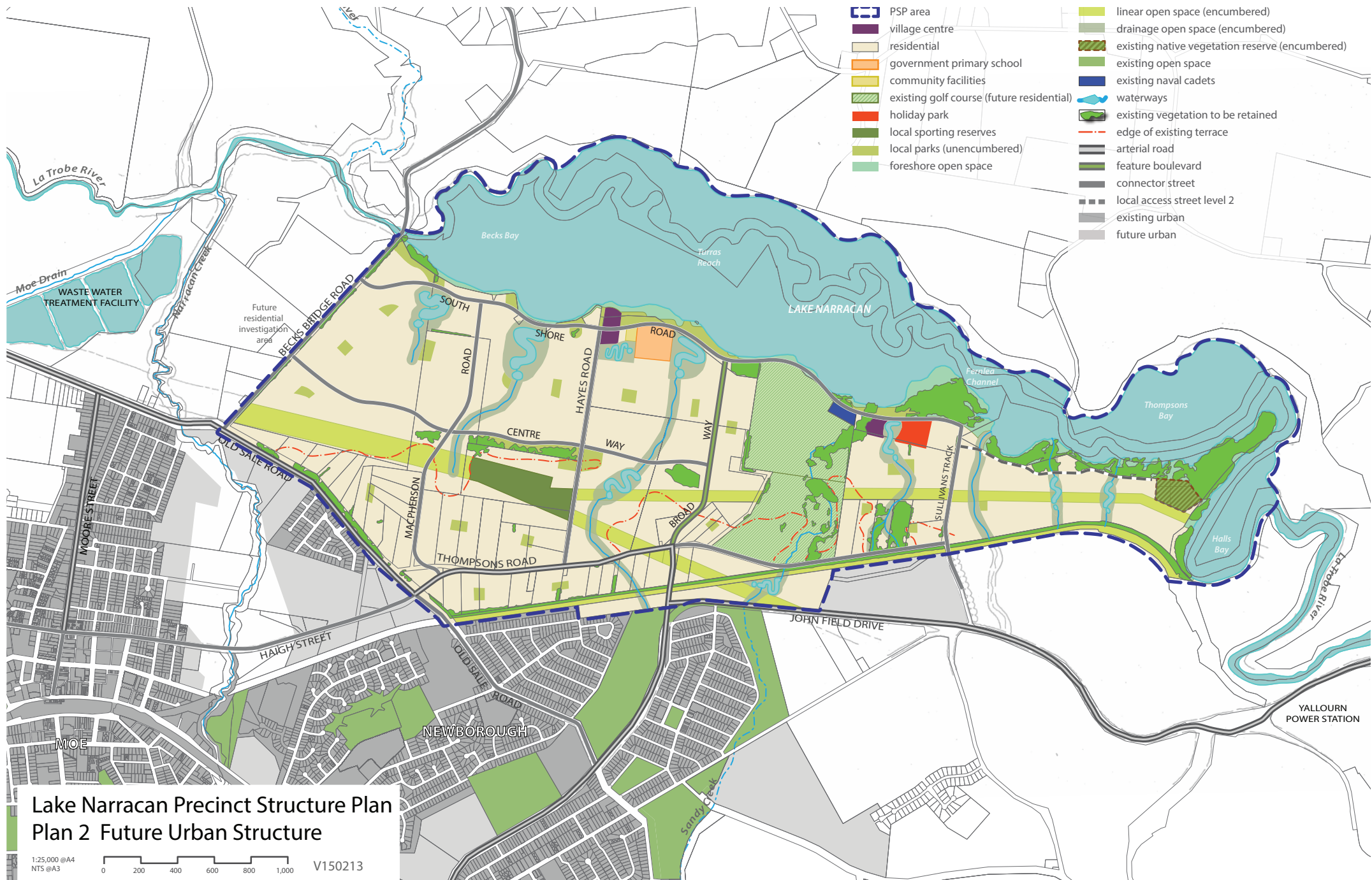
Two new village centres will provide for the daily convenience shopping needs of new residents and visitors, but support the Moe town centre as the major shopping destination of the area. The new village centres also offer the opportunity to establish cafes and restaurants adjacent to the lake for the wider community to enjoy. This area is also a suitable location for a holiday park offering short stay accommodation for visitors to enjoy the amenity of the lake and the recreational activities that it offers.

The amenity offered by the lake offers the ability to provide a range of housing types in proximity to the lake not seen in other locations in the municipality. The majority of the new residential areas away from the lake will provide for more typical housing seen in existing townships of the municipality, and will provide opportunities for larger lots to be created in key locations.

An open space network will be created that includes the foreshore parkland and a large centrally located park offering views across the precinct and to the lake. The existing electricity easements that run through the precinct will be integrated to form part of the open space and trail network. The existing Moe golf course will be retained as a key recreation feature offered by the area. Significant biodiversity values such as prominent stands of trees, native vegetation along the foreshore and nationally significant Strzelecki Gums will be retained as important features of the area.

New employment will be created by the village centres, holiday park, primary school, community centre and home-based business. Additional employment uses that do not conflict with ultimate residential land use will also be considered as interim uses.

The development of the Lake Narracan area is one of a number of initiatives that will assist in the long term revitalisation and enhancement of the Moe and Newborough area. This project will also help reinforce Latrobe City as the regional capital of Gippsland.



Lake Narracan Precinct Structure Plan Plan 2 Future Urban Structure

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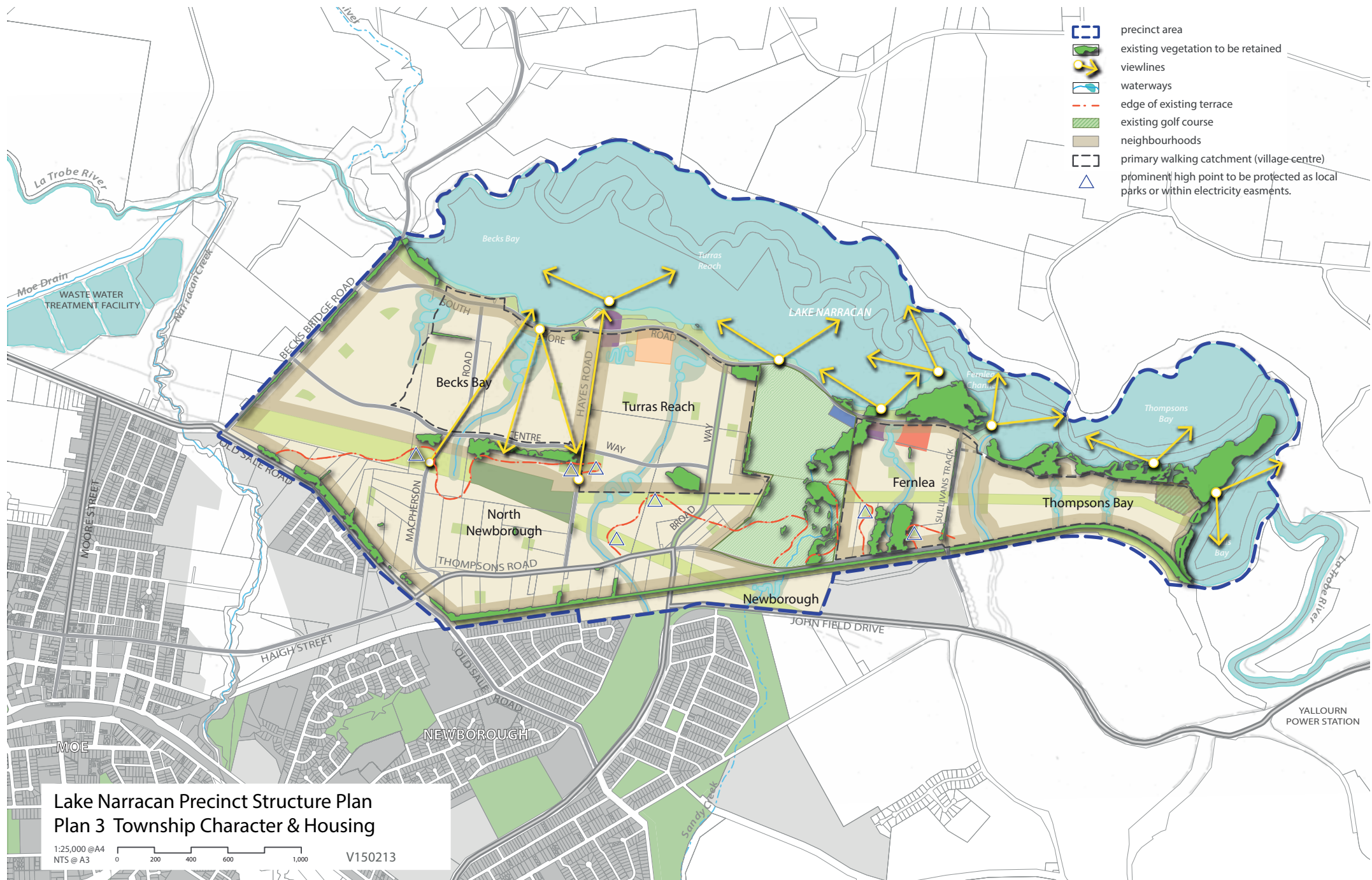
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2.2 OBJECTIVES

The following points describe the desired outcomes of development of the precinct and guide the implementation of the vision.

OBJECTIVES	
01	Protect the significant natural values of the precinct and promote the rural character of Latrobe City through the protection of significant elements of the landscape.
02	Promote the enjoyment and public use of Lake Narracan and the adjacent foreshore as a significant recreation feature of the region.
03	Recognise the character and history of the area by drawing on the existing identity of the different sections of the lake and on features of the previous township of Yallourn.
04	Deliver an integrated network of local parks, sporting reserves, and community infrastructure that meets the needs and aspirations of the new community.
05	Achieve a diversity of streetscape and open space outcomes to enhance local character and amenity.
06	Establish a landscape of connecting canopies along streets, parks and waterways.
07	Ensure that residents do not need to cross arterial roads, railway lines or waterways to access a local park.
08	Effectively incorporate existing electricity easements into the future urban structure of the precinct and maximise the benefit they provide to the community.

09	Develop a slow-speed and permeable connector road network that links to adjacent arterial roads.
010	Promote greater housing choice through the delivery of a range of lots capable of accommodating a variety of dwelling types.
011	Leverage off the amenity offered by the lake, waterways, open space and village centres to deliver medium density housing options.
012	Develop a series of village centres that each has a civic focus and an ability to adapt and evolve with the community.
013	Deliver sufficient residential densities within a walkable catchment to support vibrant and viable village centres, without undermining the viability of the Moe Town Centre and Newborough Neighbourhood Centre.
014	Deliver an Whole of Water Cycle management system that encourages reduced reliance on reticulated potable water, encourages the re-use of alternative water, minimises flood risk, ensures waterway health, and contributes toward a sustainable and green urban environment.
015	Ensure that development staging is co-ordinated with the delivery of key infrastructure.
016	Ensure pre-development property structure does not impede the realisation of cohesive and integrated neighbourhoods.
017	Allow for the transition of Moe Golf Course and larger residential properties to conventional residential densities over time if appropriate.
018	Deliver a minimum of 3,723 new homes (11 dwellings residential net developable hectare overall precinct average).



Lake Narracan Precinct Structure Plan Plan 3 Township Character & Housing

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3.0 IMPLEMENTATION

3.1 Township character & Housing

3.1.1 Township Character

REQUIREMENTS		
R1	Street trees must be provided on both sides of all roads and streets (excluding laneways) at regular intervals appropriate to tree size at maturity and not exceeding the guidance below unless otherwise approved by the Responsible Authority:	
	Average Interval	Tree Size
	8 – 10 metres	Small trees (less than 10 metres)
	10 – 12 metres	Medium trees (10 – 15 metres)
	10 – 15 metres	Large trees (15 metres or greater)
R2	Trees in parks and streets must be suitable for local conditions and planted in modified and improved soil as required to support tree longevity.	
R3	Street tree planting must use locally appropriate species and be consistent with any guidance provided on the relevant cross section within this PSP unless otherwise approved by the Responsible Authority.	
R4	Connector roads and access streets must be aligned to create views and direct connections to the lake, waterways and open space, as shown on Plan 3.	
R5	Subdivision applications are to demonstrate how they respond to the Neighbourhood Character Statement for the relevant neighbourhood identified in Plan 3. If a Neighbourhood Character Statement has not been prepared for the neighbourhood in which a proposed development is situated, the first development proponent to lodge a permit application must prepare a Neighbourhood Character Statement to the satisfaction of the Responsible Authority.	
GUIDELINES		
G1	Street networks within subdivisions should be designed to maximise the number of connections and direct views to the lake, waterways, open space and village centres.	

G2	Significant elements of the landscape and built form should be used as focal points for view lines along streets. Elements may include items such as hill tops, ridge lines, established vegetation, public buildings and landmarks.
G3	Retained windrows and significant trees should be located within the public domain, including parks and road reserves, unless otherwise approved by the Responsible Authority.
G4	Street trees should be used consistently across neighbourhoods to reinforce movement hierarchy and local character.
G5	A consistent suite of lighting and furniture should be used across neighbourhoods, appropriate to the type and role of street or public space, unless otherwise approved by the Responsible Authority.
G6	Trees in streets and parks should be larger species wherever space allows (to facilitate continuous canopy cover).
G7	Aboriginal names should be used in the naming of new streets, parks and other features where appropriate, in consultation with the Victorian Aboriginal Corporation for Languages.

3.1.2 Housing

REQUIREMENTS	
R6	Residential subdivisions must deliver a broad range of lot sizes capable of accommodating a variety of housing types.
R7	Residential subdivision applications must demonstrate how they will contribute to the satisfaction of minimum housing yields in broad village centre catchments as described on Plan 3 and Table 2.
R8	Lots must front or side:
	• Lake Narracan foreshore
	• Waterways and public open space
	• Moe Yallourn Rail Trail
	• Areas of retained native vegetation
	• Connector Roads
	• Arterial roads
	• Local roads

R9	<p>Subdivision applications must include indicative concept layouts for any lots identified for the future development of medium density or integrated housing that suitably demonstrate:</p> <ul style="list-style-type: none"> • Active interfaces with adjacent streets, open space, waterways and water bodies. • Safe and effective vehicle and pedestrian access and internal circulation, as appropriate.
R10	<p>In addition to Clause 55 or Clause 56 requirements, an application for development of land of a slope greater than 10% should be accompanied by the following information as appropriate:</p> <ul style="list-style-type: none"> • A plan of subdivision showing lot boundaries, contours, and slope. • Location and approximate depth of any proposed earthworks. • The location and approximate height for proposed retaining walls or other methods of retaining soil batters. • The location and approximate grade of any proposed roads and paths. • Indicative building envelopes. • Indicative lot access arrangements consistent with Council standards for crossover design.
GUIDELINES	
G8	<p>Residential subdivision should provide across each neighbourhood a broad range of lot sizes capable of accommodating a variety of housing types as described in Table 1.</p>
G9	<p>Lot sizes suitable for the delivery of medium density housing types should be located adjacent or in close proximity to:</p> <ul style="list-style-type: none"> • Lake Narracan foreshore • Open space • Waterways • Village centres • Community facilities • Public transport routes • Moe Golf Course

G10	<p>Specialised housing forms such as retirement living or aged care should be:</p> <ul style="list-style-type: none"> • Integrated into the wider urban structure. • Located in close proximity to village centres and community hubs. • Accessible by public transport.
G11	<p>Lot sizes should respond to slope with larger lots on steeper land (greater than 10% slope grade) and increased densities in flatter areas (less than 10% slope grade) to avoid excessive earthworks.</p>
G12	<p>Proposals for development of lots on land which has a slope of greater than 10% gradient should:</p> <ul style="list-style-type: none"> • Demonstrate how the development responds to natural topography by minimising cut and fill. • Minimise the risk of land erosion. • Allow appropriate siting and construction of a dwelling without presenting any overlooking/overshadowing issues between lots. • Ensure vehicle crossover and driveway grades allow access to garages/carports.
G13	<p>Retaining walls or any other methods of retaining soil batters should be:</p> <ul style="list-style-type: none"> • Staggered, instead of one large wall. • Staggered with a minimum 1.0 metres distance between each wall to allow for landscaping between walls. • Set back at least 1.0 metres from any building envelope. • Positioned on a lot with sufficient setback from boundaries to accommodate appropriate drainage behind the wall.

Table 1 Housing type by lot size

The following table is intended to provide statutory planners with guidance on the achievement of housing diversity objectives by providing an example of how variation in lot sizes supports a diversity of housing types.

HOUSING TYPES THAT MAY BE SUPPORTED	LOT SIZE CATEGORY (m ²)		
	LESS THAN 300m ²	301-700m ²	MORE THAN 700m ²
Small lot housing (including town houses and attached, semi-detached and detached houses)			
Dual occupancies, including duplex			
Detached housing			
Multi-unit housing sites (including terraces, row houses and villas)			
Stacked housing (including apartments and walk-up flats)			

Table 2 Housing delivery guide – walkable catchment areas

The following table is intended to provide statutory planners with guidance on the required lot yields across the precinct to underpin the viability of village centres and support the broader village centre objectives.

CATCHMENT	HOUSING TARGET
Beck Bay Village Centre	1,195 dwellings
Fernlea Village Centre	570 dwellings

3.2 Village centres & employment

3.2.1 Village Centres (Neighbourhood Activity Centres)

REQUIREMENTS

R11

Village Centres may be developed proximate to the locations shown on Plan 2 and consistent with the guidance in Table 3, to the satisfaction of the Responsible Authority. Any Village Centre development must be located on a connector road.

R12

Land use and development within each Village Centre must respond to the relevant concept plan and key design elements shown in Figures 1 and 2.

R13

The design of any Village Centre must:

- Provide opportunities for a mix of tenancies.
- Incorporate a range of uses including retail, offices and medium density residential.
- Locate any servicing infrastructure or car parking to the rear or centre of the allotment in a manner that protects the amenity of the surrounding neighbourhood.

R14

The leasable retail floor area of an individual shop within a Village Centre must not exceed 600m² (without a planning permit).

R15

Development within Village Centres must have regard to the design principles and performance criteria outlined in Appendix B.

GUIDELINES

G14

Non-residential employment uses in areas shown as 'Residential' on Plan 2, which are permissible under the residential zones applied through the Urban Growth Zone schedule, may be considered as an interim land use, to the satisfaction of the Responsible Authority.

Figure 1 - Becks Bay Village Centre

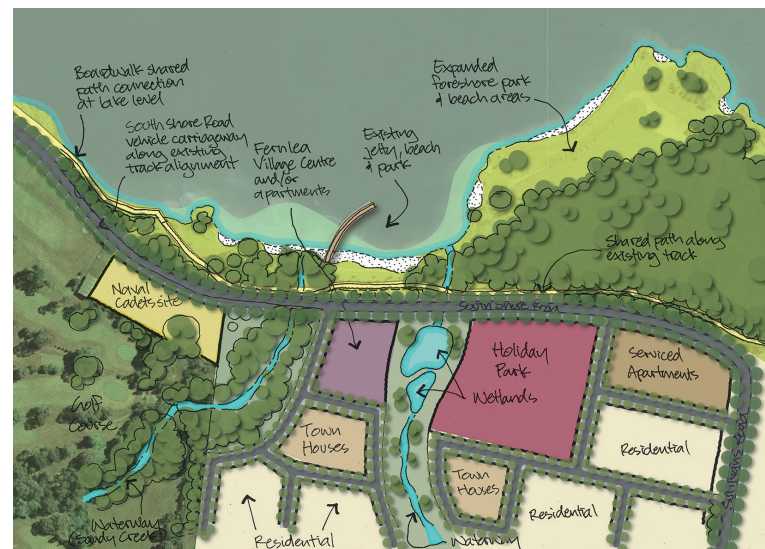


BECKS BAY VILLAGE CENTRE

Key design elements:

- Located around the intersection of Hayes Road and South Shore Road.
- Central civic space to be located on the north side of South Shore Road on the alignment of Hayes Road to provide an extension of public space and views through to the lake.
- Central civic space to be named 'Monash Square' in reference to the central civic space in the historic township of Yallourn.
- Fine grained specialty retail shops on the east side of Monash Square with off-street car parking located behind to also service the Turras Reach Foreshore Park.
- Medium density residential and/or commercial on the west side of Monash Square.
- A future supermarket may be located on the south-east corner of intersection.
- Medium density residential on south-west corner of intersection with strong built form.
- South Shore Road adjacent village centre to be slow speed with pedestrian priority.

Figure 2 - Fernlea Village Centre



FERNLEA VILLAGE CENTRE

Key design elements:

- Located between two waterways opposite the existing jetty and beach.
- Potential holiday park located on the opposite side of the eastern waterway.
- Water quality treatment on eastern waterway to provide a permanent water feature to complement the village centre and holiday park.
- Fine grained specialty retail shops fronting South Shore Road with off-street car parking located behind.
- A future supermarket may be located on the south side of specialty retail with shared off-street car park between.
- South Shore Road adjacent village centre to be slow speed with designated pedestrian priority crossing between beach area and adjacent shops.

Table 3 Village Centres

TOWN CENTRE	LOCATION	DESCRIPTION
Becks Bay Village Centre	Located at the intersection of Hayes Road and South Shore Road.	This village centre will provide for the daily convenience shopping needs of the surrounding area.
Fernlea Village Centre	Located on the south side of South Shore Road, opposite the existing beach and jetty.	This village centre will provide for the daily convenience shopping needs of the surrounding area.

Note: Village Centres in this document are equivalent to Neighbourhood Centres as referred to in the Latrobe Planning Scheme.

Table 4 Anticipated Employment Creation in Precinct

LAND-USE BASED EMPLOYMENT	MEASURE	JOB	QTY. IN PRECINCT	ESTIMATED JOBS
Community centre	Jobs / centre	10	1	10
Primary school	Jobs / school	40	1	40
Village centres (retail)	Jobs / 30 sqm	1	100	100
Home-based business	Jobs / Dwelling	0.05	3,723	186
TOTAL				336

3.3 Open space & community facilities

3.3.1 Open Space

REQUIREMENTS	
R16	All public landscaped areas must be designed and constructed to enable practical maintenance and planted suitable to the local climate and soil conditions.
R17	All parks must be located, designed and developed generally in accordance with the relevant description in Table 5 unless otherwise approved by the Responsible Authority. The area of the park may vary so long as it remains inside the guidance for the relevant type of park. Where a park is smaller than that outlined in the table, the land must be added to another park or used to create a new park in addition to those outlined on Plan 4. Where a proposed park is larger than outlined in the table it may be accepted so long as it does not result in the removal of another park allocation.
R18	Where a local park shown on Plan 4 spans across multiple properties, the first development proponent to lodge a permit application must prepare an indicative concept master plan for the entire park unless otherwise agreed by the Responsible Authority.
R19	Design and layout of waterway corridors and other encumbered open space must maximise the potential for the integration of recreation uses and water quality treatment, where this does not conflict with the primary function of the land.
R20	Any fencing of open space, whether encumbered or unencumbered, must be low scale and visually permeable to facilitate public safety and surveillance.

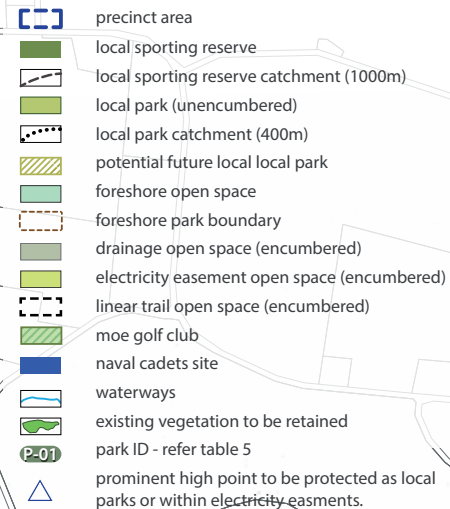


Table 5 Open Space Delivery Guide

The following table sets out the open space provision expected to be delivered within the PSP area.

PARK ID	AREA (Ha)	TYPE	LOCATION & OTHER ATTRIBUTES
S-01	8.49	Sporting Reserve (Equestrian)	Centrally located within wider residential catchment between Becks Bridge Road and Moe Golf Club. Includes 7.50Ha of encumbered land within electricity easement.
P-01	0.40	Parkland - General Use (Small)	Generally located as shown on Plan 4, central to surrounding neighbourhood.
P-02	0.40	Parkland - General Use (Small)	Generally located as shown on Plan 4, central to surrounding neighbourhood.
P-03	0.40	Parkland - General Use (Small)	Generally located as shown on Plan 4, central to surrounding neighbourhood.
P-04	0.75	Parkland - General Use (Medium)	Located adjacent waterway, central to surrounding neighbourhood.
P-05	0.39	Parkland - General Use (Small)	Located across three properties, central to surrounding neighbourhood.
P-06	0.27	Parkland - General Use (Small)	Located adjacent waterway, central to surrounding neighbourhood.
P-07	0.46	Parkland - General Use (Small)	Generally located as shown on Plan 4, central to surrounding neighbourhood.
P-08	2.43	Parkland - General Use (Large)	Located to protect the prominent high point and terrace embankment.
P-09	0.51	Parkland - General Use (Medium)	Located across two properties, central to surrounding neighbourhood.
P-10	0.40	Parkland - General Use (Small)	Located across three properties, central to surrounding neighbourhood.
P-11	0.40	Parkland - General Use (Small)	Located across two properties, central to surrounding neighbourhood.
P-12	0.40	Parkland - General Use (Small)	Located across two properties, central to surrounding neighbourhood.
P-13	0.55	Parkland - General Use (Medium)	Generally located as shown on Plan 4, central to surrounding neighbourhood.
P-14	0.40	Parkland - General Use (Small)	Generally located as shown on Plan 4, central to surrounding neighbourhood.

PARK ID	AREA	TYPE	LOCATION & OTHER ATTRIBUTES
P-15	1.27	Parkland - General Use (Large)	Located to protect prominent high point and terrace embankment.
P-16	0.40	Parkland - General Use (Small)	Located across two properties, central to surrounding neighbourhood.
P-17	0.30	Parkland - General Use (Small)	Located at edge of existing terrace across two properties, central to surrounding neighbourhood.
P-18	0.55	Parkland - General Use (Medium)	Located adjacent waterway (on two sides), central to surrounding neighbourhood.
P-19	0.32	Parkland - General Use (Small)	Located at edge of existing terrace, central to surrounding neighbourhood.
P-20	0.25	Parkland - General Use (Small)	Located at edge of existing terrace, central to surrounding neighbourhood.
P-21	0.23	Parkland - General Use (Small)	Located adjacent waterway and electricity easement, central to surrounding neighbourhood.
F-01	0.84	Parkland - Special Use (Foreshore)	Generally located as shown on Plan 4.
F-02	0.38	Parkland - Special Use (Civic Square)	Located at the end of Hayes Road and central to the Becks Bay Village Centre. To be named 'Monash Square' in reference to civic space at centre of the original township of Yallourn.
F-03	4.40	Parkland - Special Use (Foreshore)	Generally located as shown on Plan 4, opposite state primary school and community centre. To be named 'Turras Reach Foreshore Park' and will provide district level playground and viewing area at high point overlooking the lake.
F-04	4.05	Parkland - Special Use (Foreshore)	Existing forshore, including existing jetty and beach.

Small = 0.25 – 0.50Ha, Medium = 0.5 – 1.2Ha, Large = 1.2 + Ha

GUIDELINES	
G15	Lots directly fronting open space should provide for a primary point of access from a footpath or shared path proximate to the lot boundary.
CONDITIONS	
C1	<p>Conditions for subdivision or building and works permits where land is required for public open space</p> <p>Land required for open space, as set out in the <i>Lake Narracan Precinct Structure Plan</i> or the <i>Lake Narracan Development Contributions Plan</i>, must be transferred to or vested in Council at no cost to Council unless the land is funded by the <i>Lake Narracan Development Contributions Plan</i> or contributes to satisfaction of required provision under Clause 52.01.</p>

3.3.2 Community Facilities & Education

REQUIREMENTS	
R21	Schools and community centres must be designed to front, and be directly accessed from, a public street with car parks located away from the main entry (except for disability car parking).
GUIDELINES	
G16	School sites should be provided with three street frontages where practicable.
G17	Any educational or community use not shown on Plan 2 should be located within or proximate to a village centre, school or community facility as appropriate.
G18	Any private childcare, medical, or similar facility should be located proximate to a village centre, school or community facility as appropriate.

G19	Community facilities which are located in a village centre should be designed to maximise efficiency of land use through the sharing and overall reduction of car parking.
G20	Community facilities, schools and district parks which are co located should be designed to maximise efficiencies through the sharing of car parking and other complementary infrastructure.

3.4 Biodiversity & bushfire management

3.4.1 Biodiversity & Natural Systems

REQUIREMENTS	
R22	A buffer zone of at least twice the canopy diameter (measured at the widest point) must be provided around all Strzelecki Gums within the precinct. This buffer zone must be provided within open space and is to exclude new buildings, roads, paths, drainage infrastructure and any underground services, to the satisfaction of the Responsible Authority.
R23	Any public infrastructure or trails located adjacent to the Lake Narracan foreshore must be designed to minimise disturbance to existing native vegetation and be placed generally in locations shown on Plan 7.
GUIDELINES	
G21	Street trees and public open space landscaping should contribute to habitat for indigenous fauna species, in particular arboreal animals and birds, where practical.
G22	Landscaping adjacent to retained indigenous vegetation, the lake and waterways should be complementary to conservation objectives, and should use indigenous species of local provenance and must not include known or potential environmental weed species, to the satisfaction of the Responsible Authority.
G23	Where located adjacent or nearby each other, maximise the integration of linear and conservation open space with local parks.

3.4.2 Bushfire Management

REQUIREMENTS	
	For the purpose of Clause 56.06-7, the requirements of the relevant fire authority are, unless otherwise approved by the Country Fire Authority (CFA): <ul style="list-style-type: none"> Constructed roads must be a minimum of 7.3m trafficable width where cars park on both sides, or: <ul style="list-style-type: none"> A minimum of 5.4m in trafficable width where cars may park on one side only. A minimum of 3.5m trafficable width, with no parking and 0.5m clearance to structures on either side, and if this width applies, there must be passing bays of at least 20m long, 6m wide and located not more than 200m apart.
R24	<ul style="list-style-type: none"> Roads must be constructed so that they are capable of accommodating a vehicle of 15 tonnes for the trafficable road width. The average grade of a road must be no more than 1 in 7 (14.4% or 8.1°). The steepest grade on a road must be no more than 1 in 5 (20% or 11.3°) with this grade continuing for no more than 50 metres at any one point. Dips on the road must have no more than 1 in 8 grade (12.5% or 7.1°) entry and exit angle. Constructed dead end roads more than 60 metres in length from the nearest intersection must have a turning circle with a minimum radius of 10m (including roll over curbs if they are provided).
R25	<p>Before the commencement of works for a stage of subdivision, a Construction Management Plan that addresses Bushfire Risk Management must be submitted to and approved by the Responsible Authority and the CFA. The Construction Management Plan must specify, amongst other things:</p> <ul style="list-style-type: none"> Measures to reduce the risk from fire within the surrounding rural landscape and protect residents from the threat of fire. A separation buffer, consistent with the separation distances specified in AS3959-2009, between the edge of development and non-urban areas. How adequate opportunities for access and egress will be provided for early residents, construction workers and emergency vehicles.



Lake Narracan Precinct Structure Plan Plan 5 Biodiversity

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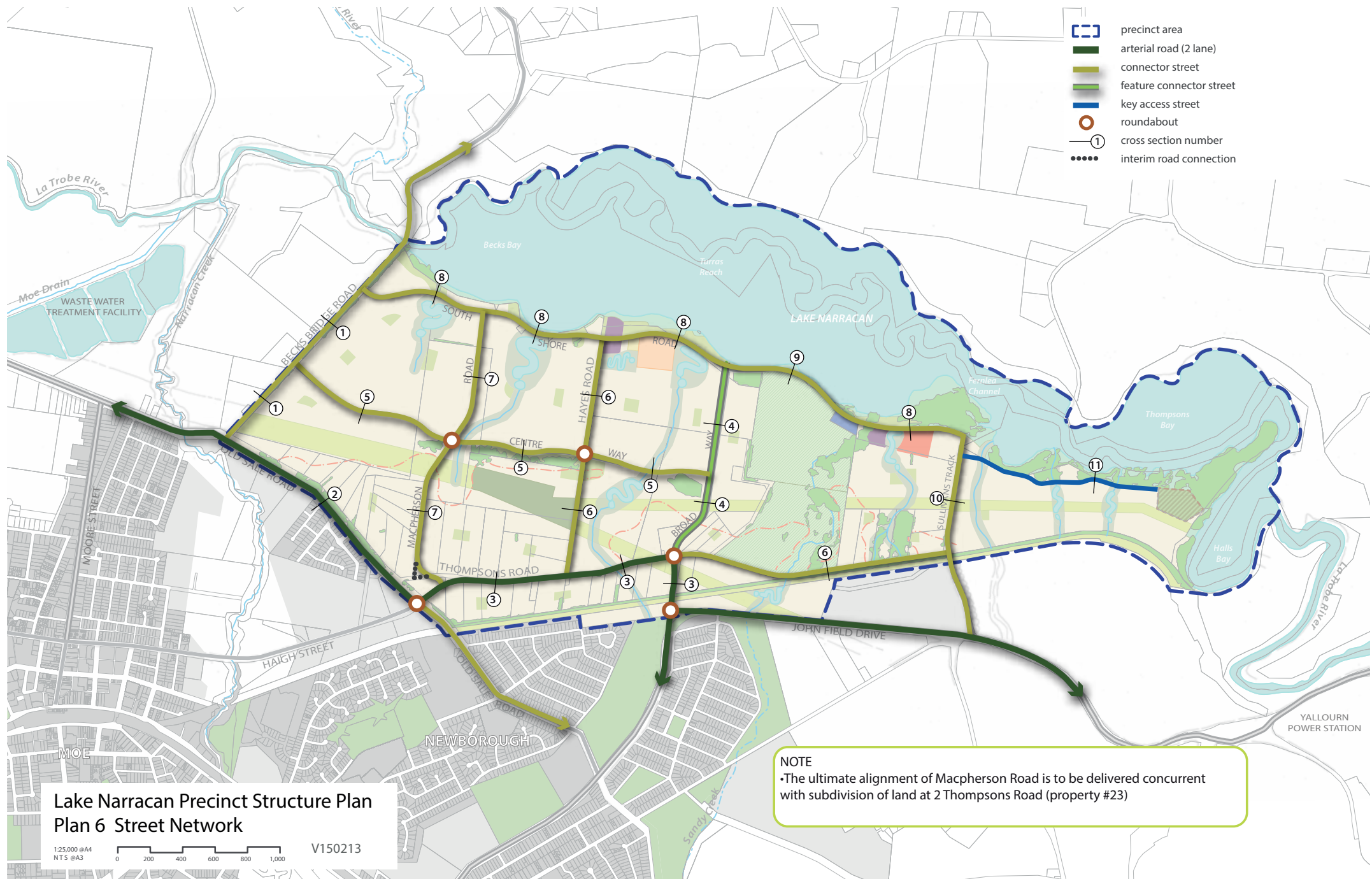
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3.5 Transport & movement

3.5.1 Street Network

REQUIREMENTS	
R26	Subdivision layouts must form a permeable local street network that provides convenient access to local open space and allows for the effective integration with neighbouring properties.
R27	<p>Approximately 30% of local streets (including connector streets) within a subdivision must apply an alternative cross section to the 'standard' cross section for these streets outlined in Appendix C.</p> <p>Examples of potential variations are provided in Appendix D, however others are encouraged including but not limited to:</p> <ul style="list-style-type: none"> • Varied street tree placement, • Varied footpath or carriageway placement, • Introduction of elements to create a boulevard effect, • Varied carriageway or parking bay pavement and • Differing tree outstand treatments <p>For the purposes of this requirement, changes to street tree species between or within streets does not constitute a variation.</p> <p>Alternative cross sections must ensure that:</p> <ul style="list-style-type: none"> • Minimum required carriageway dimensions are maintained to ensure safe and efficient operation of emergency vehicles on all streets as well as buses on connector streets. • The performance characteristics of standard cross sections as they relate to pedestrian and cycle use are maintained. • Relevant minimum road reserve widths for the type of street (illustrated in Appendix C) are maintained, unless otherwise approved by the Responsible Authority.

R28	Where a single street spans across multiple properties, that street may consist of multiple cross sections so long as a suitable transition has been allowed between each section. Where that street has already been constructed or approved for construction to a property boundary, the onus is on the development connecting into that street to adopt a consistent cross-section until that suitable transition can be made.
R29	Convenient and direct access to the connector road network must be provided through neighbouring properties where a property does not otherwise have access to the connector network or controlled access to the arterial road network, as appropriate.
R30	Vehicle access to lots fronting arterial roads must be provided from a service road, local road or rear lane only, to the satisfaction of the coordinating road authority.
R31	Configuration of vehicle access to lots from a public street must ensure that there is sufficient separation between crossovers to allow for a minimum of one on-street car park for every two residential lots.
R32	Vehicle access to a lot that is six metres or less in width must be via rear laneway, unless otherwise approved by the Responsible Authority.
R33	Development must positively address all waterways through the use of frontage roads or lots with a direct frontage, to the Catchment Management Authority and the Responsible Authority.
R34	Any connector road or access street abutting a school must be designed to achieve slow vehicle speeds and provide designated pedestrian crossing points as required by the Responsible Authority.
R35	Subdivision or properties adjacent the Moe Golf Course are to provide road connections to the boundary of the golf course to ensure any future development for the site can integrate with the surrounding road network.



GUIDELINES	
G24	Street layouts should provide multiple convenient routes to major destinations such as the lake foreshore, village centres, holiday park and the arterial road network.
G25	Street block lengths should not exceed 240 metres to ensure a permeable and low speed environment for pedestrians, cyclists and vehicles is achieved.
G26	Cul-de-sacs should only be used where there is no practical alternative and should not detract from convenient pedestrian and vehicular connections.
G27	Slip lanes should be avoided in areas of high pedestrian activity and only be provided at any other intersection between connector roads and arterial roads where they are necessitated by high traffic volumes, to the satisfaction of the coordinating roads authority.
G28	<p>The frequency of vehicular crossovers on widened verges (a verge in excess of six metres) or verges containing retained vegetation should be minimised through the use of a combination of:</p> <ul style="list-style-type: none"> • Rear loaded lots with laneway access. • Vehicular access from the side of a lot. • Combined or grouped crossovers. • Increased lot widths.
G29	Streets should be the primary interface between development and waterways. Public open space and lots with a direct frontage may be provided as a minor component of the waterway interface. Where lots with direct frontage are provided, they should be set back up to 5.0 metres from the waterway corridor to enable pedestrian and service vehicle access, to the satisfaction of the Catchment Management Authority and the Responsible Authority.
CONDITIONS	
C2	<p>Conditions for subdivision or building and works permits where land is required for road widening</p> <p>Land required for road widening including right of way flaring for the ultimate design of any intersection within an existing or proposed local road must be transferred to or vested in Council at no cost to the acquiring agency unless funded by the Lake Narracan Development Contributions Plan.</p>

Table 6 Feature Streets

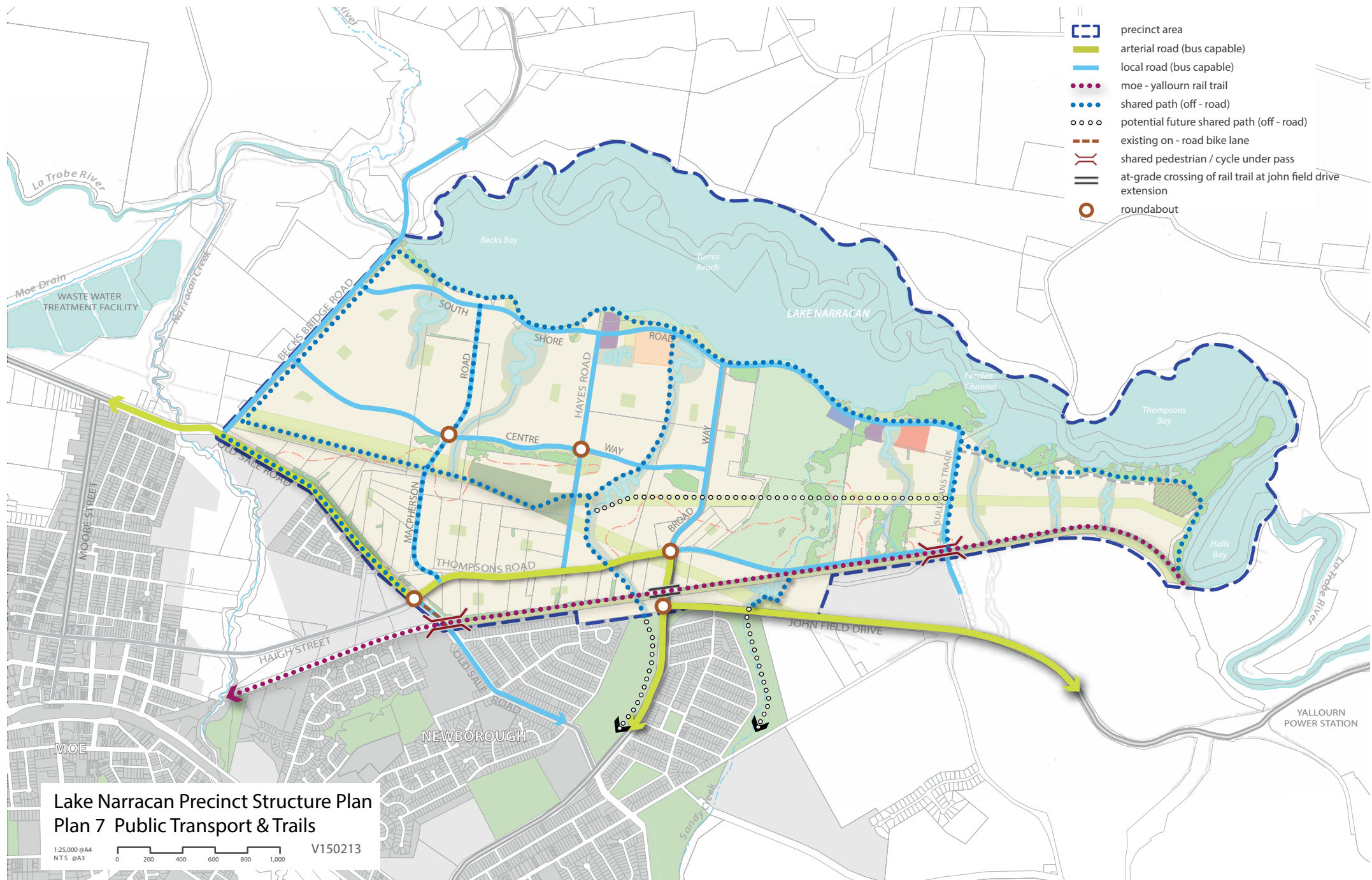
The following table provides an overview of the intended outcomes for the feature streets identified on Plan 6. The form of a relevant feature street in any given subdivision must comply with the description below. Final decisions on planting outcomes may however be made at detailed design stage.

DESCRIPTION	CROSS SECTION	WIDTH	PLANTING
Broad Way (from Thompsons Road to South Shore Road) – connector boulevard with 6.0m wide median. Street to be named 'Broad Way' in reference to a key street in the historic township of Yallourn.	4	27.6m	Large canopy trees

Note: Central east-west connector street shown in Plan 6 is to be named 'Centre Way' also in reference to a key street in the historic township of Yallourn.

3.5.2 Public Transport

REQUIREMENTS	
R36	Any roundabouts on roads shown as 'bus capable' on Plan 7 must be constructed to accommodate ultra-low-floor buses in accordance with the Public Transport Guidelines for Land Use and Development.
R37	Bus stop facilities must be designed as an integral part of village centres and activity generating land uses such as schools and holiday parks.
CONDITIONS	
C3	<p>Unless otherwise agreed by Public Transport Victoria (PTV), prior to the issue of Statement of Compliance for any subdivision stage, bus stop hard stands with direct and safe access to a pedestrian path must be constructed:</p> <ul style="list-style-type: none"> • In accordance with the Public Transport Guidelines for Land Use and Development; and compliant with the Disability Discrimination Act – Disability Standards for Accessible Public Transport 2002. • At locations approved by PTV, at no cost to PTV, and to the satisfaction of PTV.

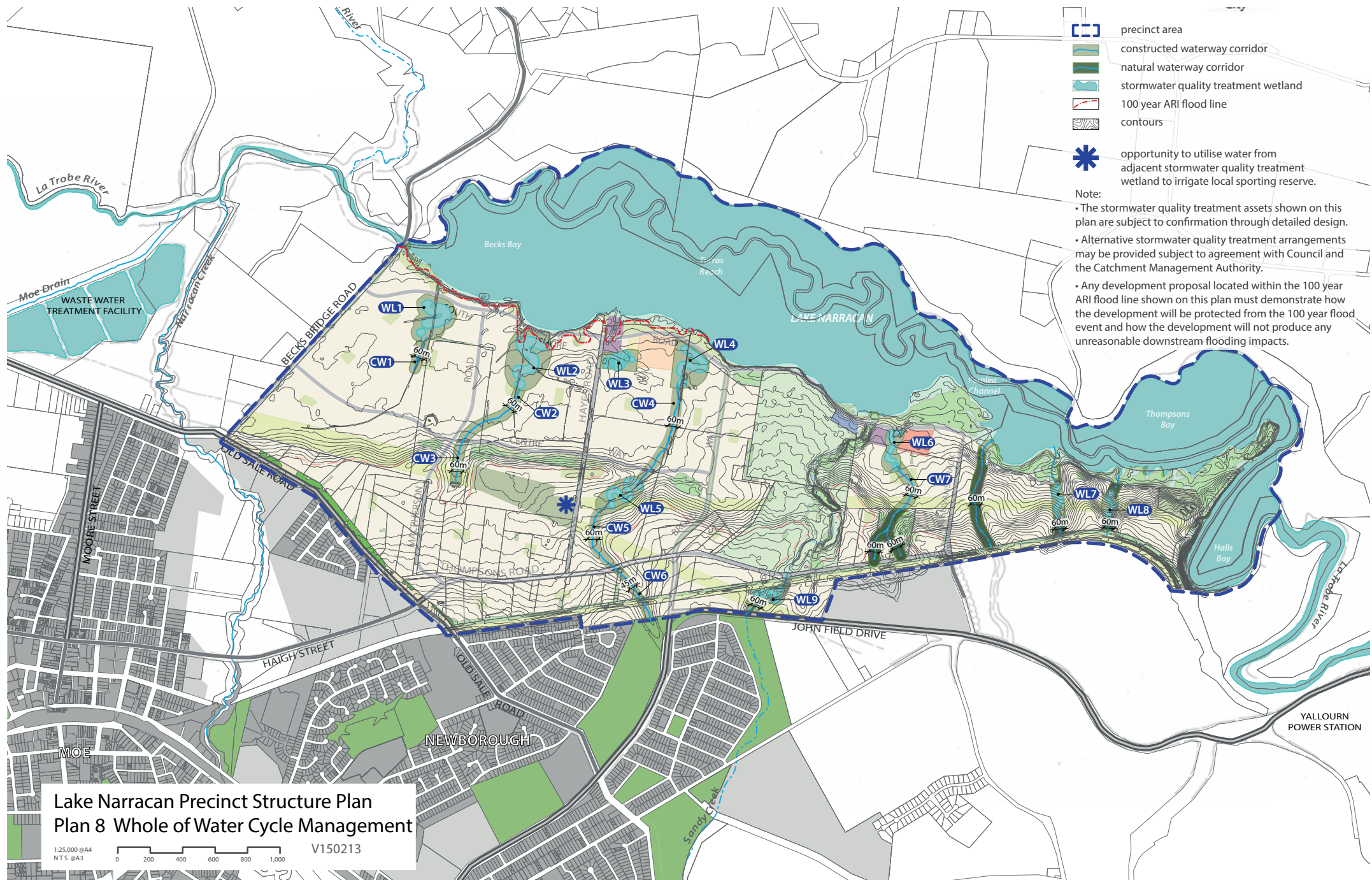


Lake Narracan Precinct Structure Plan Plan 7 Public Transport & Trails

3.5.3 Walking & Cycling

REQUIREMENTS	
R38	<p>Design of all streets and arterial roads must give priority to the requirements of pedestrians and cyclists by providing:</p> <ul style="list-style-type: none"> • Footpaths of at least 1.5 metres on both sides of all streets and roads unless otherwise specified by the PSP. • Shared paths or bicycle paths where shown on Plan 7 or specified by another requirement in the PSP. • Safe and convenient crossing points of connector roads and local streets at all intersections and on key desire lines. • Safe pedestrian crossings of arterial roads at all intersections, at key desire lines, and on regular intervals appropriate to the function of the road and public transport provision. • Pedestrian priority crossings on all slip lanes. • Safe and convenient transition between on and off-road bicycle networks. <p>All to the satisfaction of the coordinating roads authority and the Responsible Authority.</p>
R39	<p>Shared paths shown on Plan 7 adjacent waterways and the lake foreshore must be provided either within a road reserve or within open space.</p>
R40	<p>Shared and pedestrian paths along waterways must:</p> <ul style="list-style-type: none"> • Be delivered by development proponents consistent with the network shown on Plan 7. • Be above 1:10 year flood level with any crossing of the waterway designed to maintain hydraulic function of the waterway. • Be constructed to a standard that satisfies the requirements of the Catchment Management Authority. • Where a shared path is to be delivered on one side of a waterway as outlined in Plan 7, a path is also to be delivered on the other side of the waterway but may be constructed to a lesser standard, such as granitic gravel or similar granular material. <p>All to the satisfaction of the Catchment Management Authority and the Responsible Authority.</p>

R41	Bicycle parking facilities must be provided by development proponents in convenient locations at key destinations such as parks and village centres.
R42	Bicycle priority at intersections of minor streets and connector roads with dedicated off-road bicycle paths must be achieved through strong and consistent visual and physical cues and supportive directional and associated road signs.
GUIDELINES	
G30	Lighting should be installed along shared, pedestrian, and cycle paths linking key destinations, unless otherwise approved by the Responsible Authority.



Lake Narracan Precinct Structure Plan Plan 8 Whole of Water Cycle Management

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3.6 Whole of Water Cycle Management & Utilities

3.6.1 Whole Water Cycle Management

REQUIREMENTS	
R43	Consistent with Clause 56.01-2 and Clause 56.07 of the Latrobe Planning Scheme, VPP Practice Note 39, and any requirements and guidelines in this PSP, a subdivision application of 60 or more lots must include a Whole of Water Cycle Management Plan.
R44	Development must meet or exceed best practice stormwater quality treatment standards prior to discharge to receiving waterways as outlined on Plan 8, unless otherwise approved by Catchment Management Authority and the Responsible Authority.
R45	<p>Where a waterway is shown as 'natural' on Plan 8, development works must:</p> <ul style="list-style-type: none"> Not encroach past the waterway corridor defined in this PSP, unless otherwise agreed by the Catchment Management Authority and the Responsible Authority. Minimise earthworks and impact on the existing landform of the waterway. Retain and enhance existing vegetation as part of waterway landscaping. <p>All to the satisfaction of the Catchment Management Authority and the Responsible Authority.</p>
R46	Final design and boundary of constructed waterways, waterway corridors, stormwater quality treatment infrastructure, and associated paths, boardwalks, bridges, and planting, must be consistent with Plan 8 unless otherwise approved by the Catchment Management Authority and the Responsible Authority.
R47	Development staging must provide for the delivery of ultimate waterway and drainage infrastructure, including stormwater quality treatment. Where this is not possible, development proposals must demonstrate how any interim solution adequately manages and treats stormwater generated from the development and how this will enable delivery of an ultimate drainage solution, all to the satisfaction of Catchment Management Authority and the Responsible Authority.

R48	<p>Subdivision applications must demonstrate how:</p> <ul style="list-style-type: none"> Waterways and whole of water cycle management design enables land to be used for multiple recreation and environmental purposes. Overland flow paths and piping within road reserves must be connected and integrated across property / parcel boundaries. Catchment Management Authority freeboard requirements for overland flow paths must be adequately contained within road reserves.
GUIDELINES	
G31	The design and layout of roads, road reserves, and public open space should optimise water use efficiency and long-term viability of vegetation and public uses through the use of WSUD initiatives.
G32	Where practical, development should include whole of water cycle management initiatives to reduce reliance on potable water and increase the utilisation of storm and waste water, contributing to a sustainable and green urban environment.
G33	Development should have regard to relevant policies and strategies being implemented by the Responsible Authority, Catchment Management Authority and Gippsland Water, including any approved Whole of Water Cycle / Integrated Water Management Plan.
G34	<p>Where practical, whole of water cycle management systems should be designed to:</p> <ul style="list-style-type: none"> Maximise habitat values for local flora and fauna species by using indigenous species of local provenance. Enable future harvesting and/or treatment and re-use of stormwater, including those options or opportunities outlined in Plan 8.
G35	Where practical, and where primary waterway, conservation or recreation functions are not adversely affected, land required for whole of water cycle management initiatives (such as stormwater harvesting, aquifer storage and recharge or sewer mining) should be incorporated within the precinct open space system as depicted on Plan 4, to the satisfaction of the Responsible Authority.

Table 7 Drainage Assets

The stormwater quality treatment areas and waterway corridor widths identified in this table are subject to change during detailed design, to the satisfaction of the Catchment Management Authority and the Responsible Authority.

ID	DESCRIPTION	LOCATION	AREA/WIDTHS
WL-01	Stormwater quality treatment wetland	As shown on Plan 8	4.9Ha
WL-02	Stormwater quality treatment wetland	As shown on Plan 8	6.5Ha
WL-03	Stormwater quality treatment wetland	As shown on Plan 8	2.0Ha
WL-04	Stormwater quality treatment wetland	As shown on Plan 8	4.1Ha
WL-05	Stormwater quality treatment wetland	As shown on Plan 8	3.3Ha
WL-06	Stormwater quality treatment wetland	As shown on Plan 8	2.0Ha
WL-07	Stormwater quality treatment wetland	As shown on Plan 8	1.3Ha
WL-08	Stormwater quality treatment wetland	As shown on Plan 8	1.3Ha
WL-09	Stormwater quality treatment wetland	As shown on Plan 8	1.5Ha
CW-01	Constructed waterway corridor	As shown on Plan 8	60m
CW-02	Constructed waterway corridor	As shown on Plan 8	60m
CW-03	Constructed waterway corridor	As shown on Plan 8	60m
CW-04	Constructed waterway corridor	As shown on Plan 8	60m
CW-05	Constructed waterway corridor	As shown on Plan 8	60m
CW-06	Constructed waterway corridor	As shown on Plan 8	45m
CW-07	Constructed waterway corridor	As shown on Plan 8	60m

3.6.2 Utilities

REQUIREMENTS	
	<p>Before development commences on a property, functional layout plans must be submitted of the road network showing the location of all:</p> <ul style="list-style-type: none"> • Underground services • Driveways/crossovers • Street lights • Street trees
R49	<p>A typical cross section of each street must be submitted showing above and below ground placement of services, street lights and trees.</p> <p>The plans and cross sections must demonstrate how services, driveways and street lights will be placed so as to achieve the road reserve width (consistent with the road cross sections outlined in this PSP) and accommodate the minimum level of street tree planting (as outlined in this PSP). If required, the plan and cross sections will nominate which services will be placed under footpaths or road pavement. The plans and cross sections are to be approved by the Responsible Authority and all relevant service authorities before development commences.</p>
R50	<p>Delivery of underground services must be coordinated, located, and bundled (utilising common trenching) to facilitate the planting of trees and other vegetation within road verges.</p>
R51	<p>All existing above ground electricity cables of less than 66kv voltage must be placed underground as part of the upgrade of existing roads.</p>
R52	<p>All new electricity supply infrastructure (excluding substations and cables of a voltage of 66kv or greater) must be provided underground.</p>
R53	<p>Where existing above ground electricity cables of 66kv voltage are retained along road ways, underground conduits are to be provided as part of the upgrade of these roads to allow for future undergrounding of the electricity supply.</p>

R54	Above-ground utilities must be identified at the subdivision design stage to ensure effective integration with the surrounding neighbourhood and to minimise amenity impacts, and be designed to the satisfaction of the relevant authority. Where that infrastructure is intended to be located in public open space, the land required to accommodate that infrastructure will not be counted as contributing to open space requirements classified under Clause 52.01 or within the Lake Narracan DCP.
R55	Utilities must be placed outside of natural waterway corridors or on the outer edges of these corridors to avoid disturbance to existing native vegetation, significant landform features (eg rock outcrops) and heritage sites, to the satisfaction of Catchment Management Authority and the Responsible Authority.
R56	Any road crossings, pathways, wetlands, constructed waterways or open space proposed to be located within an electricity easement must be to the satisfaction of Ausnet Services.
GUIDELINES	
G36	Above-ground utilities should be located outside of key view lines and screened with vegetation, as appropriate.
G37	Design and placement of underground services in new or upgraded streets should utilise the service placement guidelines outlined in Appendix E.
G38	Utility easements to the rear of lots should only be provided where there is no practical alternative.

3.7 Infrastructure delivery & staging

3.7.1 Subdivision Works by Developers

REQUIREMENTS	
R57	<p>Subdivision of land within the precinct must provide and meet the total cost of delivering the following infrastructure (unless funded by the DCP):</p> <ul style="list-style-type: none"> • Local streets (including connector streets). • Bus stop infrastructure (as agreed by Public Transport Victoria). • Landscaping of all existing and future roads and local streets. • Intersection works and traffic management measures (including interim roads if required by Council) along arterial roads, connector streets, and local streets. • Council approved fencing and landscaping (where required) along arterial roads. • Local shared, pedestrian and bicycle paths along local arterial roads, connector roads, local streets, waterways and within local parks including bridges, intersections, and barrier crossing points. • Bicycle parking as required in this document. • Appropriately scaled lighting along all roads, major shared and pedestrian paths, and traversing public open space. • Basic improvements to local parks and open space. • Local drainage system. • Local street or pedestrian path crossings of waterways unless included in the DCP or outlined as the responsibility of another agency in the Precinct Infrastructure Plan. • Infrastructure as required by utility service providers including water, sewerage, drainage, electricity, gas, and telecommunications.

R58	<p>All public open space (where not otherwise provided via the DCP) must be finished to a standard that satisfies the requirements of the Responsible Authority prior to the transfer of the public open space, including but not limited to:</p> <ul style="list-style-type: none"> • Removal of all existing and disused structures, foundations, pipelines, and stockpiles. • Clearing of rubbish and weeds, levelled, topsoiled and grassed (unless conservation reserve requirements dictate otherwise). • Provision of water tapping, potable and recycled water connection points. Sewer, gas, and electricity connection points must also be provided to land identified as a district-level open space. • Provision of vehicular exclusion devices (fence, bollards, or other suitable method) and maintenance access points where necessary. • Fencing of allotment boundaries which abut open space.
R59	<p>Any heritage site or conservation area to be vested in the relevant authority must be done so in a standard that satisfies the requirements of that authority. Works required prior to the transfer include, but may not be limited to:</p> <ul style="list-style-type: none"> • Clearing of rubbish and weeds. • Essential repairs to and stabilisation of any structures. • Any fencing required to ensure the safety of the public. <p>Any works carried out must be consistent with any relevant Cultural Heritage Management Plan and Conservation Management Plan.</p>

3.7.2 Provisions of Passive Open Space (Local Parks)

REQUIREMENTS

R60	<p>With respect to the public open space contribution required by Clause 52.01 of the Latrobe Planning Scheme, this provision sets out the amount of land to be contributed by each property in the precinct and consequently where a cash contribution is required in lieu of land.</p> <p>All land owners must provide a public open space contribution equal to 5.29% of the Net Developable Area (NDA) upon subdivision of land in accordance with the following:</p> <ul style="list-style-type: none"> • Where land is required for unencumbered local parks as show on Plan 9 and specified in Table 10 and is equal to 5.29% of NDA that land is to be transferred to Council at no cost. • Where no land or less than 5.29% of NDA is shown on Plan 9 and specified in Table 10, as required for unencumbered local parks a cash contribution is to be made to Council to bring the total open space contribution to a value equal to 5.29% of NDA of that site. • Where land required for unencumbered local parks as shown on Plan 9 and specified in Table 10 is more than 5.29% of NDA, Council will pay an amount equivalent to the value of the additional land being provided by that proposed development. <p>The value of land for equalisation purposes is to be assessed as an equivalent proportion of the value of the whole of the land, in accordance with Section 18 of the <i>Subdivision Act</i> 1988.</p>
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3.7.3 Development Staging

REQUIREMENTS	
R61	<p>Development staging must provide for the timely provision and delivery of:</p> <ul style="list-style-type: none"> • Arterial road reservations. • Connector streets and connector waterway crossings. • Street links between properties, constructed to the property boundary. • Connection of the on- and off-road pedestrian and bicycle network.
R62	<p>Streets must be constructed to property boundaries where an inter-parcel connection is intended or indicated in the PSP, by any date or stage of development required or approved by the Responsible Authority.</p>
R63	<p>The design of road and intersection projects must be to the approval of the coordinating road authority.</p>
GUIDELINES	
G39	<p>Staging will be determined largely by the development proposals on land within the precinct and the availability of infrastructure services. Within this context, the following should be achieved:</p> <ul style="list-style-type: none"> • Development staging should, to the extent practicable, be integrated with adjoining developments through the timely provision of connecting roads and walking/cycling paths. • Where development does not directly adjoin the urban edge, local open space should be provided in the early stages to provide new residents with amenity. • Access to each new lot must be via a sealed road.

3.7.4 Precinct Infrastructure Plan

The Precinct Infrastructure Plan(PIP) at Table 8 sets out the infrastructure and services required to meet the needs of proposed development within the precinct. The infrastructure items and services are to be provided through a number of mechanisms including:

- Subdivision construction works by developers.
- Agreement under Section 173 of the Act.
- Utility service provider requirements.
- The Lake Narracan Development Contributions Plan.
- Relevant development contributions from adjoining areas.
- Capital works projects by Council, State government agencies and non-government organisations.
- Works In Kind (WIK) projects undertaken by developers on behalf of Council or State government agencies.

Table 8 Precinct Infrastructure Plan

TITLE	DESCRIPTION	DELIVERY	TIMING
Intersection Projects			
Land for connector road intersections	Provision of land for connector road intersections (beyond existing road reserves)	Developer works	S-M
Land for connector road intersections on property #38 and 48	Provision of land for connector road intersections (beyond existing road reserves)	DCP	L
Land for arterial road intersections	Provision of land for arterial road intersections (beyond existing road reserves)	DCP	S-M
Intersection of South Shore Road and Becks Bridge Road	Construction of unsignalised T intersection	Developer works	M
Intersection of South Shore Road and Macpherson Road extension	Construction of unsignalised T intersection	Developer works	M
Intersection of South Shore Road and Hayes Road	Construction of unsignalised T intersection	Developer works	M
Intersection of South Shore Road and Broad Way	Construction of unsignalised T intersection	Developer works	M
Intersection of South Shore Road and Sullivans Track	Construction of unsignalised 2-way intersection	Developer works	M
Intersection of Centre Way and Becks Bridge Road	Construction of unsignalised T intersection	Developer works	M
Intersection of Centre Way and Macpherson Road extension	Construction of unsignalised 4-way intersection	Developer works	M
Intersection of Centre Way and Hayes Road	Construction of unsignalised 4-way intersection	Developer works	M
Intersection of Centre Way and Broad Way	Construction of unsignalised T intersection	Developer works	M
Intersection of Sullivans Track and local access level 2 road	Construction of unsignalised T intersection	Developer works	M
Intersection of Becks Bridge Road and Old Sale Road	Construction of unsignalised T intersection	DCP	M
Intersection of Thompsons Road, Old Sale Road and Haigh Street	Construction of unsignalised 4-way intersection	DCP	L
Intersection of Thompsons Road and Macpherson Road	Construction of unsignalised T intersection	DCP	L
Intersection of Thompsons Road and Hayes Road	Construction of unsignalised T intersection	DCP	L
Intersection of Thompsons Road and Broad Way	Construction of unsignalised 4-way intersection	DCP	L
Intersection of Thompsons Road and Sullivans Track	Construction of unsignalised T intersection	DCP	S
Intersection of John Field Drive and Broad Way	Construction of unsignalised T intersection	DCP	L
Intersection of John Field Drive and Old Sale Road	Upgrade of existing signalised intersection	DCP & VicRoads	M-L

TITLE	DESCRIPTION	DELIVERY	TIMING
Road Projects			
Land for connector roads	Provision of land for connector roads (beyond existing road reserves)	Developer works	S-M
Land for connector roads on property #23, 36, 38 and 48	Provision of land for connector roads (beyond existing road reserves)	DCP	L
Land for arterial roads	Provision of land for arterial roads (beyond existing road reserves)	DCP	S-M
South Shore Road (Becks Bridge Road to Macpherson Road extension)	Construction of 2 lane connector road	Developer works	M
South Shore Road (Macpherson Road extension to Hayes Road)	Construction of 2 lane connector road	Developer works	M
South Shore Road (Hayes Road to Golf Club western boundary)	Construction of 2 lane connector road	Developer works	M
South Shore Road (adjacent Golf Club)	Construction of 2 lane connector road	DCP	M
South Shore Road (Golf Club eastern boundary to Sullivans Track)	Construction of 2 lane connector road	Developer works	M
Centre Way (Becks Bridge Road to Macpherson Road extension)	Construction of 2 lane connector road	Developer works	M
Centre Way (Macpherson Road extension to Hayes Road)	Construction of 2 lane connector road	Developer works	M
Centre Way (Hayes Road to Broad Way)	Construction of 2 lane connector road	Developer works	M
Macpherson Road extension (South Shore Road to existing Macpherson Road reserve)	Construction of 2 lane connector road	Developer works	M
Macpherson Road extension (existing Macpherson Road reserve to Thompsons Road)	Construction of 2 lane connector road	DCP	L
Hayes Road (South Shore Road to Centre Way)	Construction of 2 lane connector road	Developer works	S
Hayes Road (Centre Way to Thompsons Road)	Construction of 2 lane connector road	Developer works	S
Broad Way (South Shore Road to Property #36 boundary)	Construction of 2 lane connector boulevard	Developer works	M
Broad Way (Property #36 and 38)	Construction of 2 lane connector boulevard	DCP	L
John Field Drive extension (Property #62 and 66)	Construction of 2 lane arterial boulevard	DCP	L
Sullivans Track (South Shore Road to Thompsons Road)	Construction of 2 lane connector road	Developer works	S
Thompsons Road (Old Sale Road to Macpherson Road)	Construction of 4 lane arterial road	DCP	L
Thompsons Road (Macpherson Road to Hayes Road)	Construction of 2 lane arterial boulevard	DCP	L
Thompsons Road (Hayes Road to Broad Way)	Construction of 2 lane arterial boulevard	DCP	L
Thompsons Road (Broad Way to Sullivans Track)	Construction of 2 lane connector road	DCP	L

TITLE	DESCRIPTION	DELIVERY	TIMING
Culvert projects			
South Shore Road (between Becks Bridge Road and Macpherson Road extension)	Construction of basic culvert crossing of waterway	Developer works	M
South Shore Road (between Macpherson Road extension and Hayes Road)	Construction of basic culvert crossing of waterway	Developer works	M
South Shore Road (between Hayes Road and Broad Way)	Construction of basic culvert crossing of waterway	Developer works	M
South Shore Road (at Golf Club eastern boundary)	Construction of basic culvert crossing of waterway	Developer works	M
South Shore Road (between Golf Club eastern boundary and Sullivans Track)	Construction of basic culvert crossing of waterway	Developer works	M
Centre Way (between Macpherson Road extension and Hayes Road)	Construction of basic culvert crossing of waterway	Developer works	M
Centre Way (between Hayes Road and Broad Way)	Construction of basic culvert crossing of waterway	Developer works	M
Thompsons Road (between Hayes Road to Broad Way)	Construction of basic culvert crossing of waterway	DCP	L
Thompsons Road (between Broad Way and Golf Club eastern boundary)	Construction of basic culvert crossing of waterway	DCP	L
Thompsons Road (between Golf Club eastern boundary and Sullivans Track)	Construction of 2 x basic culvert crossings of waterway	DCP	L
Recreation Projects			
Sporting reserve facilities	Construction of sporting reserve facilities	DCP	M
Shared path network	Construction of off-road shared paths	Developer works	M
Foreshore environmental improvements	Construction of weed management and bank stabilisation	DCP & Council	M
Boardwalks	Construction of boardwalk in Becks Bay delta area	Council	M

TITLE	DESCRIPTION	DELIVERY	TIMING
Community Projects			
Turras Reach Community Centre	Land and construction of community centre	DCP	M
Lake Narracan user groups	Relocation of user groups and improvements to facilities	DCP & Council	M
Turras Reach Government Primary School	Land and construction of school	DET	L
Drainage Projects			
Land for waterway corridors	Provision of land for natural and constructed waterways	Developer works	S-L
Land for stormwater quality treatment wetlands	Provision of land for wetlands (beyond waterway corridors)	DCP	S-L
Constructed waterways	Construction of waterways and associated landscaping	DCP	S-L
Stormwater quality treatment wetlands	Construction of stormwater quality treatment wetlands	DCP	S-L
Other infrastructure			
Delivery of bus services	Bus services to and within the precinct	PTV	L

DCP = Funded by Lake Narracan Development Contributions Plan, delivered by Council or as Works in Kind by developers/land owners

Developer works = Funded by land owners/developers and delivered as part of subdivision works

Council = Funded and delivered by Latrobe City Council

VicRoads = Funded and delivered by VicRoads

DET = Funded and delivered by Department of Education and Training

PTV = Public Transport Victoria

Project timing indication: S = 0-5 years, M = 5-10 years, L= 10 years+



Lake Narracan Precinct Structure Plan Plan 9 Land Use Budget

1:25,000 @A4
NTS @A3

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4.0 APPENDICES

4.1 APPENDIX A - Land Budget

The Net Developable Area (NDA) is established by deducting the land requirements for community facilities, public and private education facilities, arterial and connector roads, and open space from the Gross Developable Area (GDA). The NDA for the Lake Narracan Precinct is 338 hectares which equates to approximately 37% of the PSP area.

The land budget shows that the PSP will yield approximately 3,723 lots with an average density of approximately 11 dwellings per Net Developable Hectare.

An average household size of 2.4 persons for conventional density housing (based on Victoria in Future 2012), is used to estimate the future population of the PSP area. On this basis the future population of the PSP is estimated at approximately 8,935 residents.

The PSP is also expected to yield more than 336 jobs for future residents.

See Plan 9: Land Use Budget, Table 9 Summary Land Use Budget and Table 10 Property Specific land Use Budget.

Notes:

- The detailed land budget included in this Appendix clearly sets out the NDA for every property included in the PSP. The NDA will not be amended to respond to minor changes to land budgets that may result from the subdivision process, unless agreed to by Responsible Authority.
- The land budget has been prepared to reflect current advice on land required for drainage assets as part of the preparation of the Lake Narracan Development Contributions Plan. The land required for drainage assets may be subject to minor refinement through the subdivision process.
- The land budget has been prepared to allow for best practice water quality treatment. Alternative water quality treatment solutions may be possible, subject to the approval of the Catchment Management Authority and the Responsible Authority.

Table 9 Summary Land Use Budget

DESCRIPTION	HECTARES	% OF PRECINCT	% OF NDA
TOTAL PRECINCT AREA (ha)	908.93	100%	
TRANSPORT			
Arterial Road widening / realignment	3.20	0.35%	0.95%
Existing road reserves	20.12	2.21%	5.96%
SUB-TOTAL	23.31	2.56%	6.90%
OPEN SPACE			
ENCUMBERED LAND AVAILABLE FOR RECREATION			
Lake Narracan*	305.30	33.59%	90.42%
Foreshore open space	14.78	1.63%	4.38%
Waterways & drainage	46.52	5.12%	13.78%
Conservation / native vegetation retention	54.76	6.02%	16.22%
Existing native vegetation reserve	3.11	0.34%	0.92%
Electricity easements	43.40	4.78%	12.85%
Moe - Yallourn Rail Trail reserve	10.27	1.13%	3.04%
Moe Golf Course	46.65	5.13%	13.82%
Existing Naval Cadets	0.91	0.10%	0.27%
SUB-TOTAL	525.69	57.84%	155.69%
UNENCUMBERED LAND AVAILABLE FOR RECREATION			
Local sporting reserves	0.50	0.06%	0.15%
Local parks	17.87	1.97%	5.29%
SUB-TOTAL	18.37	2.02%	5.44%
SUB-TOTAL ALL OPEN SPACE	544.06	59.86%	161.13%
EDUCATION & COMMUNITY			
Schools - government	3.50	0.39%	1.04%
Community centres	0.40	0.04%	0.12%
SUB-TOTAL	3.90	0.43%	1.16%
TOTAL	571.28	62.85%	169.19%

TOTAL NET DEVELOPABLE AREA (NDA) Ha	337.66	37.15%	100.00%
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* Area occupied by lake water body at normal water level

DESCRIPTION	HECTARES	DWELL/Ha	DWELLINGS
RESIDENTIAL & VILLAGE CENTRES			
Village centres	2.10	15.00	31
Residential	335.56	11.00	3691
TOTAL AGAINST NET DEVELOPABLE AREA (NDA)	337.66	11.02	3723

Table 10 Property-specific Land Use Budget

		Transport		Encumbered Land Available for Recreation									Unencumbered Land Available for Recreation		Education & Community		Total Net Developable Area (Hectares)
PSP Property ID	TOTAL AREA (Ha)	Arterial Road widening / realignment	Existing road reserves	Lake Narracan*	Foreshore open space	Waterways & drainage	Conservation / native vegetation retention	Existing native vegetation reserve	Electricity easements	Moe - Yallourn Rail Trail reserve	Moe Golf Course	Existing Naval Cadets	Local sporting reserves	Local parks	Schools - government	Community centres	
PROPERTIES																	
1	68.948					3.401	0.298		11.380					2.538			51.331
2	28.050					2.351	0.755		3.024					0.582			21.338
3	51.487					10.451	2.253							3.670			35.113
4	0.766				0.135												0.632
5	37.665					7.274								2.009	3.500	0.400	24.482
6	28.056						2.210				25.847						0.000
7	18.218					2.806	0.459		3.022					0.550			11.381
8	44.394					6.787	1.073		5.922					0.230			30.382
9	3.255						0.142	3.113									0.000
10	1.849																1.849
11	1.861																1.861
12	1.866																1.866
13	1.850						0.060										1.790
14	1.908																1.908
15	2.023						0.073										1.950
16	2.053													0.142			1.911
17	2.046																2.046
18	2.016																2.016
19	2.004													0.134			1.869
20	2.311						0.039							0.114			2.158
21	2.223																2.223
22	2.288																2.288
23	4.394	0.208															4.186
24	4.438													0.292			4.147
25	4.133	0.003												0.222			3.908
26	4.221	0.039															4.182
27	17.049						0.478		7.975				0.500	0.600			7.496

		Transport		Encumbered Land Available for Recreation									Unencumbered Land Available for Recreation		Education & Community		Total Net Developable Area (Hectares)
PSP Property ID	TOTAL AREA (Ha)	Arterial Road widening / realignment	Existing road reserves	Lake Narracan*	Foreshore open space	Waterways & drainage	Conservation / native vegetation retention	Existing native vegetation reserve	Electricity easements	Moe - Yallourn Rail Trail reserve	Moe Golf Course	Existing Naval Cadets	Local sporting reserves	Local parks	Schools - government	Community centres	
PROPERTIES																	
28	4.010								0.492								3.518
29	4.076	0.061					0.063							0.229			3.723
30	2.212													0.136			2.076
31	2.009	0.082												0.035			1.892
32	31.175	0.069				6.878			3.389					1.271			19.568
33	25.696	0.062				0.517	1.440		4.175					0.200			19.303
34	0.629																0.629
35	1.626																1.626
36	1.948	0.456															1.492
37	0.045	0.006															0.039
38	1.435	0.197															1.238
39	1.235	0.002												0.150			1.083
40	1.205													0.150			1.055
41	23.769						2.961				20.808						0.000
42	2.839																2.839
43	2.842					0.270	0.096							0.317			2.159
44	2.599					0.807	1.194										0.598
45	2.636					0.218	2.192										0.227
46	2.262						0.063										2.199
47	2.405						0.138							0.248			2.019
48	2.412	0.632					0.069										1.711
49	2.340	0.203					0.146										1.991
50	2.205	0.032					0.158							0.205			1.811
51	3.246						0.192							0.196			2.859
52	2.012						0.122										1.891
53	0.396																0.396
54	2.628						0.124							0.223			2.281

		Transport		Encumbered Land Available for Recreation									Unencumbered Land Available for Recreation		Education & Community		Total Net Developable Area (Hectares)
PSP Property ID	TOTAL AREA (Ha)	Arterial Road widening / realignment	Existing road reserves	Lake Narracan*	Foreshore open space	Waterways & drainage	Conservation / native vegetation retention	Existing native vegetation reserve	Electricity easements	Moe - Yallourn Rail Trail reserve	Moe Golf Course	Existing Naval Cadets	Local sporting reserves	Local parks	Schools - government	Community centres	
PROPERTIES																	
55	4.010								0.492								3.518
56	4.076	0.061					0.063							0.229			3.723
57	2.212													0.136			2.076
58	2.009	0.082												0.035			1.892
59	31.175	0.069				6.878			3.389					1.271			19.568
60	25.696	0.062				0.517	1.440		4.175					0.200			19.303
61	0.629																0.629
62	1.626																1.626
63	1.948	0.456															1.492
64	0.045	0.006															0.039
65	1.435	0.197															1.238
66	1.235	0.002												0.150			1.083
67	1.205													0.150			1.055
68	23.769						2.961				20.808						0.000
69	2.839																2.839
70	2.842					0.270	0.096							0.317			2.159
71	2.599					0.807	1.194										0.598
72	2.636					0.218	2.192										0.227
73	2.262						0.063										2.199
74	2.405						0.138							0.248			2.019
75	2.412	0.632					0.069										1.711
76	2.340	0.203					0.146										1.991
77	2.205	0.032					0.158							0.205			1.811
78	3.246						0.192							0.196			2.859
79	2.012						0.122										1.891
80	0.396																0.396
81	2.628						0.124							0.223			2.281

		Transport		Encumbered Land Available for Recreation									Unencumbered Land Available for Recreation		Education & Community		Total Net Developable Area (Hectares)
PSP Property ID	TOTAL AREA (Ha)	Arterial Road widening / realignment	Existing road reserves	Lake Narracan*	Foreshore open space	Waterways & drainage	Conservation / native vegetation retention	Existing native vegetation reserve	Electricity easements	Moe - Yallourn Rail Trail reserve	Moe Golf Course	Existing Naval Cadets	Local sporting reserves	Local parks	Schools - government	Community centres	
PROPERTIES																	
82	0.692			0.692													0.000
83	26.280			26.280													0.000
84	8.642			8.642													0.000
85	0.054			0.054													0.000
SUB-TOTAL	881.815	3.197	0.000	305.295	14.780	46.436	48.739	3.113	43.405	10.266	46.655	0.906	0.500	17.761	3.500	0.400	336.863

ROAD RESERVES																	
BECKS BRIDGE ROAD	2.843		1.039				1.804										0.000
OLD SALE ROAD	10.142		6.968				3.174										0.000
THOMPSONS ROAD	6.555		5.955				0.017										0.583
HAYES ROAD	3.093		2.803				0.183							0.107			0.000
SULLIVANS TRACK	1.200		0.989				0.211										0.000
MACPHERSON ROAD	1.096		0.969														0.127
LINKS ROAD	1.835		1.393				0.442										0.000
R1	0.354					0.084	0.187										0.083
SUB-TOTAL	27.117	0.000	20.116	0.000	0.000	0.084	6.017	0.000	0.000	0.000	0.000	0.000	0.000	0.107	0.000	0.000	0.794
PSP-TOTAL	908.933	3.197	20.116	305.295	14.780	46.519	54.756	3.113	43.405	10.266	46.655	0.906	0.500	17.868	3.500	0.400	337.657

* Area occupied by lake water body at normal water level

4.2 APPENDIX B - Village Centre Design Principles

LOCAL TOWN CENTRES

<p>Principle 1</p> <p>Locate Village Centres in attractive settings and as the focus of the surrounding neighbourhood.</p>	<p>PERFORMANCE CRITERIA</p> <ul style="list-style-type: none"> • Locate Village Centres in attractive settings and incorporate natural or cultural landscape features such creeks and waterways, linear open space, pedestrian and cycle links and areas of high aesthetic value. • The design of the Village Centre should respect existing views and vistas to and from the Village Centre location.
<p>Principle 2</p> <p>Focus on a public space as the centre of community life.</p>	<p>PERFORMANCE CRITERIA</p> <ul style="list-style-type: none"> • A public space which acts as the central meeting place within the Village Centre must be provided. This public space may take the form of a civic square, town park, foreshore park, public plaza space, public market place or a similar locally responsive option. • The public space should be located in a position where the key uses of the Village Centre are directly focuses on this public space to ensure that it is a dynamic and activated space. • The public space should be designed to function as the identifiable 'centre' or 'heart' with a distinctive local character for both the Village Centre and the broader residential catchment. • The public space should be designed as a flexible and adaptable space so that a range of uses can occur within this space at any one time. Such uses may include people accessing their daily shopping and business needs as well as providing a space where social interaction, relaxation, celebrations and temporary uses (such as stalls, exhibitions and markets) can occur. • The public space should be well integrated with pedestrian and cycle links around and through the Village Centre. • The main public space or town square within the Village Centre should have a minimum area of 500sq m. Smaller public spaces which are integrated within the built form design, are surrounded by active frontages and facilitate high levels of pedestrian movement are also encouraged. • Footpath widths within and around the public space as well as along the main street should be sufficient to provide for pedestrian and mobility access as well as provide for outdoor dining and smaller gathering spaces.
<p>Principle 3</p> <p>Provide a range of retail, local community and other facilities within Village Centres.</p>	<p>PERFORMANCE CRITERIA</p> <ul style="list-style-type: none"> • Land uses should be located generally in accordance with the locations and general land use terms identified in Figure 1 and 2. • The design of the Village Centre should facilitate development with a high degree of community interaction and provide a vibrant and viable mix of retail, recreation and community facilities. • The design of the Village Centre should encourage a pattern of smaller scale individual tenancies and land ownership patterns to attract investment and encourage greater diversity and opportunities for local businesses. • Active building frontages should address the main street and town square to maximise exposure to passing trade, and promote pedestrian interaction. • Shop fronts should have varying widths and floor space areas to promote a diversity of trading opportunities throughout the Village Centre. • Flexible floor spaces (including floor to ceiling heights) should be incorporated into building design to enable localised commercial uses to locate amongst the activity of the Village Centre. • Childcare, medical centres and specialised accommodation (e.g. aged care/nursing home, student accommodation, and serviced apartments) should be located within the Village Centre and at the edge of the Village Centre to contribute to the activity of the centre and so these uses are close to the services offered by the centre. • Car parking areas should be located centrally to the site and to the rear and or side of street based retail frontages. • Car parking areas should be designed to accommodate flexible uses and allow for long term development opportunities. • Public toilets should be provided in locations which are safe and accessible and within the managed area of the property
<p>Principle 4</p> <p>Integrate local employment and service opportunities in a business friendly environment.</p>	<p>PERFORMANCE CRITERIA</p> <ul style="list-style-type: none"> • A variety of employment and business opportunities should be planned through the provision of a mix of land uses and commercial activities. • Options for office based businesses should be provided within the Village Centre. • Services and facilities to support home based and smaller businesses are encouraged within the Village Centre. • Appropriate locations for small office/home office ('SOHO') housing options which maximise the access and exposure to the activity of the Village Centre should be considered as part of the design process.

<p>Principle 5</p> <p>Include a range of medium density housing and other forms of residential uses within and surrounding the Village Centre.</p>	<p>PERFORMANCE CRITERIA</p> <ul style="list-style-type: none"> • Medium density housing in and around the Village Centre is required to provide passive surveillance, contribute to the life of the centre and to maximise the amenity of the centre. • Medium density housing should establish in locations of high amenity around the Village Centre and be connected to the activity of the Village Centre through strong pedestrian and cycle links. • A range of housing types for a cross section of the community (such as retirement living) should be included in and around the Village Centre. • Specialised accommodation (such as aged/nursing care, student accommodation and serviced apartments) is encouraged at the edge of Village Centres with strong pedestrian and cycle links to the central activity area of the Village Centre. • The Village Centre design should avoid potential land use conflicts between residential and commercial uses by focusing on retail operations on the main street and around the town square/public space and locating residential uses predominantly at the edge of the Village Centre and/or on upper levels. • Refer to the Small Lot Housing Code for further information about housing requirements for small lots around Village Centres.
<p>Principle 6</p> <p>Design the Village Centre to be pedestrian friendly and accessible by all modes including public transport, while enabling private vehicle access.</p>	<p>PERFORMANCE CRITERIA</p> <ul style="list-style-type: none"> • The Village Centre should be easily, directly and safely accessible for pedestrians, cyclists, public transport modes, private vehicles, service and delivery vehicles with priority given to pedestrian movement, amenity, convenience and safety. • The Village Centre should provide a permeable network of streets, walkways and public spaces that provide linkages throughout the centre and designated pedestrian crossing points. • The main street should be designed to comply with the relevant cross sections found within the Precinct Structure Plan. • A speed environment of 40km/h or less should be designed for the length of the main street. • Public transport infrastructure/facilities should be planned for commuter friendly/convenient locations within the Village Centre. • Bus stops should be provided in accordance with the Department of Transport Public Transport Guidelines for Land Use and Development, to the satisfaction of the Public Transport Victoria. • Bicycle parking should be provided within the street network and public spaces in highly visible locations and close to pedestrian desire lines and key destinations. • Supermarkets and other 'large format' buildings should not impede on the movement of people around the Village Centre. • Key buildings within the Village Centre should be located to encourage pedestrian movement along the length of the street through public spaces. • The design of buildings within the Village Centre should have a relationship with and should interface to the public street network. • Car parking areas should be designated to ensure passive surveillance and public safety through adequate positioning and lighting. • Car parking areas should be designed to provide dedicated pedestrian routes and areas of landscaping. • On street car parking should be provided either as parallel or angle parking to encourage short stay parking. • Car parking ingress and egress crossovers should be grouped and limited. • Car parking ingress or egress and car parking areas accommodating heavy vehicle movements should be designed to limit the pedestrian/vehicle conflict. • Heavy vehicle movements (i.e. loading and deliveries) should be located to the rear and or side of street based retail frontages • Streets, public spaces and car parks should be well lit to Australian standards and with pedestrian friendly (generally white) light. Lighting should be designed to avoid unnecessary spill to the side or above. • All public spaces should respond appropriately to the design for mobility access principles.

Principle 7

Create a sense of place with high quality engaging urban design.

PERFORMANCE CRITERIA

- Development should complement and enhance the character of the surrounding area by responding appropriately to key visual cues associated with the topography of the Village Centre location and its surrounds.
- The Village Centre design should seek to minimise amenity and noise impacts resulting from the mix of uses by maintaining separation and transitional areas between retail and housing activities, such as open space, road networks and community facilities.
- The design of each building should contribute to a cohesive and legible character for the Village Centre as a whole.
- Sites in prominent locations (such as at key intersections, surrounding public spaces and terminating key view lines and vistas) should be identified for significant buildings or landmark structures.
- The design of building frontages should incorporate the use of a consistent covered walkway or verandah to provide for weather protection.
- The built form should define the main street and be aligned with the property boundary.
- Street facades and all visible side or rear facades should be visually rich, interesting and well articulated and be finished in suitable materials and colours that contribute to the character of the Village Centre.
- Corner sites, where the main street meets an intersecting connector street / arterial road should:
 - Be designed to provide built form that anchors the main street to the intersecting road. This can be achieved through increased building height, scale and articulated frontages;
 - Incorporate either 2 storey building or 2 storey elements (such as awnings and roof lines);
 - Be developed to have a ground floor active frontage and active floor space component to the main street frontage; and
 - Not be developed for standard single storey fast food outcomes.
- Materials and design elements should be compatible with the environment and landscape character of the broader precinct.
- Any supermarket and secondary anchors should have frontages that directly address the main street and/or town square so that the use integrates with and promotes activity within the main street and public spaces/thoroughfares.
- Any supermarkets or large format retail uses with a frontage to the main street should use clear glazing to allow view lines into the store from the street. (Planning permits for buildings and works should condition against the use of white washed windows, excessive window advertising and obtrusive internal shelving or 'false walls' offset from the glazing).
- Secondary access to any supermarket from car parking areas should be considered where it facilitates convenient trolley access and does not diminish the role of primary access from the main street or town square.
- The design and siting of any supermarkets and other 'large format retail uses' should provide an appropriate response to the entire public domain. This includes but is not limited to car parking areas, predominantly routes and streets.
- Retail uses along street frontages should generally include access points at regular intervals to encourage activity along the length of the street.
- Retail and commercial buildings within the Village Centre should generally be built to the property line.
- Public spaces should be oriented to capture north sun and protect from prevailing winds and weather.
- Landscaping of all interface areas should be of a high standard as an important element to complement the built form design.
- Urban art should be incorporated into the design of the public realm.
- Street furniture should be located in areas that are highly visible and close to or adjoining pedestrian desire lines/gathering spaces and designed to add visual interest to the Village Centre.
- Wrapping of car parking edges with built form, to improve street interface, should be maximised.
- Car parking areas should provide for appropriate landscaping with planting of canopy trees and dedicated pedestrian thoroughfares.
- Screening of centralised waste collection points should minimise amenity impacts with adjoining areas and users of the centre.
- Where service areas are accessible from car parks, they should present a well designed and secure facade to public areas.
- Mechanical plant and service structure roofs should be included within roof lines or otherwise hidden from view.

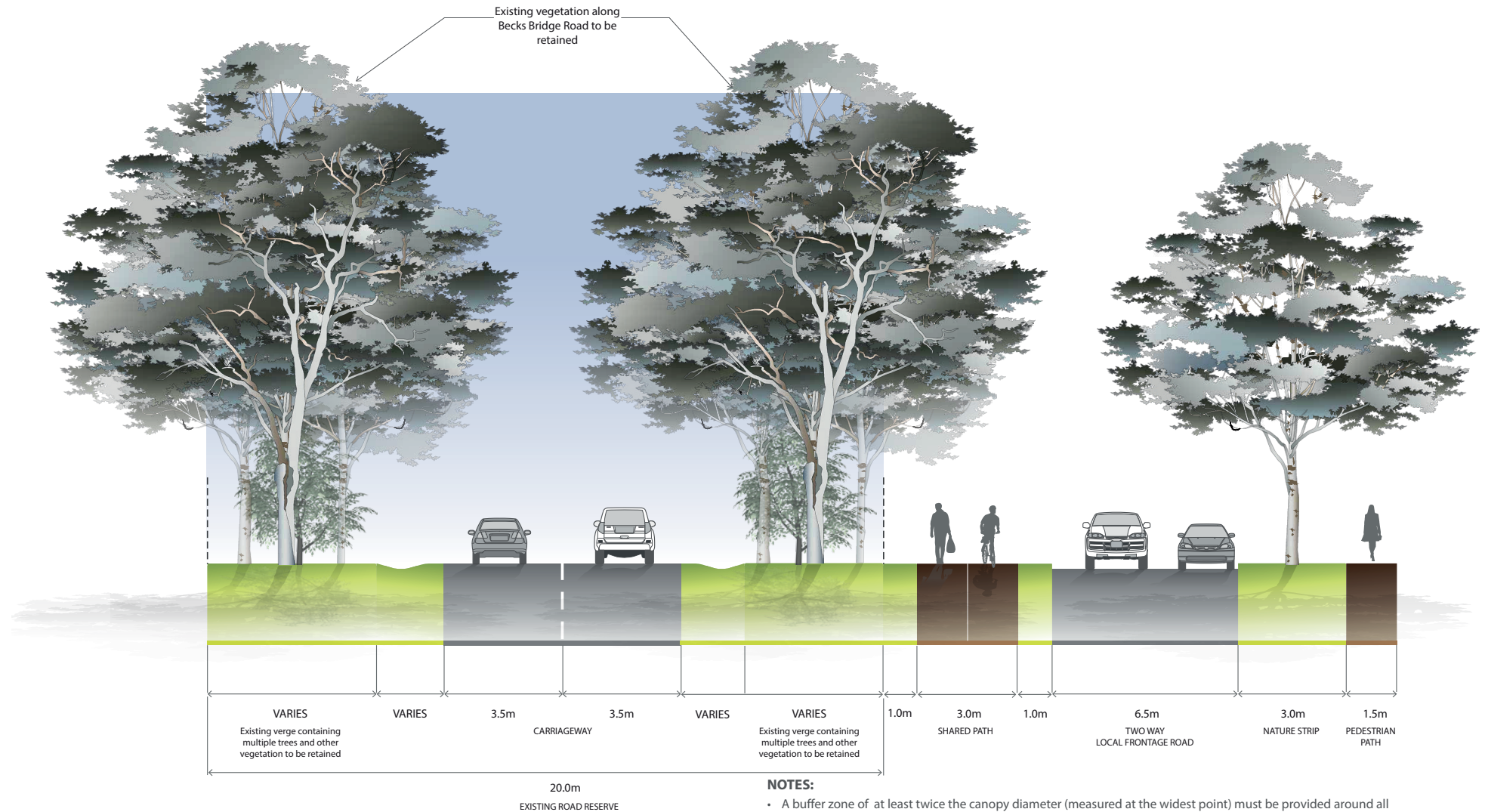
Principle 8

Promote localisation, sustainability and adaptability.

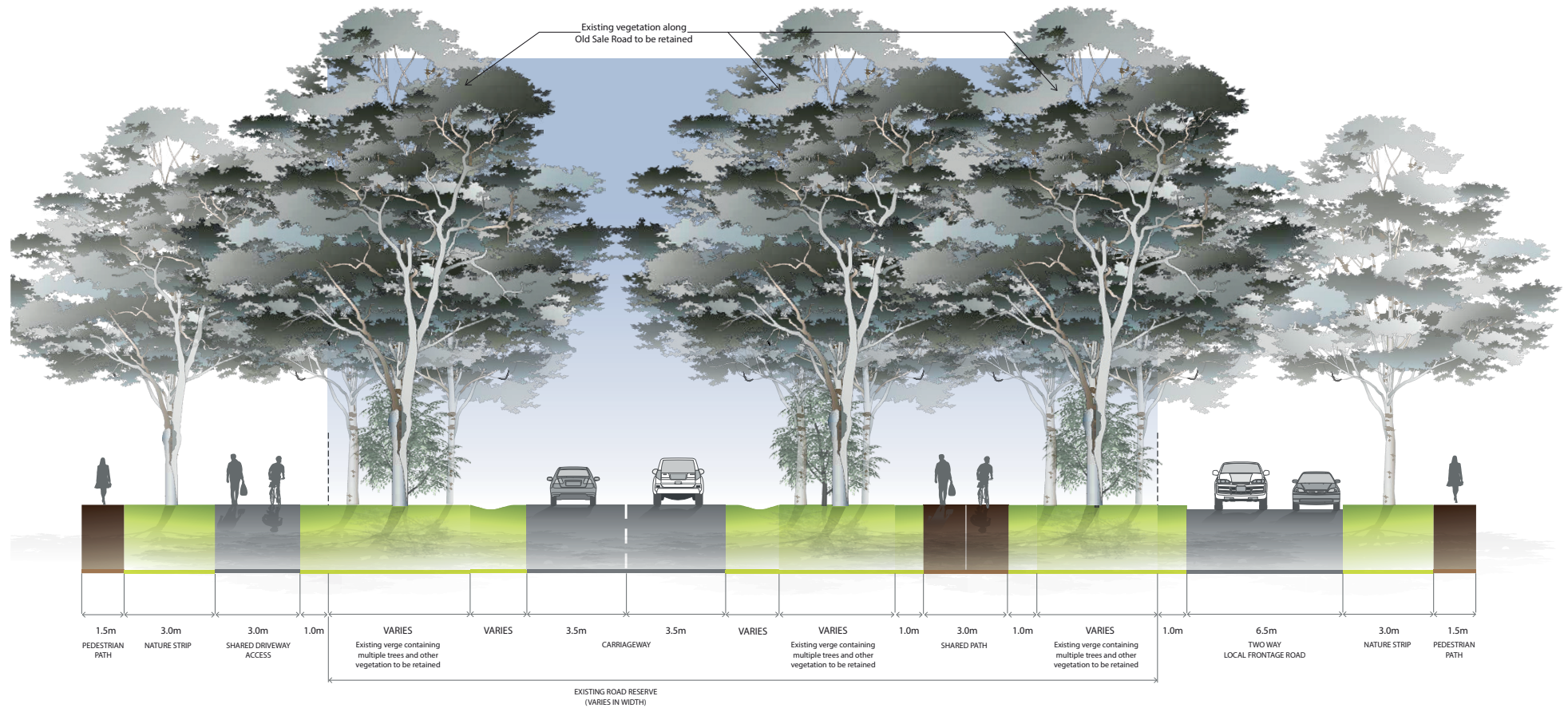
PERFORMANCE CRITERIA

- The Village Centre should promote the localisation of services which will contribute to a reduction of travel distance to access local services and less dependence on the car.
- The Village Centre should be designed to be sympathetic to its natural surrounds by:
 - Investigating the use of energy efficient design and construction methods for all buildings;
 - Including Water Sensitive Urban Design principles such as integrated stormwater retention and reuse (e.g. toilet flushing and landscape irrigation);
 - Promoting safe and direct accessibility and mobility within and to and from the Village Centre;
 - Including options for shade and shelter through a combination of landscape and built form treatments;
 - Ensuring buildings are naturally ventilated to reduce the reliance on plant equipment for heating and cooling;
 - Promoting passive solar orientation in the configuration and distribution of built form and public spaces;
 - Grouping waste collection points to maximise opportunities for recycling and reuse;
 - Promoting solar energy for water and space heating, electricity generation and internal and external lighting; and
 - Investigating other opportunities for the built form to reduce greenhouse gas emissions associated with the occupation and the ongoing use of buildings.
 - Including suitable locally indigenous plant species in landscape treatments (particularly in the Fernlea Village Centre).
- Encourage building design which can be adapted to accommodate a variety of uses over time.
- Ensure the Village Centre has an inbuilt capacity for growth and change to enable adaptation and the intensification of uses as the needs of the community evolve.
- Ensure plant species that are known or potential environmental weeds are not used in landscape treatments.

4.3 APPENDIX C - Street Cross Sections



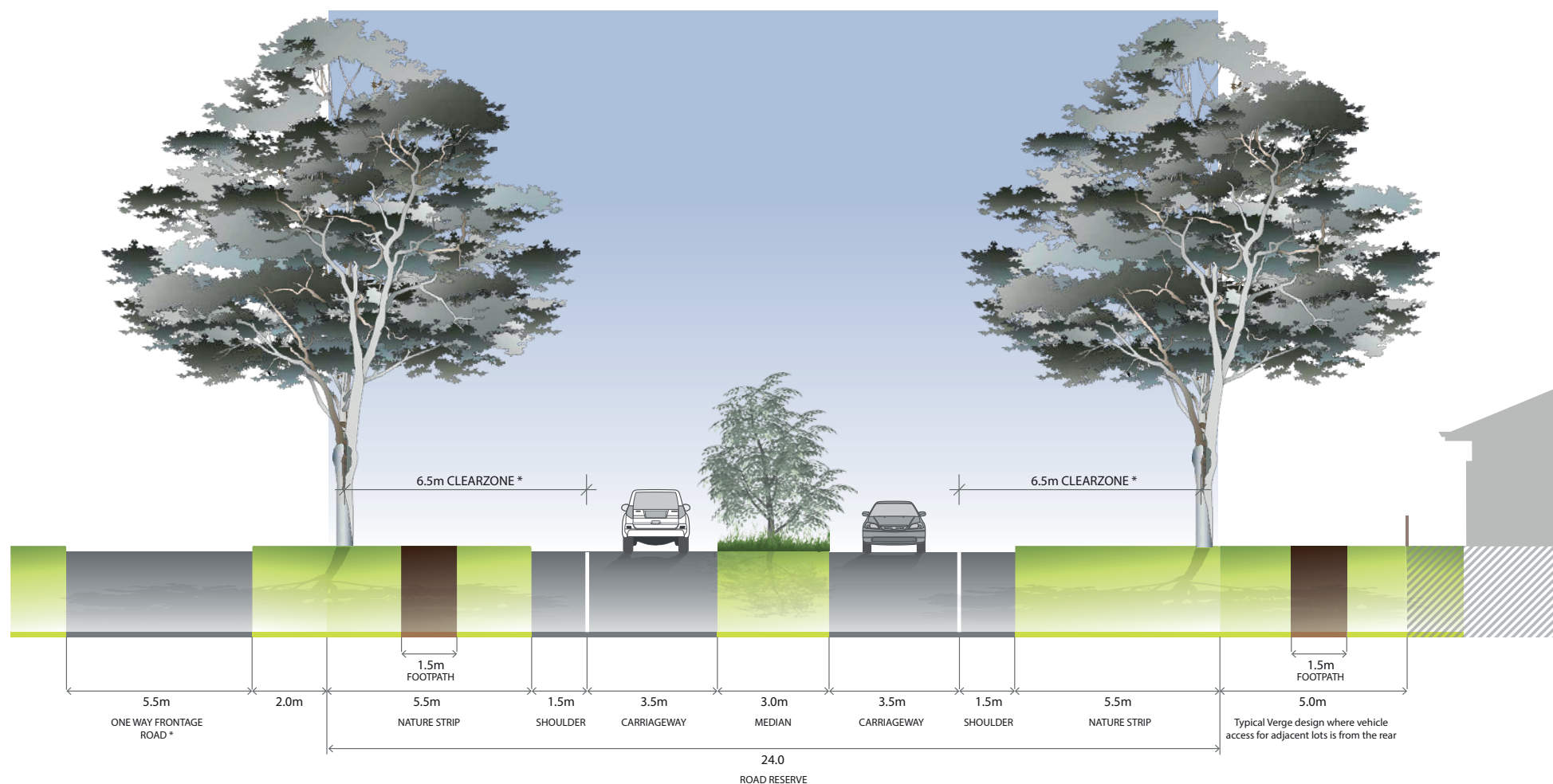
Cross Section 1 - Becks Bridge Road
Connector Street (20m)
Vegetation retained in verges



Cross Section 2 - Old Sale Road
Arterial Road
Vegetation retained in verges

NOTES:

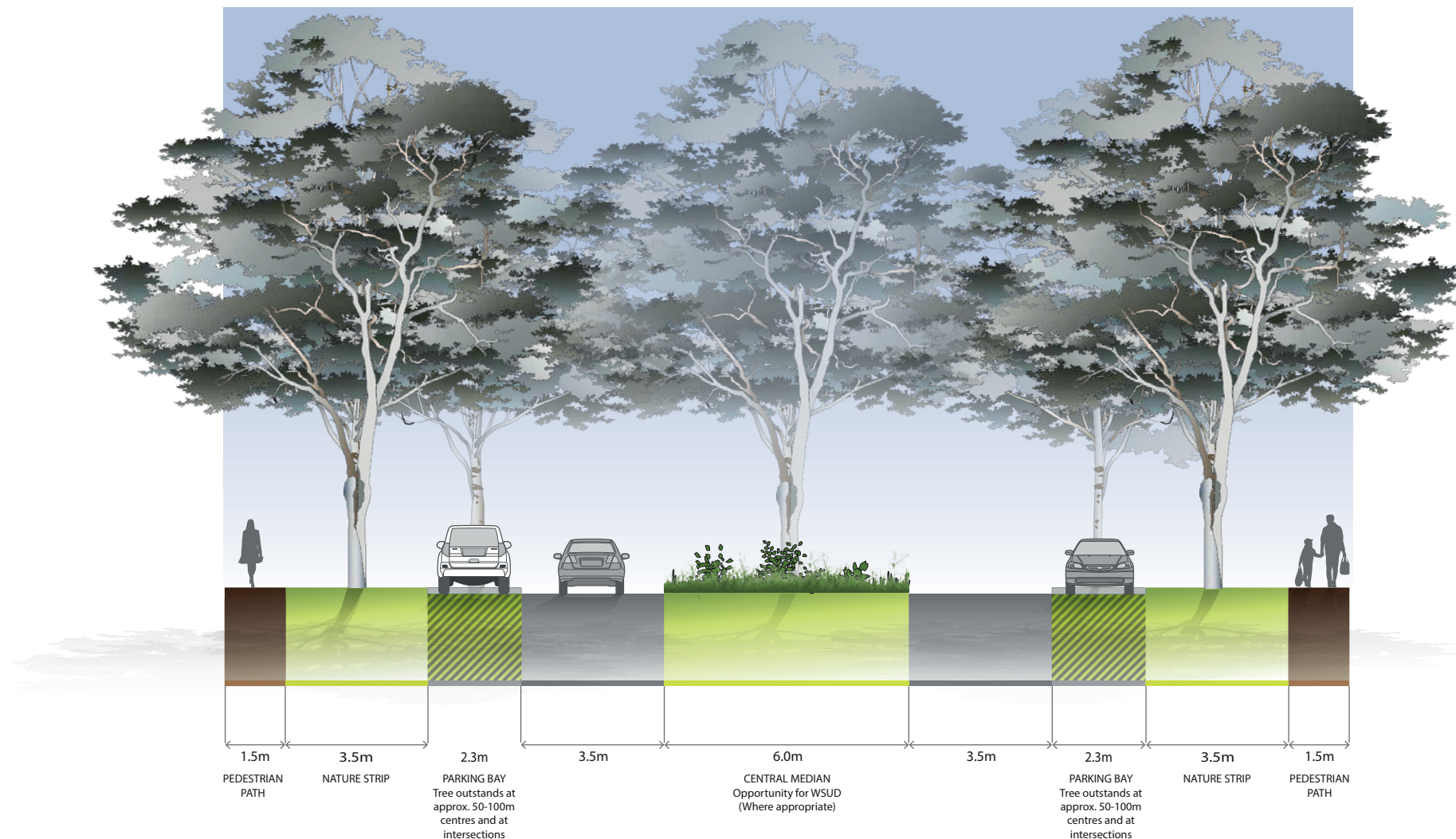
- Two options are shown for interface treatment with existing road reserve:
- Shared driveway access (left) - a limited number of driveways may be provided between breaks in vegetation along the verge with each driveway providing access to multiple allotments. (subject to Section 173 agreement outlining land ownership & maintenance arrangements).
- Frontage road (right) - a frontage road may be provided adjacent the existing road reserve which provides access to adjacent allotments.



NOTES:

- Under a future 'Safe System' approach to road management, one of the following treatments may be applied to Thompsons Road between Old Sale Road and Broad Way:
 - Installation of a barrier between the road carriageway and adjacent tree planting
 - Reduction in the speed limit to 60km/hr
- A minimum 0.5m clearance is to be provided to structures on either side of road carriageways, with passing bays located at a maximum of 200m apart which are a minimum of 6m wide and 20m long.
- Trees or large shrubs are to be centrally planted in median.
- Topsoil used in central medians is to be sandy loam, with a minimum depth of 200mm. The surface of medians is to be free-draining with a minimum cross fall of 2%, and is to be planted with warm season grasses.
- In areas where high pedestrian volumes are expected (e.g. around schools and town centres), central medians may be paved with harder wearing surfaces such as granitic sand or other pavements.
- All kerbs to be semi-mountable.
- Depending on the location of breaks in the median, provide intermediate pedestrian crossing points to accommodate mid-block crossings

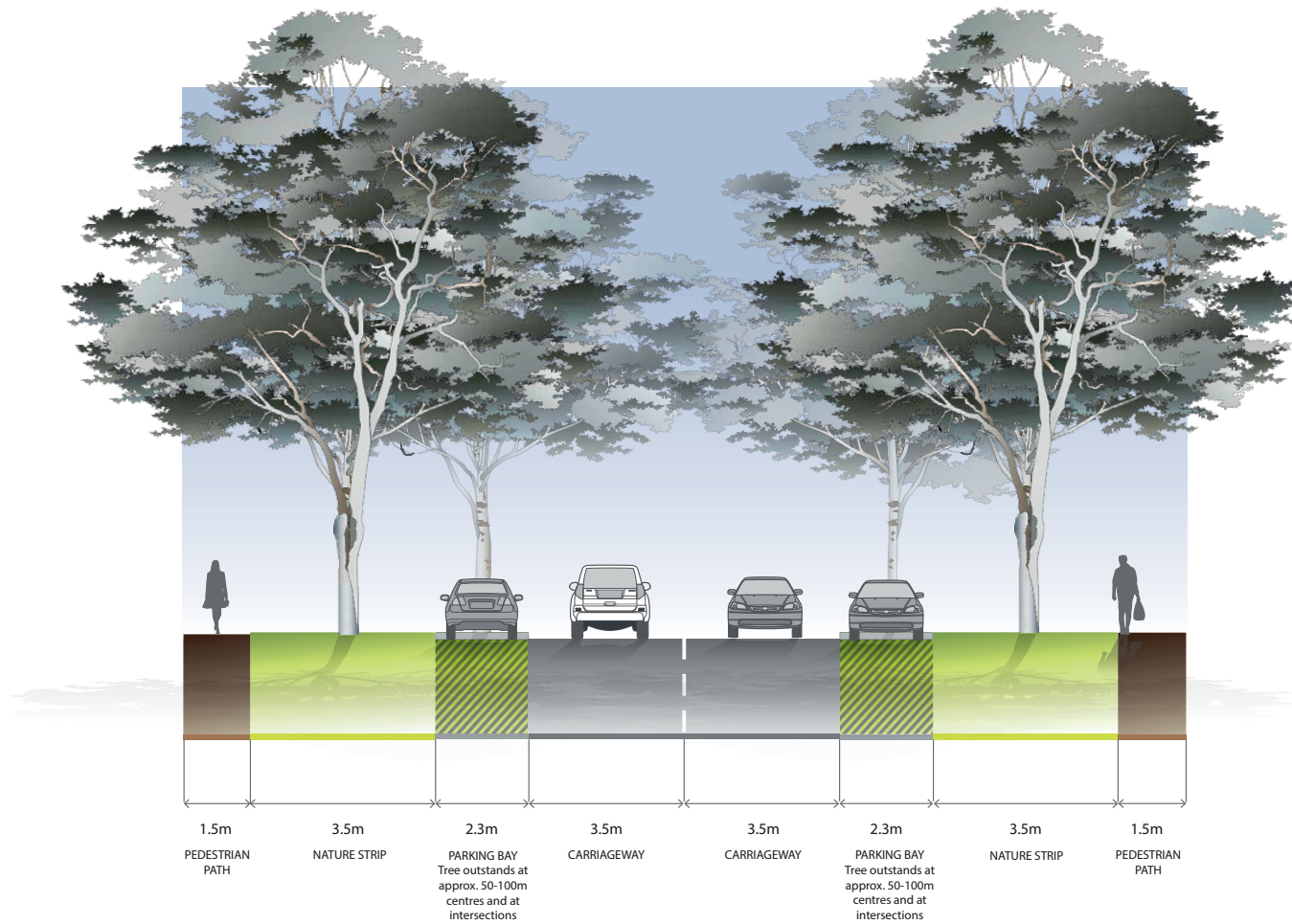
Cross Section 3
Arterial Road (24m)



NOTES:

- Include a central median with large canopy trees to create a boulevard effect. Trees are to be centrally planted in median.
- Topsoil used in central medians is to be sandy loam, with a minimum depth of 200mm. The surface of medians is to be free-draining with a minimum cross fall of 2%, and is to be planted with warm season grasses.
- In areas where high pedestrian volumes are expected (e.g. around schools and town centres), central medians may be paved with harder wearing surfaces such as granitic sand or other pavements.
- Any garden beds in central medians are to be offset 1.5m from back of kerb.
- Kerb to central median is to be SM2 Semi-mountable kerb.
- Depending on the location of breaks in the median, provide intermediate pedestrian crossing points to accommodate mid-block crossings

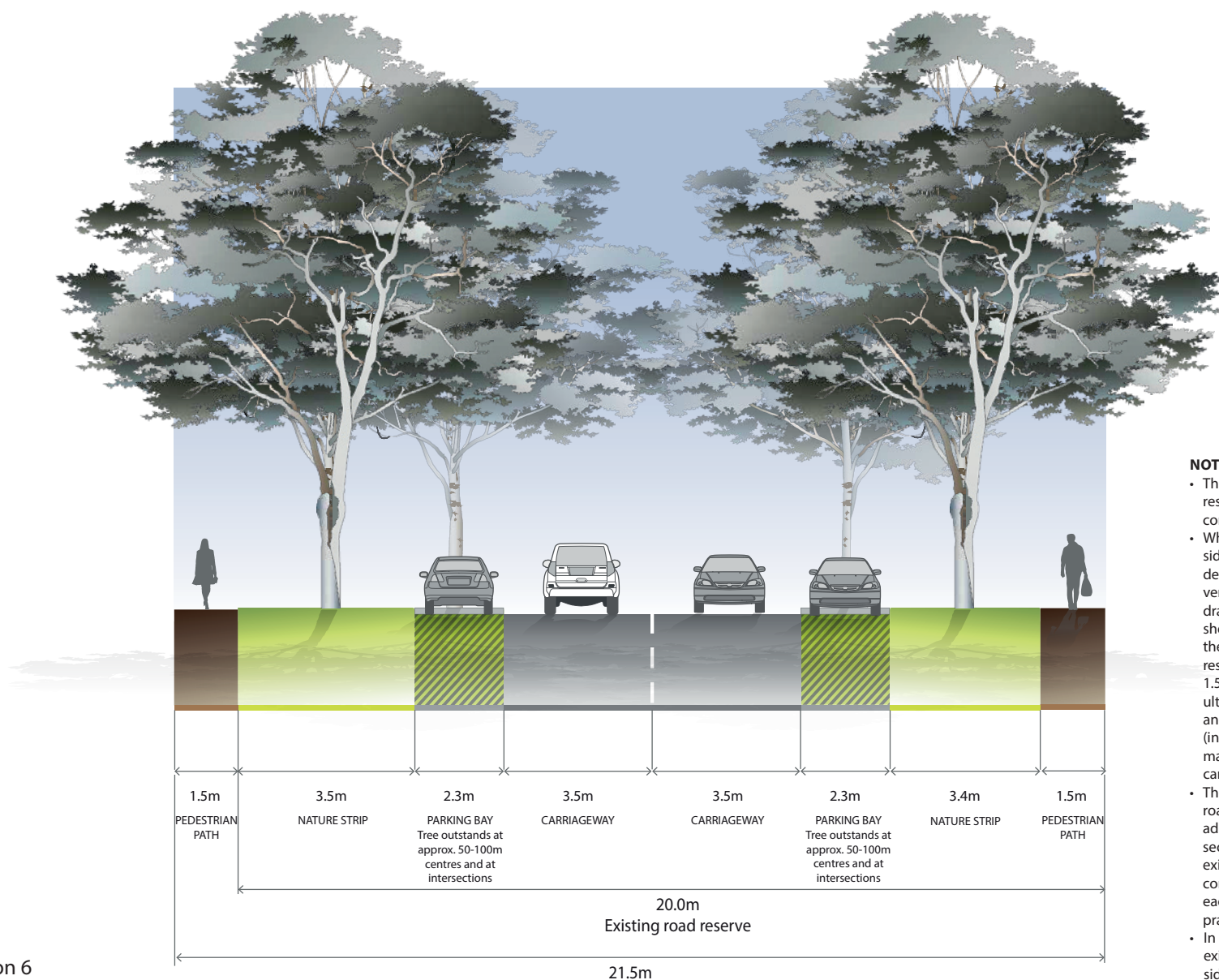
Cross Section 4
Broad Way Connector Boulevard (27.6m)



Cross Section 5
Connector Street (21.6m)

NOTES:

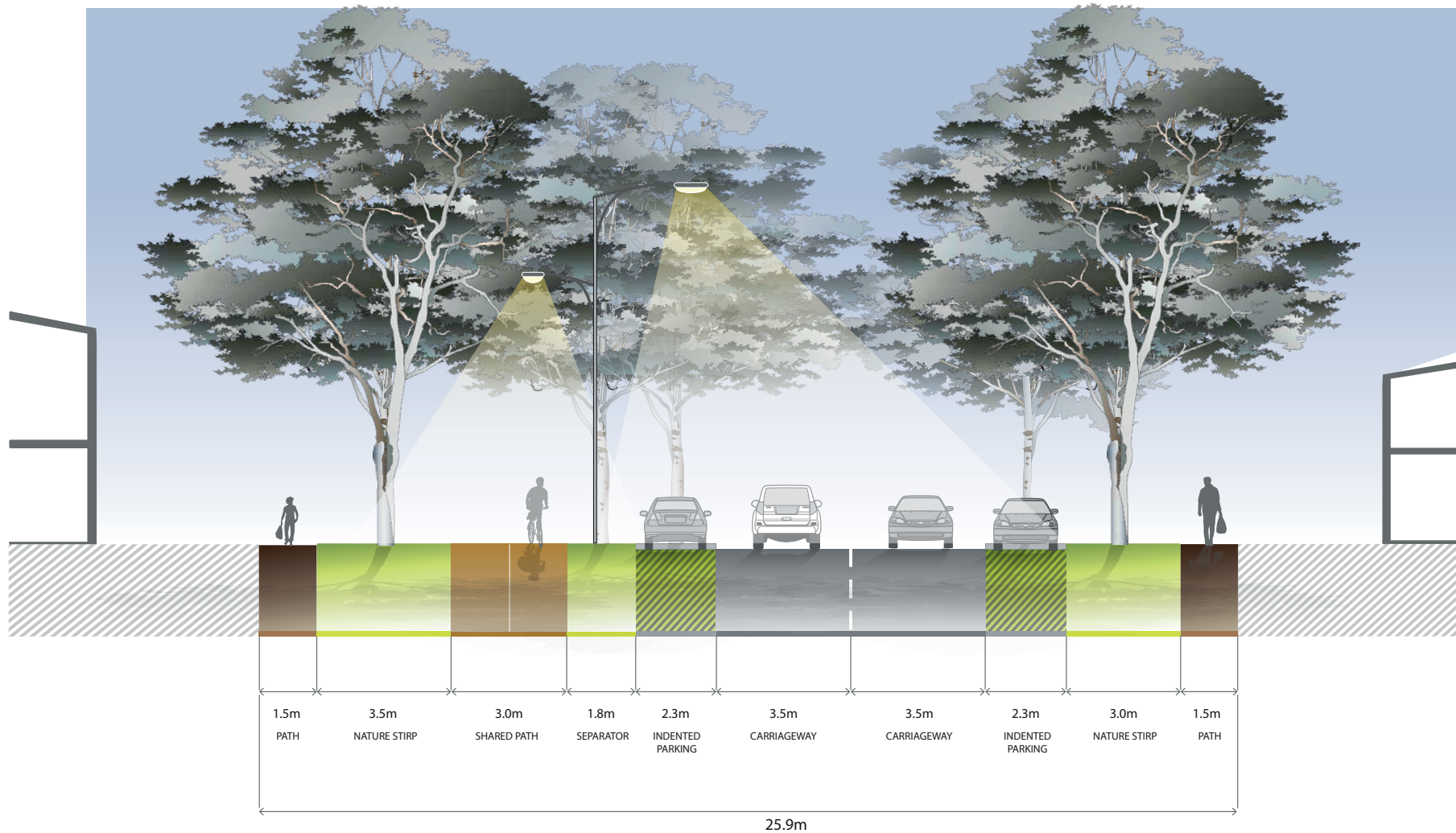
- Minimum street tree mature height 15 meters.



Cross Section 6
Connector Street (21.5m)
Existing road reserve

NOTES:

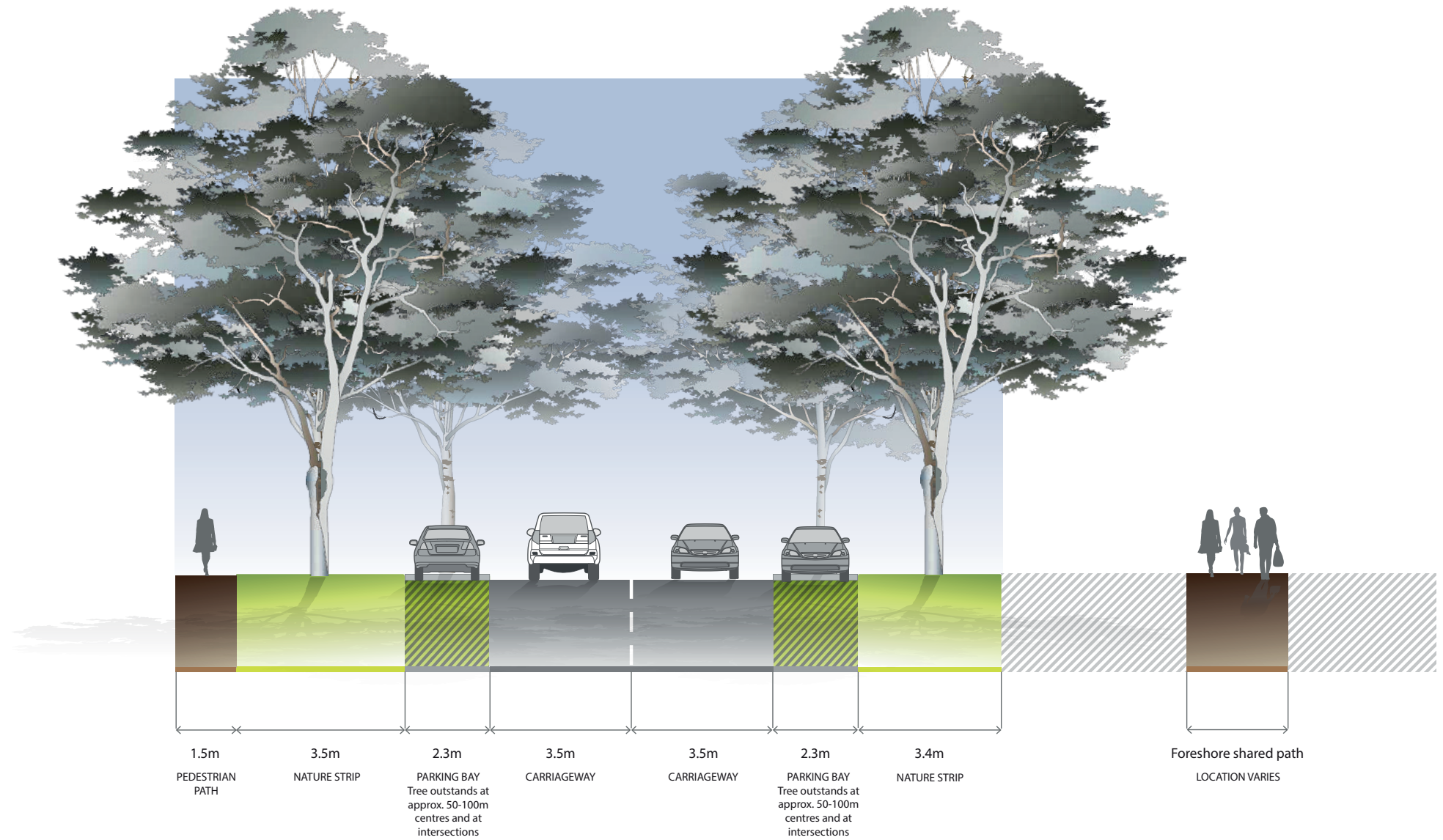
- This cross section applies to existing road reserves which are to be upgraded to connector street standard.
- Where development occurs on one side of the existing road reserve, this development is to construct the adjacent verge (including kerb, channel and drainage) and both carriageways as shown. When development occurs on the opposite side of the existing road reserve, this development is to provide 1.5m of additional land to achieve the ultimate 21.5m cross section shown and is to construct the adjacent verge (including kerb, channel and drainage) to match in with the previously constructed carriageways.
- The responsible authority will co-ordinate road construction and provision of additional land to achieve this cross section between properties along an existing road reserve and may vary the construction and land requirements of each land owner as needed to achieve a practical and co-ordinated result.
- In implementing this cross section, existing native vegetation on the southern side of Thompsons Road east of Broad Way should be retained if possible. This may involve providing a pedestrian path on the north side only of this section of Thompsons Road



Cross Section 7
Connector Street (25.9m)
Shared path

NOTES:

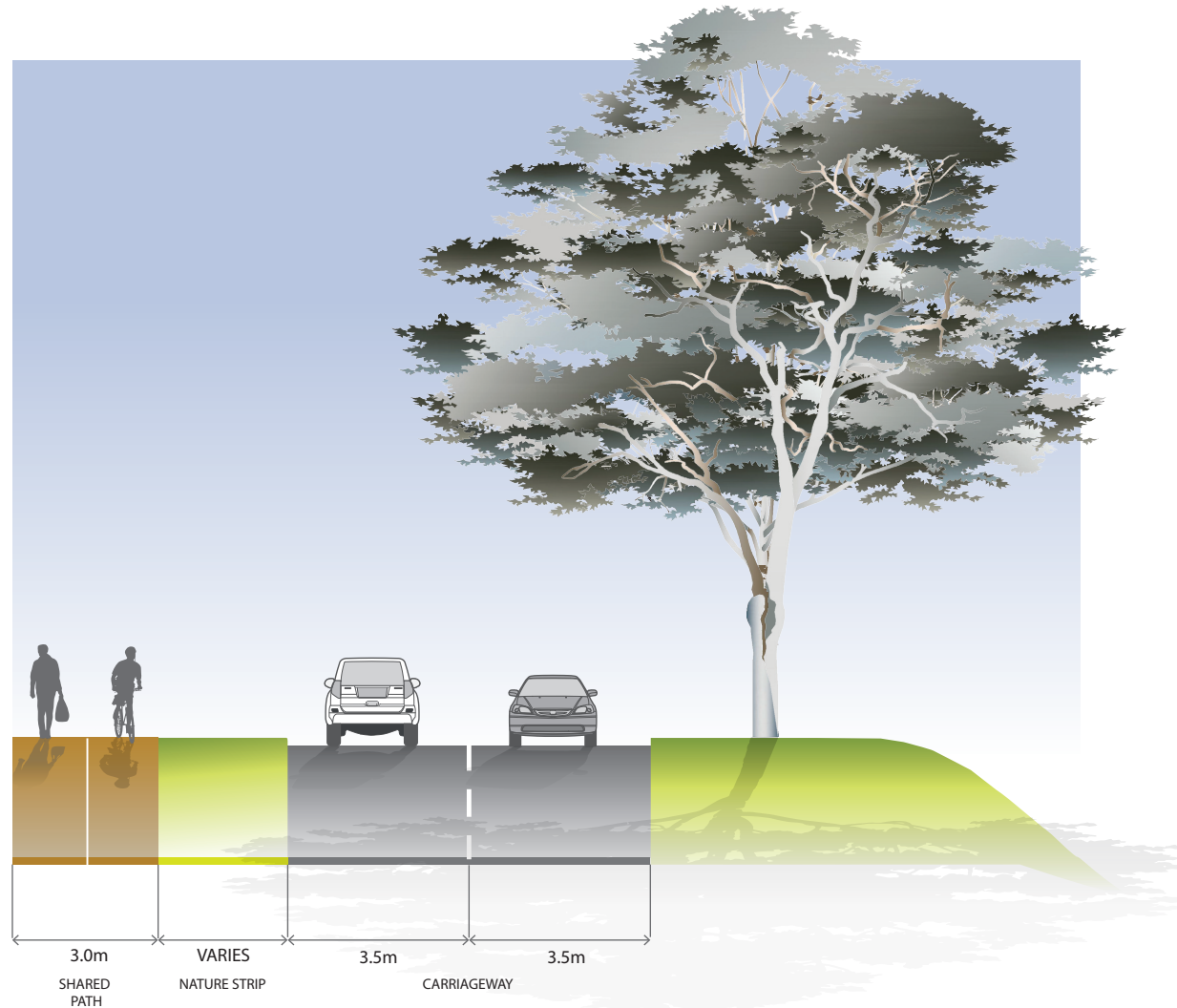
- Street lighting design to consider illumination of shared path - indicative street light arrangement shown.



Cross Section 8 - Foreshore
Connector Street (20m)

NOTES:

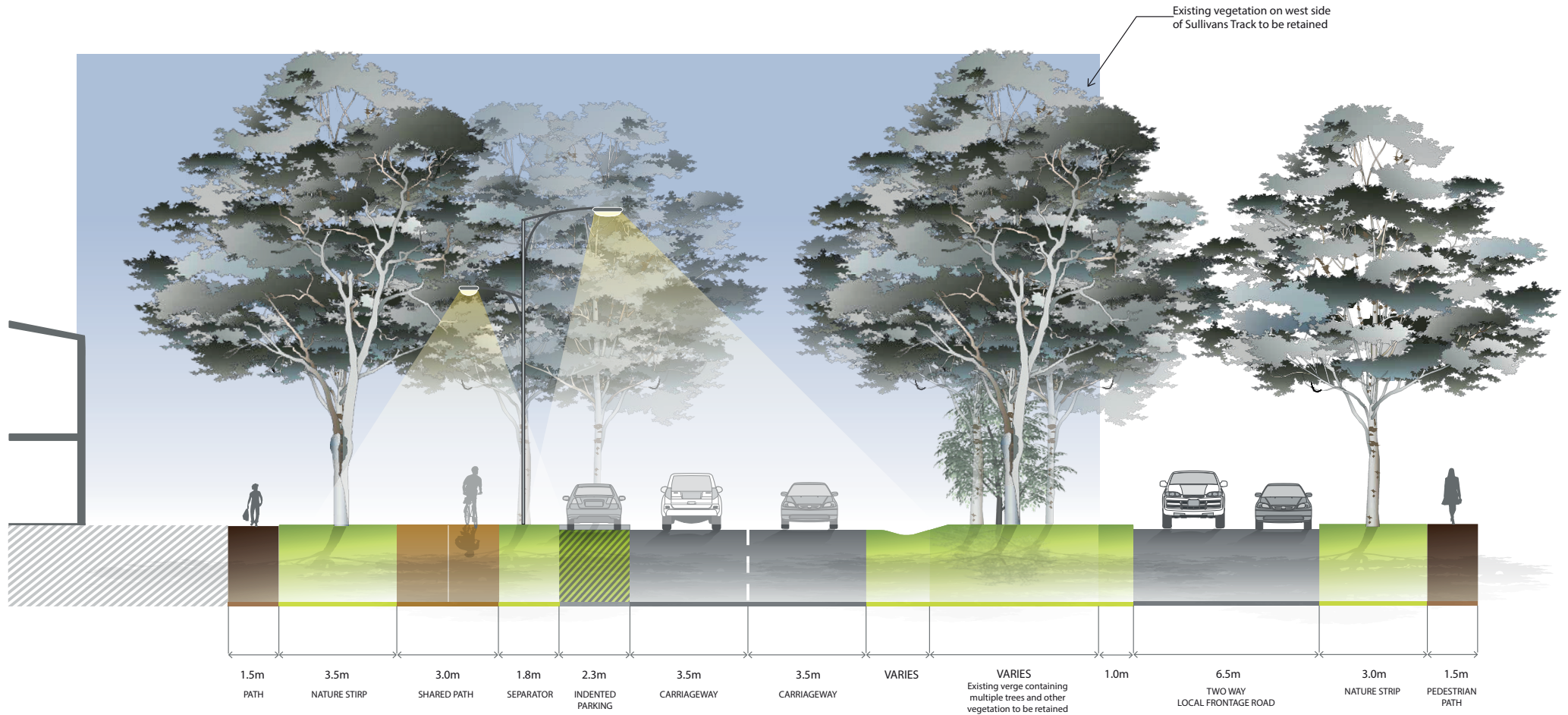
- Minimum street tree mature height 15 metres.



Cross Section 9
Foreshore Connector (Constrained)

NOTES:

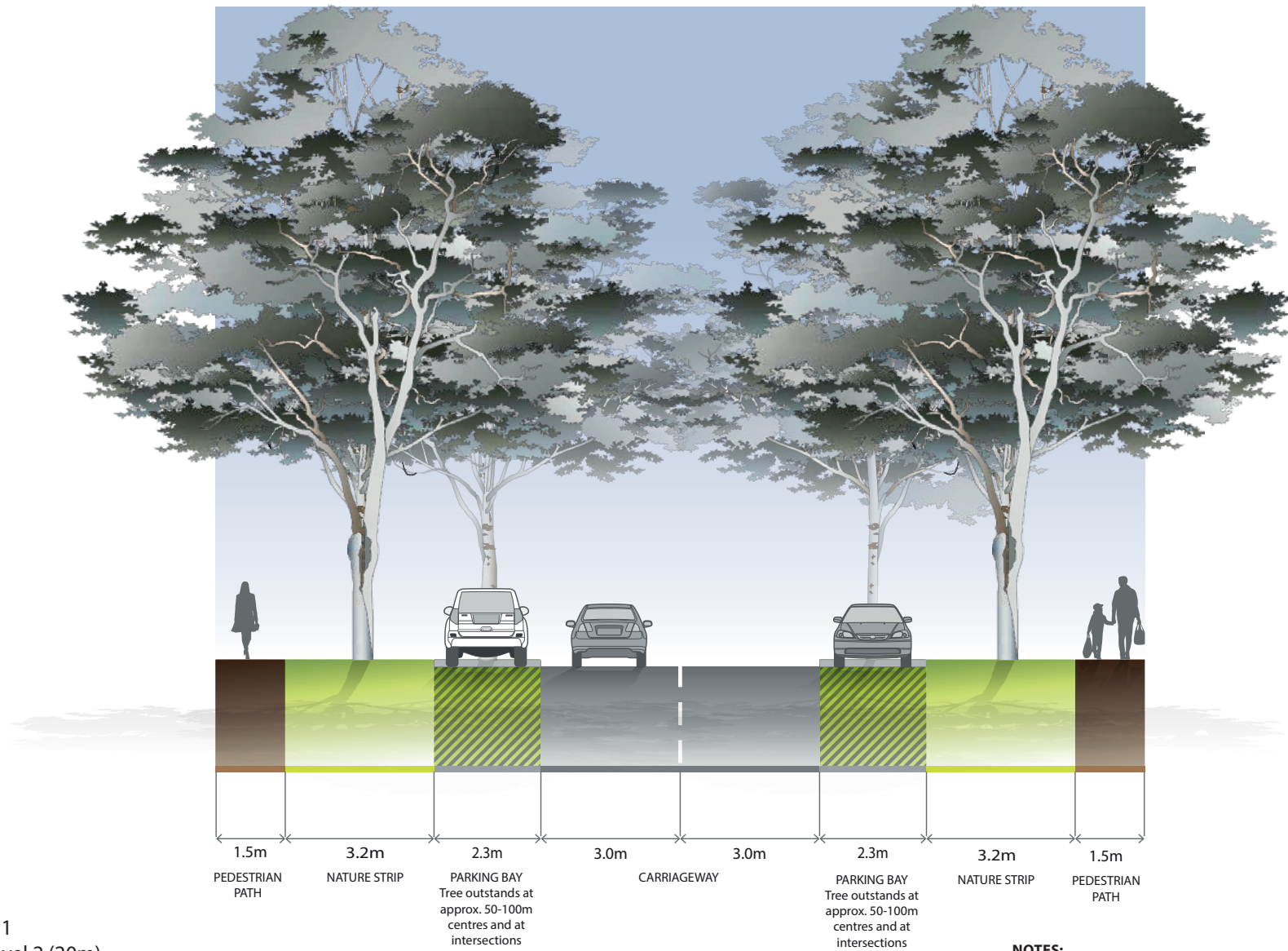
- This cross section applies to the constrained area between the Moe Golf Course and the top of the embankment adjacent the lake. The width of the nature strip adjacent the shared path will vary depending on space available.
- Road design is to ensure passage of emergency vehicles is accommodated.



Cross Section 10 - Sullivans Track
Connector Street
Shared path

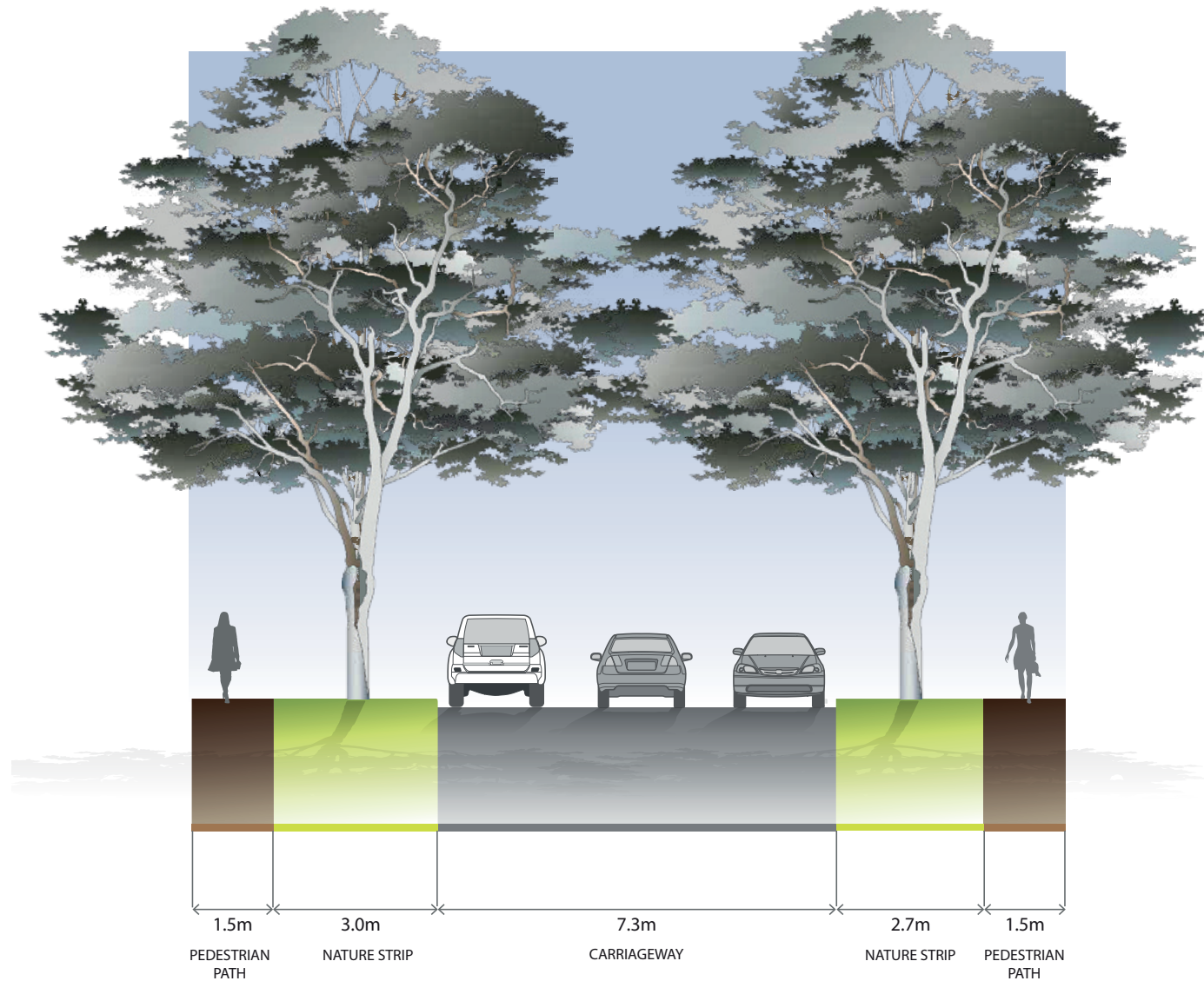
NOTES:

- Street lighting design to consider illumination of shared path - indicative street light arrangement shown.



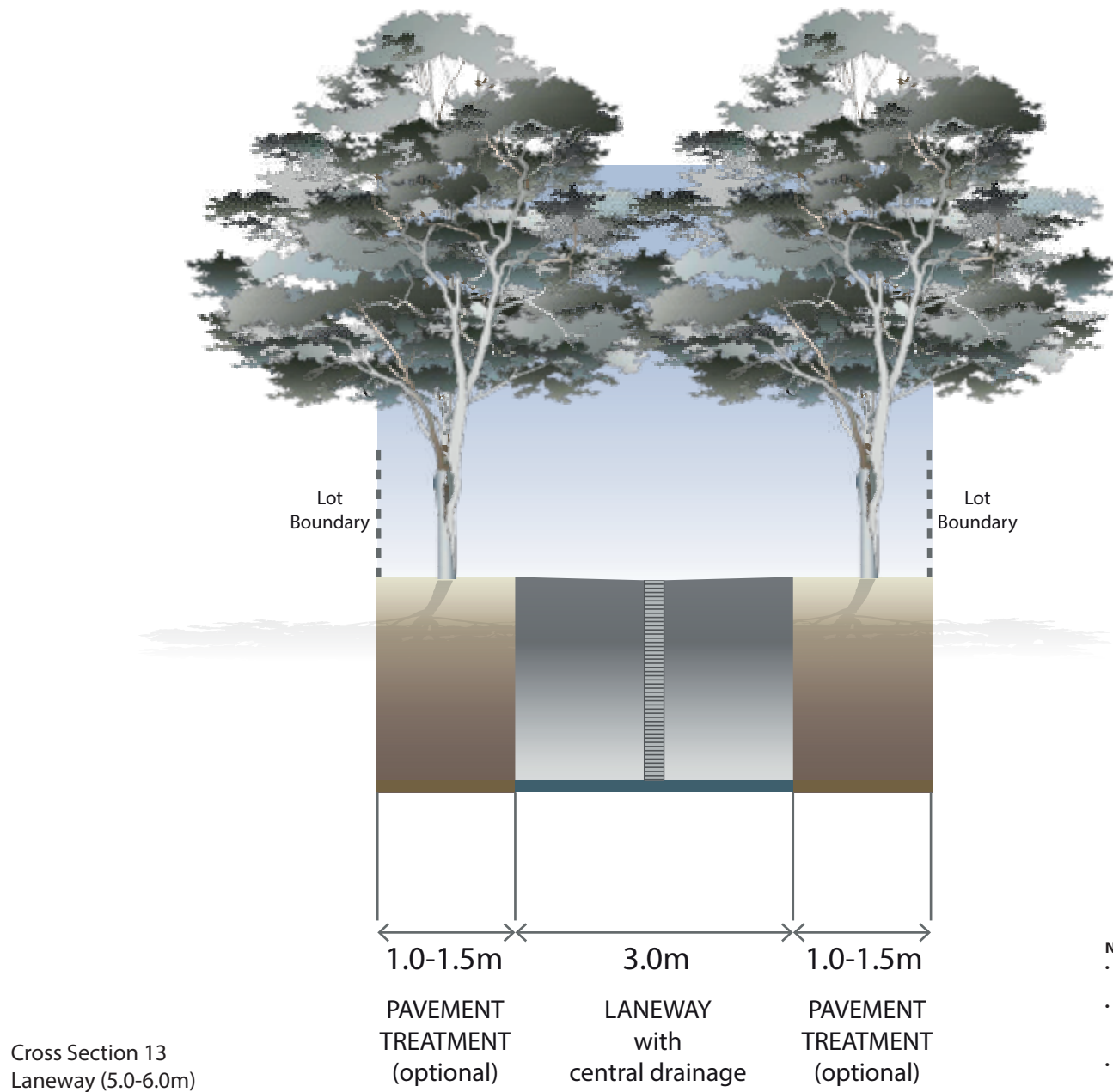
NOTES:
• Minimum street tree mature height 12 metres

Cross Section 11
Local Access Level 2 (20m)



Cross Section 12
Local Access Level 1 (16m)

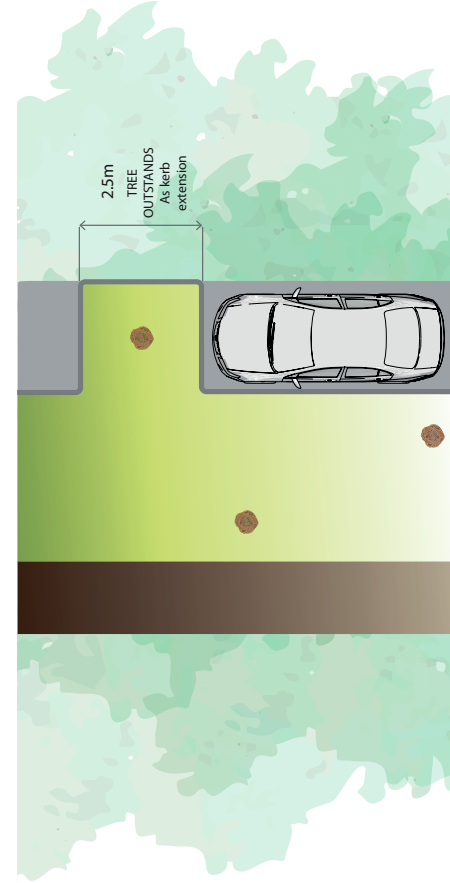
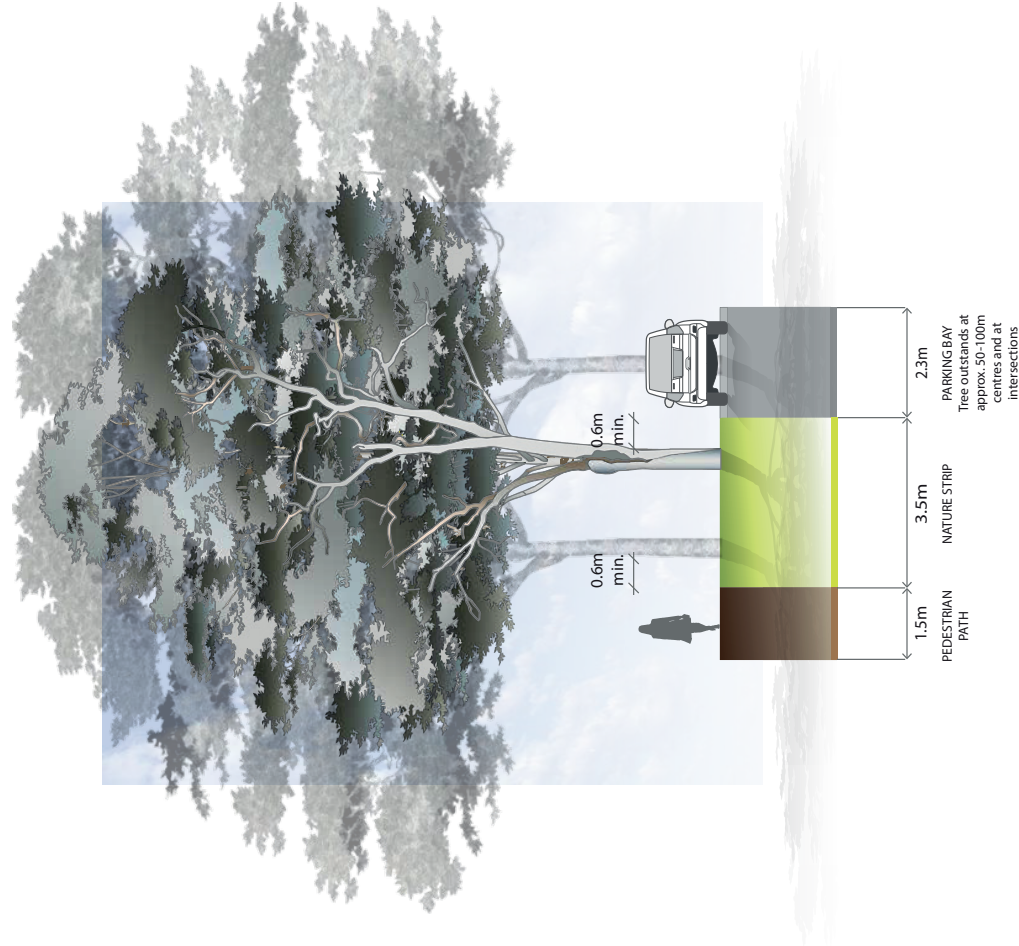
NOTES:
• Minimum street tree mature height 12 metres



NOTES:

- Different pavement treatment to sides of laneway is optional
- Where different pavement treatment to sides is not provided, central drainage line is to include pavement treatment other than asphalt
- Small tree planting to sides of laneway is optional

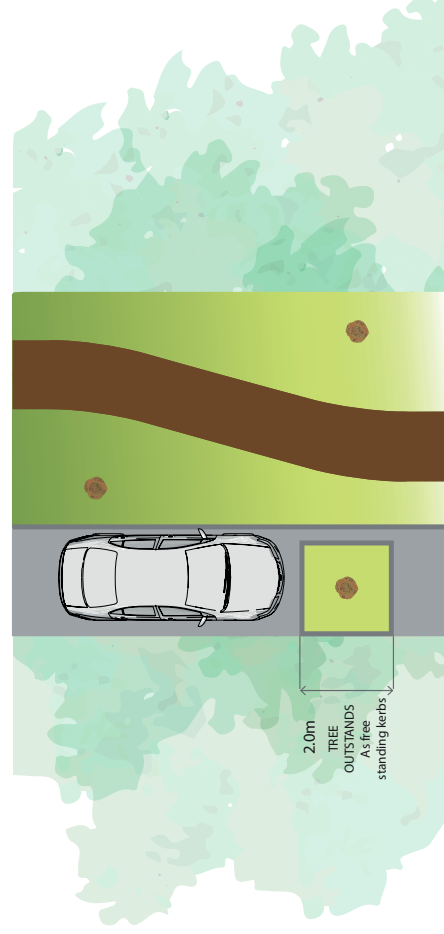
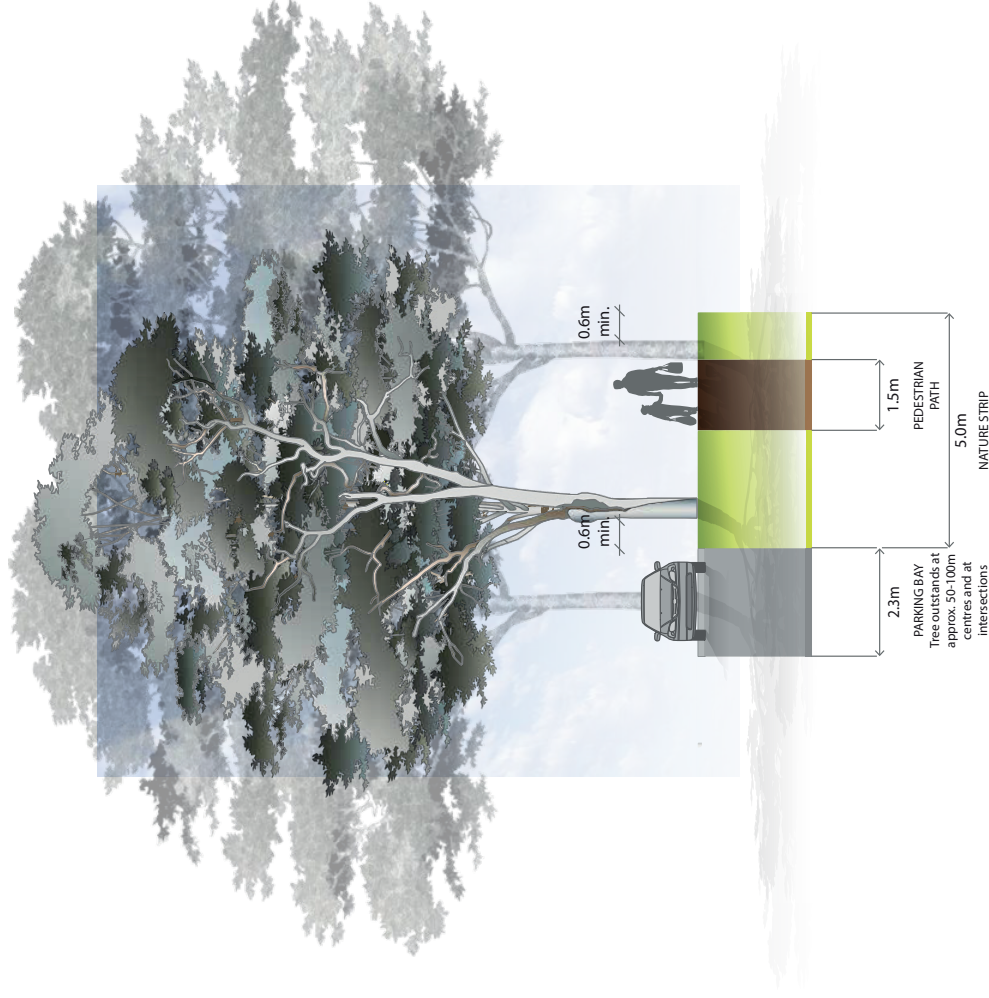
4.4 APPENDIX D - Street Cross Sections Variation Examples



NOTES:

- Tree planting in varying locations in nature strip, in groups or clusters
- Minimum offset of tree trunks 0.6m from back of kerb and footpath edge
- Tree outstand with continuous extension of kerb shown

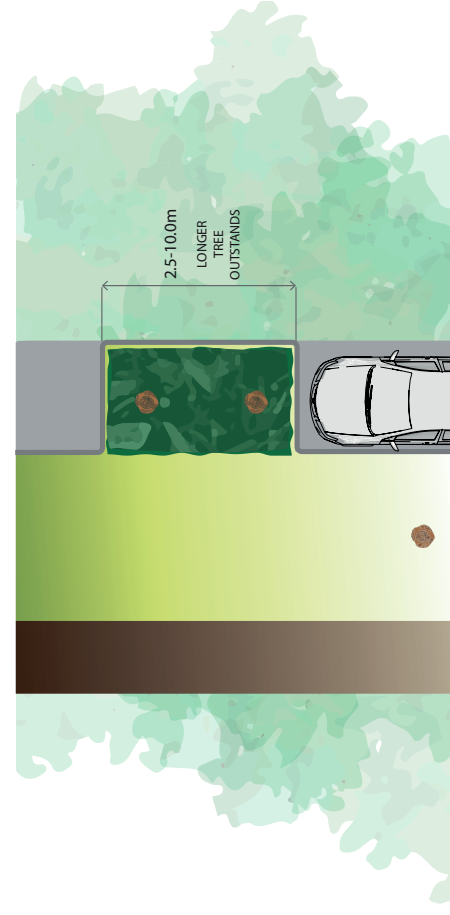
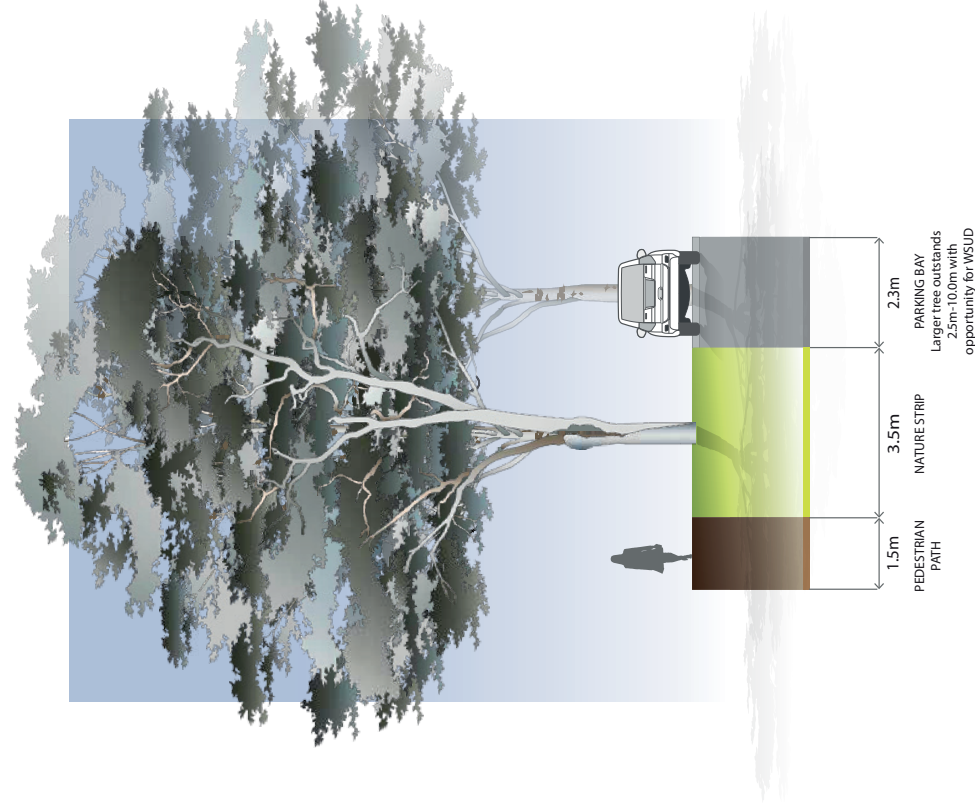
Connector Street (21.6m) Variation 1 - Varying tree placement in nature strip



NOTES:

- Footpath in varying locations in nature strip
- Tree placement adjusts in response to footpath location
- Minimum offset of footpath 1.0m from back of kerb and 0.6m from tree trunks
- Design of meandering footpath is to consider bin placement on nature strips, access to letter boxes for mail delivery, interface with driveways, definition of front allotment boundary and accommodation of bus stops
- Tree outstand with separate kerb surround shown

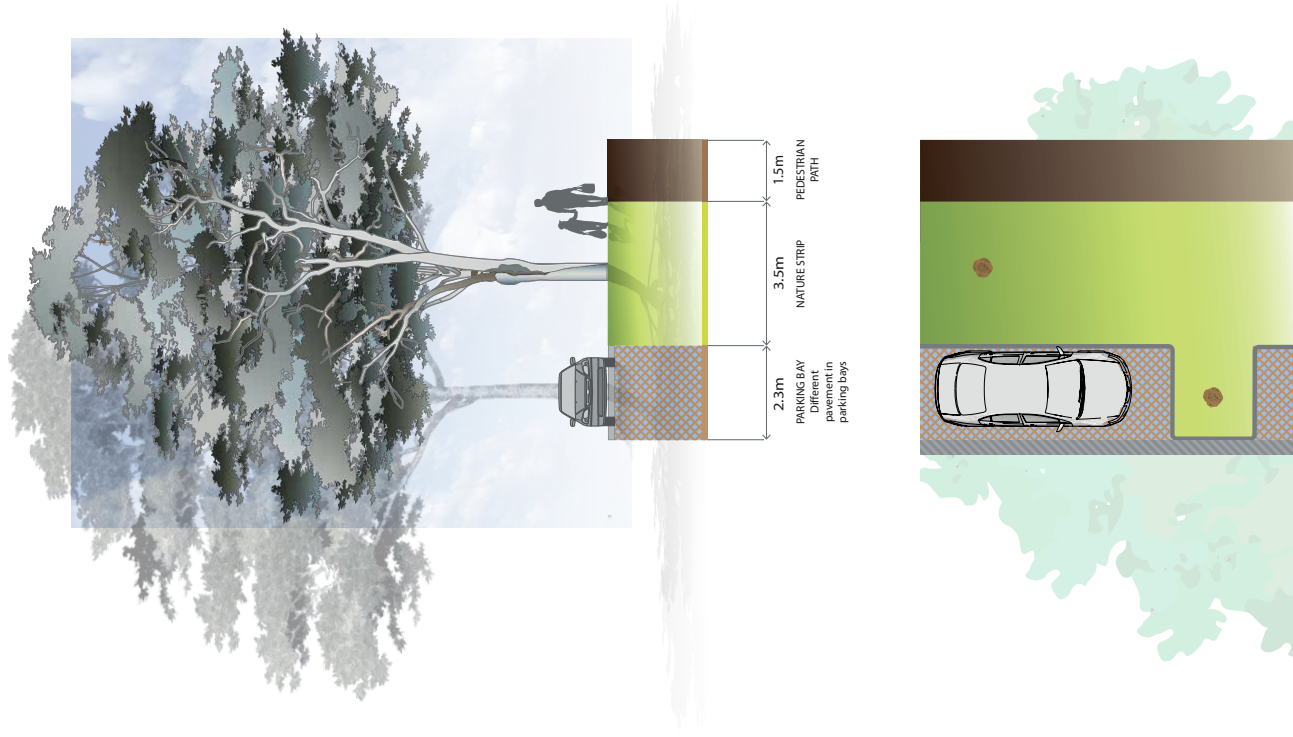
Connector Street (21.6m) Variation 2 - Meandering footpath in nature strip



NOTES:

- For allotments with frontages of 13m or greater tree outstand lengths can be increased to accommodate more trees, garden bed planting and WSUD treatments (where appropriate)
- Provide a minimum distance of 6.0m between outstands and adjacent driveways

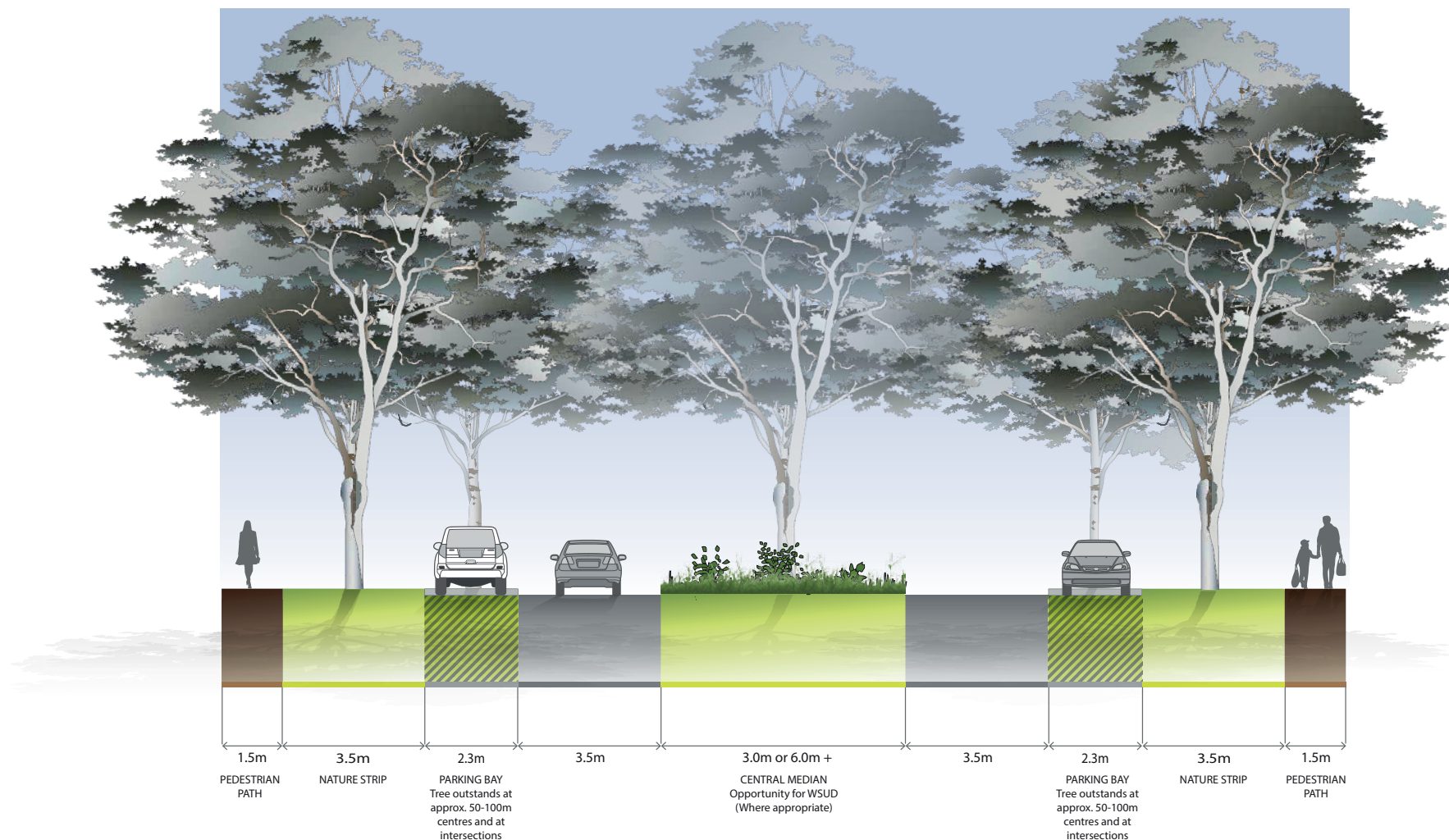
Connector Street (21.6m) Variation 3 - Larger tree outstands



NOTES:

- A pavement treatment other than asphalt applied to parking bays
- Spoon drain between carriageway and parking bay shown as an alternative drainage treatment

Connector Street (21.6m) Variation 4 - Different pavement in parking bays

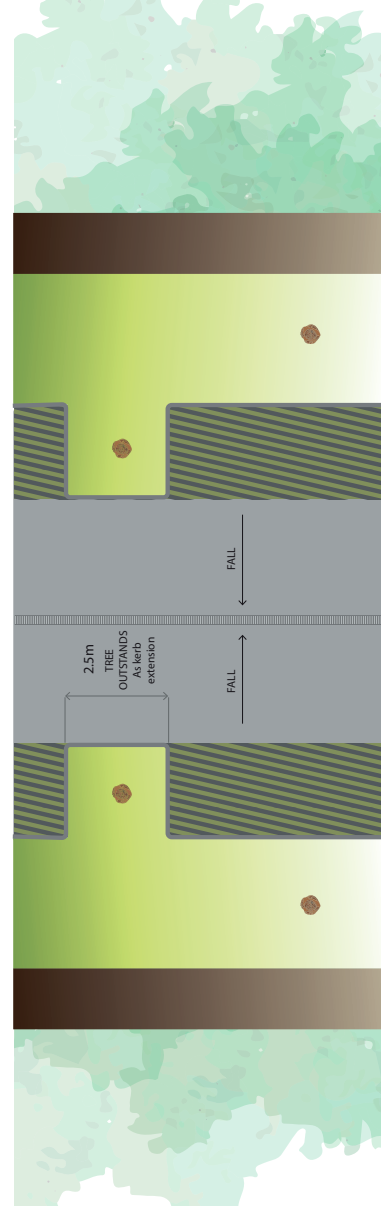
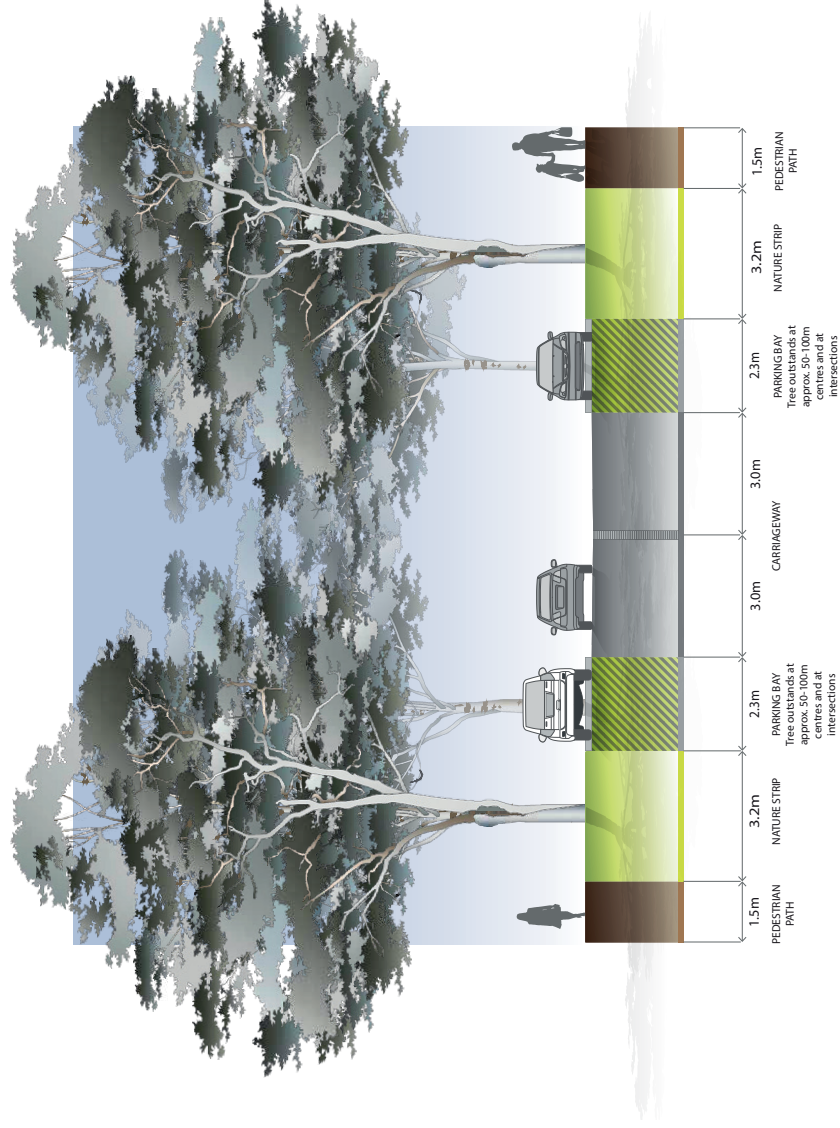


Connector Street (24.6 - 27.6m) Variation 5 - Boulevard

NOTES:

- Include a central median with large canopy trees to create a boulevard effect. Trees are to be centrally planted in median.
- Topsoil used in central medians is to be sandy loam, with a minimum depth of 200mm. The surface of medians is to be free-draining with a minimum cross fall of 2%, and is to be planted with warm season grasses.
- In areas where high pedestrian volumes are expected (e.g. around schools and town centres), central medians may be paved with harder wearing surfaces such as granitic sand or other pavements.
- Any garden beds in central medians are to be offset 1.5m from back of kerb.
- Kerb to central median is to be SM2 Semi-mountable kerb.
- Depending on the location of breaks in the median, provide intermediate pedestrian crossing points to accommodate mid-block crossings
- An alternative boulevard treatment can be achieved through a wider verge on one side capable of accommodating a double row of canopy trees.

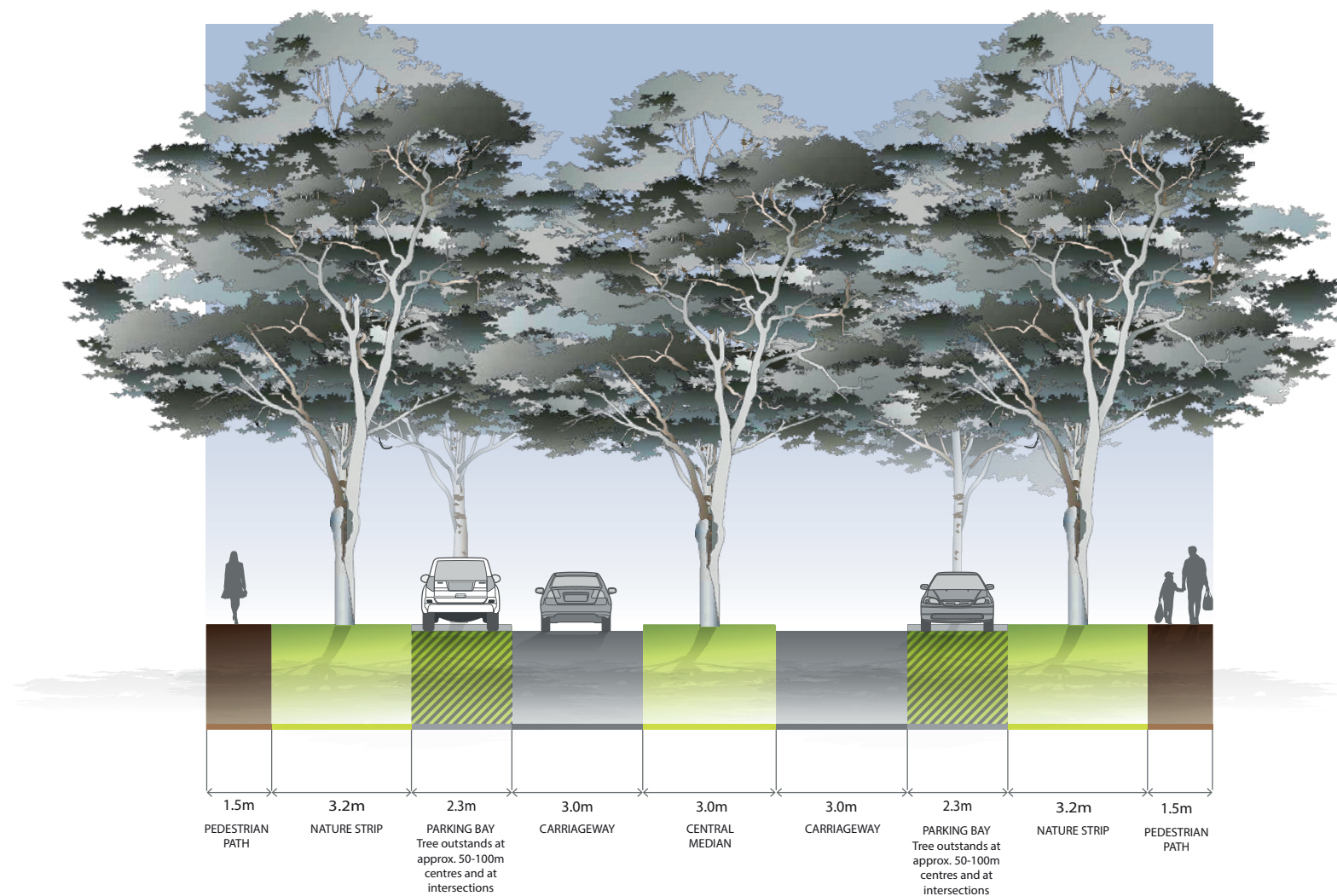
Local Access Level 2 Variation 1, 2, 3 and 4 - as per connector street variation 1, 2, 3 and 4 with nature strip width of 3.2m



NOTES:

- Carriageway drains to central drainage line rather than sides (when appropriate)
- Central drainage line to include pavement treatment other than asphalt
- Kerbs are to be B1 Barrier Kerb

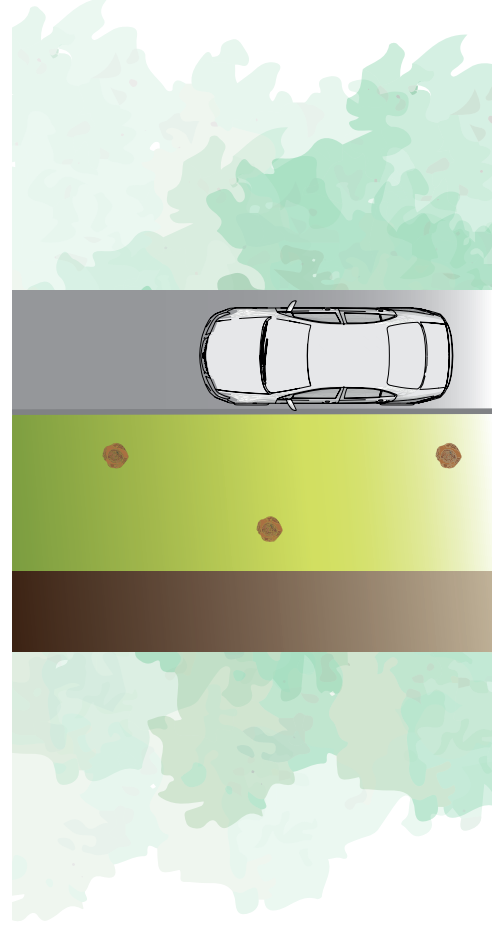
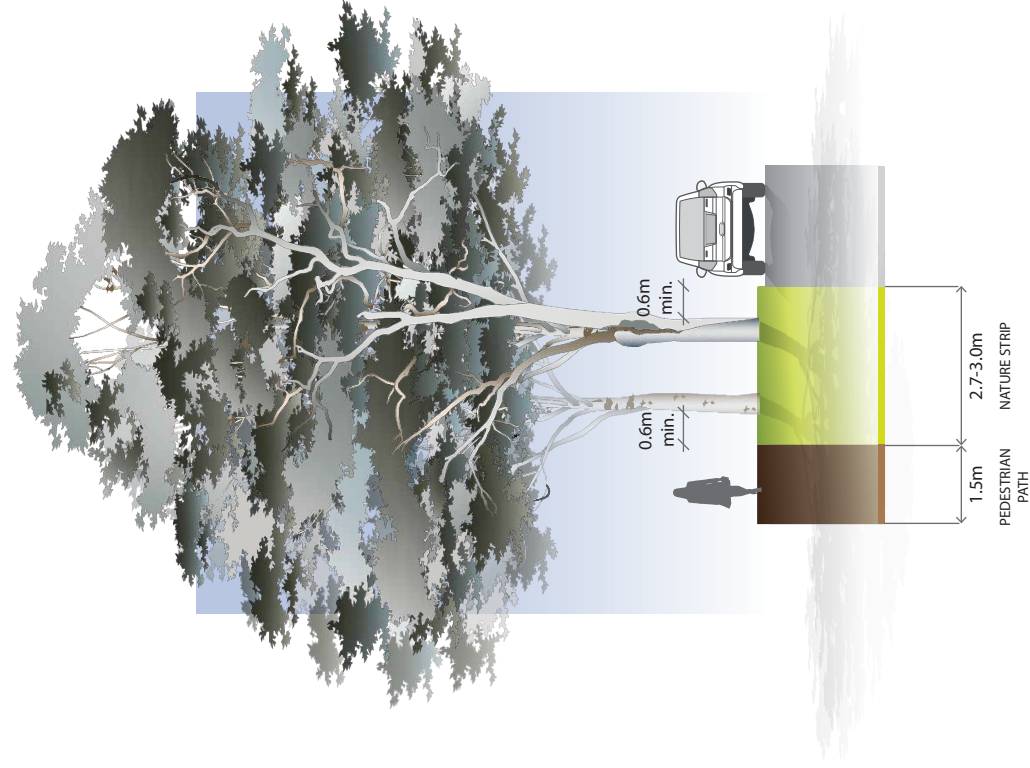
Local Access Level 2 (20m) Variation 5 - Central Drainage



Local Access Level 2 (23m) Variation 6 - Boulevard

NOTES:

- Include a central median with canopy trees to create a boulevard effect
- Depending on the location of breaks in the median, provide intermediate pedestrian crossing points to accommodate mid-block crossings
- An alternative boulevard treatment can be achieved through a wider verge on one side capable of accommodating a double row of canopy trees

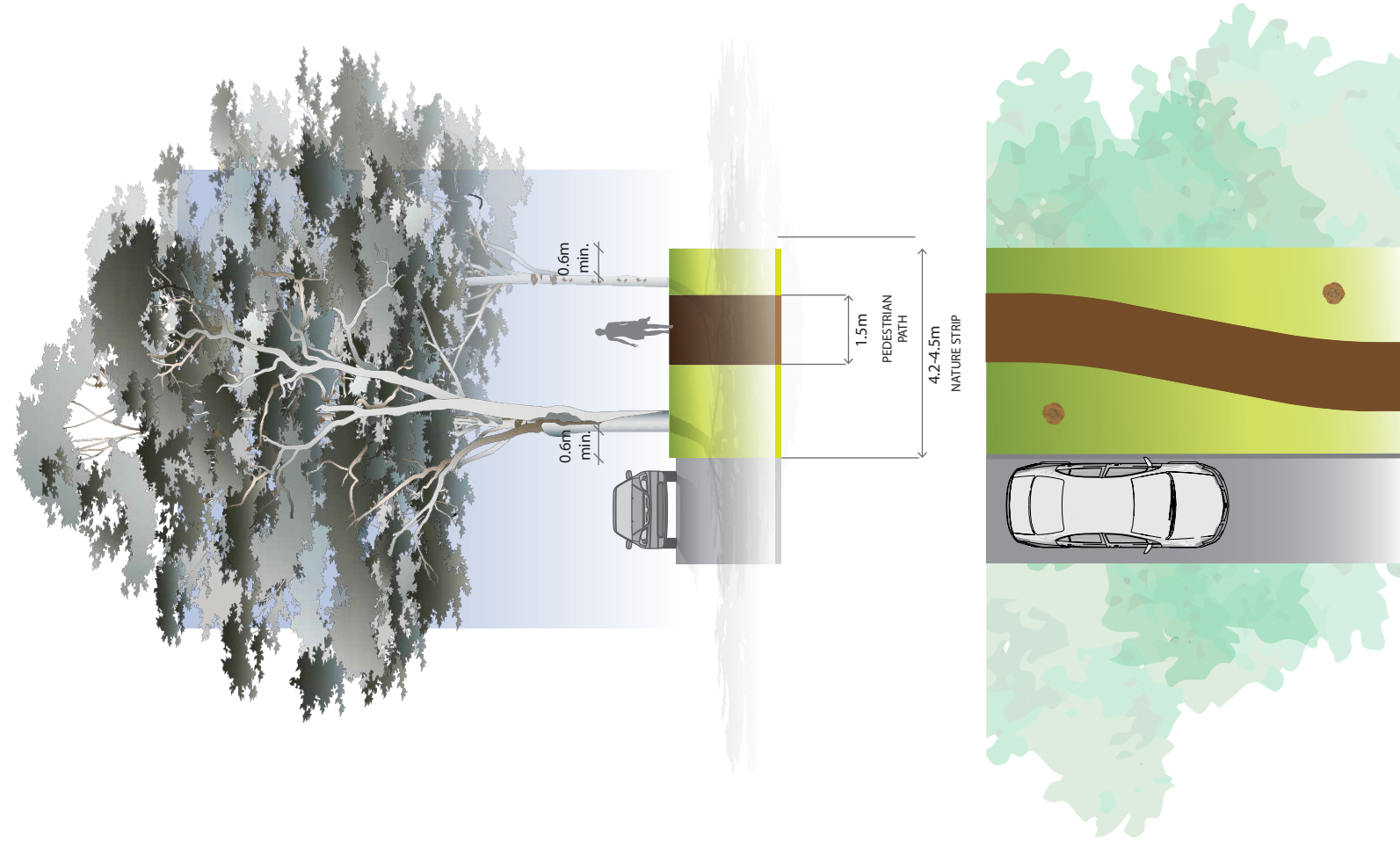


NOTES:

- Tree planting in varying locations in nature strip, in groups or clusters
- Minimum offset of tree trunks 0.6m from back of kerb and footpath edge

Local Access Level 1 (16m)

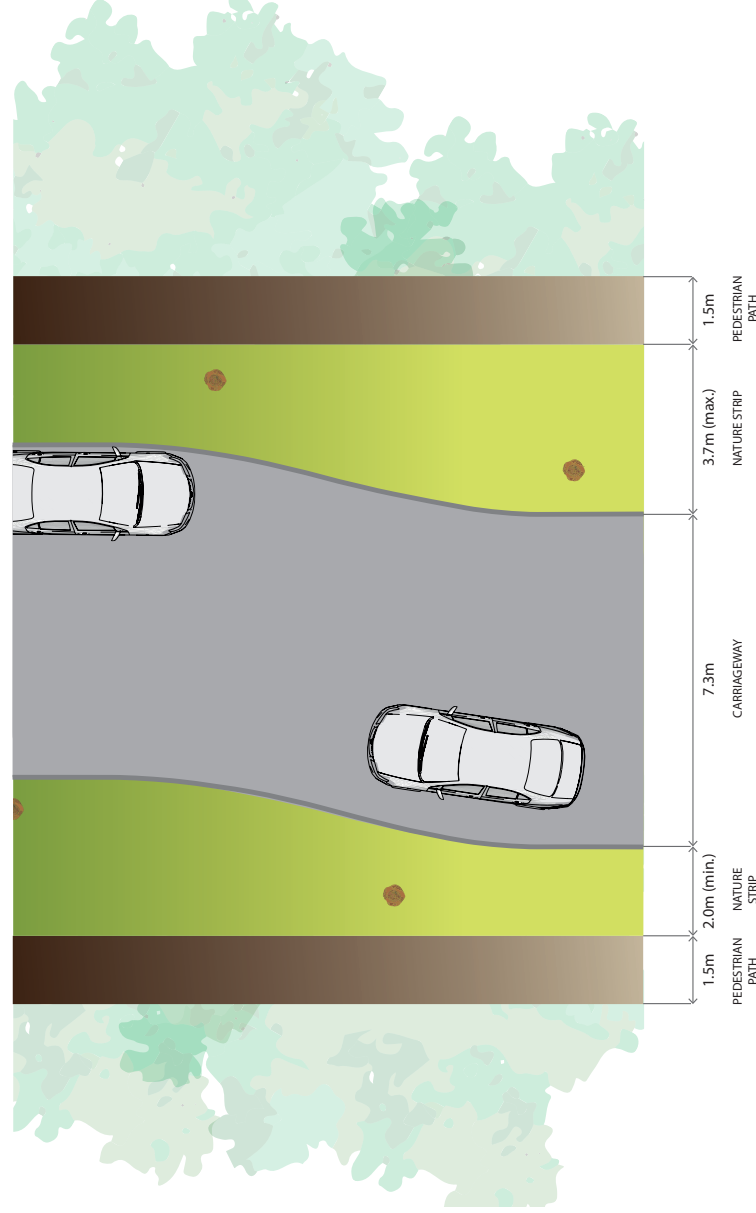
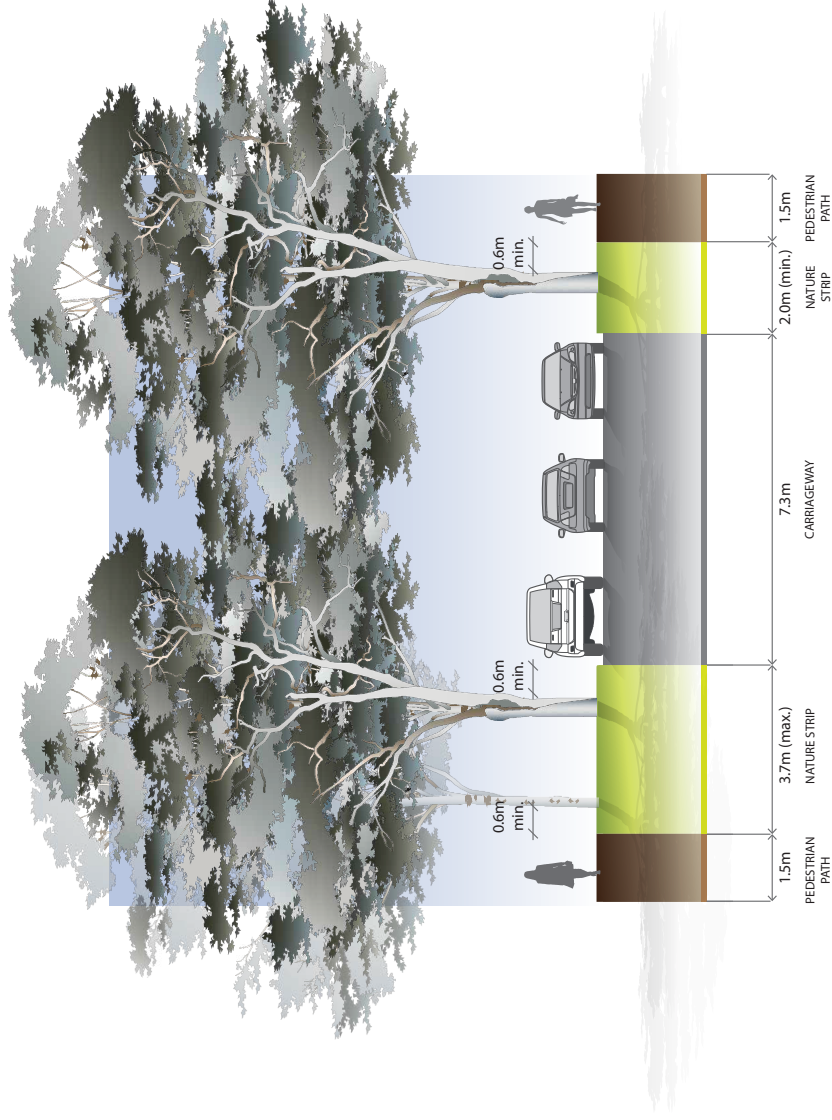
Variation 1 - Varying tree placement in nature strip



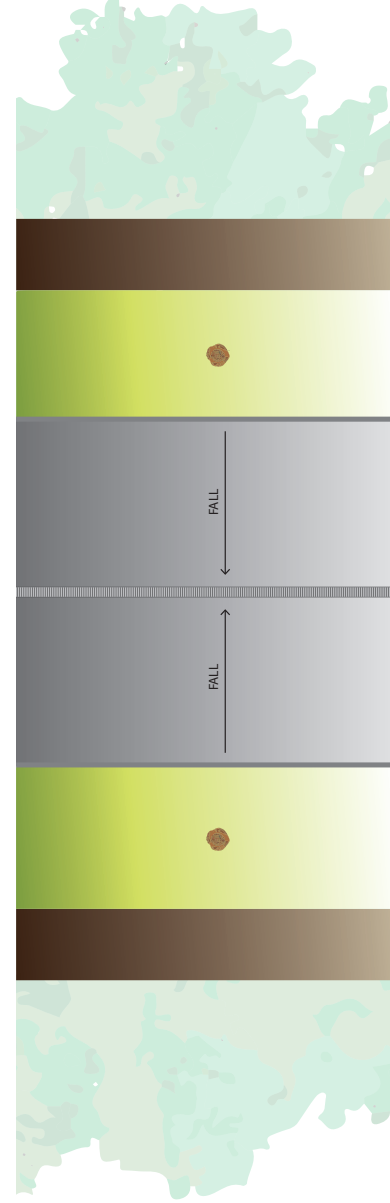
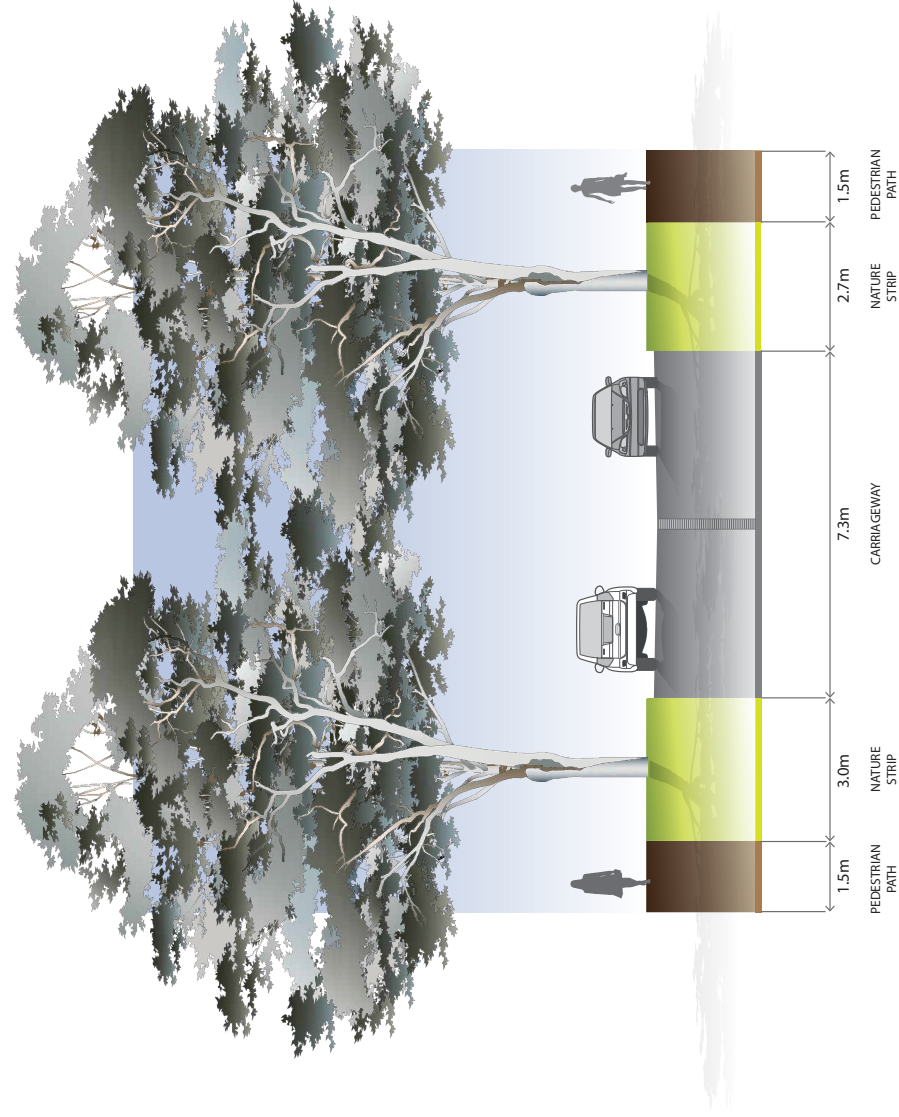
NOTES:

- Footpath in varying locations in nature strip
- Tree placement adjusts in response to footpath location
- Minimum offset of footpath 1.0m from back of kerb and 0.6m from tree trunks
- Design of meandering footpath is to consider bin placement on nature strips, access to letter boxes for mail delivery, interface with driveways, definition of front allotment boundary and accommodation of bus stops.

Local Access Level 1 (16m) Variation 2 - Meandering footpath in nature strip



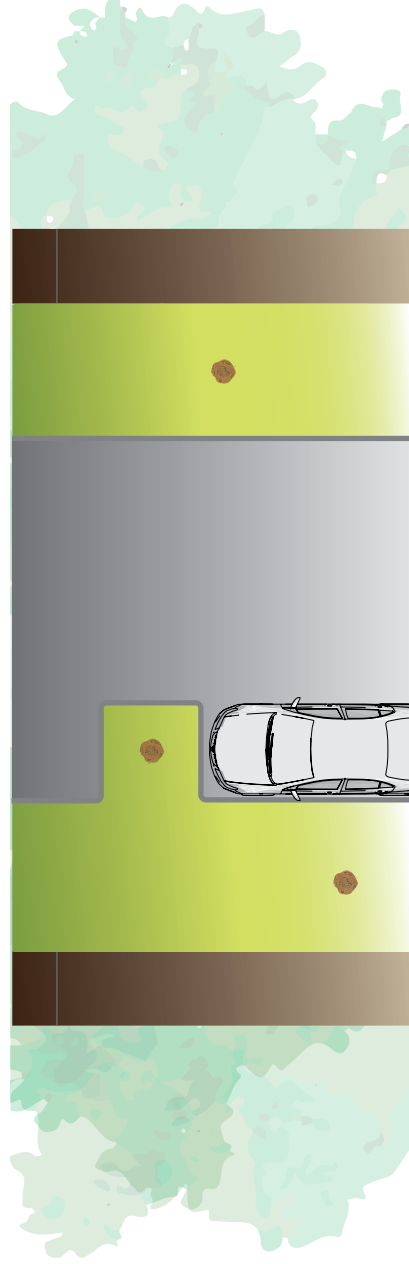
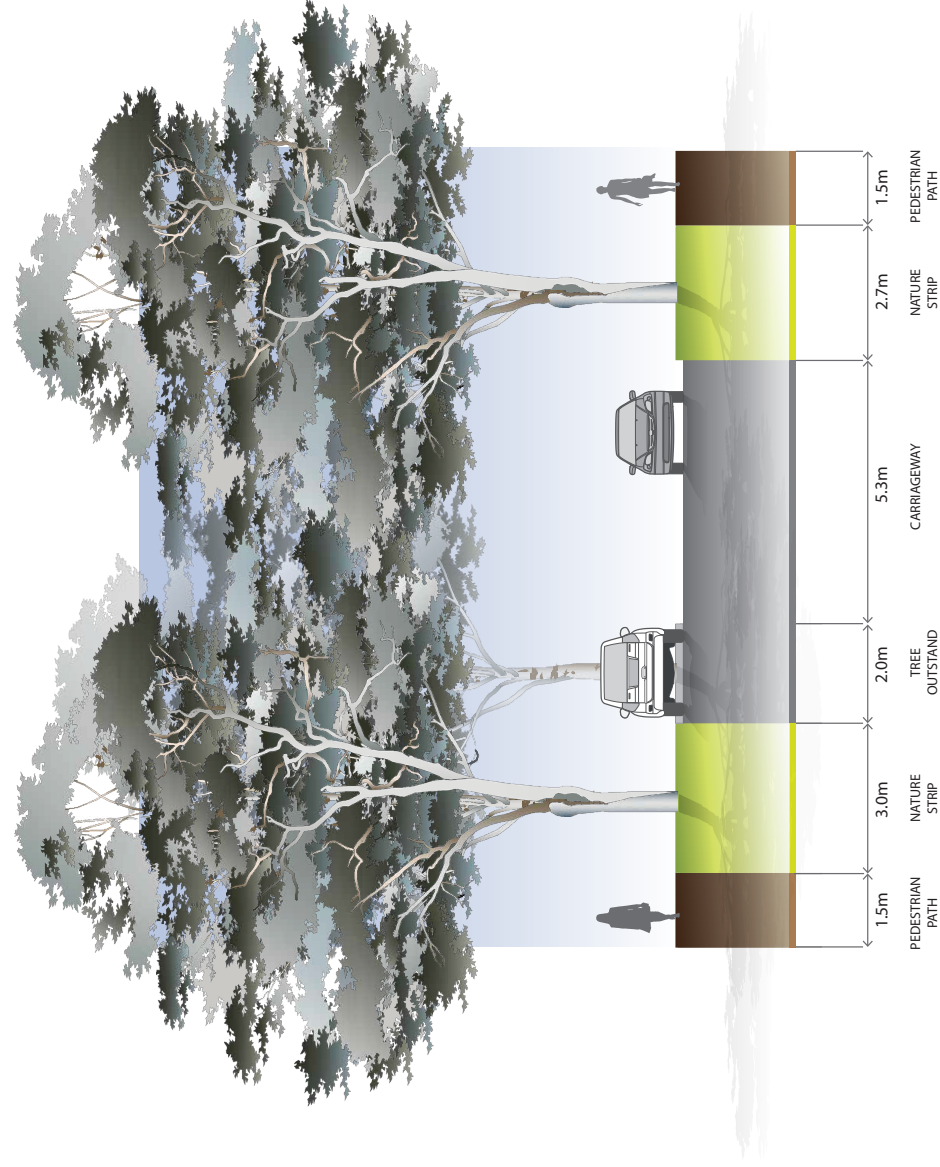
Local Access Level 1 (16m)
Variation 3 - Varying nature strip widths / meandering carriageway



NOTES:

- Carriageway drains to central drainage line rather than sides (where appropriate)
- Central drainage line to include pavement treatment other than asphalt
- Appropriate for short streets (less than 60m) with minimal through traffic or for frontage roads

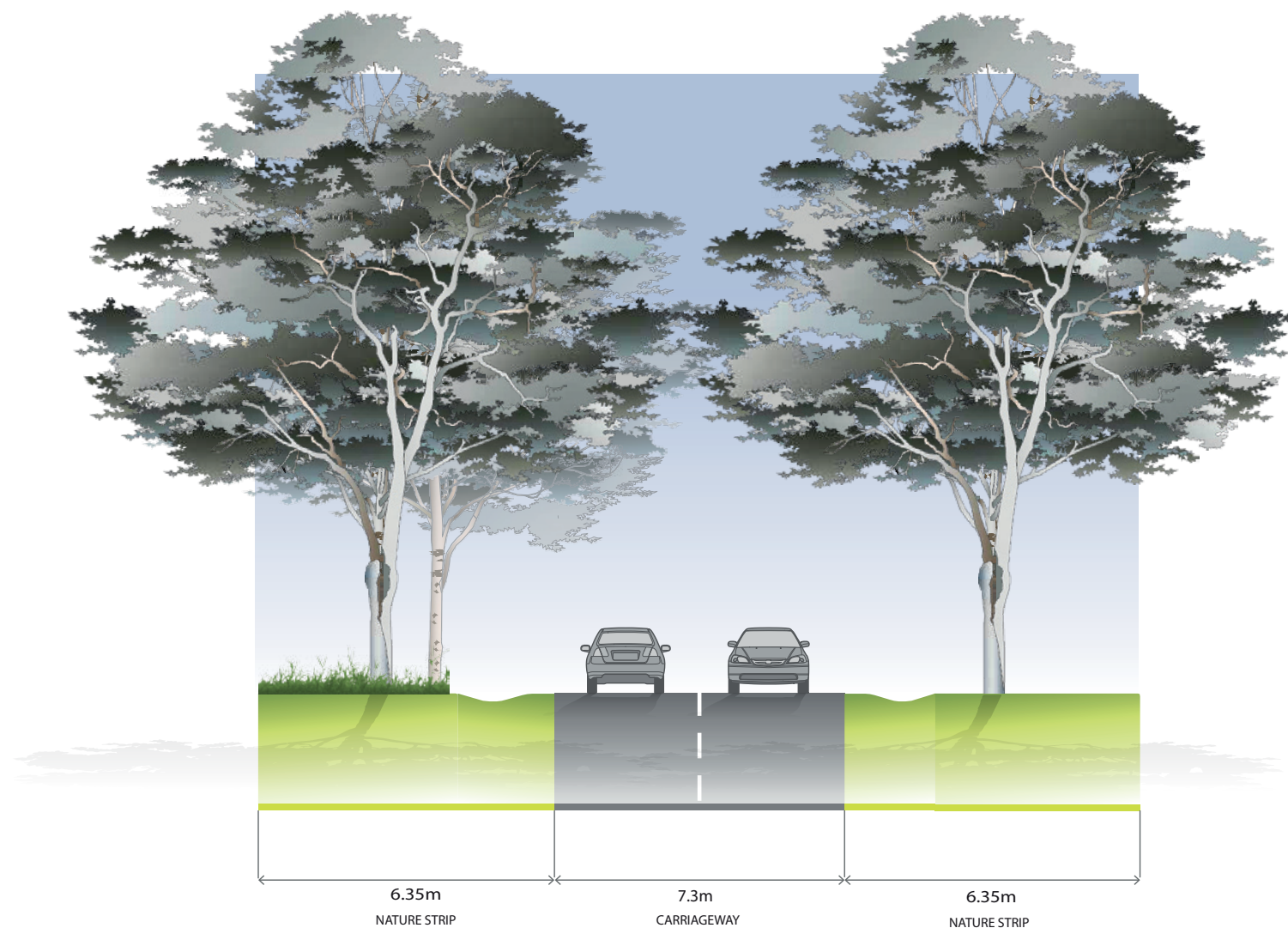
Local Access Level 1 (16m) Variation 4 - Central drainage



NOTES:

- Include tree outstands at approx 50 – 100m centres on one side only
- Road design to ensure passage of emergency vehicles is accommodated

**Local Access Level 1 (16m)
Variation 5 - Tree Outstands**



Local Access Level 1 (20m)
Variation 6 - Rural style

NOTES:

- This variation provides a rural style local road option for low volume streets with larger allotments. Swales adjacent the road pavement cater for drainage rather than kerb and channel.
- Two options are shown for nature strip treatment – variable tree placement and ground storey vegetation (left) and more typical mown grass and central tree planting (right).

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4.5 Appendix E - Service Placement Guidelines

Standard road cross sections

Figures 003 and 004 in the *Engineering Design and Construction Manual for Subdivision in Growth Areas* (April 2011) outline placement of services for a typical residential street environment. This approach is appropriate for the majority of the 'standard' road cross sections outlined in Appendix C containing grassed nature strips, footpaths and road pavements.

Non-standard road cross sections

To achieve greater diversity of streetscape outcomes, which enhances character and amenity of these new urban areas, non-standard road cross sections are required. Non-standard road cross sections will also be necessary to address local needs, such as fully sealed verges for high pedestrian traffic areas in town centres and opposite schools. This PSP contains suggested non-standard 'variation' road cross sections in Appendix D, however other non-standard outcomes are encouraged.

For non-standard road cross sections where service placement guidance outlined in Figure 003 and 004 in the *Engineering Design and Construction Manual for Subdivision in Growth Areas* (April 2011) is not applicable, the following service placement guidelines will apply.

TABLE NOTES

1. Trees are not to be placed directly over property service connections
2. Placement of services under road pavement is to be considered when service cannot be accommodated elsewhere in road reserve. Placement of services beneath edge of road pavement/parking bays is preferable to within traffic lanes
3. Where allotment size/frontage width allows adequate room to access and work on a pipe
4. Where connections to properties are within a pit in the pedestrian pavement/footpath

	Under pedestrian pavement	Under nature strips	Directly under trees ¹	Under kerb	Under road pavement ²	Within allotments	Notes
Sewer	Possible	Preferred	Possible	No	Possible	Possible ³	
Potable Water	Possible ⁴	Preferred	Preferred	No	Possible	No	Can be placed in combined trench with gas
Recycled Water	Possible ⁴	Preferred	Preferred	No	Possible	No	
Gas	Possible ⁴	Preferred	Preferred	No	No	No	Can be placed in combined trench with potable water
Electricity	Preferred ⁴	Possible	Possible	No	No	No	Pits to be placed either fully in footpath or nature strip
FTTH/Telco	Preferred ⁴	Possible	Possible	No	No	No	Pits to be placed either fully in footpath or nature strip
Drainage	Possible	Possible	Possible	Preferred	Preferred	Possible ³	
Trunk Services	Possible	Possible	Possible	Possible	Preferred	No	

General principles for service placement

- Place gas and water on one side of road, electricity on the opposite side
- Place water supply on the high side of road
- Place services that need connection to adjacent properties closer to these properties
- Place trunk services further away from adjacent properties
- Place services that relate to the road carriageway (eg. drainage, street light electricity supply) closer to the road carriageway
- Maintain appropriate services clearances and overlap these clearances wherever possible
- Services must be placed outside of natural waterway corridors or on the outer edges of these corridors to avoid disturbance to existing waterway values.



Lake Narracan Precinct Structure Plan - March 2015