Black Forest Road North

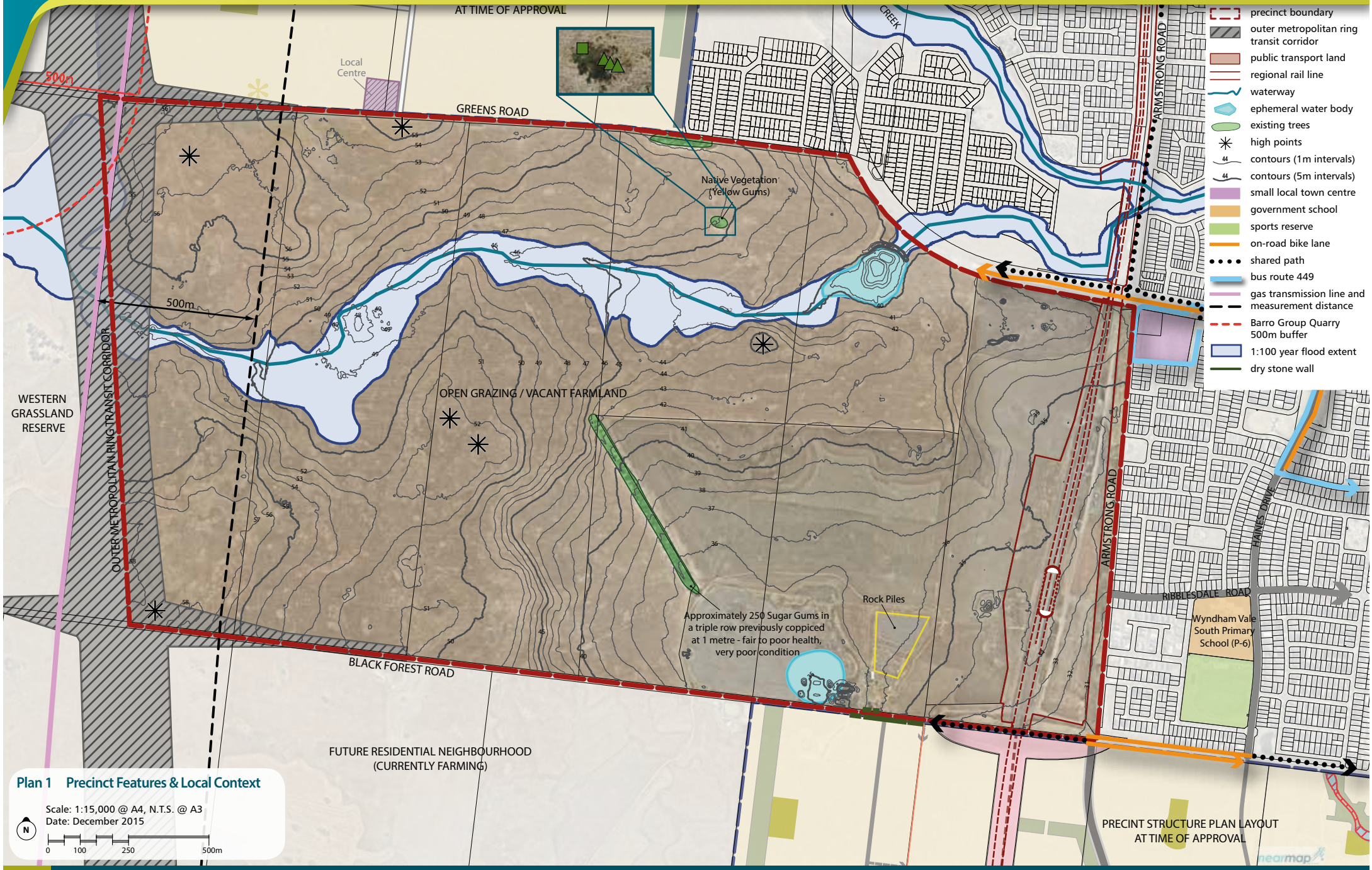
Precinct Structure Plan

December 2015

METROPOLITAN
PLANNING
AUTHORITY

Reference to the Metropolitan Planning Authority (MPA) in this document is a reference to the Growth Areas Authority (GAA).

CONTENTS



Plan 1 Precinct Features & Local Context

Scale: 1:15,000 @ A4, N.T.S. @ A3
Date: December 2015

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1.0 INTRODUCTION

The Black Forest Road North Precinct Structure Plan (the PSP) has been prepared by the Metropolitan Planning Authority (MPA) with the assistance of Wyndham City Council, 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 Victorian Government guidelines listed in this section
- Enables the transition of non-urban land to urban land
- Sets the vision for how the land should be used and developed and the outcomes to be achieved
- Outlines the projects required to ensure that future residents, visitors and workers within the area can be provided with timely access to services and transport necessary to support a quality and affordable lifestyle
- Sets out objectives, requirements and guidelines for land use and development
- Provides Government agencies, Wyndham City 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) in accordance with an endorsed program under Part 10

The PSP is informed by the following policies and guidelines:

- State and Local Planning Policy Framework set out in the Wyndham Planning Scheme
- *Precinct Structure Planning Guidelines* (Growth Areas Authority, 2008)
- *Growth Corridor Plan: Managing Melbourne's Growth* (Growth Areas Authority, 2012)
- The *Biodiversity Conservation Strategy for Melbourne's Growth Corridors* (BCS) and applicable sub-regional species strategies (Department of Environment & Primary Industries, 2013)*
- Wyndham City Council strategies: *Landscape Context Guidelines* (2013), *Wyndham Social Infrastructure Plan 2040* (2012), *Quality Community Plan* (2007), *Wyndham Community Health, Wellbeing and Safety Plan 2013-17, Wyndham City Plan 2013-17.*

* On 5 September 2013 an approval under the EPBC Act 1999 was issued by the Commonwealth Minister for Environment, Heritage and Water. The approval applies to all actions associated with urban development in growth corridors in the expanded Melbourne 2010 Urban Growth Boundary as described in page 4 in the BCS. The Commonwealth approval has effect until 31 December 2060 and is subject to conditions specified at Annexure 1 of the approval. Provided the conditions of the EPBC Act 1999 approval are satisfied individual assessment and approval under the EPBC Act 1999 is not required.

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

- The *Wyndham West Background Report Plan* as described in section 1.3 of the PSP
- The *Surface/Stormwater Management Strategy, Daleston* (October 2015)
- The *Wyndham West Development Contributions Plan* (the DCP) as described in section 1.4 of the PSP.

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1.1 How to read this document

This PSP guides use and development of land where a planning permit is required under the Urban Growth Zone, or another zone, where that zone references this structure plan.

A planning 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 and guidelines as relevant.

Requirements must be adhered to in using or 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 structure plan. 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 that must be included in the planning permit are outlined in Schedule 7 to Clause 37.07 Urban Growth Zone (UGZ7) in the Wyndham Planning Scheme. Meeting these requirements, guidelines and conditions will implement the outcomes of the PSP.

Development must also comply with other acts and approvals where relevant e.g. the EPBC 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 land's use, development or subdivision is addressed in this PSP. A responsible authority may manage use and development and issue permits as relevant under its general discretion.

1.2 Land to which this PSP applies

The PSP applies to 499.97ha of land as illustrated on Plan 1. The precinct is bounded by Armstrong Road to the east, the Outer Metropolitan Ring (OMR) transit corridor to the west, Black Forest Road to the south and Greens Road to the north. Plan 1 also identifies the key features of the land.

1.3 Background Information

Detailed background information on the precinct including its local and metropolitan 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.

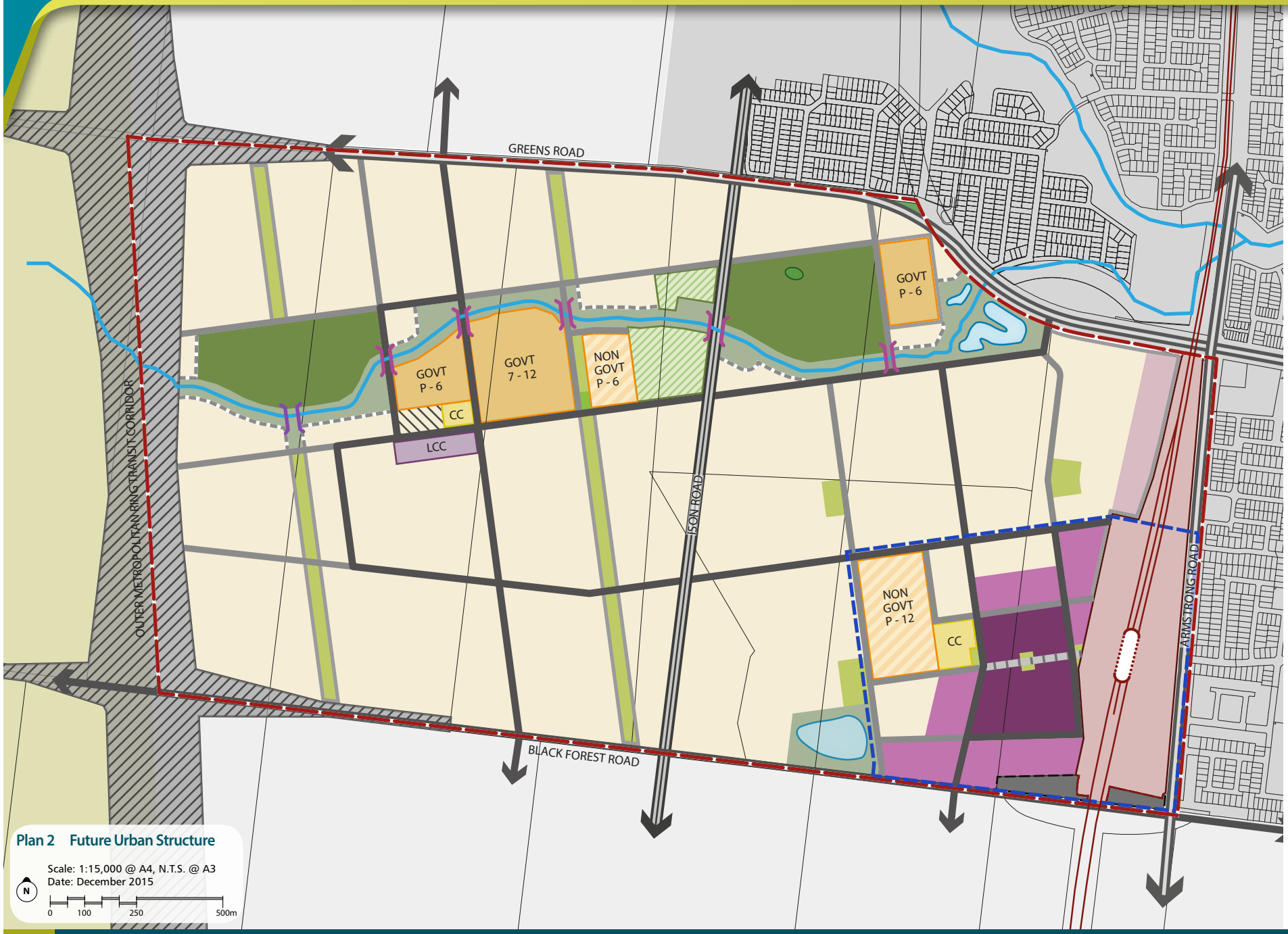
1.4 Development Contributions Plan

Development proponents within the PSP are bound by the DCP.

The DCP sets out requirements for infrastructure funding across the wider Wyndham West region and priorities for delivery of the infrastructure it funds, and has been prepared separately to the PSP.

The DCP sets out the requirements for development proponents to make contributions toward infrastructure required to support the development of the precinct.

The DCP is a separate document incorporated into the Wyndham Planning Scheme and implemented through Schedule 11 to Clause 45.06 Development Contributions Plan Overlay (DCPO11).



precinct boundary
arterial road
connector street
main street
access street level 2
access street level 1
frontage access road
residential
potential government education facility
potential non-government education facility
local convenience centre
large local town centre
mixed use
mixed use employment/ commercial
CC community centre
area of land to be addressed in town centre UDF
suitable for non-residential uses
local sports reserve
local park
land for indoor sports
local park (uncredited)
service open space - drainage
tree reserve
outer metropolitan ring transit corridor
public transport land
regional rail line
potential future railway station
waterway
bridge/culvert
pedestrian/cyclist crossing
future residential neighbourhood (currently farmland)
existing urban area
western grasslands reserve
ephemeral waterbody (indicative)
native vegetation

Plan 2 Future Urban Structure

Scale: 1:15,000 @ A4, N.T.S. @ A3
Date: December 2015

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2.0 OUTCOMES

2.1 Vision

Black Forest Road North will be a community where a distinct urban form, characterised by a strong grid of high quality streets, is complemented by an extensive and innovative park network focused on the main east-west waterway and key north-south streets. It will also contain attractive and integrated town centres and significant educational and community facilities.

A town centre integrated with a railway station precinct, together with extensive parkland along an existing ephemeral waterway, will provide the principal character elements.

The town centre will be an active and vibrant place providing services, facilities and local amenity to the surrounding residential catchment. Due to the centre's proximity to the railway station, bus routes and the potential future population beyond the boundaries of the PSP area, the town centre will have scope for additional growth in the longer term.

The open space network has been created through a grid of formal and informal green spaces. Meandering west to east across the precinct, the waterway corridor provides a naturally landscaped link between schools and formal open spaces. Traversing these corridors and running north-south are two linear parks. These unique green spines extend the width of the precinct and will provide a range of recreation opportunities through footpaths, cycling tracks, play equipment, picnic areas and informal sports infrastructure. Additional pocket parks will be scattered throughout the precinct to complete an accessible open space structure.

Black Forest Road North will be a:

- Place where excellence in landscape, architectural and urban design is demonstrated
- Place where streets and public spaces provide extensive and healthy canopy tree cover
- Place that residents and businesses are proud to call home
- Place of significant housing choice catering for a diversity of people from varying cultural and socioeconomic backgrounds
- Connected community with provision for extensive public transport options and a first class pedestrian and cycle network
- Place where the town and convenience centres act as strong community hubs, complemented by a mix of retail, office, home office and other services and employment opportunities.

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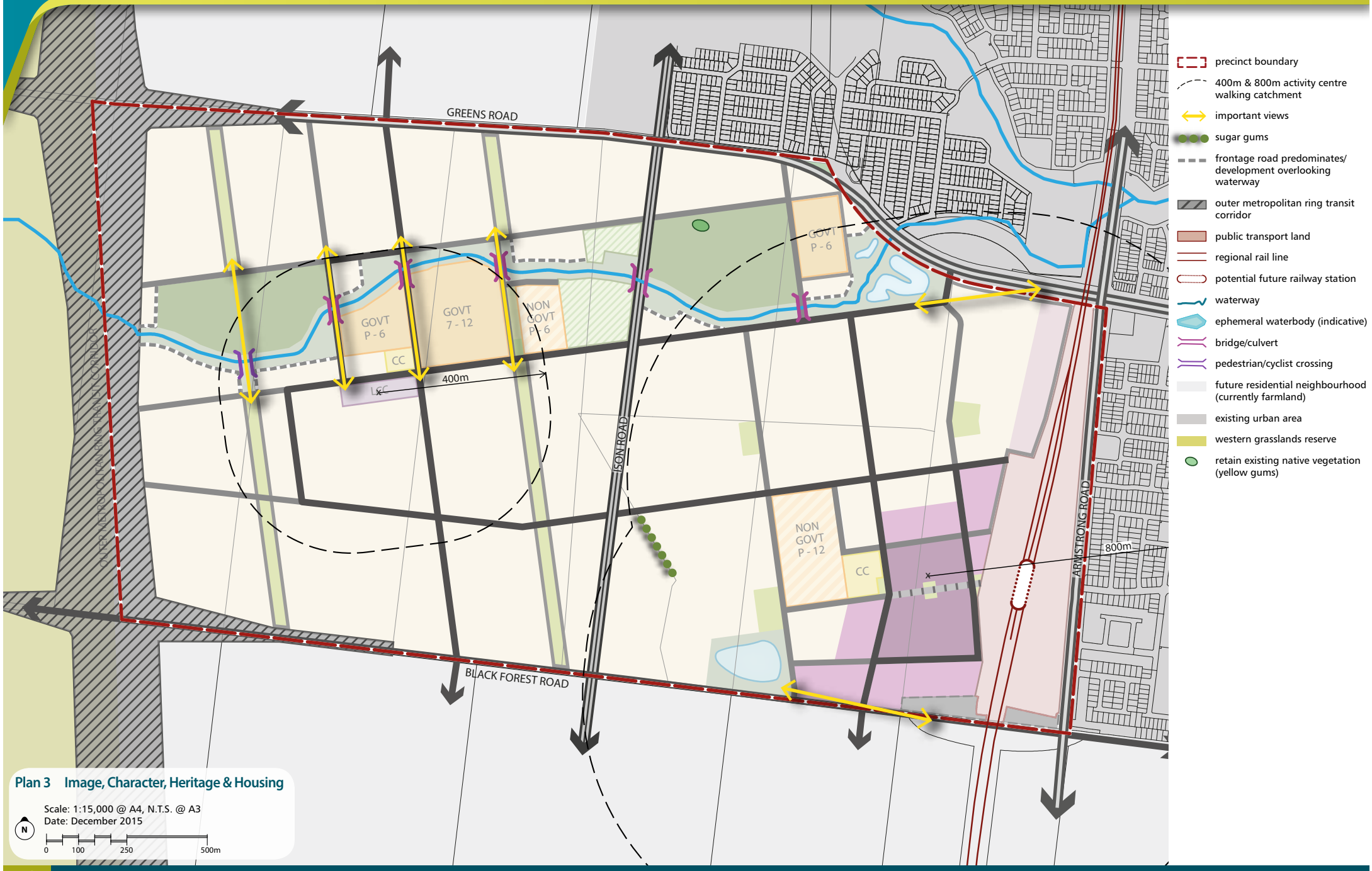
2.2 Objectives

Use and development of the precinct is guided by a set of key objectives.

	OBJECTIVES
O1	Recognise the history, heritage and character of the Werribee Plains in a new urban environment through the protection and enhancement of waterway corridors values, and sympathetic design and planting of such waterways and adjoining public open spaces.
O2	Capitalise on the significant opportunities of the local context, including the Regional Rail Link (RRL), the future Mambourin East Employment Area and the East Werribee National Employment Cluster.
O3	Provide formal and informal opportunities for active living and social connections in a safe and pleasant environment.
O4	Achieve a diversity of streetscape and open space outcomes.
O5	Establish a landscape of connecting tree canopies along streets, parks and waterways.
O6	Ensure that no residents need to cross arterial roads, railway lines or waterways to access a local park.
O7	Develop a slow-speed and permeable connector road network that links across arterial roads and traverses through the core of each square mile.
O8	Deliver a minimum of 5,555 new homes (equating to 16.5 dwellings per net developable hectare (residential) overall precinct average).
O9	Build high-density and transit-oriented neighbourhoods around the railway station precinct.
O10	Promote housing choice through the delivery of a range of lots capable of accommodating a variety of dwelling typologies throughout the precinct, including within town centres.
O11	Leverage off the amenity offered by waterways, open space and town centres to deliver medium and high density housing options.
O12	Deliver sufficient residential densities within a walkable catchment to support vibrant and viable town centres.
O13	Develop town centres that have a civic focus, provide safe non-commercial social spaces and are capable of adapting and evolving with the community.
O14	Ensure the design of town centres is conducive to attracting a diverse range of commercial enterprises including start-up, small and home based businesses that generate a variety of local jobs.
O15	Deliver an integrated water management system that reduces reliance on reticulated potable water, increases the re-use of alternative water, minimises flood risk, ensures waterway health and contributes toward a sustainable and green urban environment.
O16	Ensure that development staging is co-ordinated with the delivery of key local and state infrastructure.
O17	Provide for non-government school sites to meet a strategically justified need for Catholic primary and secondary education in the area.
O18	Encourage non noise-sensitive land uses to be located adjacent the RRL corridor/public transport reservation.



Plan 3 Image, Character, Heritage & Housing

Scale: 1:15,000 @ A4, N.T.S. @ A3
Date: December 2015

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3.0 IMPLEMENTATION

3.1 Image, character, heritage & housing

3.1.1 Image, character & heritage

	REQUIREMENTS
R1	Trees in parks and streets must be: • Suitable for local conditions • Planted in adequate, modified, improved and non-contaminated soil to support longevity and optimum growth.
R2	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 average intervals below: AVERAGE INTERVAL / MATURE TREE SIZE 8 – 10m / Small trees (less than 10m canopy) 10 – 12m / Medium tree (10 – 15m canopy) 12 – 15m / Large trees (canopy larger than 15m) Unless otherwise agreed by the responsible authority.
R3	Street tree planting must use species appropriate for the local environmental conditions and be generally consistent with the *Wyndham City Street Tree Policy*, *Subdivision Landscape Works Standards and Specifications Manual* and any guidance provided on the relevant cross section within the PSP.
R4	Connector roads and access streets must be aligned to create views and direct connections to waterways and open space as illustrated on Plan 3.
R5	Retain the native vegetation (scattered Yellow Gum trees near Ison Road and Greens Road) and incorporate into the layout of the open space.

	GUIDELINES
G1	Subdivisions should demonstrate a strong generally north-south and east-west grid of streets, maximising the number of connections and facilitating direct views to open space and town centres.
G2	Significant landscape and built form should terminate view lines along streets, including public building and landmark elements.
G3	Street tree species should be used consistently across neighbourhoods to enhance use, local character and amenity, as well as reinforce the movement hierarchy.
G4	A consistent suite of lighting and furniture should be used in neighbourhoods and the wider precinct appropriate to the type and role of street or public space, unless otherwise approved by the responsible authority.
G5	Trees in streets and parks should be larger species wherever space allows (to facilitate continuous canopy cover).
G6	Salvaged rocks should be incorporated in the design and construction of waterways, retaining structures, walls, fences and other landscape features.
G7	To provide sustainable and robust landscapes, with extensive tree cover, Water Sensitive Urban Design (WSUD) initiatives should be implemented to direct runoff water into nature strips, medians and other planted areas.
G8	Where practical, subdivision plans should be consistent with the *Wyndham City Landscape Context Guidelines*.
G9	Front fences abutting open space areas including waterways should be visually permeable and not more than 1.2m in height to the satisfaction of the responsible authority.
G10	Dwellings on corner lots (including lots interfacing with pedestrian links) should restrict boundary fencing to no more than 1.2m in height forward of the front wall of the dwelling.
G11	Incorporate existing Sugar Gum trees (near Ison Road and the southern east-west connector) into public spaces such as roads or local parks where sustainable, safe and practical so as to not have any adverse impact on the layout of subdivison design, otherwise replace with locally appropriate species in accordance with the *Wyndham City Street Tree Policy*.

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3.1.2 Housing

	REQUIREMENTS
R6	Residential subdivisions must deliver a broad range of lot sizes capable of accommodating a variety of housing types as indicated in Table 1.
R7	Subdivision must appropriately respond to the potential future railway station and planned public transport through the creation of opportunities for high-density residential development.
R8	Dwellings must front or side: • Waterways and the open space network (including local parks) • Arterial roads and connector streets. The siding of lots to waterways, open space and primary street frontages must be kept to a minimum, and preferably not more than one.
R9	Ensure lot orientation along the linear park provides an active and engaging edge for passive surveillance opportunities and visual amenity.
	GUIDELINES
G12	Subdivision of land within a walkable catchment of town centres, potential future train station and designated public transport routes should create a lot range suitable for the delivery of medium and higher density housing types listed in Table 1.
G13	Subdivision of land within the waterway/open space corridor and directly north, should create a lot range suitable for the delivery of medium and higher density housing types listed in Table 1.
G14	Specialised housing forms such as retirement living or aged care should be: • Integrated into the wider urban structure • Located in proximity to town centres and community hubs • Accessible by public transport.
G15	Edge public open space, the rail reserve and arterial roads with local roads that are overlooked by the front of lots and houses.
G16	Dwellings should provide a positive address to directly abutting schools and community centres.

Table 1 Housing type by lot size

The following table provides an indication of the typical range of lot sizes that support the delivery of a broad range of housing types.

HOUSING TYPES THAT MAY BE SUPPORTED	LOT SIZE		
	LESS THAN 300m²	300m² - 600m²	MORE THAN 600m²
Small Lot Housing (including townhouses, attached, semi-detached houses and detached houses)	■		
Dual occupancies (including duplexes)	■	■	■
Detached houses		■	■
Multi-unit housing sites (including terraces, row houses and villas)		■	■
Stacked housing (including apartments and walk-up flats)		■	■

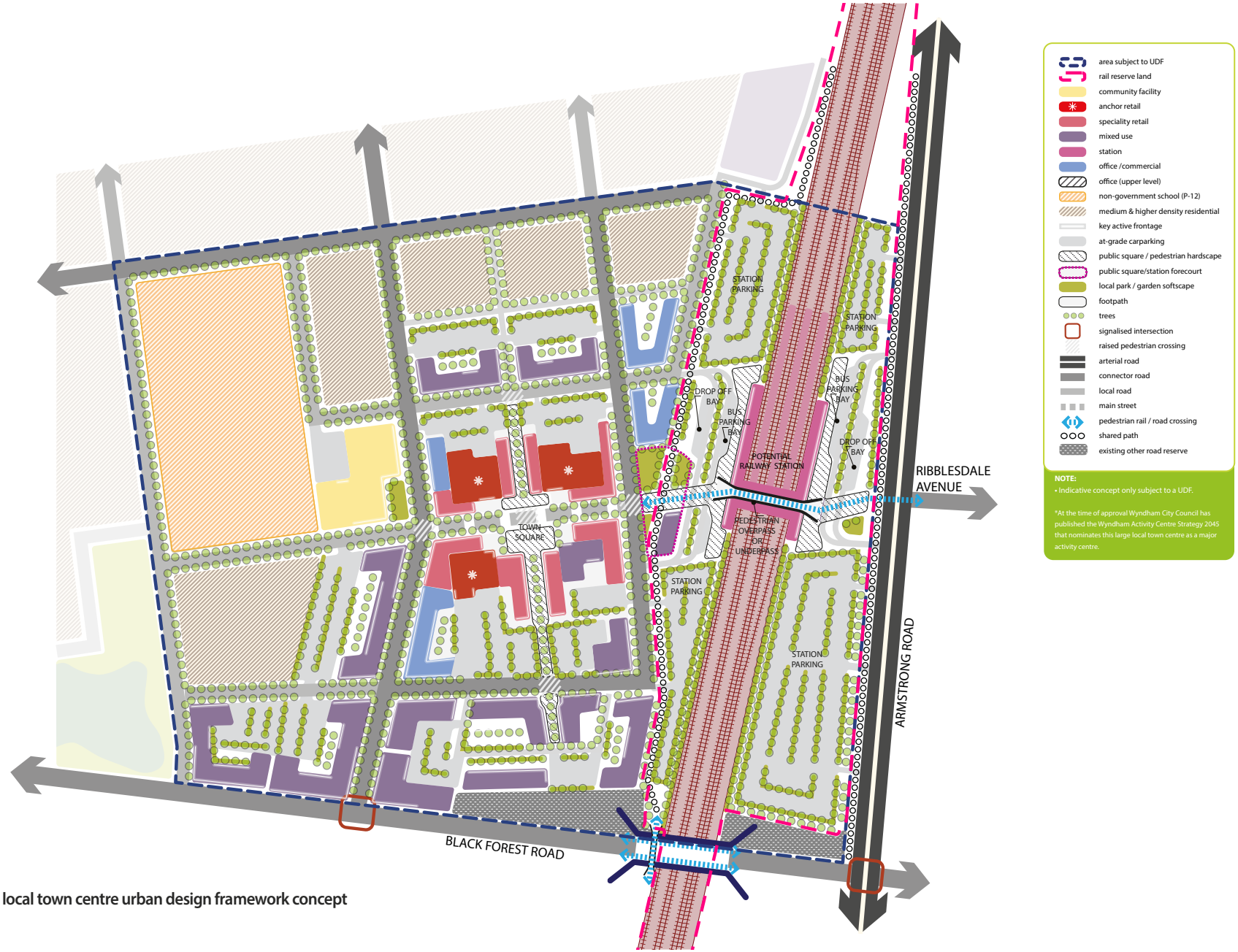

Figure 1 Large local town centre urban design framework concept

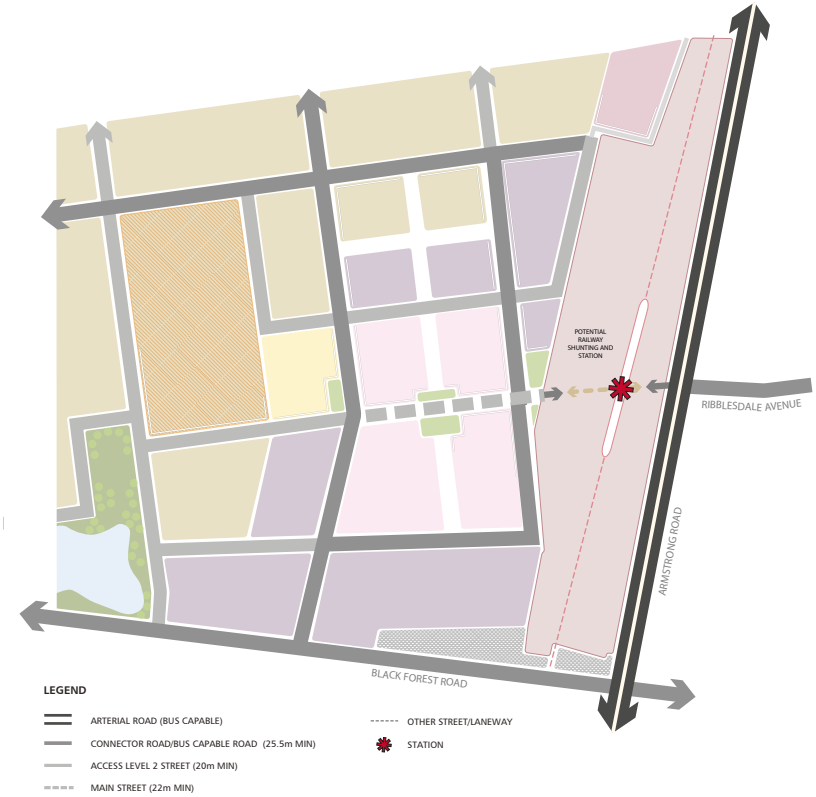

Figure 2a Large local town centre road network & public transport

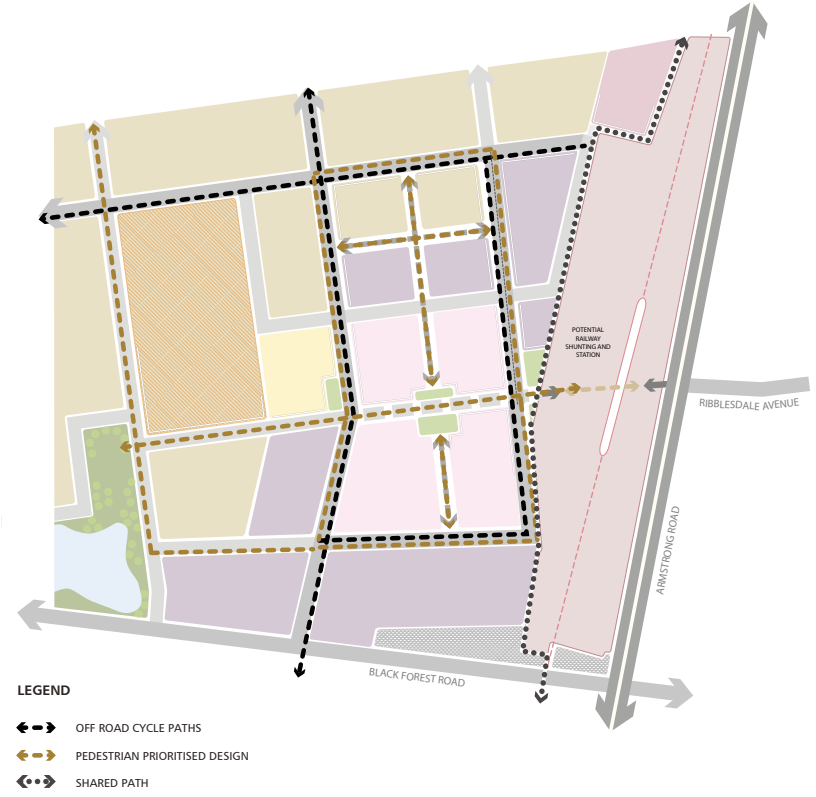

Figure 2b Large local town centre pedestrian & cycle movement

Figure 2 Large local town centre organising elements

Figure 2c Large local town centre public space, views & vistas

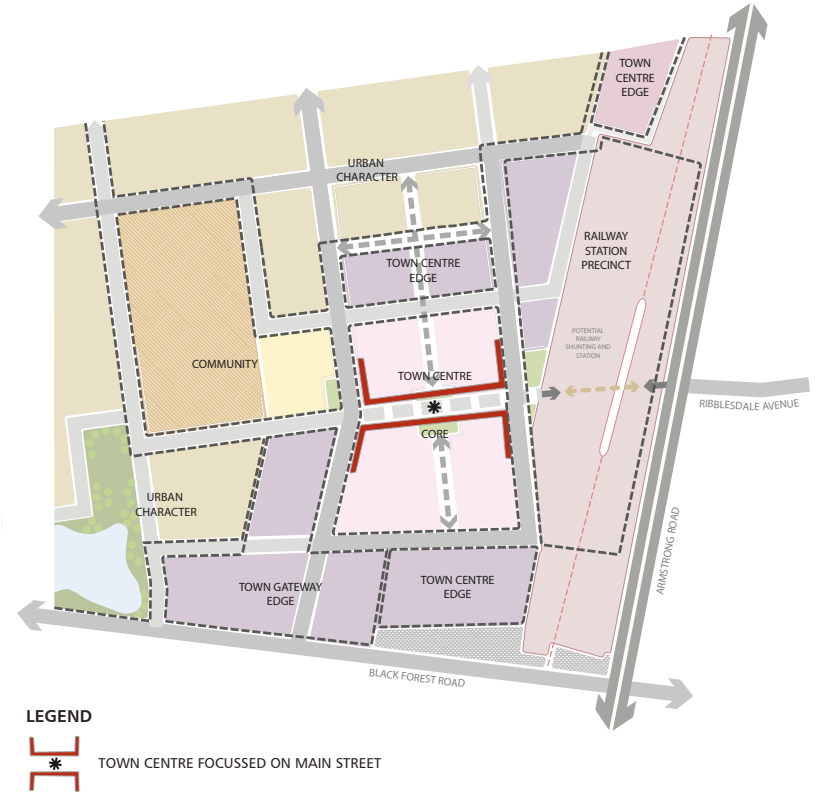

Figure 2d Large local town centre character precincts

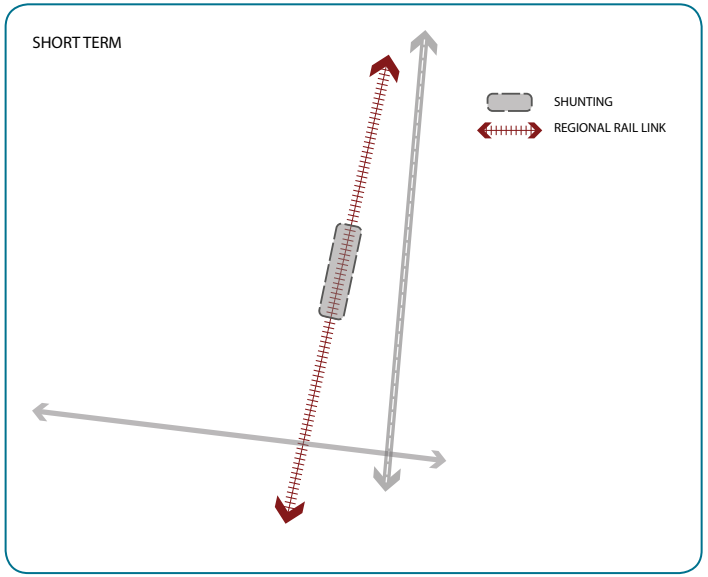

Figure 2e Large local town centre indicative staging short term

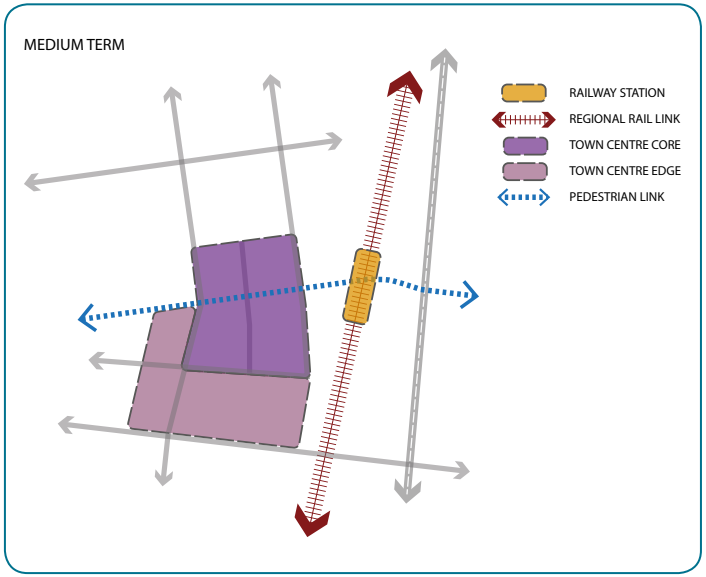

Figure 2f Large local town centre indicative staging medium term

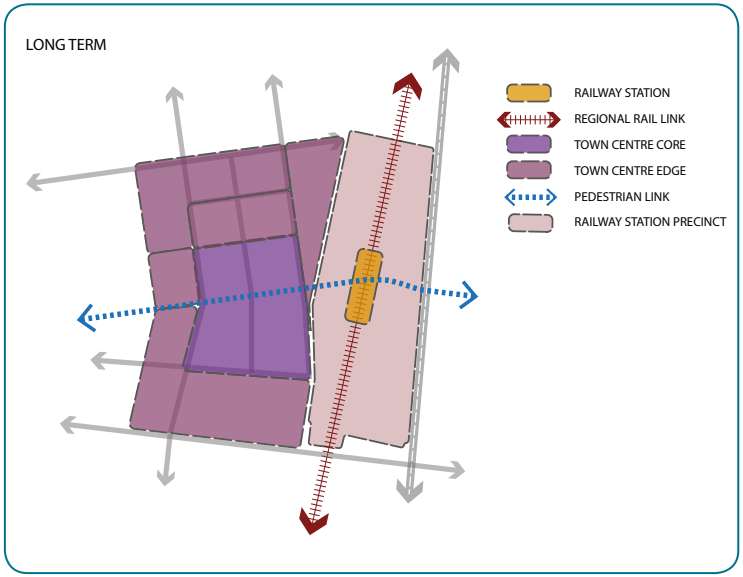

Figure 2g Large local town centre indicative staging long term

3.2 Town centres and employment

3.2.1 Large local town centre

	REQUIREMENTS
R10	An Urban Design Framework (UDF) for the Large Local Town Centre must address the following: • Any relevant approved activity centre strategies or design guidelines prepared by the Victorian Government or Wyndham City Council • A response to the vision, objectives and other relevant requirements and guidelines of this PSP • A response to the Large local town centre urban design framework concept plan (Figure 1) and the organising elements diagrams (Figures 2a - 2g) • A response to the guidance information included within Appendix B • Inclusion of land use appropriate to the town centre's role and function as the second largest town centre of Wyndham West including (but not limited to) retail, commercial, office, medium and high density residential, education and community space • Importance of the main street presentation, as well as its purpose as the principal spine of activity and pedestrian movement • Creation of a permeable pedestrian and cyclist friendly road network • Facilitation of and response to pedestrian linkages across railway station precinct and connecting to the established residential area to the east • Integration of the potential future train station/bus interchange into the wider centre and particularly along the shared interface • Integration with the proposed non-government primary/secondary school and Wyndham City Council community centre • Integration with the retarding basin and wetland open space.
R10 cont'd	Specifically, the UDF must: • Set out clear and specific strategies, actions, and guidelines for the development of the town centre that may be used as an assessment tool for future development applications within the centre • Demonstrate how the design of the centre maximises the opportunities of its location within the western growth corridor and incorporates the principles objectives and strategies for transport and land use integration outlined in the Wyndham Planning Scheme • Demonstrate how the design of the town centre integrates and connects with the surrounding residential neighbourhood • Outline the intended staging and indicative timing of development, including any potential interim land uses • Demonstrate how the design of the town centre allows for long-term evolution and growth from a 'standard' local town centre to a large local town centre of around 25,000m^2 of retail floor space • Demonstrate how the town centre will be an attractive, functional and viable centre in the short to medium term • Demonstrate how the design of the centre allows for a range of compatible commercial, residential and mixed use outcomes • Demonstrate how the potential future train station will integrate with the town centre, and particularly the train station forecourt area with the main street • Set out provisions for car parking including the location and design of parking areas and a demonstration of how off-street car parking has been minimised through efficiencies in the shared use of off-street facilities • Set out arrangements for the provision of service areas for the deliveries and waste disposal, including access for larger vehicles and measures to minimise the impact on adjoining neighbourhoods • Include an overall landscape architectural concept.

R11	Use and development of the Large Local Town Centre must have regard to the concepts at Figures 1, 2a - 2g, any adopted UDF and the following objectives: • Provide high amenity public spaces and streetscapes with significant planting as settings for medium and high density residential, commercial and office developments. • Create a strong central meeting space for the community • Create a series of public spaces each with a unique character and focus • Ensure community gathering spaces are included with the first stages of development • Maximise exposure to Black Forest Road while retaining a compact town centre core • Maximise frontages along the north-south connector road with uses which benefit from exposure to passing traffic • Provide clear east-west view lines between the station precinct, town centre core, community hub and local park to the west • Ensure land use and built form maximises views and view lines • Ensure building setbacks from the street are minimised at corner sites. • Creating the following character areas: **Town centre core:** A compact urban core that acts as the 'heart' of the centre and has a strong, vibrant character **Town gateway edge:** Commercial/employment area that maximises exposure to passing traffic and visually anchors the southern entrance to the town centre **Railway station precinct:** Transport hub, with complementary uses, which provides transport infrastructure and a strong visual link to town centre **Town centre edge:** Commercial/employment areas that maximise exposure to passing traffic and buffer residential uses from the RRL **Community:** Attractive public buildings servicing the residential community with strongly related to the town centre **Urban character:** Opportunity for diverse housing forms in high amenity locations
R12	Use and development within the Large Local Town Centre must address the design principles and performance criteria outlined in Appendix B.

3.2.2 Local convenience centre

REQUIREMENTS	
R13	Buildings must be oriented toward the connector street and consider the relationship and interface with surrounding use and development.

3.2.3 Employment

REQUIREMENTS	
R14	Buildings within the mixed use/commercial area must positively address the street.
R15	Development within the mixed use employment/commercial area must be separated from the RRL by a frontage road and an active interface.
R16	Development proponents must consider crime prevention through environmental design (CPTED) and the *Safer Design Guidelines* when designing employment areas.
GUIDELINES	
G17	Car parking and loading facilities should be located to the side or rear of any buildings.
G18	Fencing forward of building lines and along public streets should be largely transparent and not above 1.5m in height.
G19	Water tanks, service infrastructure, plant material and other structures should be located behind the building line or, where this is not possible, behind constructed screening using durable and attractive materials to provide a positive street address.

Plan 4 Open Space and Community Facilities

Scale: 1:15,000 @ A4, N.T.S. @ A3
Date: December 2015

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3.3 Open Space, natural systems and community facilities

3.3.1 Open space and natural systems

Table 2 Open space delivery guide

PARK ID	SIZE (ha)	PARK TYPE	LOCATION & OTHER ATTRIBUTES	MANAGEMENT RESPONSIBILITY
P1	1.31	Linear local park	Neighbourhood linking and linear landscape functions	Wyndham City Council
P2	0.88	Linear local park	Neighbourhood linking and linear landscape functions	Wyndham City Council
P3	1.13	Linear local park	Neighbourhood linking and linear landscape functions	Wyndham City Council
P4	0.92	Linear local park	Neighbourhood linking and linear landscape functions	Wyndham City Council
P5	0.47	Linear local park	Neighbourhood linking and linear landscape functions	Wyndham City Council
P6	1.46	Linear local park	Neighbourhood linking and linear landscape functions	Wyndham City Council
P7	0.14	Linear local park	Neighbourhood linking and linear landscape functions	Wyndham City Council
P8	1.25	Linear local park	Neighbourhood linking and linear landscape functions	Wyndham City Council
P9*	0.50	Neighbourhood park		Wyndham City Council
P10	1.00	District park	Co-located with retarding basin	Wyndham City Council
P11	0.10	Urban park	Located in large local town centre	Wyndham City Council
P12	0.10	Town square	Located in large local town centre	Wyndham City Council
P13	0.10	Town square	Located in large local town centre	Wyndham City Council
P14*	0.80	Neighbourhood park		Wyndham City Council
P15	0.05	Urban park	Located in large local town centre	Wyndham City Council
P16	0.02	Urban park	Located in large local town centre	Wyndham City Council
PARK ID	SIZE (ha)	PARK TYPE	LOCATION & OTHER ATTRIBUTES	MANAGEMENT RESPONSIBILITY
A1	12.39	Sports reserve (eastern)	May incorporate two AFL/cricket ovals, four lawn bowls greens and two rugby fields	Wyndham City Council
A2	10.98	Sports reserve (western)	May incorporate two AFL/cricket ovals and four netball courts	Wyndham City Council

* The location of these parks is flexible provided 95% of all dwellings are within 400m safe walking distance of a park subject to the approval of the responsible authority.

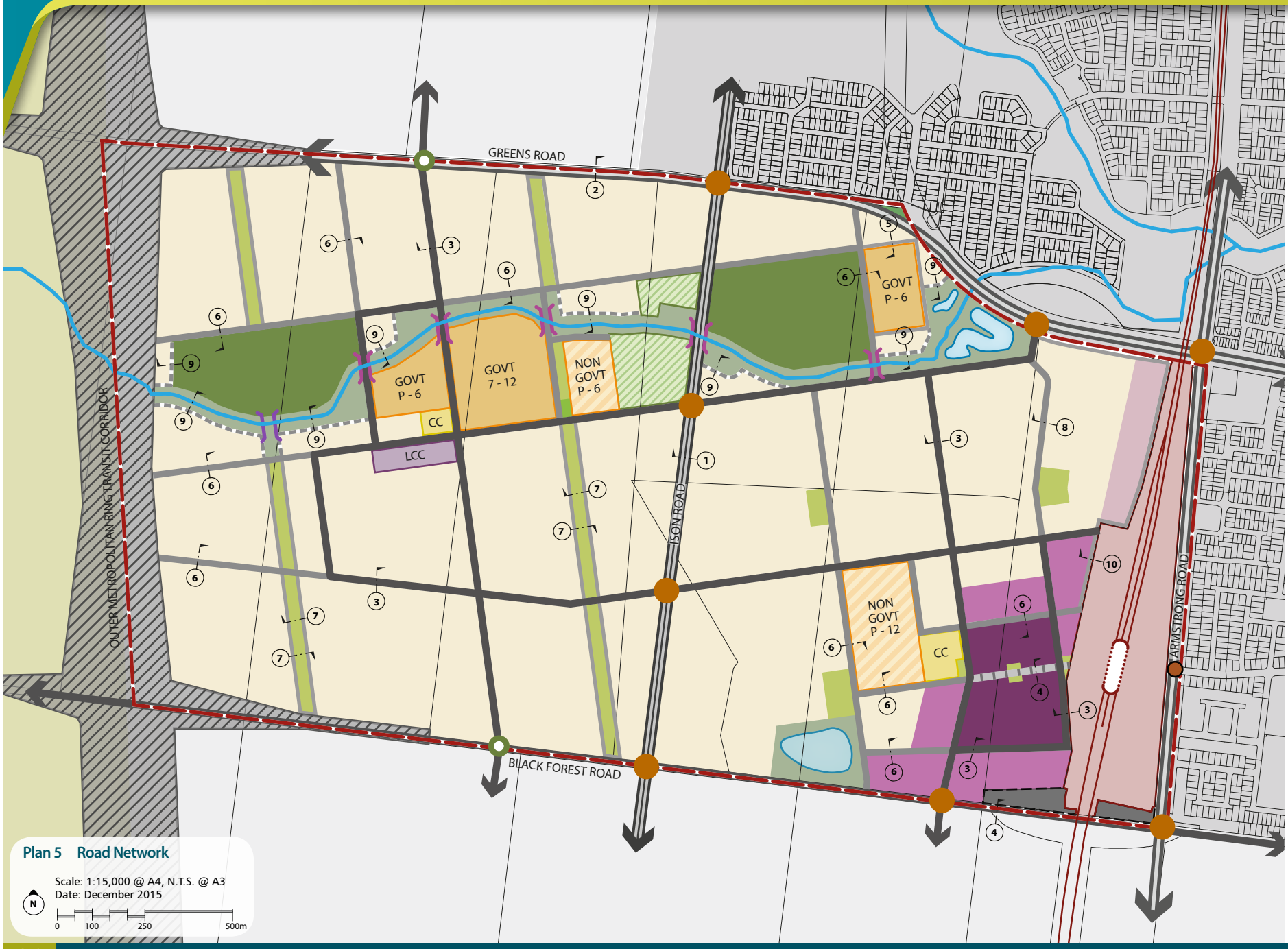
REQUIREMENTS	
R17	All public landscaped areas must be designed and constructed to enable practical maintenance and be planted suitable to the local climate and soil conditions.
R18	With respect to the public open space contribution required by Clause 52.01 of the Wyndham Planning Scheme, this provision 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.
R19	All land owners must provide a public open space contribution equal to 3% of the Net Developable Area - Residential and town centres (NDA-R) upon subdivision of land in accordance with the following: • Where land is required for unencumbered open space purposes as shown on Plan 4 and specified in Table 2 and is equal to 3% of NDA-R that land is to be transferred to Council at no cost • Where no land or less than 3% of NDA-R is shown Plan 4 and specified in Table 3, as required for unencumbered open space purposes a cash contribution is to be made to Council to bring the total open space contribution to a value equal to 3% of NDA-R of that site • Where land required for unencumbered open space purpose as shown on Plan 4 and specified in Table 2 is more than 3% of NDA-R, Council will pay, at a time to be agreed, an amount equivalent to the value of the additional land being provided by that proposed development. 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 Subdivision Act 1988.
R20	Development must positively address all waterways through the use of frontage roads or shared path proximate to the lot boundary or lots with direct frontage to the satisfaction of Melbourne Water and the responsible authority.
R21	All parks must be located, designed and developed in accordance with Plan 4 and Table 2 and to the satisfaction of the responsible authority.
R22	All public open space (where not otherwise provided via a 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: • Removal of all existing disused structures, foundations, pipelines and stockpiles and land contamination • Clearing of rubbish and environmental weeds and rocks, levelled, topsoiled and grassed with warm climate grass • Provision of water tapping, potable and recycled water connection points • Sewer, gas and electricity connection points to land identified as sports reserves and community facilities • Trees and other plantings • Vehicle exclusion devices (fence, bollards or other suitable methods) and maintenance access points • Installation of park furniture, including barbecues, shelters, furniture, rubbish bins, local-scale play areas, and appropriate paving to support these facilities, consistent with the type of open space listed in Appendix C.
R23	A master plan must be prepared for each linear park, when the first part of that park (P1, P2 and P3 or P4, P5, P6, P7 and P8) forms part of the stage of subdivision, to the satisfaction of the responsible authority.

GUIDELINES	
G20	Where fencing of open space is proposed the fencing should be less than one metre in height and allow maximum visibility of the open space to the satisfaction of the responsible authority.
G21	Design and layout of waterway corridors and other service or heritage open space must maximise the potential for integration of recreation uses where this does not conflict with the primary function of the land.
G22	Street trees and public open space landscaping should contribute to habitat for indigenous fauna species, in particular arboreal animals and birds.
G23	Planting within and adjacent to waterways and wetlands should use indigenous and native species.
G24	The layout of sports reserves should: • Maximise informal open space adjacent to waterway • Maintain clear views between the sports reserve and waterway • Avoid impassable fencing between the sports reserve and the waterway • Locate circulation paths adjacent the waterway

3.3.2 Community facilities & education

	REQUIREMENTS
R24	Where the responsible authority is satisfied that land shown as a non-government school site is unlikely to be used for a non-government school, that land may be used for an alternative purpose which is generally consistent with the surrounding land uses and the provisions of the applied zone.
R25	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.

	GUIDELINES
G25	School sites should be provided with three street frontages where practicable.
G26	Educational, community, medical or similar uses not shown on Plan 2 should be located within or proximate to the Large Local Town Centre, Local Convenience Centre or community facilities.
G27	Community facilities which are located in or adjoining a town or convenience centre should be designed to maximise efficiency of land through the sharing and overall reduction of car parking.
G28	Community facilities, schools and sports reserves that are co-located should be designed to maximise land efficiency through the sharing of car parking and other complementary infrastructure.



precinct boundary
arterial road
connector street
access street level 2
access street level 1
frontage access road (indicative)
signalised intersection
potential signalised intersection
roundabout
outer metropolitan ring transit corridor
public transport land
regional rail line
potential future railway station
waterway
bridge/culvert
pedestrian/cyclist crossing
indicative cross-street
future residential neighbourhood (currently farmland)
existing urban area
western grasslands reserve

Note: The first landowner to begin construction will be required to construct the connector road intersection adjacent to their property boundary and ensure access for the adjoining landowner.

Refer to Appendix D for street cross section details.

Plan 5 Road Network

Scale: 1:15,000 @ A4, N.T.S. @ A3
Date: December 2015

N

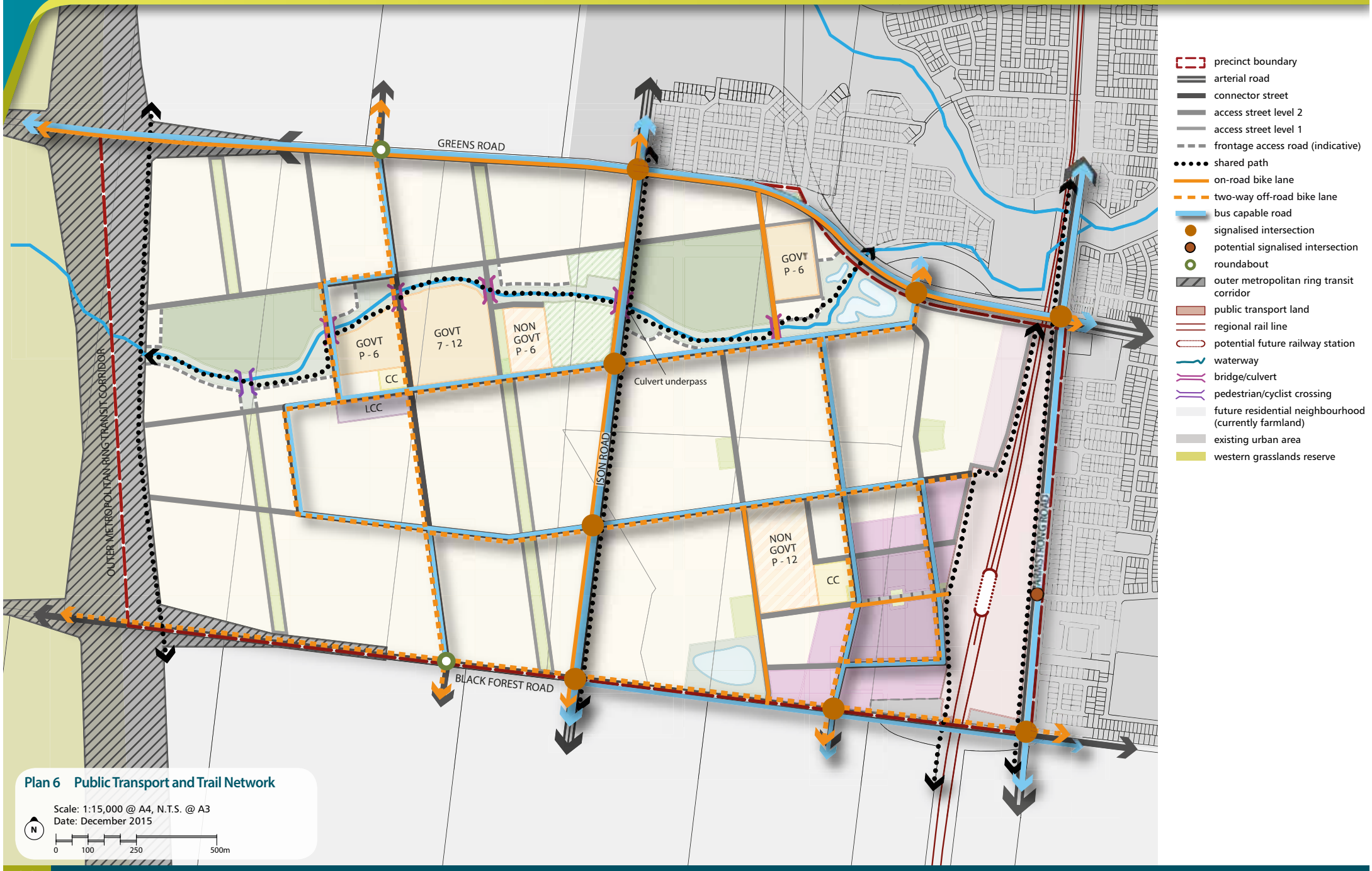
0 100 250 500m

3.4 Transport & movement

3.4.1 Street network

	REQUIREMENTS
R26	Subdivision layouts must form a permeable local street network that provide convenient access to local open space and allows for effective integration with neighbouring properties.
R27	Vehicle access to residential lots fronting arterial roads must be provided from an internal local loop road or rear lane only, to the satisfaction of the coordinating road authority. Where access to an arterial road is via a rear lane and no internal loop road is provided, a tree reserve of not less than five metres and not more than twelve metres must be provided to the edge of the road reserve.
R28	Vehicle access to non-residential lots fronting arterial roads must be provided from an internal local loop road or rear lane, unless providing access from a local street would unreasonably impact the amenity of users of the local road. Direct access may be granted provided there is only one left-in/left-out access/egress including appropriate deceleration lane intersecting the arterial road to the satisfaction of the co-ordinating road authority and the responsible authority. A landscaped setback of not less than five metres and not more than twelve metres must be provided to the edge of the road reserve which can contain services, utilities and vehicle crossings to the satisfaction of the responsible authority.
R29	Configuration of vehicle access to lots from a public street must ensure there is sufficient separation between crossovers to allow for a minimum of one on-street car park for every two residential lots.
R30	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.
R31	One way streets adjacent to north-south linear open spaces must have east-west cross connections at regular intervals generally in accordance with Plan 5 while prioritising pedestrian movements.

	GUIDELINES
G29	Street layouts should provide multiple convenient routes to major destinations such as the future railway station and the Large Local Town Centre, the Local Convenience Centre, schools, community facilities, sports reserves and the arterial road network.
G30	Street block lengths should not exceed 240m to ensure a permeable and low speed environment for pedestrians, cyclists and vehicles is achieved.
G31	Culs-de-sac should not detract from convenient pedestrian and vehicular connections.
G32	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 co-ordinating road authority.
G33	When using different cross section designs along the length of a street, provide for a properly resolved transition between the alternative and indicative designs.
G34	The frequency of vehicular crossovers on widened verges (a verge in excess of six metres) should be minimised through the use of a combination of: • Rear loaded lots with laneway access • Lot sideage for lots on corners (i.e. lots oriented for access off the intersecting streets) • Combined or grouped crossovers • Increased lot widths.
G35	The road network should follow the geometry illustrated in Plan 5 unless otherwise to the satisfaction of the co-ordinating road authority.
G36	Mid-block pedestrian links should be at least four metres wide.
G37	The road network should provide increased permeability around the Large Local Town Centre including shorter block lengths and avoiding culs-de-sacs.
G38	The eastern north-south road extending from Greens Road to the Large Local Town Centre should be a 26m wide boulevard street with cross-intersections to the satisfaction of the responsible authority.



Plan 6 Public Transport and Trail Network

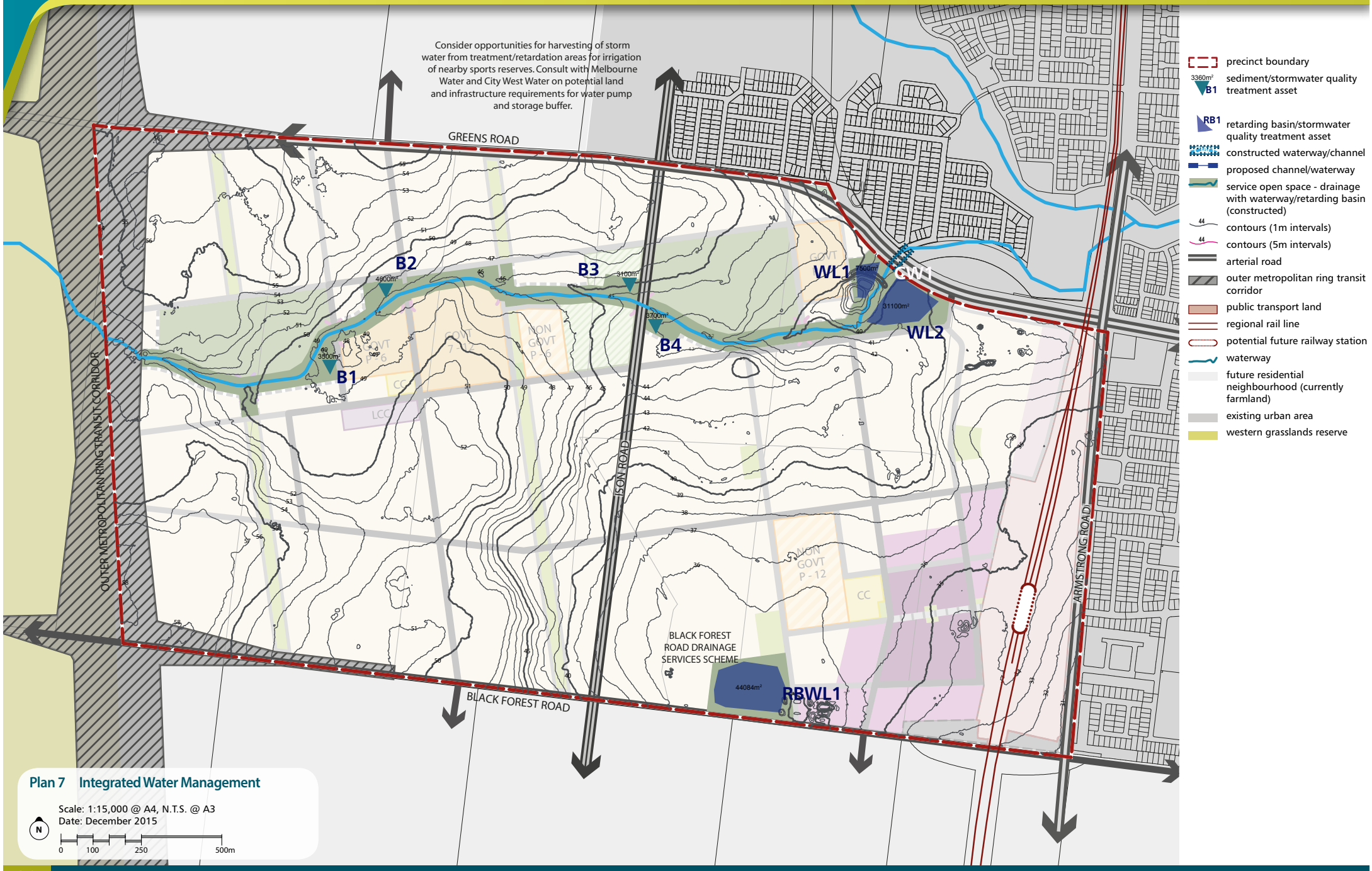
Scale: 1:15,000 @ A4, N.T.S. @ A3
Date: December 2015

3.4.2 Public Transport

	REQUIREMENTS
R32	Any roads, intersection and roundabouts on roads shown as 'bus-capable' on Plan 6 must be constructed to accommodate ultra-low-floor buses to the satisfaction of the Public Transport Victoria and the responsible authority.
R33	Bus stop facilities must be designed as an integral part of activity generating land uses such as town and convenience centres, schools, sports fields and employment areas.
	GUIDELINES
G39	Alignment of the street network at the western extent of the precinct should provide direct walking routes to the connector street network.

3.4.3 Walking and Cycling

	REQUIREMENTS
R34	Shared and pedestrian paths along waterways must: • Be delivered by development proponents consistent with the network shown on Plan 6 • Be above 1:10 year flood level with any bridge/culvert crossing the waterway designed to be above the 1:100 flood level to maintain hydraulic function of the waterway • Be constructed to a standard that satisfies the requirements of Melbourne Water • Where a shared path is to be delivered on one side of a waterway shown on Plan 6 a path shall also be delivered on the other side of the waterway but may be constructed to a lesser standard and reduced width (minimum two metres), such as granitic gravel or similar granular material. All to the satisfaction of Melbourne Water and the responsible authority.
R35	Bicycle parking facilities are to be provided by development proponents in convenient locations at key destinations such as parks and town centres.
R36	The alignment of the off-road bicycle paths must be designed for cyclists travelling up to 30km/h.
R37	Bicycle priority at intersections of minor streets must be achieved through strong and consistent visual and physical clues and supportive directional and associated road signs.
R38	Shared paths shown on Plan 6 adjacent to the RRL and waterway corridor must be provided either within a road reserve or within open space. Where Plan 6 identifies locations where a shared path may be placed within the RRL reserve, the design of the path is to be to the satisfaction of VicTrack.
R39	A continuous shared path must be provided along frontages to the RRL corridor and proposed shunting as illustrated on Plan 6.
R40	Design of all streets and arterial roads must give priority to the requirements of pedestrians and cyclists by providing: • Footpaths of at least 1.5m on both sides of all streets and roads unless otherwise specified by the PSP • Shared paths or bicycle paths where shown on Plan 6 or specified by another requirements 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. All to the satisfaction of the co-ordinating road authority and the responsible authority.
	GUIDELINES
G40	In addition to the crossing locations shown on Plan 6, development proponents should provide formal pedestrian crossings of creeks and minor waterways at regular intervals of no greater than 400m where this level of connectivity is not already satisfied by the street network.
G41	Lighting should be installed along shared pedestrian and cycle paths linking key destinations unless otherwise agreed by the responsible authority.



Plan 7 Integrated Water Management

Scale: 1:15,000 @ A4, N.T.S. @ A3
Date: December 2015

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3.5 Integrated water management & utilities

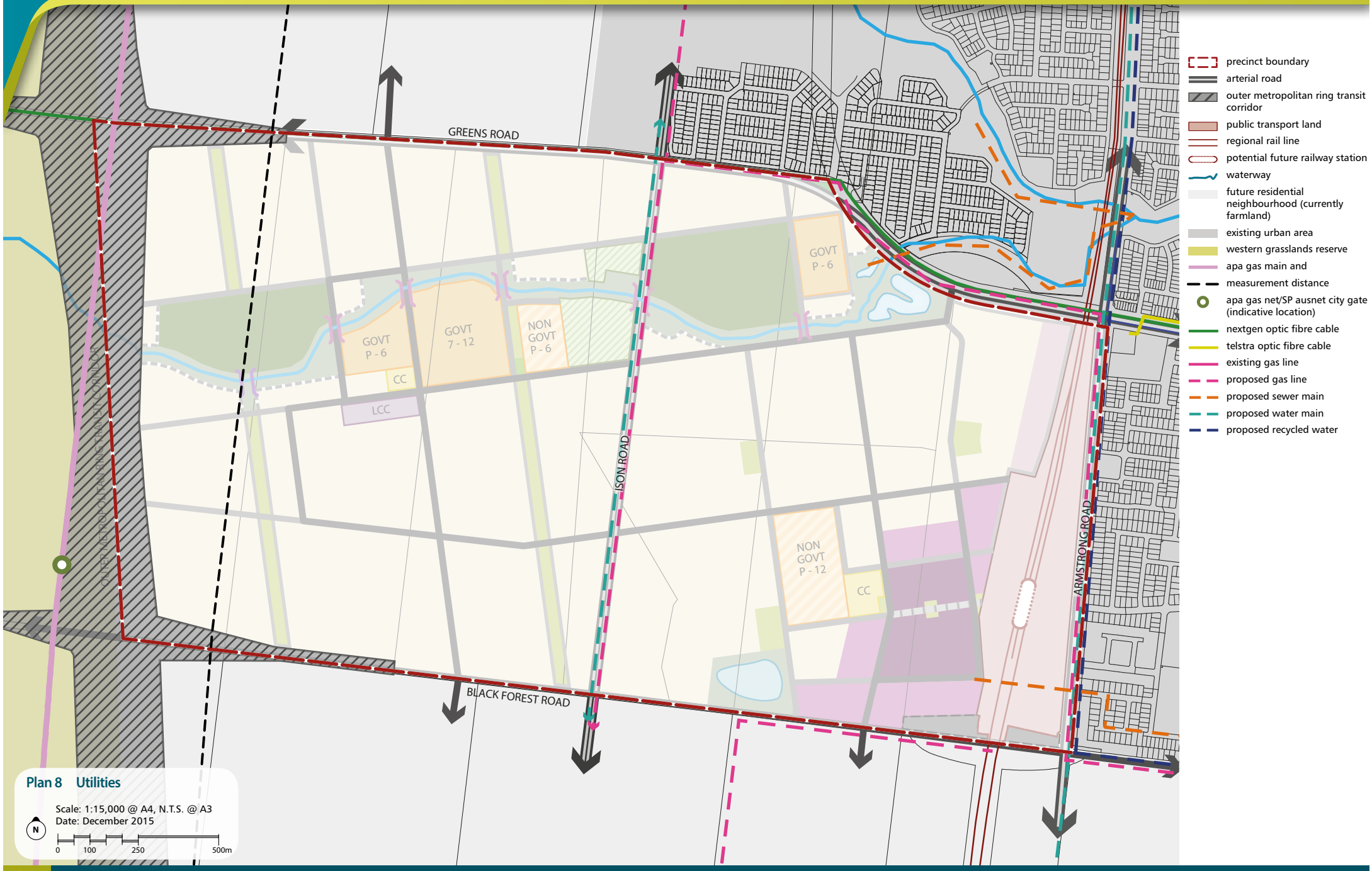
3.5.1 Integrated water management

	REQUIREMENTS
R41	Final design and boundary of the constructed waterway corridors, retarding basins, stormwater quality treatment infrastructure and associated paths, boardwalks, bridges, culverts and planting must be to the satisfaction of Melbourne Water and the responsible authority.
R42	Development staging must provide for delivery of ultimate waterway and drainage infrastructure including stormwater quality treatment. Where this is not possible, development 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 Melbourne Water and the responsible authority.
R43	Consistent with Clauses 56.01-2 and 56.07 of the Wyndham Planning Scheme and Victorian Planning Provisions Practice Note 39, a subdivision application of 60 or more lots must include an Integrated Water Management Plan (IWMP).
R44	No stormwater, drainage or effluent must enter VicTrack land, but must be collected and directed to legal discharge points.
	GUIDELINES
G42	Development should have regard to relevant policies and strategies being implemented by the responsible authority, Melbourne Water and the water retail authority, including any approved IWMP.
G43	Where practical, development should include Integrated Water Management (IWM) initiatives to reduce reliance on potable water and increase the use of treated storm and waste water contributing to a sustainable and green urban environment.
G44	Where practical, IWM systems should be designed to: • Maximise habitat values for local flora and fauna species • Enable future harvesting and/or treatment and re-use of stormwater • Optimise the use of recycled water through the installation of dual reticulation.
G45	The design and layout of roads, road reserves and public open spaces should optimise water use efficiency and long term viability of vegetation and public uses through the use of WSUD initiatives.
G46	Where practical, and where primary waterway, conservation or recreation functions are not adversely affected, land required for IWM initiatives (such as stormwater harvesting, aquifer storage and recharge, sewer mining) should be incorporated within the open space system as depicted on Plan 7 and subject to the approval of the responsible authority.

Table 3 Stormwater drainage & water quality treatment infrastructure delivery guide

ID	DESCRIPTION	LOCATION & OTHER ATTRIBUTES	AREA	MANAGEMENT RESPONSIBILITY
CW1	Constructed waterway	Corridor width of 45m, 50m or 55m depending on access provided by surrounding development	38.5ha	Melbourne Water
WL1 - WL2	Northern wetlands	Adjacent to Greens Road	3.86ha	Melbourne Water
RBWL1	Southern wetlands	Adjacent to Black Forest Road	4.4ha	Melbourne Water
B1	Sediment basin as identified in the IWMP	Adjacent to the constructed waterway	3,500m^2	Wyndham City Council
B2	Sediment basin as identified in the IWMP	Adjacent to the constructed waterway	4,600m^2	Wyndham City Council
B3	Sediment basin as identified in the IWMP	Adjacent to the constructed waterway	3,100m^2	Wyndham City Council
B4	Sediment basin as identified in the IWMP	Adjacent to the constructed waterway	3,700m^2	Wyndham City Council

*The areas and corridor widths identified in this table are subject to refinement during detailed design, to the satisfaction of Melbourne Water.



Plan 8 Utilities

Scale: 1:15,000 @ A4, N.T.S. @ A3
Date: December 2015

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0 100 250 500m

3.5.2 Utilities

	REQUIREMENTS
R45	Trunk services are to be placed along the general alignments shown on Plan 8, subject to any refinements as advised by the relevant service authorities.
R46	Before development commences on a property, functional layout plans of the road network are to be submitted showing the location of all: • Underground services • Driveways/crossovers • Street lights • Street trees A typical cross section of each street must also be submitted showing above and below ground placement of services, street lights and trees. Street cross sections can be widened to facilitate service utilities, if required. 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 street cross sections outlined in the PSP) and accommodate the minimum level of street tree planting (as outlined in the PSP). If required, the plan and cross sections will nominate which services will be placed under footpaths or road pavement. The plans and street cross sections must be approved by the responsible authority and all relevant service authorities before development commences.
R47	Delivery of underground services must be co-ordinated, located and bundled (utilising common trenching) to facilitate the planting of trees and other vegetation within road verges.
R48	All existing above ground electricity cables of less than 66kv voltage must be placed underground as part of the upgrade of existing roads.
R49	All new electricity supply infrastructure (excluding substations and cables of a voltage of 66kv or greater) must be provided underground.
R50	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 of the Wyndham Planning Scheme or within the DCP.

	GUIDELINES
G47	Above ground utilities should be located outside of key view lines and screened with vegetation as appropriate.
G48	Design and placement of underground services in new or upgraded streets should utilise the service placement guidelines outlined in Appendix E.
G49	Utility easements to the rear of lots should only be provided where there is no practical alternative.

3.6 Infrastructure delivery & development staging

3.6.1 Precinct Infrastructure Plan

The Precinct Infrastructure Plan (PIP) at Table 4 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
- Agreements under section 173 of the *Planning and Environment Act 1987*
- Utility service provider requirements
- The DCP including separate change areas of local items
- 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
- The Wyndham West Development Services Scheme managed by Melbourne Water for the delivery of infrastructure.

Table 4 Precinct Infrastructure Plan

GROUP	CATEGORY	TITLE	DESCRIPTION	LEAD AGENCY	INDICATIVE TIMING	INCLUDED IN DCP	DCP PROJECT No.
Transport							
Transport	Road	Ison Road	Land for ultimate configuration and construction of first carriageway	Wyndham City Council	Refer to Section 3.6.2	Yes	RD-03
Transport	Road	Ison Road	Construction of ultimate configuration	VicRoads	Long term	No	-
Transport	Bridge	Ison Road	Construction of interim configuration	Wyndham City Council	Refer to Section 3.6.2	Yes	BR-04
Transport	Bridge	Ison Road	Construction of ultimate configuration	VicRoads	Long term	No	-
Transport	Bridge	Ison Road	Construction of interim configuration	Wyndham City Council	Refer to Section 3.6.2	Yes	BR-25
Transport	Bridge	Ison Road	Construction of ultimate configuration	VicRoads	Long term	No	-
Transport	Road	Armstrong Road	Land for ultimate configuration and construction of first carriageway	Wyndham City Council	Refer to Section 3.6.2	Yes	RD-06A RD-06B
Transport	Road	Greens Road	Land for ultimate configuration	Wyndham City Council	Refer to Section 3.6.2	Yes	RD-12
Transport	Road	Greens Road	Construction of ultimate configuration	Wyndham City Council	Long term	No	-
Transport	Road	Black Forest Road	Land and construction of ultimate configuration	Wyndham City Council	Refer to Section 3.6.2	Yes	RD-11
Transport	Intersection	Armstrong Road/Black Forest Road	Land for ultimate configuration and construction of interim signalised intersection	Wyndham City Council	Refer to Section 3.6.2	Yes	IN-14
Transport	Intersection	Armstrong Road/Black Forest Road	Construction of ultimate configuration	Wyndham City Council	Refer to Section 3.6.2	No	-
Transport	Intersection	Black Forest Road/North-South connector	Land and construction of ultimate signalised intersection	Wyndham City Council	Refer to Section 3.6.2	Yes	IN-23
Transport	Intersection	Black Forest Road/Ison Road	Land for ultimate configuration and construction of interim signalised intersection	Wyndham City Council	Refer to Section 3.6.2	Yes	IN-05

GROUP	CATEGORY	TITLE	DESCRIPTION	LEAD AGENCY	TIMING	INCLUDED IN DCP	DCP PROJECT No.
Transport	Intersection	Black Forest Road/Ison Road	Construction of ultimate configuration	VicRoads	Medium to long term	No	-
Transport	Intersection	Ison Road/east-west connector	Land for ultimate configuration and construction of interim signalised intersection	Wyndham City Council	Refer to Section 3.6.2	Yes	IN-06
Transport	Intersection	Ison Road/east-west connector	Construction of ultimate configuration	VicRoads	Medium to long term	No	-
Transport	Intersection	Ison Road/east-west connector	Land for ultimate configuration and construction of interim signalised intersection	Wyndham City Council	Refer to Section 3.6.2	Yes	IN-07
Transport	Intersection	Ison Road/east-west connector	Construction of ultimate configuration	VicRoads	Medium to long term	No	-
Transport	Intersection	Ison Road/Greens Road	Land for ultimate configuration and construction of interim signalised intersection	Wyndham City Council	Refer to Section 3.6.2	Yes	IN-08a IN-08b
Transport	Intersection	Ison Road/Greens Road	Construction of ultimate configuration	VicRoads	Medium to long term	No	-
Transport	Intersection	Greens Road/north-south connector	Land for ultimate configuration and construction of interim signalised intersection	Wyndham City Council	Refer to Section 3.6.2	Yes	IN-24a IN-24b
Transport	Intersection	Greens Road/north-south connector	Construction of ultimate configuration	VicRoads	Medium to long term	No	-
Transport	Intersection	Greens Road/north-south connector	Land for ultimate configuration and construction of interim roundabout	Wyndham City Council	Refer to Section 3.6.2	Yes	IN-25a IN-25b
Transport	Intersection	Greens Road/north-south connector	Construction of ultimate configuration	VicRoads	Medium to long term	No	-
Transport	Public Transport	Railway Station	Construction of potential future railway station in the existing Regional Rail Link corridor	Public Transport Victoria	Medium to long term	No	-
Community facilities							
Community	Community	Level 1 children's centre	Land and construction of northern multipurpose community centre including kindergarten rooms	Wyndham City Council	Refer to Section 3.6.2	Yes	CO-10

GROUP	CATEGORY	TITLE	DESCRIPTION	LEAD AGENCY	INDICATIVE TIMING	INCLUDED IN DCP	DCP PROJECT No.
Community	Community	Level 3 community centre	Land and construction of multipurpose community centre including kindergarten, maternal child health rooms, library and performing arts centre	Wyndham City Council	Refer to Section 3.6.2	Yes	CO-08 CO-09
Community	Education	Primary School	Land and construction of a government P – 6 school	DEECD	Short term	No	-
Community	Education	Primary School	Land and construction of a government P – 6 school	DEECD	Medium to long term	No	-
Community	Education	Secondary School	Land and construction of a government 7 – 12 school	DEECD	Medium term	No	-
Community	Education	Primary School	Land and construction of a non-government P – 6 school	Catholic Education Office	Medium term	No	-
Community	Education	Primary & secondary school	Land and construction of a non-government P – 12 school	Catholic Education Office	Medium term	No	-
Sports reserves							
Open Space	Sports field	Western reserve	Land and construction of a sports field recreation reserve	Wyndham City Council	Refer to Section 3.6.2	Yes	AR-13 AR-14
Open Space	Sports field	Eastern reserve	Land and construction of a sports field recreation reserve	Wyndham City Council	Refer to Section 3.6.2	Yes	AR-15 AR-16
Open Space	Indoor	Indoor sports	Land for indoor sports	Wyndham City Council	Refer to Section 3.6.2	Yes	AR-25
Drainage							
Drainage	Waterways	Throughout precinct	Waterway construction	Melbourne Water	Short to long term	No	-
Drainage	Wetlands/ retarding basins	Throughout precinct	Land and construction for retarding basins and wetlands	Melbourne Water	Short to long term	No	-

The timings in Table 4 are indicative. Where 'Included in DCP' is noted, refer to the DCP including Section 6.1 for guidance on early project delivery by developers.

3.6.2 Development staging

	REQUIREMENTS
R51	Development staging must provide for the timely provision and delivery of: • Arterial road reservations • Connector streets and connector street bridges/culverts • Street links between properties, constructed to the property boundary • Connection of the on- and off-road pedestrian and bicycle network.
R52	Permits must be consistent with the DCP which sets out the requirements of specified infrastructure. The DCPO applies the DCP over most land in the PSP area.
R53	Further to the public open space contribution required by Clause 52.01 of the Wyndham 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. For the purposes of Clause 52.01 a local park or town square in this PSP is public open space. A contribution must be made as per R19. Refer to the Property Specific Land Budget for detailed individual property open space land areas and percentages specified by this PSP. The responsible authority may alter the distribution of public open space as illustrated in this PSP provided the relevant vision and objectives of this PSP are met. A subdivider may provide additional public open space in a subdivision to the satisfaction of the responsible authority. There is no onus on Council, the responsible authority or any other party to provide compensation for public open space provided above that required by Clause 52.01 and this PSP.

	GUIDELINES
G50	Staging will be largely determined by the development proposals on land within the PSP area and the availability of infrastructure services. Within this context, the following should be achieved: • 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 • Delivery of interim infrastructure can be provided where it is demonstrated that it adequately services needs generated by development and how it will enable delivery of the ultimate infrastructure, at no additional cost and to the satisfaction of the responsible authority.

3.6.3 Infrastructure delivery

	REQUIREMENTS
R54	Unless funded under the DCP applying to the land, the subdivider of land must provide the land and meet the total cost of development for: • Infrastructure shown on the subject land in this PSP • Roads, streets, footpaths and trails including associated intersections, culverts, bridges, road crossing, landscaping, fencing and lighting associated with any of these items • Local bus stop infrastructure where locations have been agreed in writing by Public Transport Victoria • Bicycle parking at local public destinations • Local drainage infrastructure • Development of local parks to the following standard: - Free from structures, foundations, pipelines, stockpiles, rubbish and weeds. - Levelled, topsoiled and grassed with warm climate grass. - Provided with potable water, and where available recycled water, tapping connection points. Sewer, gas and electricity connection points must also be provide to a district level local park listed in Table 3 - Construction of pedestrian paths within the road reserve, at least 1.5m in width and linking into surrounding paths or points of interest - Provided with facilities as described for the relevant park classification in Appendix C to the satisfaction of the responsible authority
R54 cont'd	• Development of sports reserves to the following standard: - Free form structures, foundations, pipelines, stockpiles, rubbish and weeds. - Basic grading and/or targeted topsoiling only as required to fill in holes and achieve reasonably safe and regular surface trafficable by mowers with a maximum 1:6 gradient at interfaces with abutting roads. - Bare, patchy and newly graded areas seeded with drought resistant grass. - Provided with water tapping, potable and recycled water, sewer, gas and electricity connection points. - Be temporarily fenced, outside the works of the DCP, if handed over before Council requires it. Consistent with the DCP applying to the land, where not considered to be temporary works, the sports reserve works described above are eligible for a WIK credit. Works associated with adjacent road construction (e.g. earthworks for a road embankment) are not eligible or WIK credit.

4.0 APPENDICES

4.1 Appendix A Land use budget

The NDA is established by deducting the land requirements for community facilities, public and private education facilities, arterial roads, open space (sports reserves and local parks) and encumbered land from the Gross Developable Area (GDA). The NDA for the PSP area is 336.65ha which equates to 67.73%.

The land budget shows that the PSP will yield approximately 5,587 lots with an average density of approximately 16.5 dwellings per NDHa-R.

An average household size of 2.8 persons (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 15,643 residents.

Notes:

a) The land budget has been prepared to reflect current advice from Melbourne Water regarding land required for drainage assets as part of the preparation of draft Development Services Schemes (DSS) for the PSP. The land required for DSS drainage assets may be subject to minor refinement through the subdivision process.

b) The land budget has been prepared consistent with the Melbourne Water Development Services Scheme to allow for best practice water quality treatment. The DSS may allow for alternative water quality treatment solutions, subject to Melbourne Water approval.

c) Potential non-government school site areas have been removed from the NDA and excluded from the corresponding DCP. Note if the use of that land is subsequently for a purpose other that a non-government school, the owner of that land must pay development contributions in accordance with the provision of the DCP.

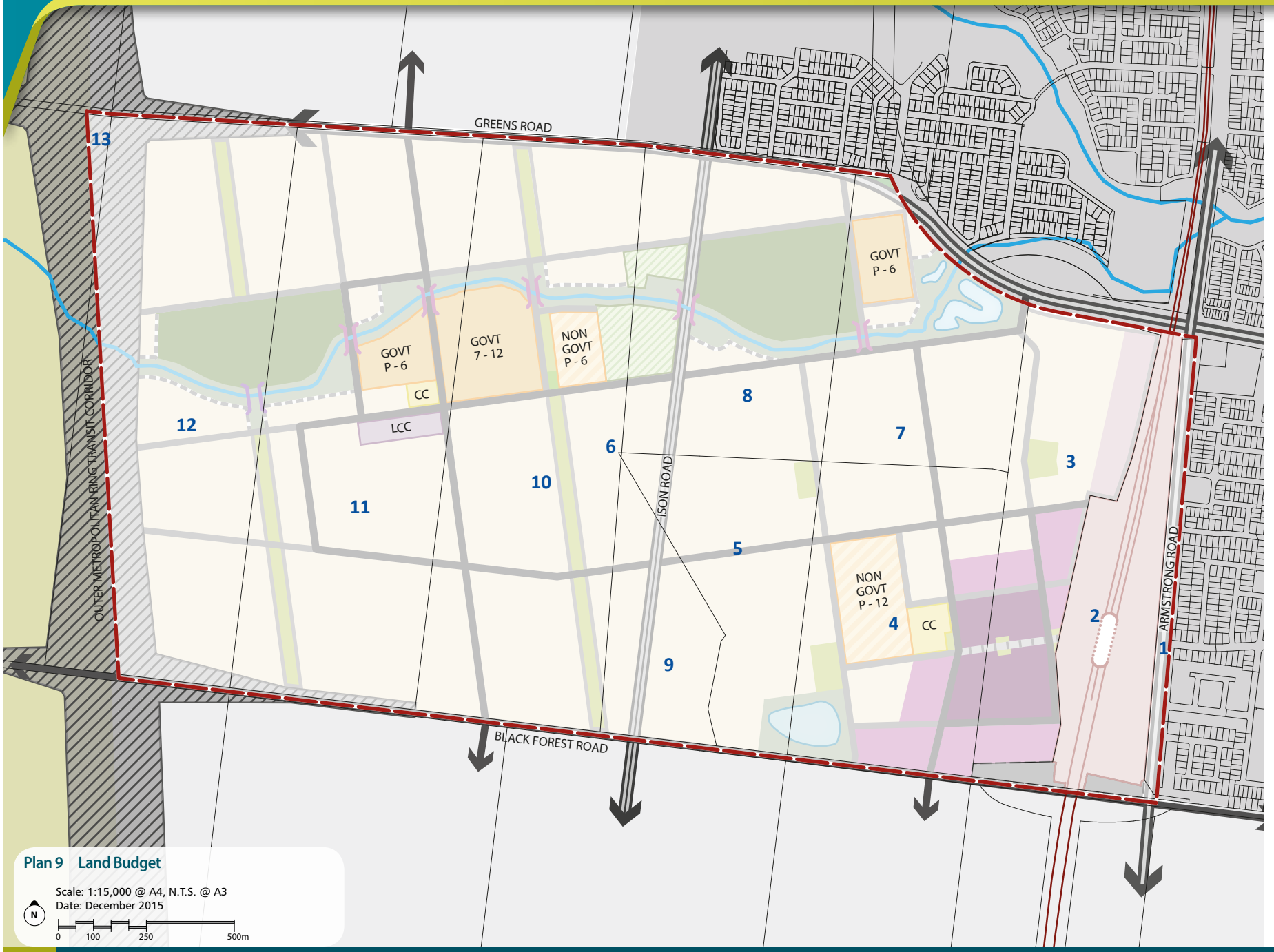
Table 5 Summary land use budget

DESCRIPTION	HECTARES	% PRECINCT	% NDA
TOTAL PRECINCT AREA (ha)	499.97		
TRANSPORT			
Arterial Road (Greens, Armstrong & Ison Roads and bridge abutments)	18.71	3.74%	5.56%
Black Forest Road reserve	1.99	0.40%	0.59%
OMR reserve	24.29	4.86%	7.22%
Railway reserve	26.10	5.22%	7.75%
SUB - TOTAL	71.08	14.22%	21.12%
EDUCATION & COMMUNITY			
Government school	15.40	3.08%	4.57%
Non-government school	9.66	1.93%	2.87%
Community facility	2.10	0.42%	0.62%
Indoor recreation	6.00	1.20%	1.78%
Uncredited open space	0.13	0.30%	0.04%
SUB - TOTAL	33.29	6.66%	9.89%
OPEN SPACE			
SERVICE OPEN SPACE			
Drainage - waterway, stormwater quality treatment & retardation	24.48	4.90%	7.27%
Utilities - easements, sub-stations	1.00	0.20%	0.30%
SUB - TOTAL	25.48	5.10%	7.57%
CREDITED OPEN SPACE			
Sports reserves	23.37	4.67%	6.94%
Local parks	10.09	2.02%	3.00%
SUB - TOTAL	33.46	6.69%	9.94%
SUB - TOTAL ALL OPEN SPACE	58.94	11.79%	17.51%
TOTAL NET DEVELOPABLE AREA (NDA) Ha	336.65	67.33%	

ESTIMATED DWELLING YIELD & POPULATION			
Description	PSP 42.1 BLACK FOREST ROAD NORTH		
	NDA (Ha)	Dwell/NDHa-R	Dwellings
Totals - Residential yield against NDHa - R	336.65	16.50	5,555
Anticipated population @ 2.8 people per dwelling			15,553

4.1.1 Detailed land use budget (property-specific)

The detailed land use budget sets out the NDA for every property included in the PSP. The NDA will not be amended to respond to minor changes to the land budget that may result from the subdivision process for any other reasons than that stated above, unless the variation is agreed by the responsible authority.



- precinct boundary
- arterial road
- 12 property numbers
- outer metropolitan ring transit corridor
- public transport land
- regional rail line
- potential future railway station
- waterway
- future residential neighbourhood (currently farmland)
- existing urban area
- western grasslands reserve

Plan 9 Land Budget

Scale: 1:15,000 @ A4, N.T.S. @ A3
Date: December 2015

N

0 100 250 500m

Table 6 Detailed land use budget (property-specific)

PSP PROPERTY ID	TOTAL AREA (HA)	TRANSPORT				EDUCATION & COMMUNITY						SERVICE OPEN SPACE		CREDITED OPEN SPACE			TOTAL NDA (HA)
		ARTERIAL RD - GREENS, ARMSTRONG, ISON ROAD & BRIDGE ABUTMENTS	EXISTING BLACK FOREST RD RESERVE	EXISTING OMR RESERVE	RAILWAY RESERVE	GOV. EDUCATION	NON - GOV. EDUCATION	COMM. CENTRES	INDOOR REC.	COMM. EVENTS SPACE	UNCREDITED OPEN SPACE	DRAINAGE - WATERWAY, STORM WATER QUALITY TREATMENT & RETARDATION	UTILITIES - EASEMENT & SUB STATIONS	SPORTS RES.	LOCAL PARKS (RES.)	LOCAL PARKS (EMP.)	
1	5.20	5.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
2	28.35	2.20	-	-	26.05	-	-	-	-	-	-	-	-	-	-	-	0.10
3	35.88	-	-	-	-	-	-	-	-	-	-	-	1.00	-	1.07	-	33.81
4	46.56	-	-	-	-	-	6.81	1.50	-	-	-	3.11	-	-	1.10	-	34.04
5	28.05	0.82	-	-	-	-	-	-	-	-	-	1.30	-	-	0.50	-	25.43
6	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
7	35.02	0.60	-	-	-	3.50	-	-	-	-	-	6.30	-	0.86	-	-	23.76
8	50.73	4.11	-	-	-	-	-	-	3.92	-	-	3.94	-	11.53	-	-	27.23
9	18.20	2.52	-	-	-	-	-	-	-	-	-	-	-	-	0.03	-	15.65
10	83.78	0.69	-	-	-	6.83	2.85	-	2.08	-	0.13	2.80	-	-	4.07	-	64.33
11	87.93	0.77	-	1.26	-	5.07	-	0.60	-	-	-	4.82	-	4.32	1.95	-	69.14
12	73.46	-	-	20.11	-	-	-	-	-	-	-	2.22	-	6.65	1.36	-	43.12
13	1.47	-	-	1.47	-	-	-	-	-	-	-	-	-	-	-	-	0.00
SUB - TOTAL	**494.64**	**16.91**	**0.00**	**22.84**	**26.05**	**15.40**	**9.66**	**2.10**	**6.000**	**0.000**	**0.13**	**24.49**	**1.00**	**23.36**	**10.08**	**0.000**	**336.62**
OTHER (ROAD & RESERVES)																	
GREENS ROAD	1.76	1.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
ARMSTRONG ROAD	0.04	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
BLACK FOREST ROAD	2.07	-	1.99	-	0.05	-	-	-	-	-	-	-	-	-	-	-	0.03
OMR	1.46	-	-	1.46	-	-	-	-	-	-	-	-	-	-	-	-	0.00
SUB - TOTAL	**5.33**	**1.80**	**1.99**	**1.46**	**0.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.03**
PSP TOTAL	**499.97**	**18.71**	**1.99**	**24.30**	**26.10**	**15.40**	**9.66**	**2.10**	**6.00**	**0.00**	**0.13**	**24.49**	**1.00**	**23.36**	**10.08**	**0.00**	**336.65**

4.2 Appendix B Town centre design principles

LOCAL TOWN CENTRES	
Principle 1 Provide every neighbourhood with a viable Local Town Centre as a focus of the community with a fine grain, closely spaced distribution pattern.	• Deliver a fine grain distribution pattern of highly accessible local town centres generally on a scale of one local town centre for every neighbourhood of 8,000 to 10,000 people. • Locate local town centres with a distribution pattern of around one local town centre for every square mile of residential development. • Deliver a network of economically viable local town centres including a supermarket and supporting competitive local shopping business, medical, leisure, recreation and community needs while allowing opportunities for local specialisation.
Principle 2 Locate Local town centres on a connector street intersection with access to an arterial road and transit stop.	• Locate local town centres on an arterial/connector intersection and ensure that the local town centre is central to the residential catchment that it services while optimising opportunities for passing trade. • Locate the Large Local Town Centre with future railway stations or other forms of transit stops to benefit the local town centre, to offer convenience for public transport passengers, and to minimise walking distance between transit stops and the town centre core. • Other local town centre locations may be considered where the location results in the local town centre being central to the residential catchment that it serves and/or the location incorporates natural or cultural landscape features such as rivers and creeks, tree rows, topographic features or other heritage structures which assist in creating a sense of place.
Principle 3 Locate Local Town Centres in an attractive setting so that most people live within a walkable catchment of a Local Town Centre and relate to the centre as the focus of the neighbourhood.	• Ensure that 80-90% of households are within a one kilometre walkable catchment of a local or higher order town centre. • Locate local town 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 local town centre should respect existing views and vistas to and from the local town centre location.
Principle 4 Provide a full range of local community and other facilities including a supermarket, shops, medical and recreation uses.	• Land uses should be located generally in accordance with the locations and general land use terms identified on the Large Local Town Centre Concept Urban Design Framework Plan. • The design of the local town 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 creation of land use precincts within the centre is encouraged to facilitate the clustering of uses. For example a 'medical precinct' where similar or synergistic uses should be sited together to promote stronger trading patterns. • The design of the local town centres should also encourage a pattern of smaller scale individual tenancies and land ownership patterns within the local town centre to attract investment and encourage greater diversity and opportunities for local business investment. • The local town centre should generally be anchored by one full line supermarket and supported by specialty stores unless otherwise noted on the Local Town Centre Concept Plan. • Supermarkets and other commercial or community anchors or secondary anchors within the local town centre should be located diagonally opposite one another across the main street and/or town square to promote desire lines that maximise pedestrian movement within the public realm. • A small access mall that address a supermarket/other 'large box uses' may be considered as part of the overall design. Such access malls may have a limited number of internalised shops. The primary access to the mall should be from the main street and/or the town square. • 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 local town 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 Local Town Centre. • Mixed-use precincts should provide retail and/or office at ground level, and office, commercial and residential above-ground level.

Principle 4 (continued) Provide a full range of local community and other facilities including a supermarket, shops, medical and recreation uses.	• Childcare, medical centres and specialised accommodation (e.g. aged care/nursing home, student accommodation and serviced apartments) should be located within the Large Local Town Centre and at the edge of the 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.
Principle 5 Focus on a public space as the centre of community life.	• A public space which acts as the central meeting place within the Large Local Town Centre must be provided. This public space may take the form of a town square, town 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 Local Town 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 Large Local Town 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 Large Local Town Centre so that the public space acts as a 'gateway' to the activity of the centre. • The main public space or town square within the Local Town Centre should have a minimum area of 500m^2. 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.
Principle 6 Integrate local employment and service opportunities in a business friendly environment.	• A variety of employment and business opportunities should be planned through the provision of a broad mix of land uses and commercial activities. • A range of options and locations for office based businesses should be provided within the Local Town Centre. • Services and facilities to support home based and smaller businesses are encouraged within the Local Town Centre. • Appropriate locations for small office/home office ('SOHO') housing options which maximise the access and exposure to the activity of the Local Town Centre should be considered as part of the design process.
Principle 7 Include a range of medium and high density housing and other forms of residential uses within and surrounding the Local Town Centre.	• Medium and high density housing in and around the Large Local Town Centre is required to provide passive surveillance, contribute to the life of the centre and to maximise the amenity of the centre. • Medium and high density housing should establish in locations of high amenity around the Large Local Town Centre and be connected to the activity of the centre through strong pedestrian and cycle links. • A range of housing types for a cross section of the community (e.g. retirement living) should be included in and around the Local Town Centre. • Specialised accommodation (e.g. aged/nursing care, student accommodation and serviced apartments) is encouraged at the edge of the Large Local Town Centres with strong pedestrian and cycle links to the central activity area of the centre. • The Large Local Town 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 and locating residential uses predominantly at the edge of the centre and/or on upper levels. • Refer to the Small Lot Housing Code for further information about housing requirements for small lots around local town centres.

Principle 8 Design the Local Town Centre to be pedestrian friendly and accessible by all modes including public transport, while enabling private vehicle access.	• The Local Town 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 Local Town Centre should provide a permeable network of streets, walkways and public spaces that provide direct linkages throughout the centre, particularly to transit stops and to designated crossing points. • The main street should be designed to comply with the relevant cross sections found within the PSP. • 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 Local Town 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. • Supermarket and other 'large format' buildings should not impede on the movement of people around the Local Town Centre. • Key buildings within the Local Town Centre should be located to encourage pedestrian movement along the length of the street through public spaces. • The design of buildings within the Local Town 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 9
 	
Create a sense of place with high quality engaging urban design.
	• Development should complement and enhance the character of the surrounding area by responding appropriately to key visual cues associated with the topography of the Local Town Centre location and its surrounds.
	• The Local Town 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 Local Town Centre as a whole.
	• Sites in prominent locations (e.g. 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 Local Town Centre.
	• Corner sites, where the main street meets an intersecting and/or 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 two-storey building or two-storey elements (e.g. awnings and roof lines)
	  • Be developed to have a ground floor active frontage and active floor space component to the main street frontage
	  • Not be developed for standard single storey fast food outcomes.

Principle 9 (continued) Create a sense of place with high quality engaging urban design.	• Materials and design elements should be compatible with the environment and landscape character of the broader precinct. • The 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. • 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 the supermarket from car parking areas should be considered where it facilitates convenient trolley access and does not diminish the role of the primary access from the main street and or town square. • The design and siting of 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 Large Local Town 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. • Landscaping of streets will aim to contribute to improved biodiversity outcomes and habitat to encourage urban wildlife biodiversity. • 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 Large Local Town 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. • Align roads and locate buildings and public spaces to increase the visibility of station sites and provide direct sightlines to future station sites to maximise opportunities for casual/informal surveillance. • Encourage future stations to incorporate a high quality of design and landscaping to provide a focal point for the town centre and better integrate with the adjoining land use.

Principle 10
 	
Promote localisation, sustainability and adaptability.
	• Local town centres 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.
	• Local town centres should be designed to be sympathetic to its natural surrounds by:
	  • Implementing where practical 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 Local Town 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
	  • Implementing where practical other opportunities for the built form to reduce greenhouse gas emissions associated with the occupation and the ongoing use of buildings.
	• Encourage building design which can be adapted to accommodate a variety of uses over time.
	• Ensure the Large Local Town Centre has an inbuilt capacity for growth and change to enable adaptation and the intensification of uses as the needs of the community evolve.

4.3 Appendix C Open space delivery guidelines

PASSIVE RECREATIONAL PARK

Passive recreation park that provides opportunities for a variety of recreational and social activities in a green space setting. Passive recreational parks come in a variety of landforms, and in many cases provide opportunities to protect and enhance landscape amenity.

NEIGHBOURHOOD LOCAL PARK

- Park corridor that provides local link
- Passive recreation park suitable for local recreation/social activities
- Junior play emphasis
- Attracts users from the local area (ie 400m catchment)
- Recreational/social facilities suitable for local activities/events.
- Minimal support facilities (seats, bin etc)
- Minor access facilities e.g. path
- Footpath/bikeway links

DISTRICT PARK (1HA OR GREATER)

- Major park corridor that provides district link
- Passive recreation park suitable for district-level recreation/social activities
- Junior and youth play emphasis
- Attracts users from the district (ie 2km catchment)
- Recreational/social facilities suitable for district activities/events.
- Basic support facilities eg amenities, BBQ, Picnic tables, shelters, seats etc)
- Footpath/bikeway links
- Toilets and skate area

MUNICIPAL PARK (5HA OR GREATER)

- Major park corridor that provides metropolitan link
- Major passive recreation park suitable for Citywide recreation/social events
- Attracts users from municipality and adjacent municipalities
- Capacity to sustain high level recreational/social use (5,000+) over long periods
- High level recreational/social facilities suitable of Citywide events
- Junior and youth play emphasis
- High level support facilities, e.g. parking, amenities (toilets), signage
- Footpath/bikeway links
- Public transport
- Car spaces (on and off street)
- Bus spaces (on and off street)

REGIONAL

- Major park corridor that provides regional link
- Major passive recreation park suitable for regional recreation/social events
- Attracts users from Melbourne/Geelong and surrounding municipalities
- Capacity to sustain high level recreational/social facilities suitable for regional events
- Junior and youth play emphasis
- High level support facilities e.g. parking, amenities, signage
- Footpath/bikeway links
- Public transport
- Car spaces (off street)
- Bus spaces (off street)

LINEAR LOCAL PARK

Park that is developed and used for pedestrian and cyclist access, both recreational and commuter, between residential areas and key community destinations such as recreational facilities, schools and other community facilities, public transport and places of work. Linear Reserves are generally linear in nature and follow existing corridors such as water courses and roads. They usually contain paths or tracks (either formal or informal) that form part of the wider path/track network. While the primary function of Linear Reserve is pedesrtian and cyclist access, these parks may serve additional purpose such as storm water conveyance, fauna movement and ecological/biodiversity protection.

TOWN SQUARE/URBAN PARK

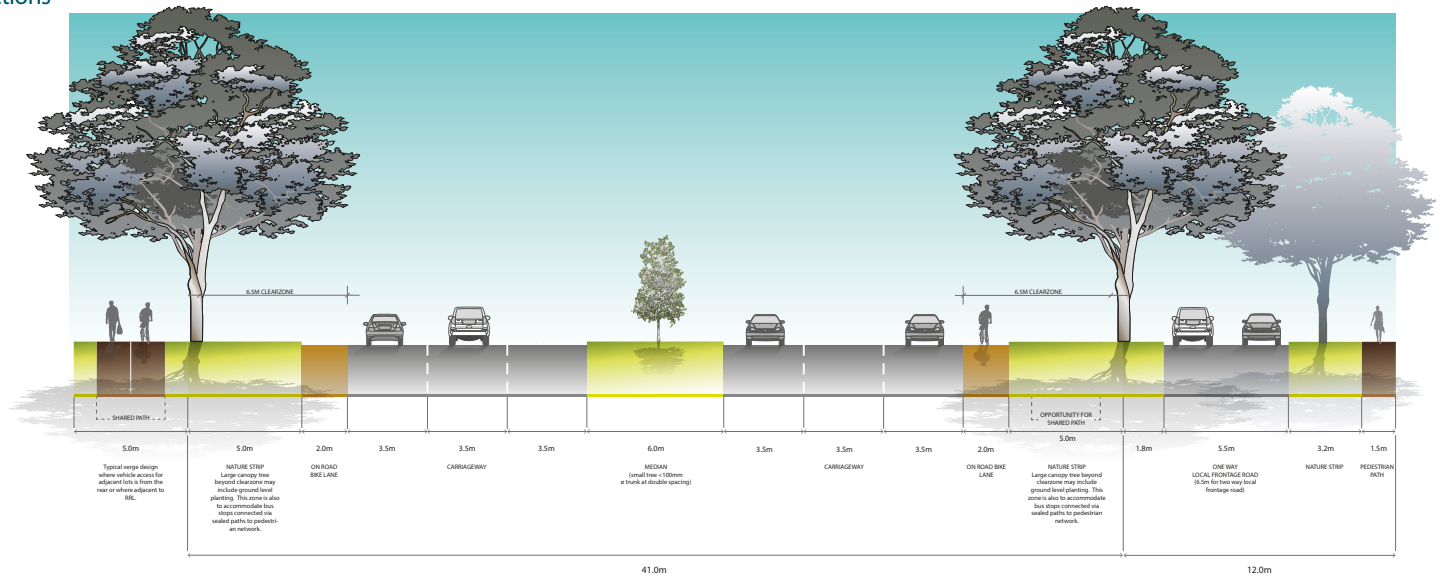
A passive recreation park providing opportunities for a variety of recreational and social activities in an urban setting. They are located predominantly in medium to high density residential areas and mixed use centres or corridors. They provides an important role in meeting the passive recreation needs of residents, workers and visitors in activity centres and/or medium to high density residential areas.

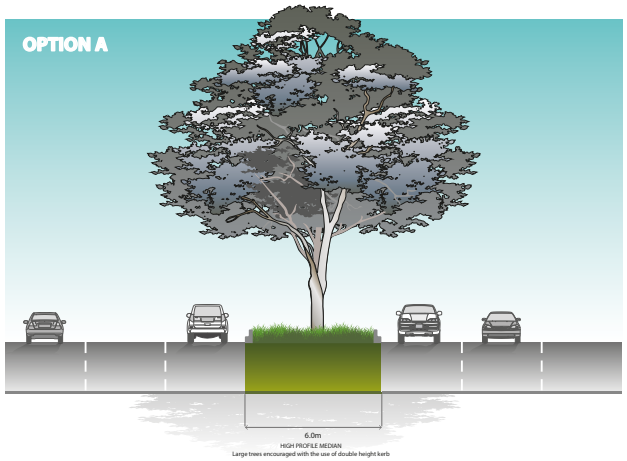
Town squares are to be predominantly hard landscaped, while urban parks have less hardstand than town squares, but more than traditional neighoburhood passive recretion parks. Urban parks also offer the opportunities for low key kick-and-throw activities. Town square and urban park design must also create skate/scooter opportunities.

Parks within the PSP area must consider any adopted Wyndham open space strategy.

4.4 Appendix D Street Cross Sections

PSP Cross Sections

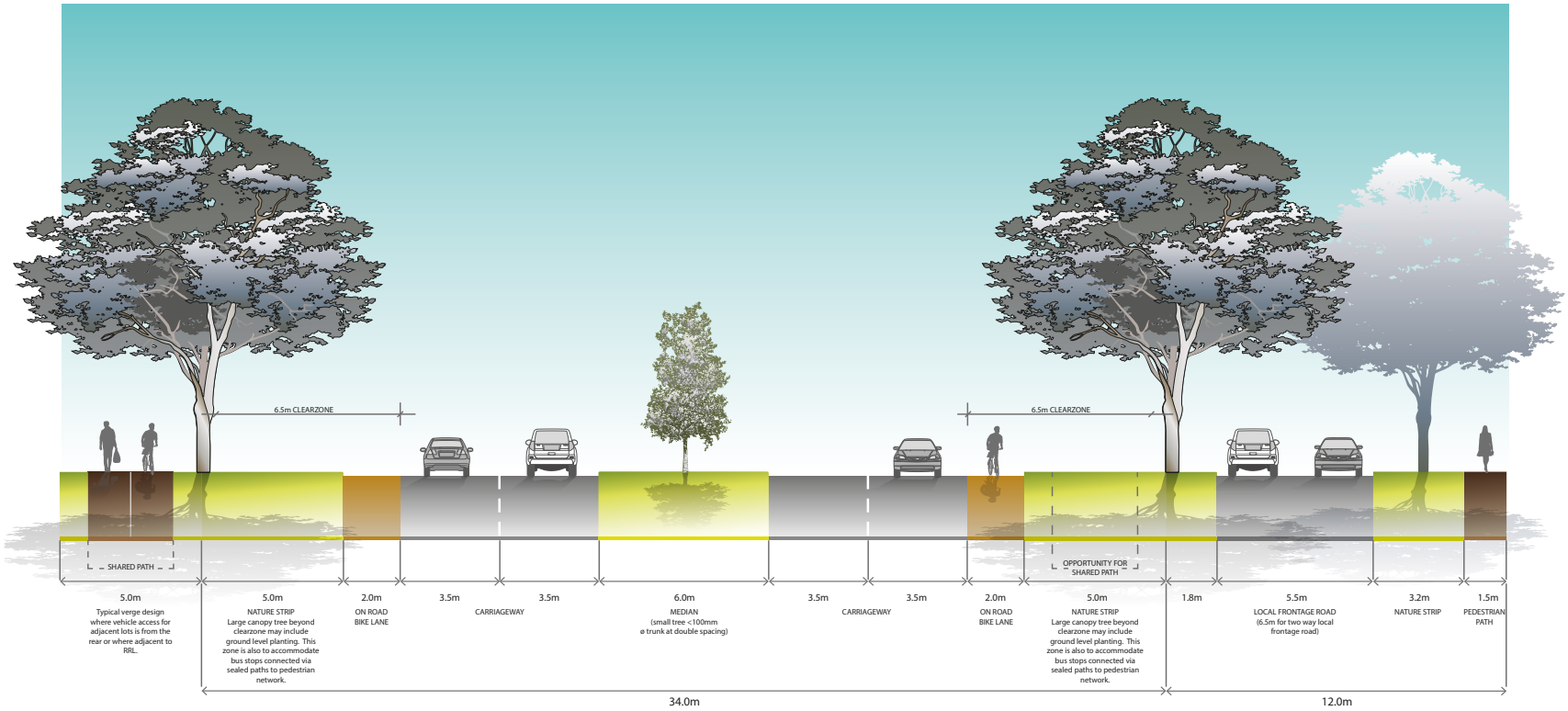




Cross Section 1
Primary Arterial Road 6 lane (41m)

NOTES:

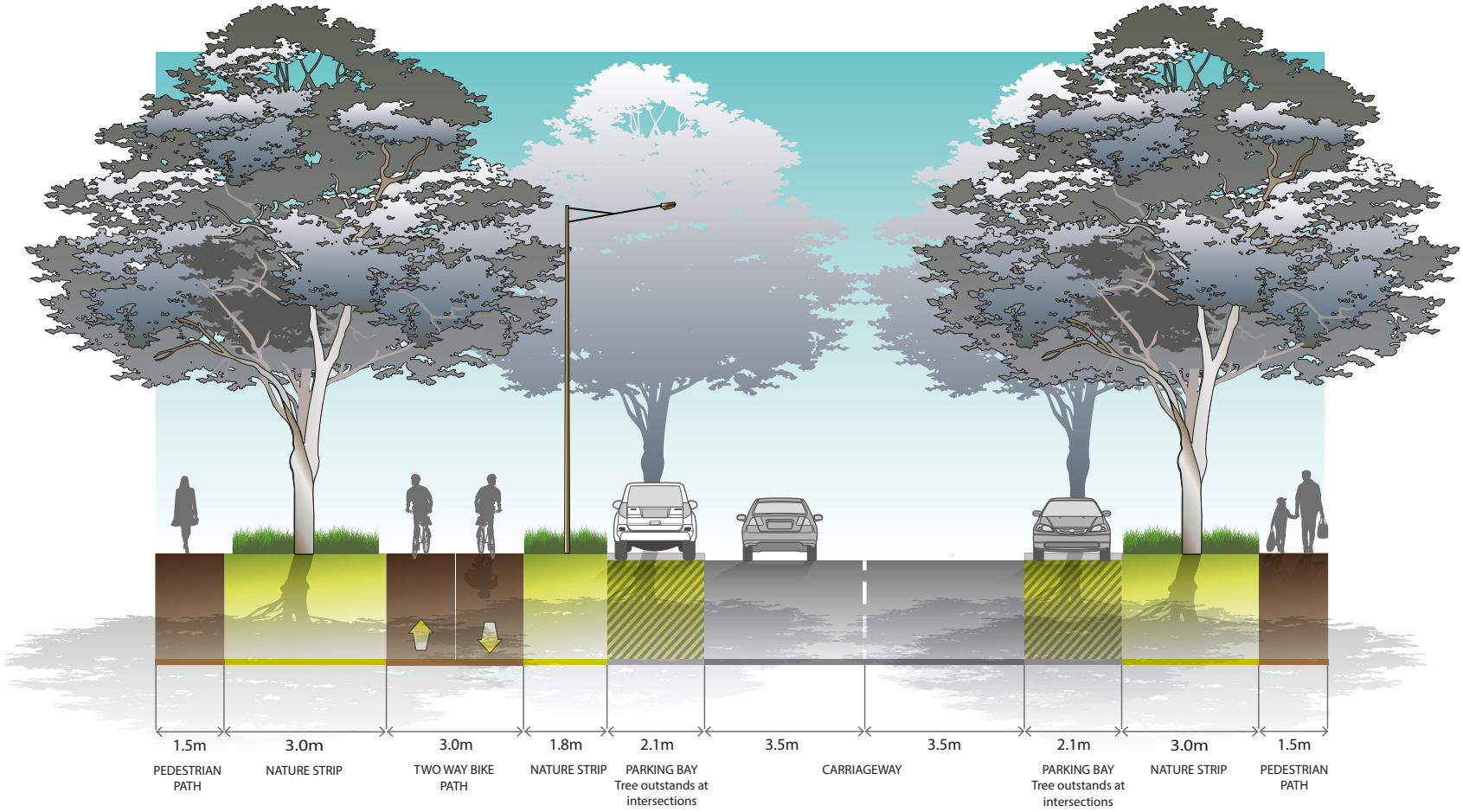
- Includes typical residential interface both sides
- Minimum street tree mature height 15 metres
- Kerbs for arterial carriageways are to be SM2 Semi-Mountable Kerb, and local frontage roads are to be B2 Barrier Kerb as per Figure 008 in Engineering Design and Construction Manual for Subdivision in Growth Areas (April 2011)
- 6.5m clearzone assumes 80km/hr speed limit - where required clearzones are to be consistent with VicRoads guidelines
- Option A (60km/hr) – opportunity for high profile barrier kerb in strategic locations such as adjacent town centres or significant parkland, to enable large canopy tree planting



Cross Section 2
Secondary Arterial Road 4 lane (34m)

NOTES:

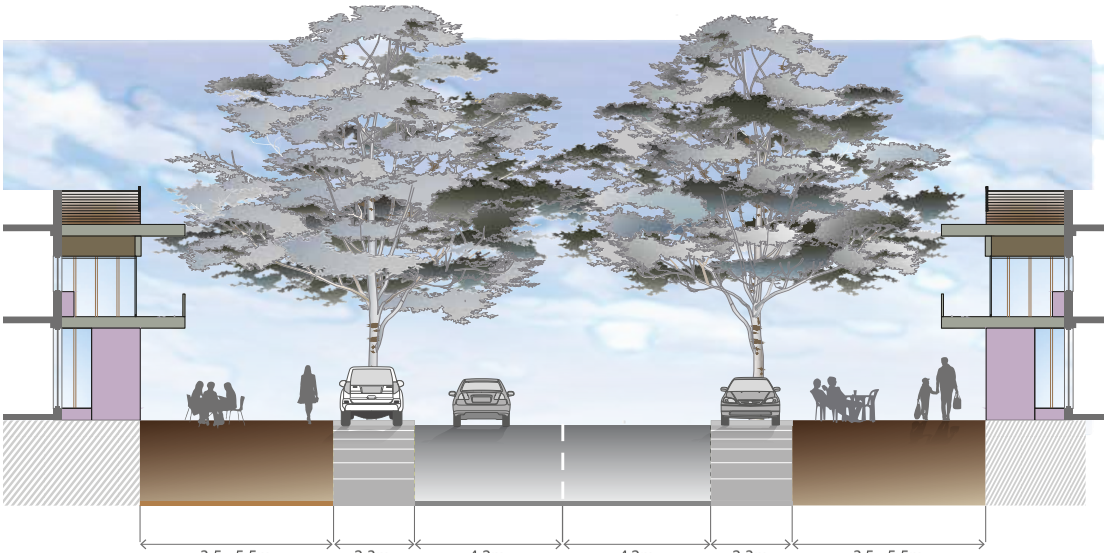
- Includes typical residential interface both sides
- Minimum street tree mature height 15 metres
- Kerbs for arterial carriageways are to be SM2 Semi-Mountable Kerb, and local frontage roads are to be B2 Barrier Kerb as per Figure 008 in Engineering Design and Construction Manual for Subdivision in Growth Areas (April 2011)
- 6.5m Clearzone assumes 80km/hr speed limit - where required clearzones are to be consistent with VicRoads guidelines



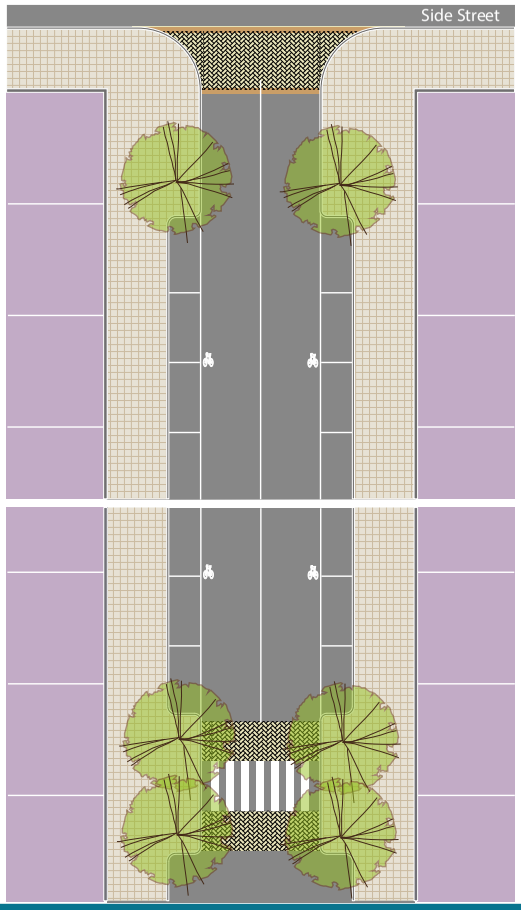
Cross Section 3
Connector Street (25.5m)

NOTES:

- Minimum street tree mature height 15 metres
- All kerbs are to be B2 Barrier Kerb as per Figure 008 in Engineering Design and Construction Manual for Subdivision in Growth Areas (April 2011)
- Where roads abut school drop-off zones and thoroughfares, grassed nature strip should be replaced with pavement. Canopy tree planting must be incorporated into any additional pavement.
- Verge widths may be reduced where roads abut open space with the consent of the responsible authority.



Section



An undivided connector road through the Local Town Centre (LTC) must have a cross section containing a parking lane of 2.3m, a bicycle lane of 1.7m and a traffic lane of 3.5m for each direction of travel (as in "Undivided Connector Road - A" of the *Public Transport Guidelines for Land Use and Development 2008)*, unless otherwise approved in writing by the Director of Public Transport.

The Director may approve an alternative cross section providing a parking lane of not less than 2.3m and a shared bicycle/traffic lane of not less than 4.2m for each direction of travel (as in "Undivided Connector Road - B" of the Guidelines). This option is shown here.

A request to construct an alternative cross section may be made where a main street Local Town Centre (LTC) with retail and commercial development on both sides of the connector road is proposed and:

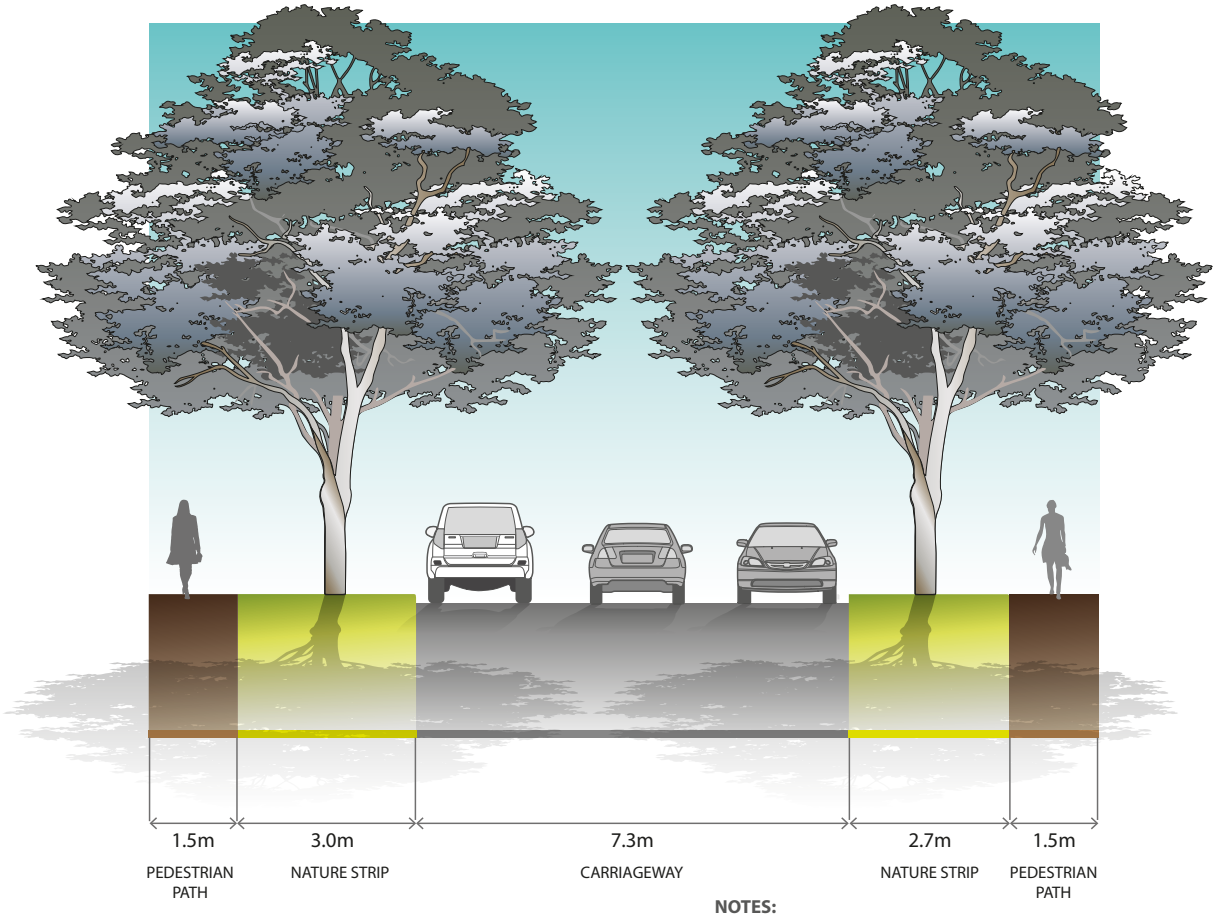
1. a bus service is not expected to utilise that segment of the LTC connector (e.g. an alternative route is proposed); or
2. a bus service is expected to utilise that segment of the LTC connector and:

- pedestrian accessibility and safety is the primary transport objective,
- there will be no prejudicial impact on public transport services,
- the connector does not form part of the Principal Public Transport Network,
- the connector is expected to carry three (3) services or less per hour each way under current bus service provision standards,
- the posted speed limit is proposed to be 40km/h or lower,
- the length of the "Undivided Connector Road - B" section is less than 250m and
- there is no proposal to locate a use which would generate significant volumes of bicycle traffic such as a school, community facility, sporting facility or place of assembly, in or adjacent to the LTC and a nearby alternative cycling route is available.

Plan View

Note:
- Final design of LTC main street will occur as part of LTC urban design framework
- A design speed environment of 40km/h should be provided

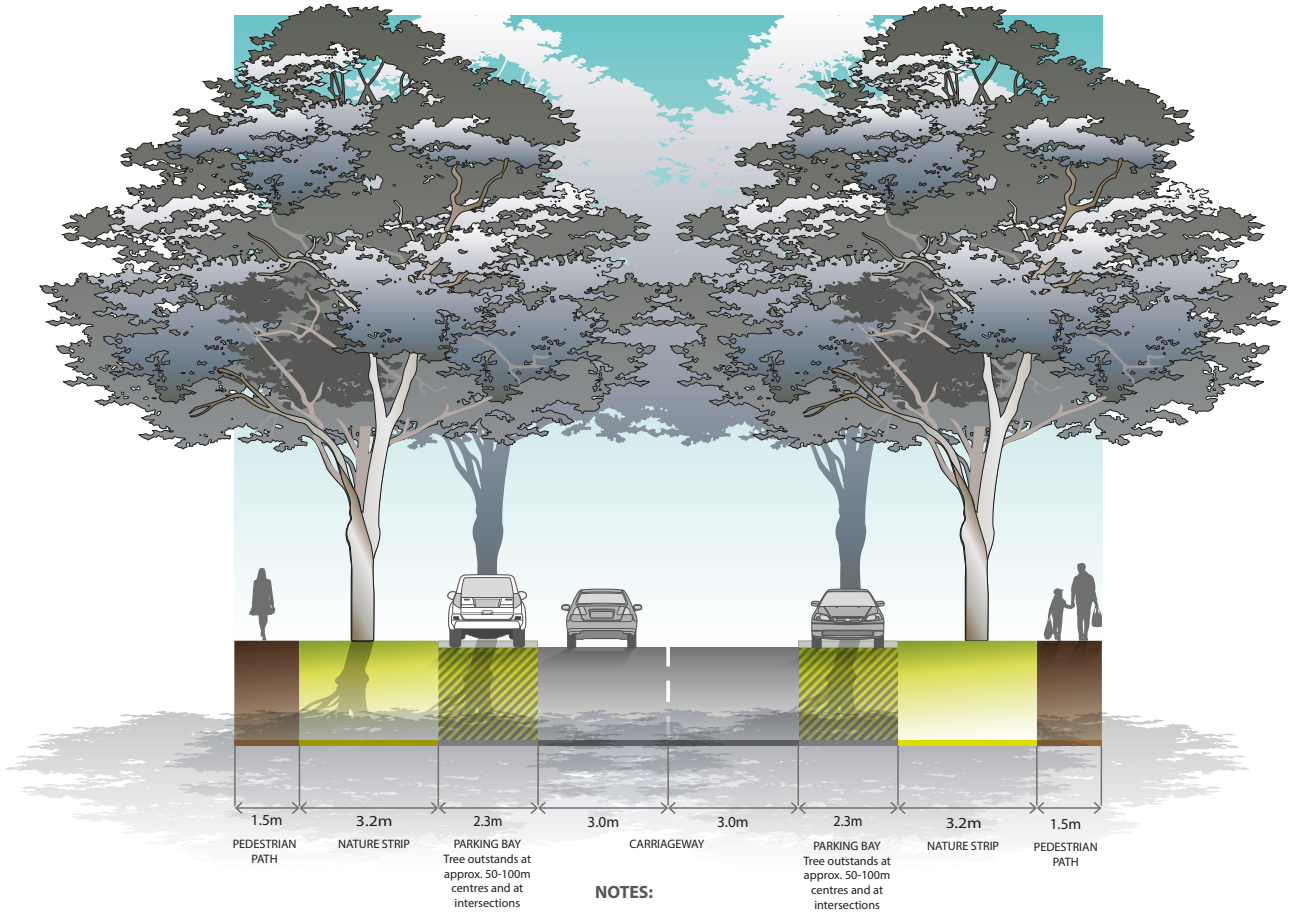
Cross Section 4
Main Street / Connector (20 - 24m) for Local Town Centres



Cross Section 5
Local Access Street Level 1 (16m)

NOTES:

- Minimum street tree mature height 12 metres
- All kerbs are to be B2 Barrier Kerb as per Figure 008 in Engineering Design and Construction Manual for Subdivision in Growth Areas (April 2011)
- Verge widths may be reduced where roads abut open space with the consent of the responsible authority.
- Where roads abut school drop-off zones and thoroughfares, grassed nature strip should be replaced with pavement. Canopy tree planting must be incorporated into any additional pavement.



Cross Section 6
Local Access Street Level 2 (20m)

NOTES:

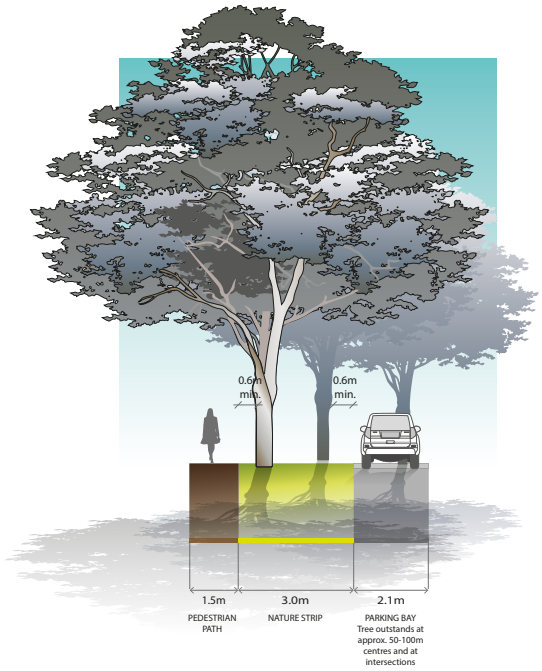
- Minimum street tree mature height 12 metres
- All kerbs are to be B2 Barrier Kerb as per Figure 008 in Engineering Design and Construction Manual for Subdivision in Growth Areas (April 2011)
- Verge widths may be reduced where roads abut open space with the consent of the responsible authority.
- Where roads abut school drop-off zones and thoroughfares, grassed nature strips should be replaced with pavement. Canopy tree planting must be incorporated into any additional pavement.

NOTES:

- Minimum street tree mature height 12 metres
- All kerbs are to be B2 Barrier Kerb as per Figure 008 in Engineering Design and Construction Manual for Subdivision in Growth Areas (April 2011)
- Verge widths may be reduced where roads abut open space with the consent of the responsible authority.

Cross Section 7
Local Access Street Level 1 **One way linear park (54m)**

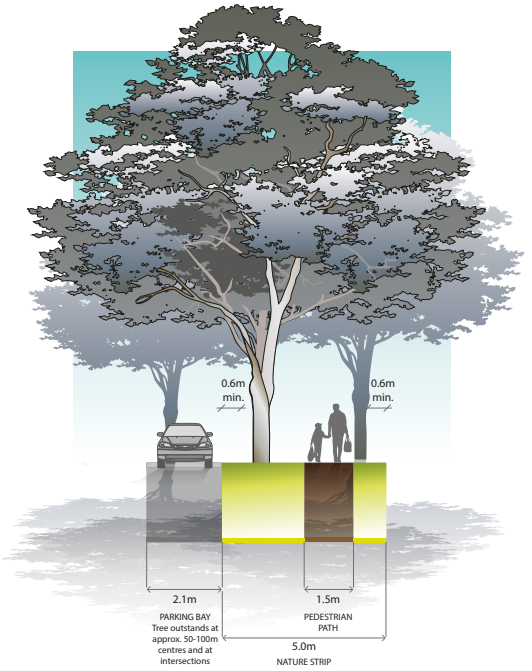
Cross Section Variations

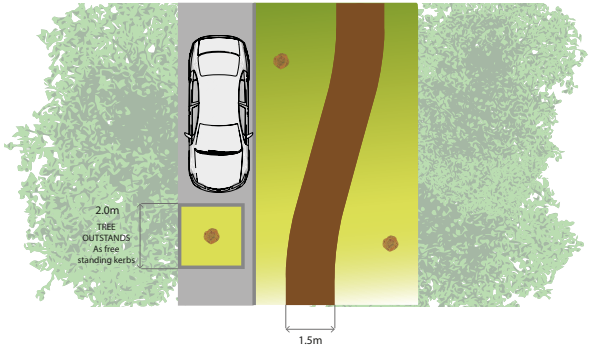


Connector Street (25.5m) Variation - Varying tree placement in naturestrip

NOTES:

- Tree planting in varying locations in nature strip not containing bike path, 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
- Functional layout of the kerb outstands to be to the satisfaction of the responsible authority

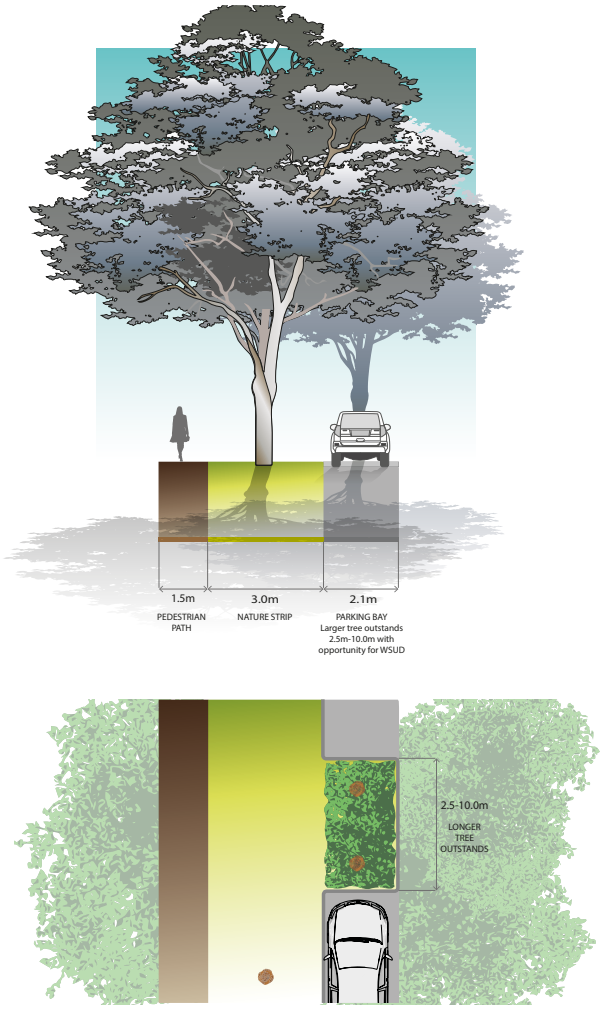




Connector Street (25.5m) Variation - Meandering footpath in nature strip

NOTES:

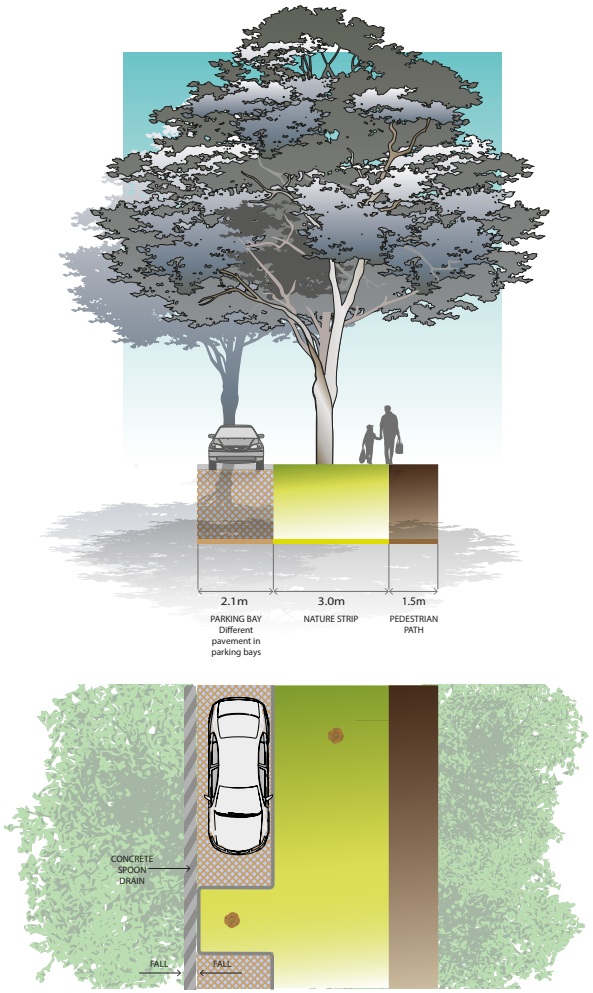
- Footpath in varying locations in nature strip
- Tree placement adjusts in response to footpath location
- Minimum offset of footpath 1.0m from back of kerb and 0.6m from tree trunks
- Design of meandering footpath is to consider bin placement on nature strips, access to letter boxes for mail delivery,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



Connector Street (25.5m) Variation - Longer tree outstands

NOTES:

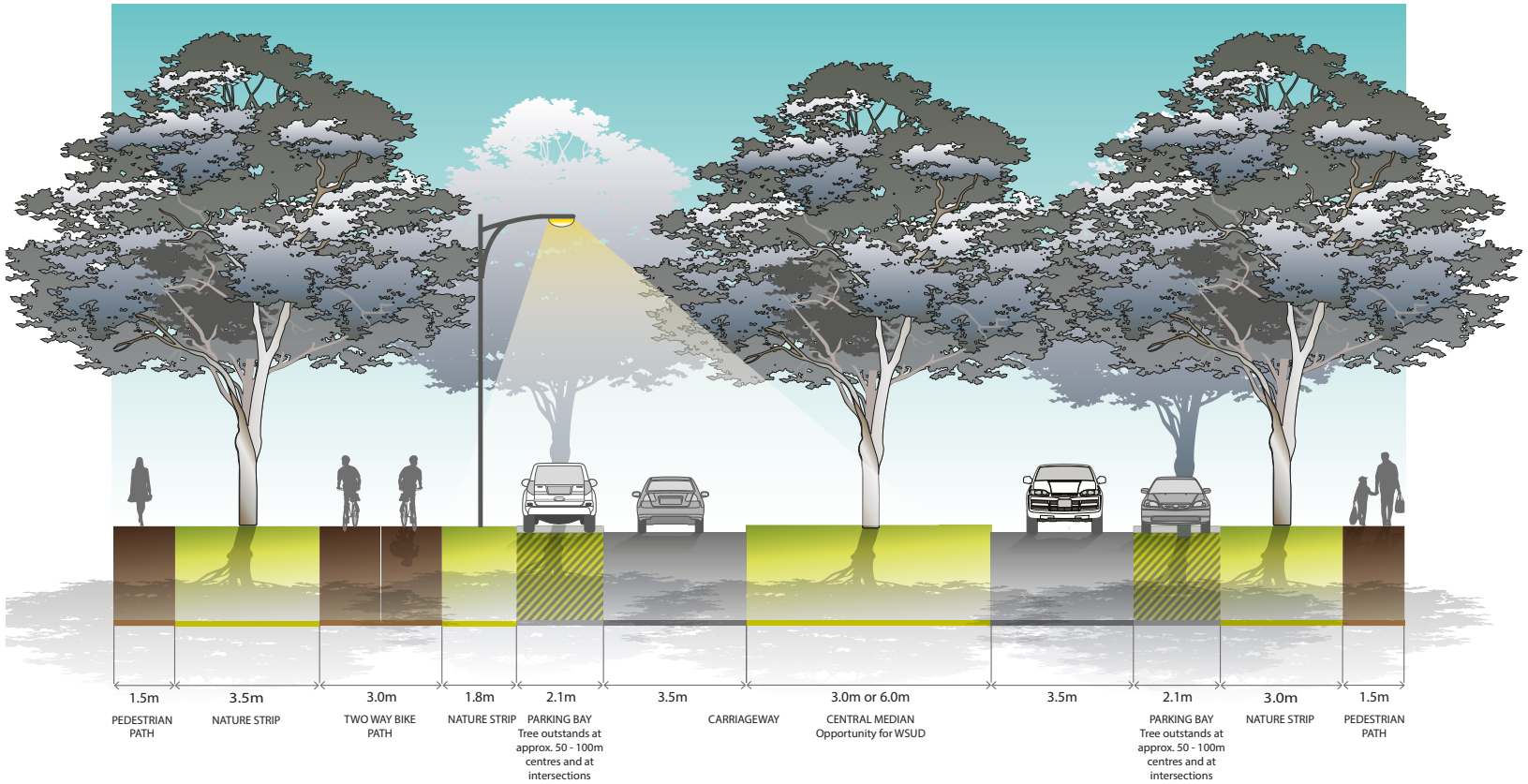
- For allotments with frontages of 13m or greater tree outstand lengths can be increased to accommodate more trees, garden bed planting and WSUD treatments
- Provide a minimum distance of 6.0m between outstands and adjacent driveways
- Functional layout of the kerb outstands to be to the satisfaction of the responsible authority



Connector Street (25.5m) Variation - Different pavement in parking bays

NOTES:

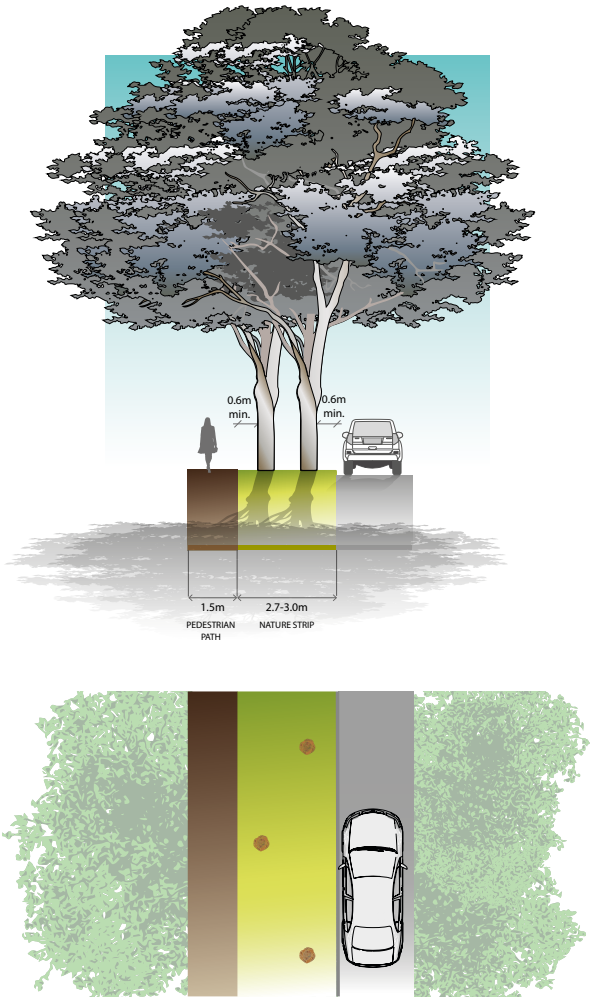
- A pavement treatment other than asphalt applied to parking bays
- Spoon drain between carriageway and parking bay shown as an alternative drainage treatment
- Functional layout of the kerb outstands to be to the satisfaction of the responsible authority



Connector Street (28.5-31.5m) Variation - Boulevard

NOTES:

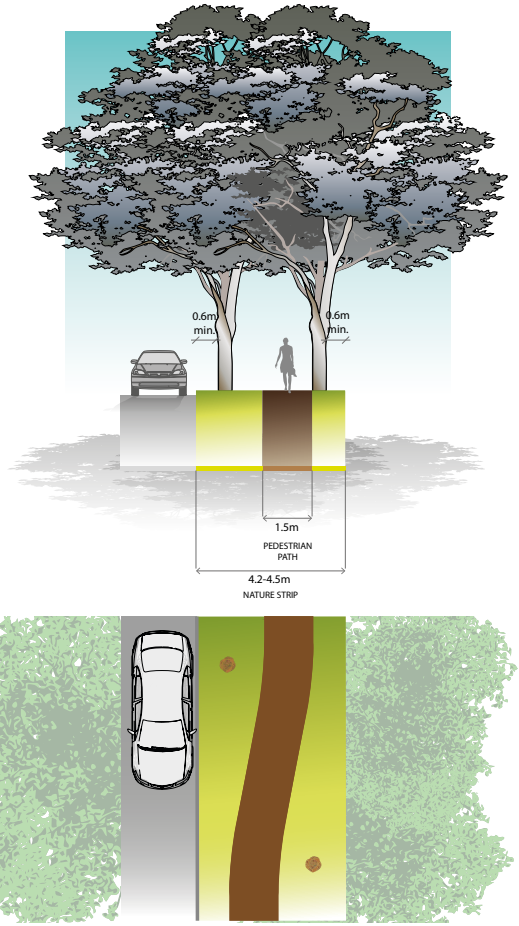
- Include a central median with large canopy trees to create a boulevard effect. Trees are to be centrally planted in median.
- Topsoil used in central medians is to be sandy loam, with a minimum depth of 200mm. The surface of medians is to be free-draining with a minimum cross fall of 2%, and is to be planted with warm season grasses.
- In areas where high pedestrian volumes are expected (e.g. around schools and town centres), central medians should 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.
- Verge widths may be reduced where roads abut open space with the consent of the responsible authority.
- Where roads abut school drop-off zones and thoroughfares, grassed nature strips should be replaced with pavement. Canopy tree planting must be incorporated into any additional pavement.



Local Access Street Level 1 (16m) Variation - Varying tree placement in naturestrip

NOTES:

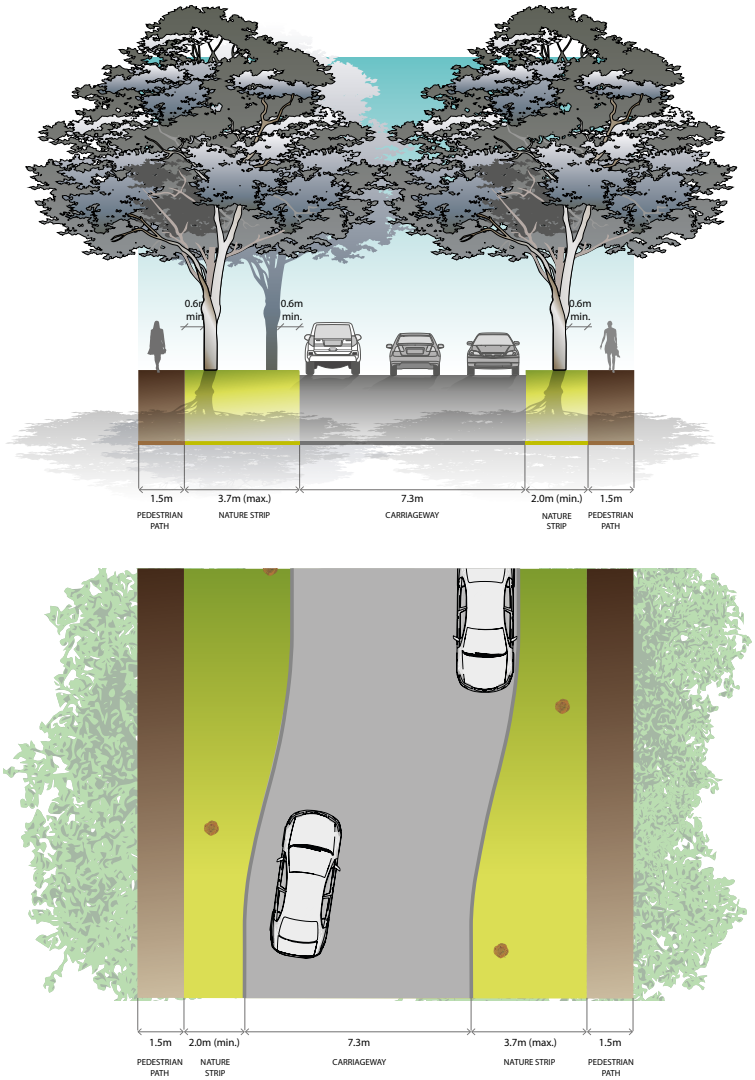
- Tree planting in varying locations in nature strip, in groups or clusters
- Minimum offset of tree trunks 0.6m from back of kerb and footpath edge



Local Access Street Level 1 (16m) Variation - Meandering footpath in naturestrip

NOTES:

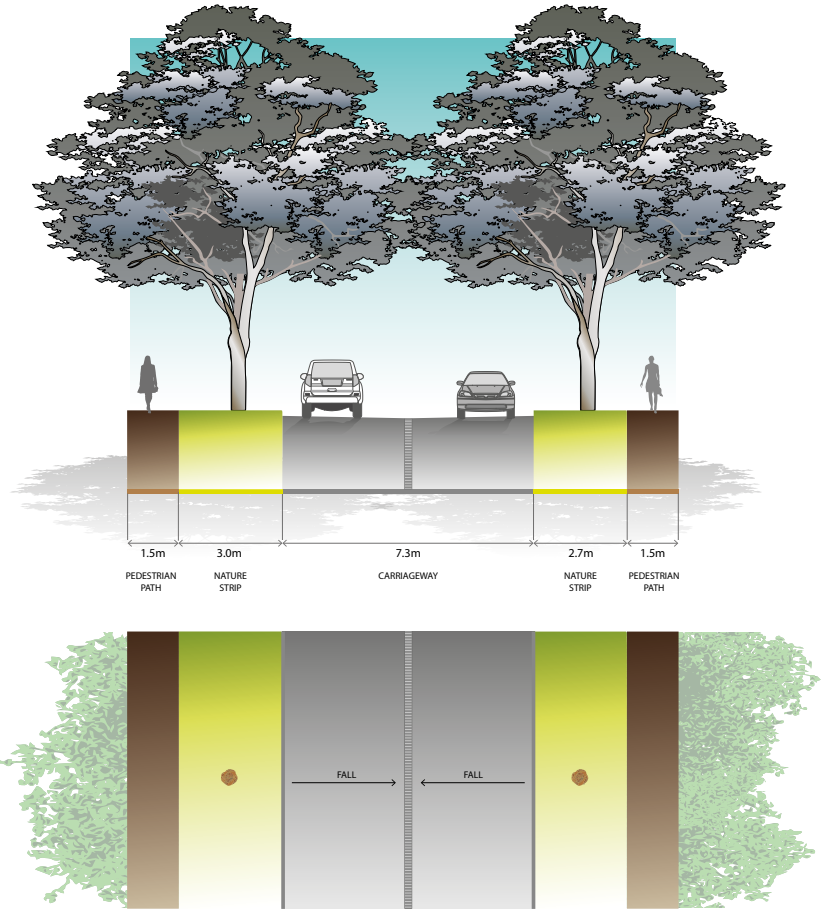
- Footpath in varying locations in nature strip
- Tree placement adjusts in response to footpath location
- Minimum offset of footpath 1.0m from back of kerb and 0.6m from tree trunks
- Design of meandering footpath is to consider bin placement on nature strips, access to letter boxes for mail delivery,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



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

NOTES:

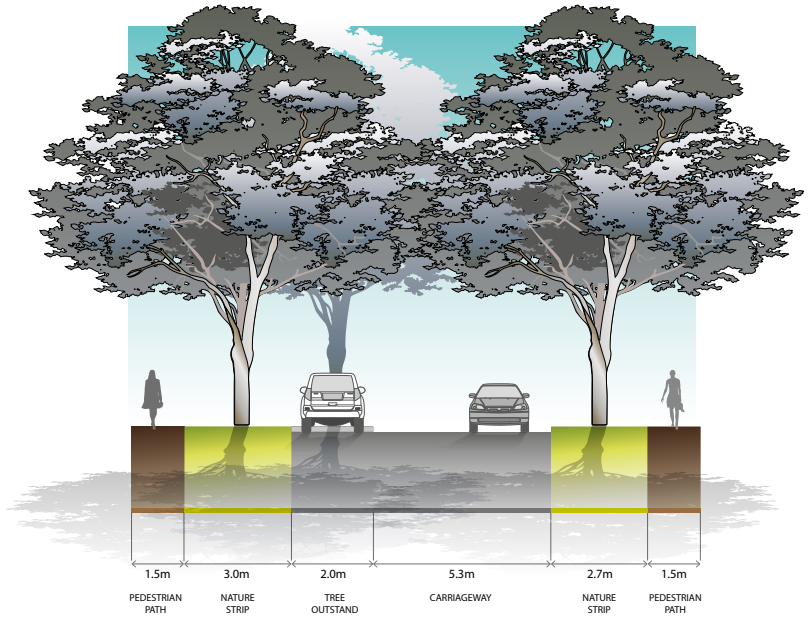
- Varying carriageway placement in road reserve
- Tree placement adjusts in response to carriageway location

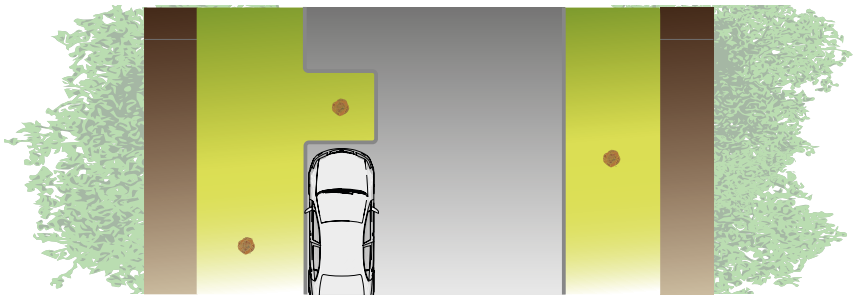


Local Access Street Level 1 (16m) Variation - Central Drainage

NOTES:

- Carriageway drains to central drainage line rather than sides
- Central drainage line to include pavement treatment other than asphalt
- Kerbs are to be B1 Barrier Kerb as per Figure 008 in Engineering Design and Construction Manual for Subdivision in Growth Areas (April 2011)
- Appropriate for short streets (less than 60m) with minimal through traffic or for frontage roads



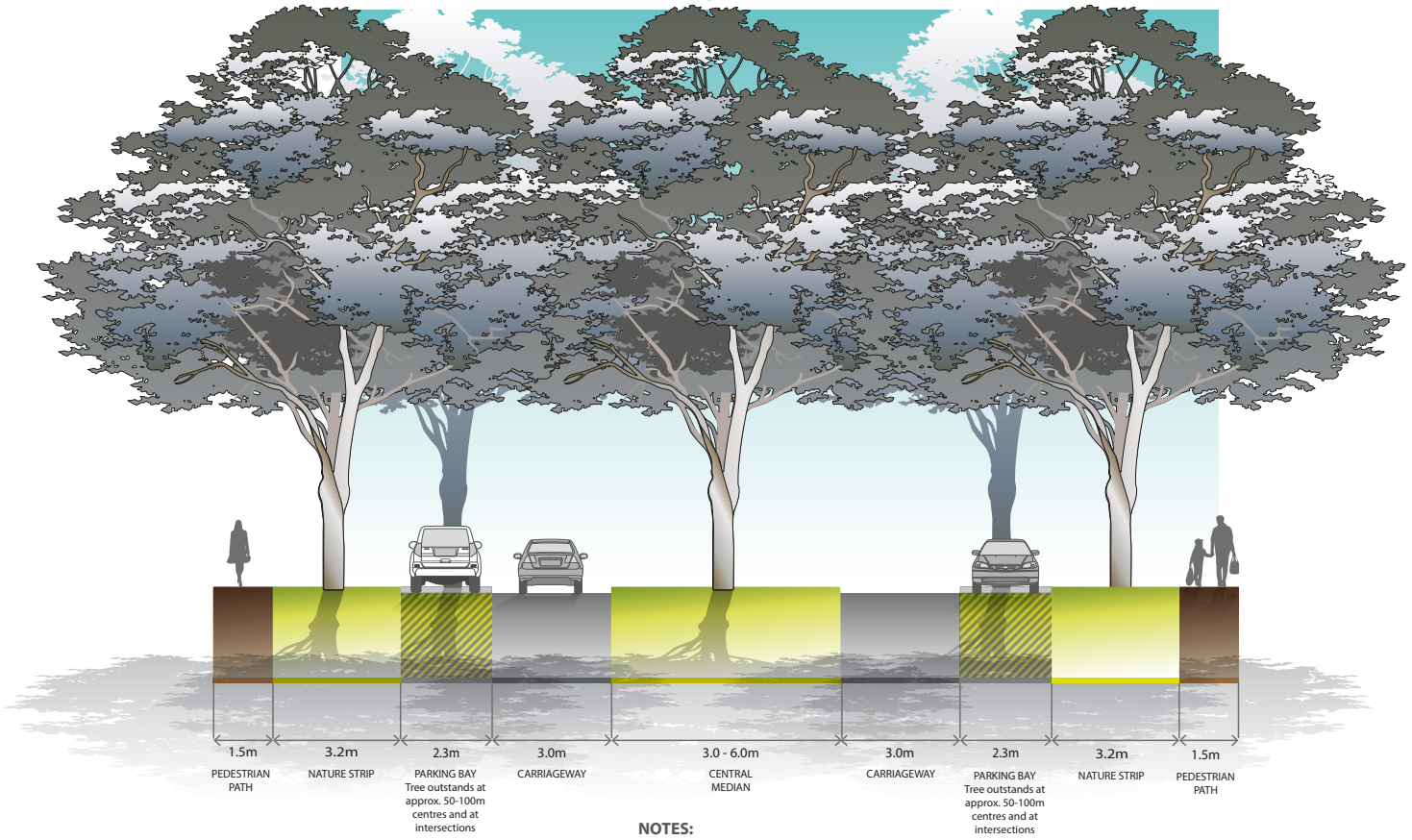


Local Access Street Level 1 (16m) Variation - Tree outstands

NOTES:

- Include tree outstands at approx 50 – 100m centres on one side only
- Road design to ensure passage of emergency vehicles is accommodated
- Functional layout of the kerb outstands to be to the satisfaction of the responsible authority

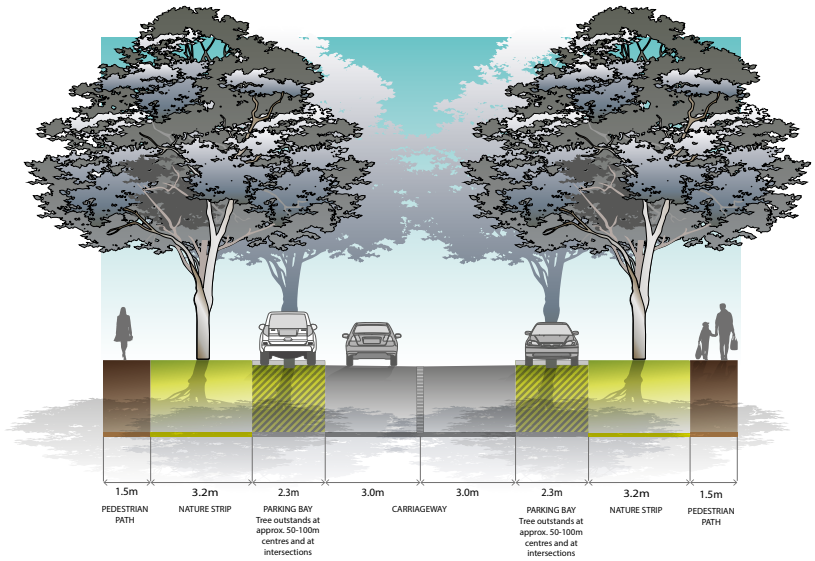
Local Access Level 2 (20m) Variations 1, 2, 3 & 4 - as per Connector Street Variations 1, 2, 3 & 4

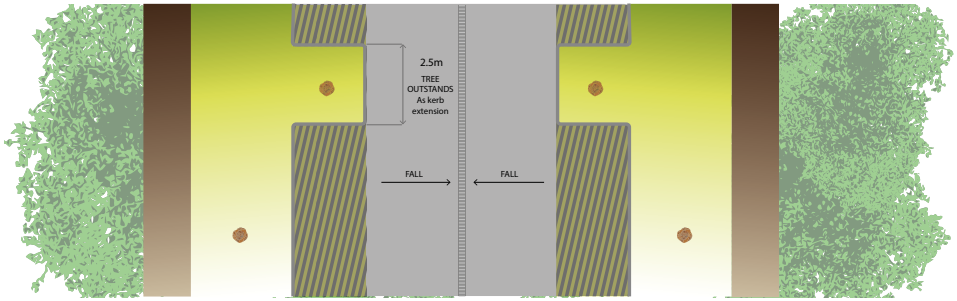


NOTES:

- 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
- Verge widths may be reduced where roads abut open space with the consent of the responsible authority.

Cross Section 8
Local Access Street Level 2 (23 - 26m) Variation - Boulevard



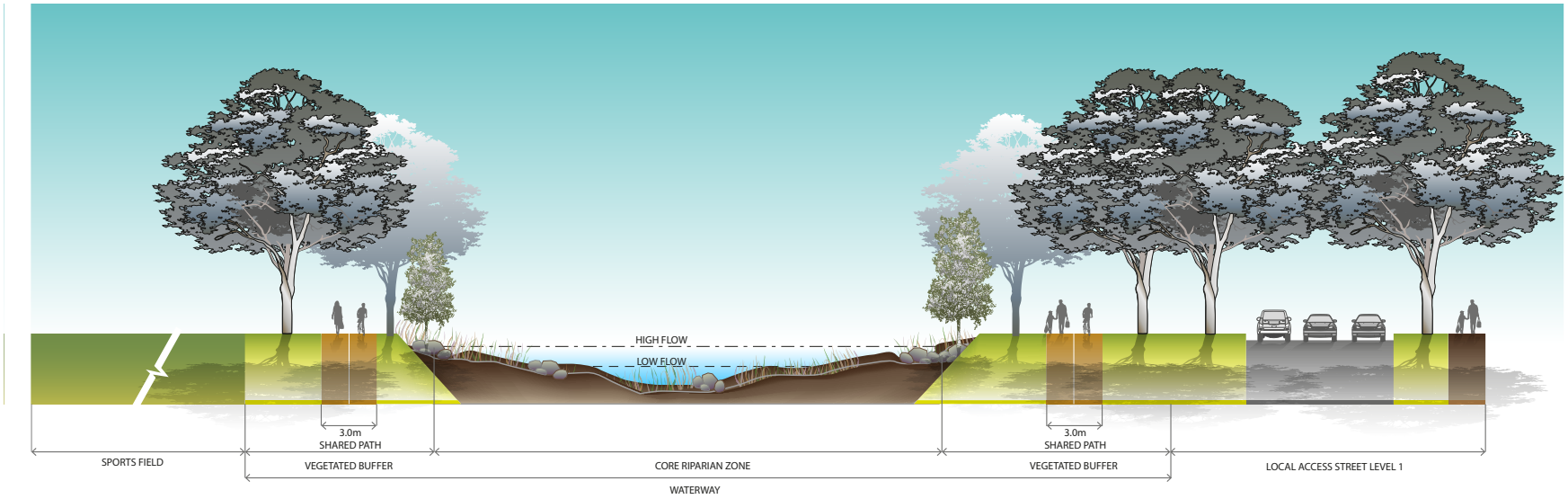


Local Access Street Level 2 (20m) Variation - Central Drainage

NOTES:

- Carriageway drains to central drainage line rather than sides
- Central drainage line to include pavement treatment other than asphalt
- Kerbs are to be B1 Barrier Kerb as per Figure 008 in Engineering Design and Construction Manual for Subdivision in Growth Areas (April 2011)
- Functional layout of the kerb outstands to be to the satisfaction of the responsible authority

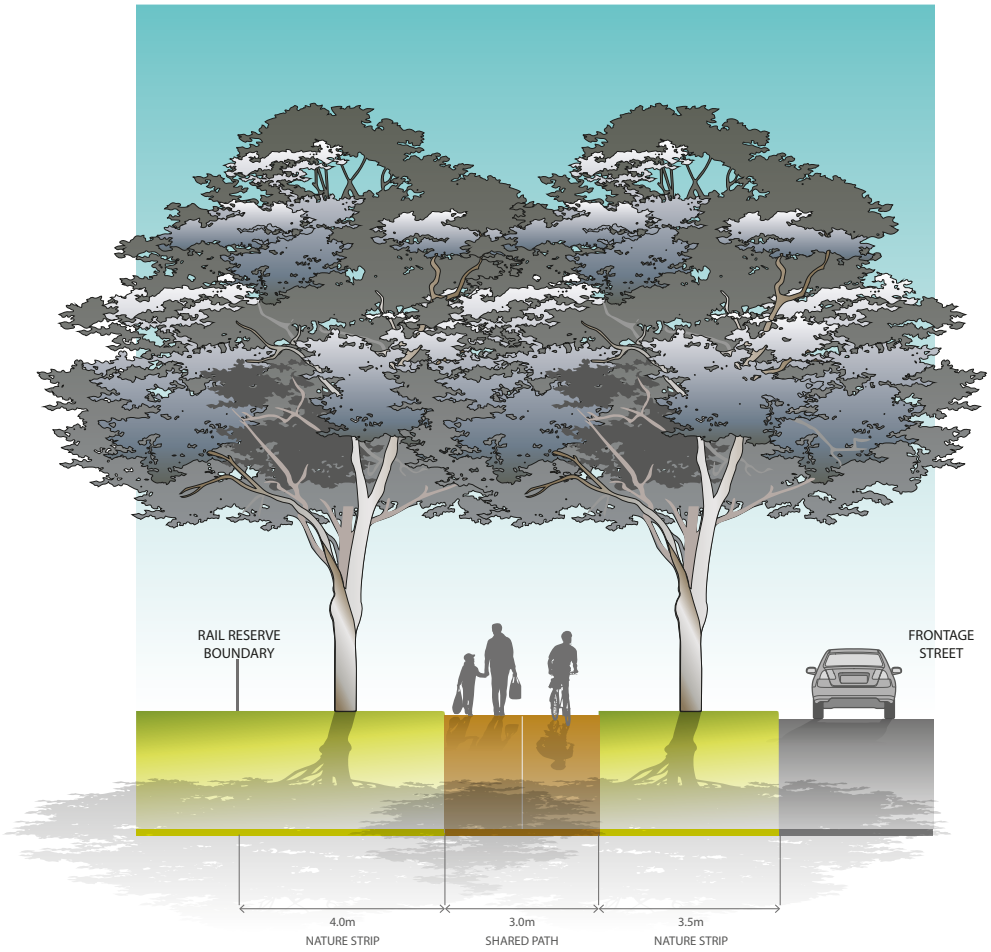
Waterway Interface



Cross Section 9
Constructed Waterway Interface

NOTES:

- Waterway widths are to be consistent with Plan 8 and subject to Melbourne Water approval
- Shared path placement is shown for both sports field and local access street interfaces for indicative purposes. The shared path network is shown on Plan 7.



NOTES:

- A shared path is to be provided along the Rail reserve where shown on Plan 6
- The shared path is to be located outside of the rail reserve, unless a proposal to locate the path within the rail reserve is approved in writing by VicTrack
- Fencing to the Rail reserve boundary is to be visually transparent

Cross Section 10
Rail Reserve Interface

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 D 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, 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.

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 (e.g. 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 waterway corridors or on the outer edges of these corridors to avoid disturbance to waterway values unless otherwise agreed by Melbourne Water.

	Under pedestrian pavement	Under nature strips	Directly under trees1	Under kerb	Under road pavement	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	No	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	

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.

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