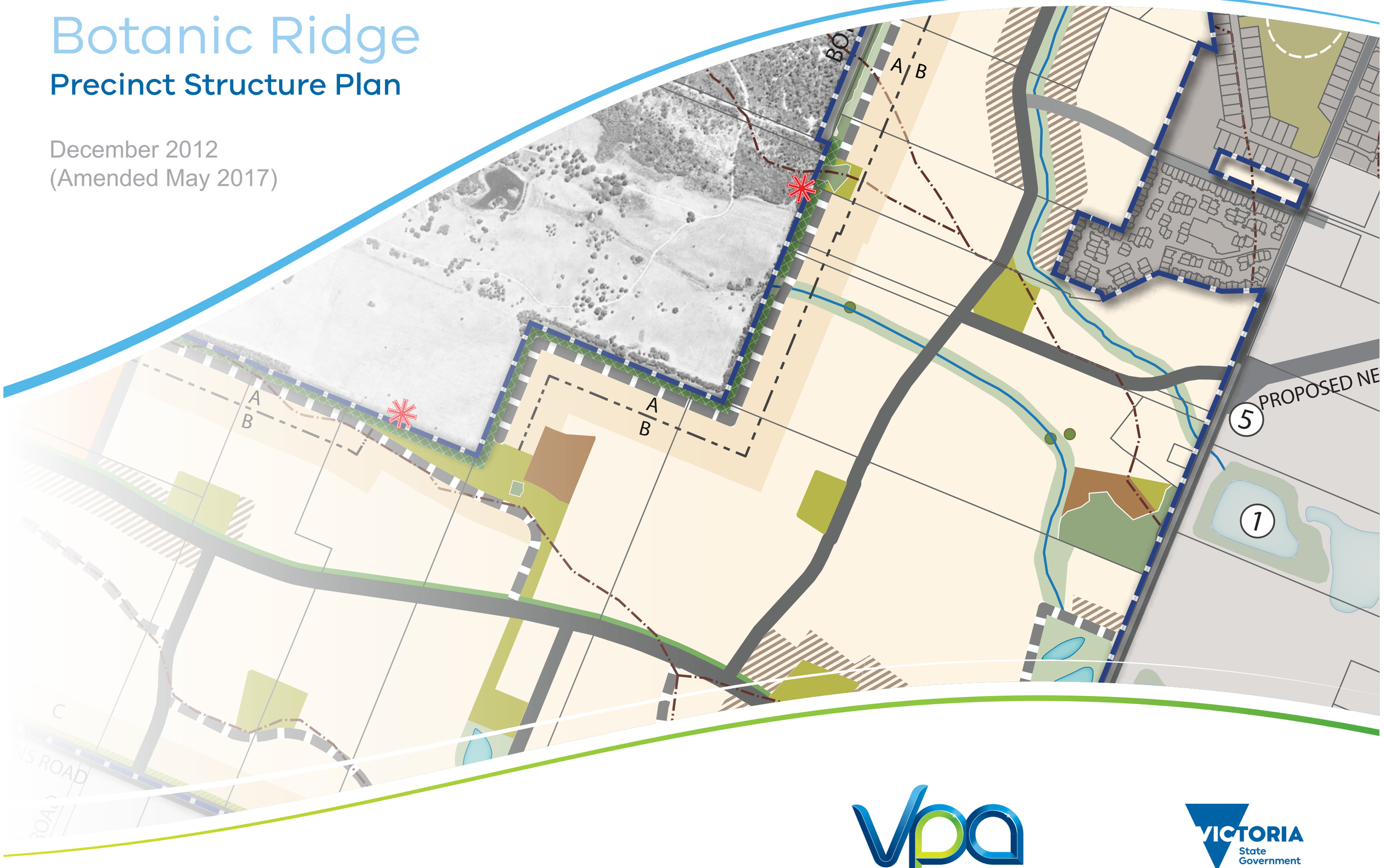
Botanic Ridge

Precinct Structure Plan

December 2012
(Amended May 2017)

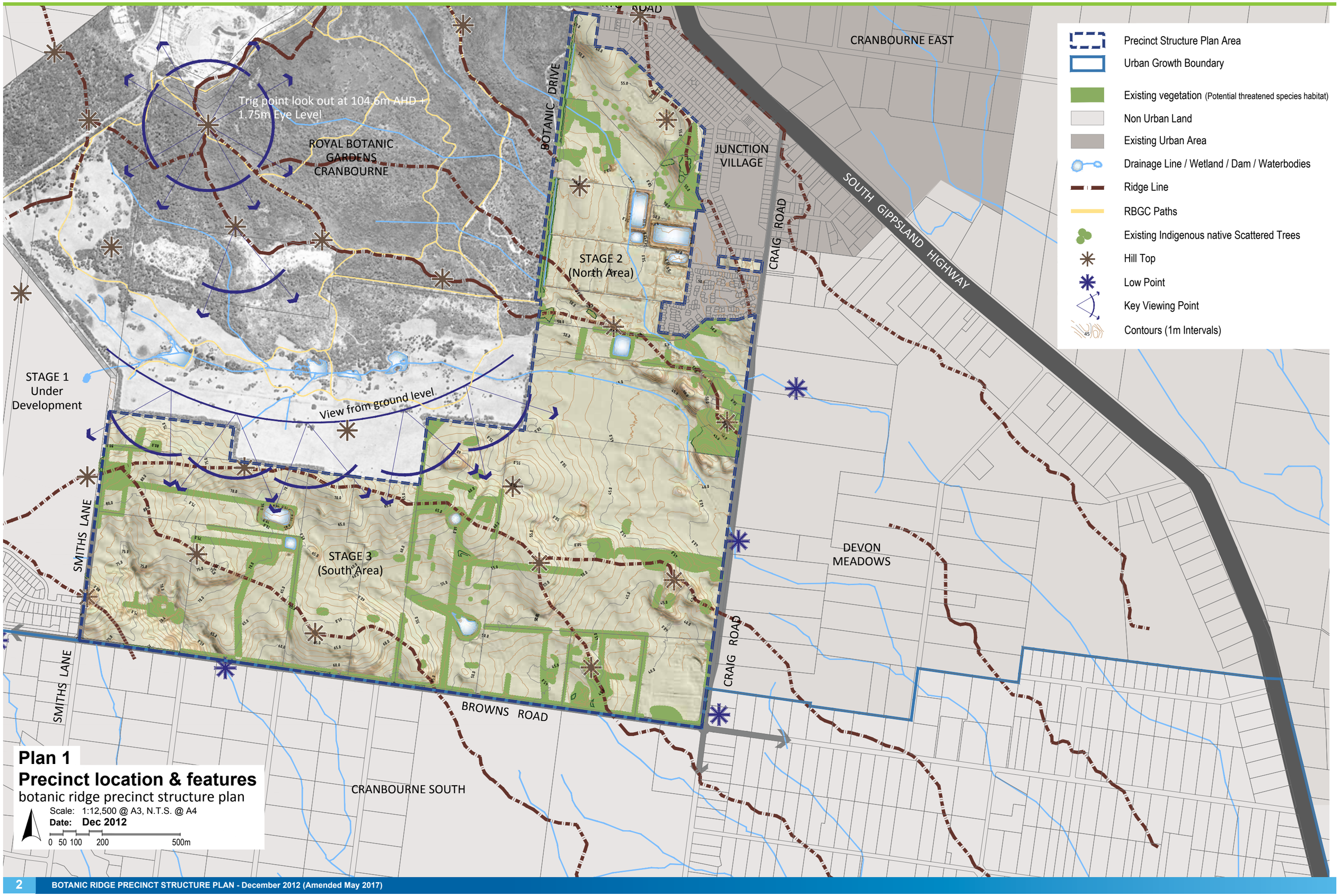


Victorian Planning Authority

VICTORIA
State Government

Version	Date	Incorporated into the planning scheme by amendment	Description of changes
1	December 2012	Casey C133	N/A
2	April 2015	Casey C197	Various amendments to the Bushfire Management Framework (changes noted throughout PSP document)
3	May 2017	Casey C227	Change the provisions relating to habitat creation for the Southern Brown Bandicoot to align with the approved 'Sub-regional Species Strategy for the Southern Brown Bandicoot Supplement: Habitat connectivity Melbourne Strategic Assessment' (The State of Victoria Department of Environment and Primary Industries Melbourne, July 2014).

CONTENTS



Plan 1

Precinct location & features

botanic ridge precinct structure plan

Scale: 1:12,500 @ A3, N.T.S. @ A4

Date: **Dec 2012**

0 50 100 200 500m

1.0 INTRODUCTION

The Botanic Ridge Precinct Structure Plan (the PSP) has been prepared by the Growth Areas Authority (GAA) with the assistance of the Casey City Council, Government agencies, service authorities and major stakeholders.

The Botanic Ridge Development Contributions Plan (DCP) has been prepared concurrently with this document. It sets out requirements for development proponents to make a contribution toward the infrastructure required to support the development of the precinct.

The Botanic Ridge Native Vegetation Precinct Plan has also been prepared concurrently with this document. It sets out requirements for which native vegetation must be retained and protected and which native vegetation may be removed and offset.

The PSP is a long-term plan for urban development. It describes how the land is expected to be developed over a +/-20 year timeframe, and how and where services are planned to support development.

The Precinct Structure Plan guides proposed development within the Precinct. The PSP:

- sets out plans to guide the delivery of quality urban environments in accordance with the Victorian Government guidelines.
- enables the transition of non-urban land to urban land.
- sets the vision for how land should be 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, affordable lifestyle.
- sets out objectives guidelines and requirements for land use and development
- provides Government agencies, the Council, developers, investors and local communities with certainty about future development.

The PSP is informed by:

- the State Planning Policy Framework set out in the Casey Planning Scheme,
- Growth Area Framework Plans (September 2006)
- Biodiversity Conservation Strategy and applicable Sub-Regional Strategies for Melbourne's Growth Corridors*; and
- the Precinct Structure Planning Guidelines; and
- the Local Planning Policy Framework of the Casey Planning Scheme.

Inserted by C227

*On 11 September 2014 an approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was issued by the Parliamentary Secretary to the Commonwealth Minister for Environment. 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 Biodiversity Conservation Strategy for Melbourne's Growth Corridors (Department of Environment and Primary Industries, 2013). The Commonwealth approval has effect until 31 December 2060. The approval is subject to conditions specified at Annexure 1 of the approval.

Inserted by C227

Provided the conditions of the EPBC Act approval are satisfied individual assessment and approval under the EPBC Act is not required.

1.1 How to Read This Document

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

A planning application and a planning permit must implement the **outcomes** of the precinct structure plan. The outcomes are expressed as the **vision** and **objectives**.

Each element of the precinct structure plan contains **requirements**, **guidelines** and **conditions** as relevant.

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

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 precinct structure plan.

Conditions must be included in a planning permit.

Meeting these requirements, guidelines and conditions will implement the outcomes of the precinct structure plan.

Development must also comply with other Acts and approvals where relevant e.g. the Environment Protection and Biodiversity 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 and development is addressed in this structure plan and a Responsible Authority may manage development and issue permits as relevant under its general discretion.

1.2 Land to which the Precinct Structure Plan applies

The PSP applies to approximately 318 hectares of land as shown on Plan 1, and is generally bounded by Smiths Lane to the west, Craig Road to the east, the Royal Botanic Gardens Cranbourne (RBGC) and Ballarto to the north and Browns Road to the south.

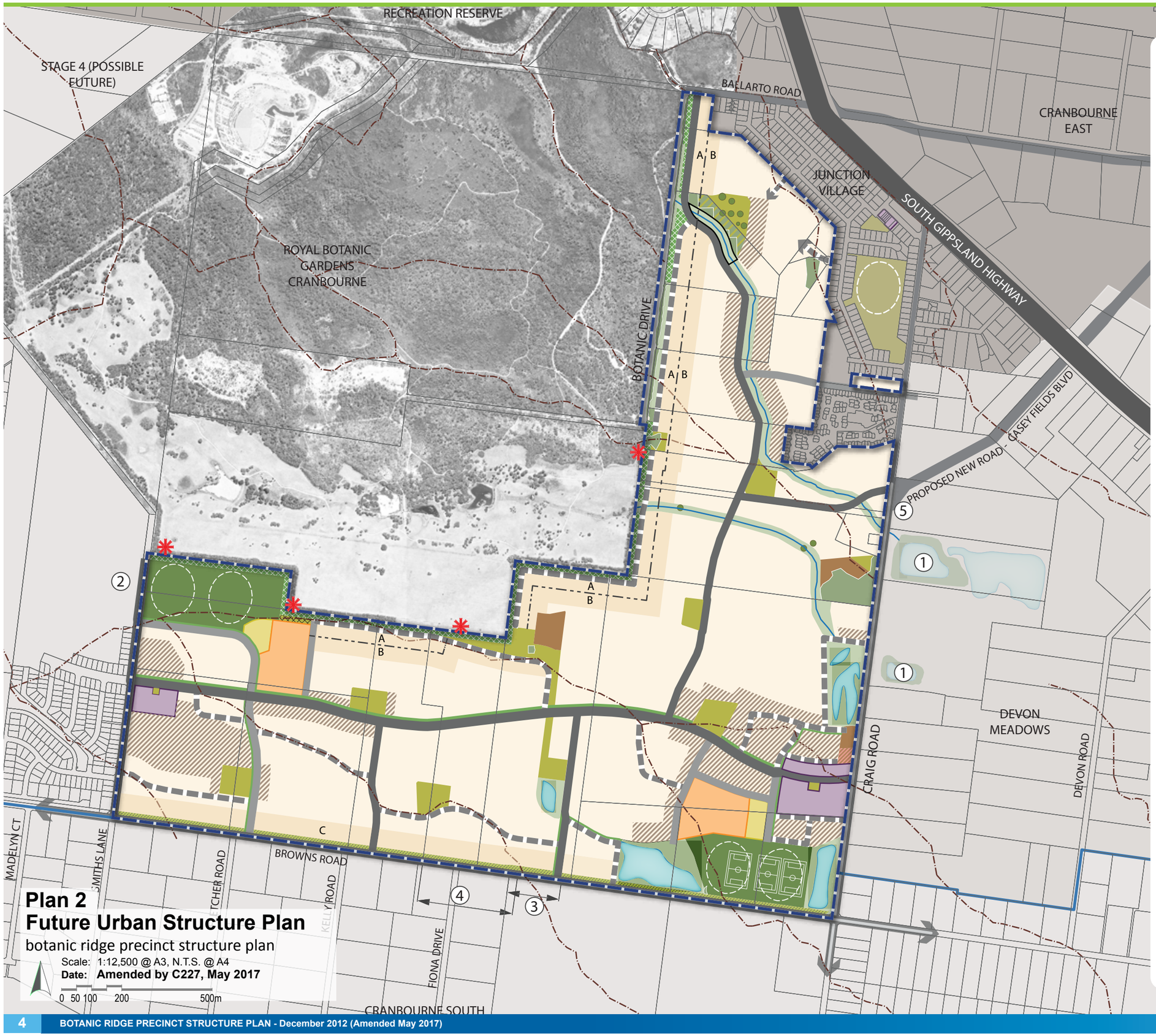
Plan 1 also identifies the key features of the land, particularly the undulating landform, which is a key planning and design driver for the precinct. These and other physical features are described in more detail within the accompanying background report.

1.3 Botanic Ridge Native Vegetation Precinct Plan (NVPP)

The Botanic Ridge Native Vegetation Precinct Plan (the "NVPP") sets out requirements for the protection and management of native vegetation within the Botanic Ridge precinct area. The Botanic Ridge NVPP is incorporated into the Casey Planning Scheme by inclusions in the schedule to Clause 52.16.

1.4 Botanic Ridge Development Contributions Plan (DCP)

The Botanic Ridge DCP provides for the provision of works, services, and facilities to be used by the future community of Botanic Ridge. The DCP area is the same as the PSP area.



Plan 2
Future Urban Structure Plan
botanic ridge precinct structure plan

Scale: 1:12,500 @ A3, N.T.S. @ A4
Date: Amended by C227, May 2017

0 50 100 200 500m

- Precinct Structure Plan Area
- Urban Growth Boundary
- Village Housing Zone
- Interface Housing Zone (A, B & C)
- Neighbourhood Housing Zone
- Town Centre
- Potential Mixed use
- Council Community Facility
- Government Education Facility (Primary)
- Active Open Space/Playing Fields
- Passive Open Space
- Conservation area set aside subject to VCAT enforcement order (in addition to NVPP requirements)
- Defendable space - RBGC Perimeter *
- Conservation Open Space (NVPP Requirement) *
- Waterway modification works minimised *
- Waterway / Drainage / Waterbodies / Wetlands *
- Tree Reserve along Browns Roads *
- Heritage site / Open Space (Aboriginal) *
- Scattered Trees *
- * Encumbered – No POS Credit
- Non Urban Land / Existing Urban Area
- Other Undeveloped Land Within UGB
- Major Arterial Road (South Gipps Highway)
- Arterial Road - Craig Rd. / Browns Rd. (2–4 lane)
- Connector Street (27m)
- Connector Street (with Landscape and trail 32m)
- Access Street - Level 2 (22m)
- Access Street - Level 2 (with Landscape and trail 28m)
- Key Access Street - Level 1
- Key Access Street - Level 1 (with Landscape and trail 24m)
- Ridge Line
- RBGC Potential Pedestrian Access Point subject to RBGC approval
- (1) Wetland retarding basin located outside Precinct subject to Melbourne Water PAO
- (2) Eastern 5m of Smiths Lane road reserve used for Active Open Space
- (3) Flexibility for Connector Road location. Refer Plan 7 & Appx. D
- (4) Alternative for interim access to initial stages of development via a local street. Refer Plan 7 & Appx. D
- (5) Potential for intersection to shift south to align with existing Road Reserve. Refer Section 3.7

Amended by C227

1.5 Southern Brown Bandicoot Conservation

Requirements specified within the Botanic Ridge Precinct Structure Plan align with condition 1 of the Commonwealth Government final approval of urban development in Melbourne's South East Growth Corridor. The approval was made under section 146B of the *Environment Protection and Biodiversity Conservation Act 1999* on 11 September 2014.

The requirements include three Southern Brown Bandicoot (SBB) connectivity corridors that link the Royal Botanic Gardens Cranbourne to other potential habitat within and outside the Urban Growth Boundary. The corridors comprise of drainage reserves, local parks, and a key access street (level 1 - with landscaped trail) and, will include revegetation, landscaping and road crossing design suitable for use by the SBB. This will form part of a number of actions to implement the Southern Brown Bandicoot Sub-Regional Species Strategy (DEPI 2014), which applies over the broader region.

1.6 Background Information

Background information on the precinct – including its local and metropolitan context, history, landform and topography, biodiversity, drainage, open space and community facilities are provided in the separate Precinct Background Report. This report also references the various background technical studies that have also informed the structure plan.

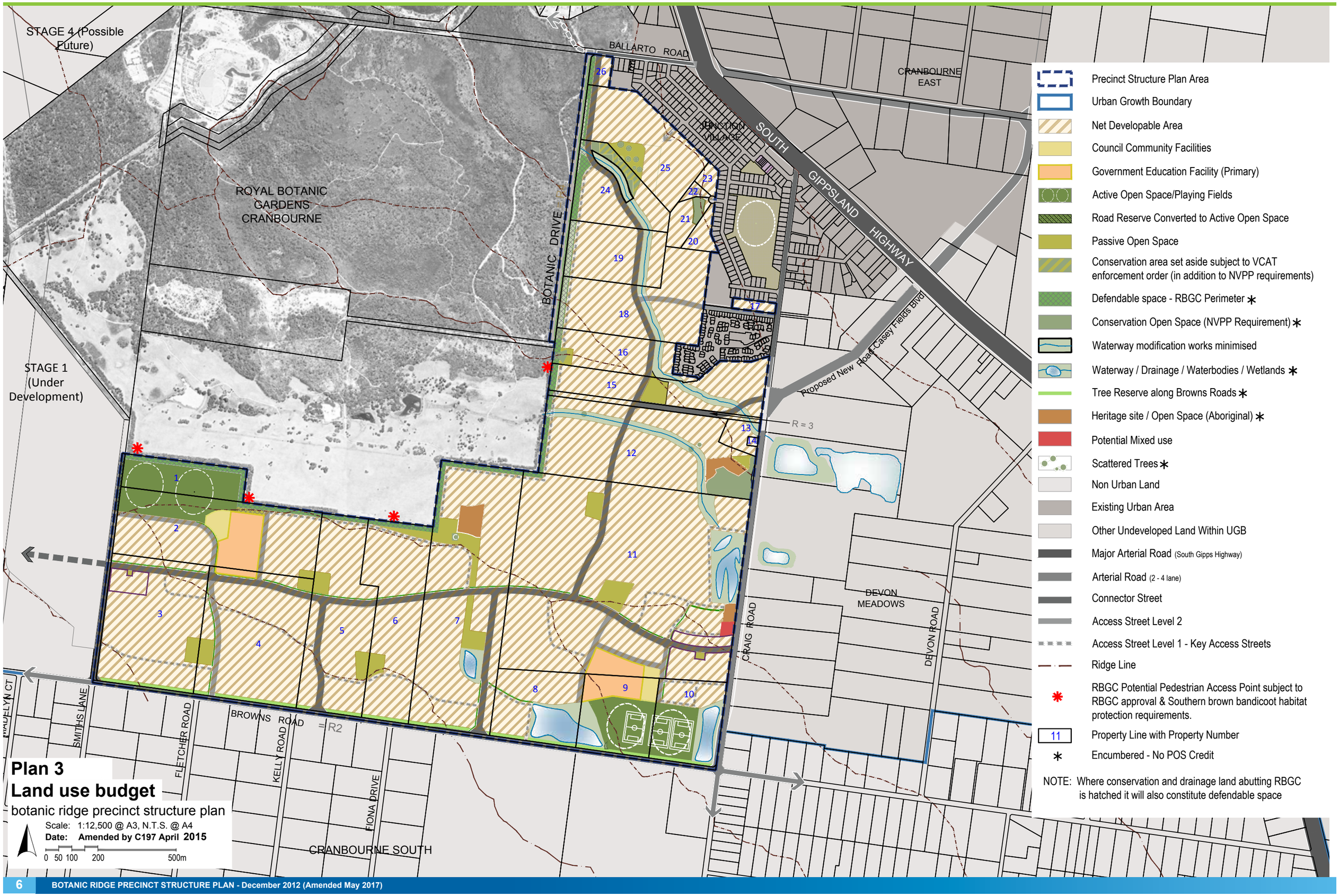
2.0 OUTCOMES

2.1 Vision

Botanic Ridge will be a unique community where physical landform, landscape character and environmental management are the key planning and design drivers. Botanic Ridge will be an innovative model for the creation of an ecological, landscaped and environmentally sustainable residential area, that provides for, housing diversity, quality community facilities and vibrant town centres at urban densities.

Botanic Ridge will be:

- A place of beauty, where excellence in landscape, architectural and urban design contribute to a strong 'sense of place', while also addressing important visual and environmental performance requirements.
- A place of significant housing choice, that caters for a diversity of people with varying means.
- A connected community with integrated transport and open space networks, community facilities and state of the art telecommunication.
- Designed with nature in mind, utilising native and indigenous plants and integrating conservation areas to foster respect among residents for the environment and in particular the EPBC listed Southern Brown Bandicoot.
- A place where residents have a sense of ownership and pride, which together with the beautiful environment and excellent amenities, contributes to a healthy community.
- A place with inviting and thriving town centres, where it is natural for residents of all ages to meet, shop and carry out business.
- A place that recognises the adjoining RBGC as a major strategic asset and conserves, enhances and integrates with its ecological and landscape qualities, including provision of habitat and connectivity for the Royal Botanical Gardens population of the Southern Brown Bandicoot.



Precinct Structure Plan Area

Urban Growth Boundary

Net Developable Area

Council Community Facilities

Government Education Facility (Primary)

Active Open Space/Playing Fields

Road Reserve Converted to Active Open Space

Passive Open Space

Conservation area set aside subject to VCAT enforcement order (in addition to NVPP requirements)

Defendable space - RBGC Perimeter ∗

Conservation Open Space (NVPP Requirement) ∗

Waterway modification works minimised

Waterway / Drainage / Waterbodies / Wetlands ∗

Tree Reserve along Browns Roads ∗

Heritage site / Open Space (Aboriginal) ∗

Potential Mixed use

Scattered Trees ∗

Non Urban Land

Existing Urban Area

Other Undeveloped Land Within UGB

Major Arterial Road (South Gipps Highway)

Arterial Road (2 - 4 lane)

Connector Street

Access Street Level 2

Access Street Level 1 - Key Access Streets

Ridge Line

RBGC Potential Pedestrian Access Point subject to RBGC approval & Southern brown bandicoot habitat protection requirements.

11 Property Line with Property Number

∗ Encumbered - No POS Credit

NOTE: Where conservation and drainage land abutting RBGC is hatched it will also constitute defendable space

Plan 3
Land use budget
botanic ridge precinct structure plan

Scale: 1:12,500 @ A3, N.T.S. @ A4
Date: Amended by C197 April 2015

0 50 100 200 500m

2.2 Summary Land Budget

The Botanic Ridge PSP covers a total (gross) area of 317.71 hectares.

The Net Developable Area (NDA) is established by deducting the land requirements for community facilities, public education facilities, arterial roads, unencumbered open space (both active and passive) as well as encumbered open space (including drainage, conservation and heritage), from the total (gross) precinct area. As such the NDA for the Botanic Ridge PSP is 241.22 hectares which equates to 75.96% of the PSP area.

The land budget shows that the PSP achieves a yield of approximately 14.20 dwellings per Net Developable Hectare (NDHa).

Based on this density, the PSP Area is estimated to provide for a yield of 3,431 dwellings.

Based on an average household size of 2.8 persons (Victoria in Future 2008), the future population of the PSP is estimated to be approximately 9,640 people.

A detailed property specific land budget is included in Appendix A to this PSP.

Table 1: Summary Land Budget

	NORTH (STAGE 2)			SOUTH (STAGE 3)			TOTAL		
	HECTARES	% OF TOTAL PRECINCT	% OF NDA	HECTARES	% OF TOTAL PRECINCT	% OF NDA	HECTARES	% OF TOTAL PRECINCT	% OF NDA
TOTAL PRECINCT AREA	**71.21**	**100.0%**		**246.36**	**100.0%**		**317.57**	**100.0%**	
TRANSPORT									
Arterial Roads / widening - Casey Fields Bvd / Craig Rd & Browns Rd	0.00	0.00%	0.00%	2.65	1.08%	1.44%	2.65	0.84%	1.10%
Road Reserve Not Available for Development	2.47	3.47%	4.36%	0.96	0.39%	0.52%	3.43	1.08%	1.42%
Tree reserve (Browns Road)	0.00	0.00%	0.00%	2.93	1.19%	1.59%	2.93	0.92%	1.22%
SUB-TOTAL	**2.47**	**3.47%**	**4.36%**	**6.55**	**2.66%**	**3.55%**	**9.01**	**2.84%**	**3.74%**
COMMUNITY FACILITIES									
Community Services Facilities	0.00	0.00%	0.00%	1.61	0.65%	0.87%	1.61	0.51%	0.67%
SUB-TOTAL	**0.00**	**0.00%**	**0.00%**	**1.61**	**0.65%**	**0.87%**	**1.61**	**0.51%**	**0.67%**
GOVERNMENT EDUCATION									
Government Schools	0.00	0.00%	0.00%	7.00	2.84%	3.79%	7.00	2.21%	2.90%
SUB-TOTAL	**0.00**	**0.00%**	**0.00%**	**7.00**	**2.84%**	**3.79%**	**7.00**	**2.21%**	**2.90%**
OPEN SPACE									
ENCUMBERED LAND AVAILABLE FOR RECREATION *									
Waterway / Drainage Line / Wetland / retarding	5.61	7.87%	9.90%	13.29	5.39%	7.20%	18.89	5.95%	7.83%
Heritage - Aboriginal	0.00	0.00%	0.00%	2.22	0.90%	1.20%	2.22	0.70%	0.92%
RBGC defendable space 'outer zone'	1.78	2.50%	3.14%	4.50	1.83%	2.44%	6.28	1.98%	2.60%
Conservation	2.81	3.95%	4.97%	2.16	0.87%	1.17%	4.97	1.56%	2.06%
SUB-TOTAL ENCUMBERED LAND FOR RECREATION	**10.20**	**14.32%**	**18.01%**	**22.16**	**9.00%**	**12.01%**	**32.36**	**10.19%**	**13.41%**
UNENCUMBERED LAND AVAILABLE FOR RECREATION									
Active Open Space	0.00	0.0%	0.00%	16.20	6.6%	8.78%	16.20	5%	6.72%
Passive Open Space	1.90	2.7%	3.36%	8.26	3.4%	4.48%	10.16	3.2%	4.21%
SUB-TOTAL UNENCUMBERED LAND FOR RECREATION	**1.90**	**2.67%**	**3.36%**	**24.47**	**9.93%**	**13.26%**	**26.37**	**8.30%**	**10.93%**
SUB-TOTAL - ALL OPEN SPACE	**12.10**	**17.0%**	**21.36%**	**46.63**	**18.9%**	**25.26%**	**58.73**	**18.5%**	**24.35%**
NET DEVELOPABLE AREA (NDA) HA	**56.64**	**79.54%**		**184.58**	**74.92%**		**241.22**	**75.96%**	

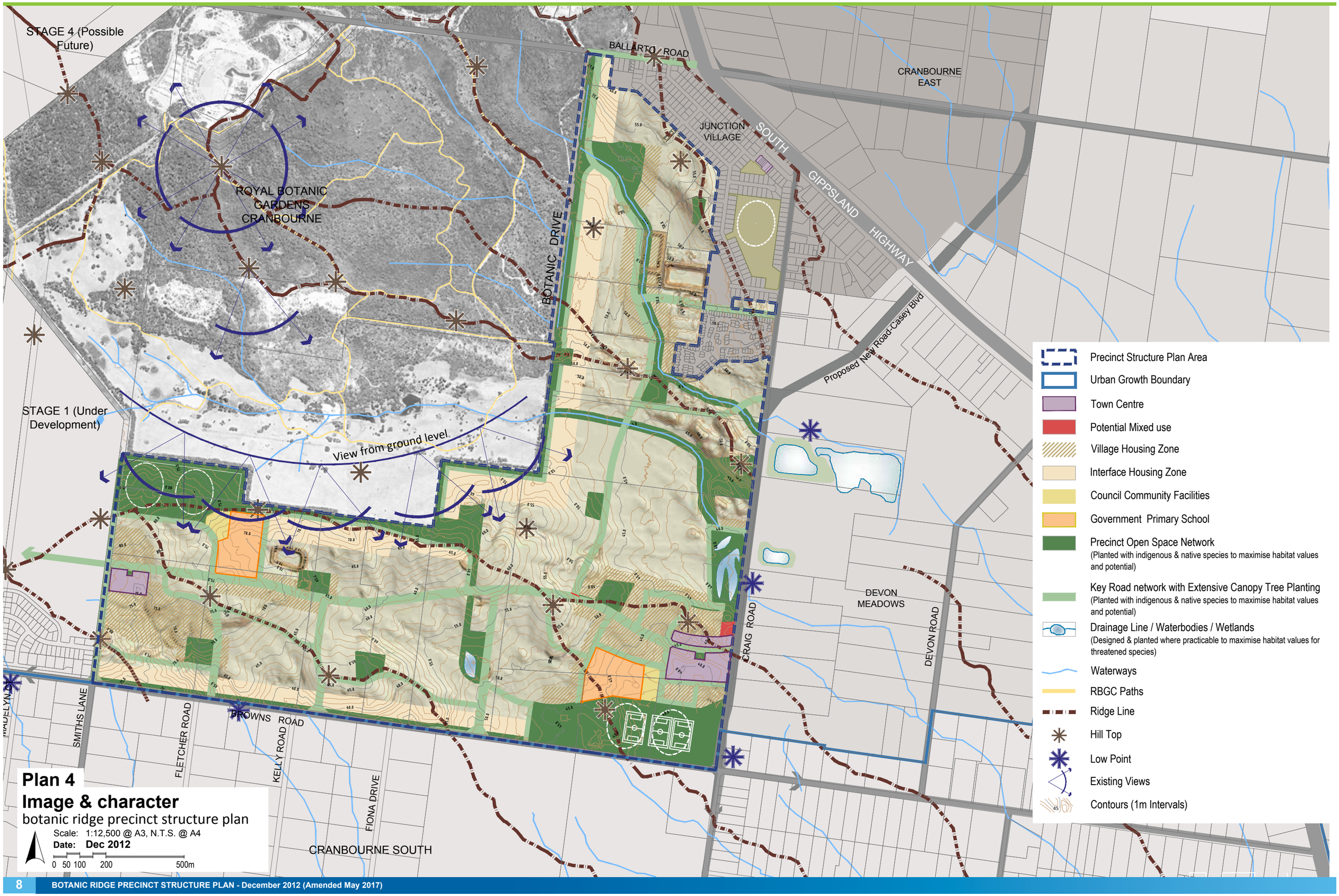
***NOTE**

Encumbered land available for recreation does not comprise public open space for the purpose of clause 52.01 of the Planning Scheme.

While the land is not set aside for recreation, as a consequence of it being open space, it is likely to afford enjoyment to people using the precinct.

Active Open Space amounts shown in Table 1 are in addition to Regional Active Open Space already provided within the City of Casey.

When existing Regional Active Open Space is apportioned to the Precinct, an Active Open Space provision of greater then 2 Ha per thousand people is achieved.



Plan 4

Image & character

botanic ridge precinct structure plan

Scale: 1:12,500 @ A3, N.T.S. @ A4

Date: Dec 2012

0 50 100 200 500m

3.0 IMPLEMENTATION

This chapter sets out objectives, requirements and guidelines for the following elements:

3.1 Image and character

3.2 Housing

3.3 Employment and town centres

3.4 Community facilities

3.5 Open space and natural systems

Deleted by C197 3.6 ...

3.7 Transport and Movement

3.8 Water and utilities

3.9 Precinct staging and infrastructure delivery

3.1 Image and Character

3.1.1 Objectives

- Ensure development is sensitive to the landscape and environmental characteristics of the site including hillsides and ridgelines.
- To minimise the intrusion of buildings into views from 'Trig Point Lookout' and other areas within the RBGC.
- To create a green and treed backdrop when viewed from within the RBGC.
- To locate streets with wide verges and canopy trees on ridgelines.
- To establish a road network with extensive canopy tree planting.
- To establish a built environment that is functional, safe and encourages sustainable living.
- To encourage development that reflects the local environmental character.
- To create cohesive neighbourhoods that integrate individual development sites.
- Encourage distinct neighbourhood identity via local level design diversity and other elements which contribute to a sense of place.
- To protect the integrity of the existing topography of the land.
- To re-establish local environmental elements after construction.
- To minimise the impact of illuminance (including reflected light) on the RBGC.

This page has been intentionally left blank.

3.1.2 Requirements and Guidelines

LANDSCAPE CHARACTER

	REQUIREMENTS
R1	Streets, parks and other public spaces must be planted with indigenous or Australian native species, excepting the Homestead Park (Passive Park P6) and the street aligned with the former Homestead driveway at 53-65 Craig Road..
R2	Streetscape planting must: • Be indigenous species in streets adjoining conservation areas; • Be suited to the scale of the street and planted to densities and size profiles as outlined in street cross section specifications (see Appendix C); • Unless otherwise approved by Council, utilise listed species in relevant adopted City of Casey street tree strategies; • Be suitable for the ground conditions, where planted in swales or similar, as part of WSUD initiatives; and • Match or complement adjoining development and / or street planting that has already been approved and / or commenced.
	GUIDELINES
G1	Subdivision design should integrate with the precinct landform and physical character by: • Site responsive location and alignment of roads, trails and paths. • Site responsive location and design of public spaces.
G2	Planting of streets and public spaces should draw inspiration from the planting palette utilised at the RBGC.
G3	Water sensitive urban design initiatives should contribute to the landscaped and treed character of the precinct.
G4	Where approved by Council, utilise alternative street tree species (not nominated in relevant Street Tree Strategies), that draw inspiration from the local indigenous trees within the RBGC bushland and the native planting palette used in the RBGC display gardens.
G5	Incorporate a mixture of planting approaches throughout the precinct to create particular effects and individual street characters. This may include more natural style cluster or copse plantings of trees of different sizes and species, through to more regular and symmetrical planting styles.
G6	Street trees should be selected: • To provide visual cues (trunks, foliage, flower colour, branch structure and size), and definition to different classes of roads, activity centres, park frontages and key intersections and entrances; and • With Council maintenance and management regimes in mind.
G7	Ground level planting should be incorporated within streetscapes where practicable.
G8	Trees not requiring protection under the Botanic Ridge NVPP should be retained within streetscapes and public spaces where: • They are in good health and condition, as determined by a qualified arborist; and • Where adequate space can be provided around them from adjoining structures for long term safe and viable retention as determined by a qualified arborist.

RBGC VIEW-SHEDS AND INTERFACE

	REQUIREMENTS
R3	Wider than standard verges in accordance with cross sections must be provided on all streets to support extensive on-street canopy tree planting to protect views from the RGBC trig point lookout..
	GUIDELINES
G9	Access streets shown within subdivision plans should be appropriately aligned and located to contribute to view-shed protection and landscape amenity
G10	Buildings on ridgelines should be minimised and where buildings are located on ridgelines, views from trig point must be protected via street and open space planting.
G11	Streets and open spaces adjoining the RBGC should be strategically planted (within the parameters of precinct fire management requirements) to reduce the visual intrusion of buildings into the RBGC.

EARTHWORKS, EMBANKMENTS AND RETAINING STRUCTURES

	REQUIREMENTS
R4	Subdivision, engineering, landscape design and buildings and works must provide a sensitive response to current landforms and minimise the need for earthworks, excavation and cut and fill earthworks.
R5	Earthworks, retaining structures and embankments must be designed carefully and sensitively and should tie back gradually into natural contours.
R6	Any vertical retaining structures in public places (with the exception of those which are part of building walls) must be no more than 1m in height.
R7	Where lawn areas are utilised for embankments in public areas, the gradient must be in accordance with Council standards.

EARTHWORKS, EMBANKMENTS AND RETAINING STRUCTURES

	GUIDELINES
G12	For cutting and filling deeper than 1m in public places, planted and landscaped embankments (maximum 1:3 gradient) or a combination of retaining structures (max. 1m height) and planted embankments or terracing should be used.

CONTROL OF EXTERNAL LIGHTING

	REQUIREMENTS
R8	External lighting to streets and public spaces, public buildings and structures must be baffled 'cut-off' style to minimise peripheral light spill.
	GUIDELINES
G13	Design and layout of streets and public spaces (including planting) should minimise the intrusion of street and vehicle lights into the RBGC and conservation areas.

FORMER HOMESTEAD DRIVEWAY AT 53-65 CRAIG ROAD

	REQUIREMENTS
R9	A new local street must be constructed on the general alignment of the original driveway at 53-65 Craig Road and connecting to the new homestead park (Passive Park P6).

R10	The new local street must:
	• Be a minimum of 19m wide;
	• Provide appropriate additional verge width and / or ground treatments to accommodate any retained trees; and
	• Be designed, and use materials, to innovatively respond to and respect the original character of the driveway. This may include but not be limited to:
	  • Use of non-standard paving materials or asphalt colours and aggregates;
	  • Incorporation of permeable pavements to maximise viability of any retained trees; and
	  • Use of timber, brick, or other materials that respect the character of the original homestead and driveway.

	GUIDELINES
G14	The new local street should, where practical, incorporate any trees that have been classified as worthy of safe and long term viable retention by a qualified arborist.
G15	The new local street should contain tree species that match or (where this is not possible for environmental weed or safety reasons) reference the original driveway plantings.

3.2 Housing

3.2.1 Objectives

- To provide housing that is designed, and uses materials, that are responsive to the landscape and environmental characteristics of the site.
- To provide housing with setbacks, heights, design and materials that minimises visual impact on views from the RBGC.
- To create distinct neighbourhood identity via local level design diversity, multiple housing zones and other elements which contribute to a sense of place.
- To concentrate the higher residential densities in and at the periphery of the activity centre, around local parks and the east-west connector road.
- To concentrate lower residential densities at interfaces to the RBGC Corridors and Browns Road.
- To provide a wide range of housing options and lot sizes to meet the needs of diverse household types.
- To achieve between 14 and 15 dwellings per net developable hectare across the precinct.
- To encourage provision of dwellings above ground level in town centres.
- To encourage planting of indigenous and native vegetation within the private realm to complement the habitat value of adjoining public spaces.
- To manage bushfire risk to private property.

3.2.2 Housing Density and Zone Description

The overall housing density target for the precinct is based on Net Developable Area (NDA) which is defined as:

- The total amount of land within the precinct that is available for development of housing and town centres, including lots, local streets and connector streets. It excludes land set aside for community facilities, government educational facilities, arterial roads, unencumbered open space and encumbered open space such as waterways, ecological and heritage conservation areas.

The precinct is divided into 3 main zones (interface, neighbourhood and village) that are illustrated on Plan 2 and located to respond to:

- The Precinct's physical conditions, landscape and visual amenity including RBGC view-sheds.
- The need to provide to housing diversity within the Precinct.

General location parameters for the housing zones are as follows:

INTERFACE ZONE:

- A – Lots that immediately abut (interface with) the RBGC boundary.
- B – Second line of lots behind lots that immediately abut (interface with) the RBGC.
- C – Lots that immediately abut (interface with) the Browns Road tree reserve and Green Wedge.

NEIGHBOURHOOD ZONE:

Balance of developable land area between interface and village zones

VILLAGE ZONE:

Generally in strategic locations near town centres and key transport routes

The average dwelling yield mix for each housing zone in order, to achieve an overall PSP density average of between 14 and 15 dwellings per Net developable Hectare is as follows:

- Interface Zone = 7-10 dwellings per NDHa
- Neighbourhood Zone = 14-15 dwellings per NDHa
- Village Zone = 20-21 dwellings per NDHa

Table 2, read in conjunction, with Plan 2, demonstrates how the Precinct Structure Plan achieves housing diversity.

A detailed property specific housing yield table is included with appendices.

Table 2: **Estimated Housing Yield and Distribution**

DESCRIPTION	Total Precinct					
RESIDENTIAL	NRA (Ha)	Approximate Dwell / NDHa	Approximate Dwellings	Approximate Average Lot Size	% of lots	% of NRA
Residential - Neighbourhood Zone	161.11	14.5	2336	462	67.8%	66.8%
Residential - Interface Zone	38.56	8.5	328	788	9.5%	16.0%
Residential - Village Zone	36.60	20	732	330	21.2%	15.2%
Town Centre	4.95	7	35	200	1.4%	2.1%
TOTALS RESIDENTIAL YIELD AGAINST NDA	241.22	14.22	3431	461	100%	100%
ANTICIPATED POPULATION			**9643**			

	REQUIREMENTS
R1	Housing must be designed to high standards and use materials compatible with the local landscape and environmental character.
R2	Housing must provide a diversity of lot sizes and housing types as appropriate with designated low density 'Interface Zones', medium density 'Village Zones' and more conventional density 'Neighbourhood Zones'.
	GUIDELINES
G1	Housing should be designed to minimise energy and resources use.
G2	Housing should minimise disturbance and changes to existing ground levels (cut and fill) by utilising alternative building techniques where appropriate, such as suspended floors and split levels.
G3	Display housing should incorporate native and indigenous plants within private spaces where appropriate. • Note - refer "Top 10 Planting List for City of Casey" publication which lists 70 attractive and robust native species (categorised into 7 x 10 groupings) suitable for residential gardens.
G4	Housing should incorporate existing (non weed species) trees into landscaped areas of housing allotments where practical.

3.2.3 Residential Design Controls

Table 3: Residential Design Controls

DESCRIPTION	ZONE REQUIREMENTS				
	Interface A	Interface B	Interface C	Neighbourhood	Village
RDC-1					
Dwellings per lot	Only one dwelling must be constructed on a lot.			None specified	
RDC-2					
Lot size and dimensions	**Min. average:** 900 sqm **Minimum:** 800sqm **Lot depth:** 45-55m	**Min. average:** 750 sqm **Minimum:** 720sqm **Lot depth:** 40-45m	**Min. Average:** 750 sqm **Minimum:** 720sqm **Lot depth:** 38-45m	**Min. average:** 460 sqm	**Min. average:** 330 sqm
RDC-3					
Building height	Maximum 1 storey	**Maximum:** 8.5m with any 2nd storey to be recessed behind front wall of dwelling	**Maximum:** 8.5m	**Maximum:** 8.5m	**Maximum:** 8.5m
RDC-4					
Dwelling Setbacks (As measured from the relevant lot boundary to the closest dwelling wall.) (Porches, pergolas and verandahs that are less than 3.6 metres high and eaves may encroach not more than 2.5 metres into the setbacks of this standard.)	**Minimum:** Front 10m Rear 10m Note: Fire management defendable space considerations will generally require minimum 13m front setbacks unless otherwise approved by the CFA.	**Other areas minimum:** Front 6m Rear 8m	**Minimum:** Front 6m Rear 6m	**Lots less than 550sqm in area:** Front 4m minimum **Lots between 551sqm and 719sqm in area :** Front 5m minimum **Lots 720sqm in area or greater:** Front 6m minimum	Lots less than 300sqm in area small lot code applies. **Lots between 300 and 450sqm in area or greater:** Front 3m minimum Front 4m maximum
RDC-5					
Garage setbacks and frontage (including carports)	**Minimum front setback:** 1m behind the front wall of dwelling **Garage frontage:** Garage openings facing the front of a lot must occupy no more than 40% of the width of the lot frontage.			**Minimum front setback** At least 5.5m and at least 1m behind the front wall of the dwelling **Garage frontage:** Garage openings facing the front of a lot must occupy no more than 40% of the width of the lot frontage.	**Minimum front setback:** Lots less than 300sqm in area small lot code applies. **Otherwise:** Minimum front setback where vehicle access from front of lot At least 5.5m and at least 1m behind the front wall of the dwelling **Garage frontage:** Garage openings facing the front of a lot must occupy no more than 40% of the width of the lot frontage.
RDC-6					
Out-buildings (buildings not attached to house inclusive of garages)	**Maximum total floor area of all out-buildings on a lot:** 50m^2 **Maximum height:** 3.6m in height				None specified
RDC-7					
Front fencing and gates (defined as fencing between the front dwelling wall and the street)	**Maximum height 1.2m**: Must be at least 75% transparent.			**Maximum height 1.2m:** For fences up to 0.7m in height, may be 0% transparent. For fences above 0.7m in height must be minimum 50% transparent.	Lots less than 300sqm in area small lot code applies. **Otherwise:** Maximum height 1.2m For fences up to 0.7m in height, may be 0% transparent. For fences above 0.7m in height must be minimum 50% transparent.
RDC-8					
Eaves	Must be incorporated in dwelling design. 450mm minimum distance from wall to outer edge of eave.				Lots less than 300sqm in area small lot code applies. **Otherwise:** Must be incorporated in dwelling design 450mm minimum distance from wall to outer edge of eave.

DESCRIPTION	REQUIREMENTS All
RDC-9	
Side fencing to streets and public places (defined as fencing behind the front dwelling wall and that faces a street or public space)	**Minimum transparency:** 75% for at least 50% of the length of the relevant lot boundary. **Maximum height:** 1.5m for at least 50% of the length of the relevant boundary otherwise 1.8m.
RDC-10	
Side setback of dwellings	The wall of a dwelling must be setback either 0m or at least 1.0m from a side lot boundary.
RDC-11	
Dwellings Interface with public spaces	Fronts of dwellings must face streets or public open spaces or conservation areas. Where side or rear walls of dwellings, exceeding 10m in length, face streets, public open spaces or conservation areas, these must be designed to incorporate a minimum standard of articulation as follows: • a plan profile stepped a minimum 0.3 metre in depth for a length of at least 1 metre to limit any unbroken length to 10 metres; or • contrasting material for at least 2 metres to limit any unbroken length to 10m; or • contrasting wall colours for at least 2 metres to limit any unbroken length to 10m. At least 50% of rooms including non-habitable rooms at the side of a dwelling that has an interface with a secondary boundary (side street) must have windows facing that boundary.
RDC-12	
Materials and finishes	All roof materials and finishes (including guttering and fascias) must be non-reflective and in muted colour tones. Roofs must be muted grey, blue/grey, charcoal or green tones. Garage doors must be sectional overhead or tilt panel type. • Any side or rear timber paling fence must be capped in timber. • Fences must not be constructed of pressed and rolled metal sheeting, including colorbond and zincalume unless integrated with exposed timber posts and capping. • Paling fencing must not be used for front fences.
RDC-13	
Retaining Structures	Any retaining structures (with the exception of those which are part of building walls) must be no more than 1m in height between a dwelling and a street or public space, or where visible from a street or public space'. For cutting and filling deeper than 1m, utilisation of planted and landscaped embankments (maximum 1:3 gradient) or a combination of a series of retaining structures (max. 1m high steps) and planted embankments or terracing must be utilised.
RDC-14	
Driveways and crossovers	A lot must have only 1 vehicle crossover unless it is a corner lot in which case 2 cross-overs are allowable. • Driveways must not exceed 4m in width except where they form part of a turning or reversing area required for access / egress from a garage.

3.3 Employment and Town Centres

3.3.1 Objectives

- To boost local employment opportunities through the development of a network of neighbourhood and local centres providing a mix of retail, commercial, leisure and community services.
- To facilitate the development of services and small offices located within and at the edge of the town centres.
- To encourage the development of home based businesses.
- The design of the 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.
- To prioritise pedestrian movements and amenity above other modes of transport on public streets and public spaces.
- To provide convenient and attractive spaces with direct access to retail and commercial premises from public streets and spaces.
- To ensure buildings and works reflect the scale and context of the local town centre.
- To allow for direct short walking trips to surrounding residential neighbourhoods.

3.3.2 Anticipated Employment Generation

Projected employment opportunities within the Botanic Ridge PSP are as follows:

Table 4: **Anticipated Employment Creation In Precinct**

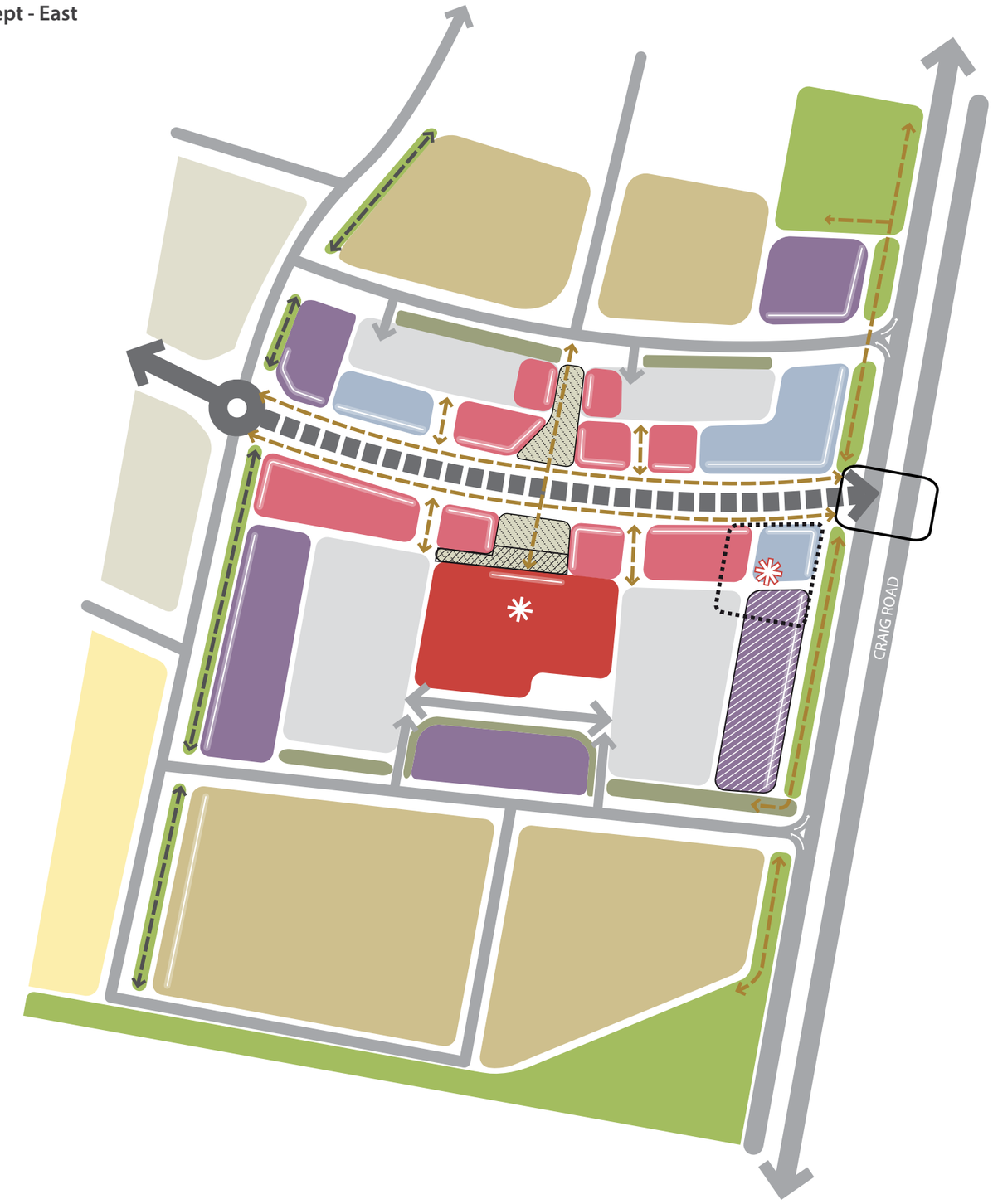
LAND USE BASED EMPLOYMENT	MEASURE	JOBS	QTY IN PSP	EST. JOBS
Kindergarten	Jobs/centre	5	6	35
Primary School	Jobs/school	40	2	80
Childcare centre	Jobs/100 places	20	1	20
Multi Purpose Community Centre	Jobs/centre	10	2	20
Retail	Jobs/1000sqm	25	12500sqm	313
NAC Office/Non retail commercial	Jobs/1000sqm	50	2150sqm	108
Medical Centre	Jobs/practitioner	3	5	15
Home based business				346
		TOTAL ESTIMATED		**936**

Note: All jobs calculated as full time

Table 5: **Town Centre Hierarchy and Employment Opportunities Inside the Precinct**

TOWN CENTRE	FUNCTION AND BUSINESS MIX
EASTERN LOCAL TOWN CENTRE – CRAIG ROAD	• Located in the east of the centre and anchored to Craig Road. • Indicative Retail floor space up to around 8,700m2. • Provides for total supermarket floorspace of up to 4,800m2 which may consist of a larger full line supermarket complemented by a secondary anchor or 'mini-major'. • A range of specialty retail up to around 3,900m2 which may include a tavern. • Non retail / office provision of up to around 1,400m2. • Opportunities for a medical centre and private child care. • Anchors activity along the east-west main street that runs through the precinct, focussed on a public town square of approximately 600m2. • Provides opportunities to maximise the intensity of development around the centre as part of the 'Village Zone'. • Provides an opportunity to locate private services and other employment opportunities. • Opportunities for SOHO and other higher density residential integrated into a true village atmosphere.
WESTERN SMALL LOCAL TOWN CENTRE	• Located in the west of the centre and anchored to Smiths Lane opposite the school and western community hub / active open space. • Indicative Retail floor space up to around 3,000m2. • Provides for smaller scale supermarket of around 1,500m2 and a variety of specialty retail / shops up to 1,500m2. • Non retail / office provision of up to around 600m2. • Opportunities for private child care, taking advantage of proximity to the community hub and school. • Opportunities for medium density town housing / SOHO residential integrated into a true village atmosphere. • Anchors activity along the south side of the east-west main street opposite the school and community hub. • Contains a small public town square / community focus of approximately 400m2. • Provides opportunities to maximise the intensity of development around the centre as part of the 'Village Zone', although this is more constrained than the Eastern Local Town Centre due to proximity of nearby ridgelines / RBGC view-sheds. • Provides some opportunity to locate private services and other employment.
EAST SCHOOL AND COMMUNITY HUB	• Employment opportunities in the school, with potential for kindergarten, childcare and maternal and child health if proposed community hub is delivered by Council (non DCP item).
WEST SCHOOL AND COMMUNITY HUB	• Employment opportunities in the school, kindergarten, childcare and maternal and child health.
HOME BASED EMPLOYMENT	• Opportunity for mixed home based employment throughout the precinct via flexibly designed housing and SOHO products.

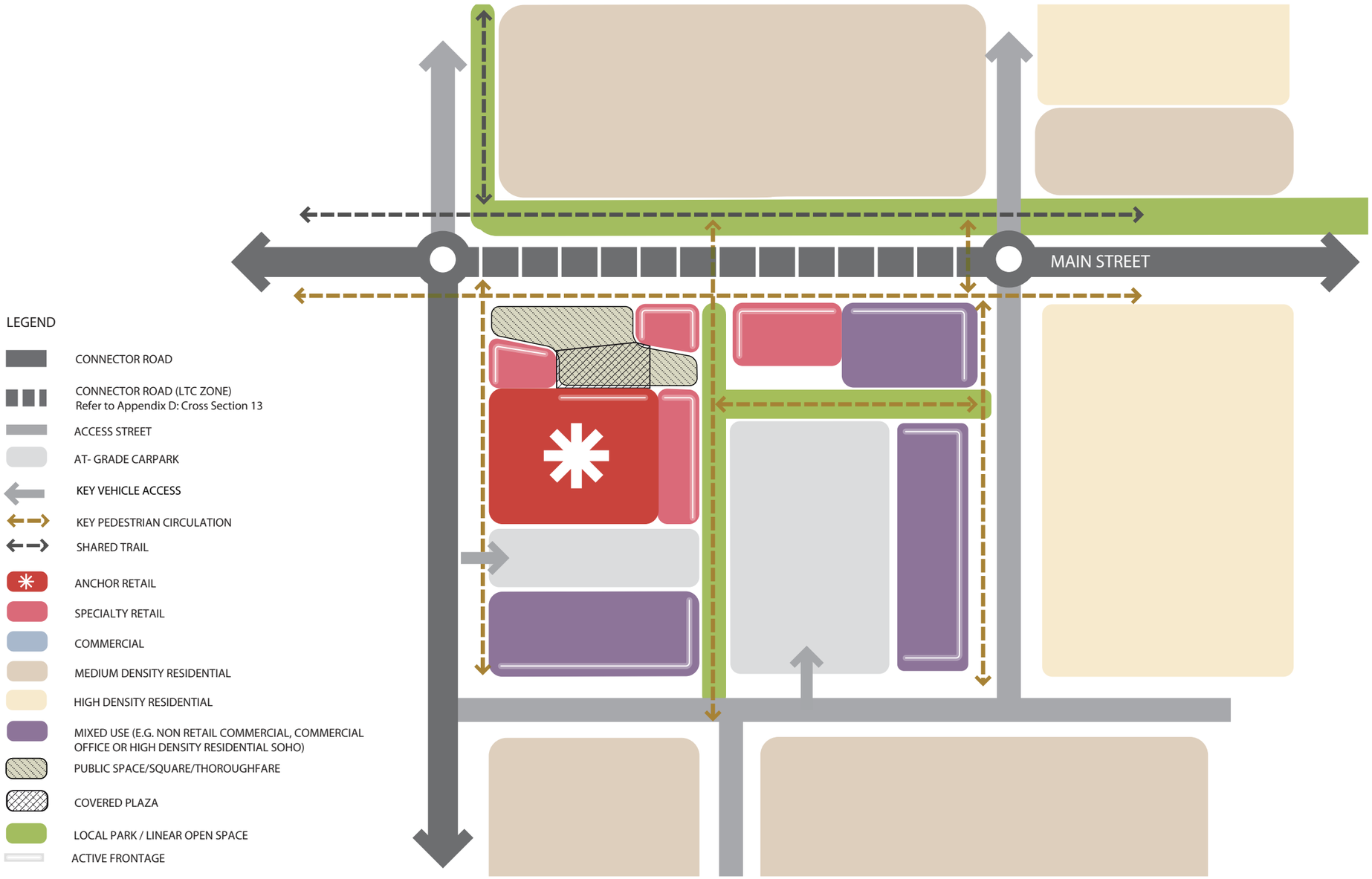
Figure 1: Town Centre Concept - East



LEGEND

- ARTERIAL
- CONNECTOR ROAD (LTC ZONE) refer Appendix D: Cross Section 14
- SIGNALISED INTERSECTION
- ACCESS STREET
- AT- GRADE CARPARK
- KEY VEHICLE ACCESS
- KEY PEDESTRIAN CIRCULATION
- SHARED TRAIL
- ANCHOR RETAIL
- SPECIALTY RETAIL
- COMMERCIAL
- HIGH DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- MIXED USE (E.G. NON RETAIL COMMERCIAL, COMMERCIAL OFFICE OR HIGH DENSITY RESIDENTIAL SOHO)
- COUNCIL COMMUNITY CENTRE
- PUBLIC SPACE/SQUARE/THOROUGHFARE
- COVERED PLAZA
- POTENTIAL LONG TERM REDEVELOPMENT SITE
- LOCAL PARK / LINEAR OPEN SPACE / STREET RESERVE WIDENING
- KEY LANDSCAPING
- POTENTIAL SECONDARY ANCHOR RETAIL / MINI MAJOR
- ACTIVE FRONTAGE

Figure 2: Town Centre Concept - West



3.3.3 Requirements and Guidelines

	REQUIREMENTS
R1	Use and development of a town centre must be generally in accordance with the layout of land uses and road structure shown in the concepts in Figures 1 and 2.
R2	Use and development of a town centre must be generally in accordance with the role and function for the centre set out in Table 5: Town Centre Hierarchy and Employment Opportunities within the PSP.
R3	Minimise stepping of landform along key pedestrian routes.
R4	Provide footpaths of a width sufficient to provide for pedestrian and mobility access, outdoor dining and gathering spaces along 'main street' frontages.
R5	Side building facades and continuous walls, should not exceed 10m in length or height, without articulation, fenestration, activity or visual interest.
R6	Define key town centre corners with strong built form that actively defines public streets and spaces.
R7	Streets, public spaces and car parks should be well lit to Australian standards and with pedestrian-friendly (generally white) light.
R8	The 'main street' design must prioritise pedestrian movement,.
R9	Provide an outdoor space(s): • with direct access from a public street and individual retail/ commercial premises characterised by high volume pedestrian movement; and • Of a scale that can accommodate 'spill-out' trade from abutting premises while catering to through pedestrian movements.

	GUIDELINES
G1	A main street through a town centre should accord with Public Transport Guidelines for Land Use and Development (State of Victoria 2008).
G2	Local town centre street and pedestrian networks should be continuous, highly permeable and integrate with the surrounding street network.
G3	Open spaces and squares should be oriented to capture north sun and provide protection from prevailing winds and adverse weather conditions.
G4	The design of building frontages should incorporate the use of a consistent covered walkway or verandah to provide for weather protection.
G5	Lighting should be designed to avoid unnecessary spill to sides or above.
G6	Streets, public spaces and car parks should be lit to Australian standards and with pedestrian-friendly (generally white) light.
G7	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 centre.
G8	Public toilets should be high visible and located for convenient access (generally adjacent higher volume traffic (vehicle and pedestrian routes)
G9	The built form should define the main street and be aligned with the property boundary.
G10	Development should complement and enhance the character of the surrounding area by responding appropriately to key visual cues associated with the topography of the site and surrounds.
G11	Key view lines / sight lines into and out of the activity centre should be incorporated in the overall design to promote way finding and accessibility.
G12	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.
G13	Mechanical plant and services structures roofs should be included within roof lines or otherwise hidden from view.
G14	Buildings should be closely oriented to public streets and spaces to reinforce the public movement network

	GUIDELINES
G15	Ensure anchor retail use entries address the main street and public square.
G16	Minimise level changes between pedestrian entries to premises from public streets.
G17	Strategic siting of landscaping, built form and carpark areas should be utilised to minimise the impact of site gradients and level changes.
G18	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 could be achieved, for example, through the use of a substantial multi - storey building located at the corners (Note: The eastern Local Town Centre has more scope for this type of built form than the western local town centre, which is in a more sensitive location with regard to RBGC view-sheds); • Should not be developed for standard single storey fast food outlets; and • Should be developed to have a ground floor retail floor space component to the "main street" frontage.
G19	Where possible supermarket and other commercial or community anchors or secondary anchors within the Town Centre should be located diagonally opposite one another across the 'main street' to promote 'desire lines' that maximises pedestrian movement along the length of the street.
G20	The supermarket and secondary anchors should have frontage that directly addresses the 'main street' and / or town square so that the use integrates with and promotes activity within the 'main street' and public spaces / thoroughfares.
G21	Shopfronts should have varying widths and floor space areas to promote a diversity of trading opportunities throughout the Town Centre
G22	Flexible floor space (including floor to ceiling heights) should be incorporated into building design to enable localised non-retail commercial uses to be integrated within the 'main street'.
G23	Specialised accommodation (e.g. aged care/nursing home, student accommodation, serviced apartments) should be located at the edge or just outside Town Centres.

	GUIDELINES
G24	Facilities such as childcare and medical centres, gyms, dance schools, places of assembly etc. should be located within or adjacent to town centre.
G25	The creation of land use precincts within Town Centres should be considered with the objective of clustering of like uses.
G26	Traffic should be managed to ensure pedestrian safety.
G27	Design for a speed environment of 40km/h or less.
G28	Car parking areas, other than on-street parking, should be located centrally to the site and to the rear and or side of street based retail frontages.
G29	On street parking should be provided either as parallel or angle to encourage short stay parking.
G30	Car parking ingress and egress crossovers should be grouped and limited.
G31	Vehicle ingress and egress and car parking areas accommodating heavy vehicle movements should be designed to limit the potential for pedestrian/vehicle conflict and maximise the visibility of pedestrians by drivers.
G32	Heavy vehicle movements (i.e. loading and deliveries) should located to the rear and or side of street based retail frontages.
G33	Car parking areas should provide for appropriate landscaping with planting of canopy trees.
G34	Bicycle parking should be provided within the street network in highly visible locations and close to pedestrian desire lines and gathering spaces.
G35	Service areas should be internalised wherever possible. Where internalised service areas cannot be provided, they should be secured and sensitively screened at the rear of buildings.
G36	Where service areas are accessible from car parks, they should present a well designed and secure façade to public areas.
G37	Adequate allowance should be made for trolley return areas, but they must not be placed within public squares, forecourts or open spaces.

3.4 Community facilities

3.4.1 Objectives

- To provide community hubs throughout the precinct at required locations as the focal point for community activity and interaction.
- To complement town centre built form objectives.
- To plan for a range of community facilities, cultural venues and services to meet the varying needs of local residents.
- To plan and design for community facilities to reflect high quality architecture and flexible design for a range of uses to accommodate changing community needs over time.
- To plan for community facilities to be located proximate to the town centres, and co-located with active and passive open space.
- To plan for community facilities to be accessible by public transport, walking and cycling.

3.4.2 Community Hub Concept Planning

Delivery of integrated and timely community facilities is a complex and evolving task that takes place in stages over a substantial period of time. It is expected that models for service delivery will change over time as new approaches are adopted and the PSP has been designed to be flexible enough to enable this change to occur. Co-ordination and delivery will be greatly assisted by the establishment of:

- An integrated governance model for the concept and master planning.
- The development of community hub concept plans, preferably at the time of land acquisition, to ensure that the potential for efficient and integrated outcomes between facility managers and service providers is maximised.
- Detailed hub master plan that provides detail for the delivery of the concept plans.

The governance arrangement and engagement is an important part of identifying, discussing and resolving issues around facility design, ownership, leasing, capital works funding, service delivery funding, management and maintenance and upgrade over time.

The opportunities for integrated facility delivery apply equally to sporting facilities as they do to items such as community centres and schools. Opportunities for shared use of clubhouse and pavilion buildings should be investigated and if appropriate accommodated through flexible facility design and integration through the hub master planning.

Table 6: Community Facilities

WESTERN AREA		
FACILITIES AND SERVICES	LOCATION	RESPONSIBILITY
State Primary School P-6	Western Community Hub	DEECD
Four room Kindergarten	Western Community Hub	City of Casey
Maternal & Child Health	Western Community Hub	City of Casey
Community meeting space, meeting facilities, consulting suites and occasional child care.	Western Community Hub	City of Casey
2 full size AFL / cricket ovals • Cricket pitch and nets • 4 tennis courts (with potential space for additional 4) • 2 Netball courts • Pavilions - 1 football/cricket and tennis • Space for district playground • Car parking	Western Community Hub	City of Casey
Passive open space - Refer Table 7 and 3.9.1 'Open Space delivery'	Distributed throughout precinct but generally within 400m of most residents	Developers / City of Casey
Local scale 2 court indoor sports facility – co-located / integrated with school	Western Community Hub / School	City of Casey / DEECD

EASTERN AREA		
FACILITIES AND SERVICES	LOCATION	RESPONSIBILITY
State Primary School P-6	Eastern Community Hub	DEECD
Double, triple or four room Kindergarten (depending on Council analysis of demand)	Eastern Community Hub	City of Casey
Maternal & Child Health (depending on Council analysis of demand)	Eastern Community Hub	City of Casey
Community meeting space, meeting facilities, consulting suites and occasional child care. (depending on Council analysis of demand)	Eastern Community Hub	City of Casey
2 full size cricket ovals and 3 Soccer Fields • Cricket pitch and nets • Pavilion • Space for passive uses • Car parking	Eastern Active Reserve	City of Casey
Passive open space - Refer Table 7 and 3.9.1 'Open Space delivery'	Distributed throughout precinct but generally within 400m of most residents	Developers / City of Casey

EASTERN AREA COMMUNITY HUB AND ACTIVE OPEN SPACE

Figure 3 provides a preliminary concept for the Eastern Area Community Hub. Alternative approaches that meet the objectives, requirements and guidelines for community facilities may be considered to the satisfaction of the Responsible Authority.

The active open space reserve component of the eastern hub has potential to be designated a "Neighbourhood Safer Place – Place of Last Resort" and as such should be designed to be consistent with 'Safer Places CFA Assessment Guidelines and MAV 'Municipal Council Neighbourhood Safer Places Plan'.

WESTERN AREA COMMUNITY HUB AND ACTIVE OPEN SPACE

Figure 4 provides a preliminary concept for the western Area Community Hub. Alternative approaches that meet the objectives, requirements and guidelines for community facilities may be considered to the satisfaction of the Responsible Authority.

As the western community hub is located in a very sensitive ridgeline area adjacent to the RBGC, additional more specific planning and design guidelines are provided.

3.4.3 Requirements and Guidelines

GENERAL

	GUIDELINES
G1	Where facilities are associated with schools, they should be designed concurrently to ensure integrated facility delivery and to maximise sharing opportunities.
G2	Community infrastructure siting and design should be integrated with council facilities and/or open space areas.
G3	Community centres should be co-located with children's playgrounds, recreation infrastructure and kindergartens.
G4	Education and community services (public and private) and other activities (such as childcare centres and nursing homes) should be located: • Within and/or adjoining community hubs; • Within and/or on the edge of the town centre; or • On either connector streets or arterial roads where access can be provided safely.
G5	Built form should be architecturally designed to be sensitive to the landscape and environmental characteristics of the site including hillsides and ridgelines by: • Site responsive location of buildings; • Site responsive location of single storey and multi level building locations.
G6	Community facilities should be: • Designed to high architectural standards, be aesthetically pleasing and use materials compatible with the local landscape and environmental character; • Designed to minimise visual impact of the RBGC; and • Designed to minimise energy and resources use.
G7	Planting within external spaces should be designed to soften and screen view-sheds from the RBGC.
G8	Existing (non weed species) trees should be incorporated into external spaces where practical and viable.

WESTERN AREA COMMUNITY HUB AND ACTIVE OPEN SPACE

	REQUIREMENTS
R1	Ground level and tree planting must be carefully designed to minimise RBGC view-shed and ground level visual impacts as well as bushfire management requirements.
R2	Sportsfield lighting must be designed so that light spill into the adjoining RBGC is kept to an absolute minimum and satisfies Australian Standard AS 4282-1997 'Control of the obtrusive effects of outdoor lighting'
R3	Drainage from buildings, hard and soft surfaces must be managed to so that drainage flow rates into the adjoining RBGC are maintained at current levels.

	GUIDELINES
G9	Built form should generally be low scale and single storey and designed so that massing and configuration minimises impacts on RBGC view-sheds.
G10	Buildings should be designed and constructed with materials that are non-reflective and muted in colour.
G11	Where built form above single storey height is unavoidable, it should be located to minimise direct visual impact on RBGC view-sheds with extra careful attention applied to materials selection, form and massing so that it is visually lost in the backdrop when viewed from the RBGC.
G12	Strategic planting of canopy trees should occur along the southern boundary of the active sports reserves and at the interface with the school and residential areas to protect RBGC view-sheds into the town centre and beyond.
G13	Drainage should incorporate WSUD initiatives to appropriately manage stormwater entering the RBGC.
G14	Funding opportunities and partnerships should be sought to support the early provision of community facilities.
G15	Tree planting to protect view-sheds from the RBGC should be implemented as soon as practicable, particularly in the development of the western community hub.

Figure 3: Community Hub Concept Plan - East

Figure 4: Community Hub Concept Plan - West

RECREATION RESERVE

STAGE 4 (POSSIBLE FUTURE)

ROYAL BOTANIC GARDENS CRANBOURNE

BALLARTO ROAD

CRANBOURNE EAST

JUNCTION VILLAGE

SOUTH GIPPSLAND HIGHWAY

BOTANIC DRIVE

PROPOSED NEW ROAD - CASEY FIELDS BLVD

STAGE 1 (UNDER DEVELOPMENT)

Section 16
Section 8
Section 17
Section 18
Section 15
Section 8a
Section 8b
150

P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13 P14 P15

BROWNS ROAD

MADELYN CT

SMITHS LANE

FLETCHER ROAD

FIONA DRIVE

CRANBOURNE SOUTH

CRAIG ROAD

DEVON MEADOWS

DEVON ROAD

Plan 5
Open Space & Natural Systems
botanic ridge precinct structure plan

Scale: 1:12,500 @ A3, N.T.S. @ A4
Date: Amended by C227, May 2017

0 50 100 200 500m

- Precinct Structure Plan Area
- Urban Growth Boundary
- Residential
- Regional Open Space
- Active Open Space/Playing Fields
- Passive Open Space
- Conservation area set aside subject to VCAT enforcement order (in addition to NVPP requirements)
- Defendable space – RBGC Perimeter
- Conservation Open Space ✲
- Heritage site / Open Space (Aboriginal) ✲
- Potential Mixed Use
- Waterway / Drainage ✲
- Waterway modification works minimised ✲
- Waterway bodies / Wetlands ✲
- Southern Brown Bandicoot Connectivity (Must not compromise the primary function of the land)
- ✲ Encumbered - No POS Credit
- Tree Reserve along Browns Roads
- Non Urban Land
- Existing Urban Area
- Other Undeveloped Land Within UGB
- Major Arterial Road (South Gipps Highway)
- Arterial Road – Craig Rd. / Browns Rd. (2 – 4 lane)
- Connector Street (27m)
- Connector Street (with Landscape and trail 32m)
- Access Street – Level 2 (22m)
- Access Street – Level 2 (with Landscape and trail 28m)
- Key Access Street – Level 1
- Key Access Street – Level 1 (with Landscape and trail 24m)
- Ridge Line
- ✱ RBGC Potential Pedestrian Access Point subject to RBGC approval
- Bushfire hazard edge

Table 7: Open Space Delivery Guide

	PARK CODE	PARK FUNCTION & CASEY RECREATION CATEGORY	UNENCUMBERED AREA	EFFECTIVE USEABLE AREA	SITE FEATURES / DESCRIPTION
	P1	Passive - Social Family Recreation	1.00	1.05	Located within a valley, this park will in part service the western neighbourhood village zone and adjoining interface zone. It is anchored to a local access street which incorporates a 10-11m wide shared landscape trail, providing additional usable space and ensuring the park is easily accessed. In its south west corner, It has potential to take advantage of some existing semi-mature native trees, rated as moderate in the background arborist report. There would also be potential for incorporation of WSUD elements given the location and topography.
	P2	Passive - Youth Park	0.95	1.01	Located to the side of the Christies drain branch G valley, this park will cover the site of an existing small farm dam. It is currently well treed with the ability to take advantage of some existing native trees (predominantly Corymbia citriodora), rated as moderate in the background arborist report. It will service the north central area of stage 3 and is in a high profile location, being anchored to the main east west connector C1) which incorporates a 10-11m wide shared landscape trail, providing an effective additional buffer from the road. Some medium density housing may interface with this park
	P3	Passive - Social Family Recreation	1.01	1.01	This park is located along a ridgeline / high point and will generally service neighbourhood and interface areas in the south central part of stage 3. Being on a ridgeline it provides a physical bridge between 2 local 'key green streets' that are located to protect RBGC view-sheds. This park will also play a part in view-shed protection, and should include significant canopy tree planting in a generally east - west orientation. With careful design of the park and adjoining development / street alignments, some existing views out of the park could potentially be retained.
Amended by C227	P4	Passive - Destination	1.99	3.35	Located to the northern end of the key north/south open space trail and corridor, this park is strategically located on a key ridgeline and RBGC interface area, a future RBGC pedestrian access point as well as being adjacent to an important aboriginal cultural heritage conservation area. This park will service local interface and neighbourhood zones, but is also likely to be a destination park within the precinct, given its location at the junction of several trails. This is further enhanced by its beautiful setting, which can incorporate a range of existing trees rated as moderate within the arborists background report. The cultural heritage conservation site will be able to be managed integrated and used as passive open space with a mix of planting, open areas, paths, furniture and potentially play equipment and park shelters (subject to the management requirements of the approved CHMP). The park also presents an opportunity to incorporate interpretive and educational material regarding the cultural heritage values of the local region. It is recommended that a masterplan / concept plan be developed for this area of parkland to ensure an integrated and functional outcome. P4 incorporates a north / south linear park nominally 24m wide that provides a link with P5. Planting and design should integrate measures to facilitate Southern Brown Bandicoot connectivity where practical.
Amended by C227	P5	Passive - Contemplative	0.96	1.12	This is a small to medium scale passive park is anchored to a small scale retarding basin / wetland. It will service a neighbourhood zoned area, although as it is within a valley area, pockets of smaller lots / medium density may also be appropriate. Exiting trees also have the potential to be integrated within the trail. P5 incorporates a north / south linear park nominally 24m wide that provides a link with P4. Planting and design should integrate measures to facilitate Southern Brown Bandicoot connectivity where practical.
	P6	Passive - Social Family Recreation	1.14	1.14	This 'homestead' park is anchored to the main east / west connector street and associated wide shared trail, at the interface between the eastern village and neighbourhood zones. It is also strategically located on a ridgeline and to advantage of the interpretive potential of an old degraded homestead and associated driveway. The ridgeline location may afford views to the north east and, linked with adjacent 'key green streets' it will contribute to the RBGC view-shed protection. Due to the previous use of the site, this park as an exception for the precinct, may include appropriate and non weedy exotic tree planting.
	P7	Passive - Urban, Social Family Recreation	0.61	0.61	This park is located on a relatively flat area proximate to the RBGC perimeter trail to the west. There is potential to give this park more of an urban feel, for a point of difference in the precinct.
	P8	Passive - Contemplative / Social - Nature based	0.17	0.47	This small park is integrated with the RBGC defendable space and a patch of native vegetation to be retained. It is also located at on the main RBGC defendable space trail. This park will provide a useful 'stop off point for trail users and a well located park for use by local residents.
Amended by C227	P9	Passive - Nature Based	0.86	2.11	The location of P9 takes advantage of adjoining land that has been set aside for native vegetation as well as a waterway. In addition to native vegetation retained as part of the PSP, the broader park area also includes land set aside for native vegetation conservation as part of a VCAT order. This native vegetation backdrop, will provide for extensive landscape amenity and a sense of scale. It also integrates a number of indigenous scattered trees (maturing Eucalyptus pryoriana) outlined for retention as part of the precinct NVPP. Planting and design should complement adjoining Southern Brown Bandicoot connectivity where practical.
Amended by C227	P10	Passive - Social Family Recreation	0.87	0.91	P10 is a medium park located in the Wylies Creek branch G valley that will be a focal point for the local residential area. The location and scale lends itself to a more intensive garden based design approach, that could include WSUD initiatives. Planting and design should complement adjoining Southern Brown Bandicoot connectivity where practical.
Amended by C227	P11	Passive - Nature Based	0.21	2.77	This small park becomes is part of a much larger offering that includes land set aside for native vegetation and cultural heritage. Similar to P4, there is an opportunity to include interpretive materials and trail within the park design to take advantage of these features. The cultural heritage conservation site will be able to be managed integrated and used as passive open space with a mix of planting, open areas, paths and furniture (subject to the management requirements of the approved CHMP). Planting and design should complement adjoining Southern Brown Bandicoot connectivity where practical.
Amended by C227	P12	Active & Passive	8.63	9.87	Other than the 8.63ha to be delivered via the precinct DCP, the north west active reserve integrates a redundant 5m portion of the Smiths Lane Road Reserve and the RBGC defendable space. It also includes a 0.21ha linear passive component (within property 2) between the RBGC defendable space and primary school to create an east / west link. Combined, this delivers a 10.3ha active and passive park that provides and effective RBGC / precinct interface treatment. Detail of the facilities in the park,as well as an indicative layout is outlined in figure 4. This park will require cutting and filling as part of sportsfield development, and this presents an opportunity to create both aesthetically pleasing and functional viewing embankments around the southern flanks of the ovals. Some existing trees have the potential to be integrated into the south western part of the reserve depending on extent of earthworks required and final park design. As P12 encompasses an important ridgeline, planting of larger canopy trees along the southern boundary will protect RBGC viewsheds. An indicative concept of the park is outlined in Figure 4.
		Passive - Linear	0.21	0.43	
Amended by C227	P13	Active & Passive - with youth potential	7.58	8.55	P13 is situated in the lowest, south east corner of the precinct, located between 2 retarding basin / stormwater treatment wetlands (RBWL). It directly services the southern part of the eastern village zone and is a junction and linkage point for a number of trails. Its southern boundary is complemented by a 13m vegetated tree reserve and then an additional 5-6m of road verge on the south boundary. The flexible passive space to the west of the park would be ideal for youth activities given the proximity to the town centre and school. It incorporates a small patch (HZ13) of native vegetation at the south east boundary (WLRB interface). The earthworks to create the ovals and WLRB's will necessitate the removal of much of the existing vegetation, however there may be opportunities to incorporate some existing trees around the south east corner and north eastern passive recreation zone shared with the WLRB. Facilities provision and an indicative concept is outlined in Figure 3. Planting and design should complement adjoining Southern Brown Bandicoot connectivity where practical.
	P14	Passive - Urban	0.04	0.04	This will be a small and vibrant north facing urban space or town square, fronted by retail and active frontages and servicing users of the western Town Centre. It will function as a relaxing resting space as well as provide for diverse community interaction (refer also figure 2 for concept example). Its location complements the school, community centre and nearby active reserve P12.
	P15	Passive - Urban	0.10	0.10	This will be a medium sized town square servicing the users of the larger eastern Town Centre. It will provide for a vibrant north facing urban space fronted by retail and active frontages. It will function as a relaxing resting space as well as provide for diverse community interaction and events. This space may also be distributed across both sides of the street (refer figure 1 for example).
Amended by C227	TOTALS		26.3	34.5	

3.5 Open Space and Natural Systems

3.5.1 Objectives

The objectives for open space and natural systems are:

- To provide a variety of open spaces to meet the active and passive recreation needs of the community.
- To protect and improve environmental, heritage and drainage features.
- To ensure local open space is generally within 400 metres walking distance of all residents.
- To create an open space network that supports, complements and integrates with the landscape, ecological and design characteristics of the adjoining RBGC.
- To create an open space network that integrates and maximises the amenity and value of encumbered open space, in particular waterway, heritage conservation open space.
- To provide for a sustainable open space maintenance regime.
- To support the early development of open space through a range of funding sources.
- To connect recreational trails with trails and destinations outside the precinct.
- To contribute to the vegetative screening of development from RBGC view-sheds.
- To integrate heritage and historical features with public open space.
- To encourage planting of indigenous vegetation within the private realm to complement the habitat value of adjoining public spaces.

Amended by C227
- To provide habitat for local native species, where practicable, in wetlands and waterways and other open spaces.

Inserted by C197
- To identify areas which require specified bushfire protection measures for subdivision and buildings and works to be implemented.

Inserted by C197
- To ensure that the location, design and construction of development considers the need to implement bushfire protection measures.

Inserted by C197
- To ensure development does not proceed unless the risk to life and property from bushfire can be reduced to an acceptable level.

3.5.2 Requirements and Guidelines

GENERAL

	REQUIREMENTS
R1	Open spaces must be designed and constructed to be fit for purpose and with an appropriate mix of facilities.
R2	...

R2 deleted by C197

	GUIDELINES
G1	Planting of open spaces should contribute to RBGC view-shed protection and precinct habitat values.
G2	Design of open spaces should be contemporary in nature, innovative and draw upon the design themes and materials mix used at the RBGC or local history.
G3	Materials for park infrastructure and buildings should complement the proposed landscape and environmental character of the precinct and adjoining RBGC. They should incorporate natural materials, and utilise muted tones, colours and finishes that are be non reflective.
G4	Passive parks should cater for a broad range of users by providing a mix of spaces and planting to support both structured and informal recreational activities.
G5	Active recreation reserves should be designed to maximise co-location and sharing opportunities between complementary sports and adjoining school facilities. Sharing of Council managed facilities with schools will require a formal management agreement.
G6	Any pedestrian link through a drainage reserve or adjoining the road network should include provision of park seating at appropriate intervals to the satisfaction of Melbourne Water.
G7	Local park designs should consider descriptions in Table 7.

HOMESTEAD PARK (PASSIVE PARK P6)

	REQUIREMENTS
R3	A 'homestead' park must be developed to reference and interpret the nature and character of the buildings and grounds previous use.
R4	A detailed concept plan of the homestead park must be submitted for Council approval prior to the certification of stage 3 development at 53-65 Craig Road (150 lots).
R5	The homestead park must: • Be designed to include and / or reference elements and features of the previous site uses such as the buildings, vegetation and other site assets.*. • Be 'fit for purpose' as part of the local passive open space network. • Contain appropriate interpretive elements which may include signs, photographs and landscape features that explain the historic character of the site and building/s. • Contain new tree plantings that match or are complementary / respectful of the original plantings.*
R6	Any existing elements of the house and grounds that are incorporated must be able to be feasibly upgraded, made safe and robust, sustainably maintained and appropriately integrated with other park functions.

	GUIDELINES
G8	The homestead park should: • Should incorporate and integrate existing (non weed species) trees that are designated as suitable, safe and viable for long term retention by a qualified arborist. • Should incorporate materials that match or complement the original homestead and grounds.

NOTES REGARDING HOMESTEAD PARK

This is the only part of the precinct that may contain exotic / non Australian plant species, so long as they are not classed as environmental weeds.

INTERFACE WITH ROAD NETWORK AND ADJOINING DEVELOPMENT

	GUIDELINES
G9	Open spaces should have a road frontage to all edges except where these are otherwise addressed by the active frontage of residential, commercial or community facility development.. A road frontage should be provided to all open space areas designated as 'Southern Brown Bandicoot connectivity' shown on Plan 5.
G10	Landscaping of development and streets should integrate with the adjoining open space design.
G11	Linear corridors adjoining or within road tree reserves should incorporate park seating adjacent to paths at least every 400m.
G12	Development abutting open space should be well articulated and facilitate passive surveillance from windows, balconies, and pedestrian access points.
G13	Where fencing is required it should be low scale and permeable to facilitate public safety and surveillance.

G9 amended by C227

Amended by C227

INTERFACE WITH RBGC, RETAINED NATIVE VEGETATION AND SBB CONNECTIVITY

	REQUIREMENTS
R7	Planting within open space that immediately adjoins or incorporates the RBGC and native vegetation conservation areas must be indigenous and must support the enhancement of the relevant ecological vegetation class (as outlined in the NVPP) such as: • Heathy woodland (EVC 48), • Swamp Scrub (EVC 53), • Grassy woodland (EVC 55), and • Damp Heathy Woodland (EVC 793).

	GUIDELINES
G14	The design of parks and open space corridors should complement adjoining conservation areas.
G15	Hard infrastructure, such as roads, paths, furniture and shelters should be excluded from retained native vegetation patches and within zones covering twice the canopy diameter of retained scattered trees unless otherwise approved by the Responsible Authority. Location of park infrastructure should not undermine the ability to maintain native vegetation and habitat appropriately.
G16	Passive or low impact activities should occur closest to offset/ conservation areas, with more high impact or formal activities to be located further away.
G17	Where fencing of conservation areas or Southern Brown Bandicoot connectivity corridors within parkland is required, it should be low scale (max. 1.2m) and be designed to guide appropriate movement and access rather than as an impenetrable barrier. Design and materials should complement the park and conservation setting. Preferred fence types include: • Timber post with timber beams, pipe, wire or chain. • Timber post and chain wire may be required for critical areas or Southern Brown Bandicoot connectivity corridors.
G18	Lower level indigenous planting is encouraged and should be considered in both streetscape verges and parks where it can be demonstrated that it is compatible with the planning and design guidelines for street tree planting and delivery of public open space.

G17 amended by C227

Amended by C197

DEFENDABLE SPACE LANDSCAPE INFRASTRUCTURE

	REQUIREMENTS
R8 amended by C197 — **R8**	Defendable space 'outer zone' must be delivered via developer works to basic open space standards as described in 3.9.4, and must include: • shared paths along the alignment of the defendable space zone. • tree and garden bed planting. • park seating.

INTEGRATION WITH DRAINAGE SYSTEM, RECREATION & HABITAT VALUES

	REQUIREMENTS
R9	Shared paths must be incorporated into the drainage open space to connect with the broader open space and street network open space.
R10	Paths must be designed to be above the minimum of the 1:10 year flood line and bridges and boardwalks must be designed to be above the 1:100 year floodline, to the satisfaction of the relevant authority.
R11	Shared paths in waterway reserves must be at least 3 metres wide and able to withstand vehicular traffic.
R12	Development abutting a waterway or drainage reserve must provide a road interface or similar frontage.

	GUIDELINES
G19	Unencumbered parks and drainage land that directly abut should be designed and engineered concurrently to maximise the space available for recreational activities.
G20	At the discretion of (and subject to approval of) Melbourne Water, and to maximise habitat values for the Growling Grass Frog, waterways and wetlands should be designed and planted, where practicable, to include elements such as: • Peninsulas and / or islands • Waterbodies with a range of depths and gradients, including areas of deeper open water and shallow low gradient zones. • Off-line ponds • Dense low vegetation around wetland perimeters and a range of trees and shrubs • Provision of logs and rocks within and above the waters edge. Note: waterways, wetlands or drainage systems that include such habitat features are not part of any dedicated biodiversity conservation area or offset.

PARK CONSTRUCTION INFRASTRUCTURE & PLANTING

	REQUIREMENTS
R13	Open spaces must be designed to create safe and comfortable places that encourage use by a wide range of people.
R14	Light fittings must emit white light.
R15	Park seating must be provided to the satisfaction of the responsible authority

	GUIDELINES
G21	Park buildings should be sited and designed to integrate with and complement landscaping and should not dominate the parkland.
G22	Park buildings should be sited to frame park spaces and should avoid splitting up otherwise usable and effective spaces.
G23	The use of the design principles known as "Crime Prevention Through Environmental Design" ("CPTED") should guide the design of open spaces and the infrastructure it contains.
G24	Open space path systems should facilitate clear, direct and easy movement to and from key destinations.
G25	Lighting in open spaces should be restricted to key pedestrian thoroughfares to encourage safe pedestrian movement throughout the network, but discourage inappropriate use of main parkland areas after dark.
G26	Australian native cultivars should be used to achieve particular planting effects at key focal points.
G27	Species associated with local Ecological Vegetation Classes ("EVC") found in the area should be considered in open space planting schemes where they are considered to be appropriate and robust enough to be viable.
G28	Park infrastructure such as playgrounds, shelters, BBQs picnic tables, toilets etc should be clustered in nodes. Park planting themes should enhance and complement these nodes.
G29	Public toilet facilities should be integrated with pavilions and clubhouses where possible rather than as stand-alone facilities.
G30	Use of bollards and fencing should be well targeted to manage access, and maximise transparency and generally be kept to a minimum.
G31	Where car parking is required within parks it should be sensitively designed to minimise large areas of hard surfaces and maximise tree and ground level planting as well as water infiltration. Safe pedestrian access should be integrated within car park designs.
G32	Signage within open spaces should be kept to a minimum with locations focussed on assisting way finding, identifying s key access or interpretation points and major pedestrian / cycle routes.
G33	The design and layout of open spaces should maximise water use efficiency, stormwater quality and long term viability of vegetation through the use of WSUD initiatives.
G34	WSUD principles should be used so that excess run-off water from within, or where appropriate, external to the park, is directed to support park planting and / or rain gardens rather than being diverted to drains.

R16-R20 inserted by C197

BUSHFIRE MANAGEMENT

	REQUIREMENTS
R16	Provide defendable space for dwellings on lots in accordance with Plan 5 and cross sections 15, 16 , 17 and 18 of this precinct structure plan.
R17	For all lots within the BMO (150m from the Fire Hazard), the road network must be designed to enable at least two safe egress routes from the precinct leading away from the Fire Hazard.
R18	Defendable space between a lot and the Fire Hazard must include a perimeter road capable of accommodating emergency vehicles.
R19	For the purposes of 56.06-7 and 56.09-3 of this planning scheme, unless otherwise agreed by the relevant fire authority prior to the issue of a permit, the requirements of the relevant fire authority are: • Access roads must be constructed to a standard so that they are accessible in all weather conditions and capable of accommodating a vehicle of 15 tonnes for the trafficable road width. • The average grade of a road must be no more than 1 in 7 (14.4%) (8.1 degrees) with a maximum of no more than 1 in 5 (20%) (11.3 degrees) for no more than 50 metres and dips must have no more than a 1 in 8 (12%) (7.1 degree) entry and exit angle. • Constructed dead-end roads more than 60m in length from the nearest intersection must have a turning circle with a minimum radius of 8m (including roll-over kerbs when kerbs are provided) • Constructed roads must be: A minimum of 7.3m trafficable width where cars park on both sides, or: • A minimum of 5.4m in trafficable width where cars may park on one side only. • A minimum trafficable width of 3.5 metres, be clear of encroachments 4 metres vertically and have no obstructions within 0.5 metres either side of the formed width of the road. • Operable hydrants, above or below ground must be provided. • The maximum distance between these hydrants and the rear of all building envelopes (or in the absence of the building envelope, the rear of all lots) must be 120m and hydrants must be no more than 200m apart. • Hydrants must be identified as specified in 'Identification of Street Hydrants for Firefighting purposes' available under publications on the Country Fire Authority web site (www.cfa.vic.gov.au).

R20	A relevant subdivision permit must ensure that prior to the issue of a Statement of Compliance for any stage of the subdivision containing public open space within the BMO (150 metre from the Fire Hazard where shown on Plan 5) a landscape plan must be submitted to and approved by the responsible authority and the relevant fire authority. When approved, the plans will be endorsed and then form part of the permit. The plan must: • Demonstrate how the public open space will be designed for the purpose of providing defendable space; and • How the public open space will be managed and maintained for the purpose of providing defendable space; and Prior to Statement of Compliance for any stage of the subdivision within the BMO (150m of the Fire Hazard as shown on Plan 5) the endorsed landscape plan must be incorporated directly or indirectly into the Council's Municipal Fire Management Plan.

G35-G40 inserted by C197

GUIDELINES	
G35	Trees in streets and public spaces should be species capable of being pruned and managed to achieve clean trunks and raised canopies 4m or more from the ground at maturity.
G36	Ground level and shrub planting that is combined with street tree planting should generally be restricted to species with mature heights not more than 1 metre unless otherwise shown on cross-sections.
G37	Subdivision and landscape design for public open space within the BMO (150m of the Fire Hazard as shown on Plan 5) should be informed by: • "Requirements for Water Supplies and Access for Subdivisions in Residential 1, 2 and Township Zones" - available under Publications on the CFA website (www.cfa.vic.gov.au), • "Landscaping for Bushfire – Garden Design and Plant Selection", CFA, November 2011 (as amended).
G38	Design of reserve P13 (refer Plan 5) and associated community infrastructure should be consistent with "Safer Places CFA Assessment Guidelines" and "Municipal Council Neighbourhood Safer Places Plan" (Municipal Association of Victoria 2010).
G39	For all lots greater than 150 metres from the Fire Hazard, the road network should be designed to enable safe egress from the precinct without having to traverse any road that is within 150 metres of the Fire Hazard.
G40	Outer zone defendable space should also include shared paths and occasional park furniture consistent with the precinct open space requirements and guidelines.

3.5.3 How To Make A Public Open Space Contribution In This Precinct

Under clause 52.01 of the Casey Planning Scheme land owners must provide a public open space contribution equal to 4.21% of the Net Developable Area (NDA) of the subject land. Land forming part of the contribution is limited to land shown as 'passive open space' in this precinct structure plan. Contributions must be made as follows:

- Where passive open space in Plan 5 and specified in the Property Specific Land Use Budget at Appendix A to this plan is less than or equal to 4.21% of NDA that land is to be transferred to Council at no cost;
- Where no or less than 4.21% of NDA passive open space is shown in Plan 5 and specified in the Property Specific Land Use Budget at Appendix A to this plan, that land is to be transferred to Council at no cost and a cash contribution is to be made to Council to bring the total open space contribution (land and cash) to a value equal to 4.21% of NDA.
- Where more than 4.21% of NDA passive open space is shown in Plan 5 and specified in the Property Specific Land Use Budget at Appendix A to this plan that land is to be transferred to Council at no cost and a reimbursement made by Council for the contribution in excess of 4.21% NDA.

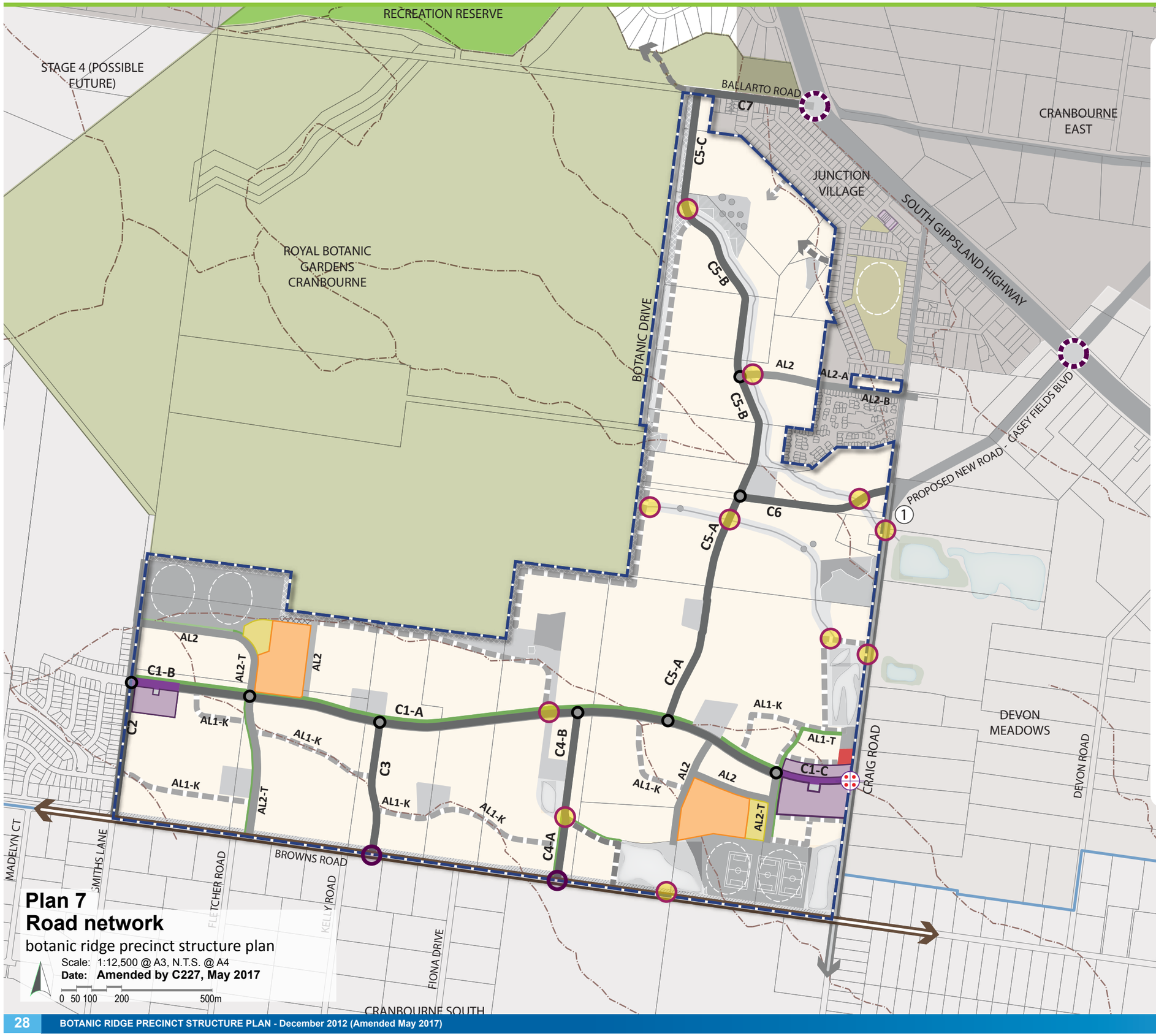
Plan 6 and Section 3.6 deleted by C197

Plan 6 ...

3.6 ...

3.6.1 ...

3.6.2 ...



Precinct Structure Plan Area
Neighbourhood Activity Centre
Potential Mixed Use
Council Community Facilities
Government Primary School
Other Development / Open Spaces
Regional Open Space

ROAD NETWORK

Signalised Intersection-controlled (DCP Item)
Roundabout Large (DCP Item)
Roundabout – Connector / Arterial (DCP Item)
Key Roundabout small (Developer works)
Potential SBB under-road transit pipe / culvert

CODES (Match Codes on Sections & PSP Tables)

C	Connector Street (Section 6, 7, 8, 11, 12, 13, 16)
AL2	Access Level 2 Streets (Section 4, 9 & 10)
AL2-T	Access Level 2 Shared landscape trail (Section 5)
AL1	Access Level 1 Streets (Section 1)
AL1-K	Access Level 1 Key Green Streets (Section 1) (19m)
AL1-T	Access Level 1 Shared landscape trail (Section 2)

Activity Centre Main Street
Arterial Road (Ultimate 4 lane: 34m)
Arterial 2 Lane (Browns Road)
Connector Street (refer Sections)
Connector Street (with landscape and trails – refer Sections)
Access Street – Level 2 (refer Sections)
Access Street – Level 2 (with Landscape and trails – refer Sections)
Access Street – Level 1 (18–19m – refer Sections)
Access Street – Level 1 (with Landscape and trails – refer Sections)

(1) Potential for intersection to shift south to align with existing Road Reserve. Refer Section 3.7

Plan 7
Road network
botanic ridge precinct structure plan

Scale: 1:12,500 @ A3, N.T.S. @ A4
Date: Amended by C227, May 2017

0 50 100 200 500m

3.7 Transport & Movement

3.7.1 Transport and movement objectives

The objectives for transport and movement are:

- To establish an integrated and sustainable transport network that reduces dependency on the use of private vehicles, maximises access to public transport, and encourages walking and cycling within and between neighbourhoods.
- To establish a local street network, the design of which, reduces vehicle speeds and maximises pedestrian and cyclist safety.
- To establish a local street network that facilitates direct and efficient vehicle movement, promotes way finding, and facilitates safe egress from the precinct in case of fire emergency.
- To establish a local street network that provides for the safe and efficient operation of buses.
- To ensure that the transport network is planned to provide for the safety of all road users.
- To ensure that the transport network provides for the safe and efficient operation of the existing and future arterial road network.
- To establish a bus network that connects internal residential areas and destinations as well as externally to:
  - Cranbourne and potentially future Cranbourne East rail stations;
  - Botanic Ridge Stage 1;
  - Future Cranbourne West Precinct and Employment area; and
  - Future Cranbourne East Employment area and other Cranbourne East destinations such as Casey Fields.
- To support the early provision of local bus services, walking and cycling links.
- To ensure that a minimum of 95% of all households are located within 400 metres of public transport services by establishing an efficient grid of roads.
- To provide for the extensive landscaping of roads, transport and movement corridors with canopy trees and ground level planting to:
  - create safe, beautiful and environmentally responsive urban environment; and
  - Shield urban development from the RBGC view-sheds
- To incorporate water sensitive urban design into streets where appropriate.

Table 8: Road Hierarchy

PLAN REFERENCE CODE	PSP CROSS SECTION NO. APPENDIX C	ROAD/STREET	EXISTING RESERVE	ULTIMATE RESERVE	ACCESS MANAGEMENT POLICY	FUNCTION	INDICATIVE VEHICLES PER DAY (VPD)	INTERIM TRAFFIC LANES	ULTIMATE TRAFFIC LANES	MEDIAN	SPEED LIMIT	BUS COMPATIBLE	PROPERTY ACCESS & PARKING	TREE RESERVE	ON ROAD CYCLE LANE	SHARED PATH	RESPONSIBILITY
EXTERNAL & PERIPHERY OF PRECINCT																	
n.a.	**n.a.**	South Gippsland Highway	60m	60m	AMP 2 limited access (Urban)	State Arterial	45,000	4	4	Yes	80 km/h	Yes	No	No	n.a.	Yes	VicRoads
n.a.	**15 & 16**	Casey Fields Boulevard	0m	34m	Not applicable	Local Arterial	10,000+	2	4	Yes	60 km/h	Yes	No - managed property access only	Yes, unless fronted by open space or internal loop road	Yes	Yes	Council
n.a.	**15 & 16**	Craig Road (south of future Casey Fields Boulevard Intersection)	20-22m	34m	Not applicable	Local Arterial	10,000+	2	4	Yes	60 km/h	Yes	No - managed property access only	Yes, unless fronted by open space or internal loop road	Yes	Yes	Council
n.a.	**n.a.**	Craig Road (north of future Casey Fields Boulevard Intersection)	20-21m	20-21m	Not applicable	Connector	Up to 7,000	2	2	No	50km	Yes	Yes	No	No	No	Council
C7	**12**	Ballarto Road (west of South Gippsland Highway)	21-22m	21-22m	Not applicable	Connector	Up to 7,000	2	2	No	50km/h	Yes	Yes	No	Yes (widened carriageway)	Yes	Council
n.a.	**3**	Browns Road	20-22m	34m-41m (c)	Potential future AMP 2 Limited Access (Urban)	Rural arterial & potential future urban arterial	10,000+	2	4-6	No	60km/h	Yes	No (to Botanic Ridge Precinct)	Yes 13m	No	Yes (within tree reserve)	Council /
n.a.	**n.a.**	Botanic Drive (Interim only - ultimate to be discontinued)	20m	0m	Not applicable	Interim Stage 2 access	Up to 3,000	2	2	No	40m/h	No	No	No	No	No	Council then RBGC when discontinued
INTERNAL TO PRECINCT																	
C3; C5a; C6	**6**	Residential Connector Street (standard)	0m	27m	Not applicable	Connector	Up to 7,000	2	2	No	50 km/h	Yes	Yes	No	Yes	No	Council
C1a; C4a	**7**	Residential Connector Street with shared landscaped trail	0m	32m (d)	Not applicable	Connector	Up to 7,000	2	2	No	50 km/h (a)	Yes	Yes - but reduced	No	Yes	Yes	Council
C2	**6**	Smiths Lane (standard residential connector)	22	27m	Not applicable	Connector	Up to 7,000	2	2	No	50 km/h	Yes	Yes	No	Yes	No	Council
C5b; C5c	**8 & 16**	Residential Connector Street adjoining waterway or defendable space	0m	22m	Not applicable	Connector	Up to 7,000	2	2	No	50 km/h	Yes	Yes	No	Yes	No (b)	Council
C1b	**12**	Town Centre - West - Main Street (connector street)	0m	30m	Not applicable	Connector	Up to 7,000	2	2	No	40 km/h	Yes	Yes	No	Yes	Yes	Council
C1c	**13**	Town Centre - East - Main Street (connector street)	0m	21-22	Not applicable	Connector	Up to 7,000	2	2	No	50 km/h	Yes	Yes	No	Yes (widened carriageway)	No	Council
AL2	**4**	Access Street Level 2 (standard)	0m	22m	Not applicable	Access level 2	Up to 3,000	2	2	No	50 km/h (a)	No	Yes	No	No	No (except where abutting a school)	Council
AL2-a	**9**	Access Street Level 2 between western boundary of retirement village and Craig Road fully constrained section.	0m	18.5m	Not applicable	Access Level 2	Up to 3,000	2	2	No	50 km/h	Yes	Yes	No	No	No	Council
AL2-b	**10**	Access Street Level 2 between western boundary of retirement village and Craig Road partly constrained section.	0m	22.6m	Not applicable	Access Level 2	Up to 3,000	2	2	No	50 km/h	Yes	Yes	No	No	No	Council
AL2-T	**5**	Access Street Level 2 with shared landscaped trail	0m	28m (e)	Not applicable	Access level 2	Up to 3,000	2	2	No	50 km/h (a)	No	Yes - but reduced	No	No	Yes	Council
AL1	**1**	Access Place/Access Street level 1 (standard)	0m	18m	Not applicable	Access Level 1	Up to 1,000	2	2	No	50 km/h	No	Yes	No	No	No	Council
AL1-K	**1**	Access Place/Access Street level 1 - Key Green Street on or adjacent key ridgeline	0m	19m min. (16m abutting open space)	Not applicable	Access Level 1	Up to 1,000	2	2	No	50 km/h	No	Yes	No	No	No	Council
AL1-T	**2**	Access Place with shared landscaped trail	0m	24m (f)	Not applicable	Access Level 1	Up to 1,000	2	2	No	50 km/h	No	Yes - but reduced	No	No	Yes	Council
AL1-T	**2**	Access Place with shared landscaped trail	0m	24m (f)	Not applicable	Access Level 1	Up to 1,000	2	2	No	50 km/h	No	Yes - but reduced	No	No	Yes	Council

Notes: Refer cross sections for more detail regarding requirements, particularly verge, nature strip and planting requirements - Appendix D

(a) 40km/h in school zone

(b) Shared path adjoining road reserve located within drainage and / defendable space reserves

(c) Depending on future Council / VicRoads Requirements

(d) Where abutting wetlands and waterways, may be reduced to 22m wide; where abutting any other open spaces may, be reduced to 27m wide.

(e) Where abutting schools, or any open space may be reduced to 23m wide.

(f) Where abutting open space may be reduced to 19m wide.

For connector and local streets nominated as 'standard', as well as AL1-K, the road reserve width may be reduced by 3m where abutting public open space.

3.7.2 Requirements and Guidelines

GENERAL

	REQUIREMENTS
R1	Where a shared landscaped trail is shown on plans and cross sections within this PSP, it must be accommodated within a widened road reserve and must not be credited as open space.
R2	Verge width dimensions shown in cross sections must be considered minimum dimensions.
R3	All road and street cross sections of potential bus routes must accord with the Public Transport Guidelines for Land Use and Development.
R4	Design and location of street lights must be coordinated with the design and location of street trees to maximise street lighting effectiveness.
R5	WSUD initiatives and / or swales within road reserves must be approved by the responsible authority.
R6	Underground services clear zones, as shown on cross sections, must be provided in nature strips to facilitate required street tree planting.
R7	Underplanting of nature strips must be compliant with relevant Council guidelines and offset 1.2m from back of kerb unless otherwise approved by Council.
	GUIDELINES
G1	If additional land is required for utilities and services, additional services should be accommodated within the parking lanes or pedestrian path zones.

CRAIG ROAD

	REQUIREMENTS
R8	Craig Road must be upgraded to interim urban standard from Browns Road to approximately 110m north of Casey Fields Boulevard Junction, in accordance with Table 8, PSP cross sections and the precinct Development Contributions Plan.
	GUIDELINES
G2	Development with an abuttal to Craig Road (between future Casey Fields Boulevard extension intersection and Browns Road) should meet the following requirements to the satisfaction of the Responsible Authority: • Residential lots fronting Craig Road should be accessed via internal loop or service roads, or in a manner that allows vehicles to enter and exit in a forward manner. • Where no internal loop / service road or open space frontage is provided, and / or where there is sideage a 12m tree reserve must be provided to the satisfaction of the responsible authority. • A tree reserve is not required where the town centre fronts Craig Road

BROWNS ROAD

	REQUIREMENTS
R9	Browns Road must be upgraded to rural arterial standard from Smiths Lane to Craig Road in accordance with table 8, PSP cross sections and the precinct Development Contributions Plan
R10	A tree reserve must be provided along the Browns Road / UGB interface with the precinct to the width as shown on the relevant cross section.
	GUIDELINES
G3	Residential lots fronting Browns Road should be accessed via internal loop roads rather than by a service road.

CONSTRUCTION OF INTERSECTIONS WITH ARTERIAL ROADS

	REQUIREMENTS
R11	All intersections with existing or proposed arterial roads must be designed, constructed and controlled to the satisfaction of the responsible authority with the main design objective being to allow for a minimum 10-year design life having regard to the anticipated traffic growth on the affected roads from the precinct and surrounding areas.
R12	Where relevant, land only must be provided for right of way flaring at all connections to existing and proposed arterial roads for the ultimate design of the intersection to the satisfaction of the responsible authority.

ADDITIONAL ARTERIAL ROAD CONNECTIONS - GENERAL REQUIREMENTS

	GUIDELINES
G4	Access to streets connecting to an arterial road should be considered within the context of the requirements of traffic management, safety, urban design and the local urban environment.
G5	Intersection design should provide for the safe and efficient operation of the arterial road and connecting road to the satisfaction of VicRoads and / or Council (depending whether road is classified as local or state arterial), with consideration to vehicle speeds, vehicle queues and conflicting movements on approach to and departure from the intersection.
G6	Any additional access points (temporary and permanent) to the existing or proposed arterial road network beyond those shown on Plan 7, will be considered on a case by case basis and must be to the satisfaction of the responsible authority.

BALLARTO ROAD, WEST OF SOUTH GIPPSLAND HIGHWAY

	GUIDELINES
G7	Ballarto Road, west of South Gippsland Highway intersection should be retained in its current form and generally has connector level status.

STAGE 4 (Possible Future)

ROYAL BOTANIC GARDENS CRANBOURNE

STAGE 1 (Under Development)

BALLARTO ROAD

BOTANIC DRIVE

JUNCTION VILLAGE

CRANBOURNE EAST

SOUTH GIPPSLAND HIGHWAY

Proposed New Road-Casey Fields Blvd

CRAIG ROAD

DEVON MEADOWS

DEVON ROAD

BROWNS ROAD

KELLY ROAD

FLETCHER ROAD

SMITHS LANE

FIONA DRIVE

CRANBOURNE SOUTH

NOTE
99% of Residential Dwellings are within 400m of a Potential Bus Route

- Precinct Structure Plan Area
- Urban Growth Boundary
- Neighbourhood Activity Centre
- Potential Mixed Use
- Council Community Facilities
- Government Primary School
- Other Development / Open Spaces
- Residential Area beyond 400m from potential bus route
- 400m Walkable Catchment from Potential Bus Routes
- Potential Bus Route
- Equestrian Trail Routes (Subject to the approval of the relevant land owner / manager).
- Potential Devon Meadows Equestrian Trail
- On-Road Bike Path (both sides)
- Off Road Shared Paths
- Existing Off Road Shared Paths
- Pedestrian Operated Traffic Signals
- RBGC Potential Pedestrian Access Point subject to RBGC approval.
- (1) Town Centre cycle bypass route

Plan 8
Public transport & walking trails
botanic ridge precinct structure plan

Scale: 1:12,500 @ A3, N.T.S. @ A4
Date: Dec 2012

0 50 100 200 500m

CASEY FIELDS BOULEVARD EXTENSION / CRAIG ROAD AND SOUTH GIPPSLAND HIGHWAY INTERSECTION

	REQUIREMENTS
R13	The Casey Fields Boulevard extension and associated intersection treatments (Craig Road / Casey Fields Boulevard and Casey Fields Boulevard and South Gippsland Highway), must be delivered prior to the issue of a statement of compliance for 1600th lot, unless otherwise agreed in writing by VicRoads.
R14	As shown on Plan 2 (note 5) and Plan 7 (note 3), and subject to the land to the west of Craig Road being zoned for urban development at the time of project delivery) the alignment of Casey Fields boulevard at the intersection with Craig Road may be shifted south to align with the existing Council Road reserve (noted as R3 on Plan 3). • Any such realignment is subject to the approval of the Responsible Authority. The detailed design of the interim safety improvements and upgrade to the South Gippsland Highway and Craig Road intersection must be to the satisfaction of VicRoads.

STAGE 2 (NORTH) ACCESS - BOTANIC DRIVE

	REQUIREMENTS
R15	Unless and until alternative arrangements can be agreed and provided, Botanic Drive must remain trafficable to service existing lots.
R16	Use of Botanic Drive for residential interim access, must not compromise the achievement of the ultimate PSP road network.
	GUIDELINES
G8	Botanic Drive should be discontinued as a road reserve in the long term.
G9	During precinct development, Botanic Drive should be utilised for construction vehicle access, subject to approval of the responsible authority and in accordance with any construction management plan.
G10	Botanic Drive may be used for interim residential access for approved subdivisions within the stage 2 area subject to addressing fire management, fauna management , an appropriate cap on the maximum number of vehicles permitted along the road, and any other relevant development staging matters.

WALKING & CYCLING NETWORK

	REQUIREMENTS
R17	Unless otherwise provided for via the Botanic Ridge Development Contributions Plan, walking and cycling networks must be constructed by development proponents as part of subdivision works prior to the issue of a statement of compliance for the relevant stage.
R18	Footpaths and cycle paths must be provided with increased width in areas expecting high foot traffic such as near schools, community centres, activity centres, rail station and public transport interchanges and bus stops.
R19	Pedestrian and cycle crossings must be provided at all relevant street intersections and along key desire lines, particularly along the interface between the residential and employment areas and in the vicinity of bus stops, and schools.
R20	Bicycle lane connections must be designed to allow for the smooth transition between on-road and off-road facilities.
R21	Pedestrian and cycle paths must be designed and located to maximise passive surveillance and provided in wider verges with safe crossing points at key locations.
R22	The local street network must be designed to provide permeable and safe routes for walking and cycling to activity centres, community facilities, parks and open space, major trail networks and public transport.
R23	Off road shared paths must be constructed within road reserves to provide strategic linkages between town centres, schools, community facilities and open spaces where shown on Plan 8 and as shown on relevant cross sections.
R24	A wide verge must be created to accommodate off road shared as shown on relevant cross sections.

EQUESTRIAN TRAILS*

	REQUIREMENTS
R25	Equestrian trails must be created/located only with the consent of the relevant landowner or land manager
	GUIDELINES
G11	Allowance for equestrian trails should be incorporated within design and delivery of designated open space corridors and roadside tree reserves, as shown on Plan 8 and relevant cross sections
G12	Allowance should be made for equestrian trail connections to stage 1 to the west of Smiths lane and to potential future Devon Meadows development and corridors to the east of Craig Road.

* Other than providing sufficient width in accordance with cross sections, and standard grassing, no specific works are required for equestrian trail delivery.

RECREATION RESERVE

STAGE 4 (POSSIBLE FUTURE)

ROYAL BOTANIC GARDENS CRANBOURNE

To PRS from 1150 Supply Main (Intersection Cameron St. SC Highway)

225Ø

150Ø

300Ø

150Ø R.M.

Junction Close SPS

250Ø

A

B

C

D

1

Browns Rd.
Botanic Ridge SPS

32Ø

225Ø

150Ø

CRANBOURNE SOUTH

- Precinct Structure Plan Area
- Urban Growth Boundary
- Proposed Potable Water Mains
- Proposed Recycled Water Mains
- Existing Potable Water Mains
- Existing Gravity Sewer (as per Dial Before You Dig)
- Existing Sewer Rising Main
- Proposed Sewer with Pump Station
- Existing South East Potable Water Main
- Waterway & Wetland Network
- Other Development / Open Spaces
- Non Urban Land
- Existing Urban Area
- Ridge Line / Catchment Boundary
- Sub-Catchment Boundary
- 5 Year AR1 Diversion Pipe
- Potential Street based WSUD Priority Locations (Other locations possible)
- General Direction of Drainage
- Contours (1m Intervals)
- Drainage Line
- Waterway bodies / Wetlands
- (1) Wetland retarding basin located outside Precinct subject to Melbourne Water PAO
- (D) Waterway identification

Waterway ID	Proposed Width
A	20m*
B	20m*
C	33m**
D	33m**

* Contained within RBGC perimeter defendable space outer zone (refer also Sections 16 & 17)

** Inclusive of 3m shared path (refer also section 8 and 8a)

Plan 9
Integrated water management & key utilities
botanic ridge precinct structure plan

Scale: 1:12,500 @ A3, N.T.S. @ A4
Date: Amended by C227, May 2017

0 50 100 200 500m

3.8 Water and Utilities

3.8.1 Objectives

- To provide all developed lots, to the satisfaction of the relevant authority, with:
  - a potable water service
  - a recycled water service
  - electricity,
  - a reticulated sewerage service,
  - integrated drainage solutions (including a low flow volume solution)
  - gas, and
  - telecommunications.
- To efficiently co-ordinate, locate and bundle underground services.
- To plan for the future drainage needs of the new urban environment.
- To mitigate flooding of urban areas.
- To mitigate against downstream water-logging.
- To manage the flows of storm water runoff into the Western Port and Port Phillip catchments.
- To reduce and filter sediment and nitrogen levels
- To enhance the biodiversity and habitat values of the precinct.
- To enhance the landscape character and plant health within the precinct.
- To prevent urban runoff from entering the RBGC.
- To incorporate Water Sensitive Urban Design into the street and public space design elements.

3.8.2 Servicing Summary

SEWER

South East Water has advised that it is reviewing the servicing arrangements for the recently announced UGB expansion areas to the east of the Botanic Ridge PSP area. This review may result in a revised sewerage strategy for Botanic Ridge. The current strategy proposes a combined gravity and pressure system transferring effluent to the existing Cranbourne East Branch Sewer in the Blue Hills Retirement Village. This branch sewer will need to be upgraded to service more than 600 lots in the total Cranbourne East and Botanic Ridge PSP areas.

53-65 Craig Road will require significant works to service including multiple pump stations, rising mains and gravity sewers.

POTABLE WATER

A second connection to the transfer main is proposed in Stage 1 near Pearcedale Road, comprising a pumping station and high level tank. Future development in Stages 2 and 3 will require the installation of a pressure reducing station on the transfer pipeline near the corner of Cameron Street and the Highway and integration with the Botanic Ridge Estate water mains. The sizing of the reticulation water mains may be influenced by the future development densities.

DRAINAGE

To address the precinct 'low flow' drainage issue, Melbourne Water, via the precinct Development Services Drainage Scheme (and in partnership with South East Water), plans to install a stormwater treatment plant adjacent to Craig road associated with one of the precinct retarding basins. This plant will treat precinct stormwater to 'Class A' or better standard suitable for uses such as irrigation, toilet flushing and possibly domestic laundries. Treated stormwater will be piped and delivered to a planned recycled water supply tank at the Cranbourne racecourse and then distributed via the planned recycled water supply mains to Botanic Ridge and / or other precincts within the growth corridor.

The precinct will also require a range of constructed open waterways linked to a network of wetland / retarding basins, as identified in the background drainage reports. These will present opportunities to provide for local flora and fauna habitat as well as become a key and functional part of the precinct open space network.

RECYCLED WATER

The installation of reticulated recycled water supply is planned to be mandated for future development in Stages 2 and 3. South East Water proposes to erect a recycled water supply tank at the Cranbourne Racecourse and install supply mains south along the South Gippsland Highway and Craig Road and west through Botanic Ridge Stage 3. Two underground booster pumping stations will be required to supply recycled water to development above the 45-50 metre contour.

The recycled water network will be capable of being supplemented (via the proposed Cranbourne Racecourse supply tank) with locally treated stormwater as part of the precinct 'low flow' stormwater solution.

ELECTRICITY

Electricity distribution is managed by SP-Ausnet (east) and United Energy (west) Future development of the SP-Ausnet supplied area will be serviced from the proposed Cranbourne Zone Substation at the Cranbourne (Merinda) Terminal Station site. The existing electricity supply infrastructure in the boundary roads will require augmentation to supply future development. Jemena advises that high voltage underground supply will be progressively extended to the proposed Botanic Ridge Estate east of the transmission lines along the proposed Station Creek Way extension. Upgrade works are also proposed along Browns Road to bring high voltage overhead conductors from Pearcedale Road.

GAS

Development of the Botanic Ridge PSP area can be serviced with reticulated gas supply via the extension of mains along Craig Road and Browns Road.

TELECOMMUNICATIONS

Existing telephony services in the PSP area will require upgrade to service future development

3.8.3 Requirements and Guidelines

GENERAL

	REQUIREMENTS
R1	Delivery of underground services must be coordinated, located and bundled (utilising common trenching) to enable services free zones as depicted in street cross sections within Appendix C to facilitate canopy tree and other planting within road verges.
	GUIDELINES
G1	Common trenching should be utilised to efficiently deliver underground services and reduce the lateral space which they cover.

ELECTRICITY

	REQUIREMENTS
R2	All new electricity supply infrastructure (excluding infrastructure to support cables with a voltage greater than 66kv) must be provided underground (excluding substations).
R3	New substations must be identified at the subdivision design response stage to ensure effective integration with the surrounding neighbourhood and to minimise amenity impacts.
R4	The design of subdivision electricity infrastructure must consider the practicality of removing existing above ground electricity lines in the local and arterial road network both within and abutting the subdivision and re-routing lines underground through the subdivision.

RECYCLED WATER

The following requirements apply to delivery of recycled water in the precinct:

	REQUIREMENTS
R5	Subject to South East Water agreeing to do so, the developer must enter into an agreement with South East Water requiring the subdivision to be reticulated with a dual pipe recycled water system to provide for the supply of recycled water from a suitable source such as the proposed Botanic Ridge stormwater treatment plant or Eastern Irrigation Scheme or any such similar scheme to all lots and open space reserves provided in the subdivision.
R6	Irrespective of whether South East Water has entered into an agreement as contemplated, any plan of subdivision must contain a restriction which provides that no dwelling or commercial building may be constructed on any allotment unless the building incorporates dual plumbing for recycled water supply for toilet flushing and garden watering use if it is to become available.
R7	Irrespective of whether South East Water has entered into an agreement as contemplated, connection points for the dual pipe reticulation system must be provided by the developer/landowner to all public open space at no cost to Council to facilitate irrigation of public open space using recycled water if it is to become available.

DRAINAGE & INTEGRATED WATER MANAGEMENT

	REQUIREMENTS
R8	Drainage systems must provide for a suitable buffer from urban development and contain ephemeral water bodies to enable the replication of natural flows and provide habitat for local species;
R9	The drainage system must prevent urban runoff (except from directly abutting open space) from entering the RBGC.
R10	Drainage systems must be designed to reduce sediment and nutrient flows into the Western Port catchment;
R11	A Development Services Scheme must ensure that downstream flows are not increased beyond the capacity of the system.
R12	WSUD Solutions must enable appropriate and long term drainage performance and maintenance.
R13	Precinct 'low flow' drainage impacts on downstream rural and rural residential properties must be mitigated via the installation of a local stormwater treatment plant (or other agreed permanent alternative) and its connection to the planned regional recycled water network, to the satisfaction of Melbourne Water. • If a treatment plant (or other permanent solution as approved by Melbourne Water) is not in place by the time 1060 lots are developed, further subdivision and development must not occur unless otherwise approved by Melbourne Water.
R14	Post-development drainage flows will be required to be controlled back to pre-development flow rates'.
R15	Any stormwater treatment plant or equipment must not be located on unencumbered public open space.
	GUIDELINES
G2	The core riparian zone (within 10 metres of the waterway itself) should be planted with dense vegetation, and should not accommodate trails, or other recreational infrastructure (excepting bridges, boardwalks or culvert structures as approved by the Responsible Authority).
G3	The stormwater treatment plant (or other permanent solution as approved by Melbourne Water) should be implemented via the precinct Development Drainage Services Scheme.
G4	WSUD should be incorporated into sections of street network to support strong and healthy canopy tree and ground level planting, particularly along hilltops and ridgelines.
G5	Where practicable, to enable retention of existing vegetation, modification of the existing waterway on the northern section of 60 Botanic Drive should be minimised (refer plans 2, 3 and 5).

3.9 Precinct staging and Infrastructure plan

Section 3.9.1 deleted by C227

3.9.1 ...

3.9.2 DEVELOPMENT STAGING

	REQUIREMENTS
Generally, staging will be determined by the development program of developers within the precinct and the availability of infrastructure services. Within this context, the following planning and design guidelines must be met:	
R16	Development staging must not create circumstances in which residents will be unreasonably isolated from commercial and community facilities or public transport,
R17	Development staging must, to the extent practicable, be integrated with adjoining developments, including the timely provision of connecting roads and walking / cycling paths, and
R18	Access to each new lot must be provided via a sealed road.
R19	Staging of subdivisions must provide for the timely connection of road links between properties and to the arterial road network to support timely transport connections (i.e. bus, cycle and walking), to the satisfaction of the responsible authority.

Note: Developers, in meeting the above:

- may still be out of sequence in terms of utilities such as sewer and electricity provision. In these circumstances they may be liable for costs associated with extending infrastructure in advance of the sequential roll out of the providers' utility services.
- may still be out of sequence for drainage provision (i.e. may not have a permanent outfall). In these circumstances, developers will be required to negotiate adequate outfall arrangements with affected landowners, Council, and Melbourne Water. They will also be liable for costs associated with the construction of any temporary works to achieve adequate outfall.

3.9.3 PRECINCT INFRASTRUCTURE PLAN

The Precinct Infrastructure Plan sets out infrastructure and services required to meet the development needs of the precinct. The infrastructure and services are to be provided through a number of mechanisms including:

Subdivision construction works by developers,

- Development contributions (community infrastructure levy and development infrastructure levy),
- Development Services (Drainage) Scheme
- Other utility service provider requirements, and
- Capital works projects by Council, State government agencies and non-Government organisations.

3.9.4 Subdivision Construction Works by Developers

GENERAL

	REQUIREMENTS
R20	The subdivsion of land within the PSP area must meet the cost of delivering the following infrastructure where not otherwise provided via a Development Contributions Plan: • Connector and collector roads and local streets, including culverts. • Local bus stop infrastructure (where determined by the Director of Public Transport). • Landscaping of all existing and future roads and local streets, • Intersection works and traffic management measures along arterial roads, collector streets and local streets. • Council approved fencing and landscaping (where required) along arterial roads, • Local pedestrian and bicycle paths along arterial roads, collector roads and local streets and within local parks. • Local drainage systems • Infrastructure as required by utility services providers including water, sewerage, drainage (except where the item is funded through a Drainage Scheme), electricity, gas, and telecommunications.

OPEN SPACE DELIVERY

	REQUIREMENTS
R21	All parks (where not otherwise provided via a Development Contributions Plan) must be finished to the following standard to the satisfaction of the Responsible Authority and prior to the transfer of the space to Council: • Removal of all existing disused structures, foundations, pipelines or stockpiles. • Cleared of rubbish and environmental weeds, levelled, topsoiled and grassed with warm climate grass (unless conservation reserve requirements dictate otherwise). • Provision of water tapping, potable and recycled water connection points. Sewer and gas connection points must also be provided to land identified as an active reserve, • Drought resistant plantings. • Vehicles exclusion devices (fence, bollards or other suitable method) and maintenance access points. • Construction of a 2.5 metre shared path (concrete unless otherwise approved by the responsible authority) around the perimeter of the reserve, connecting and linking into any other surrounding paths or points of interest, and • Installation of park furniture including BBQs, shelters, tables, local scale playgrounds and other local scale play facilities such as 1/2 basketball courts and hit up walls, rubbish bins and appropriate paving to support these facilities. • For town squares and urban spaces - provision of paving and planters, furniture including seating, shelters and bollards, tree and other planting, lighting, drainage and water tapping.

3.9.5 Required Infrastructure and Services to Support Precinct Development

Tables 9 and 10 set out the list of infrastructure and services required within and external to the PSP area to support its development, including details of:

- Infrastructure Group and Category,
- Project Title and Description,
- Lead Agency. (the agency responsible for the coordination and approval of the project. Other agencies and / or developers may have an involvement in the project),
- Timing.

Table 9: Infrastructure and services required within the precinct to support the development of the precinct

	PROJECT	PROJECT CATEGORY	PROJECT	WORKS DESCRIPTION	LEAD AGENCY	INDICATIVE TIMING: S=2013-2018, M=2019-2024, L=2025+	INCLUDED IN BOTANIC RIDGE DCP?
	TRANSPORT						
	Transport	Road	**Construction - Craig Road - interim upgrade to urban standard from Browns Road to Retirement Village.**	Upgrade of existing 6m wide 2 lane to interim 2 lane, 10m wide carriageway as per cross section - 1189 linear metres length not including intersections.	Council	S-M	Yes
	Transport	Road	**Construction - Browns Road - upgrade to rural arterial standard from Smiths Lane to Craig Road.**	Upgrade as per Botanic Ridge Stage 1 upgrades - shoulder upgrades and kerb/channel - 2140 linear metres not including intersections.	Council	M	Yes
	Transport	Road	**Land - Constrained access level 2 street adjacent north boundary of retirement village.**	Land to facilitate road delivery. Existing land is already constrained by a carriageway easement in favour of 100 Botanic Drive. Note, project cost incorporates a base value for the road reserve land with additional allowances due to acquisition process and easement rights.	Council	S-M	Yes
	Transport	Road	**Construction - Constrained access level 2 street adjacent north boundary of retirement village (AL2-A & AL2-B)**	Construction of 18.5 - 22.6m wide and 275m long connector road within constrained reservation.	Council	M	Yes
	Transport	Intersection	**Construction - Craig Road / Casey Fields Boulevard Intersection.**	Construction of interim roundabout to connecting Craig Road to Casey Fields Boulevard.	Council	S-M	Yes
	Transport	Intersection	**Construction - Craig Road / Connector C1 Intersection.**	Construct controlled intersection with traffic lights compatible with interim Craig Road upgrade treatment.	Council	S	Yes
	Transport	Intersection	**Land - Browns Road deceleration lane at Connector C4.**	Flaring / widening to accommodate future deceleration lane.	Council	S-M	Yes
	Transport	Intersection	**Construction - Browns Road / Connector C4 Intersection.**	Construction of a roundabout to facilitate full turning movements for upgraded 2 lane Browns Road.	Council	S-M	Yes
	Transport	Intersection	**Construction - Browns Road / Connector C3 Intersection.**	Construction of a roundabout to facilitate full turning movements for upgraded 2 lane Browns Road.	Council	S-M	Yes
Inserted by C227	**Transport**	Road	**Southern Brown Bandicoot Habitat to support connectivity.**	SBB under-road transit infrastructure (pipe or culvert or similar) engineering design and construction to support SBB habitat connectivity that are additional to works already required for the designated function of the road.	DELWP	S-L	No (funded via SBB compensatory habitat fund)
	PUBLIC TRANSPORT						
	Public Transport	Bus	**Botanic Ridge bus services**	Progressive extension of local bus services to service the precinct.	Department of Transport	S-L	No
	Public Transport	Bus	**Bus Stops**	Provision of bus stops to be delivered with local street system as part of subdivision construction approvals.	Relevant development proponent	S-L	No
	COMMUNITY						
	Education	School	**Primary School**	Provision of new north western primary school	DEECD	S-M	No
	Education	School	**Primary School**	Provision of new south eastern primary school	DEECD	S-M	No
	Community Services	Community Centre	**Land - Community Centre 1**	Land for north western community centre.	Council	S	Yes
	Community Services	Community Centre	**Construction - Community Centre 1**	Construction of integrated multi-purpose Community Centre to include x4 Early Years kindergarten rooms and associated external play areas, consulting rooms for maternal and child health (including 2 offices and waiting area), flexible meeting space for play groups etc.	Council	S-M	Yes
	Community Services	Community Centre	**Land Community Centre 2**	Land for provision of south eastern community centre	Council	S	No
	Community Services	Community Centre	**Construction Community Centre 2**	Construction of integrated multi purpose community centre to future Council specification	Council	M-L	No
	OPEN SPACE						
	Open Space	Passive parks	**Passive park construction**	Basic improvements to open space including earthworks, grading, seeding, garden beds, paths and trails, local playground construction.	Relevant development proponent	S-L	No - determined through future approval of specific landscape plans
	Open Space	Active Open Space	**Land - Active Recreation West.**	Land for active recreation inclusive of sportsfields, tennis, netball pavilions and carparking.	Council	S-M	Yes
	Open Space	Active Open Space	**Construction - Active Recreation West - Sportsfields.**	Construction of x2 full size AFL / cricket ovals, cricket nets, x4 tennis courts, x2 netball courts, car parking and associated landscaping. Oval construction will require balance cut and fill.	Council	S-M	Yes
	Open Space	Active Open Space	**Construction - Active Recreation West - Main Pavilion.**	Construction of pavilion to service cricket, football and netball.	Council	S-M	Yes
	Open Space	Active Open Space	**Construction - Active Recreation West - Tennis Pavilion.**	Construction of pavilion to service tennis.	Council	S-M	Yes
	Open Space	Active Open Space	**Construction - Active Recreation West - Indoor Sports Facility.**	Lower order and flexible x2 basketball court sized indoor facility. Delivery shared with primary school.	Council	M	Yes
	Open Space	Active Open Space	**Land - Active Recreation East.**	Land for active recreation inclusive of sportsfields, pavilion and carparking.	Council	M	Yes
	Open Space	Active Open Space	**Construction - Active Recreation East - Sportsfields.**	Construction of x2 full size cricket oval combined with x3 soccer fields, cricket nets and car parking.	Council	M	Yes
	Open Space	Active Open Space	**Construction - Active Recreation East - Pavilion.**	Construction of pavilion to service cricket and soccer.	Council	M	Yes
Inserted by C227	**Open Space**	Waterway and open space corridors	**Southern Brown Bandicoot Habitat to support connectivity.**	Landscape design, construction or planting works to support SBB habitat that are additional to works already required for the designated function of the land.	DELWP	S-L	No (funded via SBB compensatory habitat fund)

Table 10: Infrastructure and services located outside the precinct to support the development of the precinct

PROJECT	PROJECT CATEGORY	PROJECT	WORKS DESCRIPTION	LEAD AGENCY	INDICATIVE TIMING: S=2013-2018, M=2019-2024, L=2025+	INCLUDED IN BOTANIC RIDGE DCP?
TRANSPORT						
Transport	Road	**Land - Casey fields Boulevard extension from South Gippsland Highway to Craig Road - includes land for intersection.**	Land to achieve a 20m wide interim ultimate road reserve and appropriate intersection flaring. Note, project cost incorporates a base value for the road reserve land with additional allowances for potential 'consequential losses' due to land severance etc.	Council	S-M	Yes
Transport	Road	**Construction - Casey Fields Boulevard - Interim construction from South Gippsland Highway to intersection with Craig Road.**	Construction of interim 2 lane, 10m wide carriageway as per cross section - all new works 737 linear metres length, not including intersections.	Council	S-M	Yes
Transport	Road	**Construction - Ballarto Road west of South Gippsland Hwy - upgrade to urban connector to facilitate public transport and trail connections.**	Upgrade and construction of modified connector within constrained 21-22m existing road reserve. Includes crushed rock shared path. 202 linear metres.	Council	S-M	Yes
Transport	Intersection	**Construction - Casey Fields Bvd / Sth Gippsland Hwy Intersection.**	New intersection connection to south side of South Gippsland Hwy to integrate with roundabout intersection being delivered by the Cranbourne East DCP.	Council	S-M	Yes
Transport	Intersection	**Construction - South Gippsland Highway / Ballarto Road Intersection.**	New intersection connection to south side of South Gippsland Hwy to integrate with roundabout intersection being delivered by the Cranbourne East DCP. Ballarto Road, west of South Gippsland Highway will have Connector Road status.	Council	M	Yes
Transport	Intersection	**Construction - Craig Road / South Gippsland Highway Intersection**	Upgrade to existing intersection to facilitate increased turning movements	VicRoads	S	No
CFA Fire Station	Fire Management	**Upgrade of CFA fire station infrastructure**	Upgrade of existing fire station, or construction of new fire station in or near the Devon Meadows area.	CFA	M-L	No
Transport	Road	**Southern Brown Bandicoot Habitat to support connectivity.**	SBB under-road transit infrastructure (pipe or culvert or similar) engineering design and construction to support SBB habitat connectivity that are additional to works already required for the designated function of the road.	DELWP	S-L	No (funded via SBB compensatory habitat fund)

Inserted by C227

3.10 Project Co-ordination

Where practical and compatible, infrastructure projects should be grouped and delivered in a coordinated manner.

Examples of the projects that could be grouped for coordinated delivery include:

- The western government primary school, community hub, playing fields, pavilion and car parking.
- The western Town Centre in conjunction with the above.
- The eastern playing fields, pavilion and car parking, associated school and future Council community centre
- The eastern Town Centre in conjunction with the above.
- Casey Fields Boulevard extension interim construction works, with Craig Road upgrade and eastern Town Centre intersection works.

APPENDICES

A: Property Specific Land Use Budget

B: Estimated Property Specific Dwelling Yield

C: Street Cross Sections

Deleted by C227

D: ...

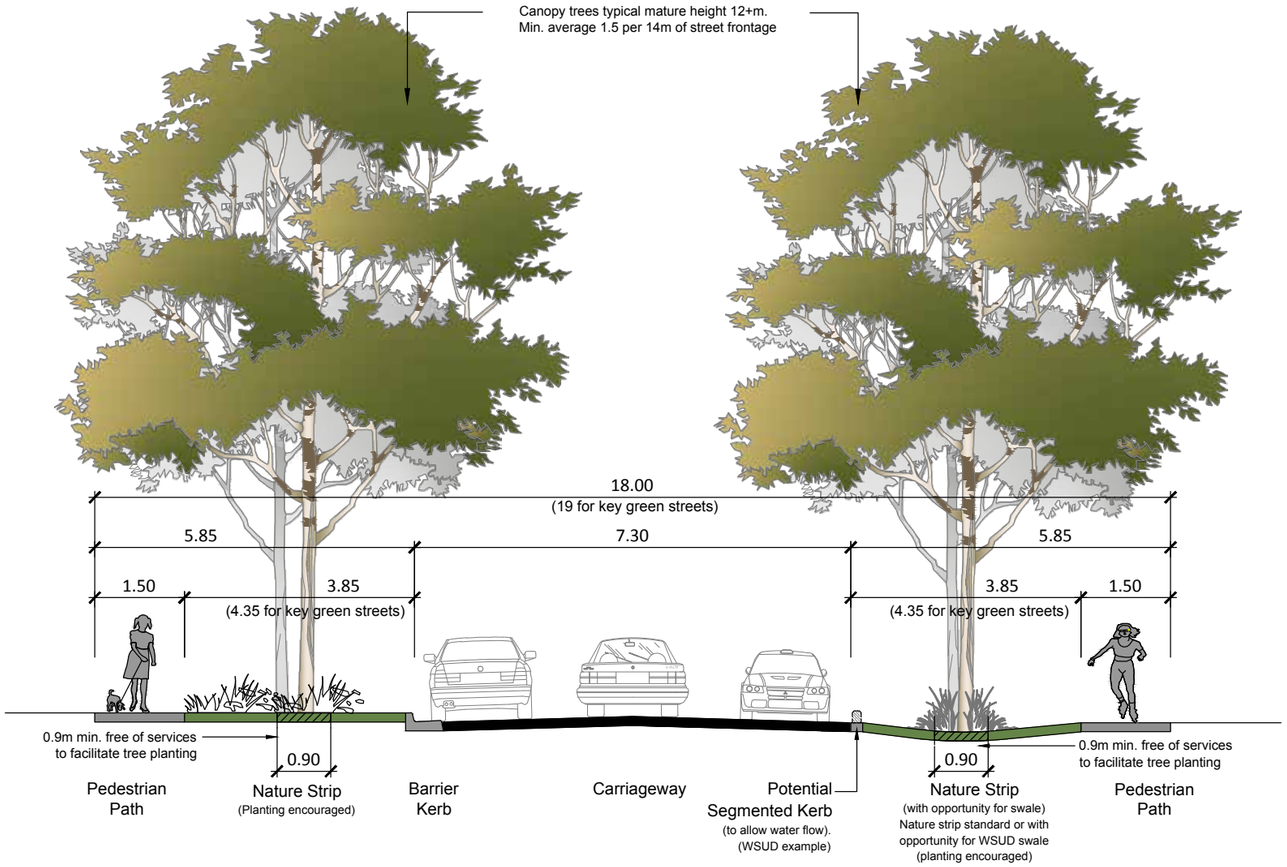
A PROPERTY SPECIFIC LAND USE BUDGET

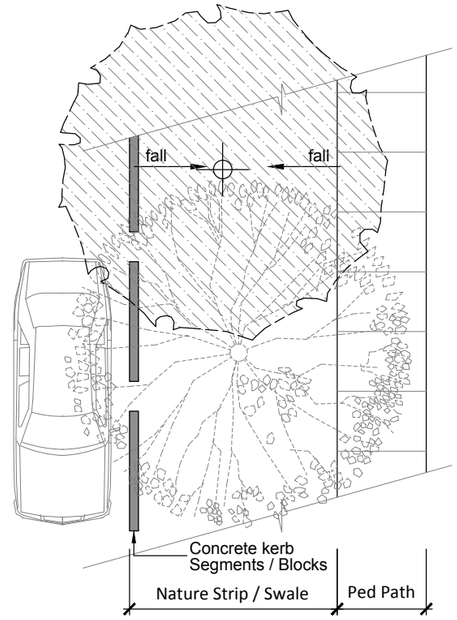
		TRANSPORT		COMMUNITY		ENCUMBERED LAND FOR RECREATION					UNENCUMBERED LAND FOR RECREATION		OTHER		KEY PERCENTAGES						
PROPERTY NUMBER	TOTAL AREA (HECTARES)	ARTERIAL ROAD - CASEY FILEDS BVD / BROWNS RD	ROAD RESERVE NOT AVAILABLE FOR DEVELOPMENT	COMMUNITY FACILITIES	GOVERNMENT SCHOOLS	POWER EASEMENT	WATERWAY / DRAINAGE LINE / WETLAND / RETARDING	HERITAGE (Aboriginal)	RBGC DEFENDABLE SPACE 'OUTER ZONE'	CONSERVATION	ACTIVE OPEN SPACE	PASSIVE OPEN SPACE	TREE RESERVE (Browns Road)	TOTAL NET DEVELOPABLE AREA (HECTARES)	NET DEVPT AREA % OF PRECINCT	ACITVE OPEN SPACE% NDA	PASSIVE OPEN SPACE % NDA	TOTAL PASSIVE & ACTIVE OPEN SPACE %	52.01 OPEN SPACE DEL TARGET %	DIFFERENCE % NDA	DIFFERENCE - EQUIVALENT LAND AREA Ha
SOUTH																					
Property 1	6.01								1.15		4.86			0.00	0.00%	n.a.	n.a.	n.a.	4.21%	0.00%	0.00
Property 2	20.06			0.80	3.11				0.66		3.77	0.38		11.34	56.54%	33.25%	3.39%	36.64%	4.21%	-0.83%	-0.09
Property 3	18.59											0.47	0.50	17.61	94.76%	0.00%	2.67%	2.67%	4.21%	-1.54%	-0.27
Property 4	19.95				0.40							0.81	0.53	18.22	91.32%	0.00%	4.45%	4.45%	4.21%	0.24%	0.04
Property 5	17.16								0.36			1.01	0.27	15.53	90.51%	0.00%	6.48%	6.48%	4.21%	2.26%	0.35
Property 6	15.45								0.50			0.92	0.25	13.78	89.20%	0.00%	6.66%	6.66%	4.21%	2.44%	0.34
Property 7	32.37	0.05					0.99	1.06	1.15	0.05		2.58	0.34	26.15	80.80%	0.00%	9.85%	9.85%	4.21%	5.64%	1.47
Property 8	9.09						2.69						0.41	5.98	65.79%	0.00%	0.00%	0.00%	4.21%	-4.21%	-0.25
Property 9	8.43			0.56	1.97		1.31			0.02	4.24		0.34	0.00	0.00%	n.a.	0.00%	n.a.	4.21%	-4.21%	0.00
Property 10	8.28	0.26					1.96				3.34		0.29	2.44	29.41%	136.98%	0.00%	136.98%	4.21%	-4.21%	-0.10
Property 11	64.58			0.25	1.53		3.85	0.36	0.15			1.89		56.55	87.57%	0.00%	3.34%	3.34%	4.21%	-0.87%	-0.49
Property 12	22.90						2.49	0.80	0.53	1.89		0.21		16.98	74.14%	0.00%	1.22%	1.22%	4.21%	-2.99%	-0.51
SUB-TOTAL	**242.86**	**0.31**	**0.00**	**1.61**	**7.00**	**0.00**	**13.29**	**2.22**	**4.50**	**1.96**	**16.20**	**8.26**	**2.93**	**184.58**	**76.00%**	**8.78%**	**4.48%**	**13.26%**	**4.21%**	**9.04%**	**0.49**
ROAD RESERVES																					
1 (Smiths La)	0.96		0.96						0.00		0.00			0.00	0.00%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2 (Browns Rd)	2.54	2.35								0.20				0.00	0.00%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
SUB-TOTAL	**3.50**	**2.35**	**0.96**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00%**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**
TOTAL SOUTH	**246.36**	**2.65**	**0.96**	**1.61**	**7.00**	**0.00**	**13.29**	**2.22**	**4.50**	**2.16**	**16.20**	**8.26**	**2.93**	**184.58**	**74.92%**	**8.78%**	**4.48%**	**13.26%**			
NORTH																					
Property 13	1.43						0.20							1.23	86.06%	0.00%	0.00%	0.00%	4.21%	-4.21%	-0.05
Property 14	0.14													0.14	100.00%	0.00%	0.00%	0.00%	4.21%	-4.21%	-0.01
Property 15	10.78						1.05		0.31			0.84		8.57	79.57%	0.00%	9.85%	9.85%	4.21%	5.63%	0.48
Property 16	6.68						0.64		0.22	0.28		0.20		5.35	80.09%	0.00%	3.72%	3.72%	4.21%	-0.50%	-0.03
Property 17	0.68													0.68	100.00%	0.00%	0.00%	0.00%	4.21%	-4.21%	-0.03
Property 18	13.85						1.05		0.06	0.14				12.60	91.01%	0.00%	0.00%	0.00%	4.21%	-4.21%	-0.53
Property 19	8.12						1.06		0.05	0.14				6.87	84.57%	0.00%	0.00%	0.00%	4.21%	-4.21%	-0.29
Property 20	1.26													1.26	100.00%	0.00%	0.00%	0.00%	4.21%	-4.21%	-0.05
Property 21	1.97									0.37				1.59	81.03%	0.00%	0.00%	0.00%	4.21%	-4.21%	-0.07
Property 22	0.41													0.41	100.00%	0.00%	0.00%	0.00%	4.21%	-4.21%	-0.02
Property 23	0.72													0.72	100.00%	0.00%	0.00%	0.00%	4.21%	-4.21%	-0.03
Property 24	8.50						1.36		0.67	1.09		0.00		5.38	63.26%	0.00%	0.00%	0.00%	4.21%	-4.21%	-0.23
Property 25	11.73						0.16		0.22	0.19		0.86		10.30	87.80%	0.00%	8.33%	8.33%	4.21%	4.12%	0.42
Property 26	0.97								0.21					0.76	78.71%	0.00%	0.00%	0.00%	4.21%	-4.21%	-0.03
SUB-TOTAL	**67.23**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.51**	**0.00**	**1.74**	**2.21**	**0.00**	**1.90**	**0.00**	**55.87**	**83.10%**	**0.00%**	**3.40%**	**3.40%**	**4.21%**	**-0.81%**	**-0.45**
ROAD RESERVES																					
3	1.68		0.77				0.09		0.04					0.77	46.21%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4 (Botanic Dr)	2.31		1.70							0.61				0.00	0.00%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
SUB-TOTAL	**3.98**	**0.00**	**2.47**	**0.00**	**0.00**	**0.00**	**0.09**	**0.00**	**0.04**	**0.61**	**0.00**	**0.00**	**0.00**	**0.77**	**19.44%**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**
TOTAL NORTH	**71.21**	**0.00**	**2.47**	**0.00**	**0.00**	**0.00**	**5.61**	**0.00**	**1.78**	**2.81**	**0.00**	**1.90**	**0.00**	**56.64**	**79.54%**	**0.00%**	**3.36%**	**3.36%**			
TOTAL PRECINCT	**317.57**	**2.65**	**3.43**	**1.61**	**7.00**	**0.00**	**18.89**	**2.22**	**6.28**	**4.97**	**16.20**	**10.16**	**2.93**	**241.22**	**75.96%**	**6.72%**	**4.21%**	**10.93%**			

B ESTIMATED PROPERTY SPECIFIC DWELLING YIELD

PROPERTY NUMBER	TOTAL AREA (HECTARES)	TOTAL NET DEVELOPABLE AREA (HECTARES)	NEIGHBOURHOOD ZONE 14.5 Dwell per NRHa			INTERFACE ZONE 8.5 Dwell per NRHa			VILLAGE ZONE 20 Dwell per NRHa			LOCAL TOWN CENTRE 7 Dwell per NRHa			TOTAL COMBINED			YIELD PER NET DEVELOPABLE HA
			NRHa	Dwell / NRHa	Dwellings	NRHa	Dwell / NRHa	Dwellings	NRHa	Dwell / NRHa	Dwellings	NRHa	Dwell / NRHa	Dwellings	NRHa	Dwell / NRHa	Dwellings	
SOUTH																		
Property 1	6.01	0.00	0.00	14.5	0		8.50	0		20	0		7	0	0.00	n.a.	0	n.a.
Property 2	20.06	11.34	7.57	14.5	110	2.32	8.50	20	1.45	20	29		7	0	11.34	13.98	158	13.98
Property 3	18.59	17.61	6.78	14.5	98	2.26	8.50	19	7.37	20	147	1.20	7	8	17.61	15.52	273	15.52
Property 4	19.95	18.22	11.72	14.5	170	2.39	8.50	20	4.10	20	82		7	0	18.22	14.95	272	14.95
Property 5	17.16	15.53	11.70	14.5	170	3.39	8.50	29	0.45	20	9		7	0	15.53	13.35	207	13.35
Property 6	15.45	13.78	10.83	14.5	157	2.95	8.50	25		20	0		7	0	13.78	13.22	182	13.22
Property 7	32.37	26.15	19.69	14.5	285	6.47	8.50	55		20	0		7	0	26.15	13.02	340	13.02
Property 8	9.09	5.98	3.86	14.5	56	0.85	8.50	7	1.26	20	25		7	0	5.98	14.80	88	14.80
Property 9	8.43	0.00	0.00	14.5	0		8.50	0		20	0		7	0	0.00	14.50	0	14.50
Property 10	8.28	2.44	1.01	14.5	15		8.50	0	1.43	20	29		7	0	2.44	17.73	43	17.73
Property 11	64.58	56.55	37.35	14.5	542	2.11	8.50	18	13.34	20	267	3.75	7	26	56.55	15.08	853	15.08
Property 12	22.90	16.98	13.84	14.5	201	3.14	8.50	27		20	0		7	0	16.98	13.39	227	13.39
SUB-TOTAL	**242.86**	**184.58**	**124.33**	**14.5**	**1803**	**25.89**	**8.50**	**220**	**29.41**	**20**	**588**	**4.95**	**7**	**35**	**184.58**	**14.33**	**2646**	**14.33**
ROAD RESERVES																		
Smiths Lane	0.96	0.00	0.00	14.5	0	0.00	8.50	0	0.00	20	0	0.00	7	0	0.00	n.a.	0	0.00
Browns Road	2.54	0.00	0.00	14.5	0	0.00	8.50	0	0.00	20	0	0.00	7	0	0.00	n.a.	0	0.00
SUB-TOTAL	**3.50**	**0.00**	**0.00**	**14.5**	**0**	**0.00**	**8.50**	**0**	**0.00**	**20**	**0**	**0.00**	**7**	**0**	**0.00**		**0**	**0.00**
TOTAL SOUTH	**246.36**	**184.58**	**124.33**	**14.5**	**1803**	**25.89**	**8.5**	**220**	**29.41**	**20**	**588**	**4.95**	**7**	**35**	**184.58**	**14.33**	**2646**	**14.33**
NORTH																		
Property 13	1.43	1.23	0.51	14.5	7	0.72	8.50	6		20	0		7	0	1.23	10.97	13	10.97
Property 14	0.14	0.14	0.05	14.5	1	0.09	8.50	1		20	0		7	0	0.14	10.56	1	10.56
Property 15	10.78	8.57	7.53	14.5	109	1.05	8.50	9		20	0		7	0	8.57	13.77	118	13.77
Property 16	6.68	5.35	3.66	14.5	53	1.15	8.50	10	0.55	20	11		7	0	5.35	13.78	74	13.78
Property 17	0.68	0.68	0.68	14.5	10		8.50	0		20	0		7	0	0.68	14.50	10	14.50
Property 18	13.85	12.60	7.89	14.5	114	2.10	8.50	18	2.62	20	52		7	0	12.60	14.65	185	14.65
Property 19	8.12	6.87	2.04	14.5	30	2.28	8.50	19	2.56	20	51		7	0	6.87	14.56	100	14.56
Property 20	1.26	1.26	1.26	14.5	18		8.50	0		20	0		7	0	1.26	14.50	18	14.50
Property 21	1.97	1.59	1.59	14.5	23		8.50	0		20	0		7	0	1.59	14.50	23	14.50
Property 22	0.41	0.41	0.41	14.5	6		8.50	0		20	0		7	0	0.41	14.50	6	14.50
Property 23	0.72	0.72	0.72	14.5	10		8.50	0		20	0		7	0	0.72	14.50	10	14.50
Property 24	8.50	5.38	2.80	14.5	41	2.10	8.50	18	0.48	20	10		7	0	5.38	12.65	68	12.65
Property 25	11.73	10.30	7.08	14.5	103	2.22	8.50	19	0.99	20	20		7	0	10.30	13.74	141	13.74
Property 26	0.97	0.76	0.00	14.5	0	0.76	8.50	6		20	0		7	0	0.76	8.50	6	8.50
SUB-TOTAL	**67.23**	**55.87**	**36.21**	**14.5**	**525**	**12.46**	**8.50**	**106**	**7.20**	**20**	**144**	**0.00**	**7**	**0**	**55.87**	**13.87**	**775**	**13.87**
ROAD RESERVES																		
3	1.68	0.77	0.56	14.5	8	0.21	8.50	2	0.00	20	0	0.00	7	0	0.77	n.a.	10	0.00
4 (Botanic Dr)	2.31	0.00	0.00	14.5	0		8.50	0	0.00	20	0	0.00	7	0	0.00	n.a.	0	0.00
SUB-TOTAL	**3.98**	**0.77**	**0.56**	**14.5**	**8**	**0.21**	**8.50**	**2**	**0.00**	**20**	**0**	**0.00**	**7**	**0**	**0.77**		**10**	**0.00**
TOTAL NORTH	**71.21**	**56.64**	**36.78**	**14.5**	**533**	**12.67**	**8.50**	**108**	**7.20**	**20**	**144**	**0.00**	**7**	**0**	**56.64**	**13.86**	**785**	**13.86**
TOTAL PRECINCT	**317.57**	**241.22**	**161.11**	**14.5**	**2336**	**38.56**	**8.5**	**328**	**36.60**	**20**	**732**	**4.95**	**7**	**35**	**241.22**	**14.22**	**3431**	**14.22**

C STREET CROSS SECTIONS





PLAN EXAMPLE OF WSUD TREATMENT
(Note: Other solutions possible)

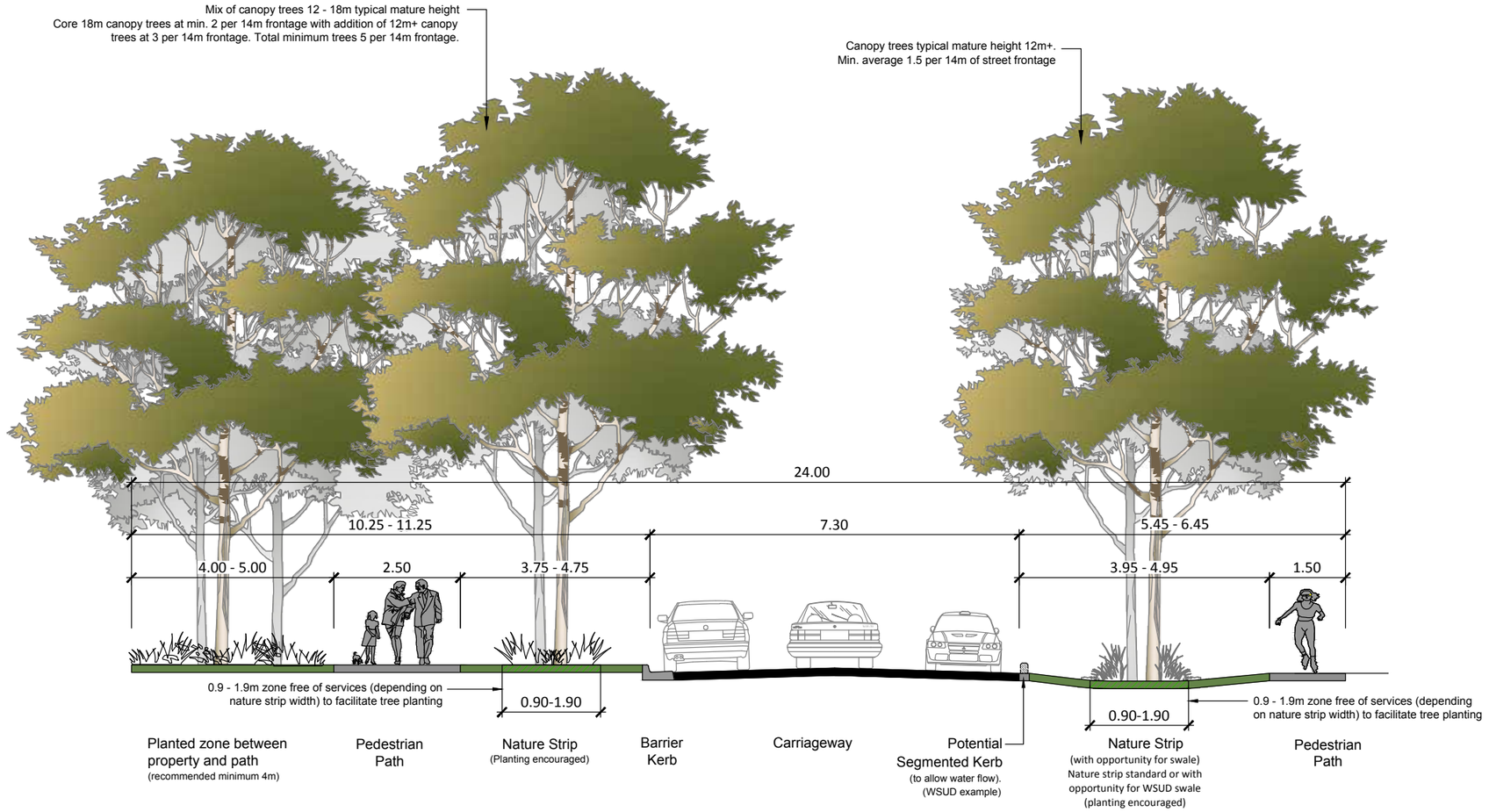
Notes:

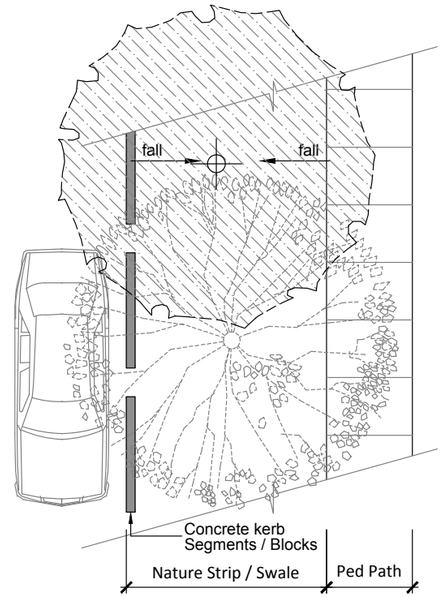
- Road reserve on park frontages reduced to 15m min. or 16m for "key green street" (road network plan code "AL1-K").
- Add min. extra 0.5m to nature strip each side (resulting in min. 19m road reserve) on designated "key green streets" (Road Network plan code "AL1-K").
- Key Green Streets may have all of extra width (1m min.) applied to one side of the street.
- Under planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under planting in nature strips to be generally less than 0.7m high to ensure site lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting.
- WSUD approach shown on this drawing is indicative and is shown to support water infiltration and planting that delivers the 'green street' concept for the precinct. Other design approaches are possible pending Council approval. WSUD may be on one or both sides of street.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.

section 1

access place / access street level 1 (typical local residential street) plan code AL1 & AL1-K

botanic ridge precinct structure plan





PLAN EXAMPLE OF WSUD TREATMENT
(Note: Other solutions possible)

Notes:

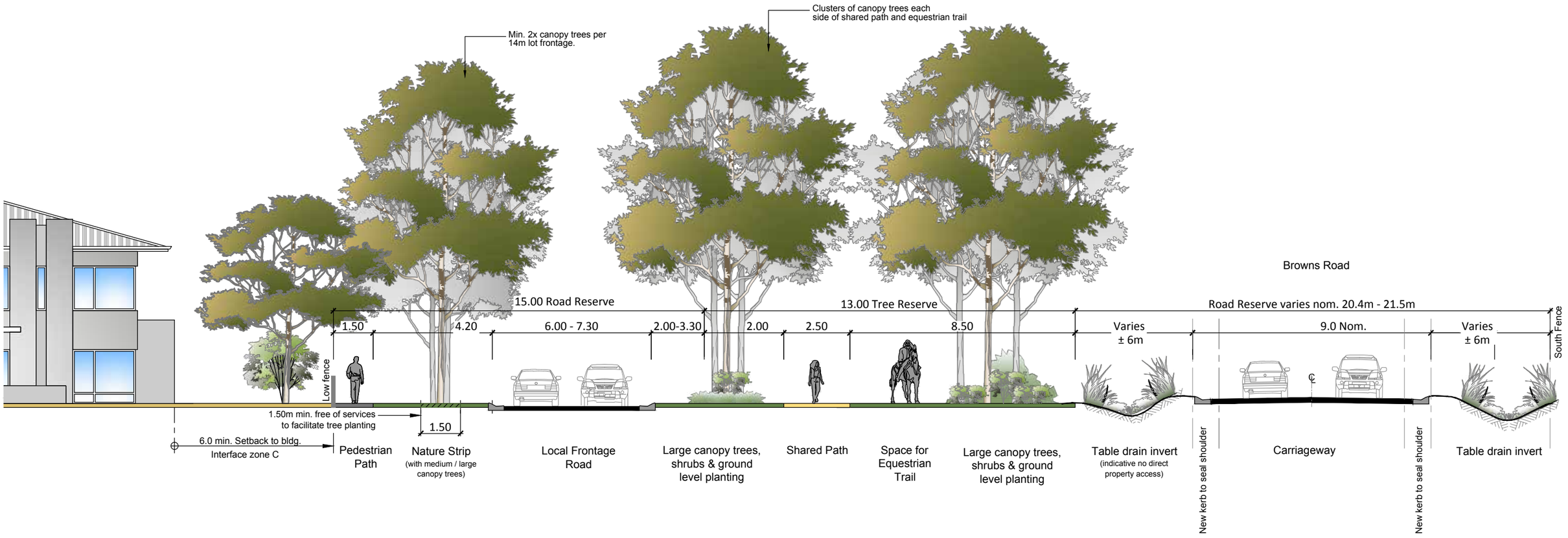
- Where located adjacent public open space road reserve may be reduced to 19m wide.
- Shared landscaped trails to be used along strategic streets as shown on Urban Structure Plan, connecting key destinations and activities. Where they are used, a minimum offset from property boundaries, to allow for sufficient sight-lines, is required. Measures to reduce the frequency and number of vehicle crossings, and the frequency of street intersection should also occur along these trails.Rear loaded dwellings encouraged on these streets.
- Under planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under planting in nature strips to be generally less than 0.7m high to ensure site lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting.
- WSUD approach shown on this drawing is indicative and is shown to support water infiltration and planting that delivers the 'green street' concept for the precinct. Other design approaches are possible pending Council approval. WSUD may be on one or both sides of street.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in of groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.
- Where this street type forms part of the Southern Brown Bandicoot Connectivity area as shown on Plan 5 the shared path may be located closer to (or possibly) abutting the kerb to create more contiguous planting and habitat space.

section 2

Amended by C227

access place / access street level 1 with landscape trail plan code AL1-T

botanic ridge precinct structure plan



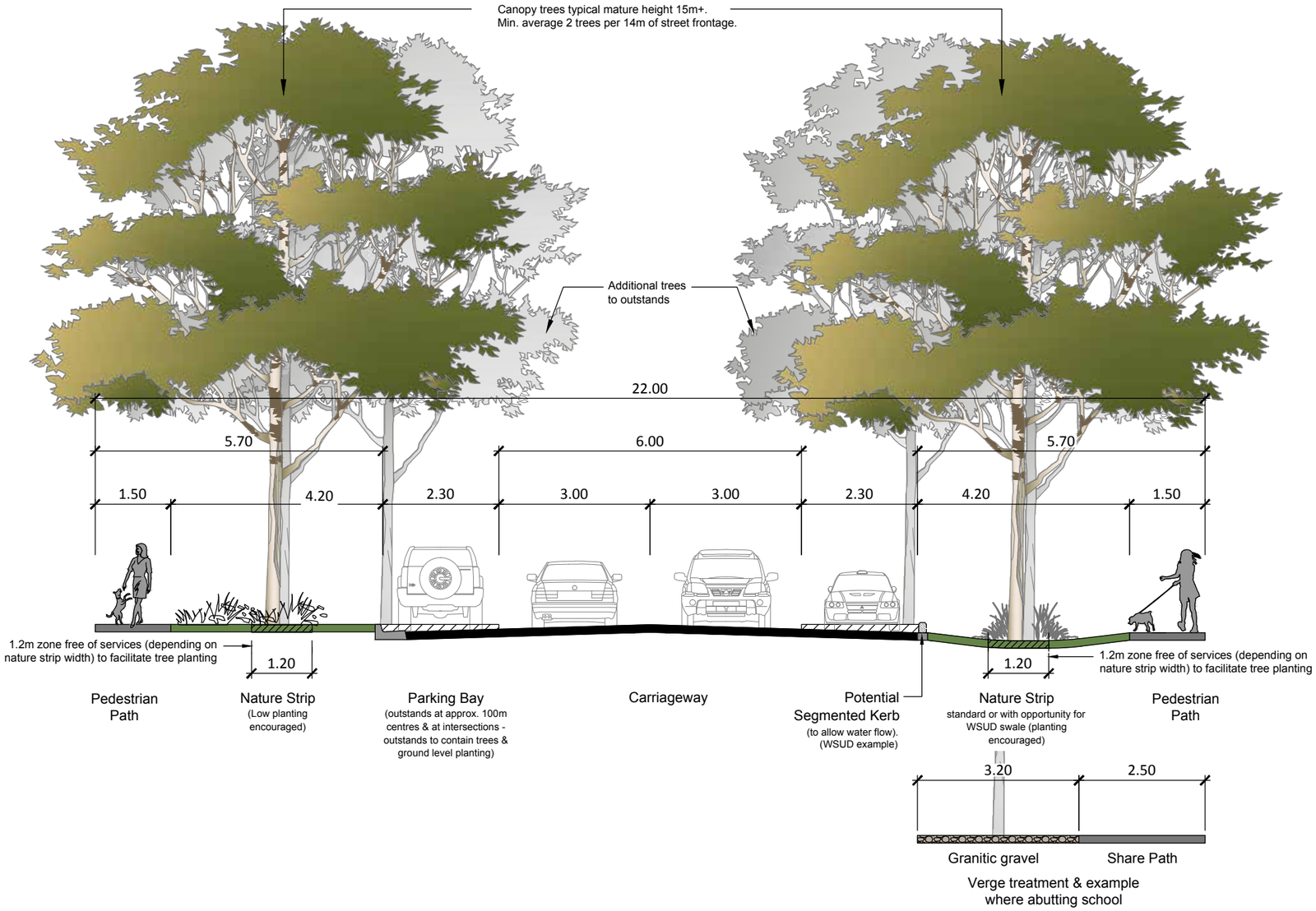
Notes:

- Common trenching of services must occur where possible to facilitate tree planting.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in of groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.
- Install min. 300-900x400 culverts under road for bandicoot movement at junction with southern brown bandicoot corridor. (Detailed design subject to CMP specifications & DSE approval). Refer section 8 or 16 for indicative approach to bandicoot culvert underpass)
- Detailed design of bandicoot culverts, endwalls & street verge planting must be to the satisfaction of the Department of Sustainability & Environment.

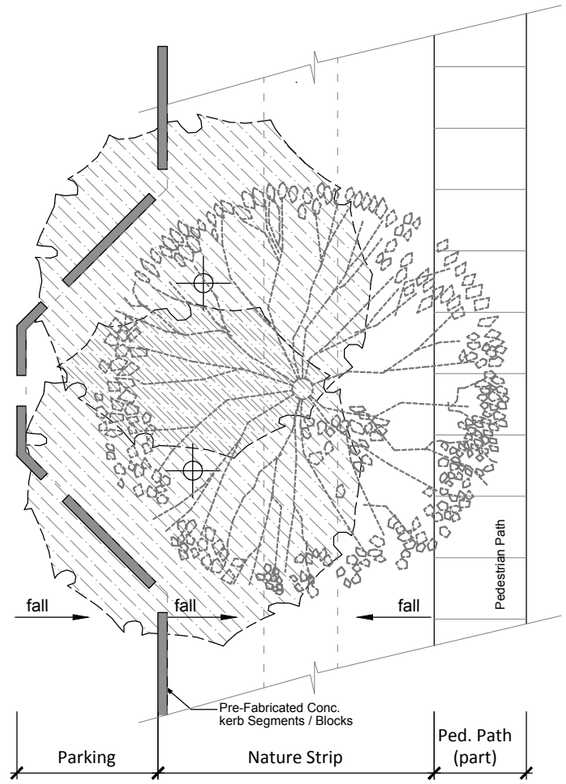
section 3

browns road & residential frontage street interface

botanic ridge precinct structure plan



Verge treatment & example where abutting school



PLAN EXAMPLE OF WSUD TREATMENT
(Note: Other solutions possible)

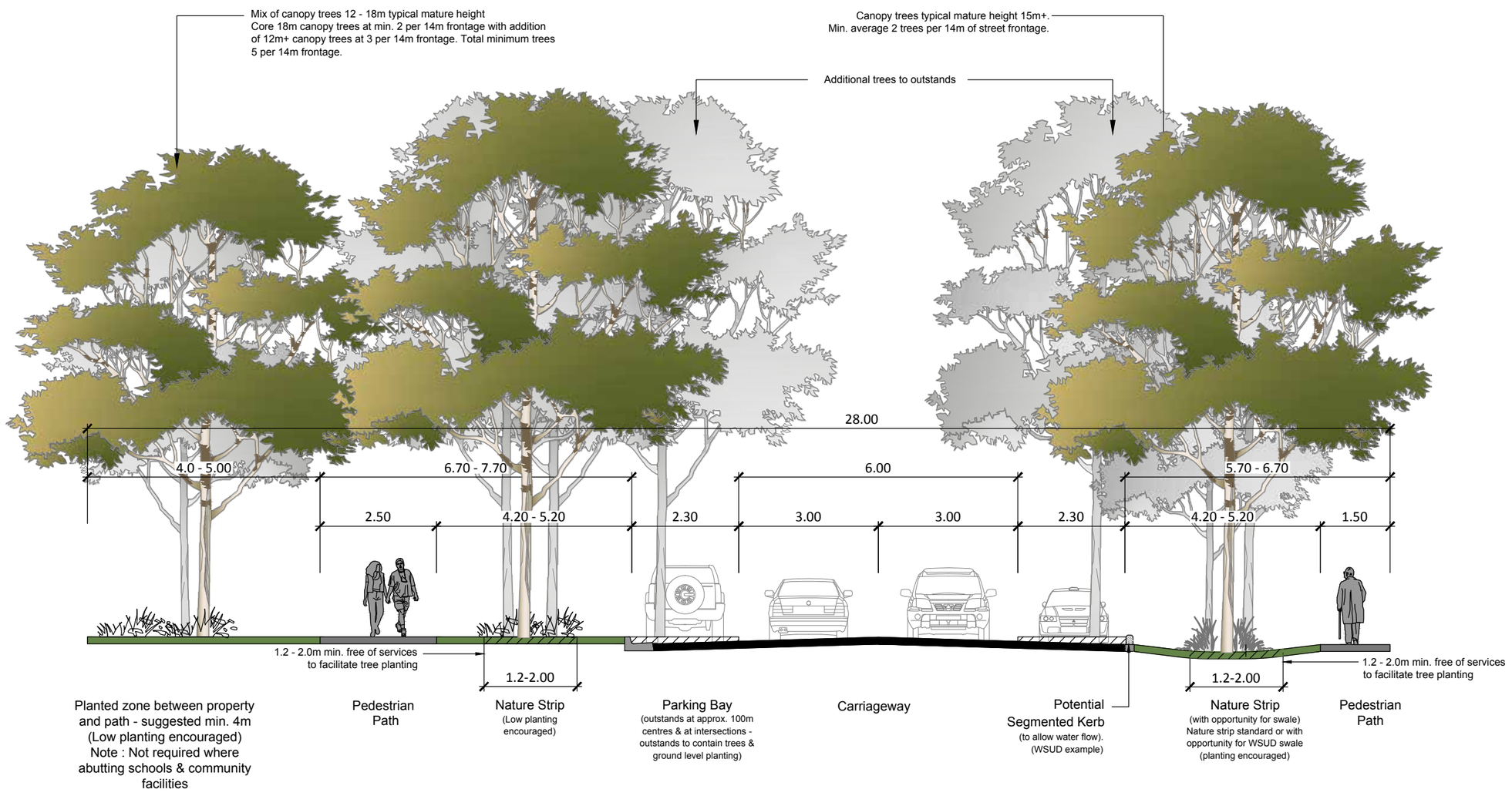
Notes:

- Road reserve on park frontages reduced to 19m. min.
- Under planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under planting in nature strips is to be generally less than 0.7m high to ensure site lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting.
- WSUD approach shown on this drawing is indicative and is shown to support water infiltration and planting that delivers the 'green street' concept for the precinct. Other design approaches are possible pending Council approval. WSUD may be on one or both sides of street.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.
- Verge abutting schools must contain a 2.5 m shared path. Alternative treatments for nature strip encouraged such as granitic gravel or hard pavement. Alternative treatment must be designed to facilitate canopy tree planting.

section 4

access street level 2 plan code AL2

botanic ridge precinct structure plan



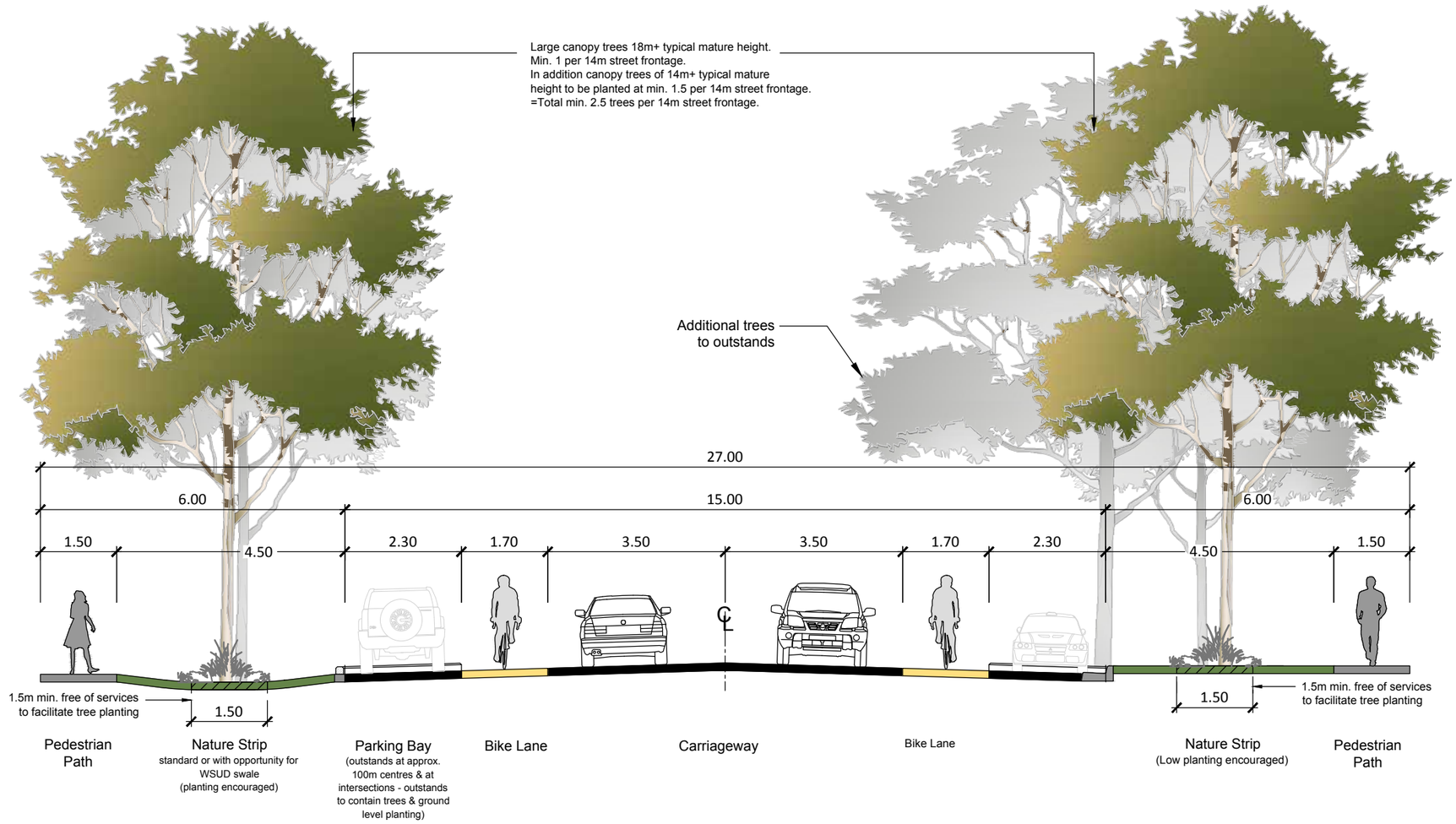
Notes:

- Shared landscaped trails to be used along targeted strategic streets as shown on Urban Structure Plan, connecting key destinations and activities. Where they are used, a minimum appropriate offset from property boundaries, to allow for sufficient sight-lines, is required. Measures to reduce the frequency and number of vehicle crossings (such as rear loaded lots), and the frequency of street intersections should also occur along these trails.
- Under planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under planting in nature strips to be generally less than 0.7m high to ensure site lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting.
- WSUD approach shown on this drawing is indicative and is shown to support water infiltration and planting that delivers the 'green street' concept for the precinct. Other design approaches are possible pending Council approval. WSUD may be on one or both sides.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.
- Where adjacent / abutting schools or public open space reduce to 23m total width.

section 5

access street level 2 with shared landscape trail plan code AL2-T

botanic ridge precinct structure plan



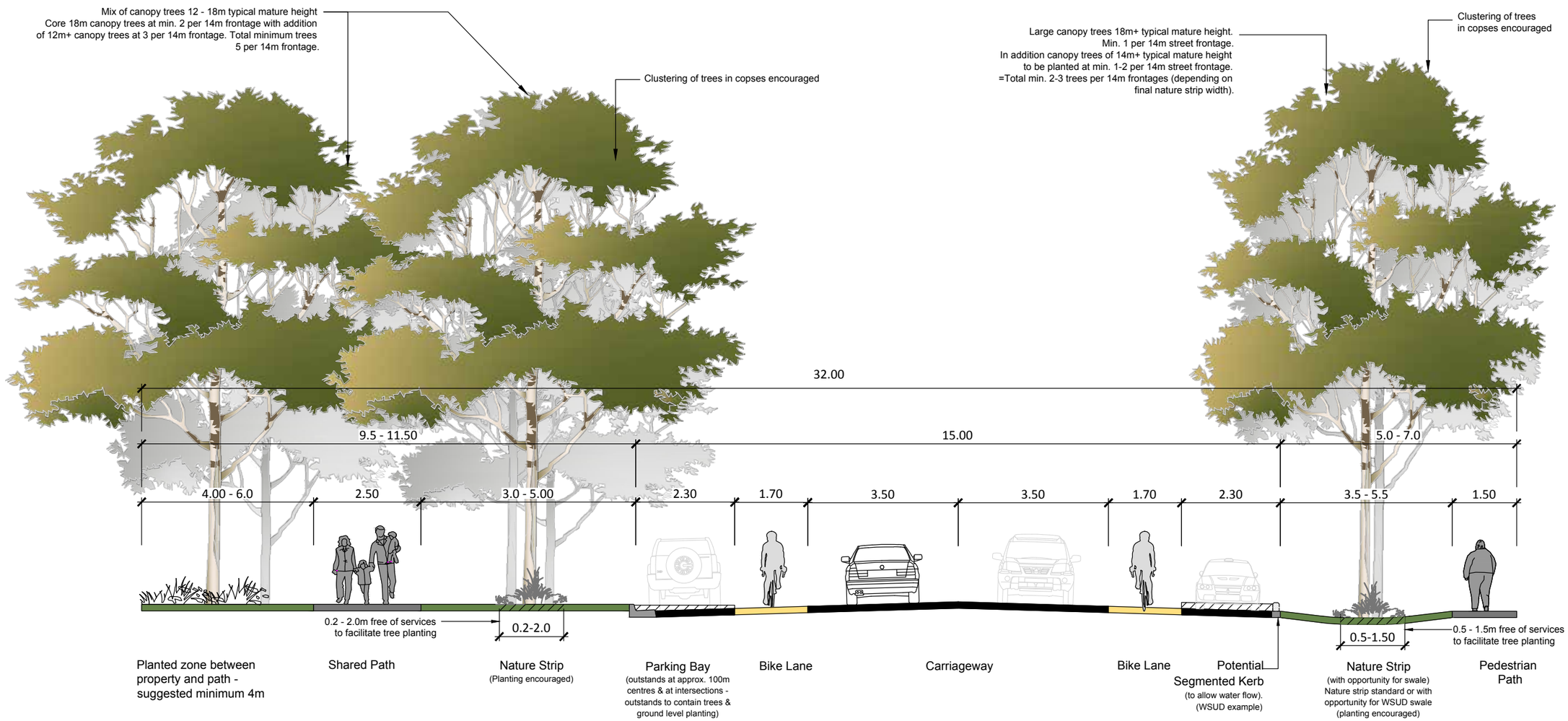
Notes:

- Under planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under planting in nature strips to be generally less than 0.7m high to ensure site lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting.
- WSUD approach shown on this drawing is indicative and is shown to promote water infiltration and planting that supports the 'green street' concept for the precinct. Other design approaches are possible pending Council approval. WSUD may be on one or both sides of street.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.

section 6

connector street **plan code C2, C3, C4-B, C5-A, & C6**

botanic ridge precinct structure plan



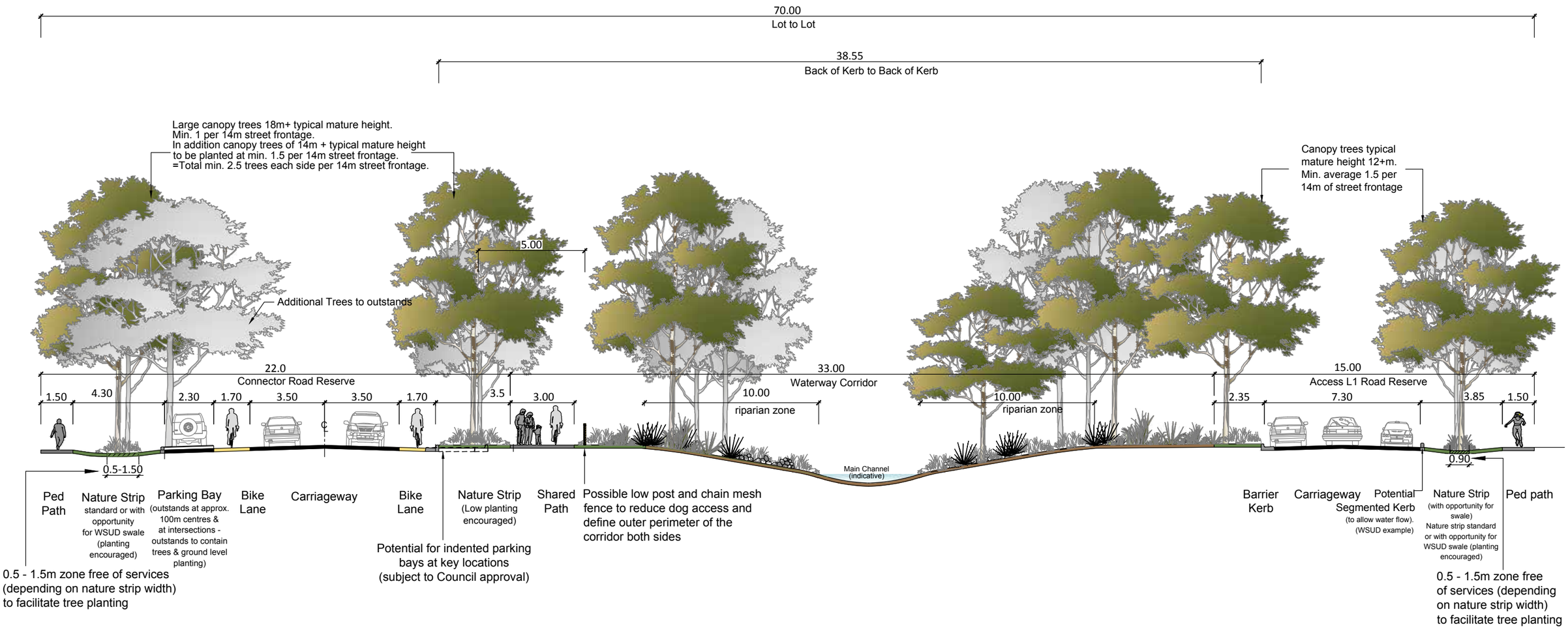
Notes:

- Where connector street with shared trail abuts waterways the road reserve may be reduced to 22m wide. (Refer cross sections 9 & 18 for example).
- Were abutting other public open space road reserve may be reduced to 27m wide.
- Under planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under planting in nature strips to be generally less than 0.7m high to ensure site lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting.
- WSUD approach shown on this drawing is indicative and is shown to promote water infiltration and planting that supports the 'green street' concept for the precinct. Other design approaches are possible pending Council approval. WSUD may be on one or both sides.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.
- Shared landscaped trails to be used along targeted strategic streets as shown on Urban Structure Plan, connecting key destinations and activities. Where they are used, a minimum appropriate offset from property boundaries, to allow for sufficient sight-lines, is required.Measures to reduce the frequency and number of vehicle crossings, and the frequency of street intersection should also occur along these trails.
- Range of dimensions in nature strip / verge width shown enables flexibility in road design.

section 7

connector street - residential with shared landscaped trail plan code C1-A & C4-A

botanic ridge precinct structure plan



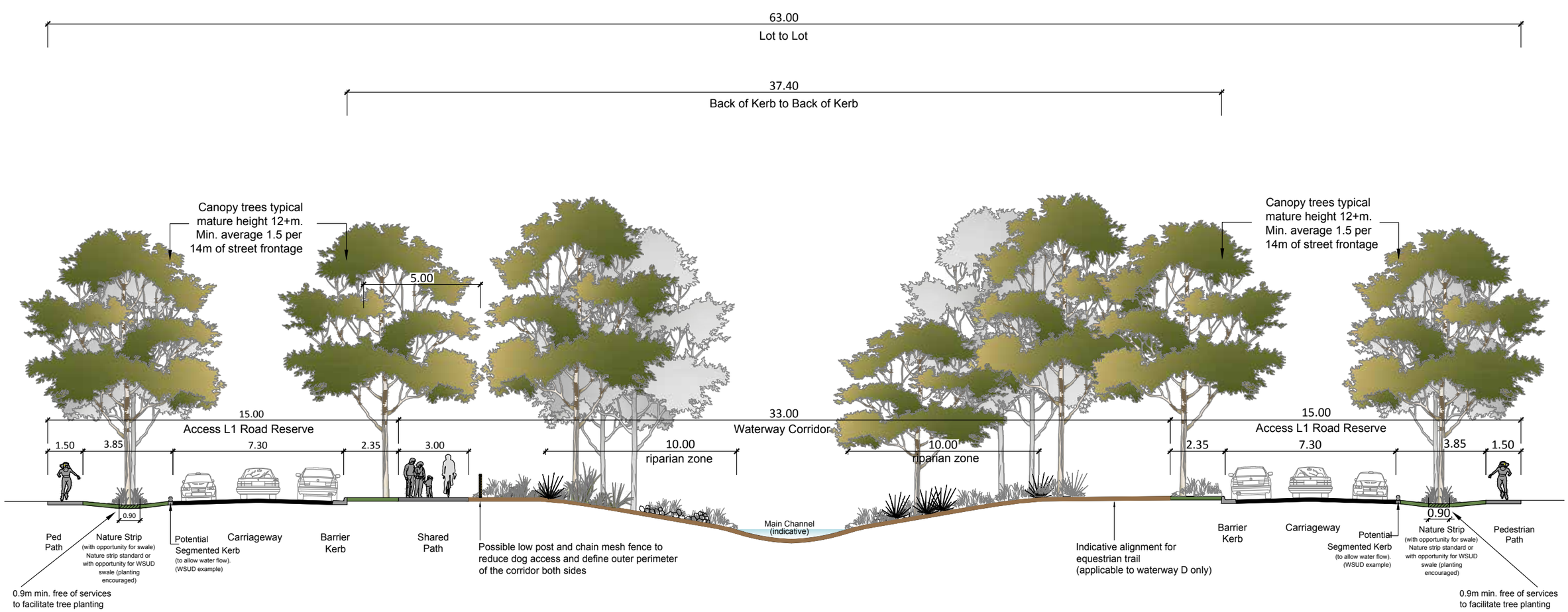
Notes:

- Under-planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under-planting in nature strips to be generally less than 0.7m high to ensure sight lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting.
- WSUD approach shown on this drawing is indicative and is shown to promote water infiltration and planting that supports the 'green street' concept for the precinct. Other design approaches are possible pending Council approval. WSUD may be on one or both sides.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.
- Waterway detailed design and construction subject to Melbourne Water approval.
- Waterway corridor C forms part of the Southern Brown Bandicoot Connectivity area as shown on Plan 5 .

section 8 Amended by C227

typical connector street (22m Plan code C5-B) and access street level 1 (15m) & waterway C (33m) interface

botanic ridge precinct structure plan



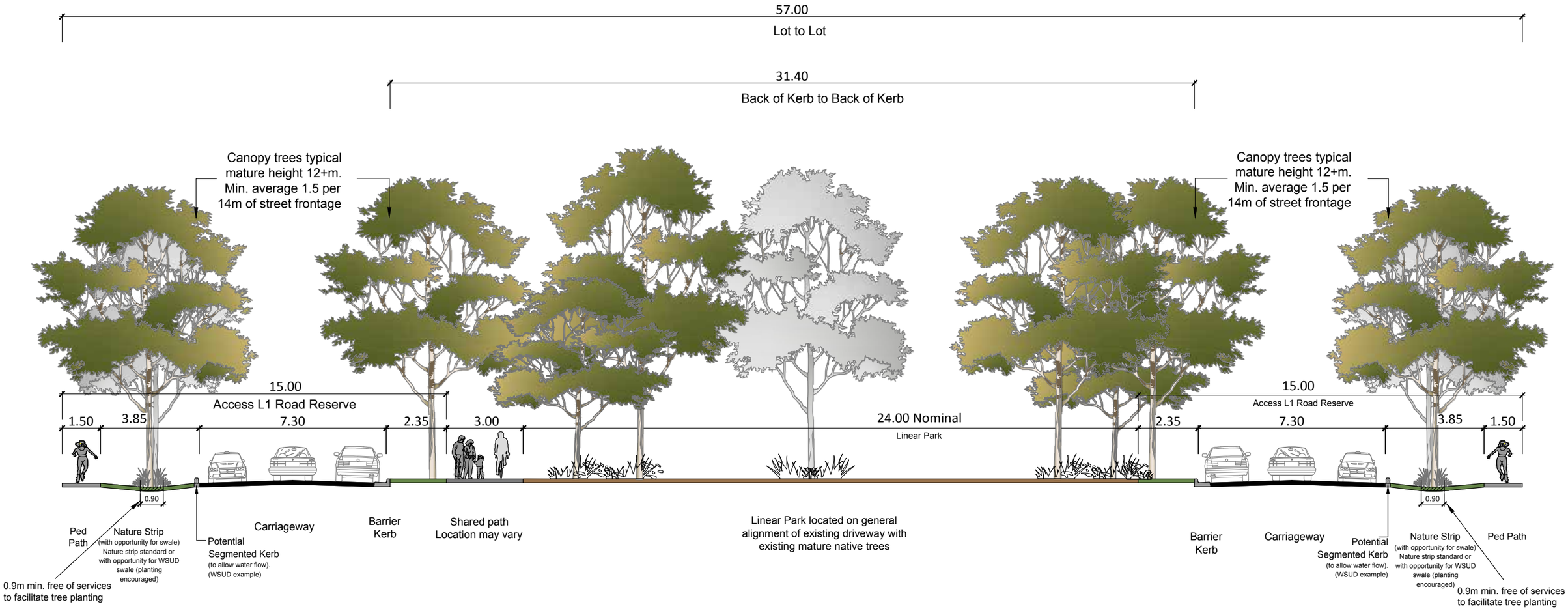
Notes:

- Under-planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under-planting in nature strips to be generally less than 0.7m high to ensure sight lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting.
- WSUD approach shown on this drawing is indicative and is shown to promote water infiltration and planting that supports the 'green street' concept for the precinct. Other design approaches are possible pending Council approval. WSUD may be on one or both sides.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.
- Waterway detailed design and construction subject to Melbourne Water approval.
- Waterway corridor C forms part of the Southern Brown Bandicoot Connectivity area as shown on Plan 5 .
- Location and alignment of the equestrian trail may vary from depicted subject to the approval of the the relevant responsible authority.

section 8a Inserted by C227

typical access street level 1 (15m) both sides & waterways C & D (33m) interface

botanic ridge precinct structure plan



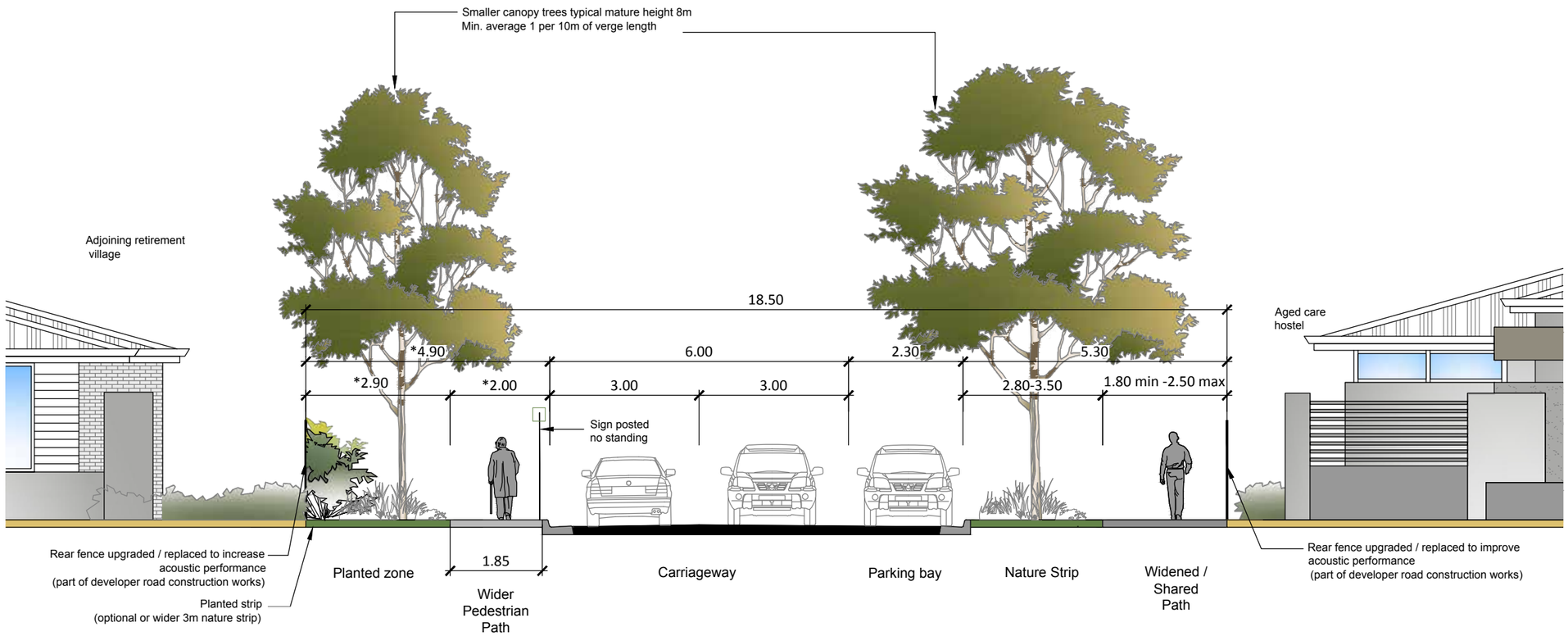
Notes:

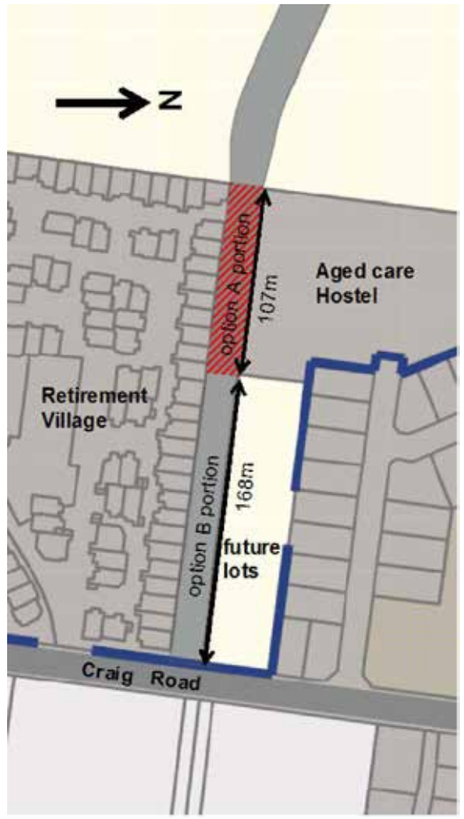
- Under-planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under-planting in nature strips to be generally less than 0.7m high to ensure sight lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting.
- WSUD approach shown on this drawing is indicative and is shown to promote water infiltration and planting that supports the 'green street' concept for the precinct. Other design approaches are possible pending Council approval. WSUD may be on one or both sides.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.
- Waterway detailed design and construction subject to Melbourne Water approval.
- This linear parkland forms part of the Southern Brown Bandicoot Connectivity area as shown on Plan 5.

section 8b Inserted by C227

typical access street level 1 (15m) both sides & P4 to P5 linear park (24m) interface

botanic ridge precinct structure plant





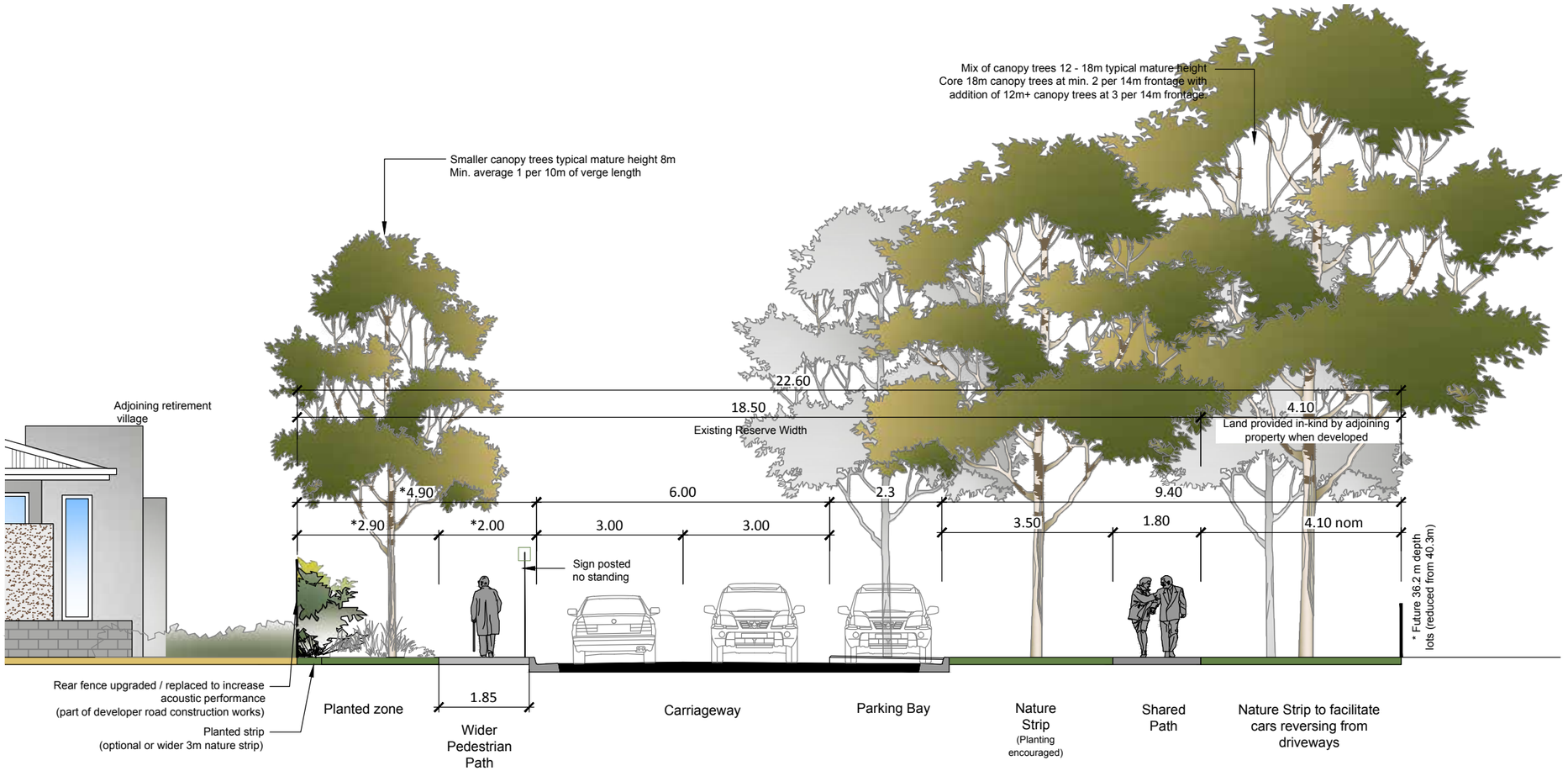
Notes:

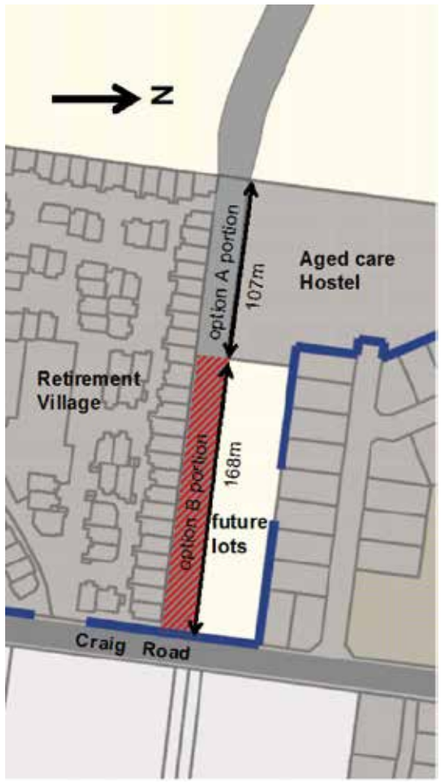
- Widened kerb side lane to accommodate buses and bicycles.
- Provides 4.80 verge to south side with min.1.8m bike pedestrian path.
- Provides wider 5.30m verge that can accommodate 2.5m wide shared path to North side - with narrower nature strip supporting smaller tree planting.
- No parking to south (retirement village) side.
- Under planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under planting in nature strips to be generally less than 0.7m high to ensure site lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting. Services under pavements may be required.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.

section 9 Amended by C227

road adjacent north boundary of retirement village - fully constrained western section **plan code AL2-A**

botanic ridge precinct structure plan





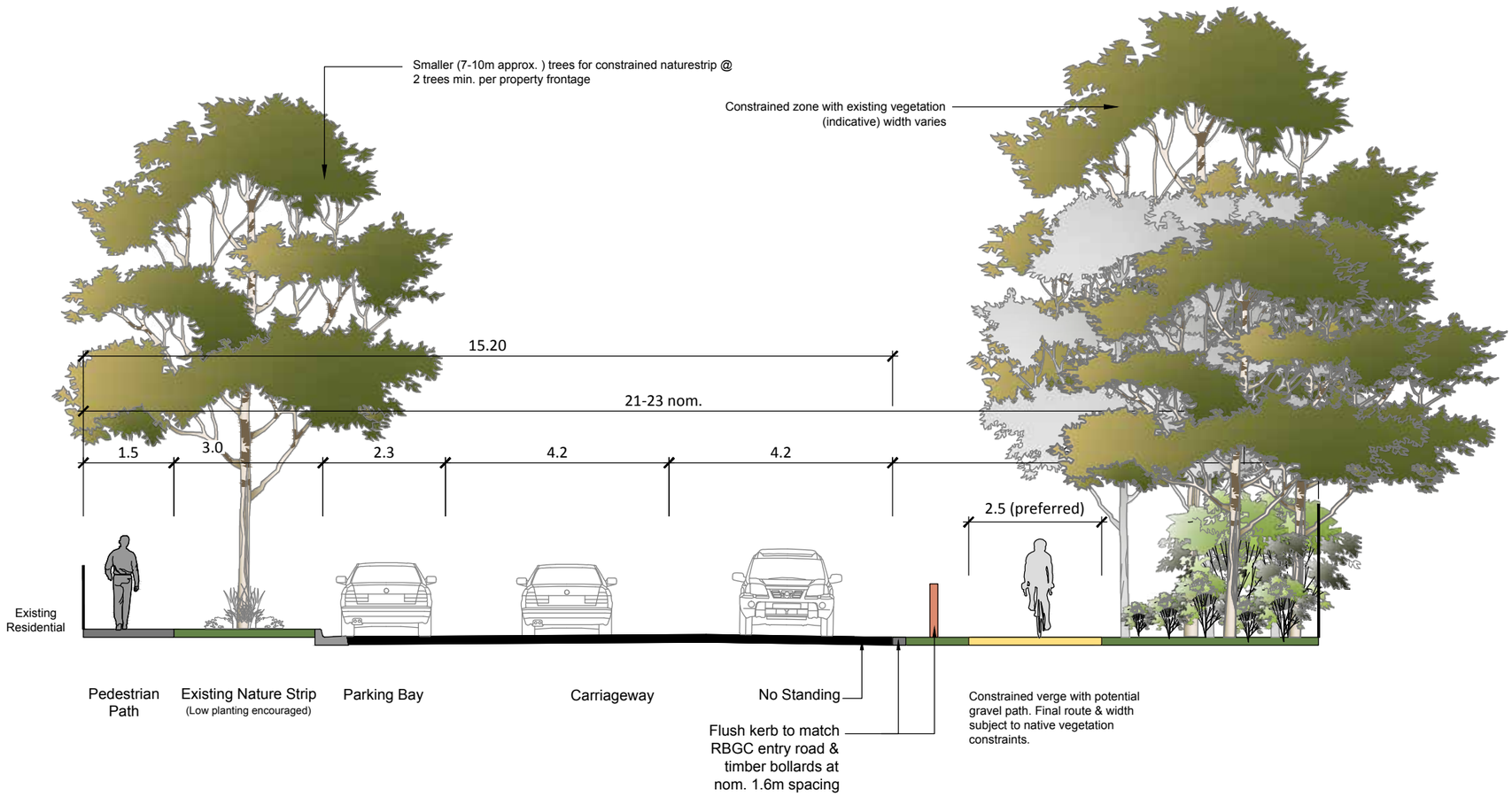
Notes:

- Wider section of road - utilises 4.1m strip of land on north side to be provided in-kind when adjoining property develops.
- Standard parking to front of lots on north (RHS) side of road.
- No parking to south (retirement village) side.
- Provides 4.9m verge and min.1.8m wide pedestrian path to south (retirement Village) side.
- Provides for 9.5m wide verge and shared path / landscaped to north side - enables additional tree planting.
- Under planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under planting in nature strips to be generally less than 0.7m high to ensure site lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting. Services under pavements may be required.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council..

section 10 Amended by C227

road adjacent north boundary of retirement village - partly constrained eastern section **plan code AL2-B**

botanic ridge precinct structure plan



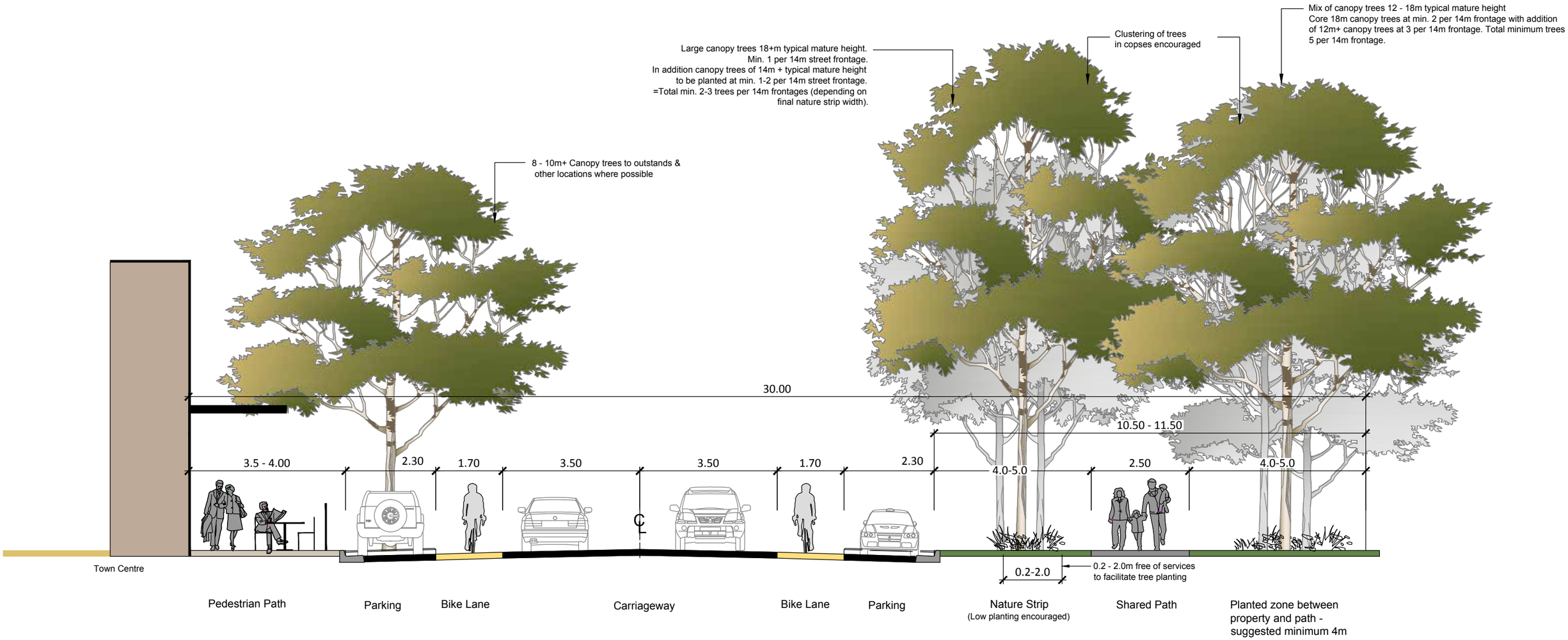
Notes:

- Under planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under planting in nature strips to be generally less than 0.7m high to ensure site lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both - depending on available space.
- All trees and ground level planting subject to approval by Council.
- Final cross section solution is subject to detailed feature & level survey & design & to approval of Council. Any changes to carriageway configuration subject to approval of Department of Transport.

section 11

ballarto road connector within existing constrained road reserve **plan code C-7**

botanic ridge precinct structure plan



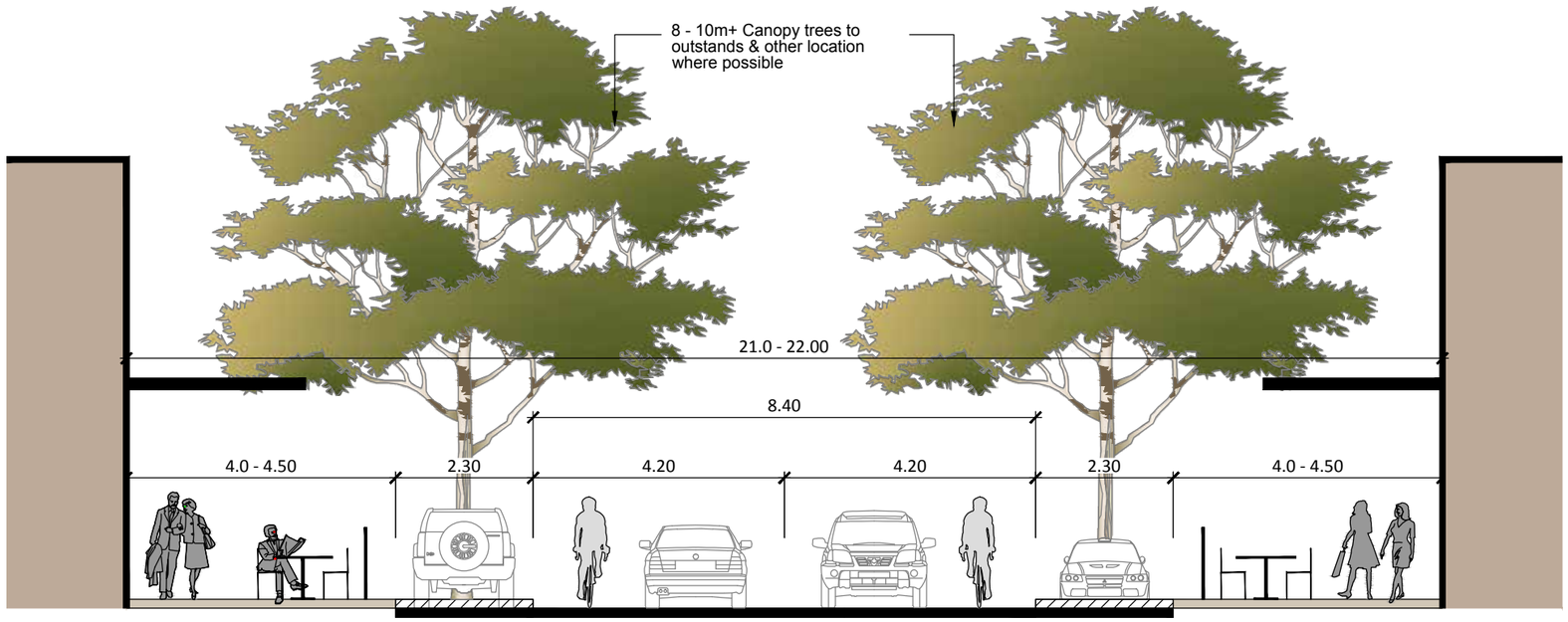
Notes:

- Under planting of nature strips should be compliant with Council Guidelines and offset 1.2m from BOK unless otherwise agreed by Council.
- Height of under planting in nature strips to be generally less than 0.7m high to ensure site lines for pedestrians and vehicles and to comply with CPTED principles.
- Common trenching of services must occur where possible to facilitate tree planting.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or as a combination of both.
- All trees and ground level planting subject to approval by Council.
- WSUD encouraged for Town Centres to maximise storm water re-use, improved quality & support landscape planting.
- Shopfront pedestrian paths to contain 1.8m clear trafficable zone as measured from building line; 0.70m min. car door opening zone & 1.0 min. trading / cafe zone.(min. 3.5m total)

section 12

western town centre main street & shared landscape trail - connector level plan code C1-B

botanic ridge precinct structure plan



Notes:

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:

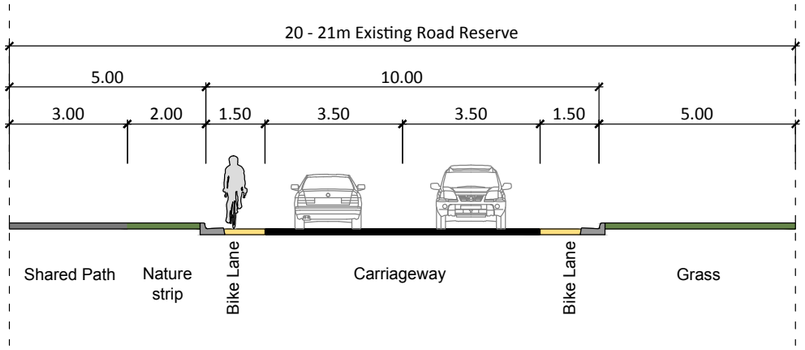
1. a bus service is not expected to utilise that segment of the LTC connector (e.g. an alternative route is proposed); or
2. a bus service is expected to utilise that segment of the LTC connector and:
   - pedestrian accessibility and safety is the primary transport objective,
   - there will be no prejudicial 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.

- WSUD encouraged for Town Centres to maximise storm water re-use, improved quality & support landscape planting.
- Shopfront pedestrian paths to contain 1.8m clear trafficable zone as measured from building line; 0.70m min. car door opening zone & 1.5 min. trading / cafe zone with 4.0 m total min. width.

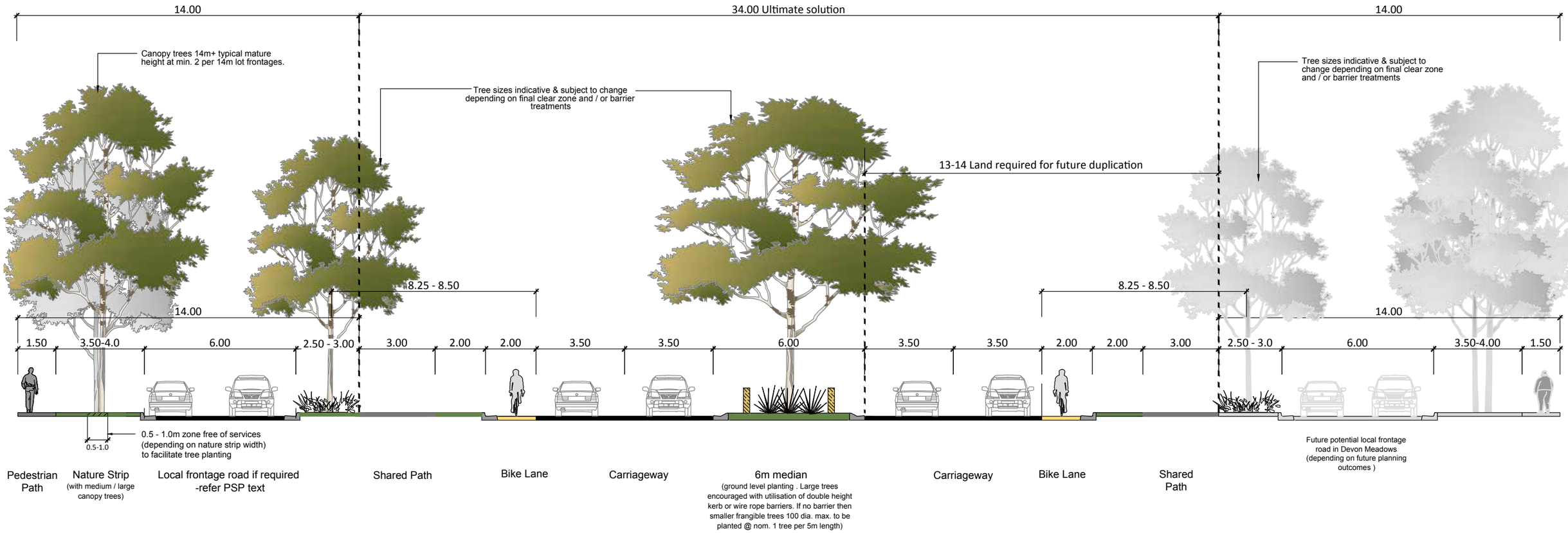
section 13

east (craig road) town centre main street plan code C1-C

botanic ridge precinct structure plan



INTERIM SOLUTION



Note

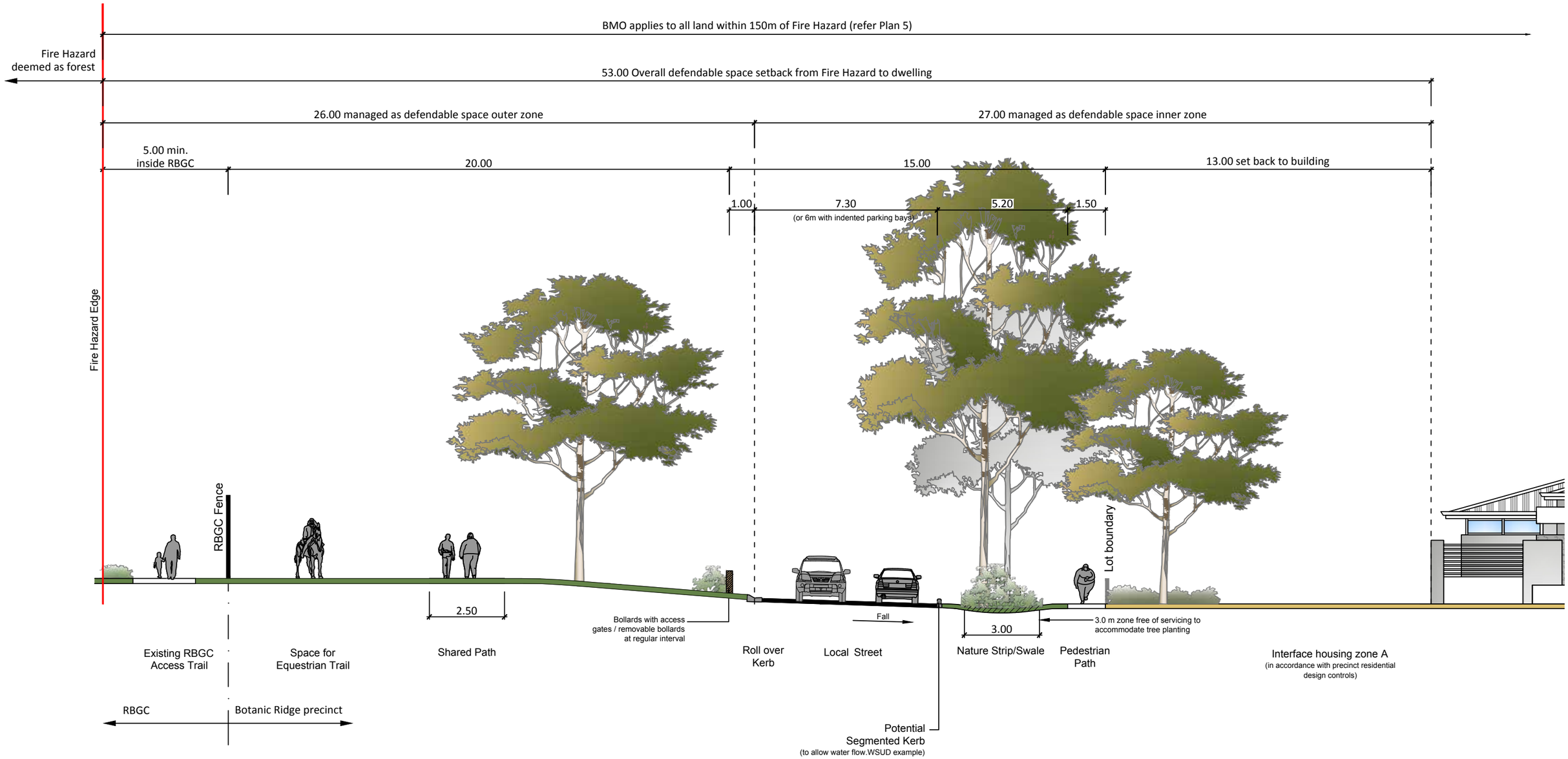
- Includes typical residential frontage roads each side.
- Investigation and use of physical barriers such as wire rope fencing is encouraged to enable more extensive canopy tree planting.
- Physical barriers shown on this drawing & tree planting locations are indicative only & subject to detailed design approval by the responsible Authority.

section 14

Amended by C197

casey fields boulevard / craig road - 4 lane arterial interim & ultimate

botanic ridge precinct structure plan



Notes:

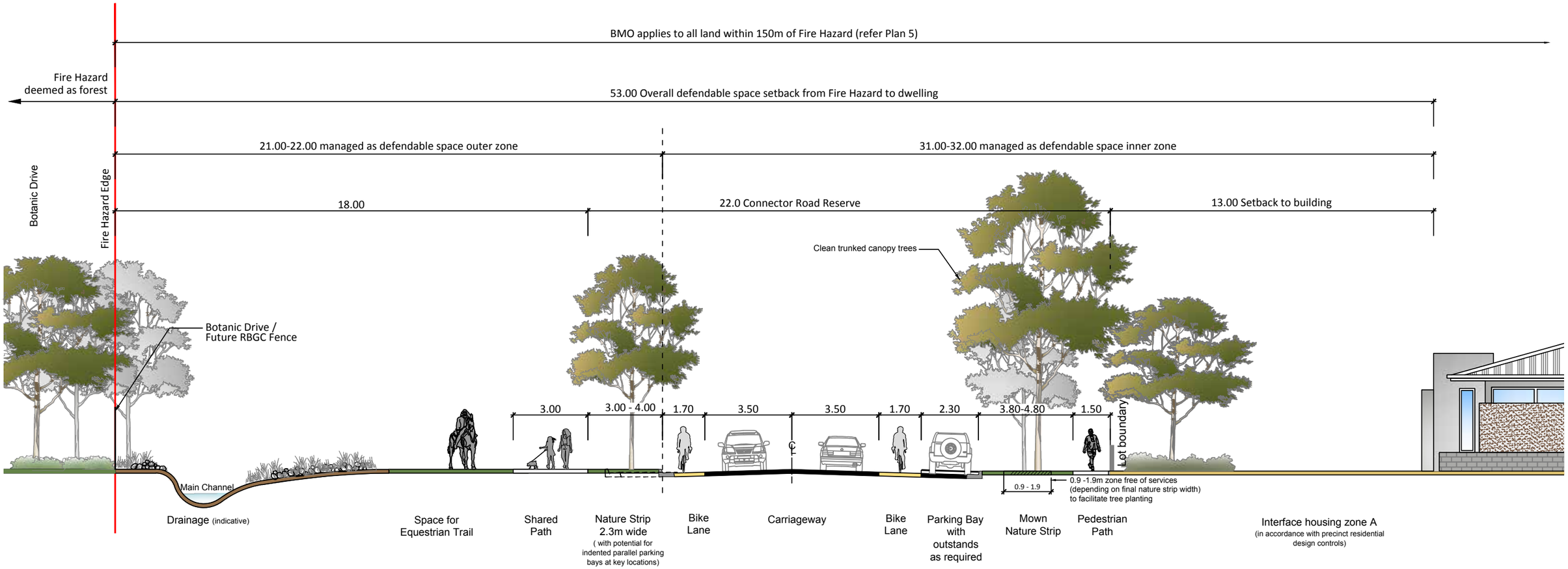
- All dimensions shown are in metres.
- Common trenching of services must occur where possible to facilitate tree planting.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.

southeast section 15

Amended by C197

typical local street and south rbgc interface / defendable space

botanic ridge precinct structure plan



Notes:

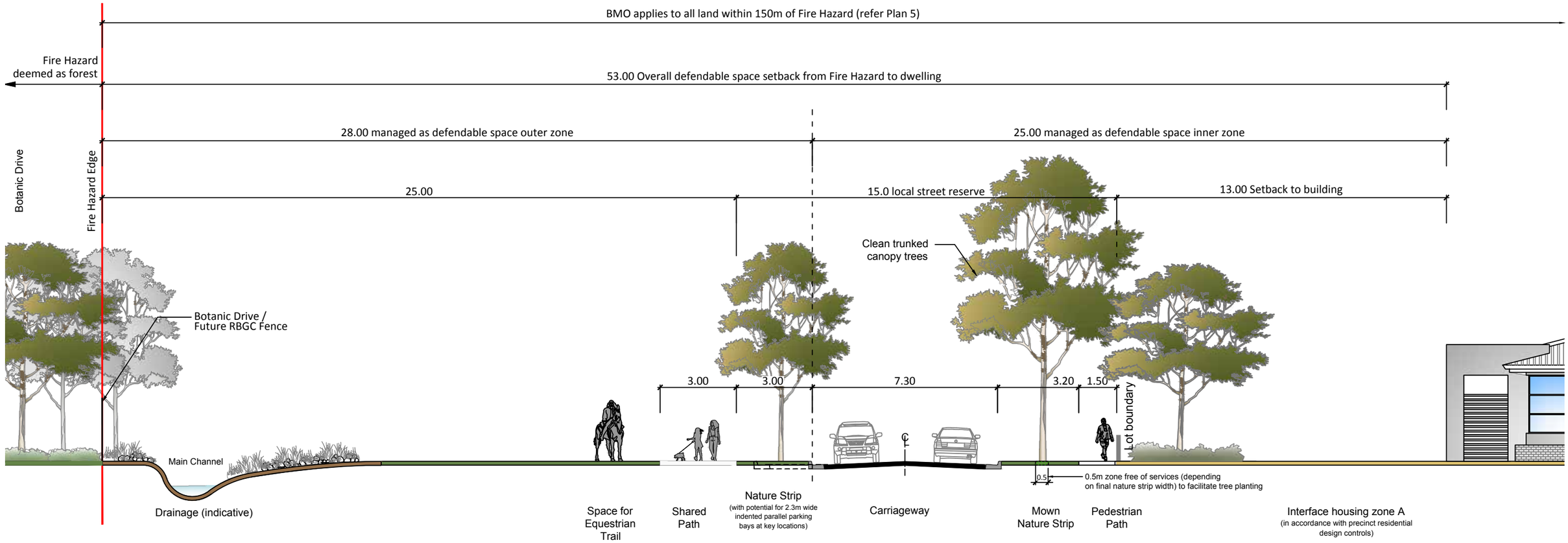
- All dimensions are in metres
- Common trenching of services must occur where possible to facilitate tree planting.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.

section 16

Amended by C197

typical connector and east rbgc boundary / defendable space / drainage interface **plan code C5-C**

botanic ridge precinct structure plan



Notes:

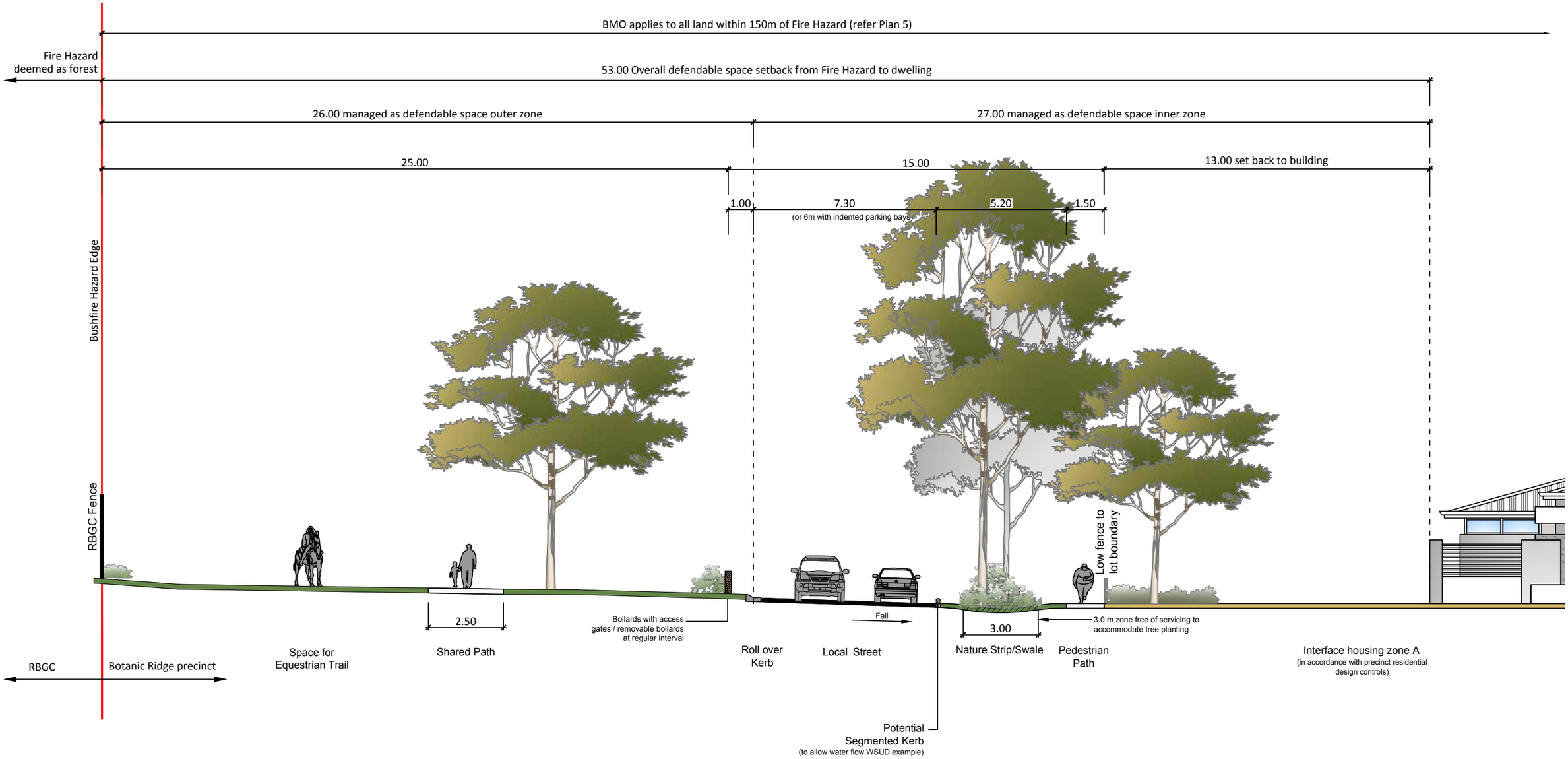
- All dimensions are in metres.
- Common trenching of services must occur where possible to facilitate tree planting.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged as a combination of groups or single specimen.
- All trees and ground level planting subject to approval by Council.

section 17

Amended by C197

typical local street & east rbgc boundary / defendable space / drainage interface

botanic ridge precinct structure plan



Notes:

- All dimensions are in metres.
- Common trenching of services must occur where possible to facilitate tree planting.
- Design and location of street lights to be co-ordinated with design and location of street trees to ensure maximum street lighting effectiveness.
- Street trees may be arranged in groups or single specimens or combination of both.
- All trees and ground level planting subject to approval by Council.

section 18

Inserted by C197

typical local street and lower east rbgc interface / defendable space

botanic ridge precinct structure plan

Deleted
by C227

D ...

Victorian Planning Authority

VICTORIA State Government