

OFFICER PRECINCT STRUCTURE PLAN

Amendment C149 to the Cardinia Planning Scheme

September 2011

Officer is...



... an established community ...

... a new transit oriented town centre ...

... rich in environmental assets ...

... new neighbourhoods ...

... a rural landscape character ...

... an urban lifestyle ...

... a place of diversity & opportunity ...



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01 Introduction

1.1 Composition of Documents

The Officer Precinct Structure Plan (PSP) has been prepared by the Cardinia Shire Council in conjunction with the Growth Areas Authority (GAA), government agencies, service authorities and major stakeholders.

The Officer PSP should be read in conjunction with two other incorporated documents: the Officer Native Vegetation Precinct Plan (NVPP) and the Officer Development Contributions Plan (DCP). The role of the PSP and the NVPP and their inter-relationship are set out below.

1.2 The Officer Precinct Structure Plan

1.2.1 Role of the Precinct Structure Plan

The PSP is a long term strategic plan to guide future urban development. It describes how the land is expected to be developed, the infrastructure and services planned to support the new community and how they will be delivered.

The PSP:

- enables the transition of non-urban land to urban land;
- sets out the vision for how land should be developed and the desired outcomes to be achieved;
- determines the overall layout of future land use and development;
- outlines projects required to ensure that future residents, visitors and workers within the Precinct can be provided with timely access to services, transport, jobs, shops, open space and recreation facilities to support a quality, affordable lifestyle;

- details the form and conditions that must be met by future land use and development;
- informs the use and development controls that apply in the schedule to the Urban Growth Zone (UGZ) and what permits may be granted under the Schedule to the Zone; and,
- provides developers, investors and local communities with certainty about future development.

The PSP is informed by:

- The State Planning Policy Framework set out in the Cardinia Planning Scheme, including the Growth Area Framework Plans and the Precinct Structure Planning Guidelines (GAA 2009), and;
- The Local Planning Policy Framework of the Cardinia Planning Scheme and other local policies and strategies (under Clause 21 and 22).

1.2.2 Land to which the Precinct Structure Plan applies

The PSP applies to land shown in Plan 1 (referred to as the Precinct) and shown on the Cardinia Planning Scheme maps as Schedules 3 and 4 to the UGZ (UGZ3 and UGZ4). The Officer PSP comprises approximately 1,000 hectares¹ of land and is defined by:

- The major electricity transmission line easement to the north;
- Gum Scrub Creek to the east;
- The Princes Freeway to the south; and
- May Road, Princes Highway, Brunt Road (part), Kenilworth Avenue and Cardinia Creek to the west.

The majority of the PSP area is within the suburb of Officer, while the area west of Whiteside Road and Brunt Road is located within Beaconsfield.

1.3 The Officer Native Vegetation Precinct Plan

1.3.1 Role of the Native Vegetation Precinct Plan

The Officer Native Vegetation Precinct Plan (NVPP) has been prepared for the purposes of Clause 52.16 of the Cardinia Planning Scheme. It identifies:

- Native vegetation which may be removed without a planning permit;
- The offsets that must be provided to remove the native vegetation which can be removed;
- Native vegetation which cannot be removed without a planning permit; and
- Conditions that must be met in relation to vegetation to be protected and removed.

The Officer NVPP has been prepared concurrently to the PSP and implements the vision set out in the PSP. It is a separate stand-alone document which is incorporated within the planning scheme.

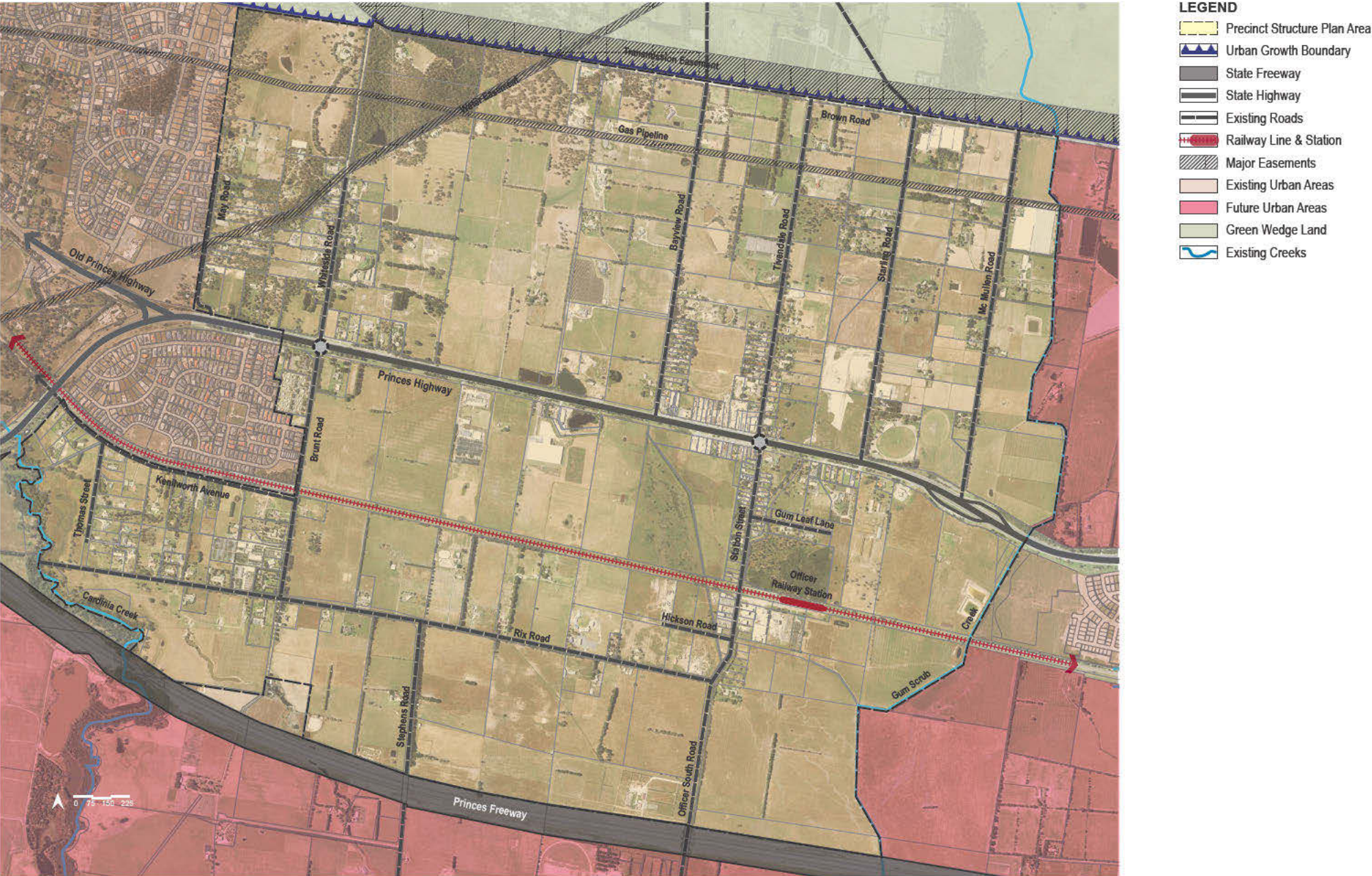
Clause 52.16 forms the statutory basis for the preparation and implementation of the NVPP. Users of this document should note that the statutory basis for the NVPP is different to the PSP (which is implemented through Clause 37.07).

1.3.2 Land to which the Native Vegetation Precinct Plan applies

The NVPP applies to land identified in Map 1 of the NVPP (September 2011). It covers all land in the Precinct, unless otherwise shown on Map 1 of the NVPP.

¹ Excludes the Freeway Services Centre.

Plan 1: Precinct Structure Plan Area



1.4 Implementation

The Officer PSP will be implemented by:

- development proponents who develop land generally in accordance with this PSP;
- the Victorian Government and the Cardinia Shire Council by funding, delivering and managing a range of infrastructure and services to support the development of the Precinct; and,
- non-government services providers and individuals such as volunteers who manage and deliver services.

Amendment C149 to the Cardinia Planning Scheme will implement the Officer PSP through:

- Schedules 3 and 4 to the Urban Growth Zone at Clause 37.07;
- the Officer Development Contributions Plan (September 2011) to be incorporated into the Scheme at Clause 45.06 Schedule 4 (DCPO4);
- the Officer Native Vegetation Precinct Plan incorporated in the Scheme at Clause 52.16; and
- other requirements of the Planning Scheme, as appropriate.

1.5 Reference Material

A glossary and other information including details of technical studies supporting the preparation of this PSP are listed in Section 7 - Other Information.

1.6 Monitoring and Review

Cardinia Shire Council and the Growth Areas Authority will jointly monitor the implementation of the Officer PSP. Its effectiveness will be evaluated regularly, at least every five years. The PSP may be revised and updated following review, which may trigger a review of the Officer Development Contributions Plan (September 2011).

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02 Local Context and Site Description

2.1 Metropolitan & Regional Context

The Officer Precinct is located in the western part of Cardinia Shire, between Beaconsfield and Pakenham. It is approximately 50 kilometres southeast of Melbourne Central Business District (CBD) and 12 kilometres east of Narre Warren-Fountain Gate Principal Activity Centre (PAC) as shown in Plan 2.

Occupying a significant land area, it is designated for residential development in the *Casey-Cardinia Growth Area Framework Plan (DSE 2006)*. Planned to accommodate approximately 10,000 dwellings, it is expected that Officer Precinct will be home to 30,000 residents at full development.

Casey-Cardinia Growth Area

The Casey-Cardinia Growth Area is located south-east of metropolitan Melbourne and includes land within the City of Casey and the Shire of Cardinia, within the Urban Growth Boundary (UGB). Cardinia's Urban Growth Area generally extends from Cardinia Creek to Pakenham between the transmission line easements north and south of the Princes Highway and Princes Freeway respectively.

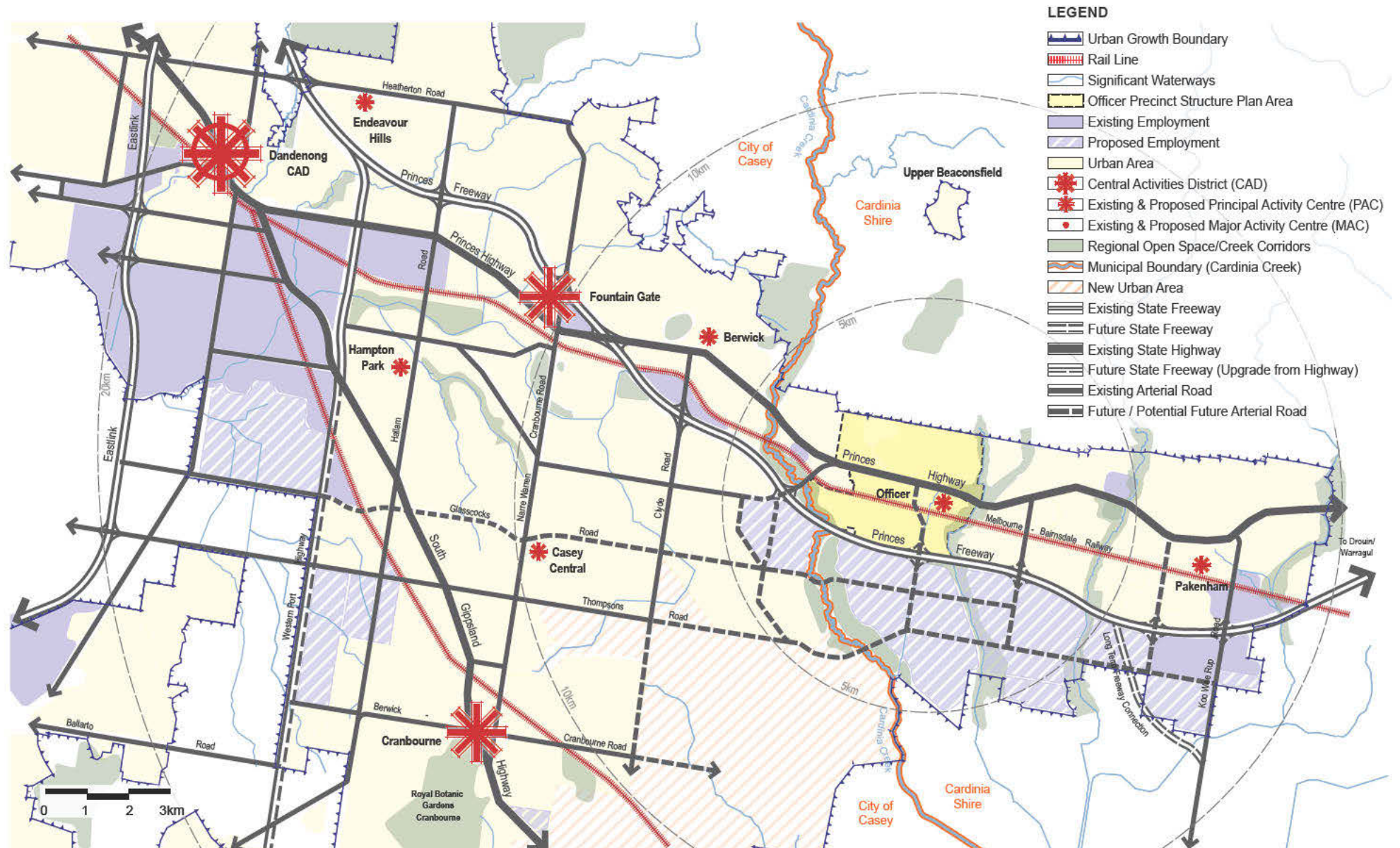
The *Growth Area Framework Plan (DSE 2006)* anticipates that the Casey-Cardinia growth area will:

- Grow by 135,000 to 170,000 people; and,
- increase the number of jobs in the area by 100,000 to 140,000.

As shown in Plan 2, in the broader metropolitan and regional context, the development of the Precinct will be influenced by:

- An **extensive network of State freeways, highways and major roads** such as
 - Princes Freeway that links to metropolitan Melbourne and EastLink (via the Monash Freeway) and Gippsland to the east; and,
 - Princes Highway that is a secondary link to metropolitan Melbourne, EastLink and Gippsland and forms part of the Strategic Road Network and the Principal Public Transport Network (PPTN) for a Bus Route.
- An **expanding activity centre network** that includes:
 - Dandenong Central Activities District (CAD), intended to provide a 'regional CBD' to serve Melbourne's south-east;
 - Principal Activity Centres (PACs) located at Narre Warren-Fountain Gate and Cranbourne; and,
 - Major Activity Centres (MACs) located at Pakenham, Officer (within the Precinct), Berwick, Casey-Central, Hampton Park and Endeavour Hills.
- An **established rail network**, encompassing:
 - a metropolitan railway line which also forms part of the PPTN and which branches into the Pakenham and Cranbourne lines at Dandenong. The railway line runs parallel to the Princes Freeway, central to Cardinia Shire's future residential area;
 - existing stations at Pakenham, Officer (within the Precinct) and Beaconsfield, with a new station under construction at Cardinia Road; and,
 - a V-Line regional railway service, connecting to Gippsland from Pakenham Station.
- An **extensive open space network**, that includes:
 - Gum Scrub Creek which forms part of the Toomuc/Deep Creek Outfall Catchment and the Koo Wee Rup Flood Protection District; and,
 - Cardinia Creek, which defines the boundary of City of Casey and Cardinia Shire and provides a significant urban break between suburbs. It also forms part of a significant regional open space area known as Cardinia Creek Parklands which provides series of linked parks which stretch over 400 hectares along 10 kilometres of Cardinia Creek;
 - Significant hills and ridgelines to the north (in part of the Precinct).
- **Established and planned employment areas** such as:
 - The Cardinia Employment Corridor, which includes all land in Cardinia Shire, south of the Princes Freeway within the UGB. Covering an area of approximately 2,500 hectares, the Cardinia Employment Corridor is comprised of four precincts: Cardinia Road Employment Precinct, Officer Employment Precinct, Pakenham South Employment Precinct and Pakenham West Employment Precinct. Planned to accommodate a diverse range of industry types, the Cardinia Road Employment Precinct creating a jobs-intensive business park at the 'core' of the corridor.
 - Narre Warren-Fountain Gate Business Park, located at the intersection of the Princes Highway and Princes Freeway. Designated for office development, the area is part of the Narre Warren - Fountain Gate Principal Activity Centre (PAC);

Plan 2: Metropolitan and Regional Context



- Casey Technology Park at Berwick, where Monash University Berwick and Casey Hospital are located. The area is planned to be developed for technology-related business and research and development activities; and
- C21 Business Park, a new employment node located just south of the Princes Freeway, adjacent to Cardinia Creek.

2.2 Local Context

The local context for the Precinct is shown in Plan 3.

2.2.1 History

Before the early nineteenth century, the Precinct was in the custodianship of clans of the *Bunurong* and also possibly the *Woieworong* clans¹.

Since European settlement, land in the Officer area has been predominantly used for farming and agricultural purposes.

Officer's Wood Siding, later abbreviated to Officer, was established in the 1880s and named after a family of local settlers.

In 1877 the Oakleigh to Bunyip railway line opened with Officer Station completed by 1881. By the 1880s Officer had become important to the district's timber trade and included a saw mill but the local population remained scattered. The rapid growth of Melbourne supported the growth of the local industry, which exported firewood, palings and other timber to the capital city. Five brickyards opened out of Officer but all closed during the 1890s depression. By the end of the nineteenth century Officer was developing into a dairying and fruit growing area along with other settlements in the district. Following the First World War a revival of brick making and related building and pottery supplies occurred with local firms such as James Hicks Pty Ltd and the Berwick Pottery being established or expanding during this time. Several buildings and sites from this period still occupy the landscape in Officer, representing an important period in the community's past.

2.2.2 Lot size and ownership pattern

At present, land within the Precinct is predominately being used for rural or farming purposes.

Approximately:

- 68% of the properties are less than 2 hectares;
- 20% of properties range from 2 to 8 hectares;
- 12% of the lots are greater than 8 hectares; and,
- 16% of the Officer PSP area is within in the ownership of VicUrban.

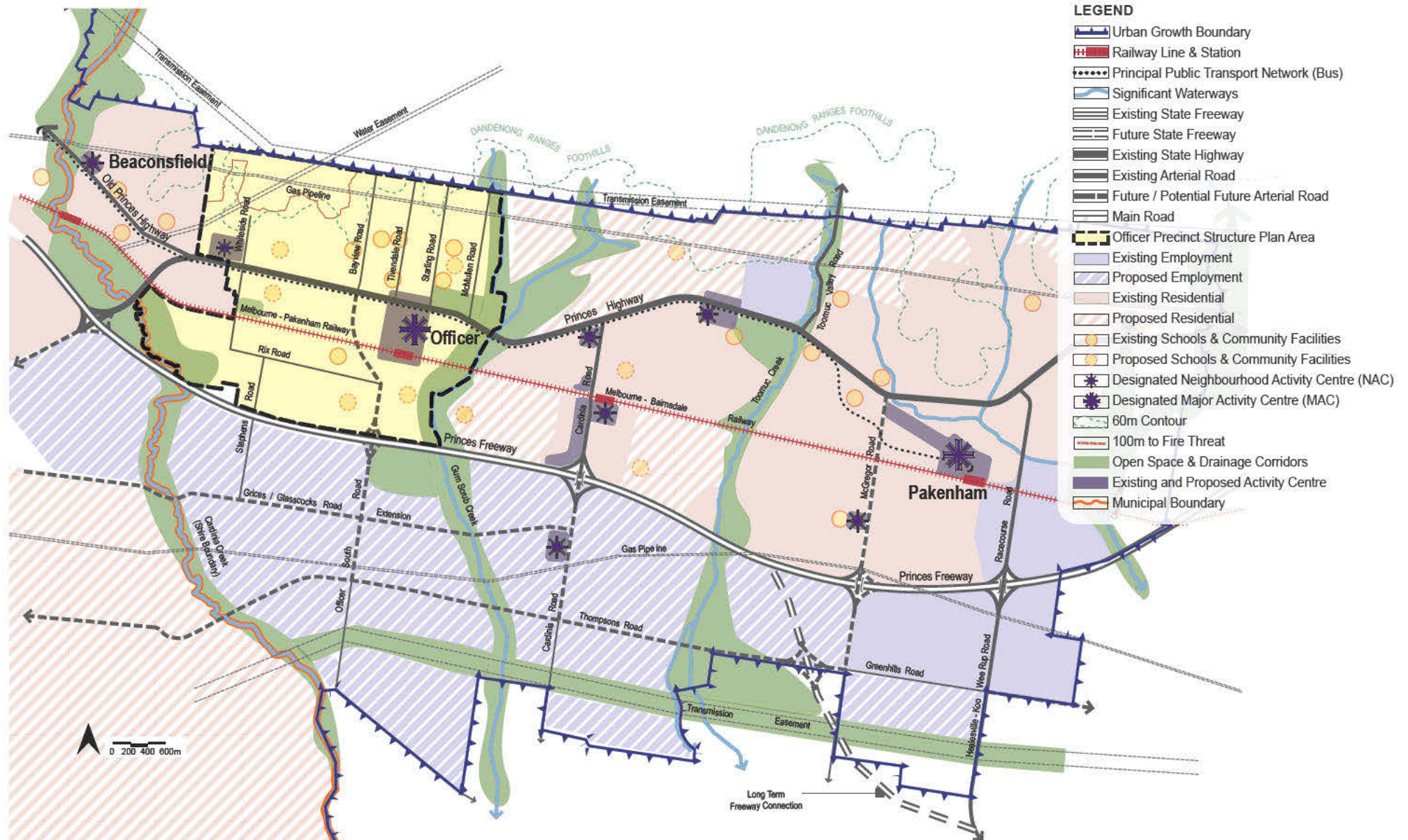
Unlike other PSP areas, the Precinct has a significantly higher number of individual property owners. Township scale lots associated with the existing Officer town centre are concentrated around Station Street south of the Princes Highway and Tivendale Road north of the Highway. Sales premises are also located along both the south and north side of Princes Highway.

The area west of Brunt Road and north of Rix Road, bounded by Kenilworth Avenue to the north makes up around 5% of the Precinct. This area is currently zoned Low Density Residential (LDRZ) and parts of this area have limited subdivision potential.

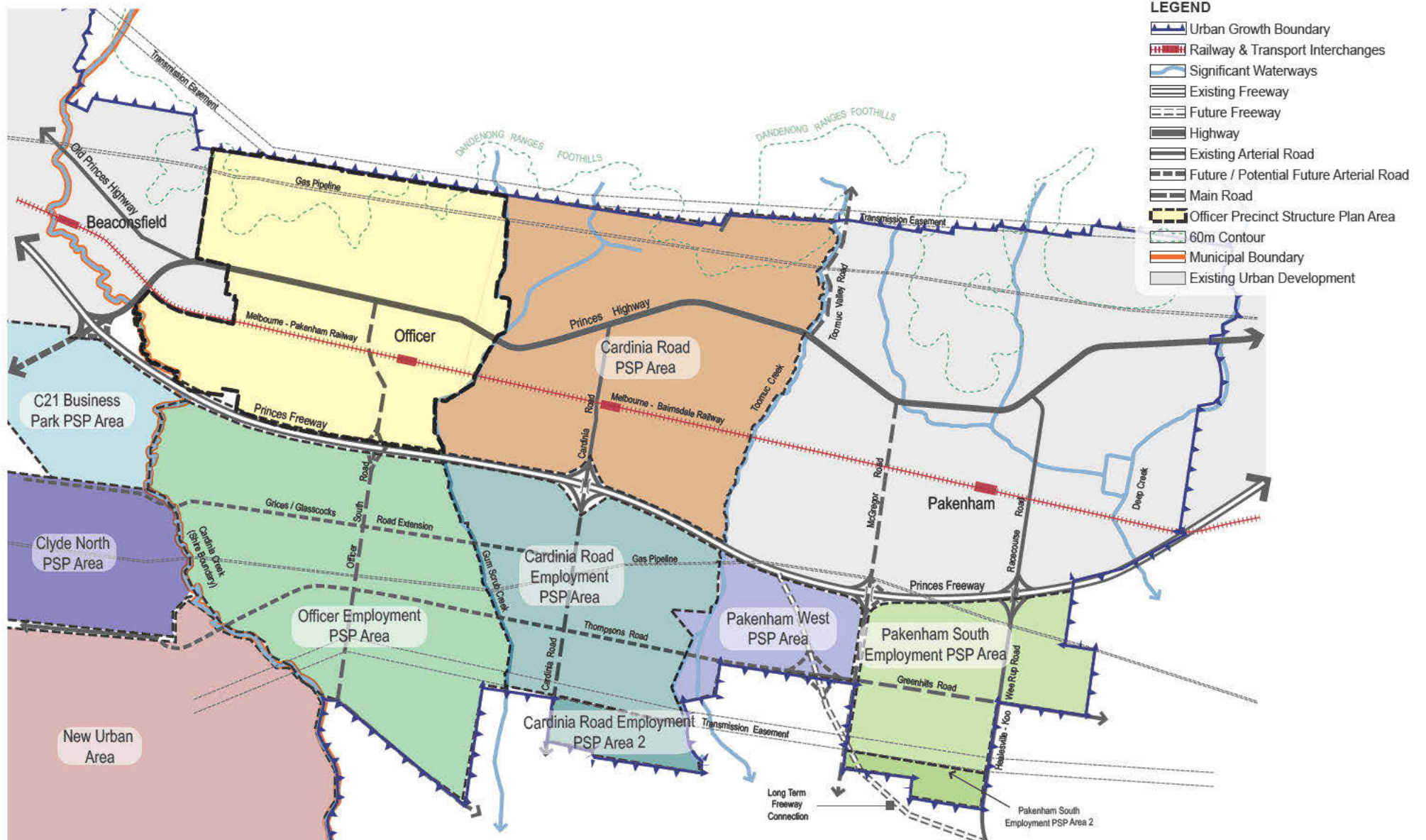
Around 32.2 hectares of land within the Precinct is occupied by private schools as identified on Plan 3.

¹ Tardis Enterprises Pty Ltd, Officer Precinct Structure Plan, Desktop Cultural Heritage Assessment, July 2009, pg. 12.

Plan 3: Local Context



Plan 3a: PSP Areas



2.2.3 Surrounding Neighbourhoods and Land Use

A number of existing neighbourhoods and precincts provide context for the development of Officer Precinct, influencing the PSP (refer Plan 3a). The key features of each of these areas are described below.

Residential Precincts

- Beaconhill Grange Estate / Bowman's Track Estate is located in Beaconsfield on the western boundary of the Precinct (north of Princes Highway) and commenced development in 2002. The Beaconhill Grange Estate contains a community node which includes the Beaconsfield Community Complex and a private childcare centre.
- Low Density areas are located in Beaconsfield on the western boundary of the Precinct (south of Princes Highway) known as the Kenilworth Avenue area. Some of these areas have potential for further subdivision. This area contains approximately 40 lots ranging in size from around 0.4 hectares through to around 8 hectares.
- Arena Estate is located in Officer, on the eastern boundary of the Precinct (south of Princes Highway). Amendment C59 to the Cardinia Planning Scheme enabled the development of this land. Development commenced in 2008 and the area provides a diverse range of residential lot sizes, including some medium density housing as well as a Neighbourhood Activity Centre. The activity centre will provide approximately 5,000 square metres of core retail floorspace, comprising a supermarket and associated shops and services, with supporting peripheral commercial uses.

- Cardinia Road Precinct Structure Plan is located on the eastern boundary of the Precinct. Amendment C92 to the Cardinia Planning Scheme enabled the development of this land, facilitating development a new suburb of approximately 30,000 residents. It provides for:
 - a diversity of dwelling types and includes the provision for medium density housing (minimum of 20 dwellings per hectare) located within 400 metres of activity centres and public transport.
 - grade separation of Cardinia Road and the railway line, substantially improving access to the new railway station, activity centre and proposed bus interchange.
 - protection of visually prominent ridges and hills by encompassing such land within public open space as well as placing controls on the type, density and design of development.

Employment Precincts

- The Cardinia Employment Corridor encompasses the land south of the Princes Freeway within the UGB. It has a total area of approximately of 2,500 hectares, and is planned to accommodate a diverse range of industry types.
- The corridor has been divided into four precincts, two of which abut the Officer PSP area:
 - Cardinia Road Employment Precinct is located south east of the Precinct. The Cardinia Road Employment Precinct is planned as an integrated commercial and industrial business park in a high amenity setting that is characterised by landscape wetland corridors, a diverse activity centre and quality residential area.

- Officer Employment Precinct is located south of the Precinct, west of Gum Scrub Creek and extending across to Cardinia Creek. At 1,050 hectares, it is the largest employment precinct in Cardinia and will provide a significant opportunity for job creation in the future.
- Pakenham South Employment Precinct is located east of McGregor Road to the eastern edge of the UGB. It includes South East Business Park and is already partially zoned for industrial use. It is planned to accommodate local and regional industrial businesses, with some bulky goods.
- Pakenham West Employment Precinct is located between Toomuc Creek and McGregor Road. Planning is underway for a freeway bypass from the Princes Freeway to Koo Wee Rup will run through the heart of this area in the future.

Urban Growth Boundary

- The northern boundary of the Officer Precinct is defined by the Urban Growth Boundary (UGB). Land north of the Precinct is located predominately in the Green Wedge Zone (GWZ) and is affected by the Environmental Significance Overlay – Schedule 1 (Northern Hills) (ESO1), with sections affected by the Floodway Overlay (FO) and Land Subject to Inundation Overlay (LSIO).
- Recommendations in *Melbourne 2030 Final Report: Casey - Cardinia Committee for Smart Growth, June 2005* make specific reference to recognising and protecting visual amenity and view lines to the significant green ridges; the visual backdrop to the southern foothills of the Dandenong Ranges; and, the significant hilltops of the area north of the Princes Highway.

- Melbourne @ 5 Million (DSE) 2008 reiterates the physical and environmental constraints of the foothills of the Dandenong Ranges to development, being fire prone and of scenic and environmental value.

2.2.4 Transport and movement

Princes Highway is an existing state arterial road which runs east-west through the centre of the Precinct. The Princes Highway is designated as a Principal Public Transport Network (PPTN) bus route.

The Princes Freeway is located south of the existing Princes Highway route and provides full freeway conditions with two lanes each way between Beaconsfield and Nar Nar Goon. A freeway interchange is proposed at Officer South Road.

With the exception of Princes Highway and the Princes Freeway, the existing road network within the Precinct is presently a combination of unsealed rural roads and sealed roads to a rural standard.

There are two existing at-grade rail crossings in the Precinct, located on Station Street/Officer South Road and Brunt Road.

The Principal Public Transport Network (PPTN) also includes the Gippsland / 'Pakenham' railway line which provide both suburban and V-Line services.

Three rail stations are highly accessible to the Officer PSP area:

- Officer station is located within the Precinct, just east of Station Street;
- Beaconsfield station is located to the west of the Precinct; and
- A new station is proposed in the Cardinia Road Precinct (east of the Precinct) immediately east of Cardinia Road, scheduled for completion in late 2011.

An inter-regional bus service currently serves the Princes Highway.

2.2.5 Activity Centres and Employment

Activity Centres

The hierarchy of activity centres is established by the Growth Area Framework Plans (DSE) 2006 and further refined in Melbourne @ 5 Million (DSE) 2008.

The network of activity centres outside the Officer PSP area are:

- A Central Activity Centre (CAD) to the west at Dandenong (within the City of Dandenong).
- A Principal Activity Centre (PAC) to the west at Narre Warren-Fountain Gate (within the City of Casey).
- A Major Activity Centre (MAC) to the east at Pakenham Town Centre. MACs provide a wide range of goods and services, underpinned by multiple supermarkets and discount department stores. A diversity of services, commercial and entertainment uses co-locate with these major stores, serving a sub-regional catchment and supporting multiple suburbs and/or communities.
- Neighbourhood Activity Centres (NACs) to the east, within the Cardinia Road Precinct Structure Plan:
 - Lakeside NAC, at the corner of Lakeside Drive and Princes Highway;
 - Cardinia Road (south) NAC, located east of Cardinia Road and south of the rail line, adjacent to the new Cardinia Road Station.
 - Cardinia Road (north), located at on the south-west corner of Cardinia Road and the Princes Highway.

These provide for day-to-day and weekly needs, with a supermarket and supporting retail, commercial and community uses. NACs create a focus for social interaction for communities.

- Neighbourhood Convenience Centres (NCCs) that are generally co-located with schools, community centres and open space in the residential areas. NCCs supplement the higher order centres in providing for day-to-day needs offering basic goods and services.

Existing employment areas

Pakenham Town Centre has historically been the focus for a range of retailing, medical, personal and professional services that support residents in Cardinia Shire and parts of Gippsland. Together with significant industrial development in close proximity to the Town Centre, Pakenham is an existing major source of employment in the Shire. Pakenham's role as an employment hub will continue to evolve as the Cardinia Urban Growth Area develops. The proposed relocation of Pakenham Racecourse and development of a new Woolworths supermarket and Big W discount department store in the core retail area will strengthen the centre. Further investment and regeneration in the centre is expected.

Two existing NACs are located in proximity to the Precinct, at Lakeside Pakenham on the Princes Highway and at Heritage Springs on McGregor Road.

Existing employment areas within proximity to the Officer PSP area include:

- South East Business Park, located east of the Precinct in the Pakenham South Employment Precinct;
- industrial areas east of Pakenham Town Centre; and,

- industrial areas along Princes Highway, where light industrial uses have established with some showrooms along the Highway. The implementation of the Cardinia Road Employment Precinct will provide a diverse range of employment opportunities. At full development, the Precinct is generate up to 18,500 jobs for the region, with 74 % in the Commercial area².

2.2.6 Open Space

The Officer PSP area abuts a major regional passive open space area known as the Cardinia Creek Parklands which extends from the Harkaway foothills (in the City of Casey) to the open plains south of Beaconsfield. When fully developed, it is anticipated that the regional Parklands will be a series of linked parks that stretch for approximately 10 kilometres along Cardinia Creek, providing an important connection in the open space network planned between Cranbourne and Pakenham³. It will also provide an important conservation area, creating a wildlife corridor that extends from the Dandenong Ranges through to Western Port.

A linear open space corridor is also located along Gum Scrub Creek, which serves a variety of purposes including drainage and water management, wildlife corridor, visual buffer, and movement corridors (for pedestrians and cyclists).

A number of open space areas are also provided within the Cardinia Road Precinct Structure Plan area (located east of the Precinct) ranging from local open space, passive open space (conservation/restoration areas and linear open space) and active open space (district sport reserves) to cater for the variety of

interest and ages within the community. Similarly, Beaconsfield (located to the west of the Precinct) contains a number of existing areas of open space.

2.2.7 Community Facilities

The Officer PSP area contains a number of existing primary and secondary education facilities that include:

- Maranatha Christian School, located on Rix Road (7.63 hectares);
- Minaret College located on Tivendale Road (4.04 hectares);
- Berwick Grammar School located on Tivendale Road (7.84 hectares);
- Heritage College, located on Starling Road (8.09 hectares);
- Glenvale School, located on Starling Road (0.70 hectares);
- St Brigid's Catholic School, located on Bayview Road (4.00 hectares); and,
- Officer Primary School (State Primary School), located on Tivendale Road (1.22 hectares).

Under the Urban Growth Zone, where no Schedule applies, schools can obtain permits to develop a site. In Officer, many sites have existing permits and approved masterplans, enabling further expansion. The number, scale and siting of these schools influence the Future Urban Structure of the Precinct.

The areas to the east and west of the Precinct include significant existing and planned social, health, and community infrastructure.

Pakenham Town Centre is 5 kilometres east of the Precinct and includes independent and state primary and secondary schools; maternal and child health /

children's centre; library; and, several medical centres.

The Cardinia Road Precinct Structure Plan plans for the activity centres within the area to have a community focus, clustering them with community facilities such as community buildings, open space and education uses. A network of community hubs will act as focal points for community activity and interaction. For example, the Lakeside NAC is co-located with Lakeside Primary School, Lutheran College, Cardinia Cultural Centre and Cardinia Life (swimming pool and basketball facilities).

Beaconsfield Town Centre is located 1.6 kilometres west of the Precinct and includes existing primary and secondary schools; maternal and child health / children's centre; a community centre and a number of medical centres.

² Cardinia Road Employment Precinct Structure Plan, September 2010, Cardinia Shire, p.16.

³ Parks Victoria, Cardinia Creek Parklands Future Directions Plan, December 2002.

2.3 Precinct Features

The features of the Precinct are illustrated in Plan 4.

2.3.1 Heritage

2.3.1a Aboriginal Cultural Heritage

Officer Precinct lies within the traditional land of the Bunurong⁴, who belonged to the inter-marriage and language group known as the *Kulin*, which inhabited areas around Melbourne. The *Woiworung* clan, who may have also had reciprocal land use rights in the area, were from the Baluk-willam clan.

In the early days of European settlement, Aboriginal people were known to reside in the district, cited as camping by the edge of dense vegetation and focusing activities along major watercourses. Cardinia Creek is not only a significant feature in the landscape, but is of great importance to Aboriginal people. Recognised as resource rich, it is considered that Aboriginal people will have used the area for extended periods of time, including using the creek environs for ceremony, visiting sacred sites in the hills to the north, making stone tools and other objects (Context 2010). It is believed there are many sacred sites along the Creek and in the foothills immediately north of the Princes Highway. A dreaming story about the creation of Cardinia Creek also exists.

Sites of indigenous cultural heritage are known within the Precinct, with fifteen recorded sites comprising surface and sub-surface stone artefact scatters (Tardis 2009). These sites are concentrated along Cardinia Creek, with over 73 percent of these sites along its eastern bank. Approximately one third of the Precinct has been subject to previous ground surface survey.

These studies found that the highest density of sites occur near water sources such as the Cardinia and Gum Scrub Creeks⁵. It is expected that complex investigations incorporating sub-surface testing will be required as part of Cultural Heritage Management Plans as part of future subdivision proposals throughout the Precinct.

2.3.1b European Heritage

The historical theme for the Officer area includes the development of early small-scale farming, dairying, and orchards as well as industrial activities such as brick-making.

Table 1 identifies places of heritage value within the Precinct as identified under the Heritage Overlay in the Cardinia Planning Scheme. The overlay currently covers entire properties; however as part of Amendment C149 to the Cardinia Planning Scheme, the overlay will be amended so that it is only applicable to the area on each property that is of significance.

2.3.2 Biodiversity

The Officer PSP area is located within the Gippsland Plain bioregion and the Port Phillip and Westernport catchment management authority.

The area is relatively flat, gently sloping from north to south. Habitat currently exists in the form of several dams, ephemeral drainage lines and constructed wetlands. Cardinia Creek and Gum Scrub Creek are located along the west and east boundaries of the Precinct, providing habitat for species and creating opportunities for enhancement of biodiversity values.

Native vegetation and habitat within the Precinct has varying levels of significance for biodiversity, from

local to national. The majority of the area is highly modified and dominated by introduced flora species, particularly pasture grasses.

2.3.2a Flora

The majority of the Precinct has been highly modified by past and current agricultural practices, however where it exists, remnant vegetation is generally high quality and relatively intact.

Large tracts of remnant vegetation exist in the north-west of the Precinct, particularly east of the northern section of Whiteside Road, providing a strong treed ridgeline that is prominent in views to the north across the Precinct. Two properties north of the railway line in the Officer township include a number of endangered Ecological Vegetation Classes (EVCs) in the Gippsland Plains Bioregion and two floristic communities listed under the *Flora and Fauna Guarantee (FFG) Act (1998)*: Herb Rich Plains Grassy Wetland and South Gippsland Plains Grassland. The Herb Rich Plains Grassy Wetland is consistent with the *Environmental Protection and Biodiversity Conservation (EPBC) Act (1999)* nominated Temperate Lowlands Plains Grassy Wetland community.

Other remnant native vegetation occurs in small isolated patches along roadsides and within the rail reserve, such as along Rix Road, Brunt Road and within proximity of Cardinia Creek.

Current biodiversity mapping indicates that there are scattered trees dotted throughout the Precinct and nine EVCs (refer Officer NVPP for further details).

In 2008/09, targeted surveys were undertaken for threatened flora species. Significant species found as part of these surveys or previously recorded include two nationally significant flora species, the endangered Matted Flax-lily and Maroon Leek Orchid.

⁴ Tardis Enterprises Pty Ltd, Officer Precinct Structure Plan, Desktop Cultural Heritage Assessment, July 2009, pg.12.

⁵ Tardis Enterprises Pty Ltd, Officer Precinct Structure Plan, Desktop Cultural Heritage Assessment, July 2009, pg.51.

Plan 4: Precinct Features

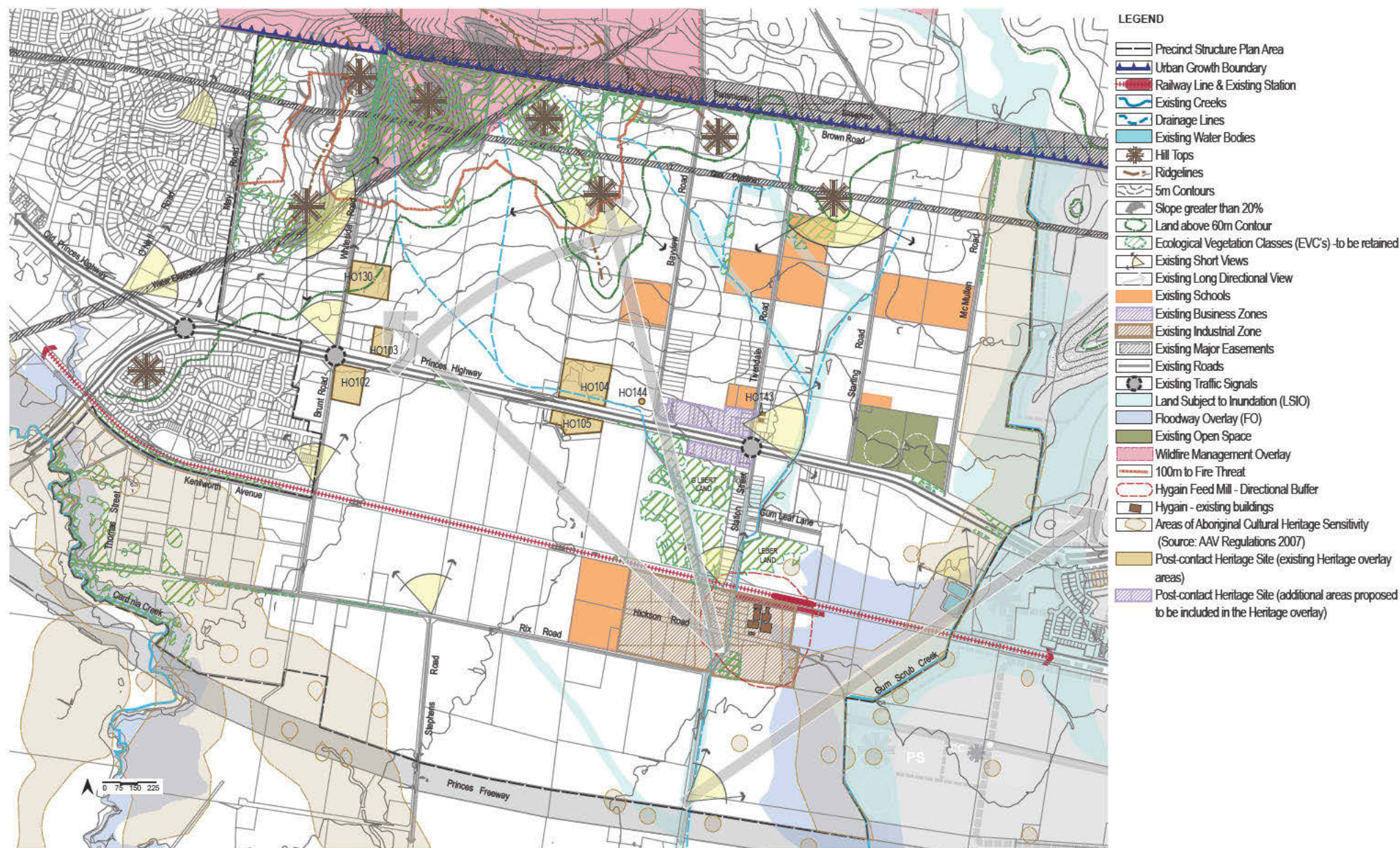


Table 1: Cardinia Planning Scheme Heritage Overlay sites in the Precinct

Heritage Overlay Number	Location	Citation / Key elements	Significance
HO 102	250 Princes Highway (Primrose Park)	Brick Villa (19th century house), mature exotic trees in garden and mature monterey cypress hedge (External Paint & Tree Controls apply)	Regional
HO 103	265 Princes Highway (Firwood Park)	Brick Villa (19th century cottage), mature exotic trees lining the driveway and mature oak east of cottage (External Paint & Tree Controls apply)	Regional
HO 104	365 Princes Highway (James Hicks Pty. Ltd. Pottery)	Brick Kiln, chimney and former clay pit (External Paint & Internal Alterations Controls apply)	Regional
HO 105	350 Princes Highway (Berwick Pottery)	Brick Kiln, office (small, tiled roof building), date palms and former clay pit (External Paint, Internal Alterations & Tree Controls apply)	Regional
HO 130	36 Whiteside Road (Grant House)	House and garden (External Paint, Internal Alterations & Tree Controls apply)	State

There are also several other sites within the Precinct that have been identified as having a heritage value of regional significance. These sites are identified in Table 2.

Table 2: Proposed Cardinia Planning Scheme Heritage Overlay sites in the Precinct

Heritage Overlay Number	Location	Citation / Key elements	Significance
Proposed HO143	16-18 Tivendale Road (Officer Union Church and Officer Public Hall)	Church and Hall (Proposed Internal Alteration Controls)	Regional
Proposed HO144	15 Bayview Road (Greenslopes)	Significant tree	Regional

Other threatened flora species identified include Arching Flax-lily, Green Scentbark, Veined Spear Grass and Purple Diuris⁶.

2.3.2b Fauna

The Officer PSP area supports five broad habitat types: exotic grassland, drainage lines/depressions, created wetlands, remnant native woodland and scattered remnant trees.

Targeted surveys were undertaken for Southern Brown Bandicoot, Growling Grass Frog, Dwarf Galaxias, Australian Grayling, Swamp Skink, Glossy Grass Skink and Southern Toadlet.

Growling Grass Frog

The EPBC and FFG listed Growling Grass Frog (nationally significant) has metapopulations within the Pakenham Urban Growth Corridor, which includes the Precinct. The species has been recorded in the south eastern portion of the Precinct, particularly along Gum Scrub Creek.

The known presence of Growling Grass Frog and suitable habitat along Gum Scrub Creek, Cardinia Creek, drainage lines and other areas within the Precinct supports the need to protect and enhance habitat for the species⁷.

Swamp Skink and Glossy Grass Skink

The Precinct contains habitat typically suitable for the FFG listed Swamp Skink and Glossy Grass Skink (state significance). It is considered there is a low to moderate likelihood they inhabit the Precinct.

Southern Toadlet

The Southern Toadlet is of state significance. Habitat that may support the species is located north of Officer Station (the Gilbert and Leber properties), along the Princes Highway, drainage lines and Gum Scrub Creek, however there is a low likelihood that the species occurs within the remainder of the Precinct.

Southern Brown Bandicoot

The nationally significant Southern Brown Bandicoot has been found within Cardinia Shire. While it is considered unlikely to occur within the Precinct, there are recent DSE records within the vicinity of the Precinct.

The north-west part of the Precinct contains vegetation typically suitable as habitat for the species. Improvement of Gum Scrub and Cardinia Creek provide opportunities to establish habitat corridors and enable movement of the species.

Australian Grayling

The EPBC and FFG listed Australian Grayling (nationally significant) has been identified in Cardinia Creek, south of the Precinct. Low streamflow within Cardinia Creek is likely to have adversely impacted on upstream migration in recent times (Ecology Australia 2010). The Cardinia Creek environs provides future habitat for the species, with a 100 metre conservation zone providing a buffer that will be enhanced and managed to maintain its high conservation value, consistent with the commitments made under Melbourne's Strategic Assessment for the species.

Dwarf Galaxias

Cardinia Creek and its floodplain is a known habitat for the EPBC and FFG listed Dwarf Galaxias. Primary and secondary habitat for this species depends on the permanency of water. Primary habitats have online water sources and

permanent water, supporting long-term persistence of the species (ie Cardinia Creek). Secondary habitats are provided in the form of floodplains, shallow pools and watercourses, which tend to be more suitable for breeding (ie the Cardinia Creek floodplain). Fish migrate between the two types of habitat during flood events, however access to primary habitat is necessary for the long-term sustainability of the population (Ecology Australia 2010).

2.3.2c Ecological Significance

Regional Significance

Elements of regional conservation significance in the Precinct include:

- the presence of at least 150 regionally significant flora species within the Gippsland Plain bioregion;
- the presence of nine EVCs that are endangered within the Gippsland Plain bioregion; and,
- the presence of continuous vegetated corridors along roadsides and waterways which provide habitat for flora and fauna species, and that facilitate the movement of fauna across the landscape.

State Significance

Elements of state conservation significance in the Precinct include:

- the 'Gilbert' property, just west of Station Street, where there are large areas of FFG listed Herb Rich Plains Grassy Wetland and South Gippsland Plains Grassland;
- the 'Leber' property, just east of Station Street, where there is a large patch of Plains Grassy Woodland;
- sites where Veined Spear-grass, Green Scentbark, Purple Diuris and Arching Flax-lily have been identified.

⁶ Ecology Partners Pty Ltd, Officer Precinct Structure Plan, Flora and Fauna Assessment, Victoria November 2009, pg.17.

⁷ Ecology Partners Pty Ltd, Officer Precinct Structure Plan, Flora and Fauna Assessment, Victoria November 2009, pg 20.

National Significance

Some parts of the study area are of national conservation significance due to the presence of flora species (i.e. Matted Flax-lily) and habitat considered suitable for fauna species (i.e. Growling Grass Frog, Southern Brown Bandicoot, Australian Grayling and Dwarf Galaxias). Key areas of national conservation significance for fauna include waterbodies, creeks, drainage lines and floodplains which may potentially be occupied or provide important dispersal routes.

2.3.3 Topography and landform

The Precinct is located along the southern fringe of the foothills to the Dandenong Ranges and the northern fringe of the coastal plain of Westernport Bay including the former Koo Wee Rup Swamp (refer Plan 4).

Hilltops and Ridgelines

The land to the north of the Princes Highway is identified as 'Foothill Ranges' and is characterised by undulating topography with significant east west ridgelines. Land on the ridgelines and hilltops, particularly above the 60 metre contour, has been identified as a visually prominent landscape element within the region. The high points are visible from many locations within the Precinct and provide a distinct and familiar point of reference in the landscape. This is particularly evident for land in the north-west corner of the precinct.

The land to the south of the Princes Highway is very flat with few landscape features.

Creek network

A distinctive natural creek environment is associated with Cardinia Creek, while Gum Scrub Creek is a highly altered waterway similar to an open cut channel.

These waterways are part of a drainage system across the floodplains of the coastal lowlands that were once part of the Koo Wee Rup swamp, eventually draining into Westernport Bay.

Vegetation

Lines of vegetation along creeks, roads and paddock boundaries provide a sense of local visual containment. The Cardinia and Gum Scrub Creek corridors provide the opportunity to define a strong landscape character and sense of place for the Precinct. Some stands of remnant vegetation, particularly on the hills to the north-west, substantially contribute to the visual character and quality of the area.

Built Form

The key built form elements influencing the landscape are the transport infrastructure: the Gippsland railway and its overhead stanchions, platform and raised tracks, the Princes Highway which creates a strong linear feature that visually and physically divides the study area, and the Princes Freeway.

The Princes Freeway is an elevated feature, enabling Officer South Road to pass beneath at-grade, and also to cross the Cardinia and Gum Scrub Creeks.

Other than sporadically located buildings, built form is located in clusters around the existing Officer township, comprising commercial premises on the Princes Highway and industrial buildings south of the railway line, including feed-mill silos. Importantly, the Memorial Gates at the Recreation Reserve on the corner of Starling Road and the Princes Highway are the dominant cultural feature viewed when passing through the Precinct along the highway.

2.3.4 Catchments and drainage

Officer is located within the catchment of Western Port Bay. It is recognised as a site of international importance in terms of its wetlands and as a site for migratory shorebirds. The wellbeing of this ecosystem is directly related to the health of its catchment. The management of the quantity and quality of water discharged from the Precinct (and the growth area as a whole) is critical to protecting the environment of Western Port Bay, and in controlling erosion.

There are two major waterways within the Precinct: Cardinia Creek and Gum Scrub Creek.

These are supported by the Officer South Road drain (east of Station Street), which has been incorporated into the table-drain adjacent to the road south of the railway line, and the Gilbert channel to the west of Station Street. Floodplains associated with these waterways are defined in the Cardinia Planning Scheme.

The Officer and Gum Scrub Creek Development Services Schemes (DSS) have been prepared for this Precinct which includes culverts (generally only for existing road crossings), a network of channels ranging from 16 metres to over 80 metres in width and retarding basins, which includes part of the Gilbert land. It is important to note that under the DSS, the Precinct will principally be drained to the east, with the Officer South Road Drain and Gum Scrub Creeks providing the main connections for drainage to areas south of the Princes Freeway.

As part of the preparation of this PSP, the DSS has been partially reviewed, enabling:

- remodelling of the Officer South Road Drain upstream of the railway into a series of retarding basins, incorporating some wetland systems to create an attractive waterway setting for higher-density residential and commercial development;

- conversion of the Officer South Road Drain south of the railway from an open-cut drain to a pipe, removing the need for land acquisition;
- conversion of a wide open-cut drain along the northern side of the rail line to a pipe, reducing the extent of encumbered land;
- a substantial reduction in the amount of fill across the area south of Princes Highway, north of the rail line between Brunt Road and Station Street;
- creation of a sediment pond and wetland system within the Gilbert property to address outfall issues between Princes Highway and the rail line.

2.3.5 Groundwater and salinity

Large areas of land within the Cardinia Urban Growth Area have a high salinity risk. The high groundwater table is partly caused by the loss of vegetation in the foothills to the north, particularly where the geology is of Silurian Sedimentary origin.

Design and construction techniques are available to address and manage water table issues to ensure that urban development is not impacted by existing water table constraints.

2.3.6 Industrial Zoned Land

Industrial 1 zoned land (IN1Z) is located on Officer South Road, south of the railway reservation for a distance of approximately 385 metres, and includes Hickson Road and encompasses around 28.0 hectares of land (as shown in Plan 4).

The established uses in the IN1Z include HyGain Feeds (specialising in horse feeds and supplements), Bradco Equipment rental, Tunundra Park Nursery and Berwick Bus Lines Depot. Several other sites are utilised for small scale commercial operations as well as storage of construction materials and machinery.

Buffers

Clause 52.10 of the Cardinia Planning Scheme relates to uses with adverse amenity potential. Of the existing uses within the existing Industrial 1 Zone, only one use generates a buffer (HyGain Feeds Pty Ltd).

The provisions of Clause 52.10 trigger a requirement to consider buffers from sensitive uses within 300 metres of new industrial premises.

When planning new development, in particular residential, schools and other sensitive uses in proximity of existing buffer-generating uses, the impacts of the existing use on the amenity of establishing uses should be considered.

A directional buffer has been determined from HyGain (GHD 2011), to provide guidance on where sensitive uses should be located in proximity to the HyGain site.

The preparation of the PSP and Schedule to the Urban Growth Zone (UGZ4) has taken into consideration the need to protect the amenity of surrounding residential areas and other sensitive uses, by either locating them outside the directional buffer zone (GHD 2011) or putting in place design provisions to ameliorate potential impacts from existing industry.

2.3.7 Potentially Contaminated Land

The General Practice Note for Potentially Contaminated Land (DSE) June 2005 identifies that potentially contaminated land generally applies to land used for industry, mining or the storage of chemicals, gas, wastes or liquid fuel.

A desktop assessment was undertaken by Meinhardt (2011) in order to establish the suitability of sites for a future sensitive use (defined as residential, child care centre, pre school centre or primary school or

open space⁸). More detailed assessment of sites identified as medium or high contamination potential will be required to address the issues identified in the Meinhardt (2011) report.

2.3.8 Low Density Residential Zoned Land

Existing Low Density Residential zoned land (LDRZ) is located in the area bound by Kenilworth Avenue, Brunt Road, Rix Road, Cardinia Creek and Princes Freeway and encompasses around 48 hectares.

The eastern portion of this area has the potential for further subdivision, enabling approximately 50% of the area to redevelop to a standard urban density. The area adjacent to Cardinia Creek has much more limited development potential, due to its sensitive environmental surrounds and existing native vegetation⁹.

The Smart Growth Committee recommended that Cardinia Creek be protected by a substantial buffer typically 400 metres (each side, encompassing an inner corridor and outer corridor – typically 30 metres beyond the 1 in 100 year flood plain or edge of the core environmental values) in recognition of its environmental, landscape and heritage values.

Maintaining the area adjacent to Cardinia Creek as low density residential will support the Cardinia Creek Parklands, enhance protection of the stream side environment, including potential for future trail development, and improve protection of the floodplain and aquatic habitat, including the habitat of threatened species.

⁸ DSE, Potentially Contaminated Land, General Practice Note, June 2005.

⁹ Melbourne 2030: Casey-Cardinia Growth Area, Final Report Casey-Cardinia Committee for Smart Growth, June 2005

2.3.9 Conservation Living Area

An area of approximately 27.5 hectares in the north-west section of the Precinct has severely limited development potential. The majority of the area is affected by the Wildfire Management Overlay (WMO) and remnant vegetation that is to be protected under the NVPP, comprising large patches of high quality Grassy Forest EVC, which is endangered in the Gippsland Plains bioregion.

The retention of this vegetation protects the character and biodiversity values of the area, maintaining the connection to the foothills of the Dandenong ranges. It also provides habitat considered suitable for the nationally-significant Southern Brown Bandicoot and is linked to other similar habitats.

The following properties are affected by these constraints:

- Part - 325 Princes Highway, Lot 2a PS517997 (PSP Property Number 152) (9.62 hectares);
- Entire site - Whiteside Road, Lot 5 PS321195 (PSP Property Number 376) (11.99 hectares); and
- Entire site - 130 Whiteside Road, Lot 2 PS327845 (PSP Property Number 377) (8.52 hectares).

Subject to meeting the assessment criteria, some limited development opportunity exists in parts of Property Number 152 and 376:

- outside of the area where native vegetation is to be retained and its surrounding buffer; and
- where bushfire risk can be addressed to the satisfaction of the CFA.

The area is of high landscape value, providing a visually dramatic wooded backdrop to the Precinct. Its significance was recognised by the Smart Growth Committee, which identified that:

- the green backdrop of the southern foothills of the Dandenong Ranges should be protected as it provides a number of ridgelines at a local level that extend well into the urban area;
- the visual quality of these ridges as green ridges (typically above the 60 metre contour) needs to be retained where possible as the corridor is urbanised;
- particularly significant ridges should be incorporated within the local and regional open space system to preserve their landscape value; and,
- urban development should be set back at least 500 metres from the high conservation value forested areas of the southern foothills of the Dandenong Ranges (north of the UGB in Cardinia) to reduce urban interface impacts (i.e. the effects of weed dispersal and domestic animals)¹⁰.

2.3.10 Bushfire Risk Management Zone

Surrounding the Conservation Living Area is a zone that has a high risk of bushfire (100 metres from the 'fire threat'). The combination of topography, proximity to the Conservation Living Area and presence of vegetation to be retained in the NVPP limits the development potential of the area. Larger lots are required to achieve vegetation protection objectives, provide adequate defendable space around dwellings and ensure dwellings can be constructed to the relevant Australian Standards to protect the safety of residents in the event of a bushfire.

The findings of the Bushfire Royal Commission have resulted in a State-wide review of bushfire risk management, including a review of the Wildfire Management Overlay (WMO).

The State-wide review is expected to take several years and includes a review of the extent of the WMO mapping and the assessment methodology.

Through the process of preparing the PSP, the Country Fire Authority have advised that rather than extending the WMO further into the Precinct, a mechanism should be put in place to manage bushfire risk through the subdivision process.

These provisions are included in the PSP and Schedule to the Urban Growth Zone (UGZ3) and will be implemented as part of Amendment C149 to the Cardinia Planning Scheme.

¹⁰ Melbourne 2030: Casey-Cardinia Growth Area, Final Report Casey-Cardinia Committee for Smart Growth, June 2005

03 Integrated Precinct Design

3.1 Vision

The Precinct will offer its community a sustainable residential and working environment incorporating high quality urban design as an integral component. The Precinct will provide accessible transport and community links that maximise vehicle, bicycle and pedestrian permeability ensuring convenient access to shopping, local jobs, open space and a variety of community facilities.

A transit oriented Major Activity Centre will form the heart of the Precinct. The highly urbanised built environment will incorporate leading practice Environmentally Sustainable Design standards and provide exceptional high quality urban design and amenity. Shared spaces will prioritise pedestrian access over vehicle movement to contribute to safer and more active shopping streets. A Neighbourhood Activity Centre and multiple Neighbourhood Convenience Centres will be located throughout the community to cater for residents' daily needs.

The Precinct will include a wide range of housing types catering for all sectors of the market, including affordable urban living, traditional residential houses and higher density housing near areas with increased amenity such as activity centres, the Officer Town Centre and Officer Railway Station as well as areas of open space. Lower density living will be provided where environmental constraints make denser living less suitable.

The principal place of employment within the Precinct is the Officer Town Centre, which is the focus for retail and commercial investment. A diverse range and substantial number of jobs will also be available in the adjacent employment precincts located south of the Princes Freeway. Highly accessible employment opportunities reduce transport costs for households

and businesses, reduce carbon emissions through reduced car travel, enhance the quality of life for local communities and contribute to social stability.

A combination of government and numerous non government schools at both primary and secondary levels will provide the community with a range of choices in education as well as generating additional employment within the Precinct.

Officer Precinct will deliver urban development that respects and protects the various environmental and natural landscape features, including the foothills backdrop, prominent hilltops, the viewlines to and from the Precinct, significant remnant vegetation and significant fauna, Cardinia Creek and numerous other waterways. These features act not only to establish a strong sense of place, but also assist in providing functional, safe and aesthetically pleasing development solutions.

The Precinct will embrace sustainable urban development practices such as maintaining and restoring native vegetation, providing treed road sides and landscape trails, incorporating water sensitive urban design solutions as well as the provision of recycled water to each home and business.

A diverse range of passive, active and local open space areas will be provided to meet the needs of the local community. These open space areas have been planned and designed so that they are 'fit for purpose' and can be viably managed and maintained in the long term. Residents will also enjoy the benefits of the adjacent regional park, Cardinia Creek Parklands which is an important conservation area within a wildlife corridor that extends from the Dandenong Ranges through to Western Port.

3.2 Future Urban Structure

This section describes how the Precinct Structure Plan delivers the vision of the Officer PSP.

The Future Urban Structure is provided in Plan 5.

3.2.1 To establish a sense of place and community

The Officer PSP establishes a framework for the development of an environmentally, socially and economically sustainable urban structure. The structural elements of the plan are interlinked and combine to create a built environment that promotes healthy lifestyles and strong, diverse communities.

Neighbourhoods within the Precinct are safe and efficiently designed, making it easy to walk or cycle to shops, local jobs, schools, community facilities and public transport stops.

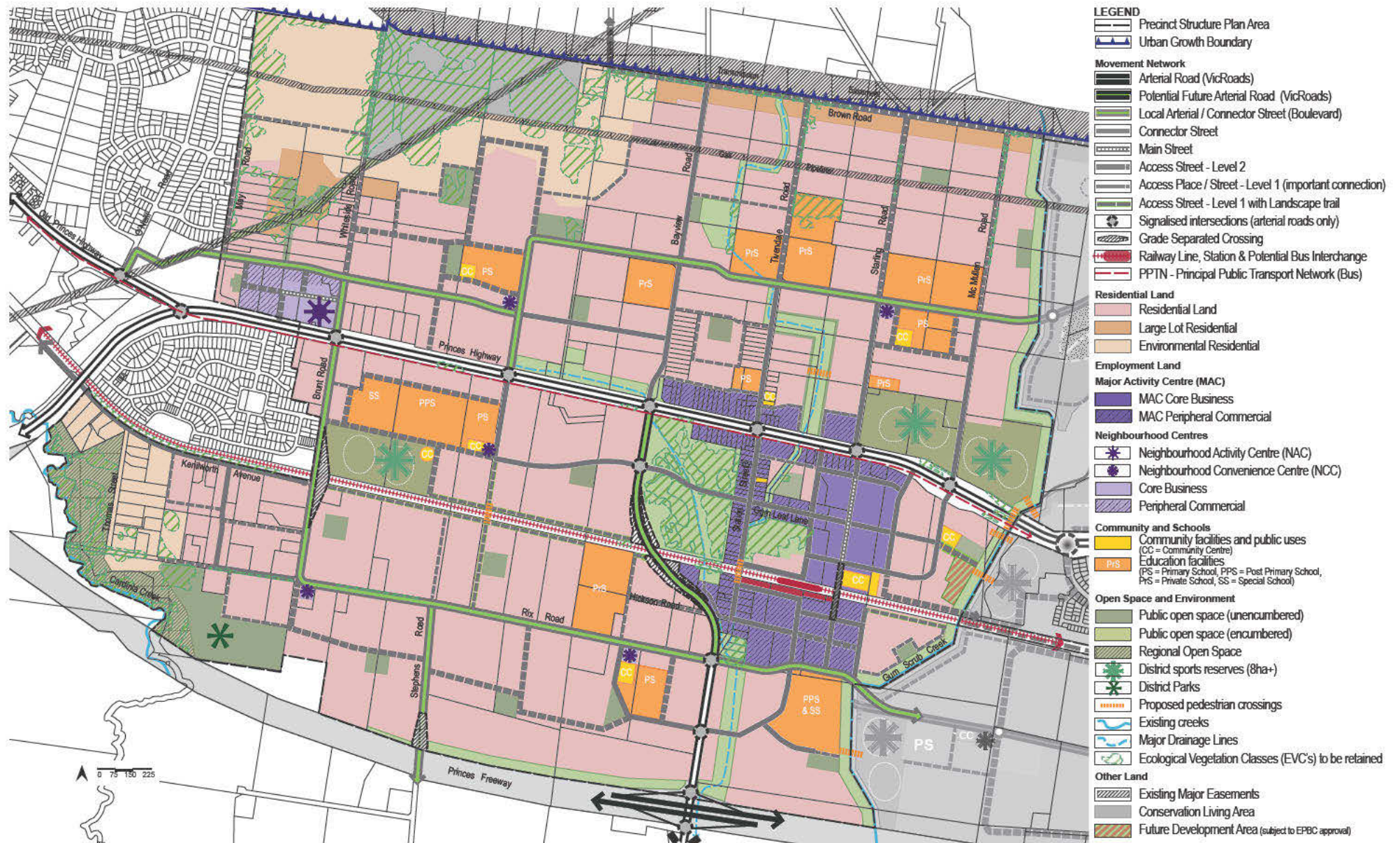
A sense of place and community is fostered through careful planning of public spaces and community facilities such as schools, a variety of open spaces and other community facilities which have an intimate spatial relationship with the neighbourhoods. The formula for positive community interaction is further enhanced by the location of the activity centres.

Connector streets deliver the opportunity for accessible bus routes as well as the provision of tree planting to create a sense of place.

The Officer PSP supports a buffer to Cardinia Creek Parklands through the retention of a low density residential area in proximity to Thomas Street and the western end of Rix Road.

Strong local character is created through the distinct natural features of:

Plan 5: Future Urban Structure



- The urban break provided by the Cardinia Creek Parklands (Regional Park) and the Gum Scrub Creek (and the abutting open space);
- The key landscape feature provided by the wide drainage lines located north of Princes Highway and adjacent to the existing road alignment of Officer South Road (south of the railway line);
- The retention of road side vegetation (where possible) that not only retains existing vegetation character but provides continuous vegetated corridors providing habitat for flora and fauna species, and facilitates the movement of avian fauna across the landscape;
- The retention of significant vegetation in and around the Officer Town Centre that not only retains the existing vegetation character but assists in providing a unique attribute to the centre; and,
- The significant view line which is visible upon entering the Precinct from the Princes Freeway which extends north easterly to the prominent ridgeline (Hilltop Park) in the Cardinia Road Precinct.

3.2.2 To create greater housing choice diversity and affordable houses to live

The Officer PSP encourages the development of a range of housing densities that will lead to the creation of a variety of lot sizes and housing types across various levels of affordability, catering for people in different stages of their lives.

The mix of housing typologies in the Precinct will include:

- High density housing, such as shop-top dwellings and apartment living within the Officer Town Centre;
- Medium density housing in strategic locations within

and around activity centres, along bus routes and around the Officer Railway Station and 'higher' amenity areas, such as public open space;

- Standard density housing with a broad diversity across the range of lot sizes; and,
- Low density housing in areas that require densities to be responsive to the character of the natural environment and site characteristics.

There is an average net density of 15 dwellings per developable hectare within the Precinct.

The Officer PSP promotes affordable housing through a mix of alternatives, such as private and social housing in and around the Officer Town Centre.

3.2.3 To create highly accessible and vibrant activity centres

The Officer PSP provides a clear hierarchy of a sustainable network of activity centres which will provide a mix of uses including housing, community facilities and a variety of employment opportunities.

Major Activity Centre

The new Officer Town Centre will be a Major Activity Centre (MAC) which will be founded on a transit oriented design with an active main street linking the Princes Highway (PPTN bus route) to the Officer Railway Station.

The Officer Town Centre will:

- have a regional retail function with regional and sub-regional core retail anchor stores, peripheral commercial and office uses with a diversity of discretionary and higher-order goods and services;
- be a key focus of the Precinct providing residents with convenient access to office and retail developments, community facilities and jobs; and

- be an attractive, accessible, functional MAC with an urbanised environment through the delivery of higher dwelling densities within and around the Town Centre.

To ensure a high level of pedestrian activity in and around the Officer Railway Station, the station will be supported by a range of community facilities immediately adjacent to it, including the new regional library and potentially health services.

A new grade separated crossing of the railway reservation and the new Main Street will form part of the Officer Town Centre contributing to safe pedestrian, bicycle and vehicle permeability to, from and within the Town Centre. It will also assist in bus circulation to/from the Officer Railway Station and future bus interchange.

The Officer PSP envisages that Station Street will provide opportunities for a range of services, including professional/commercial, medical and personal services, in addition to service business within the Precinct. Importantly, it will complement the uses proposed for the core of the MAC and enable Station Street properties to progressively redevelop over time into more land-intensive uses.

Neighbourhood Activity Centre & Neighbourhood Convenience Centres

The Whiteside Road Neighbourhood Activity Centre is located at the corner of Whiteside Road and Princes Highway, on the PPTN bus route to encourage use of public transport. It includes a mix of uses such as retail, service business/office and peripheral commercial.

Neighbourhood Convenience Centres are located throughout the Precinct and clustered with community facilities to encourage walking via a legible pedestrian and bicycle network and reduce the dependency on motorised private transport.

3.2.4 To provide for local employment and business activity

The Officer Town Centre, the Neighbourhood Activity Centre and the Neighbourhood Convenience Centres within the Precinct provide a variety of employment opportunities for the community.

Employment opportunities will also be provided in a variety of community facilities/services (public and private) and other uses (such as childcare centres, retirement and aged care facilities) that establish within the Precinct.

Employment areas within the Precinct are planned to be easily accessible via public transport, as well as the pedestrian and bicycle network.

The Precinct promotes:

- the establishment of home based businesses, by putting in place provisions that ensure up-to-date telecommunications are provided to every household;
- the development of serviced and small offices located within and at the edge of the neighbourhood activity centres; and
- the development of flexible buildings in particular parts of Officer Town Centre, that allows for conversion of premises from residential to commercial over time.

3.2.5 To provide better transport choices

Travel to Work Statement

A key element in creating a more ecologically, socially and economically sustainable urban structure is to design it in a manner that reduces travel distances, increases travel time efficiency and reduces carbon emissions generated by journey to work trips.

There is a need to provide for the employment needs of the future population within the Precinct, while also providing access to employment opportunities near the Precinct.

The future urban structure reduces travel distances to work by providing local employment that reduces travel times and out commuting.

Local employment opportunities will be generated through:

- the retail and business opportunities and community oriented services within the Officer Town Centre (MAC) and Neighbourhood Activity Centre (NAC);
- the core business and peripheral commercial areas along Princes Highway; and,
- the provision of community hubs and local schools.

Future employment opportunities will also be available in the nearby Cardinia Road Precinct Structure Plan area (located to the east of the Precinct) and the Cardinia Employment Corridor (located south of Princes Freeway).

An efficient road and public transport network

The arterial road and connector street network facilitates efficient road and public transport movement within the Precinct and provides strong connections with neighbouring precincts in all directions.

Existing rural standard roads will be upgraded to an urban standard, with several upgrades funded through the Officer Development Contributions Plan.

The future urban structure provides the basis for provision of efficient public transport by locating at least 95% of dwellings within 400 metres street walking distance of an existing or proposed bus stop.

The road network supports safe and efficient movement throughout the Precinct through the provision of future grade separated crossings of the railway reservation and the following roads:

- Brunt Road (currently an at grade rail crossing);
- The new Officer Main Street; and,
- The new North-South Arterial Road.

The level crossing of the railway line at Station Street will be closed once the new North-South Arterial Road is constructed.

In addition, a new Freeway overpass will be built at Stephens Road, providing an alternative north-south route to improve access from the Precinct to the employment area to the south.

The Major Activity Centre is proposed adjacent to Officer Station and a new station is currently being developed at Cardinia Road (located east of the Precinct). In the future, local bus services will link employees and residents to the stations at PPTN bus routes.

A walkable street structure orientated to promote energy efficient lot design

The future urban structure provides a local street network with high levels of permeability, walkability and passive solar orientation throughout the Precinct.

The Officer PSP provides for safe pedestrian and bicycle network via the:

- road network; and,
- the open space trail network, which includes pedestrian bridges over the creek network and pedestrian underpasses of the rail network.

Activity centres, community facilities, sporting and recreational activities will be clustered along the pedestrian and bicycle network to support walking access to these key destinations.

Promoting the rail corridor as a major movement corridor

The establishment of frontage roads along the edge of the rail reserve promotes the rail line as a major movement corridor for all modes of transport. Planned to provide a linear trail abutting the rail reserve, it will establish a direct walking and cycling link from the east to the west of the Precinct.

The provision of the Access Street Level 1 with Landscape Trail (refer Section 4.6 of the PSP) adjacent to the rail line creates an attractive interface with the rail corridor. It will provide a pleasant environment for those travelling through the Precinct by train and protect the amenity of future residential areas, by establishing an appropriate setback from the rail reserve.

As the rail corridor is ultimately planned to accommodate up to six tracks, in some places the existing rail reserve may need to expand to provide for the additional infrastructure (depending on detailed design). The provision of the landscape trail will also ensure any potential future rail widening has little or no impact on the amenity or circulation within adjoining neighbourhoods.

Attractors located to promote walking to frequently used services

The co-location of activity centres, community hubs and open space promotes a road, pedestrian and bicycle network that facilitates permeability and safe walking and cycling for all residents to these employment areas.

3.2.6 To deliver accessible, integrated and adaptable community infrastructure

Community Hubs

A network of community hubs are provided within the Officer PSP and are used as a hierarchy to differentiate between the roles different localities within the Precinct play in the provision of services and facilities.

Community hubs are focal points for community activity and interaction within each neighbourhood and are located along the connector street network to maximise community access by walking, cycling and public transport.

The Precinct offers a wide range of education facilities (primary and secondary government and non government). Schools within the Precinct are located on the connector street network to provide easy access for the bus network and shared path access.

The Officer PSP encourages the co location and integration of community facilities with activity centres. Higher order community facilities such as the regional library, aquatic centre are to be located in the Officer Town Centre. Higher education uses such as upper secondary, TAFE and university education are also encouraged within the Officer Town Centre.

Open Space

The open space network within the Precinct will cater for the variety of interest and ages within the community and is made up of a number of open space components.

The Precinct abuts the Cardinia Creek Parklands, which, when fully developed will be a series of linked regional parks that stretch for approximately 10 kilometres along Cardinia Creek.

Other components of the open space network include local open space, passive open space (conservation / restoration areas and linear open space) as well as active open space (district sport reserves).

3.2.7 To respond to climate change and increase environmental sustainability

The framework provided by Officer PSP strategically clusters land uses and activities to optimise the number of people who have access to a safe and efficient walking, cycling and public transport network. This supports a reduction in the extent of car use by minimising travel distances and also optimises the viability of alternative modes of travel to car use.

Energy Efficiency

Access to local jobs both within the Precinct and within close proximity to the Precinct, reduce journey-to-work travel distances. A greater range of choice in travel modes will be provided through implementation of the Officer PSP, with street design accommodating buses, cyclists and pedestrians.

The Officer PSP provides a framework for subdivision design that promotes solar access, to minimise energy use of dwellings and buildings in the activity centres, in particular the Officer Town Centre.

Third pipe recycled water is mandated in the residential area, with requirements for development in the activity centres to demonstrate water and energy efficient design elements, such as rainwater harvesting or solar energy systems.

Water Sensitive Urban Design

Water Sensitive Urban Design (WSUD) aims to reduce the quantity of stormwater and improve the quality of water that is either discharged or re-used on site, while enhancing landscape amenity.

WSUD techniques are able to be incorporated into the Precinct at a range of scales. Parks, existing drainage lines and creeks offer good opportunities to integrate WSUD into the landscape. Utilising the existing drainage systems on the site reduces the requirement for piping and channelling of water and maintenance costs.

Native Vegetation

Remnant native and indigenous vegetation will be retained as shown in the Officer Native Vegetation Precinct Plan. The NVPP will assist in creating a distinctive landscape character for the area and enhance biodiversity values and establish important bio-links through the growth corridor, substantially improving current habitat links.

Significant Fauna Species

The nationally significant Growling Grass Frog is present in parts of the Precinct. The delivery of drainage works along Gum Scrub Creek in particular, will establish biodiversity corridors that consolidated and enhance the Growling Grass Frog habitat and enable movement, compensating for the loss of suitable habitat through the development of the Precinct.

The protection and enhancement of habitat for two threatened species (Dwarf Galaxias and Australian Grayling) will occur along Cardinia Creek.

Revegetation of the Cardinia Creek and Gum Scrub Creek corridors will also create habitat for the Southern Brown Bandicoot, providing a movement corridor along these two key waterways.

3.3 Land Use Budget

The Precinct covers an area of approximately 1,020 hectares and comprises a range of different land use components.

The Land Use Budget is outlined in Tables 3a to 3c and depicted in Plan 6.

The Precinct Structure Plan area has been divided into two neighbourhoods: the Major Activity Centre and the Officer Residential Area. The Land Use Budget provides sub-totals for each neighbourhood to show the relative development potential of each part of the Precinct.

The Land Use Budget also includes details of land allocated for Employment and Activity Centres and different Residential Area Types, including Dwelling Yield Estimates for each Cell and across the Precinct.

3.3.1 Net Developable Area

The Net Developable Area (NDA) is land within the Precinct available for development.

In order to determine the NDA, certain land use components have been deducted from the total area of the Officer PSP (refer Table 3a).

The total Net Developable Area is approximately 645 hectares.

Private School Sites

In the Officer PSP area, a high proportion of land is taken up by existing private school sites (over 32 hectares). These sites have been excluded from the NDA to give a more accurate reflection of anticipated population and densities across the Precinct.

3.3.2 Net Residential Area

The residential yield estimates set out in Table 3c relate to the number of dwellings anticipated to be provided on land designated for residential development (refer Plans 5 and 6).

As set out in subsequent sections of this PSP, where planning and design guidelines permit, dwellings may be provided on land identified for development of employment and activity centres in Table 3b, however the calculations set out in Table 3c do not include yields for these areas.

Plan 6: Land Use Budget

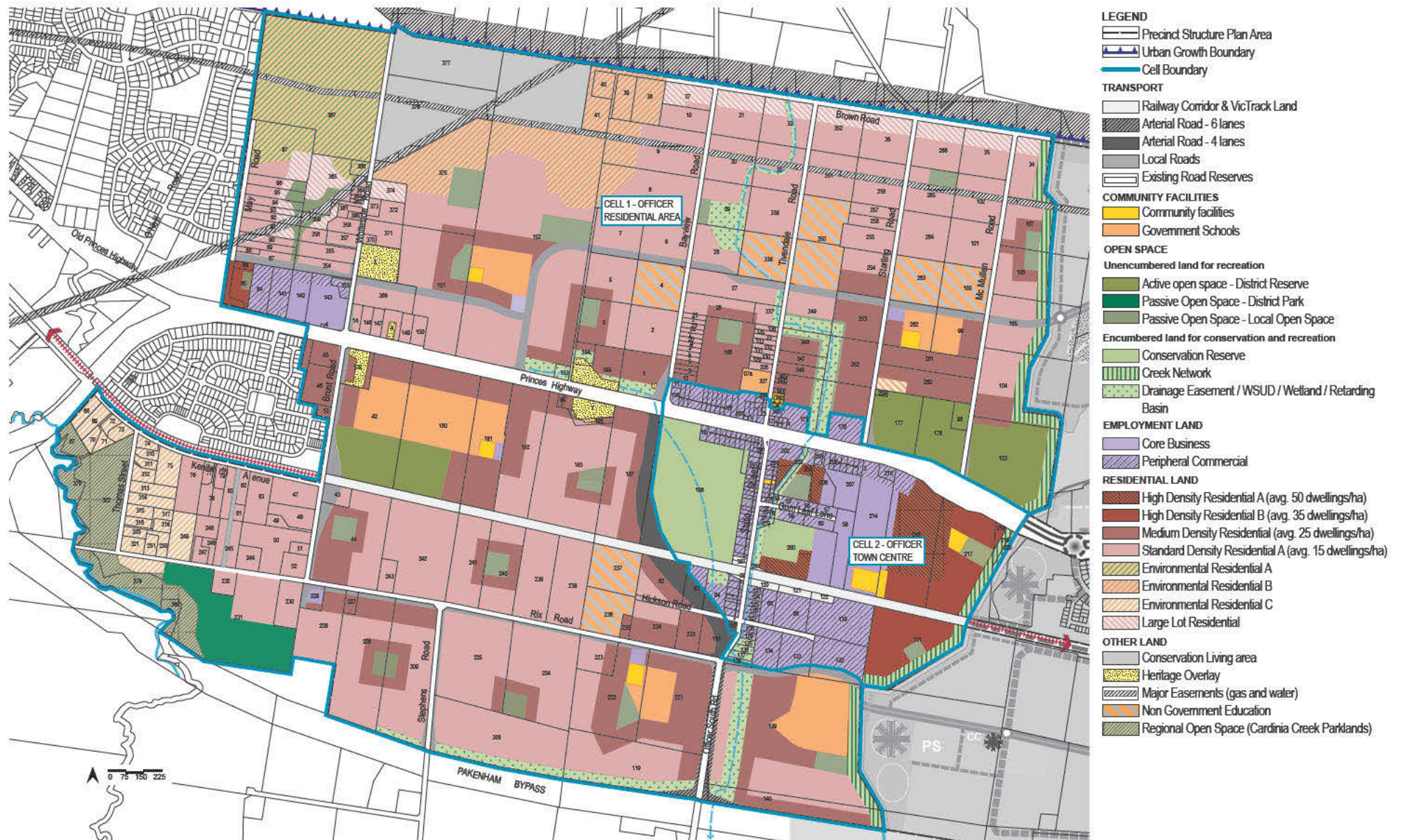


Table 3a: Summary Land Use Budget - Net Developable Area Calculation

Description	Officer Residential Area (Cell 1)		Officer Town Centre (Cell 2)		Total Precinct		
	Hectares (ha)	% of Cell Area	Hectares (ha)	% of Cell Area	Hectares (ha)	% of Total Precinct Area	% of NDA
Total Area (ha)	894.39	100.00%	129.19	100.00%	1023.58	100.00%	n/a
Transport							
Railway Corridor / VicTrack Land	11.62	1.30%	1.57	1.22%	13.19	1.29%	2.04%
Arterial Road - 6 Lanes	2.11	0.24%	0.00	0.00%	2.11	0.21%	0.33%
Arterial Road - 4 Lanes	7.65	0.86%	0.00	0.00%	7.65	0.75%	1.18%
Local Roads (including Connector Boulevards)*	23.55	2.63%	0.35	0.27%	23.90	2.33%	3.70%
Existing Road Reserves	62.67	7.01%	0.00	0.00%	62.67	6.12%	9.70%
Sub total	107.60	12.03%	1.92	1.49%	109.52	10.70%	16.96%
Community Facilities							
Community Facilities	2.28	0.25%	2.20	1.70%	4.48	0.44%	0.69%
Government Schools	34.18	3.82%	0.00	0.00%	34.18	3.34%	5.29%
Sub total	36.46	4.08%	2.20	1.70%	38.66	3.78%	5.99%
Open Space							
Unencumbered Land for Recreation							
Active Open Space - District Recreation Reserves*	30.97	3.46%	0.00	0.00%	30.97	3.03%	4.80%
Passive Open Space - District Park*	11.61	1.30%	0.00	0.00%	11.61	1.13%	1.80%
Passive Open Space - Local Open Space	19.32	2.16%	3.99	3.09%	23.31	2.28%	3.61%
Sub total - Unencumbered	61.90	6.92%	3.99	3.09%	65.89	6.44%	10.20%
Encumbered Land for Conservation and Recreation							
Creek network	12.09	1.35%	4.71	3.65%	16.80	1.64%	2.60%
Drainage Easement / WSUD / Wetland / Retarding Basin	20.11	2.25%	5.50	4.26%	25.61	2.50%	3.97%
Conservation Reserve	0.00	0.00%	22.46	17.38%	22.46	2.19%	3.48%
Sub total - Encumbered	32.20	3.60%	32.67	25.29%	64.87	6.34%	10.04%
Sub total - Unencumbered & Encumbered	94.10	9.19%	36.66	3.58%	130.76	12.77%	20.25%
Other Land							
Heritage Overlay	6.59	0.74%	0.00	0.00%	6.59	0.64%	1.02%
Major Easements (Gas & Water)	13.04	1.46%	0.00	0.00%	13.04	1.27%	2.02%
Non Government Education	32.33	3.61%	0.00	0.00%	32.33	3.16%	5.01%
Conservation Living Area	27.62	3.09%	0.00	0.00%	27.62	2.70%	4.28%
Regional Open Space (Cardinia Creek Parklands)	19.22	2.15%	0.00	0.00%	19.22	1.88%	2.98%
Sub total	98.80	11.05%	0.00	0.00%	98.80	9.65%	15.30%
Total Net Developable Area (ha)	557.43	62.33%	88.41	68.43%	645.84	63.10%	100.00%

* Included in DCP as shown on Plan 6

Table 3b: Summary Land Use Budget - Employment & Activity Centres Land Areas

Description	Officer Residential Area (Cell 1)		Officer Town Centre (Cell 2)		Total Precinct		
	Hectares (ha)	% of Cell Area	Hectares (ha)	% of Cell Area	Hectares (ha)	% of Total Precinct Area	% of NDA
Activity Centre & Employment Land Type							
Core Business	4.97	0.56%	14.55	11.26%	19.52	1.91%	3.02%
Peripheral Commercial	5.78	0.65%	37.43	28.97%	43.21	4.22%	6.69%
NET DEVELOPABLE AREA (EMPLOYMENT)	10.75	1.20%	51.98	40.23%	62.73	6.13%	9.71%

Table 3c: Summary Land Use Budget - Residential Yield Estimates

Description Residential Land Type	Officer Residential Area (Cell 1)		Officer Town Centre (Cell 2)		Total Precinct		
	Hectares (ha)	% of Cell Area	Hectares (ha)	% of Cell Area	Hectares (ha)	% of Total Precinct Area	% of NDA
High Density Residential A	0.00	0.00%	12.19	9.44%	12.19	1.19%	1.89%
High Density Residential B	1.80	0.20%	15.56	12.04%	17.36	1.70%	2.69%
Medium Density	135.34	15.13%	8.69	6.73%	144.03	14.07%	22.30%
Standard Density	314.49	35.16%	0.00	0.00%	314.50	30.73%	48.70%
Large Lot Residential	17.66	1.97%	0.00	0.00%	17.66	1.73%	2.73%
Environmental Residential A	31.00	3.47%	0.00	0.00%	31.00	3.03%	4.80%
Environmental Residential B	29.96	3.35%	0.00	0.00%	29.96	2.93%	4.64%
Environmental Residential C	16.40	1.83%	0.00	0.00%	16.40	1.60%	2.54%
NET DEVELOPABLE AREA (RESIDENTIAL LAND)	546.65	61.12%	36.44	28.21%	583.10	56.97%	90.28%

3.4 Demographic Projections

The Precinct is estimated to provide approximately 10,900 dwellings and an ultimate community of approximately 28,300 residents.

The future residential community within the Precinct is likely to have the following demographic characteristics (as compared with Cardinia Shire and the Melbourne Statistical Division (MSD) – Melbourne Metropolitan Area):

- A younger median age of 32 (compared with 36 for the MSD).
- There will be a much higher proportion of children aged 0-4 and 5-11 years.
- There will be a slighter higher proportion of adults aged 25-34 and 35-49 years.
- There will be less young adults aged 18-24 years.
- There will be less senior adults aged 55-64 and 65 years and over.
- A higher proportion of families with children households, and couples without children households.
- A lower proportion of residents from cultural and linguistic diverse backgrounds.

During the initial stages of development, the new precinct community will consist mainly of young couples and young families. This community structure will initially create high demand for children's and related services. As the community develops and these young families age, there will be an increased demand for youth services.

Over the longer term, the proportion of residents at or reaching retirement age by 2031 is projected to increase significantly in line with the metropolitan average.

These demographic characteristics are relatively typical of establishing outer growth area communities.

The future estimated population within the Precinct is based upon differential average household sizes related to density and dwelling types (as shown in Table 4). Increased population densities will be achieved through provision of higher housing densities around activity centres, open space and public transport routes, however it is recognised that the average number of people per household will decrease as dwelling density increases.

Table 4: Population Estimates by Dwelling Types

RESIDENTIAL AREA TYPE	Net Residential Hectares (NRHa)	Dwellings per hectare	Dwellings	Average Household Size	Estimated Population
Officer Town Centre (Major Activity Centre)	n/a	n/a	620	1.80	1,116
Whiteside Road Neighbourhood Activity Centre	n/a	n/a	100	2.40	240
High Density Residential A	12.19	50	610	1.80	1,097
High Density Residential B	17.36	35	608	1.80	1,094
Medium Density	144.03	25	3,601	2.40	8,642
Standard Density	314.50	15	4,717	3.00	14,152
Large Lot Residential	17.66	9	159	3.00	477
Environmental Residential A *	31.00	6	186	3.00	558
Environmental Residential B *	29.96	9	270	3.00	809
Environmental Residential C *	16.40	2.5	41	3.00	123
Conservation Living Area	n/a	n/a	8	3.00	24
TOTALS	583.10	18.73	10,919	2.59	28,332

* Dwellings per hectare assumed to be lower due to some large lots being required to address site constraints. Table does not prescribe density or lot size.

04 Elements

The Vision and Future Urban Structure of the Officer PSP is implemented through the Objectives and Planning and Design Guidelines of the following seven elements:

1. Image & Character
2. Housing
3. Employment and Activity Centres
4. Community Facilities
5. Open Space and Natural Systems
6. Transport and Movement
7. Utilities, Energy & Sustainability

Each element includes:

- **Objectives:** an objective describes the desired outcome to be achieved by development.
- **Plans:** the plans are the spatial expression of objectives.
- **Planning and Design Guidelines:** are design guidelines including figures and tables that:
 - must be met; or
 - should be met.

Any Planning and Design Guideline that:

- 'must be met' is a requirement that must be reflected in planning permits, where the responsible authority considers that the guideline is relevant to a proposal.
- 'should be met' is a preferred outcome for developments that should be reflected in planning permits. To meet the objective, an alternative may be proposed. If the responsible authority is satisfied that the alternative meets the objective, then the alternative may be considered to the satisfaction of the responsible authority.

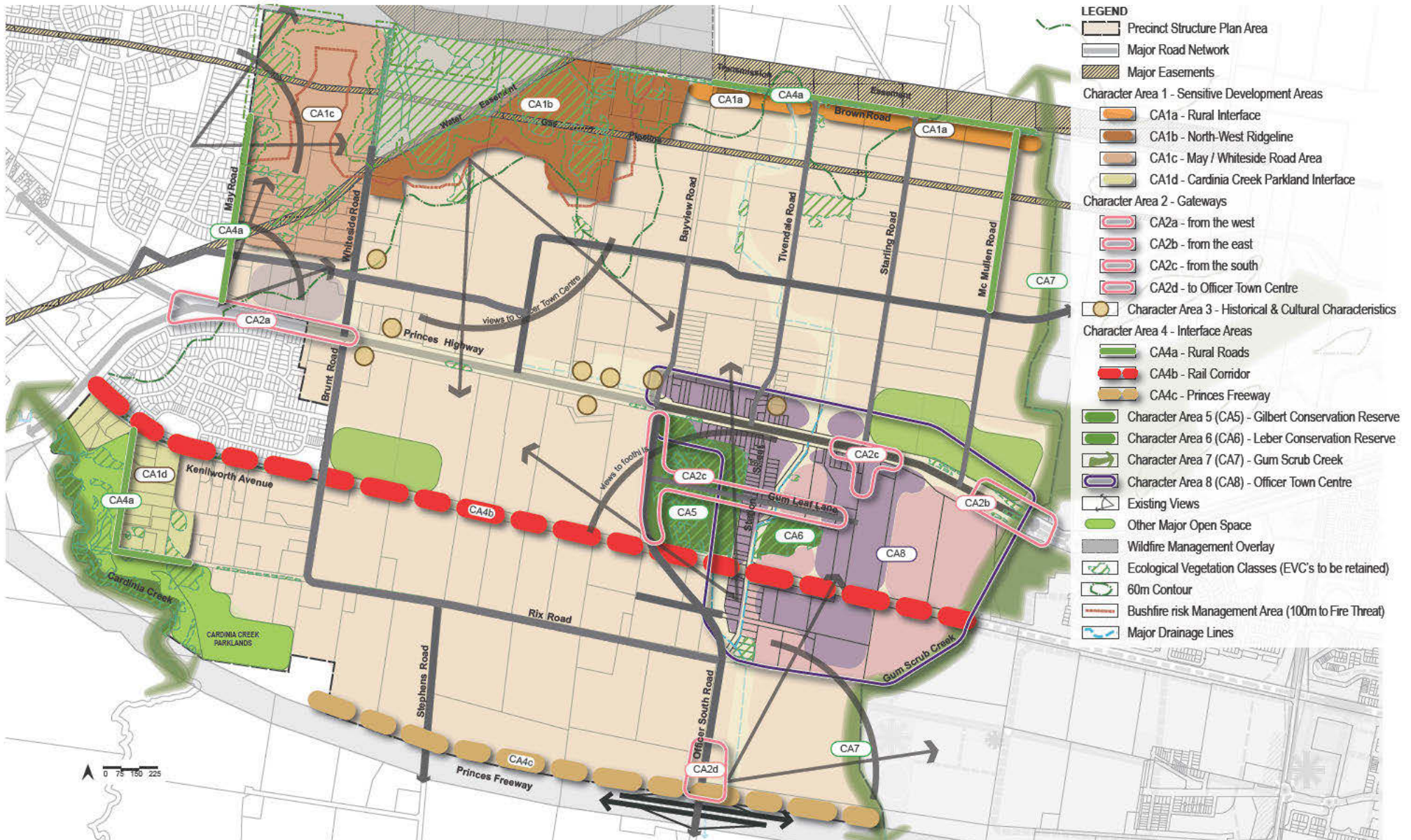
4.1 Image and Character

4.1.1 Image and Character Objectives

The objectives for image and character are to:

- Create a strong sense of place that is functional, safe and aesthetically pleasing.
- Create a distinctive character for different neighbourhoods, through the treatment of streets and public spaces.
- Preserve and capitalise on view corridors to and from significant landscapes features and ensure development does not detract from the visual amenity of the area.
- Recognise the strong contribution that the ridgelines, valleys and the backdrop of the Dandenong Ranges foothills make to the landscape character of the region.
- Recognise the importance of the buffer to Cardinia Creek and its Parklands through:
 - the provision of a sensitive urban design response to the residential interface; and,
 - the creation of district open space adjacent to Cardinia Creek Parklands in order to further protect and enhance this significant waterway, associated wetlands and significant fauna species.
- Ensure Gum Scrub Creek provides an urban break and forms a landscape feature of the Precinct.
- Preserve the high environmental qualities on existing roads that have an anticipated low volume of traffic.
- Conserve and enhance recognised heritage places.
- Provide a range of design treatments along the edges of the Princes Freeway and railway reserve to create visual interest, maximise safety and amenity.

Plan 7: Image and Character



- Minimise the visual and auditory impact of the Princes Freeway and rail line on adjacent development.
- Provide lot diversity to complement existing features of the site.

Officer Town Centre

The objectives for image and character for the Officer Town Centre are to:

- create a high profile image, in particular to be seen as a leading example of:
 - Environmentally Sustainable Development (refer Element 7: Utilities, Energy & Sustainability); and,
 - a centre of innovative mixed use urban development in Melbourne's South East.
- provide for a distinctive character through:
 - the provision of a highly urbanised, intensively developed, built form;
 - creating a contrast between the character of Officer Town Centre and surrounding neighbourhoods; and,
 - establishing streets with a strong urban feel.

4.1.2 Implementation

The objectives for image and character are met by implementation of all the following:

- Element 2 through to Element 7 (Sections 4.2 to 4.7);
- Plan 5: Future Urban Structure;
- Plan 7: Image and Character; and,
- Table 5: Image and Character Planning and Design Guidelines set out in 4.1.3

4.1.3 Planning and design guidelines

The following general planning and design guidelines must be met:

- Create compact neighbourhoods that:
 - are pedestrian friendly;
 - have a permeable street network;
 - provide a range of accessible urban parks;
 - are designed to accommodate public transport;
 - locate higher than conventional density housing along public transport corridors, adjacent to activity centres and strategic open space areas;
 - emphasise the landscape character, creek network and topographical features of the precinct; and,
 - encourage biodiversity and help support a balanced environment.
- Capitalise on view corridors to and from significant landscape features.

The following planning and design guidelines should be met:

- Establish an urban structure capable of adaptation over time to meet changing needs and to promote the continued use of existing facilities and buildings.
- Ensure development does not detract from visual amenity of the future urban context.

A number of specific Character Areas (CAs) have been identified in the Precinct, for which specific planning and design guidelines apply. These are set out in Table 5.

Table 5: Image and Character Planning and Design Guidelines

Character Area (CA) Number & Description	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
CA 1 - Sensitive Development Areas		
CA1a - Rural Interface	<ul style="list-style-type: none"> • Provide larger lots to ensure a natural transition between standard residential land and the Green Wedge zoned land to the north of the Precinct. • Subdivision layout and siting of dwellings is to: <ul style="list-style-type: none"> - respond to topography, including slope of the land and any hilltops on or adjacent to the land; and - integrate remnant native vegetation and minimise the need for removal. • Create a sense of openness and space through the siting and design of buildings, including: <ul style="list-style-type: none"> - ensuring dwellings are a low scale; - achieving appropriate setbacks from title boundaries; - providing setbacks between buildings in the area shown as large lot residential in Plan 8: Housing, to achieve a rural living character; - minimising the number and extent of dwellings protruding above ridgelines and the existing tree canopy. • Use natural colours and building materials that are sensitive to the surrounding environment. • Provide landscaping to minimise the visual impact of development, using species consistent with existing EVCs. 	<ul style="list-style-type: none"> • Design buildings that: <ul style="list-style-type: none"> - minimise the need to excavate or alter the natural topography; - occupy less than 70 percent of the length of the lot's principal road frontage; - are no more than two storeys in height from any abutting road frontage.
CA1b - North West Ridgeline	<ul style="list-style-type: none"> • Provide for larger lots that address fire risk (including the existing Wildfire Management Overlay) and the constraints of native vegetation. • Development is not to dominate the landscape. • Maximise views to and from the site. • Avoid impacts on areas identified as high or very high visual prominence in <i>Officer West, Cardinia, Landscape Assessment (Hansen Partnership 2011)</i>. 	<ul style="list-style-type: none"> • Maximise views into the Officer Town Centre. • Encourage the use of natural colours and building materials consistent with the surrounding environment. • Design buildings that minimise the need to excavate or alter the natural topography. • Provide landscaping to minimise the visual impact of development, using species consistent with existing EVCs.
CA1c - May / Whiteside Road area	<ul style="list-style-type: none"> • Set back development from ridgelines and significant view points. • Provide for larger lots that retain and protect existing vegetation and address topography constraints. • Ensure development does not dominate the landscape. • Maintain vistas of the area's treed ridgelines and hilltops from O'Neill Road, Whiteside Road, Panorama Estate and Officer Town Centre. • Avoid impacts on areas identified as high or very high visual prominence in <i>Officer West, Cardinia, Landscape Assessment (Hansen Partnership 2011)</i>. 	<ul style="list-style-type: none"> • Maximise views into the Officer Town Centre. • Encourage the use of natural colours and building materials consistent with the surrounding environment. • Encourage revegetation of native flora to enhance the relationship between the built form and surrounding area. • Maximise native vegetation that is retained above the 75 metre contour. • Integrate development with the existing vegetation.

Character Area (CA) Number & Description	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
CA1d - Cardinia Creek Parklands interface	<ul style="list-style-type: none"> • Provide for larger lots to create a buffer adjacent to the Cardinia Creek and Cardinia Creek Parklands. • Create a sense of openness and space through the siting and design of buildings, including: <ul style="list-style-type: none"> - ensuring dwellings are a low scale; - achieving appropriate setbacks from title boundaries. • Avoid further vegetation removal to protect the area's character and sensitive environmental characteristics. 	<ul style="list-style-type: none"> • Retain the existing rural character of the area. • Design buildings that: <ul style="list-style-type: none"> - occupy less than 70 percent of the length of the lot's principal road frontage; - are no more than two storeys in height from any abutting road frontage; and - are set back sufficiently to provide space for landscaping that screens buildings from Cardinia Creek Parklands. • Encourage revegetation of native flora to enhance the relationship between the built form and conservation area. • Encourage the use of natural colours and building materials consistent with the surrounding environment.
CA2 – Gateways		
CA2a - From the West	<ul style="list-style-type: none"> • Provide an open and attractive interface with buildings that address the Princes Highway. 	<p>The following apply to all Gateway character areas (CA2a-CA2d).</p> <ul style="list-style-type: none"> • Create distinctive entrances that visually differentiate character areas. • Subdivision and building design is to create landmark or gateway sites at arterial road entry points to the Precinct and at intersections along arterial roads, capable of accommodating larger buildings that provide visual markers and signature buildings at key locations.
CA2b - From the East	<ul style="list-style-type: none"> • Strengthen the green break between the Cardinia Road and Officer Precinct through the provision of open space linked to the creek network. • Maximise vegetation retention. • Densely revegetate the creek corridor adjacent to the road reserve. 	
CA2c - To the Officer Town Centre	<p>Princes Highway</p> <ul style="list-style-type: none"> • Create a strong built form edge to the Princes Highway to ensure a 'sense of arrival'. • Ensure the scale of buildings is responsive to the natural topography. • Achieve a balance between the proportion and scale of buildings on both sides of the Princes Highway. • Provide a hard edge built form at the interface between the Gateway and surrounding land uses. <p>Gum Leaf / Station Street / North South Arterial</p> <ul style="list-style-type: none"> • Provide a strong green canopy along both sides of the North South Arterial, that meet VicRoads clear zone requirements. • Provide a hard urban edge through built form along Gum Leaf Lane and on the western side of the North South Arterial. • Ensure the design of the grade separated crossing maintains the sense of green space on the eastern side of the North South Arterial, to the satisfaction of VicRoads. • Emphasise Gum Leaf Lane as a key entry point through street planting and public art. • Facilitate the transition of Station Street from a high volume road to a local access street after the North-South Arterial has been constructed and the Station Street level crossing has been closed. 	

Character Area (CA) Number & Description	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
CA2d - From the South	<ul style="list-style-type: none"> Built form on Officer South Road is to establish an attractive and prominent entry feature to the Precinct without obstructing the significant view corridor from Officer South Road / Princes Freeway looking north easterly to the Hilltop Parkland (located in the Cardinia Road Precinct Structure Plan area). 	
CA3 - Historical and Cultural characteristics		
General	<ul style="list-style-type: none"> Integrate heritage sites with adjacent subdivision design. Respond to the key features of identified heritage sites. Ensure viewlines to the front of heritage buildings from existing roads is maintained by: <ul style="list-style-type: none"> siting new development and buildings to the side and rear; ensuring the land between the front of heritage buildings and existing road reserves is used for public open space, private open space or a road. 	<ul style="list-style-type: none"> Integrate existing heritage elements as a design feature of new development, including: <ul style="list-style-type: none"> reusing clay pits as part of the drainage system; ensuring new buildings maintain the prominence of kilns and chimneys in the landscape; locating heritage trees in open space or other public reserves, where possible. Front new development onto heritage sites, to create an active interface between heritage features and new development.
CA4 - Interface areas		
CA4a - Rural interface roads (May Road, Brown Road, McMullen Road & Thomas Street)	<ul style="list-style-type: none"> Provide sealed rural standard roads on low volume roads that have high environmental qualities. 	<ul style="list-style-type: none"> Avoid the removal of vegetation along the road reserve through detailed design of the road cross section, where possible.
CA4b - Rail corridor	<ul style="list-style-type: none"> Front development or provide an appropriate frontage to the rail corridor. Increase public safety through passive surveillance and opportunities for pedestrian and bicycle links. Provide a continual green corridor (such as canopy trees in street reserve, drainage corridor, landscaped pedestrian pathway) along the length of the rail reserve. 	
CA4c - Princes Freeway		<ul style="list-style-type: none"> Incorporate consistent aspects to the treatment of the interface with the Freeway that: <ul style="list-style-type: none"> responds to the site and surrounds; and provides a clear image which is easily understandable and interesting for motorists, pedestrians and cyclists.
CA5 - Gilbert Conservation Reserve	<ul style="list-style-type: none"> Create a strong 'green break' between the Officer residential area and Officer Town Centre, by maintaining Gilbert as an expansive, open grassland. Provide a hard-edge built form along the northern and eastern edges of Gilbert to form a strong 'gateway' to Officer Town Centre. Ensure development fronts onto or overlooks Gilbert, rather than backing onto the grasslands. 	
CA6 - Leber Conservation Reserve	<ul style="list-style-type: none"> Establish Leber as an 'urban forest' conservation reserve. Provide for a range of passive recreation facilities on the edges of Leber, outside areas where vegetation is to be retained (refer Officer NVPP). 	<ul style="list-style-type: none"> Manage public access through Leber by providing boardwalks or similar, demarcating the area as environmentally sensitive.

Character Area (CA) Number & Description	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
CA7 - Gum Scrub Creek	<ul style="list-style-type: none"> • Ensure subdivision layout and design facilitates the delivery of Gum Scrub Creek as an urban break and landscape feature of the Precinct. 	<ul style="list-style-type: none"> • Provide a combination of subdivision, road and housing typologies adjacent to the creek corridor, ensuring properties 'overlook' or 'front onto' the corridor.
CA8 - Cardinia Creek	<ul style="list-style-type: none"> • Provide a district open space area adjacent to the Cardinia Creek Parklands to: <ul style="list-style-type: none"> - protect and enhance the conservation zone; - maximise the scale of the urban break provided along the Princes Freeway as it crosses Cardinia Creek. 	
CA9 - Officer Town Centre	<ul style="list-style-type: none"> • Encourage innovative urban design and architecture that complements the character of the Precinct. • Provide streetscape treatments that include the use of hard surfaces and innovative urban landscape treatments. • Provide a streetscape palette to ensure: <ul style="list-style-type: none"> - a continuous sense of place; and, - distinctive and comprehensive street furniture design. • Use hardstand landscape treatments for nature strips with tree pits or outstands. • Create a well integrated permeable environment through delivery of a fine grained urban street network. • Provide a traffic circulation loop within the Officer Town Centre to protect the integrity of main street as a primary pedestrian environment. 	

4.2 Housing

4.2.1 Housing Objectives

The objectives for housing are to:

- Ensure greater housing choice, diversity and affordability.
- Provide a range of lot sizes, housing types and lifestyle opportunities to satisfy the needs and aspirations of the community and provide for changing needs overtime.
- Achieve a minimum of 15 dwellings per Net Residential Hectare across the entire Precinct.
- Provide lot sizes and housing types that are responsive to the character of the natural and built environment in the area and the principles of Environmentally Sustainable Design.
- Provide residential neighbourhoods with attractive streetscapes and a high quality urban design and distinct urban character.
- Provide a variety of housing types and density at key amenity areas such as creek corridors, the pedestrian network and public open space.
- Provide medium and high density housing sites and specialised housing forms including retirement villages close to services and amenities such as activity centres, open space, community hubs and public transport (in particular along PPTN routes).
- Ensure the density of development responds to:
 - significant slopes and/or prominent ridgelines and hilltops;
 - vegetation to be retained in the NVPP;
 - fire risk, including the Wildfire Management Overlay (WMO);

- Cardinia Creek and surrounds (within 400 metres of the waterway); and/or
- the rural interface at the edge of the Urban Growth Boundary.
- Manage the interface between the Princes Freeway and rail line through careful subdivision design and choice of housing typology.
- Encourage barrier housing along the Freeway to enhance visual interest and minimise adverse visual and amenity impacts.

Officer Town Centre

The objectives for housing for the Officer Town Centre are to:

- Maximise housing density within the Officer Town Centre and within proximity of the public transport hub at Officer Railway Station.
- Deliver an urban, multi level residential area.
- Provide housing choice, in particular encourage:
 - shop top dwellings;
 - multi storey apartments;
 - multi storey retirement options;
 - housing that accommodates a working and living environment; and,
 - higher density town houses.
- Provide for a full range of urban density housing across all price ranges within the Officer Town Centre area from more affordable housing such as small scale apartment living to larger townhouses with superior amenity.
- Provide a high amenity urban environment, including active frontages to streets, as well as public access and permeability between buildings where appropriate.

- Consolidate parking in off-street at-grade sites at the rear of developments to preserve opportunities for higher density development in the future.
- Promote buildings of high architectural quality and visual interest.

4.2.2 Implementation

The objectives for housing and lot diversity are met by implementation of all the following:

- Plan 5: Future Urban Structure;
- Plan 8: Housing;
- Table 6: Distribution of Housing Densities;
- Table 7: Housing Planning and Design Guidelines set out in 4.2.3;
- Figures 1 to 5b;
- Figures 10a & 10b;
- Section 4.1 Image and Character, in particular the Character Area assessment; and
- Appendix A: Small Lot Housing Code.

Plan 8: Housing



4.2.3 Planning and design guidelines

The following planning and design guidelines for subdivision design must be met:

- Provide a high quality urban environment with a sense of identity.
- Provide an appropriate distribution of lot and housing types to achieve diverse streetscapes.

The following planning and design guidelines should be met:

- Lots are to be:
 - generally rectangular in shape on streets aligned on a north-south or east-west axis to maximise building and energy efficiency; and,
 - designed so as to ensure garages are not the dominant front façade element of the house and/or the streetscape
- Seek to ensure subdivision and lot layout provides creative and innovative design solutions for fragmented lot ownership in order to:
 - achieve the desired densities as outlined in the PSP; and
 - facilitate integration of development with adjoining properties.
- Subdivision design should ensure that conventional density lots create a transition from medium density development to larger, low density lots.
Ensure the transition between densities:
 - avoids creation of larger lots (with wide frontages) on one side of a road, facing small lots (with narrow frontages) on the other side; and,
 - uses rear fence lines as the transition from lower densities (1,000+ square metre lots) to standard density lots.

Table 6: Distribution of Housing Densities

RESIDENTIAL AREA TYPE	Net Residential Hectares (NRHa) ^	% Total NRHa	Dwellings	Average Lot Size (m²)	% of Dwellings
Officer Town Centre (Major Activity Centre)	n/a	n/a	620	n/a	5.68%
Whiteside Road Neighbourhood Activity Centre	n/a	n/a	100	n/a	0.92%
High Density Residential A	12.19	2.09%	610	160	5.58%
High Density Residential B	17.36	2.98%	608	230	5.56%
Medium Density	144.03	24.70%	3,601	280	32.98%
Standard Density	314.50	53.94%	4,717	500	43.20%
Large Lot Residential	17.66	3.03%	159	1,000	1.46%
Environmental Residential A*	31.00	5.32%	186	1,500	1.70%
Environmental Residential B*	29.96	5.14%	270	1,000	2.47%
Environmental Residential C*	16.40	2.81%	41	3,600	0.38%
Conservation Living Area	n/a	n/a	8	n/a	0.07%
TOTALS	583.10	100.00%	10,919	n/a	100.00%

* Average lot size assumed to be higher due to some large lots being required to address site constraints. Table does not prescribe density or lot size.

Table 7: Housing Planning and Design Guidelines

Issue	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
Housing Density Types		
High Density Residential A & B	<ul style="list-style-type: none"> • High Density Residential is to be provided in the Officer Town Centre. • Deliver a higher density urban environment, comprising: <ul style="list-style-type: none"> - shop-top dwellings and multi storey apartments, especially within the retail core and within 400 metres of the Officer Railway Station; - a minimum two storey built form, with higher density residential in buildings over two storeys that are in locations close to the retail core and the Officer Railway Station, unless otherwise specified in Table 10: Employment and Activity Centre Planning and Design Guidelines in Section 4.3 Employment and Activity Centres; - a range of high density dwelling types from affordable apartments to substantial townhouses; and, - mixed use buildings that co-locate residential with other uses, while ensuring co-location with uses likely to have amenity impacts is avoided (such as shop top dwellings above late night uses). • Building design is to: <ul style="list-style-type: none"> - maximise ground level windows, pedestrian entrances and verandahs to promote active frontages to ensure informal or passive surveillance of streets and other public open spaces; - provide high architectural quality and visual interest; - provide safe and convenient access between car parking and bicycle areas and the pedestrian entry to buildings; - provide integrated parking solutions which will minimise private garage access points and ensure private garage access will only be via rear or side lane; - ensure passive surveillance is provided from buildings overlooking laneways to provide a safe environment. • Subdivision design is to: <ul style="list-style-type: none"> - ensure lanes are well lit and provide a safe environment; - locations of single title townhouses do not compromise opportunities for higher density living in integrated housing sites adjacent to the Core Business Area and Officer Railway Station; and, - support and/or create a finer grain of streets that encourages higher levels of local pedestrian and cycle use. • The subdivision of land for housing that creates a lot less than 300 square metres must contain a building envelope that is in accordance with the Small Lot Housing Code forming part of this Precinct Structure Plan. 	<ul style="list-style-type: none"> • Incorporate retail space, cafes, restaurants or home offices in the ground floor street edges of new residential development to increase visual and physical connections between the interiors of new buildings and adjacent streets. • Lots are to be no more than 230 square metres.

Issue	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
Medium Density	<ul style="list-style-type: none"> • Additional sites for medium density and/or sites that propose a higher density will be considered provided that sites are in strategic locations and satisfy the objectives of 4.2 Housing. • The subdivision of land for housing that creates a lot less than 300 square metres must contain a building envelope that is in accordance with the Small Lot Housing Code forming part of this Precinct Structure Plan. • Integrated housing sites are to be provided: <ul style="list-style-type: none"> - within or at the edge of activity centres; - overlooking local and/or linear open space; or - adjacent to proposed public transport routes. 	<ul style="list-style-type: none"> • Medium density residential development is to: <ul style="list-style-type: none"> - include a mix of smaller lots ranging in size from 130 square metres to 350 square metres, as well as the provision of integrated housing sites; - be located within 400 metres walking distance of an activity centre and / or 800 metres from the Officer Railway Station; and/or; - be located in areas that overlook, abut or are within close proximity of open space. • Lots of 350 square metres or less are to be designed to minimise garage dominated streetscapes. • A variety of styles and types of medium density development are encouraged to further enhance lot diversity, such as terrace / townhouse development, apartments, cottage lots, shared driveway housing, integrated development sites as well as retirement villages / aged care facilities. • Encourage development of integrated housing sites by a single builder to deliver a cohesive built form. • Lots with shared driveway access are to be designed to maximise frontage to the public realm. • Lots with direct park frontage or road /park frontage with rear access are encouraged. These lots are to be designed to ensure: <ul style="list-style-type: none"> - the rear lane access to garages lessens the visual impact on the streetscape; - strong built form along the park edge provides a backdrop and interface to open space; and, - wide pathways are provided along the frontage to ensure an 'address' for dwellings.
Standard Density	<ul style="list-style-type: none"> • Lots are to designed to: <ul style="list-style-type: none"> - create a sense of street address and streetscape character; - ensure garages are not the dominant front façade element across the width of the lot; and, - maximise the opportunity for useable private open space. • Provide a diversity of block widths and depths. • Existing township lots may be redeveloped into medium density or integrated housing sites. • Where a lot abuts land shown as Environmental Residential C on Plan 8, it must be no less than 1,000 square metres. 	<ul style="list-style-type: none"> • Standard density residential is to provide a broad diversity across the range of lot sizes and include lots with sizes generally within the range of 350 square metres to 750 square metres. • Seek to ensure standard density development provides: <ul style="list-style-type: none"> - innovative design solutions for fragmented land ownership; and, - sensitive design solutions for topography and landscape features of the area. • Lots are to be designed to enable rear accessed garages on narrow fronted lots.

Issue	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
Large Lot Residential	<ul style="list-style-type: none"> • Lots are to be designed to: <ul style="list-style-type: none"> - create a sense of street address and streetscape character; - respond to the character of the area they are located in; and - minimise the loss of native vegetation either within the development or in adjacent road reserves (refer Officer NVPP). • Lots are to be a minimum of 1,000 square metres where the lot: <ul style="list-style-type: none"> - abuts an existing road reserve; and/or - is located at or above the 80 metre contour. 	<ul style="list-style-type: none"> • Lots are to be designed to: <ul style="list-style-type: none"> - be proportionally wider than deep; and - maximise side setbacks and create openness between dwellings. • Building design is to utilise colours and materials that are reflective of the natural surrounds.
Environmental Residential	<ul style="list-style-type: none"> • A building envelope plan is required for all land shown as Environmental Residential (A, B or C) in Plan 8. • The location of building envelopes are to: <ul style="list-style-type: none"> - maximise retention of native vegetation and protect adjacent environmentally sensitive areas; - be located on the flatter part of sites, to limit any cut and fill on the sites; - be located away from the tops of significant ridgelines to retain the prominence of the ridgeline and provide sufficient land for landscaping to obscure any buildings; and - address the bushfire risk management requirements that apply to Environmental Residential A or B (refer Section 4.5.11). • In the area shown as Environmental Residential A or B in Plan 8: <ul style="list-style-type: none"> - subdivision is to respond to topography and ensure that the construction of any dwelling requires minimal cut and/or fill; and - lots are no less than 600 square metres. • In the area shown as Environmental Residential B in Plan 8 and on Lot 2 PS312844, where vegetation is to be retained in a lot, that lot is to be no less than 4,000 square metres. • In the area shown as Environmental Residential C in Plan 8: <ul style="list-style-type: none"> - a density of 5 dwellings per hectare is to be achieved; - the setback of any dwellings from the Cardinia Creek Parklands is to be maximised; and - the visual bulk of development must not adversely impact on the rural character of the western end of Rix Road or Thomas Street. 	<ul style="list-style-type: none"> • In the area shown as Environmental Residential C in Plan 8: <ul style="list-style-type: none"> - encourage consolidation of existing lots to provide optimal subdivision layouts; - avoid creation of battle axe type lots; and/or, - create a sense of street address by fronting onto adjoining roads. • Lots are to be designed to: <ul style="list-style-type: none"> - be proportionally wider than deep, to maximise side setbacks and create openness between dwellings; and, - include the use of colours and materials that are reflective of the natural surrounds. • In the area shown as Environmental Residential A or B in Plan 8, where the slope is greater than 20 percent across half of a proposed lot, the size of the lot is to be greater than 1500 square metres.

Issue	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
Conservation Living Area	<ul style="list-style-type: none"> Ensure any development meets the requirements of: <ul style="list-style-type: none"> the Officer NVPP; and the bushfire management provisions set out in Section 4.5.11. Development of up to 3 dwellings on Lot 5 PS321195 is permitted, provided that: <ul style="list-style-type: none"> all dwellings are located in the south-west corner of the site; each dwelling is located on a separate lot; and native vegetation to be retained is located in a lot that contains a dwelling. A single dwelling is permitted on Lot 2 PS327845. Development of up to 4 dwellings on Lot 2a PS517997 is permitted, provided that: <ul style="list-style-type: none"> each dwelling is located on a separate lot; and native vegetation to be retained is located in a lot that contains a dwelling. 	<ul style="list-style-type: none"> Upon subdivision of the parent title, native vegetation to be retained is to be included in one lot.
Subdivision and Use of Land		
Aged Care Facilities/ Retirement Villages	<ul style="list-style-type: none"> Retirement villages or residential aged care facilities are to be: <ul style="list-style-type: none"> located within an activity centre; or within 400 metres of an activity centre and public transport node. Safe pedestrian access to the nearest activity centre is to be provided, requiring the developer to deliver pedestrian crossing infrastructure external to the development to the satisfaction of the responsible authority. 	<ul style="list-style-type: none"> The design of retirement villages are not to compromise the permeability and accessibility of neighbourhoods, particularly for pedestrians.
Existing dwellings	<ul style="list-style-type: none"> Where: <ul style="list-style-type: none"> an existing dwelling is located in an area other than Environmental Residential on Plan 8; and the existing lot is greater than 2500 square metres; <p>subdivision of the existing lot must not create a lot of more than 1500 square metres to contain the existing dwelling.</p>	
School sites (development for residential purposes)	<ul style="list-style-type: none"> Where land shown as a school in Plan 5 is proposed to be developed for residential purposes, the density of housing on the land is to be determined in the context of: <ul style="list-style-type: none"> adjoining land use, including: <ul style="list-style-type: none"> proximity to a designated Neighbourhood Convenience Centre; proximity to a local park of 8,000 square metres or more. housing densities identified for adjacent sites (refer Plan 8) or established through subdivision of adjacent sites. 	

Issue	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
Typology and Design		
Barrier Housing	<ul style="list-style-type: none"> Barrier housing is to be provided along the Princes Freeway from Officer South Road to Gum Scrub Creek. Where barrier housing is provided: <ul style="list-style-type: none"> dwellings are to be a minimum of two storeys; a varied roof-line is to be provided; the 'barrier' wall facing is to: <ul style="list-style-type: none"> be articulated; incorporate a varied palette of colour and textures; and include windows where appropriate. services must be obscured from view (from adjacent road reserves and residential area) by: <ul style="list-style-type: none"> integrating services into the building design; or use of screens. 	<ul style="list-style-type: none"> Where barrier housing is provided, dwellings of three storeys or more are encouraged.
Rear Access Lanes	<ul style="list-style-type: none"> Where rear access lanes are provided, they are to: <ul style="list-style-type: none"> be no more than 150 metres long; be designed with no alcoves or obscured places, to maintain safety and security; provide consistent setbacks from the road reserve; not be heavily landscaped to ensure viewlines are not obscured, with <ul style="list-style-type: none"> low-lying vegetation and climbing plants; and clean-trunked canopy trees. 	<ul style="list-style-type: none"> Where rear access lanes are provided, they are to: <ul style="list-style-type: none"> be linear, with no t-intersections or bends; ensure garages and rear fences are constructed to the edge of the road reserve of the laneway (with zero setback); and be a maximum paved width of 6 metres. Lots with rear lane access are to: <ul style="list-style-type: none"> encourage dwellings, home-based businesses or habitable areas over garages to ensure surveillance of the lane way; and, ensure dwellings/offices are designed to add visual interest such as balconies over garages or articulated frontages.

Issue	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
Interface Treatments		
Public Open Space	<ul style="list-style-type: none"> • Provide active frontages that address all public open space areas. • Where dwellings are adjacent to or abut public open space: <ul style="list-style-type: none"> - provision of no front fence is encouraged; or - a low, visually transparent front fence may be provided to a maximum of 1.2 metres; and - if the lot is rear-loaded, then the frontage abutting open space is to be set back by no more than 3 metres. • Where a lot has a sideage to open space: <ul style="list-style-type: none"> - the dwelling is to be set back by a minimum of 2 metres from the title boundary abutting the open space; - the length of the side fence is to be minimised; - no more than 50% of the length of the lot is to be a solid fence or wall along the sideage; - the balance of the fence along the sideage is to be: <ul style="list-style-type: none"> - visually transparent; and - a maximum of 1.5 metres high. 	<ul style="list-style-type: none"> • Ensure lots with an interface with public open space: <ul style="list-style-type: none"> - take advantage of views / aspect over open space by orienting lots to face towards the open space area; - overlook open space to increase the sense of safety / surveillance; and, - where lots have direct frontage to parkland that footpath access is provided along the front boundary to provide for surveillance and a sense of address.
Future grade separated crossings of railway line (vehicle underpass/overpass)	<ul style="list-style-type: none"> • Ensure subdivision design provides access to all lots which can be maintained when grade separation occurs in the future. 	

Issue	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
Princes Freeway	<ul style="list-style-type: none"> • Provide an appropriate response to ameliorate noise impacts on adjacent residential areas. • Development adjacent to the freeway reservation is to include an Acoustic and Vibration Assessment Report prepared by a qualified and experienced Acoustic Consultant. Such report is to: <ul style="list-style-type: none"> - ensure the design of the proposed development provides high acoustic standards to minimise the amenity impact of the freeway; and - provide an innovative design response to ensure the design addresses the opportunities and constraints of the site. • Provide either: <ul style="list-style-type: none"> - a noise attenuation wall; or - barrier housing typology incorporating a noise attenuation wall. • Subdivision of land adjacent to an existing or proposed noise wall is to provide: <ul style="list-style-type: none"> - a minimum 3.2 metre wide easement in favour of VicRoads for maintenance and access; - adjacent to the noise wall one or more of the following interface treatments: <ul style="list-style-type: none"> · a drainage reserve; · an internal loop road; · a frontage road; · a minimum 3.2 metre wide reservation for a shared path; · other open space or public reserve. • Where a reservation for a shared path is created adjacent to a noise wall, subdivision design is to provide passive surveillance of the shared path. 	<ul style="list-style-type: none"> • Ensure that neighbourhoods are designed to either directly or indirectly connect with the shared path along the Princes Freeway (as shown in Plan 17). • Lot design adjacent to the Princes Freeway is to provide appropriate amenity of private open space.

Issue	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
Railway reservation	<ul style="list-style-type: none"> • Front development or provide an appropriate frontage to the rail corridor where possible. • Adjacent to the railway line, subdivision is to: <ul style="list-style-type: none"> - maximise the number of lots fronting onto the railway line; and - provide a 'tree reserve' of 10 metres; or - an Access Street Level 2 with Landscape Trail is provided parallel to the rail reserve. • Tree reserves and landscape trails abutting the rail reserve must be designed to ensure safe use of these areas and minimise access to the rail reserve. • Visually transparent fencing along the boundary abutting the rail reserve is to be provided to the satisfaction of the Director of Public Transport and VicTrack. • Where front fences are provided they are to be: <ul style="list-style-type: none"> - visually transparent to allow passive surveillance of the rail corridor; - a maximum of 1.2 metres high. • Where a lot has a sideage to the rail corridor: <ul style="list-style-type: none"> - the length of the fence is to be minimised; - no more than 50% of the length of the lot is to be a solid fence or wall; - the balance of the fence along the sideage is to be: <ul style="list-style-type: none"> · visually transparent; and · a maximum of 1.5 metres high. • Development adjacent to the railway reservation is to include an Acoustic and Vibration Assessment Report prepared by a qualified and experienced Acoustic Consultant. Such report is to: <ul style="list-style-type: none"> - ensure the design of the proposed development provides high acoustic standards to minimise the amenity impact of the railway line; and - provide an innovative design response to ensure the design addresses the opportunities and constraints of the site. 	<ul style="list-style-type: none"> • Ensure buildings, particularly residential buildings, incorporate measures to attenuate the noise impacts associated with train movements (e.g. acoustic insulation, double glazing on windows etc.) • Ensure that where development is not fronting the rail corridor minimum lengths of fence abut the corridor to ensure surveillance of the space.

Figure 1: Indicative High Density Residential Typologies



- Dwelling styles in high density areas should cater for a variety of household sizes
- Ensure strong street address with minimal setbacks to street
- Provide a mix of dwelling styles - apartments, townhouses etc at multiple levels (2+ storeys)

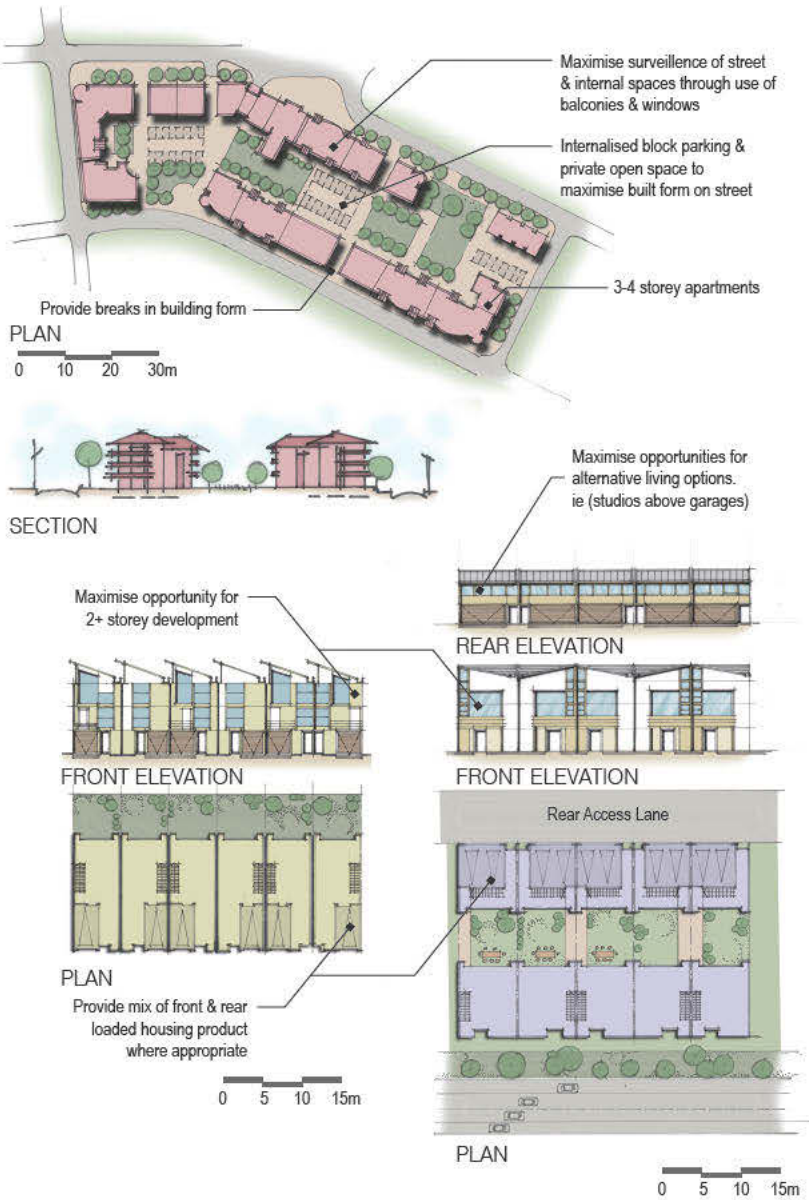


Figure 2: Indicative Medium Density Residential Typologies



0 20 40 60m

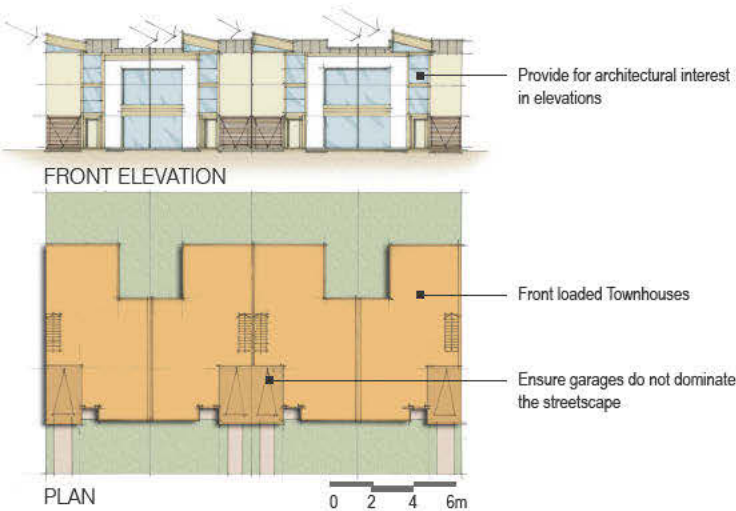


Figure 3: Indicative Building Envelopes for lots containing Native Vegetation to be retained

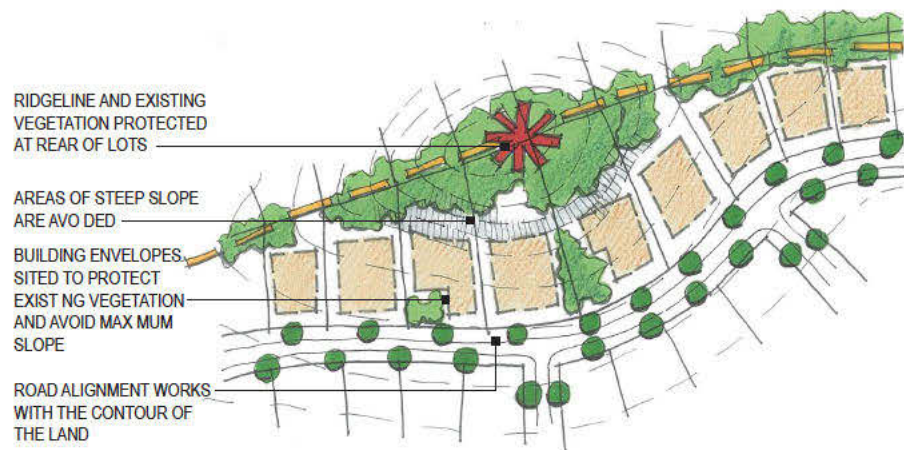


Figure 4: Lots fronting onto Open Space



Figure 5a: Interface to Railway Reservation

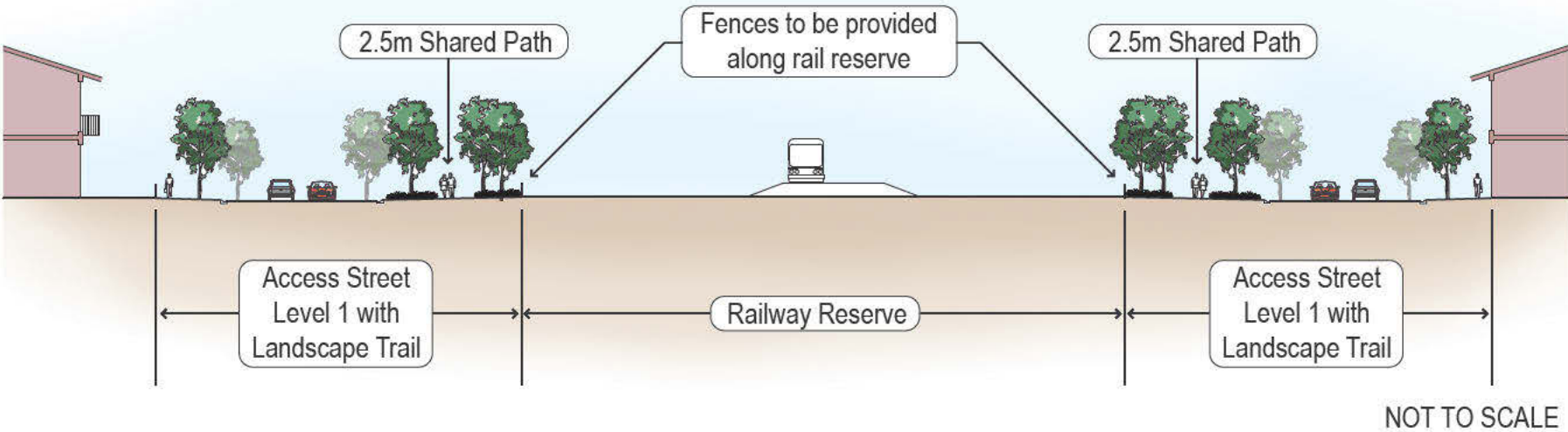
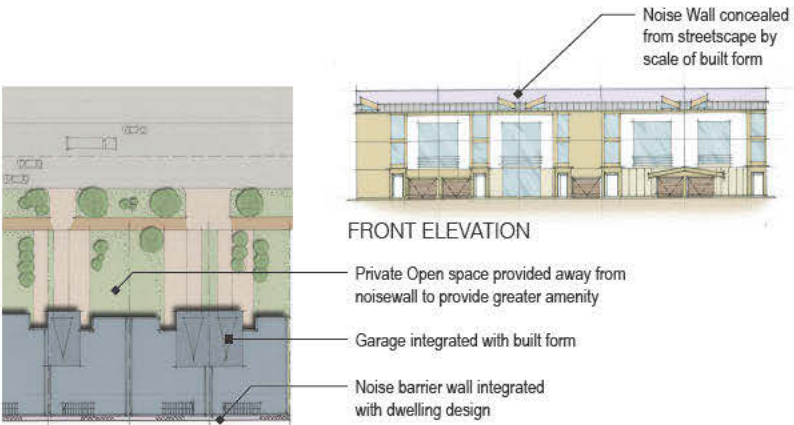


Figure 5b: Interface with Princes Freeway



4.3 Employment and Activity Centres

4.3.1 Employment and Activity Centre Objectives

Employment

The objectives for employment are to:

- Strengthen the local and regional economy by creating opportunities for new business.
- Provide a greater proportion of the community's future job requirements within Cardinia and support a reduction in the level of out-commuting for work.
- Facilitate the delivery of a wider range of employment opportunities within Cardinia, including providing jobs:
 - for a greater diversity of skills;
 - across a broader range of industries; and
 - to offer choice and flexibility in working hours.
- Maximise accessibility to employment areas by public transport, cycling and/or walking.
- Reduce commuting distances and travel to work times to:
 - improve quality of life and range of choices available to residents;
 - provide more time for family and community activity;
 - build a stable and locally based community; and,
 - reduce transport costs for households and businesses.
- Boost access to local employment opportunities by:
 - providing a network of activity centres with a mix of retail, commercial, leisure and community services activities;

- facilitating the establishment of a wide range of both public and private community services and facilities; and,
 - improved connections to other employment areas via the arterial road, freight and public transport networks.
- Concentrate high employment and/or visitor-generating uses in and adjacent to activity centres and public transport.
 - Enable the transition of existing rural activity into its future urban context by:
 - facilitating redevelopment of existing rural and industrial premises; and,
 - minimising potential amenity impacts in the short term, as urban residential development occurs.
 - Encourage the development of small and home-based businesses.

Activity Centres

The objectives for activity centres are to:

- Maximise the range, quantity and quality of goods and services available in Officer and the broader community through provision of an activity centre hierarchy.
 - Establish a network of activity centres, comprising the following hierarchy:
 - a Major Activity Centre (MAC), with a regional retail function and a diversity of discretionary and higher-order goods and services;
 - a Neighbourhood Activity Centre (NAC), providing for weekly goods and services; and,
 - 6 Neighbourhood Convenience Centres (NCC), providing for basic day-to-day goods and services.
- Ensure the new Major Activity Centre provides a viable and attractive alternative to Narre Warren-Fountain Gate Principal Activity Centre (PAC).
 - Ensure the growth of the Neighbourhood Activity Centre does not compromise the growth of the Major Activity Centre.
 - Ensure that the Neighbourhood Convenience Centres deliver high amenity, well-serviced and accessible activity centres through quality design and thorough planning, to provide a focus for the new community, within a walkable catchment of most homes.
 - Provide for a mix of uses in activity centres across the Precinct, including retail, commercial, office, housing, recreation, entertainment, and community activities that provide for the needs of residents, workers, businesses and visitors.
 - Develop attractive 'main street' based activity centres with an active public realm, strong urban character and sense of place.
 - Ensure that building proportion, scale and character are appropriate to their urban context.
 - Facilitate high-density residential development in activity centres.
 - Integrate pedestrian, cycling and open space networks of activity centres with adjacent uses to create a permeable urban environment with direct and effective links.
 - Provide strong visual connections between activity centres and their surrounds, to protect and create key sightlines and views.
 - Enable change over time through design that creates and protects future opportunities for more intensive development.

Officer Town Centre

In addition to the objectives for activity centres, objectives specific to the Officer Town Centre (MAC) are to:

- Provide a clear structure and layout, including:
 - a grid that is well integrated with surrounding development;
 - a block size that is capable of accommodating additional development;
 - a central north-south Main Street from Princes Highway to Rix Road, that provides the primary activity spine;
 - supporting east-west streets, that provide secondary spines;
 - a ‘multiple-loop’ circulation system, with several roads providing access to the retail core and its edges;
 - a road hierarchy and reservation widths that cater for all modes of transport; and
 - a structure that allows for flexibility and change over time.
- Establish sub-precincts to provide a clear framework for land use and development, including:
 - a defined retail core area north of the railway line as the primary location for major retail anchor stores;
 - civic and entertainment precincts, located in proximity to the Officer Railway Station;
 - a mixed use urban village south of the railway line; and,
 - dedicated high density residential areas in proximity to high amenity open space, creek corridors and public transport.

- Respond to existing uses and manage change in use over time.

4.3.2 Implementation

The objectives for employment and activity centres are met by implementation of all of the following:

- Plan 5: Future Urban Structure
- Plan 9: Employment and Activity Centres
- Table 8: Employment in the Precinct
- Table 9: Hierarchy of Activity Centres in the Precinct
- Table 10: Employment and Activity Centres Planning and Design Guidelines (which applies to all activity centres)
- Table 10a: Officer Major Activity Centre
- Table 10b: Whiteside Road Neighbourhood Activity Centre Planning and Design Guidelines
- Urban Design Frameworks set out in 4.3.3a

Plan 9: Employment and Activity Centres

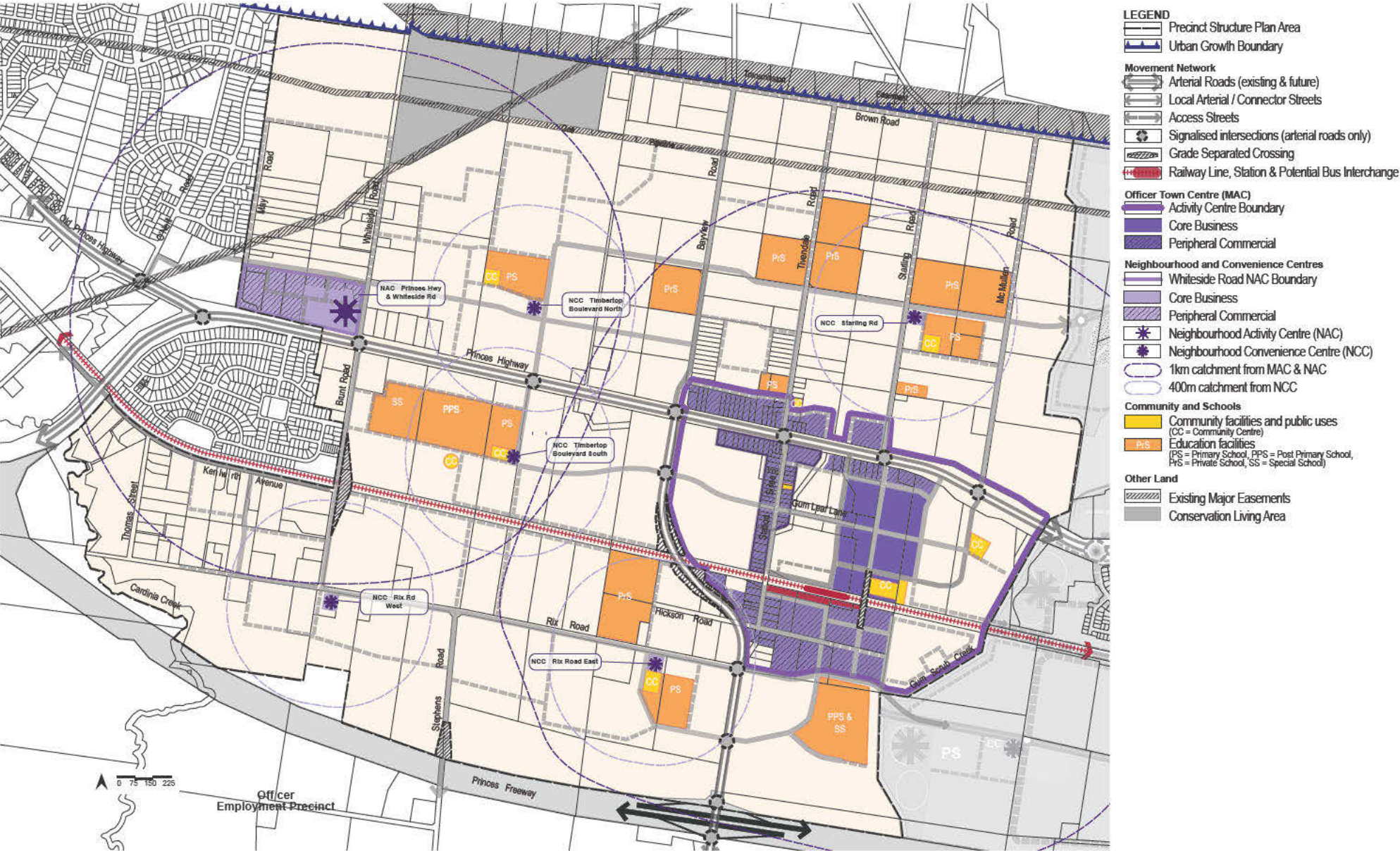


Table 8: Employment in the Precinct

Employment generators	Measure	Jobs	Quantity	Estimated Jobs
Activity Centres				
Retail 'shop' floorspace*	Jobs/100 sq m	3.5	57,000	2,000
Other retail (including bulky goods)	Jobs/100 sq m	2.5	25,000	600
Non-retail commercial **	Jobs/100 sq m	4.5	45,500	2,000
Schools				
State Primary Schools				
New	Jobs/School	40	4	160
Existing	Jobs/School	20	1	20
State Secondary Schools	Jobs/School	90	2	180
State Special School	Jobs/School	40	2	180
Private Schools	Average Jobs/School	80	6	480
Community Facilities				
Kindergartens	Jobs/Centre	5	4	20
Multi Purpose Community Centre	Jobs/Centre	10	1	10
Library	Jobs/Centre	10	1	10
Other Potential Uses				
Home based business	Jobs/Dwelling	0.1	9,955	995
Total Estimated Jobs				6,555

* Assumes:

- Major retail stores occupy 26,000 square metres of floorspace in the Major Activity Centre, comprising 60% of total retail floor area.
- The Neighbourhood Activity Centre provides 10,000 square metres of retail floorspace
- Five Neighbourhood Convenience Centres (NCCs) develop in the Precinct, providing an average of 750 square metres of retail floorspace in each NCC.

** Comprises all non-retail commercial uses, including:

- Services occupying shopfront premises (eg. Retail / Personal services)
- Hospitality and entertainment uses
- Office-based uses, such as Professional / Commercial services
- Medical services
- Leisure and recreation uses

4.3.3 Planning and design guidelines

Table 9: Hierarchy of Activity Centres in the Precinct

Hierarchy	Activity Centre	Indicative floor areas ^(*)	Role & Function
Major Activity Centre	Officer Town Centre Located south of the Princes Highway, centred upon the new Main Street	<ul style="list-style-type: none"> Retail 'shop': minimum 30,000 square metres ^ Other retail (including bulky goods): 25,000 square metres Non-retail commercial: 25,000 square metres 	<ul style="list-style-type: none"> Major Activity Centre (MAC) with retail, peripheral commercial and office uses. Regional and sub regional retail role comprising Department Store and multiple Discount Department Stores. Neighbourhood retail role comprising several supermarkets and associated shops and services. Location for regional uses including: <ul style="list-style-type: none"> bulky goods retailing associated with the Princes Highway; commercial office and business centre with all support services; hospitality and entertainment activities, including cinema; health services, and government and municipal services; senior educational facilities, for example Upper Secondary College, tertiary education (eg TAFE and/or University); and, recreation and community services, including the proposed Library and aquatic centre. Optimisation of the Officer Railway Station location and the bus interchange to provide a Transit Oriented Development fully integrated with community facilities, health services and retail. Transport interchange for PPTN services (rail and bus) and local bus services. Provision of high density housing including shop top housing, apartments and SoHos.
Neighbourhood Activity Centre	Whiteside Road Neighbourhood Activity Centre Princes Highway & Whiteside Road Located north of Princes Highway	<ul style="list-style-type: none"> Retail 'shop': 8,000 square metres Non-retail commercial: 1,500 square metres 	<ul style="list-style-type: none"> Neighbourhood retail role comprising a full size supermarket (maximum floor space of 3,500 square metres) and associated shops. Location for peripheral commercial uses including offices, medical centres and other health services, leisure, recreation and community services. Opportunity for shop top housing and apartments. Public transport access via Principal Public Transport Network (PPTN) bus route along the Princes Highway and local bus route along Whiteside Road and Brunt Road.
Neighbourhood Convenience Centres		<p>Generally:</p> <ul style="list-style-type: none"> Retail 'shop': 350 square metres Non-retail commercial: 150 square metres 	<ul style="list-style-type: none"> Convenience retail role. Generally comprising milkbar / general store and associated services. Potential for minor supermarket (approximately 1,200 square metres). Opportunity for medical centres, office, housing, community services etc.

* The floor areas are indicative of the size of the centre, based on the retail assessment undertaken as part of the preparation of the PSP. Variations from the indicative floor area may be permitted provided it does not change the role of the Activity Centre.

^ Assumes single discount department store in the minimum development scenario. No floorspace limits apply to Officer Town Centre.

Table 10: Employment and Activity Centres Planning and Design Guidelines

Design Issue	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
Layout and structure	<ul style="list-style-type: none"> The entrances to buildings are to be at ground level, providing an environment that promotes seamless movement for pedestrians between the public and private realm. The road and pedestrian network is to be well integrated with (existing and planned) surrounding areas providing multiple route options that enabling safe and accessible movement to, from and within the centre, particularly for pedestrians. Establish a pedestrian oriented environment that is visually interesting, well connected, safe and prioritises pedestrian movement over vehicle movement; Avoid internalised retail developments which present a blank facade and extensive car parking areas to the street. 	<ul style="list-style-type: none"> Street blocks are to be highly permeable to allow ease of pedestrian and cyclist movement through and within the Activity Centre.
Built form and massing	<ul style="list-style-type: none"> Prominent locations (including all corner sites) are to be developed to: <ul style="list-style-type: none"> provide buildings with a greater number of storeys than otherwise provided in the centre; and ensure frontages are well-articulated; or create the illusion of building height through landmark architecture. A high quality of building materials are to be demonstrated in the design. Where SoHos are provided, they are to: <ul style="list-style-type: none"> be designed to enable ground floor tenancies to be split from upper floor tenancies; and, ensure entrances can be provided from the street frontage from both ground floor and upper floor tenancies. 	<ul style="list-style-type: none"> Key view lines / sight lines into and out of the activity centres are to be incorporated in the overall design.

Design Issue	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
Public domain	<ul style="list-style-type: none"> • A central town square or similar public space is to be: <ul style="list-style-type: none"> - provided in scale with the role of the Activity Centre; - edged with the active frontages of specialty shops and be directly accessed by shop frontages to encourage outdoor dining; - well located in an area with high levels of pedestrian activity and where multiple paths or pedestrian desire lines intersect; and, - have good solar orientation. • Façades are to be articulated to contribute to the character of the street and provide visual interest. • Wider pathways are to be provided to: <ul style="list-style-type: none"> - enable outdoor dining and shopfront trading; - accommodate informal social interaction; and - provide clear paths of movement. • Street furniture and public art are to be provided to create a sense of place and provide informal spaces for social interaction. • The extent and visibility of blank walls from any public area is to be minimised, particularly from street frontages and public spaces. • The Activity Centre (including car park areas) is to be landscaped with clean-trunked canopy trees and low-lying vegetation to provide shade and safety. • A materials and colour palette is to be utilised to create a strong urban character that complements and is sensitive to the surrounds. • Suitable lighting is to be provided to maintain a sense of safety in the Activity Centre. • Provide slow-speed environments for vehicles. 	<ul style="list-style-type: none"> • Blank walls facing streets or the public realm are to be no more than 10 metres in length or account for no more than 50 percent of any one side of a building (whichever is smaller). • Continuous awnings or verandahs are to be provided over the footpath on all streets.
Interfaces and edges to the road network	<ul style="list-style-type: none"> • The design of buildings in the Activity Centre is to respond to the scale and character of existing and planned adjoining development. • Corner sites that are located on an arterial road edge: <ul style="list-style-type: none"> - are to provide a visual anchor, with greater building mass and height; and, - are critical development sites and not suitable for single-storey fast food outlets or petrol stations. • Landscaping of any interface is to be of a high standard and is considered to be an important element to complement built form design. • Rooftop plants, telecommunications towers, etc are to be obscured from view by built form, screens or false facades. • Continuous pedestrian and bicycle links are to: <ul style="list-style-type: none"> - be provided in the Activity Centre; and, - be integrated with the network provided on local and arterial roads and open space corridors. 	

Design Issue	Planning and Design Guidelines that <i>must</i> be met	Planning and Design Guidelines that <i>should</i> be met
Traffic & site access	<ul style="list-style-type: none"> Access to individual sites from arterial roads is subject to the approval of VicRoads. Pedestrian crossings, slow zones, pedestrian priority areas and clearly indicated shared spaces are to be used to deliver a pedestrian friendly environment. Where a 'shared space' is required to create an attractive street environment, it is to be designed to ensure pedestrian priority is given over other forms of movement. Use of slip lanes is to be avoided where significant pedestrian flows are expected and require assessment on a case-by-case basis to the satisfaction of VicRoads 	<ul style="list-style-type: none"> Provide a slow-speed environment that is self enforcing. Promote pedestrian safety through the use of stand up lanes for vehicle access. The use of roundabouts to manage traffic is to be avoided wherever possible. Where road is designed as a 'shared space', it is to be generally characterised by continuous paving treatment from frontage to frontage. Site servicing access and public car parking accesses is to be designed to be adequately separated.
Parking	<ul style="list-style-type: none"> On-street parking is to be maximised. Car parking within the Activity Centre is to be centralised to allow for shared usage between tenancies. The design of off-street car parking is to ensure that: <ul style="list-style-type: none"> it is accessible from the roads carrying higher volumes of traffic to the centre; it is screened from street frontages through the use of built form, landscaping, façade treatments, etc; it incorporates safely designed pathways to, from and within the car park; appropriate detail has been considered such as landscaping and provision of canopy trees; and, passive surveillance can be provided from adjacent development, while not adversely impacting on future development opportunities. Bicycle parking is to be provided in a number of prominent and easily accessible locations and must be clearly visible and well lit, and preferably under cover. 	<ul style="list-style-type: none"> Parking should be minimised to encourage use of other modes of travel. Multi decked or basement car parking is preferred to at-grade car parking. Any car park areas visible from streets in the short-term, are to be 'built out' in the longer term and replaced by commercial buildings and/or multi-storey or basement car parks.
Public Transport	<ul style="list-style-type: none"> The Activity Centre design is to incorporate/respond to the proposed public transport network in consultation with the Department of Transport. Public transport infrastructure and facilities are to be located in commuter friendly and convenient locations. 	
Signage	<ul style="list-style-type: none"> Signage is to be integrated within the built form. A clear visual connection is to be maintained from ground floor tenancies onto the street so as not obscure sightlines at eye-level. 	<ul style="list-style-type: none"> The transparency and visual permeability of windows at ground level is to be maintained at at least 80%, ensuring tinting, films, paint or similar treatments do not impair passive surveillance to and from premises.
Site Servicing	<ul style="list-style-type: none"> Service areas are to be internalised wherever possible. Where internalised service areas cannot be provided, they are to be secured and screened at the rear of buildings. Where service areas are accessible from car parks, a well designed and secure façade must be presented to public areas (including carparking). 	

Figure 6: Officer Town Centre Sub Precinct Plan

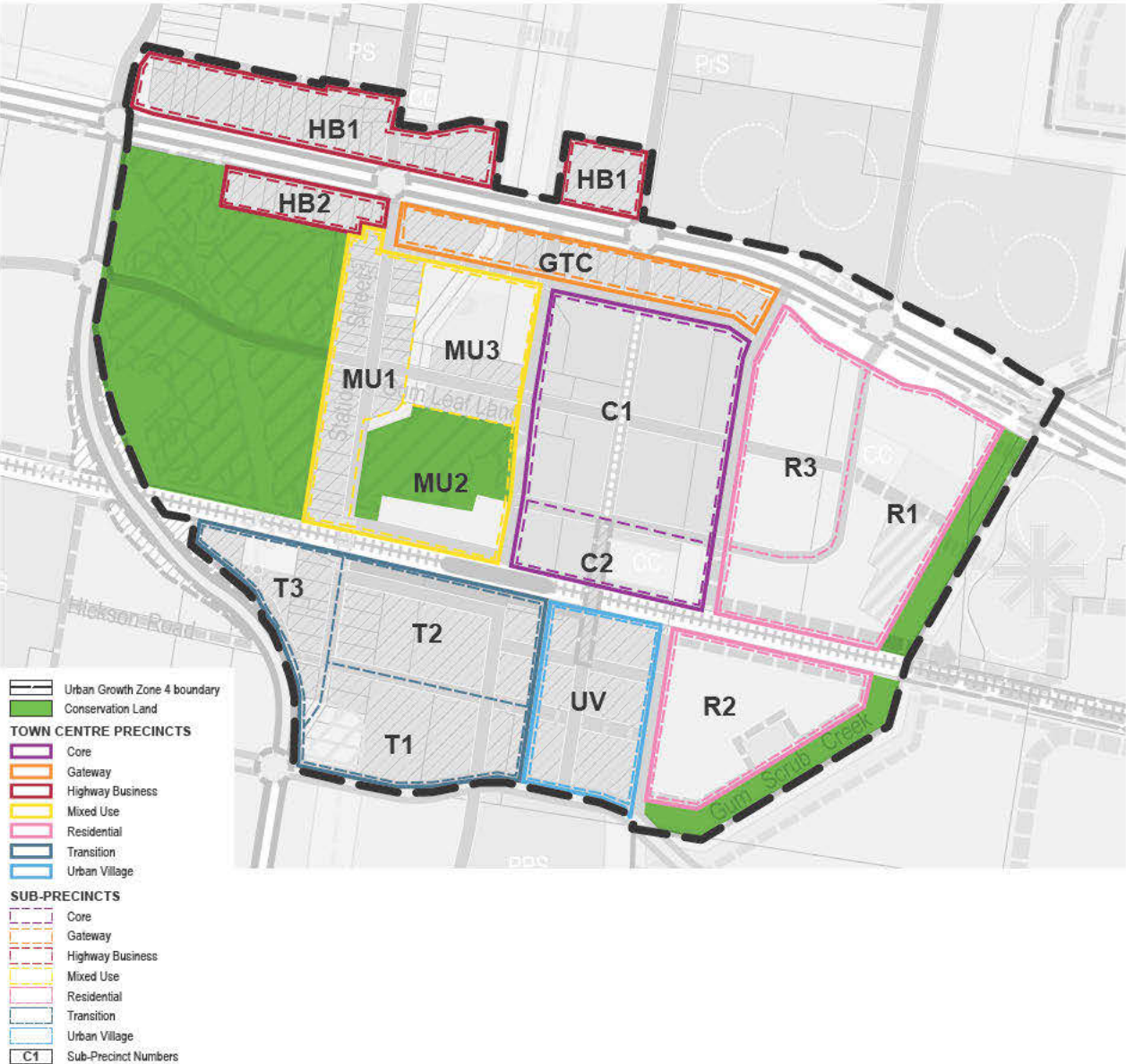


Figure 6 illustrates the planned structure for Officer Town Centre.

There are seven town centre precincts, which form the basis of the statutory controls outlined in Urban Growth Zone 4.

Within most town centre precincts there are a number of sub-precincts. Objectives are defined for each to clearly set out the intended outcome and specific planning and design guidelines apply (refer Table 11a).

These provisions provide guidance for the role, function and character of each sub-precinct to ensure the specific context, elements and/or features are addressed through the Urban Design Framework and future development applications.

Table 10a: Officer Major Activity Centre

TOWN CENTRE PRECINCT	Sub-Precinct	Objectives	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
CORE	C1 (Refer Figure 6a)	<ul style="list-style-type: none"> To establish a strong and vibrant 'heart' for Officer Town Centre as a focus for social activity To provide a fine-grain, active street environment that reinforces Main Street as the primary pedestrian spine To establish Main Street a leading example of a shared space To deliver a multi-storey built form that is in-scale and proportionate to the width of the street To create a focus for retail activity in the centre, as the location for all major retail attractors and anchor stores To encourage a diversity of uses, including hospitality, entertainment, commercial/professional/retail services, leisure and recreation activities and residential To support an active and lively street environment from the early morning to late evening, seven days a week 	<ul style="list-style-type: none"> Core retail blocks are to be designed with: <ul style="list-style-type: none"> buildings that front onto all four street frontages; the ability to accommodate additional major retail anchor stores in the long term; off street carparking at the middle of the block, consolidated into a rectilinear site for future development; and, minimal use of carriageway easements and rear access rights, except where the middle of the block is being developed at the outset. Along Main Street, breaks in the built form are to be minimised except to provide: <ul style="list-style-type: none"> a well-located town square that is integrated with and addressed by retail uses; access to retail anchor stores; or access to central car parking areas for pedestrians. Supermarkets, discount department stores and department stores of more than 1,000 square metres must: <ul style="list-style-type: none"> sit behind the fine-grained shopfront environment of Main Street; not present long façades to the public realm with all edges 'wrapped' or 'hidden from' the public realm with other tenancies or buildings; and, be directly accessed only from Main Street. <p>An alternative to the above planning and design guideline will only be considered if:</p> <ul style="list-style-type: none"> they are directly accessed from an arcade or galleria (refer Figure 6a) which has direct access from Main Street and runs parallel to the Main Street; or the edge that is not 'sleeved' by small tenancies is the east-west road along the northern edge of C1. <ul style="list-style-type: none"> Continuous active frontages are required along Main Street. Where pedestrian arcades are provided, they are to: <ul style="list-style-type: none"> provide a direct link between carparking and a significant anchor/ attractor; or link significant anchor/attractors to each other. Creation of at-grade carparks in common property is not permitted. A dense concentration of shop entries and extensive clear glazed windows are to characterise Main Street, enabling a high level of pedestrian amenity and engagement. Buildings along street frontages are to be a minimum of two storeys. Vehicle access to carparks and site servicing is not to be provided from the Main Street, with access provided from other roads abutting blocks in C1. 	<ul style="list-style-type: none"> Buildings are to be a minimum of three storeys. Creation of common property is to be avoided. Where it does not constrain opportunities for future infill development, separate tenancies with active frontages are to be provided to rear carparks as well as street frontages. A vertical scale of at least three storeys is to be achieved.

TOWN CENTRE PRECINCT	Sub-Precinct	Objectives	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
CORE	C2 (refer Figure 6e)	<ul style="list-style-type: none"> To provide a focus for civic and community activities To establish a safe and attractive pedestrian-prioritised street environment To integrate the Main Street underpass with surrounding built form To provide positive interfaces with the Officer Train Station and rail line 	<ul style="list-style-type: none"> Height and massing of buildings is to ensure passive surveillance is provided at street level, in addition to overlooking the station platform. Ensure a high level of pedestrian safety at the railway interface by: <ul style="list-style-type: none"> - avoiding creation of pedestrian routes that are not subject to passive surveillance; and - using building location and scale to direct pedestrian movement to areas of maximum activity. The grade separation of Main Street from the railway line is to ensure seamless transition from one side to the other, including: <ul style="list-style-type: none"> - provision of adequate lighting; - maximising natural light; - safe pedestrian access; - a minimal break in terms of distance between active frontages along Main Street; and, - clear viewlines through the underpass. Avoid car parking areas that are visible from Main Street and ensure openings along other street frontages are minimised. Buildings along street frontages are to be a minimum of two storeys. Vehicle access to carparks and site servicing is not to be provided from the Main Street, with access provided from other roads abutting blocks in C2. 	<ul style="list-style-type: none"> Shops and other premises may be integrated into the railway underpass in order to activate the crossing. A vertical scale of at least three storeys is to be achieved.
GATEWAY	GTC (refer Figure 6c)	<ul style="list-style-type: none"> To provide a landmark entry to Officer Town Centre To establish Princes Highway as a strong, attractive and interesting corridor that promotes a sense of arrival to Officer Town Centre To promote high density commercial development with a range of supporting uses such as hotels and showrooms To facilitate a coordinated development solution for existing small lots 	<ul style="list-style-type: none"> Buildings are to be a minimum of three storeys or equivalent height. Zero setback of buildings are to be provided from the lot line on the Princes Highway. Buildings are to be provided to the Princes Highway frontages, as well as to the corner sites of streets. Off street carparking is to be provided. Buildings are to obscure carparks from view from the Princes Highway. A coordinated carparking system is to be provided between lots. Access to carparks and site servicing is to be from the east-west street along the southern edge of GTC. 	<ul style="list-style-type: none"> Three-quarters of frontage height is to be a transparent, glazed facade. Blank walls are not to comprise more than 30% of the length of a buildings frontage. Any individual 'shop' is not to be more than 1,200 square metres. Carparking is to be consolidated into a rectilinear site for future development.

TOWN CENTRE PRECINCT	Sub-Precinct	Objectives	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
HIGHWAY BUSINESS	HB1	<ul style="list-style-type: none"> To provide the premier location for bulky goods and highway based sales in Officer Town Centre To establish Princes Highway as a strong, attractive and interesting corridor that promotes a sense of arrival to Officer Town Centre To achieve a cohesive built form and coordinated development solution for existing small lots To rationalise access from the Princes Highway as development occurs 	<ul style="list-style-type: none"> Provide a rear access lane for site servicing. A coordinated carparking system is to be provided between lots. Provide a consistent parking solution, including: <ul style="list-style-type: none"> minimising parking at the front of properties along Princes Highway; and achieving a consistent building setback and car park depth at the front of properties. Frontage height of buildings to be a minimum or equivalent of two storeys along Princes Highway. The total floorspace for use as a 'shop' in this sub precinct is not to exceed 1,500 square metres. 	<ul style="list-style-type: none"> Encourage consolidation of lots to provide greater development opportunities. Provide a coordinated carparking system that: <ul style="list-style-type: none"> minimises the number of access points to the Princes Highway; and sets carriageway easements through carparks, ensuring connectivity between lots. Three-quarters of frontage height is to be a transparent, glazed facade. Blank walls should not comprise more than 30% of the length of a buildings frontage. Encourage 'scaling down' of building height towards residential properties at the rear of site. Any individual 'shop' is not to be more than 250 square metres.
HIGHWAY BUSINESS	HB2	<ul style="list-style-type: none"> To provide opportunities for a range of convenience-oriented businesses, including convenience retail, food and drink premises and leisure and recreation To establish Princes Highway as a strong, attractive and interesting corridor that promotes a sense of arrival to Officer Town Centre To establish an appropriate, attractive interface with the Gilbert property to the south 	<ul style="list-style-type: none"> Buildings are to be a minimum of two storeys or equivalent height. Zero setback of buildings to be provided from the lot line on Princes Highway west of Station Street. Buildings are to overlook the Gilbert conservation reserve to provide surveillance to the space. Where properties directly abut the Gilbert conservation reserve, visually permeable fencing is to be provided to limit access to the site while maintaining site surveillance. 	<ul style="list-style-type: none"> Provide integrated access to development sites if possible, rather than individual site access. Any individual 'shop' is not to be more than 100 square metres.

TOWN CENTRE PRECINCT	Sub-Precinct	Objectives	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
MIXED USE	MU1	<ul style="list-style-type: none"> • To facilitate the transition of the area from residential to mixed use over time • To manage more intensive development of sites in the short term in response to anticipated traffic volumes and limited parking until the North South Arterial is delivered • To provide an attractive, appropriate interface with the Gilbert property to the west 	<ul style="list-style-type: none"> • Avoid creation of strata titled units in Station Street to allow for conversion of properties once the North South Arterial is constructed. • Redevelopment of lots is to provide a frontage to Station Street and where applicable, encumbered/unencumbered open space. • Ensure 'gateway' sites at the corners of Station Street/Gum Leaf Lane and Gum Leaf Lane/edge of the Gilbert property provide high quality multi-storey landmark buildings. 	<ul style="list-style-type: none"> • Redevelopment of sites prior to the delivery of the North South Arterial is to be limited to ensure traffic generation from existing lots does not substantially increase and minimise potential for movement conflicts. • Encourage consolidation of lots. • Enable house conversions to business uses.
MIXED USE	MU2 (Refer Figure 6d)	<ul style="list-style-type: none"> • To provide a high density mixed use area, principally comprised of residential development • To optimise the amenity and landscape value offered by the Leber Conservation Reserve through the design of buildings • To design sensitive uses to mitigate any potential amenity impacts from industrial uses south of the rail line • To provide active interfaces with Officer Train Station and the rail line 	<ul style="list-style-type: none"> • Provide high density residential development in a variety of dwelling types that are no less than two storeys in height. • Any buildings and works for sensitive uses must incorporate measures to protect residents from amenity impacts from nearby existing industry. • Minimise street setbacks to encourage strong built form along the street edge. • Provide streets abutting the Leber conservation reserve and the railway reserve. 	<ul style="list-style-type: none"> • Encourage live/work opportunities. • Non-residential uses are to be located on the southern and eastern edges of the site, adjacent to the railway reserve and abutting collector streets. • Sensitive uses are to incorporate non-opening windows on any southern façade. • Private open space areas should be located on the north side of buildings containing dwellings. • Residential buildings with shared access are to incorporate an airlock where the primary pedestrian access is provided from the southern façade. • Buildings are to be designed to provide surveillance over the railway line. • Minimise garagescapes.

TOWN CENTRE PRECINCT	Sub-Precinct	Objectives	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
MIXED USE	MU3 (refer Figure 6b)	<ul style="list-style-type: none"> To provide a high density mixed use area, principally comprised of residential development To ensure the Urban Park provides an urban open space in contrast to other parks and public spaces in Officer Town Centre To optimise the amenity and landscape values offered by the Urban Park through the design of buildings To establish a flexible built form that can adapt in use over time 	<ul style="list-style-type: none"> Buildings are to be designed to be flexible in use, enabling residential to be converted into offices and other mixed commercial buildings over time. Buildings are to be a minimum of two storeys. Ensure a maximum setback of two metres from Gum Leaf Lane lot line to maintain strong built form edge. Vehicle access is to be provided via rear access lanes, not directly onto Gum Leaf Lane. Provide active frontages to the Urban Park and provide passive surveillance. 	<ul style="list-style-type: none"> Consider mixed use properties to provide live/work options (ie. SoHo). Use of rear-accessed parking groves for visitor parking is encouraged with pedestrian access to Gum Leaf Lane. Development of properties along Gum Leaf Lane are to provide dual frontages as follows: <ul style="list-style-type: none"> buildings are to front onto Gum Leaf Lane; and studios are to be located above garages at rear; or a dwelling is to be located at the rear; or integrated developments are to be designed with buildings abutting and overlooking the rear lane.
RESIDENTIAL	R1	<ul style="list-style-type: none"> To provide a higher density residential area, offering a range of different housing types To promote a distinct urban character through built form and landscape design To establish strong east-west links to Gum Scrub Creek from the Main Street 	<ul style="list-style-type: none"> Provide higher density residential development in a variety of dwelling types that are no less than two storeys in height. Minimise street setbacks to encourage strong built form along the street edge. Provide a fine-grained, highly permeable east-west road network that optimises sightlines from the commercial areas through to Gum Scrub Creek. Stage development to ensure a substantial buffer is provided around the existing Turkey's Nest Dams on Gum Scrub Creek until such a time that they are removed or modified to be safe in an urban context (subject to approval under the EPBC Act). Maximise on-street parking for residents and encourage single-car garages. 	<ul style="list-style-type: none"> Minimise garagescapes and encourage rear lane access.
RESIDENTIAL	R2			

TOWN CENTRE PRECINCT	Sub-Precinct	Objectives	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
RESIDENTIAL	R3	<ul style="list-style-type: none"> • To establish a high density residential area with a strong urban character • To provide a flexible built form that can adapt in use over time • To encourage transition to a mixed use area in the longer term • To protect future development / redevelopment opportunities for sites 	<ul style="list-style-type: none"> • Street blocks are to be designed with: <ul style="list-style-type: none"> - off street carparking at the middle of the block, consolidated into a rectilinear site for future development; - buildings that front onto all street frontages; - off street carparking; and, - minimal use of carriageway easements and rear access rights. • Minimise lot frontages and provide thinner, longer lots. • Include shared car parking areas at the rear of street front properties. • Buildings are to be designed to be flexible in use, enabling residential to be converted into offices or other mixed commercial buildings over time. • Access to lots is to be provided from the local road network, not Princes Highway. 	<ul style="list-style-type: none"> • Individual lot frontages are to be no more than 10 metres. • Buildings are to be at least three storeys. • Where it does not constrain opportunities for future infill development, separate tenancies with active frontages are to be provided to rear carparks as well as street frontages.
TRANSITION	T1	<ul style="list-style-type: none"> • To develop a strong gateway to the town centre along Rix / Bridge Road • To establish a flexible built form that can adapt in use over time • To protect future development / redevelopment opportunities for sites • To prohibit development of residential and other sensitive uses until such a time as nearby existing industry ceases operation • To encourage development of uses that are compatible to sensitive uses • To plan for a transition to mixed use, including higher density residential in the longer term 	<ul style="list-style-type: none"> • Provide a strong built form edge along Rix / Bridge Road, comprising: <ul style="list-style-type: none"> - minimal setbacks of buildings from the road reserve; - active frontages to Rix / Bridge Road; and - a minimum or equivalent frontage height of two storeys for buildings along Rix / Bridge Road. • Minimise street setbacks to encourage strong built form along all other streets. • Provide active frontages overlooking the drainage reserve. • Avoid creation of common property. • Ensure subdivision and development enables more intensive development of the area over time, including incorporation of higher density residential housing. • Avoid locating site servicing facilities where they are visible from Rix / Bridge Road. • Allow for conversion of existing industrial properties over time. • The boundary of sub-precinct T1 adjoining UV must be located parallel to and at least 30 metres east of the eastern boundary of Lot 30 LP7847. 	<ul style="list-style-type: none"> • Encourage land extensive uses that do not require construction of substantial buildings and works on lots abutting Hickson Road or Officer South Road. • Encourage zero lot-line setbacks to Rix / Bridge Road. • Provide access for site servicing from Hickson Road.

TOWN CENTRE PRECINCT	Sub-Precinct	Objectives	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
TRANSITION	T2	<ul style="list-style-type: none"> To establish a flexible built form that can adapt in use over time To protect future development / redevelopment opportunities for sites To prohibit development of residential and other sensitive uses until such a time as existing industry ceases operation To encourage development of uses that are compatible to sensitive uses To plan for a transition to mixed use, including higher density residential in the longer term To provide active interfaces with Officer Train Station and the rail line 	<ul style="list-style-type: none"> Ensure development: <ul style="list-style-type: none"> creates high amenity streetscapes suitable for future residential development within the area; has minimal amenity impacts outside the boundaries of the individual property, to protect future residential development potential of the area; and provides passive surveillance over the station and station carpark. Minimise street setbacks to encourage strong built form, where appropriate. Where offices, medical centres, leisure and recreation uses are proposed, buildings are to be a minimum of two storeys or equivalent height. Provide access for site servicing from Hickson Road, where possible. Encourage conversion of existing industrial properties over time. Facilitate consolidation of existing activities on Lot 1 TP602076 through development of an additional warehouse. Strongly discourage further expansion of existing industrial premises. Ensure existing uses do not further encroach upon adjacent areas planned for development as sensitive uses. Avoid creation of common property. The boundary of sub-precinct T2 adjoining UV must be located parallel to and at least 65 metres east of the eastern boundary of Lot 1 TP602076. 	<ul style="list-style-type: none"> Encourage land extensive uses that do not require construction of substantial buildings and works on lots abutting Hickson Road. Where offices, medical centres, leisure and recreation uses are proposed, buildings are to have a maximum setback of two metres from the street.
TRANSITION	T3	<ul style="list-style-type: none"> To protect future development / redevelopment opportunities for sites To manage more intensive development of sites in the short term in response to anticipated traffic volumes and limited parking until the North South Arterial is delivered To prohibit development of residential and other sensitive uses until such a time as nearby existing industry ceases operation To provide an active interface with the rail line To deliver an attractive, appropriate interface with the future North South Arterial 	<ul style="list-style-type: none"> Avoid creation of common property. Ensure existing uses do not further encroach upon adjacent areas planned for development as sensitive uses. 	<ul style="list-style-type: none"> Encourage consolidation of lots. Encourage land extensive uses that do not require construction of substantial buildings and works on lots abutting Officer South Road. Ensure the height of buildings abutting the proposed grade separated overpass of the rail line obscure the overpass from surrounding areas to minimise its visual intrusion into the public realm.

TOWN CENTRE PRECINCT	Sub-Precinct	Objectives	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
URBAN VILLAGE	UV (refer Figure 6e)	<ul style="list-style-type: none"> To establish a safe and attractive pedestrian-prioritised street environment To integrate the Main Street underpass with surrounding built form To provide a high density mixed use area, with commercial development focused on Main Street To create a strong gateway to the Main Street at its intersection at Rix / Bridge Road 	<ul style="list-style-type: none"> Where any building has facades to a street and internal car parking areas: <ul style="list-style-type: none"> separate tenancies are to be provided fronting onto the street and internal car parking areas; or where single tenancies exist, active frontages are to be provided on both sides; except where rear tenancies would overlook site servicing facilities of other uses. Where pedestrian arcades are provided, they are to: <ul style="list-style-type: none"> maximise the length of active frontages within the arcade; and provide a direct link between car parking and a significant anchor/ attractor; or, link significant anchor/attractors to each other. The grade separation of Main Street from the railway line is to ensure seamless transition from one side to the other, including: <ul style="list-style-type: none"> provision of adequate lighting; maximising natural light; safe pedestrian access; a minimal break in terms of distance between active frontages along Main Street; and, clear viewlines through the underpass. In the area where rail reserve widening is to occur, temporary buildings: <ul style="list-style-type: none"> may occupy the space in the short term; are to be of a high quality design and a standard that complements surrounding permanent buildings; and, are to present active frontages to public streets and the railway station. Buildings along street frontages are to be a minimum of two storeys. Landmark buildings providing greater heights and massing than their surrounds are to be provided at the corner of Main Street and Rix / Bridge Road to mark the southern entry to Officer Town Centre. Zero lot line setbacks are required to Main Street. Minimise street setbacks elsewhere. Access to carparks and site servicing is not to be from Main Street. The boundary of sub-precinct UV adjoining T2 must be located parallel to and at least 65 metres east of the eastern boundary of Lot 1 TP602076. The boundary of sub-precinct UV adjoining T1 must be located parallel to and at least 30 metres east of the eastern boundary of Lot 30 LP7847. 	<ul style="list-style-type: none"> Large format stores (including supermarkets) may provide part of their frontage to a street, provided it is: <ul style="list-style-type: none"> the shorter edge; and, has at least 70% glazing to the wall. Minimise garagescapes and encourage rear lane access.

Figure 6a: Indicative Design Solution - Core Town Centre Precinct

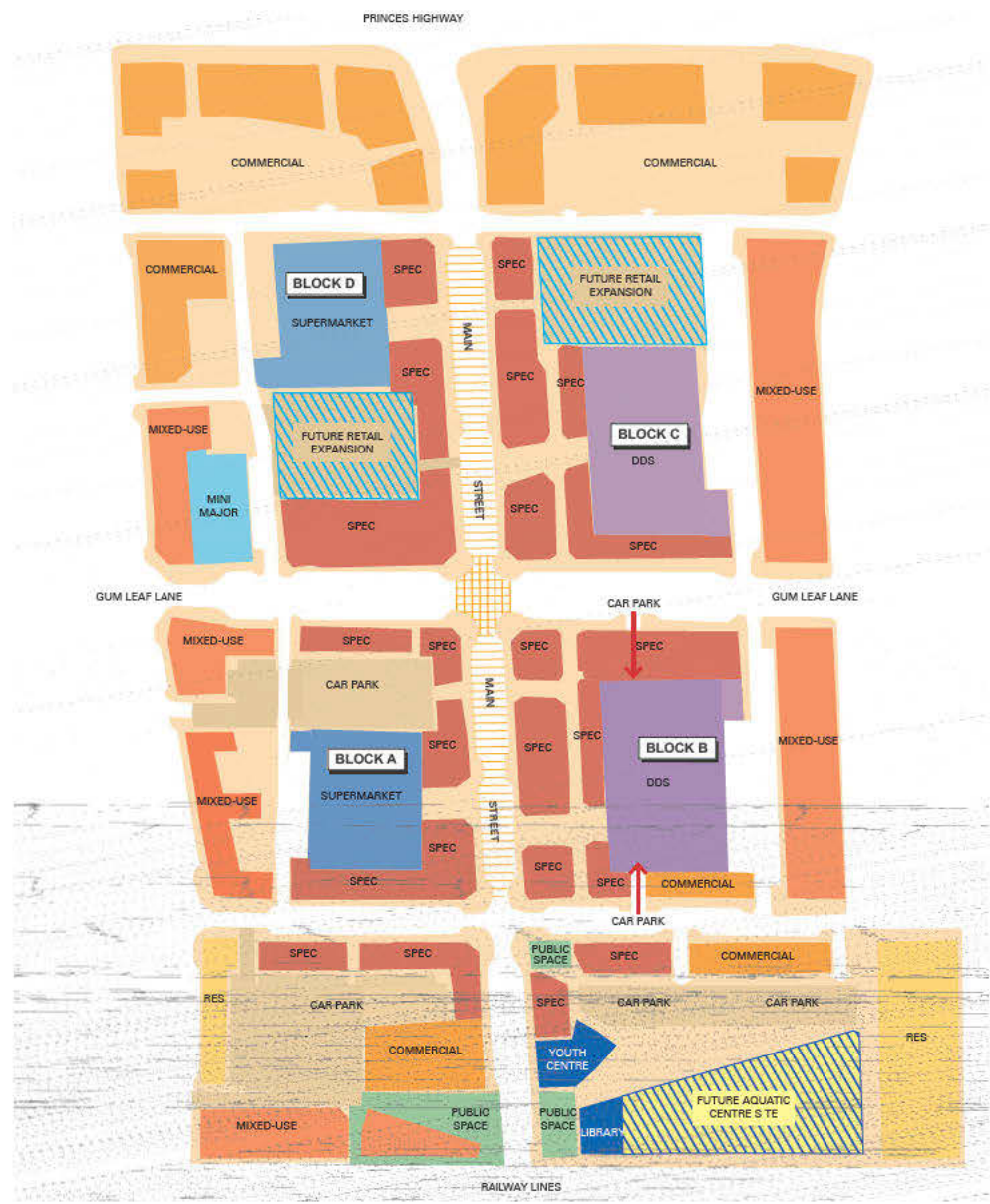


Figure 6b: Indicative Design Solution - Gum Leaf Lane SoHo

FRONT DWELLINGS TO DRAINAGE RESERVE AND PARKLAND, AS WELL AS ADDRESS GUM LEAF LANE

ALL VEHICULAR ACCESS TO BE PROVIDED FROM THE REAR - NO VEHICULAR ACCESS DIRECT TO GUM LEAF LANE DUE TO TRAFFIC VOLUMES

CONSIDER FORMS THAT ALLOW FOR BUSINESS ACCESS FROM GUM LEAF LANE AND RESIDENTIAL ACCESS FROM THE REAR ACCESS LANEWAYS (SoHo STYLE DEVELOPMENT)



PROVIDE FOR BUILDING FORMS THAT ADDRESS BOTH GUM LEAF LANE AND THE URBAN PARK THROUGH DUAL FRONTAGES WITH COMMERCIAL FRONTING ONTO GUM LEAF LANE AND RESIDENTIAL TO REAR

CONSIDER BUILT FORM OUTCOMES THAT PROVIDE FRONTAGE TO BOTH GUMLEAF LANE AND REAR ACCESSWAY

Figure 6c: Indicative Design Solution - MAC Gateway

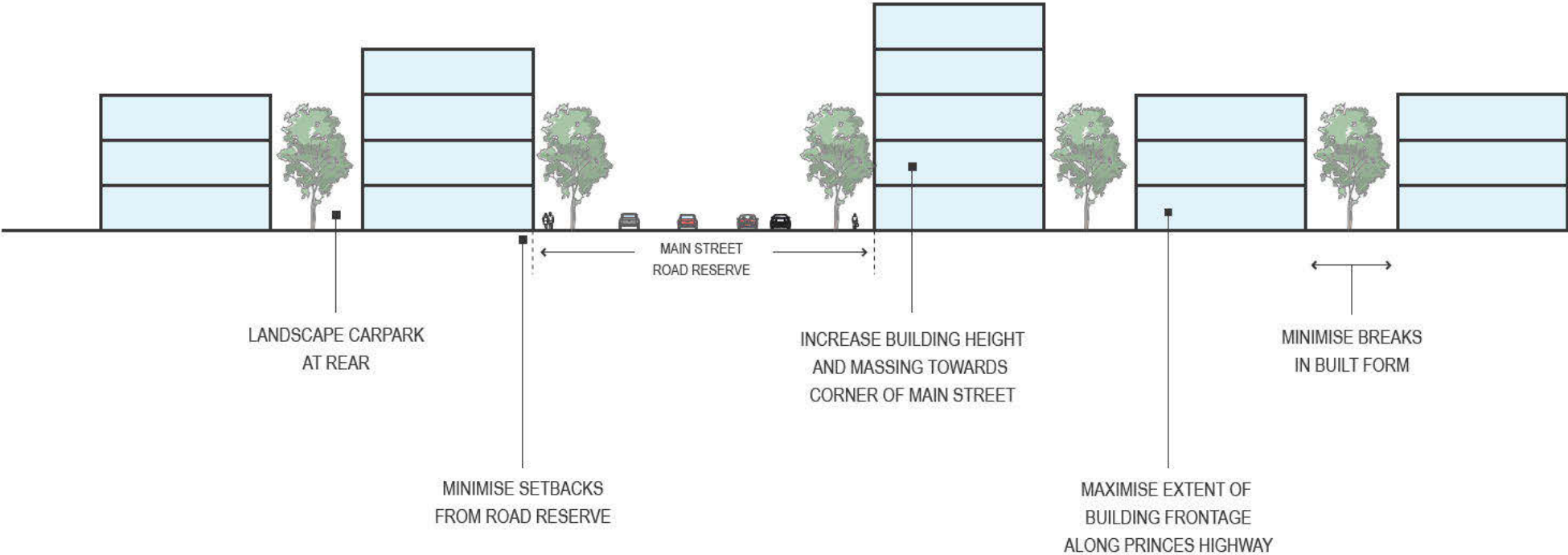


Figure 6d: Indicative Design Solution - Leber Conservation Reserve



Figure 6e: Indicative Design Solution - Main Street Underpass

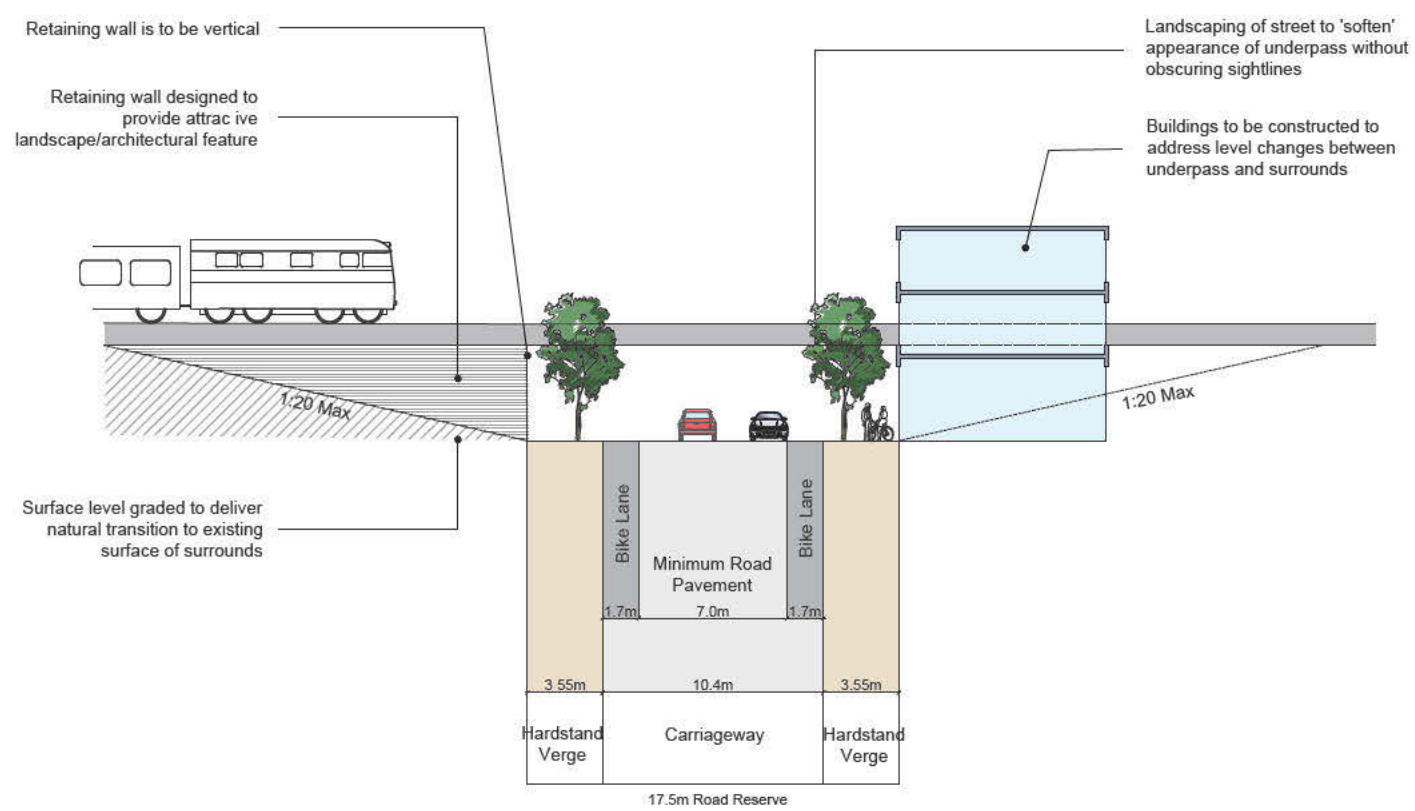


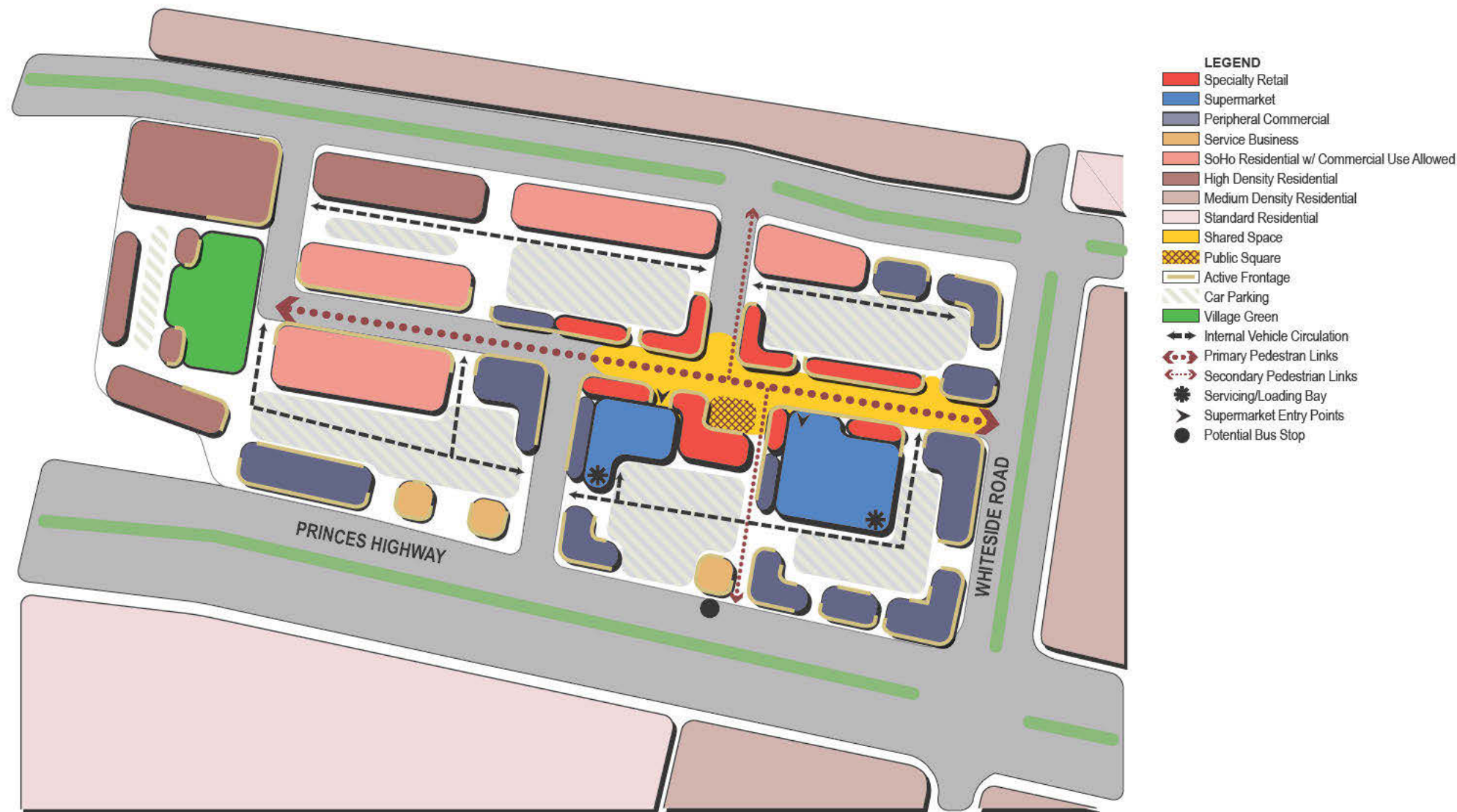
Table 10b: Whiteside Neighbourhood Activity Centre Planning and Design Guidelines

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Layout and Structure	<ul style="list-style-type: none"> • An active, pedestrianised east-west Main Street is to be provided, mid-way between Princes Highway and the East-West Boulevard Connector Street, extending from Whiteside Road to a 'village green'. • The Main Street is to be lined with specialty shops within the core business area. • A town square is to be located on Main Street, at the axis of a t-intersection that provides access to the north. • All retail shops over 1,000 square metres are to be located south of the Main Street. • A single left-in, left out into the activity centre is to be provided from the Princes Highway on Lot 1 TP85082, to the satisfaction of VicRoads. • A clear internal circulation network is to be created within carparks. • Buildings are to be developed: <ul style="list-style-type: none"> - on the corner of Whiteside Road and Princes Highway, with frontages aligned with the lot line of the road reserves; - to the lot line of the Main Street, except where setbacks are provided to create a town square; and, - in all corners of the site, with frontages aligned to the lot line of adjacent road reserve/s. • The visual bulk of larger buildings fronting onto Main Street is to be obscured by taller buildings located along the Princes Highway frontage. • Subdivision is to ensure more intensive development can occur over time. 	<ul style="list-style-type: none"> • The frontages of specialty shops tenancies will be a maximum of 10 metres in width, creating a fine-grained shopfront environment. • Within car parks, key circulation routes (with no direct access to car spaces) are to be provided in proximity the access points from public roads.
Built Form and Massing	<ul style="list-style-type: none"> • Upper storeys are to be provided on the majority of buildings along Whiteside Road and the south side of Main Street. • Buildings along the Princes Highway frontage are to be a minimum of two storeys (or equivalent height). • Where residential buildings are proposed to front onto the Main Street west of the core business area, they are to be designed to ensure they can be converted from residential to commercial use. 	<ul style="list-style-type: none"> • All buildings are to be at least two storeys. • Mixed use, 'townhouse-style' development with ground floor facades providing 'shop front' or home office environments are encouraged: <ul style="list-style-type: none"> - fronting onto the East – West Connector Street Boulevard; and - fronting onto Main Street west of the core business area.

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Uses – Distribution and Form	<ul style="list-style-type: none"> • Retail shops are to dominate the Main Street within the core business area, providing for: <ul style="list-style-type: none"> - a finely grained shop front environment along its length; - a mix of retail uses; - small-scale offices or dwellings at upper storeys. • The highest order retail anchor store in the centre will be a supermarket of no more than 3,500 square metres. • Stand-alone offices will be: <ul style="list-style-type: none"> - multi -storey; or, - provide upper storey residential dwellings. • Medical centres and gyms are to be located: <ul style="list-style-type: none"> - at edge locations where they are a stand alone use (including along the east-west Connector Street Boulevard and Princes Highway west of the core business area; or - at upper storeys along the Main Street. • Cafes and restaurants are encouraged along the Main Street and around the town square. • Where childcare and other community uses are provided they are: <ul style="list-style-type: none"> - to be located adjacent to residential uses; - not to abut the Princes Highway; and - share car parking with other uses. • Showrooms are encouraged and may be located along the Princes Highway. • Offices, non retail services and leisure and recreation facilities are encouraged: <ul style="list-style-type: none"> - along the East-West Connector Street Boulevard; - along the Princes Highway frontage; and - along Whiteside Road. • High density residential uses are encouraged: <ul style="list-style-type: none"> - along the East-West Connector Street Boulevard; - at the western end of the activity centre, overlooking the 'village green'; and, - above retail and commercial uses throughout the activity centre. 	
Supermarkets and other 'large box uses'	<ul style="list-style-type: none"> • Supermarkets and other core retail uses of more than 1,000 square metres are to: <ul style="list-style-type: none"> - provide pedestrian access only from the Main Street, not directly from carparks; - sit behind a fine grained shop front environment of the Main Street; - be sleeved from the Princes Highway by multi-storey buildings; and, - minimise the length of any blank façades that present to the public realm (including carparks). 	

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Public Domain	<ul style="list-style-type: none"> • The town square is to: <ul style="list-style-type: none"> - be approximately 400 square metres in size; - provide a longer frontage along the Main Street than its north-south dimension; - be edged with the active frontages of specialty shops and be directly accessed by shop frontages to encourage outdoor dining; - be the main pedestrian access from carparks to the Main Street; and - have good solar orientation. • Continuous active frontages are required along Main Street, with minimal breaks in the built form, except to provide access to any supermarket via a small internal plaza space which is to; <ul style="list-style-type: none"> - be the equivalent of no more than two specialty shops in width; and, - is not to create any shop with frontage to the Main Street which is accessed from the internal plaza. • A dense concentration of shop entries and extensive clear glazed windows are to characterise Main Street, enabling a high level of pedestrian amenity and engagement. • Where any building has facades to a street and car parking areas: <ul style="list-style-type: none"> - separate tenancies are to be provided fronting onto the street and internal car parking areas; or - where single tenancies exist, active frontages are to be provided on both sides; except where rear tenancies would overlook site servicing facilities of other uses. 	<ul style="list-style-type: none"> • Pedestrian paths are to be provided connecting the town square: <ul style="list-style-type: none"> - through the carpark to sites to the south and potential bus stops on Princes Highway; - to footpaths along the East-West Connector Street Boulevard to the north; - with the Main Street and surrounding areas.

Figure 7: Indicative Urban Design Framework Plan – Whiteside Road Neighbourhood Activity Centre



4.3.3a Urban Design Frameworks

An Urban Design Framework (UDF) is required for the following areas:

- Officer Town Centre (MAC) in relation to all land zoned Urban Growth Zone Schedule 4; and
- Whiteside Road Neighbourhood Activity Centre (NAC) (as per the requirements of Urban Growth Zone Schedule 3).

The Responsible Authority has the discretion to waive the requirement for the UDF to be prepared prior to issuing permits for development.

Urban Design Framework – Officer Town Centre

The purpose of the UDF is to facilitate the delivery of a well integrated urban form with building and subdivision design that responds to adjacent developments and features of the Precinct, ensuring a high quality and high amenity outcome.

The Urban Design Framework (UDF) for the Officer Town Centre must be prepared prior to undertaking any development.

The UDF must be prepared in detail for the Core, Gateway and Urban Village town centre precincts, with a broader, high-level framework being created to guide development of the balance of Officer Town Centre (ie all other land within UGZ4).

The Urban Design Framework must:

- Reflect consistency with the role and function for the Officer Town Centre set out in Table 9.
- Address the planning and design guidelines for Employment and Activity Centres set out in Table 10.
- Address the planning and design guidelines for sub-precincts within the town centre precincts, as shown in Figure 6 and set out in Table 10a.
- Address or improve upon the design solutions shown for Officer Town Centre illustrated in Figures 6a to 6d, unless otherwise agreed with Council.
- Address the Activity Centre Design Guidelines (DSE 2005), Safer Design Guidelines for Victoria (DSE 2005) and Guidelines for Higher Density Residential Development (DSE 2004).

In relation to the Core, Gateway and Urban Village town centre precincts, the UDF must:

- Set out guidelines for building design including interface with streets and other public spaces, heights and articulation to create a strong urban character.
- Demonstrate how opportunities for future expansion can be incorporated into the development of these town centre precincts, enabling more intensive development over time.
- Set out the building and paving materials to be used.
- Set out guidelines for the integrated design of 'internal' streets, including design and width of accessways, pedestrian and cyclist access and areas, car parking and where appropriate, street furniture. A framework must also be provided demonstrating how these connections should be integrated with sightlines and movement paths outside these town centre precincts.
- Outline access arrangements from roads in and adjoining these town centre precincts, including intersections with streets and property access/egress points.
- Provide a Transport Impact Assessment Report for the Activity Centre, prepared to the satisfaction of VicRoads and the Responsible Authority.
- Outline guidelines for car parking including the location and design of car parking areas, as well as setting out car parking rates for proposed uses.
- Demonstrate how the public transport interchange, as well as the Officer Railway Station, will be integrated with Officer Town Centre (to be developed in consultation with the Department of Transport).

- Identify locations of public spaces, particularly along the Main Street, including a town square and connections to other public spaces including open space and creek corridors.
- Include a landscape concept.
- Outline guidelines to improve environmental sustainability including integrated water management and energy conservation consistent with the minimum requirements set out in Table 19.
- Provide guidelines for the provision of advertising signs.
- Set out guidelines for the design of site servicing areas, including areas for deliveries and waste disposal including access for larger vehicles and measures to minimise amenity impacts.
- Set out requirements for concealment of rooftop plants etc.
- Include a plan for that shows proposed ownership patterns.

For the Highway Business, Mixed Use, Residential and Transition town centre precincts, the UDF is to:

- Provide a framework to integrate access and movement with the network established in the Core, Gateway and Urban Village town centre precincts;
 - Demonstrate how visual continuity will be achieved with the Core, Gateway and Urban Village town centre precincts, including creation and maintenance of sightlines to and from the area;
 - Address the interface between sub-precincts;
 - Provide indicative building siting and massing;
 - Set out the key elements of the paving, landscape and streetscape materials used in the Core, Gateway and Urban Village town centre precincts that are to be utilised across the broader UGZ4 area;
 - Address key principles guidelines to optimise the amenity and character of Officer Town Centre.
- In relation to the Highway Business town centre precinct, the UDF must also:
- provide an internal circulation system that:
 - establishes a car parking solution with common accessways and layouts;
 - rationalises access/egress to the Princes Highway;
 - creates a pedestrian network connecting between properties; and
 - ensures all site servicing is from the rear of properties.
 - determine building setbacks from the Princes Highway road reserve.
 - set out principles for building design, including:
 - Princes Highway frontage; and
 - interface with residential to the north.
 - provide a landscaping concept.
 - provide guidelines for the provision of advertising signs.

Urban Design Framework - Whiteside Road Neighbourhood Activity Centre

The Urban Design Framework (UDF) for the Whiteside Road Neighbourhood Activity Centre must be prepared prior to undertaking any development.

The UDF is an application requirement. It may be submitted at the time of a planning permit application is made.

The Urban Design Framework must:

- Reflect consistency with the role and function for the Whiteside Road Neighbourhood Activity Centre as set out in Table 9.
- Address the planning and design guidelines for Employment and Activity Centres set out in Table 10.
- Address the planning and design guidelines for the Whiteside Road Neighbourhood Activity Centre set out in Table 10b.
- Be generally consistent with or improve upon the indicative design solution for the site shown in Figure 7.
- Address the Activity Centre Design Guidelines (DSE 2005), Safer Design Guidelines for Victoria (DSE 2005) and Guidelines for Higher Density Residential Development (DSE 2004).
- Set out guidelines for building design including interface with streets and other public spaces, heights and articulation to create a strong urban character.
- Demonstrate how opportunities for future expansion can be incorporated into the development of the Activity Centre, enabling more intensive development of sites over time.
- Set out the building and paving materials to be

used.

- Set out guidelines for the integrated design of 'internal' streets and access ways, including design and width of access ways, pedestrian and cyclist access and areas, car parking and where appropriate, street furniture.
- Outline access arrangements from adjoining arterial roads, including intersections with streets and property access/egress points.
- Provide a Transport Impact Assessment Report, prepared to the satisfaction of VicRoads and the Responsible Authority.
- Outline guidelines for car parking including the location and design of car parking areas, as well as setting out car parking rates for proposed uses.
- Identify bus stop locations adjacent to the core business area, (in consultation with the Department of Transport).
- Identify locations of public spaces and connections to other public spaces including open space.
- Include a landscape concept for the Activity Centre.
- Outline guidelines to improve environmental sustainability including integrated water management and energy conservation.
- Provide guidelines for the provision of advertising signs.
- Set out guidelines for the design of site-servicing areas, including areas for deliveries and waste disposal including access for larger vehicles and measures to minimise the impact on the amenity of the Activity Centre and other adjacent uses.
- Set out requirements for concealment of rooftop plants etc throughout the commercial core.
- Include a plan showing proposed ownership patterns.

4.3.3b Site Context Report - Neighbourhood Convenience Centres

A Site Context Report is required for all Neighbourhood Convenience Centres (NCCs) in the Precinct.

It is a site-specific assessment of the merits of a proposal in terms of the urban design standards set by the development and its relationship to its surrounds. It will be required at planning permit stage.

The Site Context Report must:

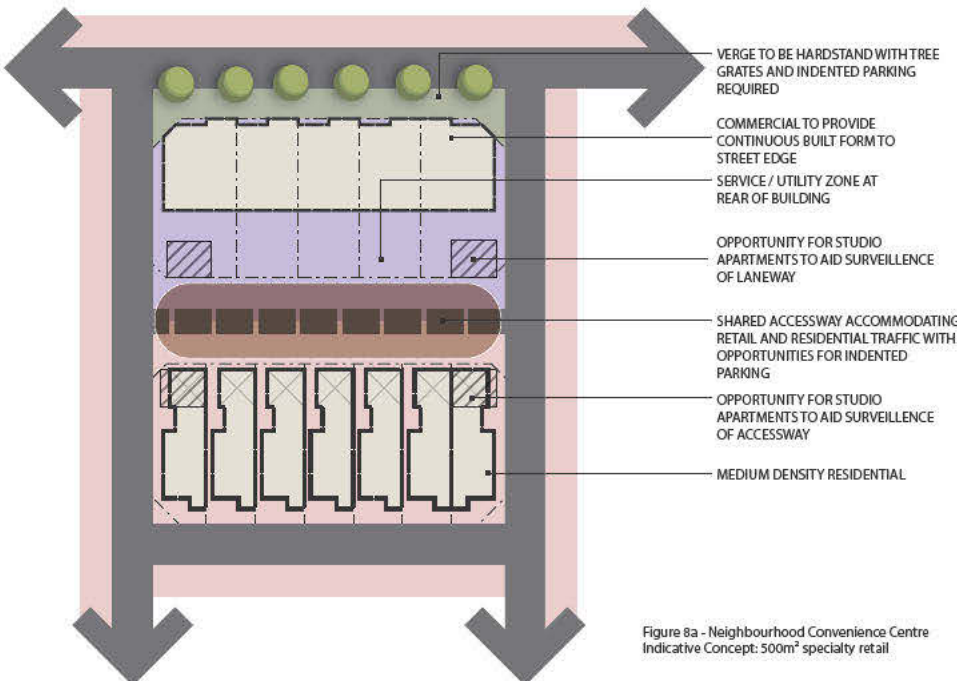
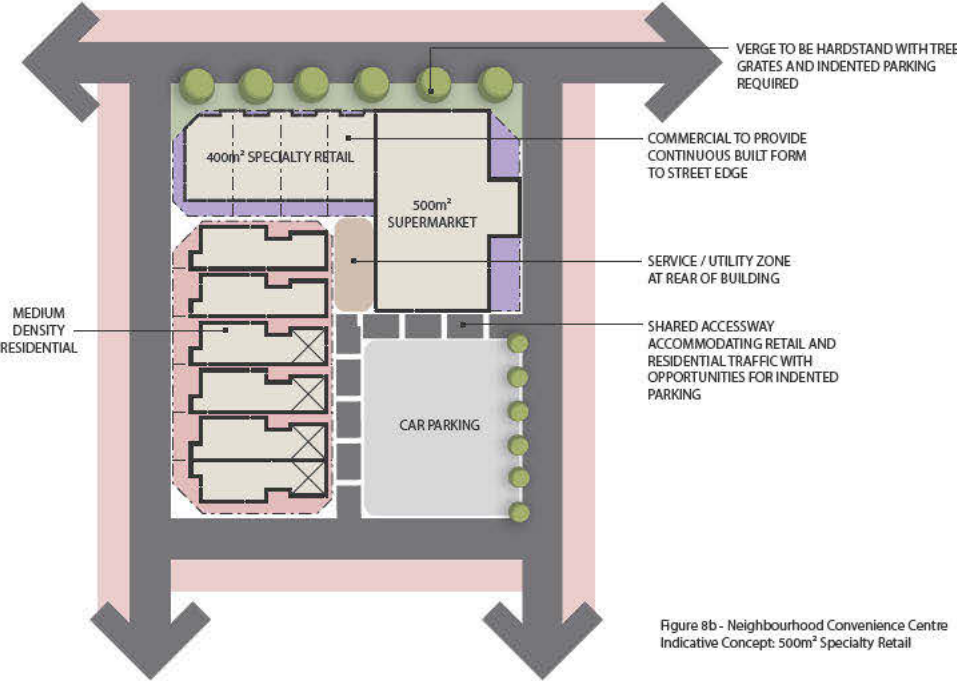
- Demonstrate consistency with the role and function for the NCC as set out in Table 9.
- Address the planning and design guidelines as set out in Table 10.
- Illustrate building design principles, including how interfaces with streets and open space have been addressed, how heights, massing and articulation will create a local 'landmark' on the site.
- Demonstrate how proposed building/s relate to existing and future adjacent buildings and lots, illustrating how facades and active frontages:
 - respond to existing adjacent buildings/lots; and/or
 - provide opportunities for integration with future adjacent developments.
- Demonstrate how circulation and access will be provided, particularly for site servicing.
- Show how site-servicing facilities will be provided, minimising the impact on the amenity of any adjoining sensitive land uses.
- Show how car parking will be provided and its visual dominance from the street is minimised.
- Include an assessment of how landscaping will contribute towards an attractive public realm.

- Demonstrate how rooftop plants etc will be concealed.

An indicative design response is provided in Figure 8.

The Site Context Report would usually include a short report, a site plan showing key features and relationships with surrounds and where existing buildings and/or subdivision exists, photographs and elevations of the streetscape.

Figure 8: Indicative Design Response – Neighbourhood Convenience Centre



4.4 Community Facilities

4.4.1 Community Facilities Objectives

The objectives for community facilities are to:

- Provide a network of community hubs across the Precinct as focal points for community activity and interaction within each neighbourhood, co-located with activity centres, open space, and transport facilities.
- Provide a range of community facilities and services to meet the varying needs of local residents.
- Promote high quality architecture and flexible design and use of community facilities to accommodate changing community needs over time.
- Maximise access to community facilities especially by public transport, walking and cycling.
- Support the provision of community building facilities such as schools, children's services, health services and formal recreation facilities as the population thresholds are reached and funding becomes available.
- Provide for community facilities and services delivered by government and non-government education, health and community service providers.
- Locate higher order community facilities to the Officer Town Centre, such as the Regional Library.

4.4.2 Implementation

The objectives for community facilities are met by implementation of all the following:

- Plan 5: Future Urban Structure;
- Table 11: Community facilities and Services;
- Plan 10: Community Facilities;
- Figure 9: Indicative concept plan for the Community Hubs;
- Table 12: Community Facilities Planning and Design Guidelines set out in Section 4.4.3; and,
- Community Facilities Delivery Statement set out in Section 4.4.3a.

Plan 10: Community Facilities

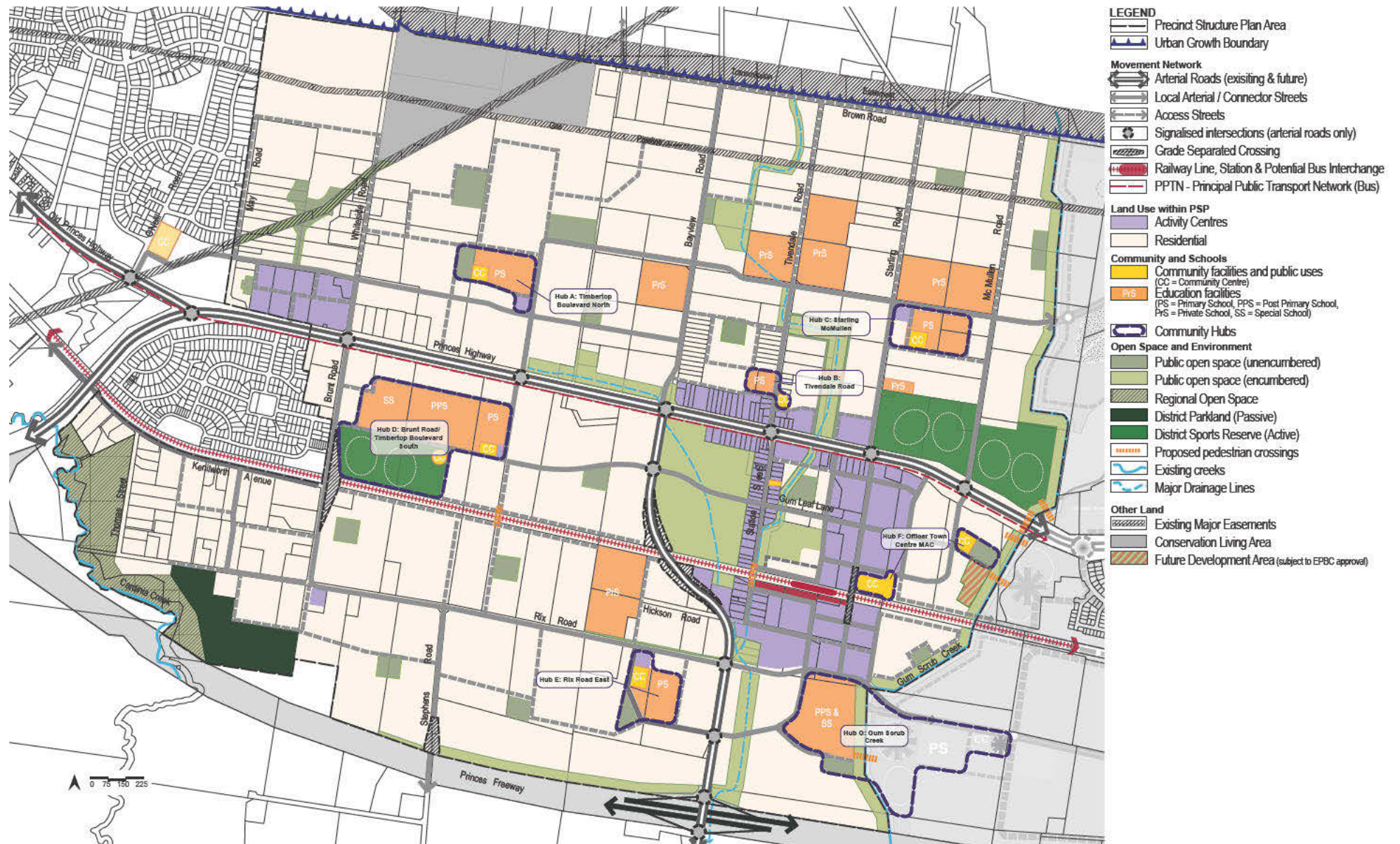


Table 11: Community facilities and services

Location	Facilities and Services	Area (hectares)	Responsibility
Neighbourhood Hub A Timbertop Boulevard North On local bus network	State Primary School	3.5	DEECD
	Children's Centre	0.4	CSC(1) (potential DEECD funding grant)
	- Double Kindergarten		
	- Maternal Child Health Centre		
	- Community Meeting Space		
Neighbourhood Hub B Tivendale Road On local bus network	Local Open Space (1 hectare)	1.0	CSC (3)
	Existing State Primary School (Officer Primary School)*	1.2	DEECD
	Existing Public Hall / Community Meeting Space	0.3	CSC
	Existing Uniting Church	0.1	Private
Neighbourhood Hub C Starling / McMullen Road On local bus network and PPTN (bus)	State Primary School	3.5	DEECD
	Children's Centre	0.6	CSC (1) (potential DEECD funding grant)
	- Triple Kindergarten		
	- Maternal Child Health Centre		
	- Community Meeting Space		
Urban Hub D Brunt Road / Timbertop Boulevard South On local bus network and PPTN (bus)	Children's Centre	0.4	CSC (1) (potential DEECD funding grant)
	- Double Kindergarten		
	- Maternal Child Health Centre		
	- Community Meeting Space		
	Community Meeting Space (Youth)	Located in Active Open Space area	CSC
	Active Open Space Brunt Road	10.0	CSC (2) (potential CFFP (S & R) funding grant)
	- One senior standard oval with floodlighting.		
	- 1 cricket pitch and 2 practice nets		
	- 1 netball court with lighting		
	- Netball lighting		
	- Small pavilion		
	- Hockey facility - synthetic surface, pavilion and lights		
	- 4 court indoor stadium		
	State Post Primary School	8.4	DEECD
	State Special School	2.0	
	State Primary School	3.5	DEECD

Location	Facilities and Services	Area (hectares)	Responsibility
Neighbourhood Hub E Rix Road East On local bus network	Children's Centre	0.6	CSC (1) (potential DEECD funding grant)
	- Triple Kindergarten		
	- Maternal Child Health Centre		
	- Community Meeting Space		
	Local Open Space (1 hectare)	1.0	CSC (3)
	State Primary School	3.5	DEECD
District Hub F Officer Town Centre (MAC) On local bus network and PPTN (rail)	Regional Library	0.6	CSC (2) (potential funding grant)
	Aquatic Centre	0.9	CSC (2) (potential funding grant)
	Community Meeting Space	0.6	CSC (2) (potential funding grant)
	Senior Citizen's Centre	Within Community Meeting Space	CSC (2) (potential funding grant)
	Performing Arts Rehearsal Space	Within Community Meeting Space	CSC (2) (potential funding grant)
	Youth Services	Within Library	CSC (2) (potential funding grant)
	Local Open Space (1 hectare)	1.0	CSC (3)
Neighbourhood Hub G Gum Scrub Creek On local bus network	State Post Primary School	5.0	DEECD
	State Special School	3.5	DEECD
	Local Open Space (1 hectare)	1.0	CSC (3)
	Active Open Space (east of Gum Scrub Creek)	8.0	CSC (4)
	State Primary School (east of Gum Scrub Creek)	3.5	DEECD
	Children's Centre (east of Gum Scrub Creek)	0.4	CSC (4)
	- Double Kindergarten		
	- Maternal Child Health Centre		
	- Community Meeting Space		

1 Cardinia Shire Council (CSC) (1) – fully funded by the Officer Precinct Development Contributions Plan

2 Cardinia Shire Council (CSC) (2) – partly funded by the Officer Precinct Development Contributions Plan

3 Cardinia Shire Council (CSC) (3) – provided through the public open space contribution under Clause 52 01 of the Cardinia Planning Scheme

4 Cardinia Shire Council (CSC) (4) – fully funded by the Cardinia Road Development Contributions Plan (2008)

5 Over time the position of the Officer Primary School in the current Officer Provision Plan may be reviewed.

6 **A Specialist School caters for students with additional learning needs.

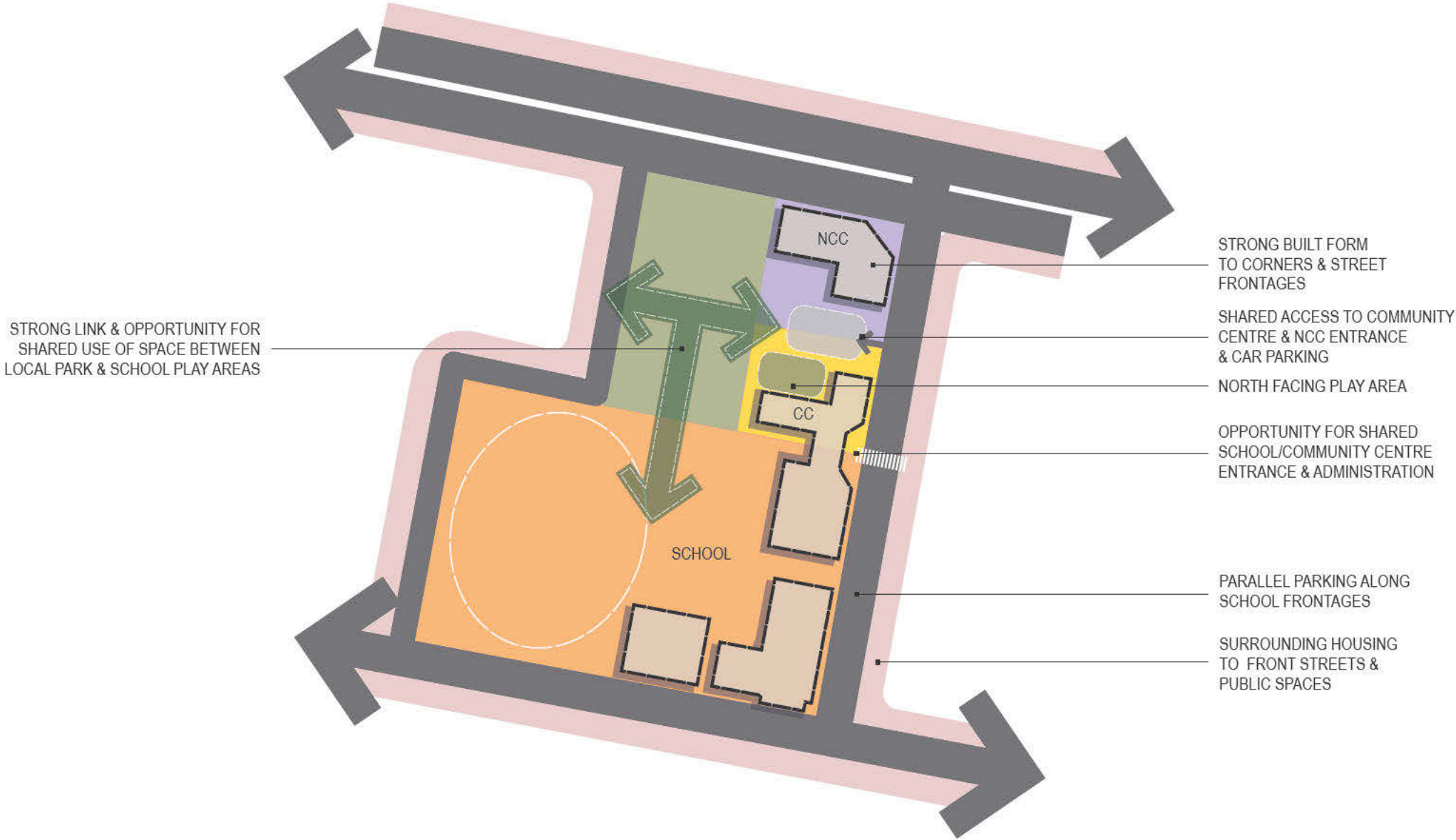
4.4.3 Planning and design guidelines

Table 12: Community Facilities Planning and Design Guidelines

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
General	<ul style="list-style-type: none"> • Locate community facilities so they are easily accessible by walking, cycling or public transport. • Where community facilities and services are proposed outside designated community hubs, ensure they are located: <ul style="list-style-type: none"> - in or adjacent to activity centres; or - adjacent to designated community hubs • Ensure that the building proportion, scale and character are appropriate to their urban context. • Ensure the principal entrances of buildings front onto streets and/or public spaces. • Where community buildings and facilities are associated with active recreation, ensure they are located in unencumbered open space. • Where Emergency Services are proposed on sites other than those designated on the plan, ensure they locate on sites with easy access to the arterial road network. • Where Justice Services are proposed, ensure they are located on sites with easy access to the Principal Public Transport Network (PPTN) and as part of a community hub or activity centre. 	<ul style="list-style-type: none"> • Ensure community infrastructure is: <ul style="list-style-type: none"> - integrated with council facilities and open spaces; and, - co-located with proposed children's playgrounds, recreation infrastructure, Children's Centres (maternal child health centres / kindergartens) and education facilities. • Locate education and community services (public and private) and other activities (such as childcare centres and nursing homes) so that they are: <ul style="list-style-type: none"> - within and or adjoining community hubs; and/or, - within and or on the edge of activity centres. • Ensure that where facilities are associated with schools, they are designed concurrently to ensure integrated facility delivery and maximise sharing opportunities. • Design community facilities so that they: <ul style="list-style-type: none"> - provide for the multi-use of facilities by different groups within the community; - facilitate the efficient and shared use of resources and facilities; - provide for disability access and comply with DDA requirements; and, - incorporate Crime Prevention Through Environmental Design Safe Design Principles where appropriate.
Land allocation for Community Facilities		<ul style="list-style-type: none"> • For sites of 0.4 hectares the preferred land allocation is approximately 80 metres (east west) and 50 metres (north south) with no major blockages of light to the north to ensure north facing playgrounds. Sites of 0.6 hectares are to be of a similar proportion. • The allocation of sites for community facilities is to ensure there is limited conflict with uses that may impact on the safety of children, increase noise levels or loss of amenity, such as roads with high traffic volumes, proximity to loading bays, etc.

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Location of schools		<ul style="list-style-type: none"> • Locate: <ul style="list-style-type: none"> - primary schools (both government and non government) on connector streets carrying a local bus service, with a bus stop at the school boundary; and, - secondary schools (both government and non government) on connector streets carrying a local bus service, with a bus stop at the school boundary, with direct access to the PPTN (rail and/or bus based), where possible. • Ensure non-government schools: <ul style="list-style-type: none"> - co-locate with open space, other schools and/or community facilities; and, - be located within walking distance to the public transport network..

Figure 9: Indicative concept plan for the Community Hubs



4.4.3a Community Facilities Delivery Statement

It is important that community facilities are delivered in an integrated and coordinated manner to maximise both early and cost effective provision.

Integrated, efficient and timely provision

- Funding opportunities and partnerships will be sought to support the early provision of community facilities.
- Potential funding sources to be considered include:
 - *Officer Development Contributions Plan.*
 - *Cardinia Road Precinct Development Contributions Plan (2008).*
 - *Cardinia Council Capital Works Program.*
 - *Development Proponent Funding.* This may include and injection of additional funding, or potential for a development proponent to deliver an item in the Development Contribution Plan through 'in-kind' works. Provision of in-kind works requires approval by Cardinia Shire Council as the Collecting Agency.
 - *State Grant programs.* The State Government provides grant programs with funding potential across a broad range of community facilities and services.
 - *Building New Communities Fund.* Council may make application to the Growth Areas Authority to apply funds from the fund to support the provision of community facilities in the precinct.
 - *Non-government Organisations.* Some community facilities may be able to be delivered by the Council working in partnership with non-government organisations.

Community Hub Concept Planning

- Delivery of integrated and timely community facilities is a complex and evolving task that takes place in stages over a long period of time. It is evolving in the sense that it involves many stakeholders, and the priorities of individual stakeholders are subject to change over time. Models for service delivery and the facilities designed to implement those models also change over time as new approaches are adopted.
- Governance arrangements 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.
- Coordination will be greatly assisted by the establishment of:
 - the development of community hub concept plans; and,
 - masterplans that provide detail for the delivery of the concept plans.
- Community facilities that have traditionally had single purpose functions (schools, sporting facilities, pre-schools) should be planned to respond to a wider range of community needs.
- Community facilities should include appropriate and flexibly designed spaces which match the needs of the community in which it is located, and the services and programs identified to operate from it.
- Community hubs should be designed to:
 - enable services and clubs to co-locate or cluster together; and
 - maximise opportunities for sharing of common spaces (reception, meeting rooms, toilets,

storage, consulting rooms) between some or all providers/users where synergies exist.

- Where possible, community facilities should be constructed in a manner that makes alterations to respond to changing needs and service delivery models both easy and cost effective.
- Design of community hubs should be undertaken in consultation with the local community in which it is to be located, and the service providers likely to operate from it.

4.5 Open Space and Natural Systems

4.5.1 Open Space Objectives

The objectives of open space are to:

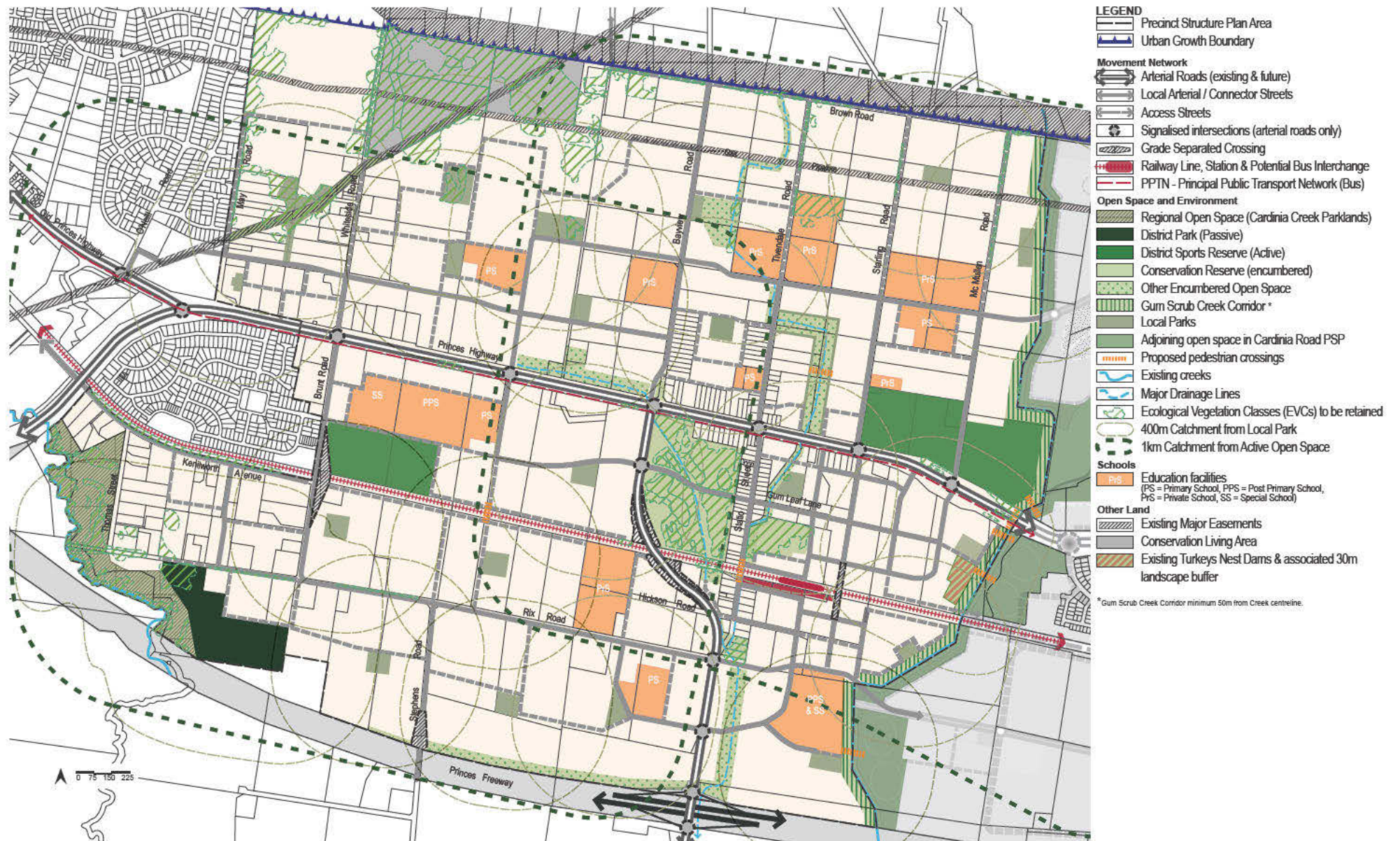
- Provide and develop a network of quality, well distributed, multi functional and appropriately sized open space areas that are well connected to meet the active and passive needs of the community.
- Protect and enhance areas of environmental significance and integrate these areas with open space systems where practicable, in particular Cardinia Creek.
- Create an attractive urban environment with a strong sense of place through the provision of well designed landscaping of open space and roads.
- Maximise the integration and sharing of space with publicly accessible encumbered land. This parkland is to be suitable for the intended open space function/s, including maintenance.
- Implement open space development standards which provide for a sustainable future maintenance regime.
- Encourage and promote the early development of open space through subdivision works, the Officer Development Contributions Plan and / or Council's Capital Works Programs.
- Incorporate pedestrian and bicycle paths throughout the open space network.

4.5.2 Implementation

The objectives for open space are met by implementation of all the following:

- Plan 5: Future Urban Structure
- Table 13: Open Space Categories
- Table 14: Open Space Planning and Design Guidelines
- Plan 11: Open Space Network
- Plan 12: Integrated Water Management
- Planning and design guidelines set out in 4.5.3.
- How to make a public open space contribution in this Precinct set out in 4.5.4.

Plan 11: Open Space Network



Plan 12: Integrated Water Management

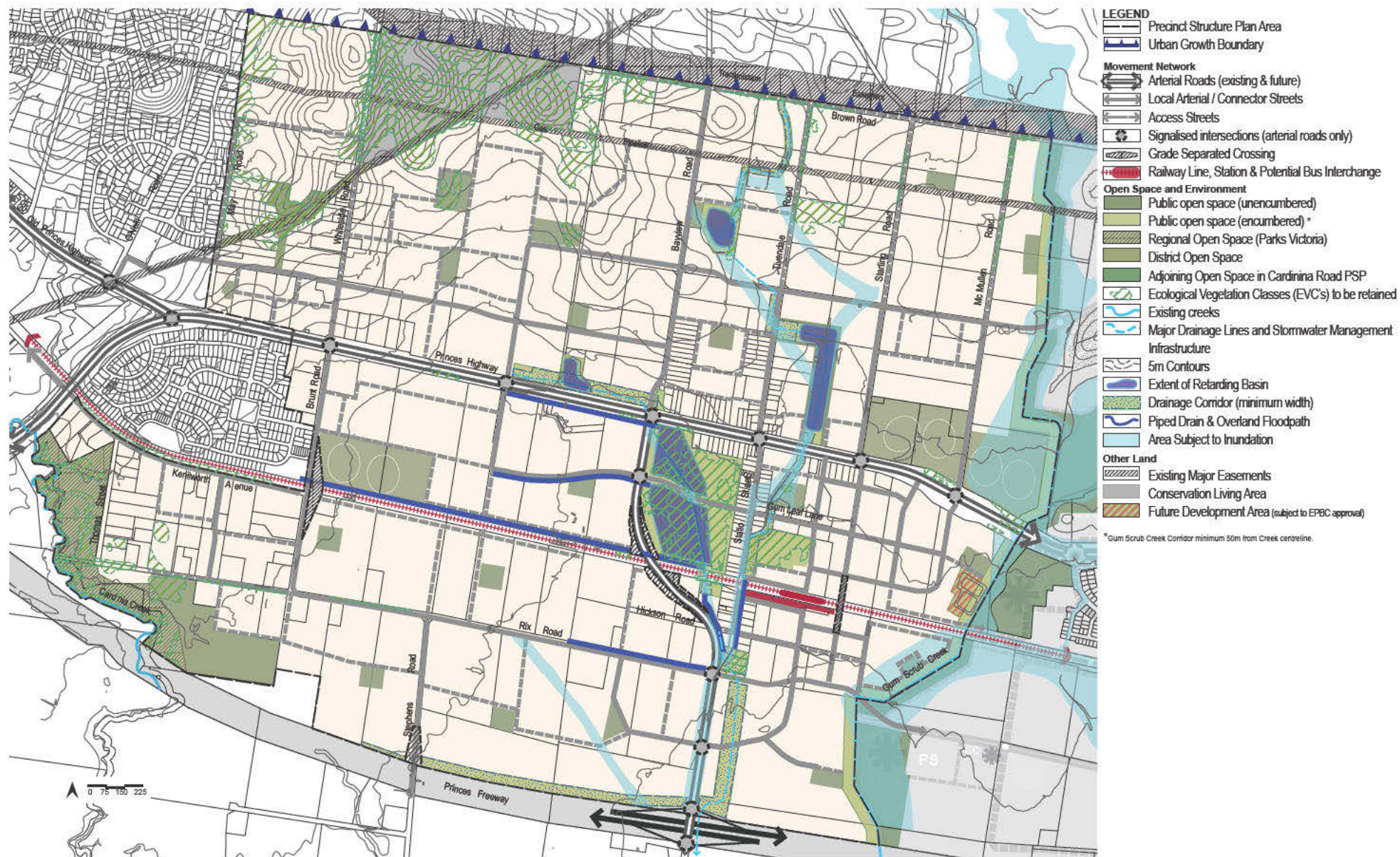


Table 13: Open Space Categories

Role	Location	Responsibility
Regional Open Space		
Cardinia Creek Parklands		
<ul style="list-style-type: none"> To serve the regional recreation needs of the community, provide a clear urban break between suburban development in Casey and Cardinia and enhance the function of the creek environs as a major waterway and biodiversity corridor. Cardinia Creek Parklands was reserved for future public open space in 1994 and will be progressively developed as a major regional park by Parks Victoria. When fully developed, the Parklands will be a series of linked parks of around 405 hectares that stretch for approximately 10 kilometres along Cardinia Creek. Some of the key values of Cardinia Creek Parklands include: <ul style="list-style-type: none"> Remnant vegetation with high conservation value for flora and fauna, and opportunities for significant wildlife corridor linkages, particularly to create habitat for Southern Brown Bandicoot. Intact Swamp Scrub and Grassy Woodland EVCs that are threatened within the Gippsland Plains bioregion and state wide. Habitats that support a diverse range of fauna species, including the nationally significant Southern Brown Bandicoot, Dwarf Galaxias and Growling Grass Frog. Archaeological significance and cultural heritage values associated with the Bunurong and Wurundjeri people. Significant landscape values that reflect the semi-rural character and pastoral history. A green open space and transition area between urban developments. A floodplain function and buffer to a regionally significant waterway. 	<ul style="list-style-type: none"> Part of Cardinia Creek Parklands is located along the south west boundary of the Precinct. 	Parks Victoria
District Parkland (Passive)		
<ul style="list-style-type: none"> To serve the regional recreation needs of the community, serving a catchment area of 15,000 to 25,000 people. This park will serve five distinct roles¹: <ul style="list-style-type: none"> Conserve biological heritage including native vegetation. The park will be important for maintaining and providing a buffer to the high biodiversity values of Cardinia Creek. Diversify recreational settings. It will provide a combination of rough natural, bushland and river based recreational settings that are in limited supply in the precinct. Buffer visual, air quality and noise effects on residents, resulting from the Princes Freeway. Provide for the most important recreation functions for adjacent residents; off road trails for walking and cycling, social /family recreation and relaxation. Access to the regional park. The park will extend the accessibility and value of the Cardinia Creek Parklands by providing a conduit for residents through the parkland. 	<ul style="list-style-type: none"> Adjacent to the Cardinia Creek Parklands, CSC in the south west section of the Precinct. 	

Role	Location	Responsibility
District Sports Reserve (Active)		
<ul style="list-style-type: none"> To provide for junior/senior training and competition. To maximise the number of dwellings within 1 kilometre of active open space. 	<ul style="list-style-type: none"> Princes Highway & Starling Road (existing) (north of Princes Highway); Princes Highway & McMullen Road (north of Princes Highway); and, Brunt Road & railway reservation (south of Princes Highway). 	CSC
Conservation Reserve (Encumbered Land)		
<ul style="list-style-type: none"> To provide for the protection of important native vegetation and habitats for fauna, including: <ul style="list-style-type: none"> endangered EVCs; floristic communities listed for protection under the FFG Act; nationally endangered Matted Flax Lily; state significant Veined Spear Grass; habitat for Swamp Skink, Glossy Grass Skink and Southern Toadlet. 	<ul style="list-style-type: none"> The Gilbert property located west of Station Street, located between Princes Highway & the railway reservation. Part of the site also acts as a retarding basin for drainage as part of Melbourne Water's Development Services Scheme; The Leber property located east of Station Street, located between Gum Leaf Lane and the railway reservation, also accommodates some overland stormwater flows; Between May Road and Whiteside Road, north of the water easement; and, The 'Conservation Living Area' as shown on Plan 5, which includes three sites north of Princes Highway between Whiteside Road and Bayview Road. 	CSC, Melbourne Water or Private
Other Encumbered Land (including Drainage & Cultural Heritage Reserves, Electricity & Gas Easements)		
<ul style="list-style-type: none"> To provide for overland flows and stormwater retention. To maintain access to services, particularly those underground. To protect and conserve sites of cultural heritage significance (where known). 	<ul style="list-style-type: none"> Throughout the PSP area. 	CSC, Melbourne Water or Private
Local Park		
<ul style="list-style-type: none"> To meet the local recreation needs of residents and provide usable and functional local open spaces. Where located within activity centres, be a formal park managed to a high standard, usually with mown and irrigated lawns, paving, sculpture, shrubs or flower beds. At least 95% of all dwellings are to be within 400 metres of a local park. 	<ul style="list-style-type: none"> Throughout the PSP area. 	CSC

Role	Location	Responsibility
Linear Open Space (Encumbered and Unencumbered)		
<ul style="list-style-type: none"> To serve a variety of purposes including: <ul style="list-style-type: none"> drainage and/or water management; wildlife corridors; visual buffers; and, movement corridors (for pedestrians, cyclists, and potentially horses where appropriate). Includes both encumbered and unencumbered land. At least 95% of all dwellings are to be within 1 kilometre of linear parks and trails (either along waterways, vegetation corridors and/or road reserves). 	<ul style="list-style-type: none"> Gum Scrub Creek Along drainage network 	<ul style="list-style-type: none"> part Melbourne Water (encumbered), part CSC (unencumbered)

(Footnotes)

1 Jeavons & Jeavons Pty Ltd trading as @leisure, Assessment of the OPSP, September 2008.

4.5.3 Planning and Design Guidelines

Table 14: Open Space Planning and Design Guidelines

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Regional District Park Cardinia Creek Parklands	<ul style="list-style-type: none"> Cardinia Creek is to be protected by a substantial buffer typically 400 metres each side, in recognition of its environmental, landscape and heritage values. All works must be in accordance with the Officer Precinct Structure Plan Cardinia Creek Conservation Management Plan (Ecology Australia, September 2011). Provide for pedestrian and cyclist movement along the creek, south of the Princes Freeway and north of Kenilworth Avenue. 	
District Parkland (Passive)	<ul style="list-style-type: none"> Conserve the vegetation and landscape character along Cardinia Creek. Provide a landscape treatment along the boundary of the Cardinia Creek Parklands to demarcate the conservation zone from the recreation zone identified in the Officer Precinct Structure Plan Cardinia Creek Conservation Management Plan (Ecology Australia, September 2011). Ensure lighting of the park does not impact on the Cardinia Creek conservation zone. Provide vegetation as a screen where necessary. Ensure the design of the park boundary considers the relationship between residential areas and the park interface. 	
District Sports Reserve (Active)	<ul style="list-style-type: none"> Be located within or adjacent to a community hub or activity centre. Designed to maximise co-location and sharing opportunities between complementary sports and adjoining school facilities. Linked to pedestrian and bicycle paths. Be accessible from a connector street or arterial road and be accessible by public transport. Provide recycled water, or other sustainable water supply for irrigated grass sports grounds. 	<ul style="list-style-type: none"> Officer Recreation Reserve (McMullen Road) is to be at least 11 hectares. The Starling Road Reserve is to be at least 10 hectares. The Brunt Road Reserve is to be at least 10 hectares. The reserves are to be appropriate for its intended open space use in terms of quality and orientation and are to be located on flat land.
Conservation Reserve (Encumbered Land)	<ul style="list-style-type: none"> Be in accordance with the relevant: <ul style="list-style-type: none"> Conservation Management Plan; Cultural Heritage Management Plan; and/or, Native Vegetation Precinct Plan. 	<ul style="list-style-type: none"> Limit formal recreation use.

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Other Encumbered Land (including Drainage and Cultural Heritage Reserves, Electricity & Gas Easements)	<ul style="list-style-type: none"> Publicly accessible encumbered land will only be considered as productive open space where the land is suitable for the intended open space function/s including maintenance. Ensure pedestrian and cycle paths on land encumbered by native vegetation is limited to the periphery of habitat zones identified to be retained in the Officer NVPP, unless otherwise agreed with the Department of Sustainability and Environment. Provide appropriate signage and fencing to manage access to the Leber and Gilbert properties, encouraging use of defined paths or boardwalks. A road is to be provided along the edge of all drainage reserves as the interface to development, unless a maintenance track is otherwise provided to the satisfaction of Melbourne Water or the responsible authority. 	
Gum Scrub Creek Open Space Corridor	<ul style="list-style-type: none"> Provide a minimum width of 50 metres of open space (measured from centre line of creek) to provide habitat for significant flora and fauna species, as well as catering for drainage requirements. Create significantly wider nodes for passive recreation by locating unencumbered local open space abutting the encumbered open space. Part of the land set aside for the creek corridor may be creditable towards the landowner's public open space contribution under Clause 52.01 subject to the detailed design of the creek corridor north of the Princes Highway and agreement of the responsible authority. Ensure dedicated Growling Grass Frog Ponds are created along the creek line between the Princes Highway and the Princes Freeway. Provide vegetation that is a suitable species and density to create habitat for Southern Brown Bandicoot. Accommodate shared pathways outside the 30 metre buffer zone to any dedicated Growling Grass Frog habitat. 	

Design Issue Water Sensitive Urban Design (WSUD)	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
	<ul style="list-style-type: none"> Design and layout of open space areas is to maximise efficient water use, stormwater quality and the viability of vegetation through use of Water Sensitive Urban Design (WSUD) initiatives. Use WSUD principles 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. Where Grouling Grass Frog Ponds are provided, WSUD is to be incorporated into unencumbered open space abutting waterways – drainage corridors to provide an offline natural water replenishment source. Incorporate stormwater management and techniques to improve stormwater quality, particularly along drainage lines. 	<ul style="list-style-type: none"> Explore opportunities to incorporate WSUD, including using: <ul style="list-style-type: none"> central medians of roads, including arterials and connector streets; and landscape trails associated with road cross sections.
Integrated Open Space Network	<ul style="list-style-type: none"> Consider significant view lines to and within the Precinct to enhance open space opportunities within the urban area. Ensure open space has a road frontage to all edges except where they are otherwise addressed by an active frontage from residential, commercial or a community facility development. Ensure pedestrian and bicycle routes are provided with good surveillance. Design streetscape planting, pedestrian / bicycle paths and landscaping of adjoining development to compliment and integrate with the adjoining parkland design. Ensure residential, commercial and/or community facility adjacent to open space is designed to enhance the open space area. Ensure the design of drainage reserves, retarding basins and wetlands are integrated with the open space network. 	<ul style="list-style-type: none"> Plant species are to be indigenous (preferred) or Australian native species which will characterise the open space network. All species chosen must be appropriately robust to perform adequately in the local urban environment. Have regard the parks and open space objectives set out in the Safer Design Guidelines for Victoria (2005). Ensure development abutting open space: <ul style="list-style-type: none"> is well articulated and facilitates passive surveillance with windows, balconies, and pedestrian access points; avoids the rear of properties or blank walls abutting parklands; and, where fencing is required it be low scale and permeable to facilitate public safety and surveillance.
Local Parks	<ul style="list-style-type: none"> Have an average size of 1 hectare across the PSP area. Local parks of less than 1 hectare will be considered on a case-by-case basis. Provide grassed areas and simple play facilities. Be generally located in accordance with Plan 11, subject to development staging and accessibility considerations, to the satisfaction of the responsible authority. 	

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Other park landscape elements and infrastructure	<ul style="list-style-type: none"> • Ensure open space areas are designed to be safe and comfortable places that encourage use by a wide range of people. • Use Crime Prevention Through Environmental Design design principles to guide the design of open space and the park infrastructure (refer Safety By Design Guidelines, DSE 2001). • Ensure open space path systems facilitate clear, direct and easy movement to and from key destinations. • Parks and sports fields are to be clearly signed. • Pedestrian / bicycle paths, bridges and boardwalks are to be designed to be above a minimum of the 1:10 year flood line to the satisfaction of the relevant authority. 	<ul style="list-style-type: none"> • Ensure the design and siting of landscape elements and infrastructure complements the urban area. • Park infrastructure is to be: <ul style="list-style-type: none"> - be clustered in nodes; and, - contemporary in design with materials and design complementing the planting character. • Park seating is to be provided with access by pathways at least every 400 metres along any open space path network, including open space corridors adjoining roads. • Bollards and fencing is to be generally kept to a minimum, but where required is to be designed to maximise transparency. • Ensure the location of car parking (where required within open space) is: <ul style="list-style-type: none"> - sensitively designed to minimise large areas of hard surfaces; - maximises tree and ground level planting; and, - integrates safe pedestrian access within the car park design. • Park buildings are to be: <ul style="list-style-type: none"> - contemporary in design with orientation, materials choices and design detailing to minimise resource use and maximise sustainability performance; - designed to make use of sustainable construction techniques (for example solar power lighting); - sited and designed to integrate with and complement landscaping and should not dominate the parkland; and, - sited to frame park spaces and avoid splitting up otherwise usable and effective spaces. • Signs within parks are to be: <ul style="list-style-type: none"> - kept to a minimum with locations focussed on key access points and major pedestrian / bicycle routes; and, - designed and include materials choice that are contemporary and complement other park design elements. • Lighting in open spaces is to be: <ul style="list-style-type: none"> - restricted to key pedestrian thoroughfares to encourage safe pedestrian movement throughout the network, but discourage inappropriate use of main parkland areas after dark; and - incorporate light fittings that are energy efficient and avoid unnecessary light spill. • Pedestrian / bicycle paths, bridges and boardwalks are to be designed to be above a minimum of the 1:100 year flood line.

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Requirements for transfer of land	<ul style="list-style-type: none"> • All open space is to be finished to the satisfaction of the responsible authority prior to the transfer of land, including: <ul style="list-style-type: none"> - cleared of all existing disused structures, foundations, pipelines or stockpiles; - cleared of all rubbish and environmental weeds; and - provision of bollards or other means of restricting vehicle access to open space areas. • In the case of unencumbered open space, the following 'base requirements' must also be finished: <ul style="list-style-type: none"> - site must be levelled, top soiled and grassed with warm climate grass; - planting of trees and scrubs in accordance with a planting schedule approved by Council in advance of the works; - construction of shared and local paths; and - provided with a water source suitable for the management of the open space. 	<ul style="list-style-type: none"> • Where 'community improvements' such as parkland embellishment, playgrounds, sports facilities and infrastructure (such as car parking, BBQs or other structure) are funded through the Officer DCP, these are to be delivered concurrently to the 'base requirements' for the site. • Where additional feature landscaping is proposed by a developer, the works must be fully funded by the developer and agreed with Council with respect to the future maintenance requirements generated by the works.

4.5.4 How to make a public open space contribution in this Precinct

Clause 52.01 of the Cardinia Planning Scheme specifies a public open space contribution which must be made upon the subdivision of the land. This requirement is only in respect of local passive public open space. Passive district open space and active open space are addressed through the Officer Development Contributions Plan (September 2011).

Because the Officer PSP identifies a desired distribution of passive public open space across the area of the PSP (land shown as Local Parks in Plan 11), all landowners must make a public open space contribution equivalent to the amount set out in the schedule to clause 52.01 either in land or in cash or a combination of both as advised by Council. Landowners who contribute more than the specified public open space contribution required by clause 52.01 will be entitled to a payment. This process is referred to as equalisation and is explained further below.

All land within the Officer Precinct Structure Plan area must make a public open space contribution specified at 5.5%.

Where land is required by Council for unencumbered passive public open space purposes and that area of land is less than or equal to 5.5% of the Net Developable Area (NDA) of that land, that land is to be transferred to Council at no cost.

Where no land or less than 5.5% of the NDA of any land is provided to Council for unencumbered passive public open space purposes, a cash contribution is to be made to Council to bring each property's total passive public open space contribution up to an amount equivalent to 5.5% of the site value.

Where the land required by Council for unencumbered passive public open space purposes is more than 5.5% of the NDA of any land, Council will pay an amount equivalent to the site value of the additional land being provided by that property over the 5.5% of the site area required as a passive public open space contribution but Council will not pay an amount for land provided as public open space which is in excess of the land required by Council to be set aside as passive public open space.

4.5.5 Biodiversity Objectives

The objectives for biodiversity are to:

- achieve a biological 'net gain' through:
 - protection and management of areas supporting ecological value;
 - significant improvements to habitat and connectivity in the Precinct and the broader Cardinia Urban Growth Area;
 - conservation management and enhancement of significant native vegetation and fauna habitat; and
 - management of open space corridors to avoid conflict between their ecological, drainage and recreation functions.
- plan for long term conservation management of significant flora and fauna species and habitats in accordance with the:
 - Officer Native Vegetation Precinct Plan (September 2011);
 - Officer Precinct Structure Plan Conservation Management Plan (excluding Cardinia Creek) (Ecology Partners, September 2011);

– Officer Precinct Structure Plan Cardinia Creek Conservation Management Plan (Ecology Australia, September 2011).

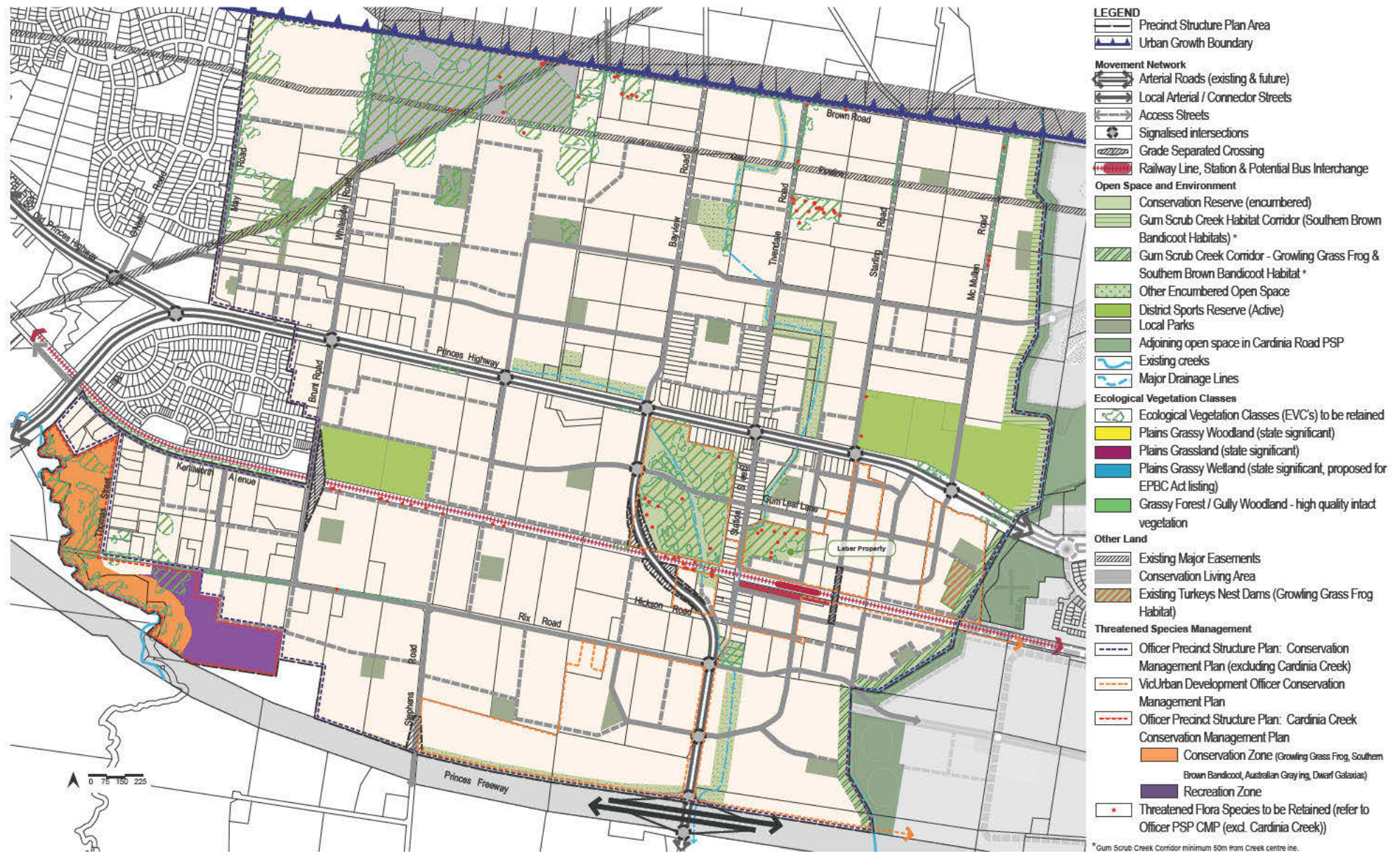
- provide for the co-location of public recreation and open spaces areas to assist in buffering of significant reserves and waterways.
- ensure that the removal, destruction or lopping of native vegetation specified to be protected is consistent with conserving the ecological values of these areas and is in accordance with the three-step approach to net gain as set out in Victoria's Native Vegetation Management – a Framework for Action, DSE 2002.

4.5.6 Implementation

The objectives of biodiversity and cultural heritage management are met by implementation of all the following:

- Plan 5: Future Urban Structure
- Table 13: Open Space Categories
- Table 14: Open Space Planning and Design Guidelines
- Plan 13: Biodiversity Management
- Planning and design guidelines set out in 4.5.7, including Table 15
- Officer Native Vegetation Precinct Plan (September 2011)
- Officer Precinct Structure Plan Conservation Management Plan (excluding Cardinia Creek) (Ecology Partners, September 2011)
- Officer Precinct Structure Plan Cardinia Creek Conservation Management Plan (Ecology Australia, September 2011).

Plan 13: Biodiversity Management



4.5.7 Planning and Design Guidelines

Table 15: Biodiversity Planning and Design Guidelines

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
General	<ul style="list-style-type: none"> Be in accordance with the relevant: <ul style="list-style-type: none"> Native Vegetation Precinct Plan; and/or Conservation Management Plan. 	
Biodiversity	<ul style="list-style-type: none"> Ensure building envelopes and development proposals provide setbacks from patches of native vegetation identified to be protected in the Officer NVPP to allow management access and fire buffers. Ensure proposals enhance biodiversity in the region and enhance planting opportunities within urban areas by: <ul style="list-style-type: none"> utilising Gum Scrub Creek to provide for vegetation buffers as well as the protection and enhancement of the creek system; protecting and retaining significant vegetation, including remnant vegetation within open space areas; and. maximising opportunities for revegetation in urban areas, particularly on ridgelines. Design open space to enhance and preserve areas of conservation significance and protect sensitive areas from vehicle or pedestrian traffic by: <ul style="list-style-type: none"> providing appropriate buffer zones between native vegetation conservation areas and 'hard' infrastructure such as paths, furniture, picnic shelters; and, ensuring passive or low impact activities are provided closest to offset / conservation areas, with more high impact or formal activities to be located further away. Ensure indigenous species are used exclusively in open spaces adjoining conservation areas. Provide 40 metre wide patches of continuous native vegetation along Cardinia Creek and Gum Scrub Creek to create habitat for Southern Brown Bandicoot, spaced 20 to 30 metres apart. Provide terrestrial grassed areas and dedicated Growling Grass Frog ponds spaced 200 to 300 metres apart along Cardinia Creek and Gum Scrub Creek corridors. Ensure a 30 metre buffer zone is provided around all Growling Grass Frog ponds, with lights, paths and other activities causing direct impacts located outside this buffer. 	<ul style="list-style-type: none"> Retain mature isolated trees through incorporation into open space, road reserves and larger lots. Rehabilitation and conservation works on encumbered land is to be undertaken in accordance with the Officer Precinct Structure Plan Cardinia Creek Conservation Management Plan (Ecology Australia, September 2011) and the Officer Precinct Structure Plan Conservation Management Plan (excluding Cardinia Creek) (Ecology Partners, September 2011). Design vegetation for drainage reserves to ensure habitat appropriate for Swamp Skink, Glossy Grass Skink and the Southern Toadlet is provided, in accordance with the Officer Precinct Structure Plan Conservation Management Plan (excluding Cardinia Creek) (Ecology Partners, September 2011).

The Officer Precinct Structure Plan Cardinia Creek Conservation Management Plan (applying to open space areas adjacent to Cardinia Creek) and the Officer Precinct Structure Plan Conservation Management Plan (excluding Cardinia Creek) (applying to all other land within the Precinct) outline the requirements under Melbourne's Strategic Assessment (under Part 10 of the EPBC Act) for all actions (development) within the Precinct. The Conservation Management Plans outline requirements in relation to the nationally threatened Southern Brown Bandicoot, Growling Grass Frog, Dwarf Galaxias, Australian Grayling and Matted Flax-Lily. The two Conservation Management Plans must be implemented to ensure compliance with the EPBC Act. The use and development of land, including all buildings and works, must be carried out in accordance with the requirements of the two Conservation Management Plans.

Landowners with suitable Growling Grass Frog and Southern Brown Bandicoot habitat which is approved to be removed to allow for development are required to contribute funding to the protection and enhancement of habitat (as outlined in the Officer Precinct Structure Plan: Cardinia Creek Conservation Management Plan).

4.5.8 Heritage Objectives

The objectives for heritage are to:

- acknowledge the significance of the land to the Bunurong and Wurundjeri people;
- ensure indigenous archaeological sites are identified and managed in accordance with statutory requirements;
- protect significant sites identified in the area; and
- integrate significant sites with the open space network and surrounding development.

4.5.9 Implementation

The objectives for heritage are met by implementation of all of the following:

- Plan 5: Future Urban Structure
- Plan 7: Image and Character
- Plan 14: Heritage
- Planning and design guidelines set out in 4.1.3
- Planning and design guidelines set out in 4.5.10

4.5.10 Planning and Design Guidelines

The following planning and design guidelines must be met:

- All planning permit applications are to comply with regulatory requirements in relation to preparation of an Aboriginal Cultural Heritage Management Plan (CHMP).
- If a suitably qualified professional considers that a CHMP is not required for a property, a letter is to be provided by Aboriginal Affairs Victoria (AAV) to demonstrate satisfaction with this assessment.
- Where a CHMP is prepared, the activity description in the CHMP must address all requirements of future public land managers for buildings and works on the property.
- If any artefact or scatter is required by AAV to be retained in-situ and is proposed to be located in a public reserve:
 - the reserve must be of sufficient size to provide an unencumbered open space area that is functional;
 - the landscaping and design of the reserve is to be to the satisfaction of the responsible authority; and
 - the design of the reserve must comply with any

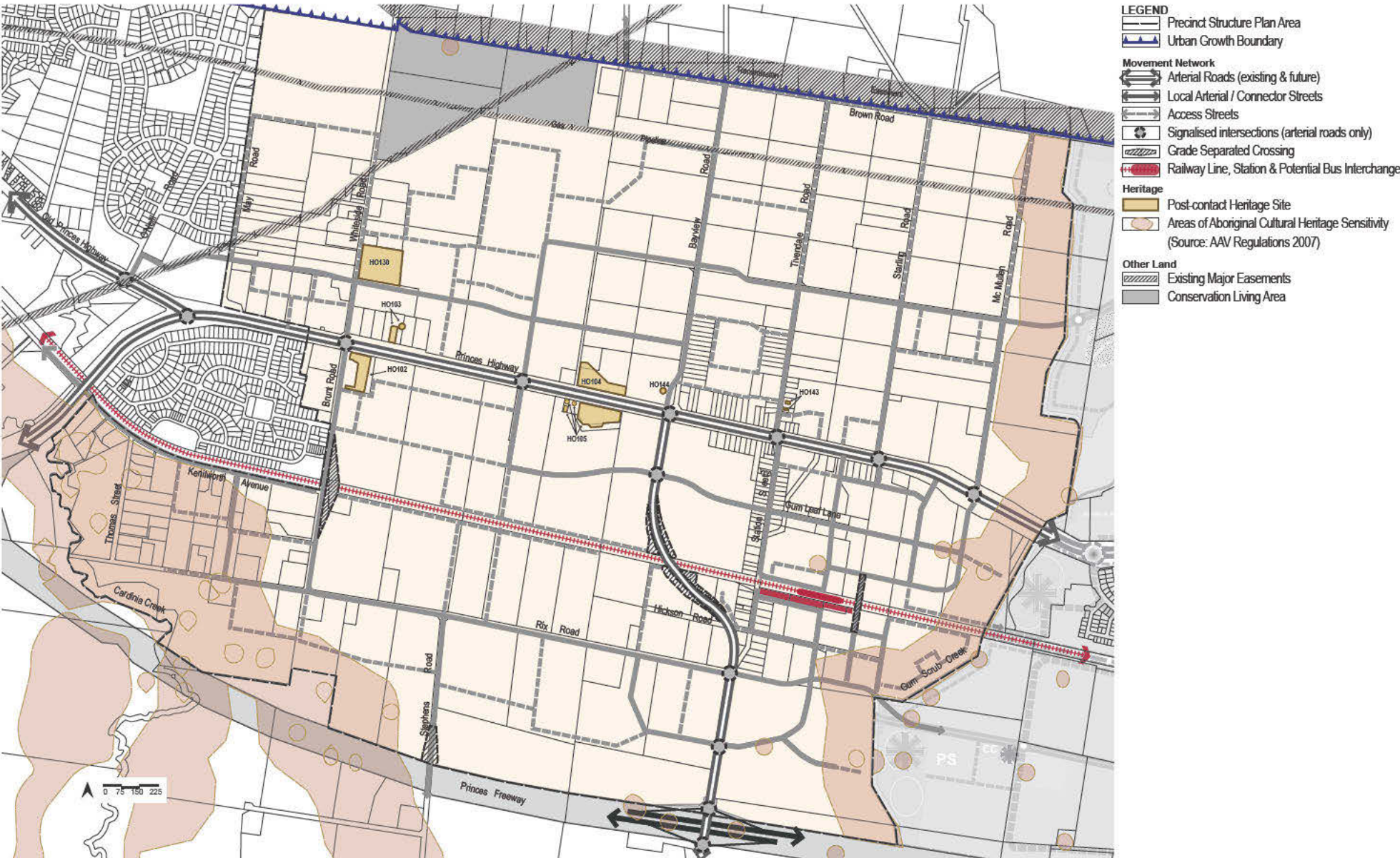
policy or guidelines adopted by the responsible authority.

- In relation to clay pits covered by the heritage overlay:
 - minimal modification is to occur; and
 - the design and landscaping of surrounding encumbered open space is to manage access and ensure public safety.
- New development is to maintain sightlines from the main road frontage of a property to heritage buildings.
- Use and development of sites covered by the heritage overlay is to ensure the protection, enhancement and maintenance of identified heritage features.
- A Conservation Management Plan (refer Heritage Council of Victoria 2010) is to be prepared prior to the development of Lot 1 TP20791 and Lot 1 TP20642 addressing the key elements identified on the site (refer Table 1).

The planning and design guidelines should be met:

- A Conservation Management Plan is to be prepared prior to the development of any site covered by the Heritage Overlay (refer Heritage Council of Victoria 2010).
- Where significant artefacts or scatters are found and are required by AAV to be retained in-situ:
 - the site, plus a 10 metre buffer, is to be set aside as encumbered open space;
 - unencumbered local open space of at least 0.5 hectare is to be provided adjacent to the encumbered open space;
 - the total area of the open space reserve is to be at least 1 hectare.

Plan 14: Heritage



4.5.11 Bushfire Risk Management Objectives

The objectives of bushfire risk management are to:

- Identify land that is subject to adverse impacts from a bushfire.
- Avoid development in areas where the fire intensity is too high to allow for the adequate protection of people and buildings.
- Ensure that any new lot created minimises the risk from bushfire.
- Ensure there is an appropriate interface treatment to bushfire risk areas.
- Provide adequate buffers between native vegetation to be retained (refer Officer NVPP 2011) and new development to minimise the need for native vegetation removal to manage fire risk.
- Ensure subdivision design responds to the effect of vegetation on the level of fire intensity.
- Increase the level of protection from fire through the design, siting and layout of the subdivision.
- Ensure that the design and siting of buildings and works improves protection for life and minimises the level of fire impact (including ember attack).
- Provide a safe and high-level of access for emergency and other vehicles.

4.5.12 Implementation

The objectives of bushfire risk management are met by implementation of all the following:

- Plan 5: Future Urban Structure
- Figure 10a: North-West Low Density Area – Design Response
- Figure 10b: Fuel Managed Buffers
- Officer Native Vegetation Precinct Plan (September 2011)
- Identification of bushfire risk areas through the adoption of a Direct Bushfire Impact Zone as shown in Figure 10a or through the adoption of a bushfire hazard map for use in Victorian planning schemes.
- Planning and design guidelines set out in 4.5.13.

4.5.13 Planning and Design Guidelines

The following planning and design guidelines must be met:

- Respond to any relevant policy in relation to bushfire and fire prevention.
- Subdivision and development within the Direct Bushfire Impact Zone (as identified in Figure 10a) must address the objectives and outcomes of bushfire planning in Victoria to the satisfaction of CFA including (but not limited to):
 - Siting of development is to minimize bushfire risk.
 - Defendable Space is to be provided within the boundaries of each lot, consistent with the requirements for a Bushfire Attack Level (BAL) specified by CFA.
 - Buildings are not to be located:
 - in Defendable Space; or
 - within 30 metres of native vegetation retained

in the relevant lot (whichever is greater).

- Building construction standards (BAL rating) are to be determined at subdivision stage and registered to the title of each lot.
- The road network is to provide each lot with access to at least two north-south routes to escape a fire threat without moving closer to the fire threat.
- Provide water supplies for fire fighting purposes for both residents and firefighters to the satisfaction of CFA.

NOTE: All applications for subdivision of land within the Direct Bushfire Impact Zone as outlined in Figure 10a or land identified as an area of bushfire hazard in a bushfire hazard map in the Victorian planning scheme, must provide a detailed fire risk assessment undertaken by a suitably qualified and experienced consultant that supports the subdivision design and siting of development to minimise bushfire risk.

Figure 10a: Strategic Design Principles for Residential Interface to Wildfire Management Overlay

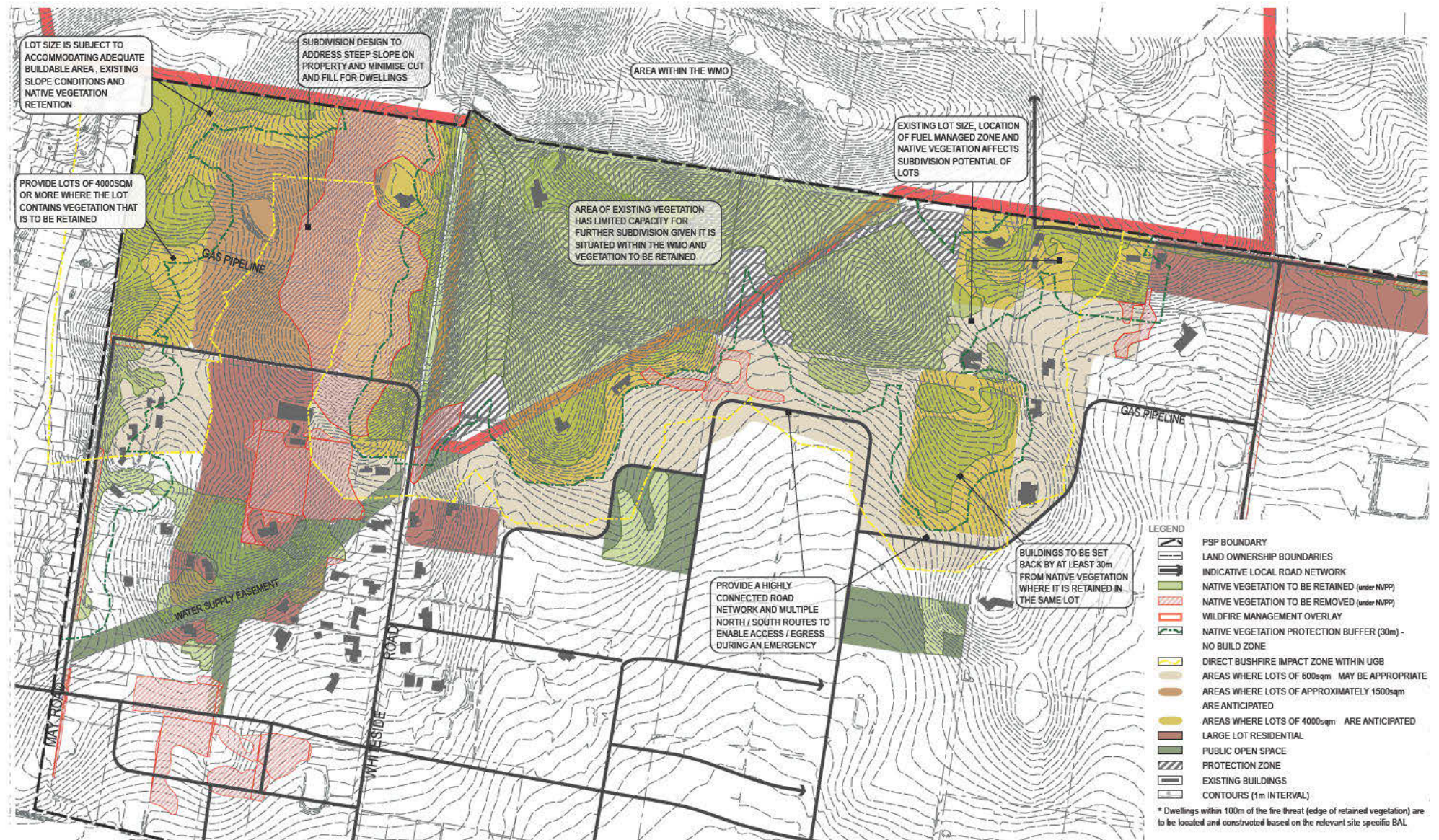
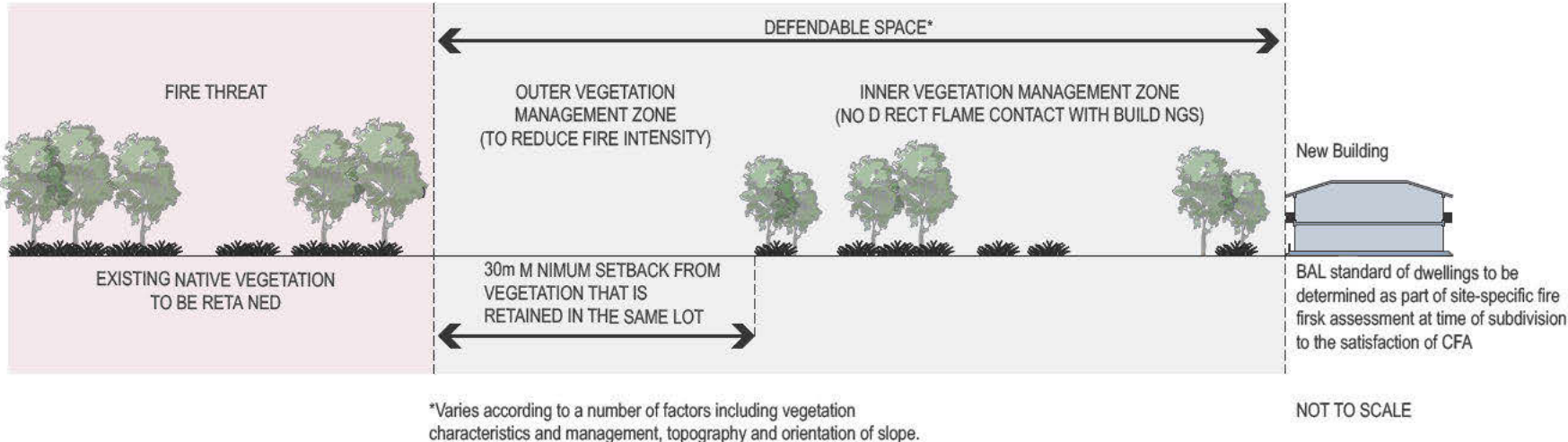


Figure 10b: Fuel Managed Buffers



4.6 Transport and Movement

4.6.1 Transport and Movement Objectives

The objectives for transport and movement are to:

- Provide a sustainable transport network that promotes public transport use, walking and cycling while reducing reliance on cars.
- Provide an efficient, legible and safe local road network that:
 - enables safe and efficient bus operations;
 - complements the role and function of the arterial road networks; and,
 - provides good internal movement within and between neighbourhoods and good access to external destinations.
- Provide for a bus network that connects residential areas to the Officer Railway Station.
- Ensure Officer Railway Station:
 - becomes a key focus of the new activity centre;
 - accommodates safe and efficient bus movements;
 - enables easy interchange to bus services;
 - provides park and ride facilities; and
 - is well connected to the pedestrian and bicycle network.
- Create an attractive and safe interface with arterial roads.
- Provide for landscaping of roads and streets to create key public spaces, landscape corridors and contribute to an attractive urban environment.
- Improve access from Officer to Beaconsfield via a new east-west road.
- Recognise Kenilworth Avenue as an important connection to Beaconsfield for Officer residents.
- Plan for the future grade separation of Brunt Road, new North South Arterial and the Officer Town Centre Main Street at the Gippsland Railway line.
- Plan for the closure of Station Street at the 'at grade' level crossing upon delivery of the new North South Arterial.
- Plan for the delivery of the Stephens Road overpass across the Princes Freeway.
- Support the early provision of a safe and efficient pedestrian and bicycle network that links Officer Railway Station, bus stops, activity centres and major community facilities.
- Facilitate a regional bicycle path network linking important destination points such as Cardinia Creek Parklands, the Princes Freeway shared path, Officer Town Centre, Gum Scrub Creek, Beaconsfield, the Cardinia Road Precinct and future employment areas south of the Freeway.
- Mitigate impacts of traffic noise from the Princes Freeway and the railway line to an acceptable level.
- Ensure the transport network is planned to provide for the safety of all road users.
- Ensure the transport network provides for the safe and efficient operation of the existing and future arterial network in the short and long term.
- Limit access to arterial roads to protect their function and safety.

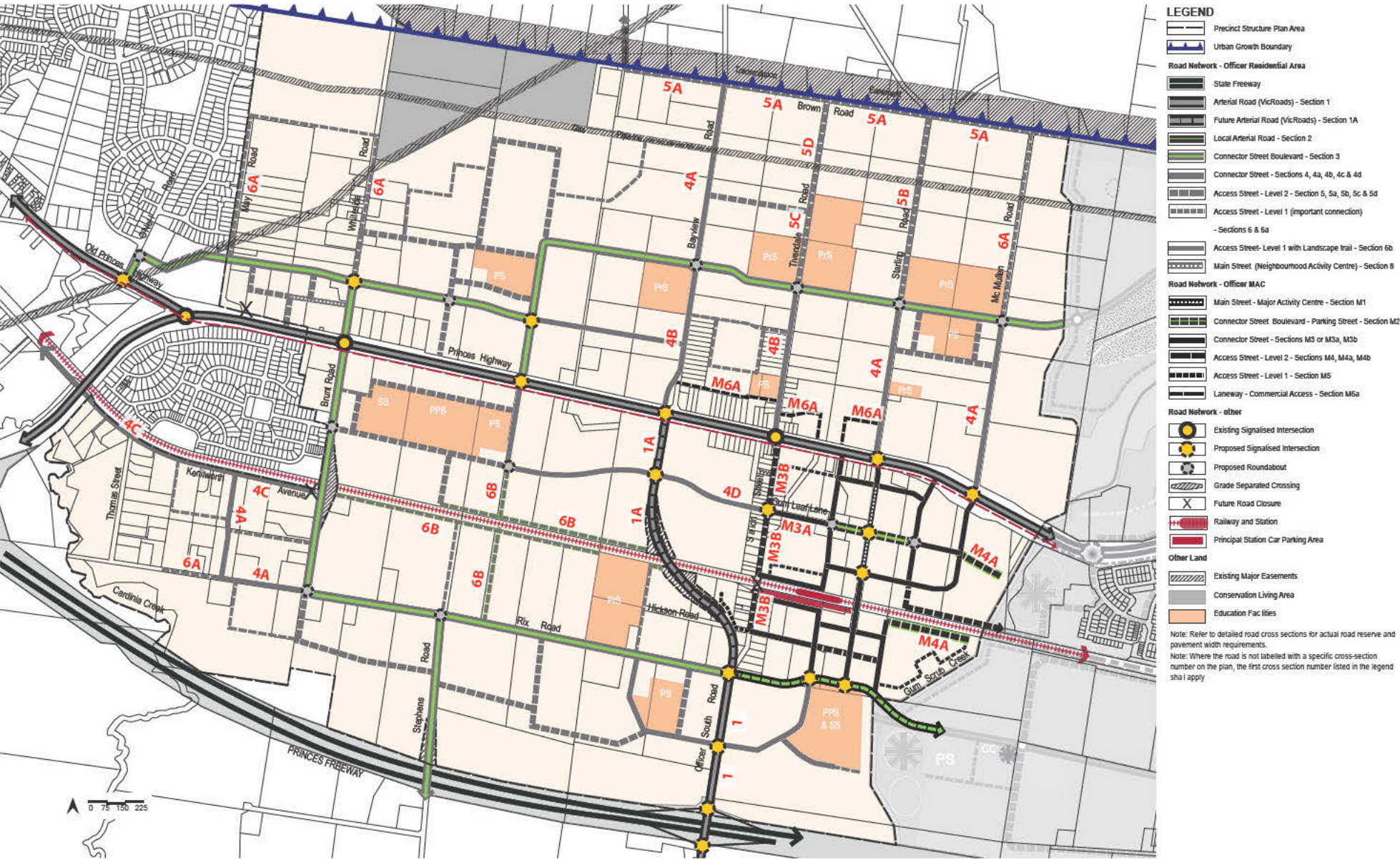
4.6.2 Implementation

The objectives for transport and movement are met by implementation of all the following:

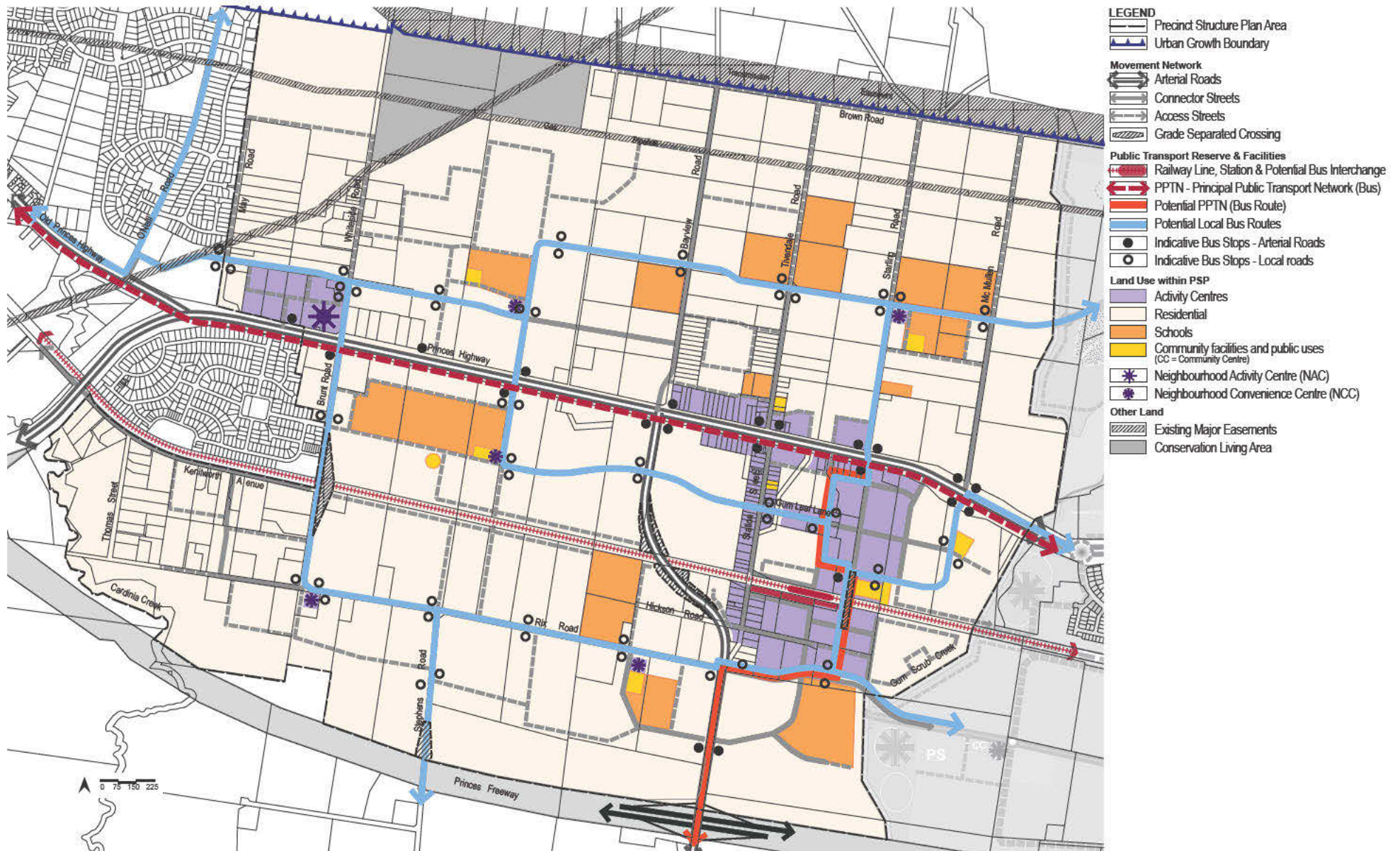
- Plan 15: Road Network;
- Plan 16: Public Transport;
- Plan 17: Walking and Trails;
- Planning and design guidelines set out in 4.6.3, including Table 16;
- Table 17a: Road Hierarchy for the residential area;
- Table 17b: Road Hierarchy for Officer Town Centre;
- Figure 11a-k: Road Cross Sections - residential area; and
- Figure 12a-f: Road Cross Sections - Officer Town Centre.

NOTE: The alignment of Local Access Streets Level 1 and 2 as shown in the plan series (including Plan 5 and Plan 15) are indicative and will be resolved at the subdivision stage. Where these roads are shown on private land, they will be delivered when landowners develop their properties. The alignments are indicative and in general, illustrate a requirement for a connection from one point to another.

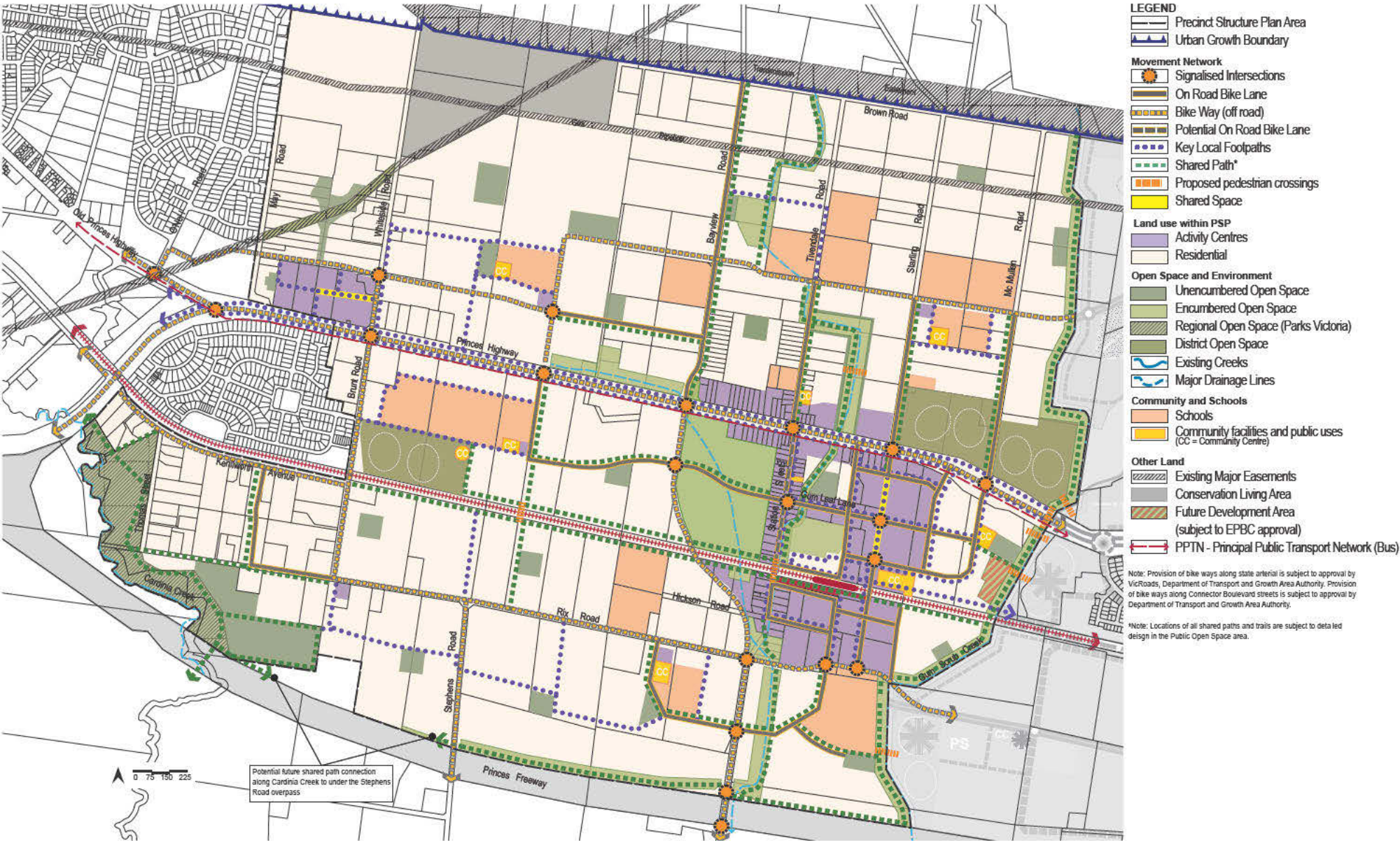
Plan 15: Road Network



Plan 16: Public Transport



Plan 17: Walking and Trails



4.6.3 Planning and design guidelines

Table 16: Transport and Movement Planning and Design Guidelines

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Signalised Intersections	<ul style="list-style-type: none"> All intersections with existing or proposed arterial roads as shown on Plan 15 must be designed, constructed and controlled to the satisfaction of the Roads Corporation and the municipal council, 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 both the ultimate development of the Precinct and the external traffic. Where a signalised intersection or roundabout is shown on Plan 15 and it is not included in the Development Contributions Plan, it is to be fully funded by the development proponent (except Gumleaf Lane extension/Bayview Road extension (North South Arterial)). The construction of the McMullen Road intersection and removal of the southern weighbridge must not occur until an alternative weighbridge site has been secured by VicRoads or if VicRoads advises identification and/or construction of an alternative weighbridge site is not required before the weighbridge is removed. Before development approval is granted for the Whiteside Road Neighbourhood Activity Centre, the land required for the upgrade of the Princes Highway/Whiteside Road intersection is to be secured, facilitating the timely upgrade of the intersection. Any reasonable variation in the scope of the indicative intersection layouts provided in the <i>Officer Precinct Structure Plan Future Traffic Estimates and Road Infrastructure Requirements (SMEC 2011)</i> report are to be fully funded by the development proponent, to the satisfaction of Roads Corporation and/or the municipal council. Staging of subdivisions must provide for the timely connection of road links between properties and to the arterial road network to optimise access for all modes of transport, to the satisfaction of the responsible authority. Land must be provided for right of way flaring at all arterial road connections to existing and proposed arterial roads for the ultimate design of the intersection in accordance with VicRoads standards. Access points (temporary and permanent) to the existing or proposed arterial road network beyond those shown on Plan 15 will not generally be permitted, but will be considered on a case by case basis where a need can be demonstrated in accordance with VicRoads access management policies. Provide direct and safe crossing points along the arterial road network for pedestrians and cyclists. Provide a safe environment within activity centres that prioritises pedestrian and cyclist movement. 	<ul style="list-style-type: none"> Prior to the preparation of planning permit applications which require access to an arterial road as shown on Plan 15, permit applicants are to consult with VicRoads to confirm the appropriate extent of right of way flaring required for the intersection. The location of an access close to an intersection (on approach or departure) has the potential to adversely affect both safety and capacity, and interference from side streets or parking should be avoided near intersections to the satisfaction of the Roads Corporation and the municipal council. Side streets or parking should generally be located away from an arterial road intersection a minimum distance of: <ul style="list-style-type: none"> 40 metres for an access street or place carrying up to 1,000 vehicles per day; 60 metres for an access street carrying between 1,000 and 3,000 vehicles per day; 100 metres on the approach side for a connector street; 75 metres on the departure side for a connector street receiving a single right turn; 100 metres on the departure side for a connector street receiving a double right turn. <p>Notwithstanding the above, the appropriate distance of access restriction will be considered on a case by case basis within the context of the requirements of traffic management, safety, urban design and the urban environment.</p>

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Arterial Road Access / Frontages (including Internal Loop Roads)	<ul style="list-style-type: none"> Long sections of rear fencing (more than 50 metres) along arterial roads will not be supported. Access to lots fronting arterial roads is to be via frontage roads or 'internal loop' roads rather than service roads. The design treatments for arterial roads and internal loop/frontage roads outlined in: <ul style="list-style-type: none"> Figure 5b: Interface with Princes Freeway; Figure 11j: Section 7 - Service Road. No direct property access to future arterial roads is permitted. The location of and turning movements at unsignalised intersections with the Princes Highway are subject to the approval of VicRoads. An assessment is to be submitted to VicRoads for approval, addressing the relevant Access Management Policy requirements (VicRoads 2006) which will determine what access may be provided. 	<ul style="list-style-type: none"> Use a combination of design treatments along arterial roads to add visual interest. The design of internal loop/frontage roads may include the following design solutions: <ul style="list-style-type: none"> short sections of side or rear fencing incorporated in the overall design layout; housing separated from, but still addressing the arterial road; a reserve that allows for dense tree plantations; open-ended courts, with associated landscape treatment; limited access points to arterial roads to key points where traffic can be managed; and, links and connections into the local road networks within residential development. Subdivisions are to provide access arterial roads from roads shown on Plan 5. The creation of additional access points is to be avoided.
Freeway Noise Attenuation	<ul style="list-style-type: none"> The developer will be required to attenuate traffic noise from the Freeway to a level of 63 dB (or level determined in consultation with Council and VicRoads) to the satisfaction of VicRoads. Noise attenuation measures are to be designed and constructed (at the cost of developers) to the satisfaction of VicRoads and Council. 	
Brunt Road Grade Separation	<ul style="list-style-type: none"> Brunt Road Grade Separation is to be designed to ensure: <ul style="list-style-type: none"> efficient north and south bound traffic movement to and from the Princes Freeway; improve safety at the rail line for all road uses; provide for uninterrupted vehicle movement across the rail line; and, an appropriate interface with surrounding land uses. Any connection of Kenilworth Avenue to the proposed road network east of Brunt Road must be grade-separated from Brunt Road. 	<ul style="list-style-type: none"> The preferred urban design outcome for Brunt Road grade separation is for an underpass.
North South Arterial Grade Separation	<ul style="list-style-type: none"> The new North South Arterial Road grade separation is to be designed to ensure: <ul style="list-style-type: none"> efficient north and south bound traffic movement to and from the Princes Freeway; and, an appropriate interface with surrounding land use and development. 	

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Officer Town Centre - Main Street Underpass	<ul style="list-style-type: none"> • Provide a grade separated crossing of the railway reservation at the time of the construction of the new Main Street (in Officer Town Centre). • The carriageway of the Main Street underpass is to be constructed as per Section M3: Connector Street - Option 2 (refer Figure 12b). • The new Officer Town Centre - Main Street grade separation is to be designed to ensure: <ul style="list-style-type: none"> - Main Street is not the principal route for north/south bound traffic to/from the Princes Freeway to Rix Road; - an appropriate interface with surrounding commercial or retail development; - physical and visual connectivity between the Station, Town Centre, and surrounding development; and, - provision is made for pedestrian /bicycle link which runs parallel to the railway line reservation, or equivalent to enable east-west connectivity and provide a direct connection to Main Street. • The Officer Town Centre - Main Street grade separation is to be a 'shallow dish' design that ensures the underpass is integrated with its surrounds with a gradual change in the surface levels from the base of the underpass to its surrounds rather than a 'cutting' (refer Figure 6e). 	
Stephens Road Overpass	<ul style="list-style-type: none"> • Set aside sufficient land for the future delivery of the Stephens Road overpass, enabling delivery of a new road connection from Officer Precinct to the Officer Employment Precinct to the south. 	
Boulevard Collector Roads	<ul style="list-style-type: none"> • Indented parking may be permitted to the satisfaction of the responsible authority, where: <ul style="list-style-type: none"> - traffic volumes permit; and - it does not adversely impact on the function of the roadway or adjacent intersection. • Kerbing of the median must be semi-mountable or mountable in accordance with the standards of the relevant road authority. 	
Station Street	<ul style="list-style-type: none"> • The Station Street level crossing is to be upgraded to ensure its safe operation for all users prior to the delivery of the North South Arterial. • At the time the North South Arterial is constructed, connecting Princes Highway to the intersection of Officer South Road and Rix Road, the closure of Station Street is to occur at: <ul style="list-style-type: none"> - the existing at grade railway crossing; and - Rix Road. • North-south pedestrian and cyclist access across the railway line is to be maintained by providing a pedestrian underpass at the time the road is closed. 	

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Officer Railway Station	<ul style="list-style-type: none"> The design of Officer Railway Station is to maximise integration with Officer Town Centre Main Street. Optimise opportunities for surveillance of the platforms and carparking from surrounding land uses and buildings. 	<ul style="list-style-type: none"> Optimise pedestrian and cyclist access from all directions to the station platforms.
Bus Network	<ul style="list-style-type: none"> Roads designated as potential bus routes are to be designed to: <ul style="list-style-type: none"> accommodate bus movements consistent with the Department of Transport's Public Transport Guidelines for Land Use and Development; and, provide bus stop facilities at strategic locations along the current and potential extensions to the PPTN (Bus) route and potential local routes. Bus stop facilities are to: <ul style="list-style-type: none"> have direct and safe pedestrian access connected to an existing pedestrian/ shared path(s); include a bus bay/stop, sealed pathway access and lighting for bus stops along the PPTN; include a bus bay, and sealed pathway access for the local bus network; and, be to the satisfaction of the Director of Public Transport. 	<ul style="list-style-type: none"> Provide bus stops facilities that: <ul style="list-style-type: none"> are located as close as possible to Activity Centres and activity generating land uses; have shelters to protect users from inclement weather; and, have an average stop spacing of 300 metres between each stop.
Walking and Trails Network	<ul style="list-style-type: none"> Provide a pedestrian underpass of the railway line for pedestrians and cyclists: <ul style="list-style-type: none"> approximately at the mid point between Brunt Road and the North South Arterial Road ; and, at Station Street. 2.5 metre shared paths are to be provided along and within the open space network, in particular along the creek/drainage network. The shared path shown within the freeway reservation is only indicative. The location and design of the path will be subject to detailed investigations of options for locating the path outside the freeway reserve. The location of the shared path either within or outside the freeway reservation must be resolved and agreed to by VicRoads in conjunction with any application to subdivide any land abutting the freeway reservation. Provide for connections between the shared path abutting the Princes Freeway and adjacent residential development by: <ul style="list-style-type: none"> incorporating the shared path into the design of encumbered open space corridors where they abut the Princes Freeway reservation; and where the shared path abuts the freeway reservation and the rear of residential dwellings, access points to the path from the residential area are to be provided every 100 metres. 	<ul style="list-style-type: none"> Provide permeable and safe routes throughout the local street network for walking and cycling to activity centres, community facilities, parks and open space, major trail networks and public transport.

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Design of Bikeways and Shared Paths	<ul style="list-style-type: none"> Design of subdivisions abutting roads with bikeways and shared paths is to minimise possible conflict points with vehicle crossovers. Any bikeway or shared path in a road reserve is to be designed in accordance with relevant guidelines/standards, give consideration to cyclist, pedestrian and motorist sightlines, consider adjoining land uses, and accommodate the necessary under- and above-ground services. Bicycle priority at intersections of minor streets is to be achieved through strong and consistent visual and physical clues and supportive road signs. Design must allow for movement of cyclists travelling at least 20 km/h. Connections must be provided to the adjoining bicycle network. Provision of crossing points must be included at major attractors such as shops, schools and recreation facilities. Design of all bikeways and shared paths is to be subject to safety audit prior to or at the time of application for subdivision permit. 	<ul style="list-style-type: none"> Ensure pathways are designed and located to maximise passive surveillance and are provided in wide road verges with safe crossing points at key locations. Reduce possible conflict points with vehicle crossovers by: <ul style="list-style-type: none"> providing rear loaded lots; creating open-ended courts abutting roads with bikeways/shared paths, enabling pedestrian access and minimising direct vehicle access.
Bicycle Parking Facilities	<ul style="list-style-type: none"> Bicycle parking facilities are to be provided in activity centres, at the railway station and at other prominent and easily accessible locations to the satisfaction of the responsible authority. 	
Tree plantings in road reserves	<ul style="list-style-type: none"> Street tree planting to be in accordance with the clear zone guidelines to the satisfaction of the relevant roads authority. 	
Freeway Service Centre	<ul style="list-style-type: none"> No access is to be provided to the Freeway Service Centre from the Precinct for pedestrians, vehicles or any other form of transport. Land adjacent to the Freeway Service Centre must provide for future road connection to the site from the Precinct to preserve the long-term option for redevelopment of the site, by: <ul style="list-style-type: none"> providing a single row of lots that back onto the Freeway Service Centre; providing an east-west road along the northern boundary of those lots; ensuring the lot size and orientation of the subdivision would require a maximum of two dwellings to be purchased to deliver a Local Access Street connection to the Freeway Service Centre site. 	

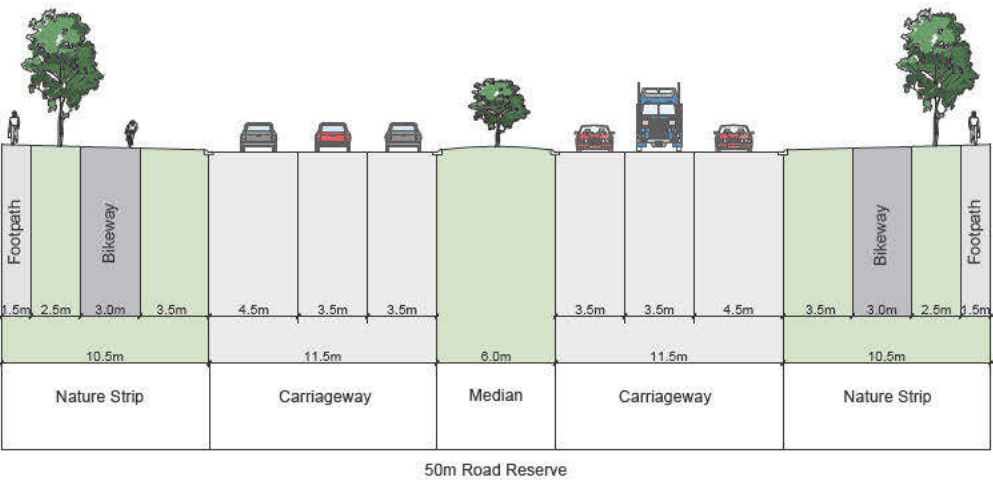
Table 17a: Road Hierarchy for Officer Residential Area

Section Name	Road Cross Section Number	Road / Street	Existing Reserve (metres)	Ultimate Reserve (metres)	Access Management Policy (AMP)	Indicative vehicles per day (VPD)	Traffic Lanes	Speed Limit (km/h)	Bus Compatible	Property Access & Parking	Median	On Road Cycle Lane *	Bikeway *	Shared Path *	Responsibility (Ultimate)
Arterial Roads															
Arterial Road: VicRoads Declared Road (6 lanes)	1	Princes Highway (Princes Highway)	50	50	AMP 2	Up to 50,000	Up to 6	60 - 80	Yes	No	Yes	No	Yes	No	Vic Roads
Arterial Road: Future VicRoads Declared Road (6 lanes)		Officer South Road (South of Rix Road)	20	50	AMP 2	Up to 40,000	Up to 6	80	Yes	No	Yes	No	Yes	No	Vic Roads
Arterial Road: Future VicRoads Declared Road (4 lanes)	1a	New North South Arterial (Rix Road to Princes Highway)	N / A	40	AMP 2	Up to 30,000	Up to 4	80	Yes	No	Yes	No	Yes	No	Vic Roads
Local Arterial Roads															
Local Arterial Road (Council Road)	2	New Road	N / A	36.5	N / A	Up to 20,000	4	60	Yes	Limited	Yes	No	Yes	No	CSC
Connector Street Boulevards															
Connector Street Boulevard	3	New Roads	N / A	33	N / A	Up to 12,000	2	60	Yes	Limited	Yes	No	Yes	No	CSC
		O'Neill Road (Princes Highway to East-West Connector Street Boulevard)	20	33	N / A	Up to 12,000	2	60	Yes	Limited	Yes	No	Yes	No	CSC
		Brunt Road (Princes Highway to Rix Road)													
		Rix Road (Stephens Road to Gum Scrub Creek)													
		Stephens Road (South of Rix Road)													
Connector Streets															
Connector Street	4	New Roads	N / A	25	N / A	Up to 7,000	2	50	Yes	Yes	No	Yes	No	Yes	CSC
Connector Street	4a	Starling Road (Princes Highway to East-West Connector Street Boulevard)	20	22.5	N / A	Up to 7,000	2	50	Yes	Yes	No	Yes	No	Yes	CSC
		McMullen Road (Princes Highway to East-West Connector Street Boulevard)													
		Rix Road (Part: West of Brunt Road)													
		Bayview Road (North of East-West Connector Street - Boulevard)													
Connector Street	4b	Tivendale Road (Princes Highway to East-West Connector Street Boulevard)	20	20	N / A	Up to 7,000	2	50	Yes	Yes	No	Yes	No	Yes	CSC
		Bayview Road (Princes Highway to East-West Connector Street - Boulevard)	20	20	N / A	Up to 7,000	2	50	Yes	Yes	No	Yes	No	Yes	CSC
Connector Street	4c	Kenilworth Avenue	20	20	N / A	Up to 7,000	2	50	Yes	Property Access = Yes Parking = No	No	No	Yes	No	CSC

* Provision of cyclist facilities (on-road lanes, bikeways or shared paths) on arterial and local roads is subject to further resolution and approval from relevant authorities.

Section Name	Road Cross Section Number	Road / Street	Existing Reserve (metres)	Ultimate Reserve (metres)	Access Management Policy (AMP)	Indicative vehicles per day (VPD)	Traffic Lanes	Speed Limit (km/h)	Bus Compatible	Property Access & Parking	Median	On Road Cycle Lane *	Bikeway *	Shared Path *	Responsibility (Ultimate)
Connector Street	4d	Gilbert Road (Through Gilbert property)	N / A	17.7	N / A	Up to 10,000	2	50	Yes	No	No	Yes	No	Yes	CSC
Access Streets – Level 2															
Access Street - Level 2	5	New Roads	N / A	20	N / A	Up to 3,000	2	50	No	Yes	No	No	No	No	CSC
		Whiteside Road (Part: North of East-West Connector Street Boulevard)	20	20	N / A	Up to 3,000	2	50	No	Yes	No	No	No	No	CSC
		McMullen Road (South of East-West Connector Street Boulevard)													
Access Street - Level 2 Rural Style Road	5a	Brown Road	18-32	18-32	N / A	Up to 3,000	2	50	No	Limited	No	No	No	No	CSC
Access Street - Level 2	5b	Starling Road (North of East-West Connector Street Boulevard)	20	20	N / A	Up to 3,000	2	50	No	Limited	No	No	No	No	CSC
Access Street - Level 2	5c	Tivendale Road (Part: North of East-West Connector Street Boulevard)	20	20	N / A	Up to 3,000	2	50	No	Yes	No	No	No	No	CSC
Access Street - Level 2	5d	Tivendale Road (Part: North of East-West Connector Street Boulevard)	20	21.5	N / A	Up to 3,000	2	50	No	Limited	No	No	No	No	CSC
Access Streets – Level 1															
Access Street - Level 1	6	New Roads	N / A	16 (minimum)	N / A	Up to 1,000	2	50	No	Yes	No	No	No	No	CSC
Access Street - Level 1 Rural Style Road	6a	May Road	20	20	N / A	Up to 1,000	2	50	No	Yes	No	No	No	No	CSC
		McMullen Road (North of East-West Connector Street Boulevard)													
Access Street - Level 1 with Shared Landscape Trail	6b	New Roads	N / A	21	N / A	Up to 1,000	2	50	No	Yes	No	No	No	Yes	CSC
Internal Loop / Frontage / Service Road															
Internal Loop / Frontage / Service Road	7	Internal Loop / Frontage / Service Road (Potentially abutting Sections 1 & 2)	N / A	10.5	N / A	N / A	1	50	No	Yes	No	No	No	No	Relevant Roads Authority
Main Street - Neighbourhood Activity Centre															
Access Street Level 2 - Neighbourhood Activity Centre Main Street	8	New Road	N / A	20	N / A	Up to 3,000	2	30	No	Limited	No	No	No	No	CSC
Laneways															
Laneway - Residential Access	Refer M6b	New Roads	N / A	6	N / A	N / A	1 - 2	N / A	No	Property Access = Yes Parking = No	No	No	No	No	CSC

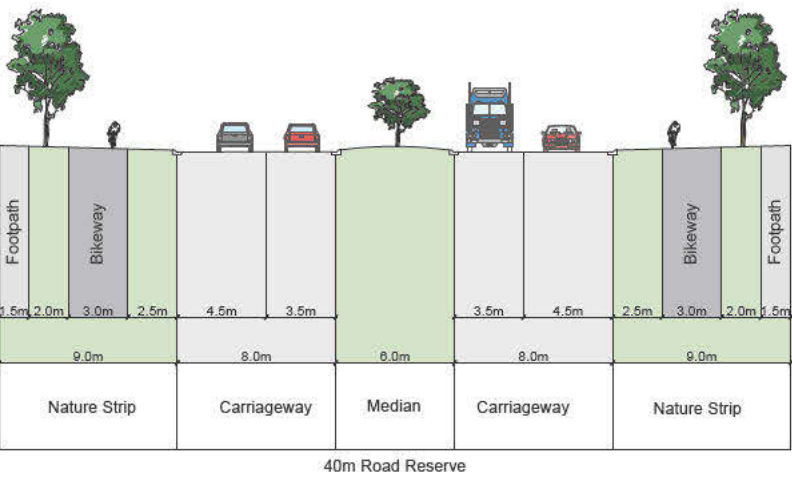
Figure 11a: Arterial Road Sections



Section 1: Arterial Road: VicRoads Declared Road (6 lanes)
Arterial Road: Future VicRoads Declared Road (6 lanes)

- Road reservation of 50m has been set aside.
- Provision for up to six lane Arterial Road.
- No direct vehicular access to Arterial Roads is permitted from abutting properties. For properties abutting Arterial Roads, access is to be provided from the internal street network, which should include 'loop roads' that run parallel to the Arterial Road (consistent with the Section 7 Service Road Cross Section).
- The implementation of this cross section is subject to approval by VicRoads, Department of Transport and the Growth Areas Authority.
- Outside lane widths along the Princes Highway to be determined through detailed design.

* 'Grass Verge' will form part of slip lanes, turning lanes etc where required. Otherwise it will form an extension of the nature strip.

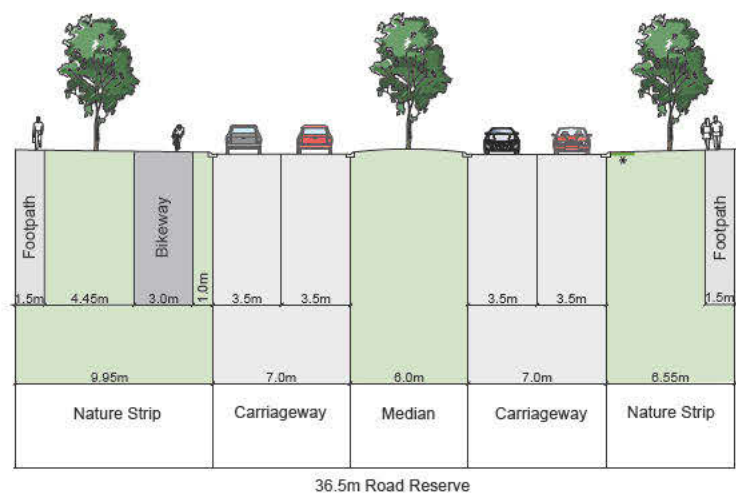


Section 1a: Arterial Road: Future VicRoads Declared Road (4 lanes)

- Road reservation of 40m has been set aside.
- No direct vehicular access to Arterial Roads is permitted from abutting properties. For properties abutting Arterial Roads, access is to be provided from the internal street network, which should include 'loop roads' that run parallel to the Arterial Road (consistent with the Section 7 Service Road Cross Section).
- The implementation of this cross section is subject to approval by VicRoads, Department of Transport and the Growth Areas Authority.

* 'Grass Verge' will form part of slip lanes, turning lanes etc where required. Otherwise it will form an extension of the nature strip.

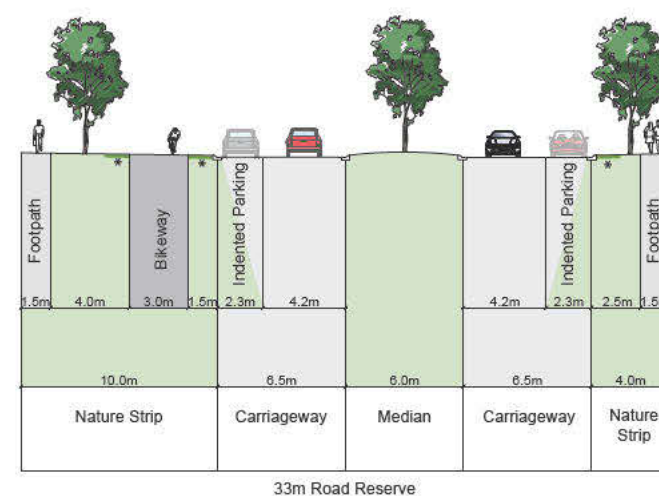
Figure 11b: Local Arterial Road Sections



Section 2: Local Arterial Road (Council Road)

- Where this street type abuts a school, the verge should be hardstand with tree grates rather than grassed & planted.
 - Widened to accommodate trunk services with all services including drainage at back of kerb.
 - The implementation of this cross section is subject to approval by the Department of Transport and the Growth Areas Authority.
- * 1.5m setback from kerb to trees and poles.

Figure 11c: Connector Street Boulevard Section

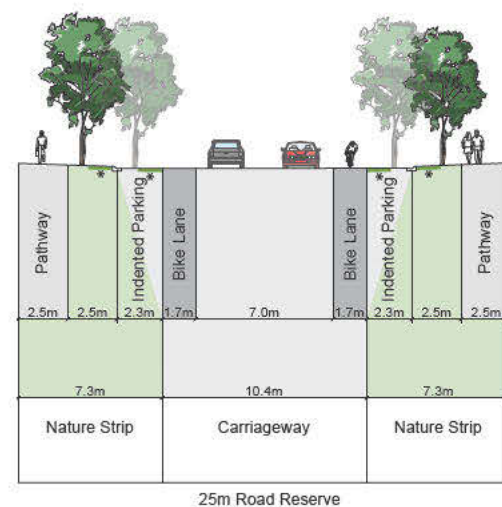


Section 3: Connector Street Boulevard

- On-street parking with indented bays and tree outstands are allowed subject to traffic volumes.
- Where this street type abuts a school, the verge should be hardstand with tree grates rather than grassed & planted.
- The implementation of this cross section is subject to approval by the Department of Transport and the Growth Areas Authority.
- To accommodate native vegetation on Rix Road between Brunt and Stephens Road, the dimensions of this cross section will vary, including narrowing of the median and widening of the nature strip.

★ 1.5m setback from kerb to trees and poles.

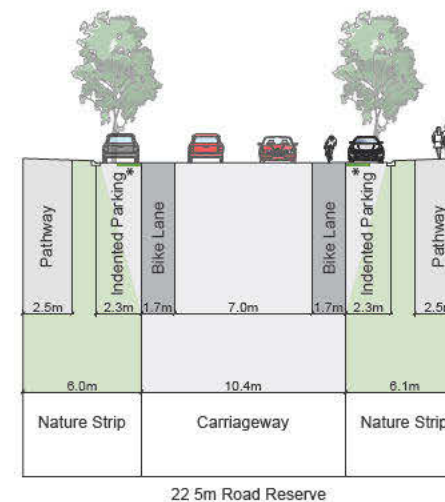
Figure 11d: Connector Street Sections



Section 4: Connector Street

■ Where street abuts schools, indented parking and hardstand verge should be provided.

* 1.5m setback from kerb to trees and poles.



Section 4a: Connector Street

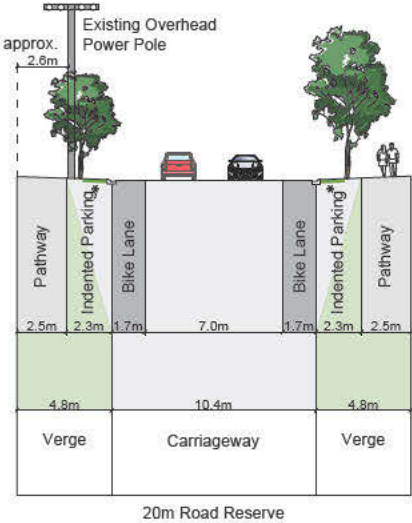
■ This section applies to Starling Road & McMullen Road between the Connector Street Boulevard and the Princes Highway, part of Bayview Road and part of Rix Road (west of Brunt).

■ 2.5m widening of existing 20m road reserve and shared path to be provided from west side of Starling Road, to east side of McMullen Road, to east side of Bayview Road and south side of Rix Road.

■ Where street abuts schools, indented parking and hardstand verge should be provided.

* 1.5m setback from kerb to trees and poles.

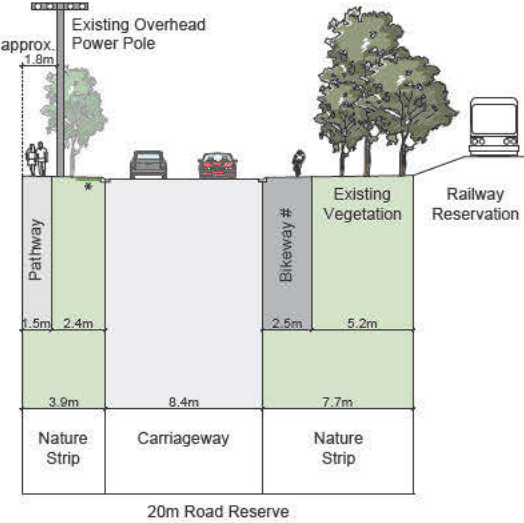
Figure 11e: Connector Street Sections



Section 4b: Connector Street

- This section applies to Bayview Road and Tivendale Road (between Princes Highway & the Connector Street Boulevard).
- Hardstand verge with indented parking to be provided between power poles, where possible.
- Outstands between powerpoles must be provided, incorporating street trees

★ 1.5m setback from kerb to trees and poles.

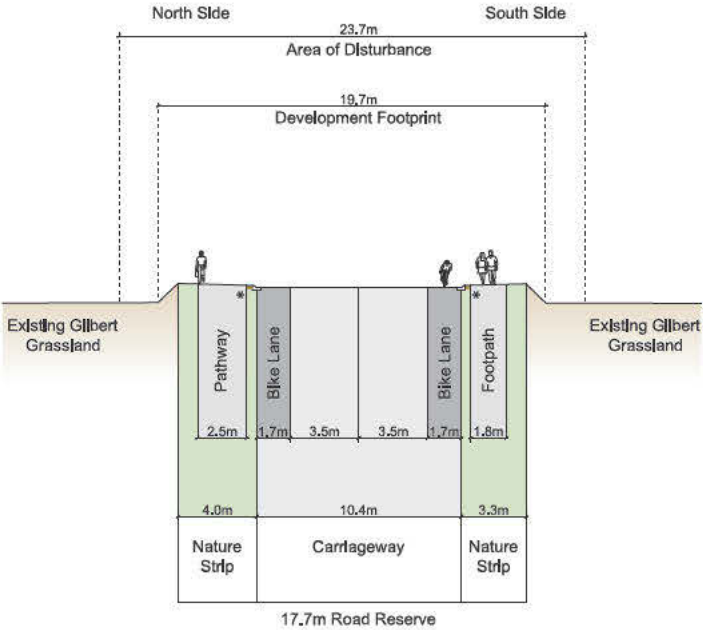


Section 4c: Connector Street

- This section applies to Kenilworth Avenue.

★ 1.5m setback from kerb to trees and poles.

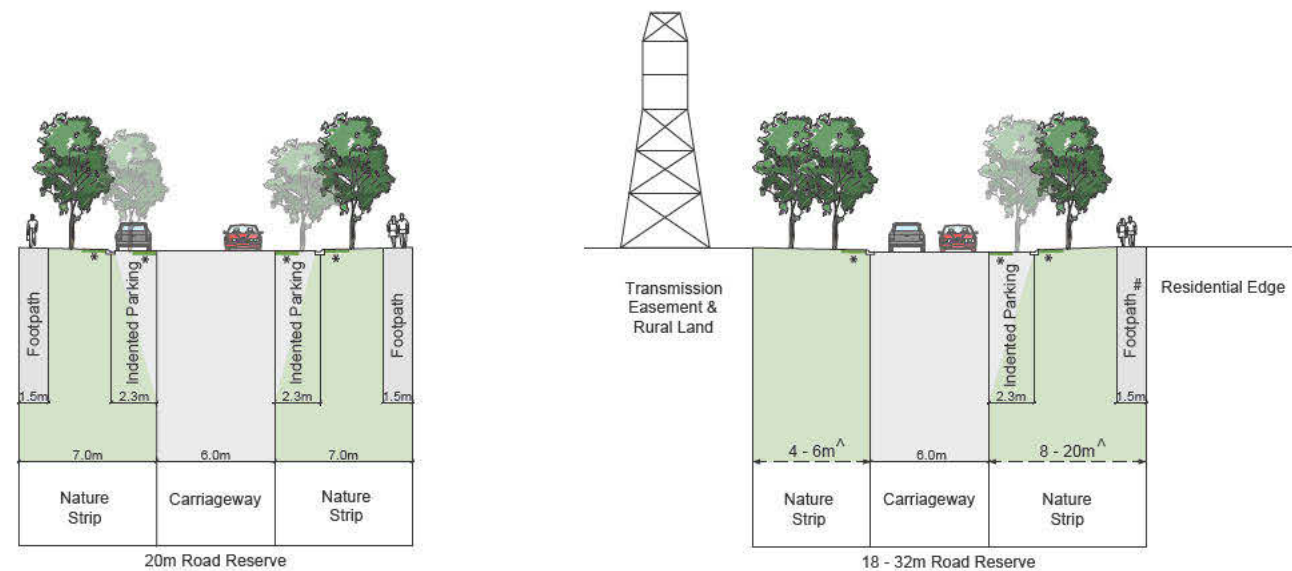
Figure 11f: Connector Street Sections



Section 4d: Connector Street

- This is the typical cross section for the east-west road through the Gilbert reserve, from the North-South Arterial to Station Street.
- Assumes 1:1 batters.
- ★ 0.5m setback to shared pathway.

Figure 11g: Access Street - Level 2 Sections



Section 5: Access Street - Level 2

- Two circulation lanes plus indented parking on both sides.
- Where road reserve abuts public open space, footpath is required on the developed edge only as long as footpaths are provided within the reserve & are readily accessible from the street.
- When this street type abuts a school, the verge should be hardstand with tree grates rather than grassed & planted.
- Trees must be provided in outstands.

★ 1.5m setback from kerb to trees and poles.

Section 5a: Access Street - Level 2 Rural Style Road

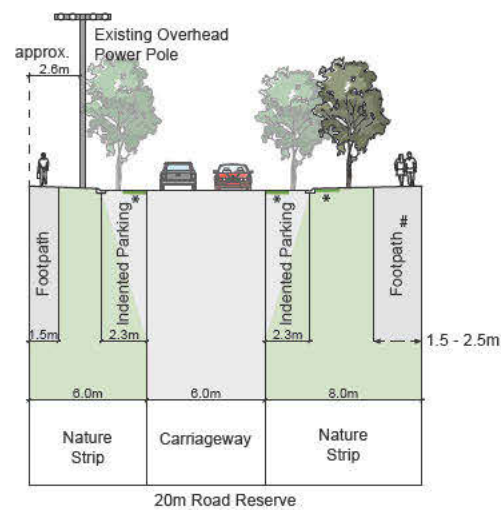
- This section applies to Brown Road.
- Indented parking to be provided along developed edge, between existing native vegetation.
- Where native vegetation constrains delivery of a footpath and services within the existing road reserve, additional land may need to be provided as part of the subdivision of abutting land.
- Detailed road design to be prepared to the satisfaction of CFA.

★ 1.5m setback from kerb to trees and poles.

Location of footpath varies to fit with existing vegetation.

^ Width varies to accommodate existing vegetation.

Figure 11h: Access Street - Level 2 Sections

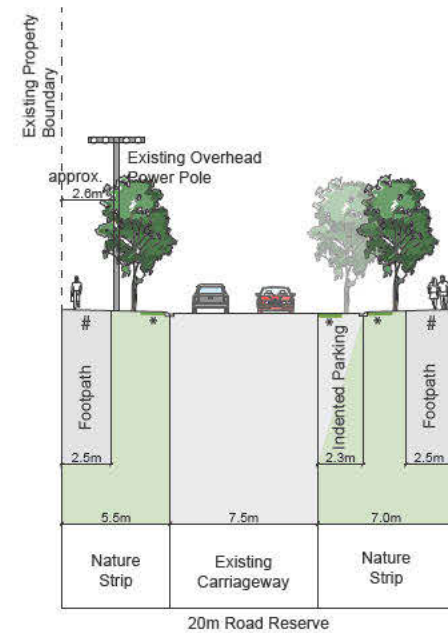


Section 5b: Access Street - Level 2
Constrained Type 1

- Two circulation lanes plus indented parking on both sides.
- Where road reserve abuts public open space, footpath is required on the developed edge only as long as footpaths are provided within the reserve & are readily accessible from the street.
- When this street type abuts a school, the verge should be hardstand with tree grates rather than grassed & planted.
- Trees must be provided in outstands on the side where overhead powerlines exist.
- On the side where native vegetation is to be retained, indented parking is to be provided between vegetated areas.
- Where native vegetation constrains delivery of a footpath and services within the existing road reserve, additional land may need to be provided as part of the subdivision of abutting land.

* 1.5m setback from kerb to trees and poles.

Location of footpath varies to fit with existing vegetation, 2.5m path required abutting school sites.



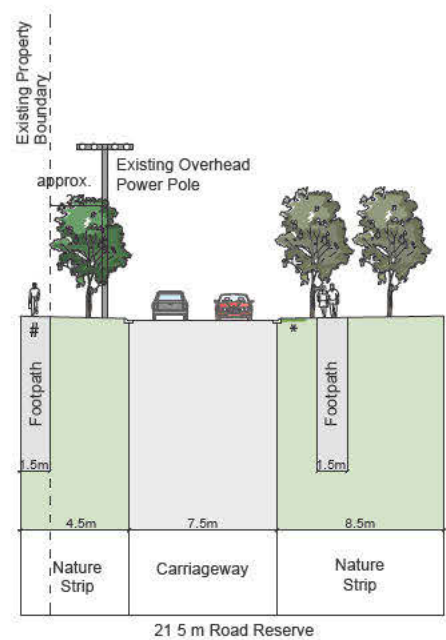
Section 5c: Access Street - Level 2
Constrained Type 2

- This section applies to Tivendale Road, north of the Connector Street Boulevard where the pavement, kerb and channel including major drainage pipes have already been constructed.

* 1.5m setback from kerb to trees and poles.

2.5m footpath required abutting school sites.

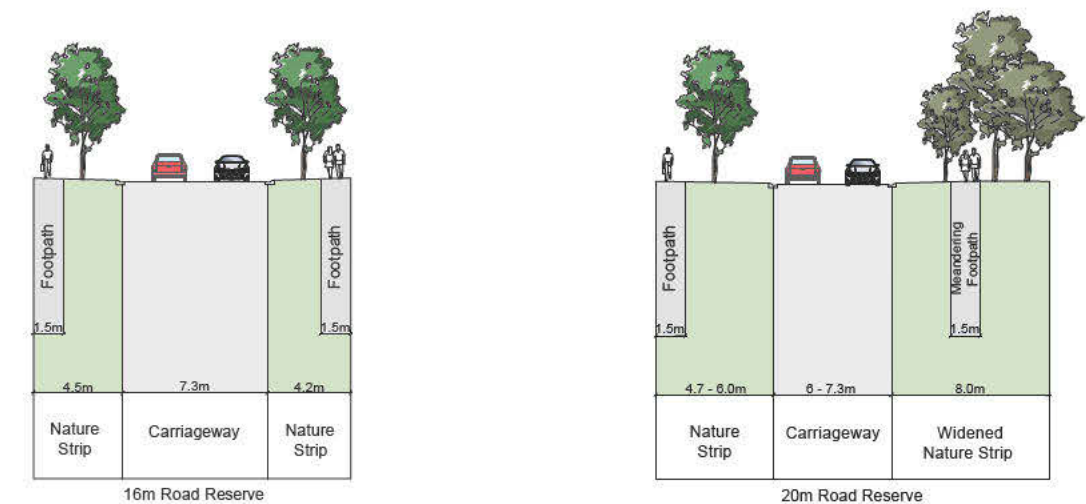
Figure 11i: Access Street - Level 2 Sections



Section 5d: Access Street - Level 2
Constrained Type 3

- This section applies to Tivendale Road, north of the Connector Street Boulevard, where there is no existing pavement.
- Additional land to be provided from west for footpath, enabling vegetation retention on the east side and street trees on the west side, avoiding existing power poles.
- * 1.5m setback from kerb to trees and poles.
- # 1.5m footpath to be delivered as part of abutting development on the west side.

Figure 11j: Access Street - Level 1 Sections



Section 6: Access Street - Level 1

- Sufficient pavement width for two circulation lanes plus 'informal' on-street parking (unmarked spaces).
- Where road reserve abuts public open space, footpath is required on the developed edge only as long as footpaths are provided within the reserve & are readily accessible from the street.
- All services, including drainage, are to be located back of kerb.

★ 1.5m setback from kerb to trees and poles.

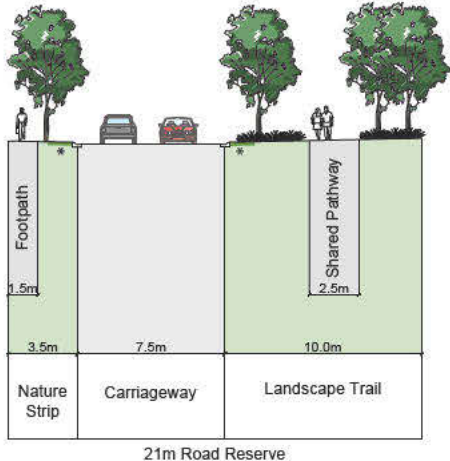
Section 6a: Access Street - Level 1 Rural Style Road

- This section applies to McMullen Road, north of the Connector Boulevard.
- Sufficient pavement width for two circulation lanes plus 'informal' on-street parking (unmarked spaces).
- 6m carriageway permitted if vehicle passing areas provided (i.e. indented bays).
- Design should minimise impact on existing vegetation within road reserve.

★ 1.5m setback from kerb to trees and poles.

Location of footpath varies to accommodate existing vegetation.

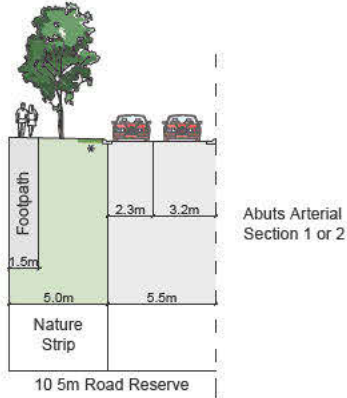
Figure 11k: Access Street - Level 1 & Service Road Sections



Section 6b: Access Street -
Level 1 with Shared Landscape Trail

- Sufficient pavement width for two circulation lanes plus 'informal' on-street parking (unmarked spaces).
- Where road reserve abuts public open space, footpath is required on the developed edge only as long as footpaths are provided within the reserve & are readily accessible from the street.
- 2.5m shared path is to be constructed as a meandering trail.

★ 1.5m setback from kerb to trees and poles.

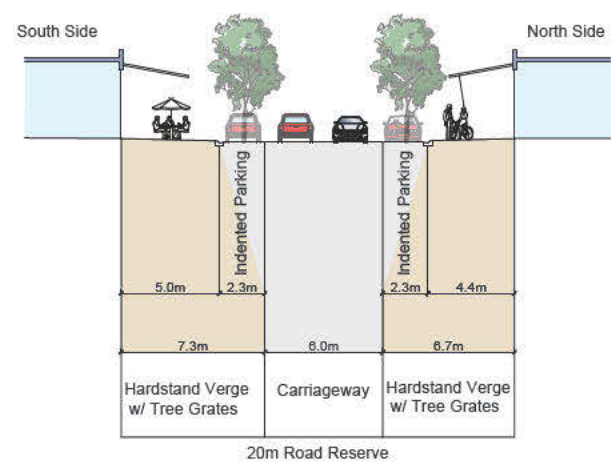


Section 7: Service Road

- Parallel parking on developed edge of road.
- Single-lane, one way traffic.
- May be utilised for either service roads, connecting to an Arterial Road (Section 1 or 2) or 'loop roads' that run parallel to an Arterial Road.

★ 1.5m setback from kerb to trees and poles.

Figure 11I: Neighbourhood Activity Centre - Main Street Section



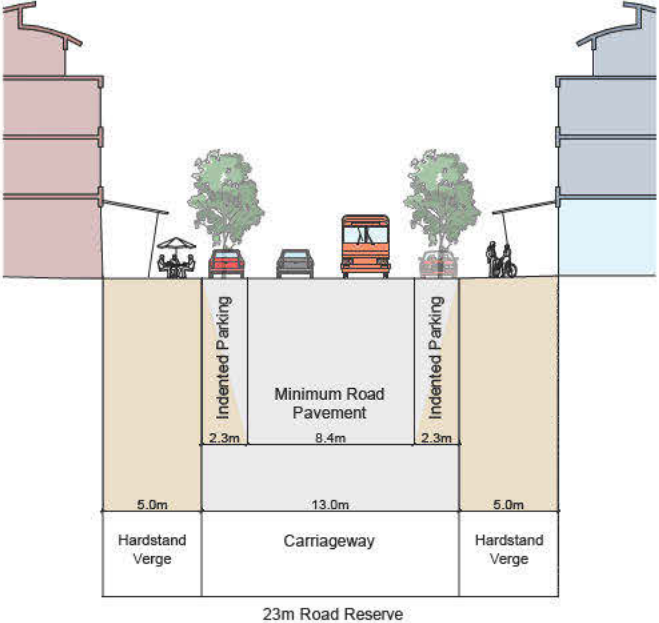
Section 8: Access Street Level 2 - Neighbourhood Activity Centre Main Street

Table 17b: Road Hierarchy for Officer Town Centre

Road / Street	Road Cross Section Number	Where it applies	Existing Reserve (metres)	Ultimate Reserve (metres)	Access Management Policy (AMP)	Indicative vehicles per day (VPD)	Traffic Lanes	Speed Limit (km/h)	Bus Compatible	Property Access & Parking	Median	On Road Cycle Lane *	Shared Path *	Ultimate Responsibility
Main Street - Major Activity Centre														
Main Street - Major Activity Centre	M1	North of the Railway Underpass to Princes Highway	N / A	23	N / A	No more than 10,000	2	40	Yes	No	No	No	No	CSC
Connector Street Boulevard														
Connector Street Boulevard - Parking Street	M2	New East-West Road North of Rail Line	N / A	30	N / A	Up to 7,000	2	40	Yes	Property Access = Limited Parking = Yes	Yes	Yes	No	CSC
Connector Streets														
Connector Street	M3	New Roads (Connector Street - Option 1)	N / A	25	N / A	Up to 7,000	2	50	Yes	Property Access = Limited Parking = Yes	No	Yes	No	CSC
		New Roads (Connector Street - Option 2)	N / A	22	N / A	Up to 7,000	2	50	Yes	Property Access = Limited Parking = Yes	No	Yes	No	CSC
Connector Street	M3a	Gum Leaf Lane (Station Street to North-South Connector Street)	18	18	N / A	Up to 7,000	2	50	Yes	No	No	Yes	No	CSC
Connector Street	M3b	Station Street (Princes Highway to rail line)	20	20	N / A	Up to 10,000	2	50	Yes	Property Access = Yes Parking = No	No	No	No	CSC
		Officer South Road (Rix Road to rail line)												
Access Streets – Level 2														
Access Street - Level 2	M4	New Roads	N / A	17	N / A	Up to 3,000	2	50	No	Yes	No	No	No	CSC
Access Street - Level 2 with Shared Landscape Trail	M4a	New Roads	N / A	23.8	N / A	Up to 3,000	2	50	No	Yes	No	No	Yes	CSC
Access Street - Level 2 Parking Street	M4d	New Roads	N / A	24.5	N / A	Up to 1,000	2	50	No	Yes	Yes	No	No	CSC
Access Street - Level 1														
Access Street - Level 1	M5	New Roads	N / A	15	N / A	Up to 1,000	2	50	No	Yes	No	No	No	CSC
Laneways														
Laneway - Commercial Access	M6a	New Roads	N / A	8	N / A	N / A	1	N / A	No	Property Access = Yes Parking = No	No	No	No	CSC
Laneway - Residential Access	M6b	New Roads	N / A	6	N / A	N / A	1	N / A	No	Property Access = Yes Parking = No	No	No	No	CSC

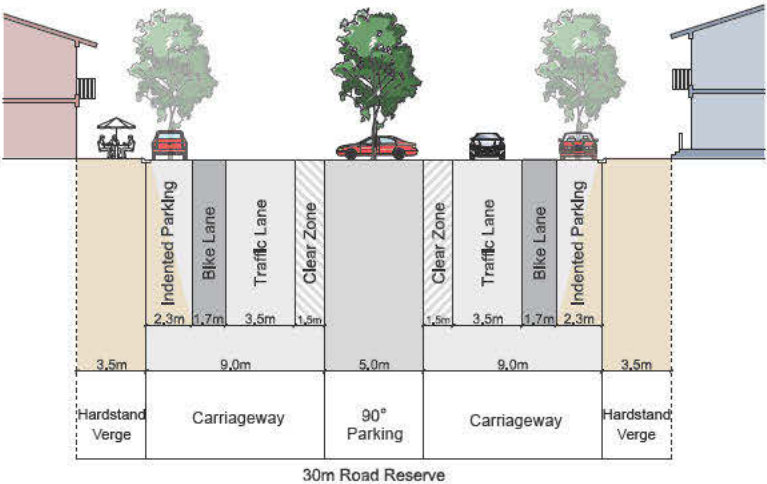
* Provision of cyclist facilities (on-road lanes, bikeways or shared paths) on arterial and local roads is subject to further resolution and approval from relevant authorities.

Figure 12a: Major Activity Centre - Core Street Sections



Section M1: Main Street - Major Activity Centre

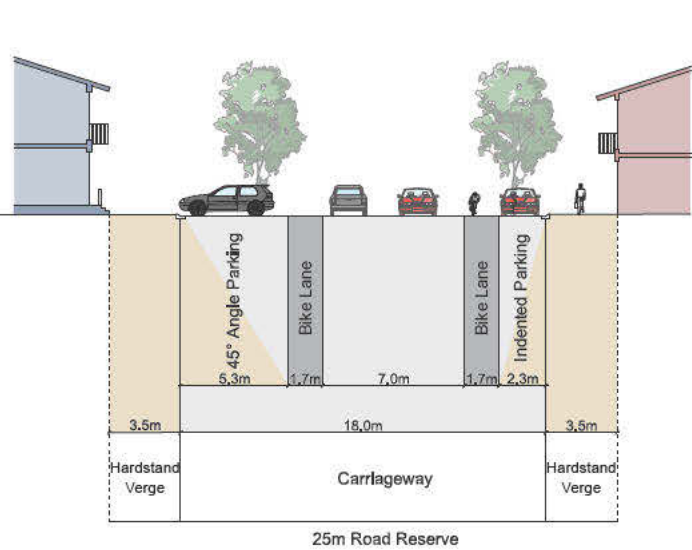
- Hardstand verges & tree grates provided in indented parking areas.



Section M2: Connector Street Boulevard - Parking Street

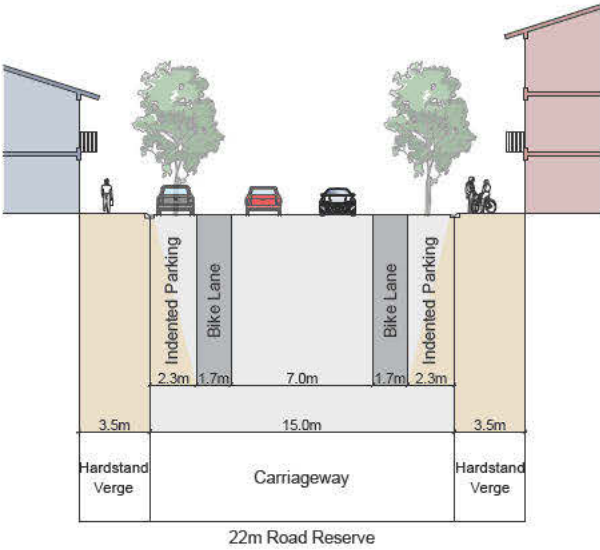
- Hardstand verges with tree grates to be provided.
- Outstands must accommodate street trees.
- On-street parking design is to meet relevant standards/guidelines.

Figure 12b: Major Activity Centre - Connector Street Sections



Section M3: Connector Street - Option 1

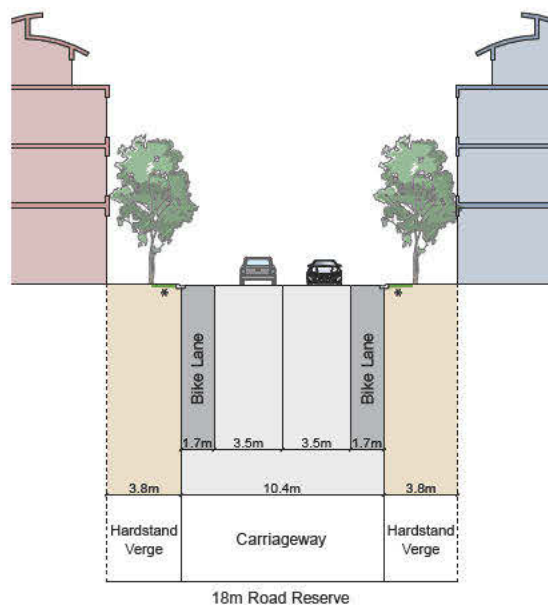
- Hardstand verges & tree grates provided in indented parking areas.
- If this cross section is applied it is to be to the satisfaction of the Department of Transport



Section M3: Connector Street - Option 2

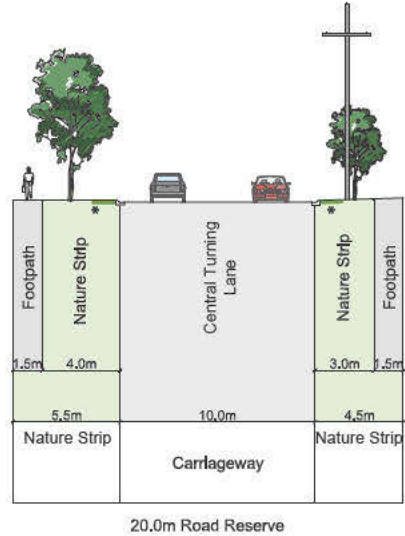
- Hardstand verges & tree grates provided in indented parking areas.

Figure 12c: Major Activity Centre - Connector Street Sections



Section M3a: Connector Street - Constrained Type 1

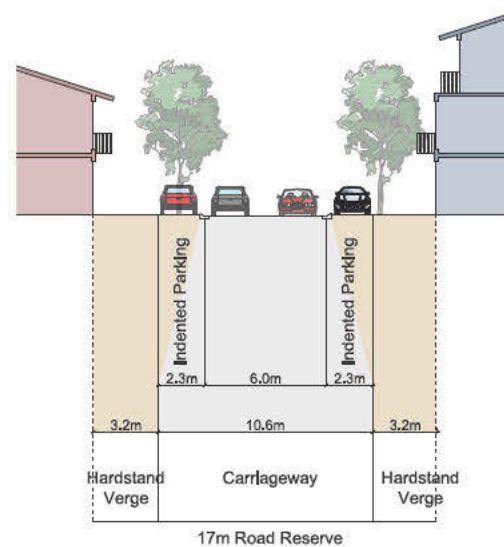
- No on street parking provided.
 - Hardstand verges & tree grates provided.
 - This section applies to the existing length of Gum Leaf Lane.
- ★ 1.5m setback from kerb to trees and poles.



Section M3b: Connector Street - Constrained Type 2

- This section applies to Station Street and Officer South Road from Rix Road to Princes Highway.
 - Extension of existing pavement kerb and channel in Station Street could accommodate up to three lanes with in carriageway.
 - Existing footpath west side of rail line.
 - Interim cross section. At Ultimate (when the North-South Arterial is constructed and the Station Street level crossing is closed) carriageway line marking could be modified to provide on-road bike lanes.
- ★ 1.5m setback from kerb to trees and poles.

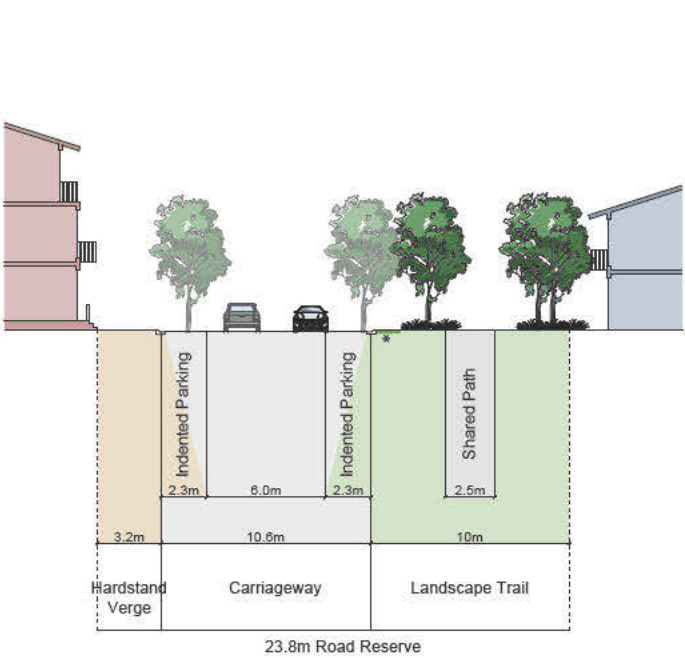
Figure 12d: Major Activity Centre - Access Street - Level 2 Sections



Section M4: Access Street - Level 2

- Hardstand verges & tree grates provided in indented parking areas.

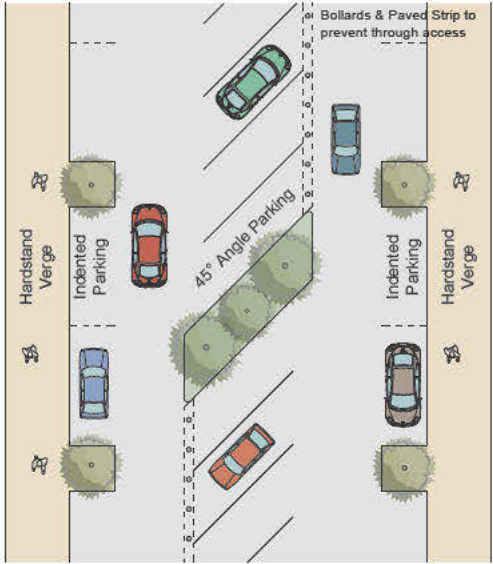
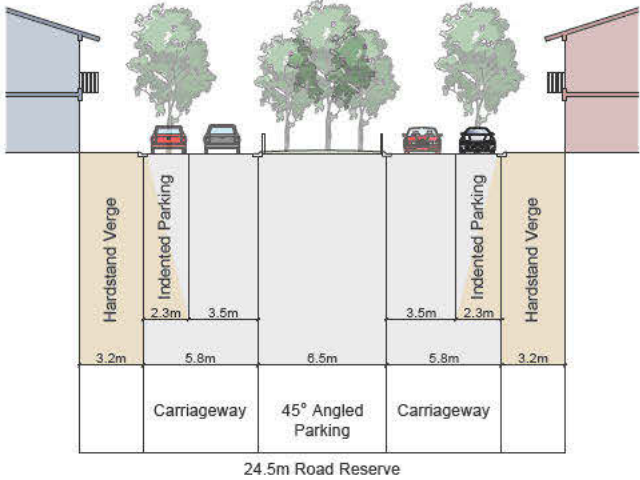
Figure 12e: Major Activity Centre - Access Street - Level 2 Sections



Section M4a: Access Street -
Level 2 with Shared Landscape Trail

- Where road reserve abuts public open space, footpath is required on the developed edge only as long as footpaths are provided within the reserve & are readily accessible from the street.
- 2.5m pathway is to be constructed as a meandering trail.
- Hardstand verges & tree grates provided in indented parking areas.

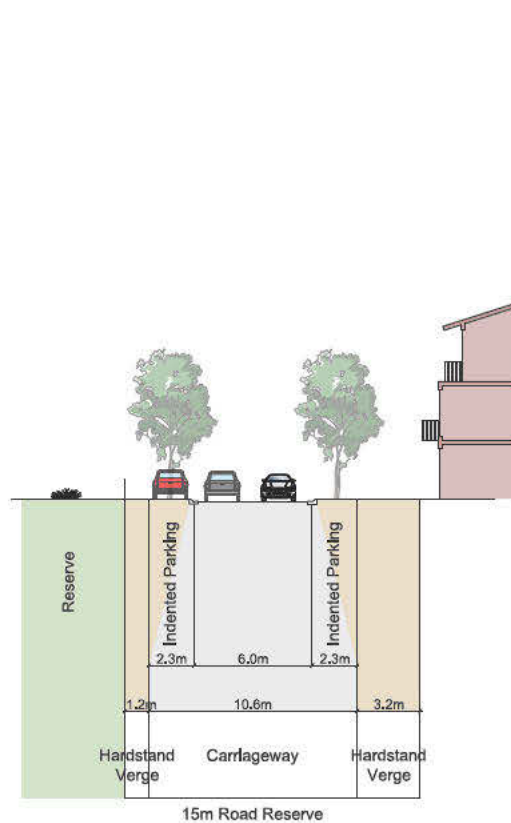
* 1.5m setback from kerb to trees and poles.



Section M4b: Access Street - Level 2 Parking Street

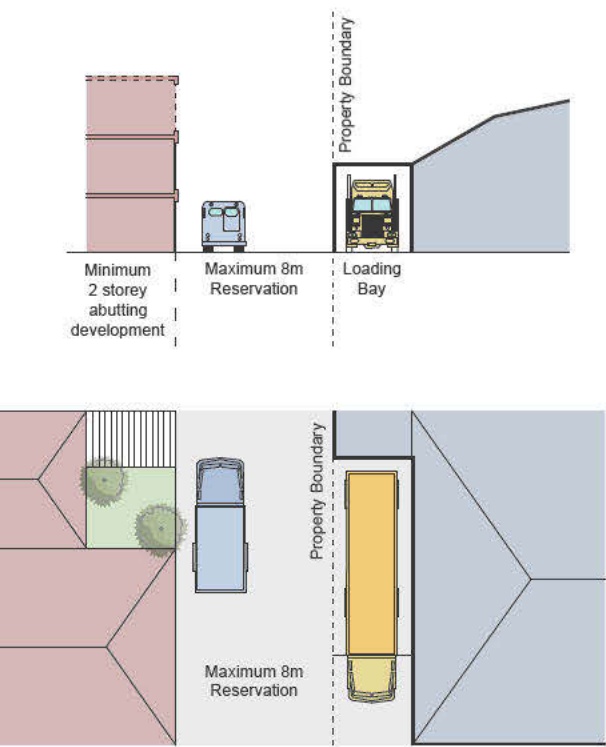
- On street parking design is to meet relevant standards/guidelines

Figure 12f: Major Activity Centre - Access Street - Level 1 & Laneway Sections



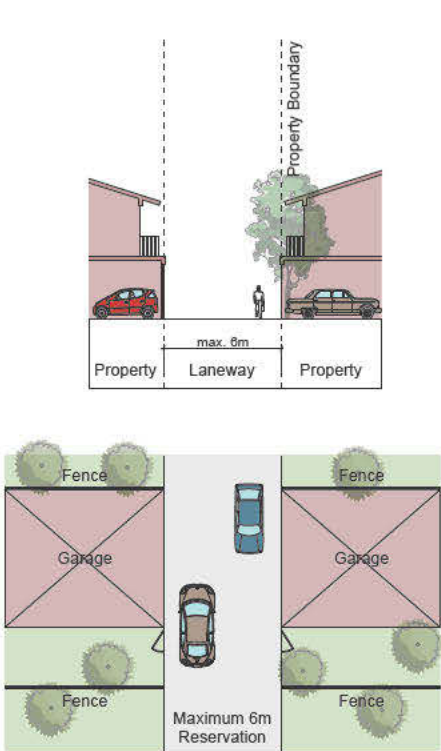
Section M5: Access Street - Level 1

- Hardstand verges & tree grates provided in indented parking areas.
- Optional indented parking abutting open space to the satisfaction of the responsible authority.
- Subject to services being delivered in an alternative location (ie outside of this road reserve)



Section M6a: Laneway - Commercial Access

- Buildings & fences to be built to the edge of the Laneway Road Reserve.



Section M6b: Laneway - Residential Access

- Buildings & fences to be built to the edge of the Laneway Road Reserve.

4.7 Utilities, Energy & Sustainability

4.7.1 Utilities, Energy & Sustainability Objectives

The objectives for utilities and energy are to:

- Provide all developed lots in the Officer Precinct with:
 - a potable water service;
 - electricity;
 - a reticulated sewerage service;
 - drainage;
 - gas; and,
 - telecommunications.
- Ensure that the all dwellings and tenancies in the Officer Precinct are connected to a broadband telecommunications network.
- Encourage developers to provide superior technologies in terms of telecommunication services.
- Integrate use of all water resources including rainwater, reused water, recycled water, greywater and stormwater.
- Provide recycled water to all residential lots.
- Implement the Development Services Scheme for Officer Precinct and Gum Scrub Creek.
- Manage the quantity and quality of stormwater runoff and improve downstream water quality flows into Western Port.
- Minimise fill requirements across the Precinct.
- Ensure that Water Sensitive Urban Design treatment measures are provided in both the main and local drainage systems.

- Achieve best practice Environmentally Sustainable Development in the planning and development of the Precinct.
- Minimise potable water consumption generated by development.
- Incorporate gravity feed for water wherever possible.
- Ensure development is not unduly susceptible to flooding by providing peak overland flow paths connected to creeks and rivers.

4.7.2 Implementation

The objectives for utilities and energy are met by implementation of all the following:

- Plan 12: Integrated Water Management;
- Planning and design guidelines set out in 4.7.3;
- Table 18: Utilities and Energy Planning and Design Guidelines;
- Table 19: Environmentally Sustainable Design Planning and Design Guidelines;
- 4.7.4 Energy Statement; and
- 4.7.5 Sustainability Statement Requirements.

4.7.3 Planning and design guidelines

Table 18: Utilities and Energy Planning and Design Guidelines

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
General	<ul style="list-style-type: none"> Requirements of the relevant authority or provider are to be met. The location of services are: <ul style="list-style-type: none"> not to impede future road alignments; to be located along the edges of open space/waterway corridors, ideally within abutting road reserves; have regard to the requirements for the location of stormwater wetlands, frog ponds and native vegetation to be retained, so as not to compromise biodiversity outcomes; to be located on private land adjacent to the Princes Freeway, not within the freeway reservation. 	<ul style="list-style-type: none"> Services are to cross waterways and creek corridors at the following locations: <ul style="list-style-type: none"> planned road culverts and bridges; existing culverts or underpasses (if they are being retained); or adjacent to or as part of existing easements for other service infrastructure.
Electricity	<ul style="list-style-type: none"> Provide an electricity supply system that is designed in accordance with the requirements of SP AusNet and is provided to the boundary of all lots in the Precinct. Ensure all new electricity supply infrastructure is provided underground (excluding substations). 	<ul style="list-style-type: none"> All existing above ground electricity lines are to be removed and placed underground as part of development to the satisfaction of the responsible authority.
Water	<ul style="list-style-type: none"> Provide a reticulated recycled water supply that is designed and constructed in accordance with the requirements of South East Water to provide a recycled water service to the boundary of all developed lots. The siting of proposed South East Water recycled and potable water tanks must ensure visual impacts on the character and amenity of the Precinct are minimised. 	<ul style="list-style-type: none"> Use recycled water for purposes such as: <ul style="list-style-type: none"> toilet flushing and garden watering on individual residential properties; and, watering of public open space in order to reduce the level of consumption of potable water.
Sewerage	<ul style="list-style-type: none"> Provide a reticulated sewerage system that is designed and constructed in accordance with the requirements of South East Water to provide a reticulated sewerage service to the boundary of all developed lots in the Precinct. 	

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Drainage	<ul style="list-style-type: none"> Underground drainage is to be designed to convey storm events to discharge into open drainage channel or waterways in the Precinct, accommodating: <ul style="list-style-type: none"> 1 in 10 year flows for commercial uses; and 1 in 5 year flows for residential uses. Provide a drainage network that is designed and constructed in accordance with the requirements of relevant Development Services Scheme, Melbourne Water and Cardinia Shire. Ensure water quality objectives outlined in Urban Stormwater – Best Practice Environmental Management Guidelines 1999 are met. Drainage systems (including the design of arterial and connector roads) are to be designed to ensure that no increase in the 100 year ARI flood levels occur upstream or downstream. The finished surface level of the area is to be at least 300 millimetres freeboard to the 100 Year ARI flood level or as required by the responsible authority. The following applies: <ul style="list-style-type: none"> all habitable buildings are to have a finished floor level of 600 millimetres freeboard to the 100 Year ARI flood level; and the finished surface level of land within Activity Centres is to match the finished floor level of buildings, except as otherwise agreed with Cardinia Shire Council. Where a drainage management strategy is required, it is to outline: <ul style="list-style-type: none"> the 5 and 100 year drainage system; water quality treatment measures; and outfall arrangements. 	<ul style="list-style-type: none"> Where a level difference exists between a site and its surrounds, a grade of 1:40 is to be achieved to enable a seamless transition to the surface level of adjacent sites.
Gas	<ul style="list-style-type: none"> Provide a gas supply network that is designed in accordance with the requirements of Origin Energy and is provided to the boundary of all lots in the precinct. 	
Telecommunications	<ul style="list-style-type: none"> Fibre optic cable (or superior technology) is to be made directly available to every building, dwelling or separate leasable tenancy in the Precinct. The best available technology for telecommunications at the time of development is to be made available to all properties and separate tenancies in the Precinct. Development and staging is to be coordinated with Telstra and other potential providers to deliver the timely upgrading and extension of telecommunication facilities to meet demand within the Precinct. Telecommunications towers are to be located where they have minimal impact on the visual amenity of the Precinct. 	<ul style="list-style-type: none"> Telecommunications towers are to be integrated within the built form.

Design Issue	Planning and Design Guidelines that must be met	Planning and Design Guidelines that should be met
Gas Transmission Pipeline Easement	<ul style="list-style-type: none"> The Gas Easement is to be: <ul style="list-style-type: none"> used as a road; included in public open space; or incorporated into the design of subdivisions to be at the front of lots, forming a setback for the dwelling. 	<ul style="list-style-type: none"> The Gas Easement is to be used as a road.
Water Easement	<ul style="list-style-type: none"> All land affected by the Melbourne Water Easement is to be: <ul style="list-style-type: none"> transferred to Melbourne Water as a reserve; or included in public open space; or used as a road vested in Council; unless it is shown as Conservation Living Area in Plan 5. If the easement is used as a road, or crossed by a road, the following conditions apply: <ul style="list-style-type: none"> The proposed road work over the Melbourne Water water main must be designed to ensure there are no point loads on the main, with a minimum cover of 1.2 metres to the final road surface level. Any new road crossings, road reconstruction works, or other works that trigger a requirement to re-locate valves associated with the water main are to be funded by the landowner. Detailed design plans must be provided to Melbourne Water for written approval prior to commencement of any works, landscaping or construction within the easement. At this time further detailed conditions will be provided. 	

Table 19: Environmentally Sustainable Design Planning and Design Guidelines

Element	Planning and Design Guidelines that must be met	Planning and design guidelines that should be met
Energy and Greenhouse	<ul style="list-style-type: none"> Energy efficient street lighting is to be provided, as approved by SP AusNet and Council. 	<ul style="list-style-type: none"> Street lighting should be solar-powered and incorporate light sensors to control on/off cycles. Commercial buildings are to be designed to: <ul style="list-style-type: none"> minimise lifecycle energy consumption and greenhouse emissions; and maximise and monitor energy efficiency and demonstrate Australian Best Practice in GreenStar ratings. Installation of renewable energy systems on individual sites and use of natural gas is encouraged. Where tri-generation or other alternative energy source is available, connection should be provided.
Integrated Water Management	<ul style="list-style-type: none"> Provide for efficient use of potable water supplies. Landscaping of private open space is to be designed to significantly minimise the demand for irrigation water from potable sources and to improve the quality of stormwater runoff. Incorporate Water Sensitive Urban Design techniques into the subdivision (refer Water Sensitive Urban Design planning and design guidelines in Table 14). 	<ul style="list-style-type: none"> Encouraged the following in both subdivision design and building construction: <ul style="list-style-type: none"> use of alternative water sources to potable mains supply. reuse and recycling of water. use of integrated stormwater treatment systems Artificial lakes, ponds, fountains etc are to utilise a recycled water source to ensure ongoing sustainability and efficient operation and maintenance.
Materials		<ul style="list-style-type: none"> Use of concrete as a road pavement is encouraged to reduce radiant heat. Buildings are to be constructed of durable materials (with low lifecycle environmental impact) that maximise the longevity and utilisation of a development, with minimal maintenance. Materials choice is to minimise embodied energy and consider whole-of-life impacts, including mining, manufacturing, transport, construction/fitting, maintenance and disposal.
Waste Minimisation	<ul style="list-style-type: none"> Facilities to enable recycling of materials are to be provided during occupation of the building. The overall design of buildings is to provide an effective waste management and recycling system for all dwellings, tenancies and premises as part of the development. 	<ul style="list-style-type: none"> Re-use or recycling of the building components at the end of the life of the building is to be considered. Construction waste materials are to be re-used and recycled wherever possible.

Element	Planning and Design Guidelines that must be met	Planning and design guidelines that should be met
Transport		<ul style="list-style-type: none"> • Within new non-residential developments, car parking spaces are to be nominated for the exclusive use of for share/pool cars. • Preparation of Green Travel Plans is encouraged for businesses employing over 20 people. • Bicycle parking is to be provided as part of: <ul style="list-style-type: none"> - activity centre subdivisions; - construction of new commercial buildings; or - schools; unless it has already been provided to the satisfaction of the responsible authority. • Showering and changing facilities are to be provided in association with bicycle parking.
Landscaping	<ul style="list-style-type: none"> • Landscaped areas are to be designed to minimise potable water use. • Trees are to maximise shade for protection of assets from solar radiation and reduce the urban heat island effect. 	<ul style="list-style-type: none"> • All new developments are to be landscaped incorporating the “Australian Landscape” theme. • Landscaping is to be incorporated into the design of buildings and structures, maximising shade and providing “green” facades and roof gardens. • Permeable paving and footpath treatments are encouraged. • Impervious paving surfaces are to be avoided.

4.7.4 Energy Statement

Overall, the future urban structure of the Precinct and the planning and design guidelines to deliver the Vision, encourages minimisation of non-renewable and non-sustainable energy by:

- providing a substantial number and diverse range of employment opportunities, particularly within Officer Town Centre, to better meet the needs of the local workforce and reduce out-commuting and travel distances within Casey-Cardinia;
- encouraging alternative modes of transport, particularly for journey-to-work trips by providing extensive walking, cycling and public transport network within the Precinct;
- encouraging rail use by locating Officer Town Centre adjacent to Officer train station and:
 - creating a safe and attractive interchange environment that encourages public transport use;
 - maximising the convenience of access to rail services, increasing its attractiveness as an alternative mode of transport to private vehicles;
 - the highest density of land use in the PSP area adjacent to the station, including higher density housing, major retail, commercial/office and regional community facilities.
- encouraging bus use by intensifying development of housing, retail and other commercial development within close proximity of proposed public transport routes;
- providing a road network that enables efficient transport movements with a hierarchical system of streets including direct arterial roads, a permeable network of lower order streets, cycle and walking paths;
- providing an integrated path system connecting roads with the linear open space network';
- promoting development of a grid-based road network to enable subdivision layouts to incorporate passive solar orientation, reducing energy use and carbon dioxide emissions particularly for residential areas; and
- encouraging innovative development design, with a requirement for non-residential buildings to demonstrate energy and water efficiency at the time of planning permit application.

4.7.5 Sustainability Statement Requirements

A Sustainability Statement should demonstrate how the development meets the sustainability objectives and planning and design guidelines including:

- a site analysis plan that highlights the physical attributes of the site, including solar access, prevailing winds, topography, soil conditions, vegetation and visual links;
- details of environmentally sustainable design strategies, initiatives and features integrated into the development;
- details of all performance standards relating to the planning and design guidelines, met by the development including the assumptions forming the basis of any calculations;
- response to any Environmentally Sustainable Design policy adopted by Council, including any evaluation criteria;
- plans indicating the location of environmentally sustainable design features as appropriate;
- a Construction Waste Management Plan which details the facilities and methods to be adopted to minimise construction waste and enhance opportunities for recycling; and
- management protocols for systems requiring ongoing maintenance and management.

05 Precinct Infrastructure Plan

5.1 Introduction

This Precinct Infrastructure Plan identifies a range of infrastructure and services required to meet the needs of the development of the Officer Precinct.

This infrastructure is to be provided through a number of mechanisms including:

- subdivision construction works by developers;
- development contributions (community infrastructure levy and development infrastructure levy);
- utility service provider contributions and infrastructure development schemes; and,
- capital works projects by Council, state government agencies and non-government organisations, including community groups.

5.1.1 Subdivision Construction Works by Developers

As part of subdivision construction works, new development in the Precinct must meet the total cost of delivering the following infrastructure to the satisfaction of the responsible authority (except where a specific project is included in the Officer Development Contributions Plan (September 2011)):

- Connector roads and local streets.
- Landscaping of connector roads and local streets.
- Intersection works and traffic management measures along connector roads and local streets.
- Uncontrolled intersection works providing access from an arterial road to a connector road or local street.
- Council approved fencing and landscaping (where required) along arterial roads.

- Local pedestrian and bicycle paths along connector roads and local streets and within local parks.
- Basic improvements to local parks / open space including levelling, grassing, tree planting and footpaths and shared paths.
- Landscaping, provision of playgrounds and other park infrastructure.
- Local drainage systems.
- Infrastructure as required by utility service providers including water, sewerage, drainage (except where the item is funded through a Development Services Scheme), electricity, gas, and telecommunications.

5.1.2 Development Contributions Plan

A Development Contributions Plan (DCP) has been prepared for the Officer Precinct in conjunction with this Precinct Structure Plan. The DCP is an incorporated document of the Cardinia Planning Scheme.

The key infrastructure and services items to be included in the development contributions plan are outlined in this section. These items are either fully funded or partly funded by the Officer DCP.

5.1.3 State Infrastructure

Any projects where the Lead Agency (in Table 20 or 21) is identified as a State Government Department or Agency are subject to funding availability in accordance with State budget processes unless another funding source is identified (for example a Commonwealth grant).

5.2 Infrastructure and Services Required

The initial list of infrastructure and services required to support the development of the Precinct are outlined in Table 20 (for projects within the Precinct) and Table 21 (for projects outside the Precinct).

The following details are set out in each table:

- Infrastructure group and category;
- Project title and description;
- Lead Agency (ie. The agency responsible for the coordination and approval of the project, however other agencies and/or developers may have an involvement in the project); and
- Indicative timing (short, medium or long term).

NOTE: In relation to projects outside the PSP area (refer Table 21), the lead agency role may be transferred to developer requirements or other mechanisms over time as other PSPs are prepared.

5.3 Project Co-ordination

The following projects have been grouped, as it has been identified that if delivered together or in a co-ordinated way, the projects will deliver significant benefits to the community beyond the benefits of each project being delivered individually.

Where possible these projects should be delivered as a single package of works.

- Project group 1
New Main Street in Officer Town Centre and grade separation of railway line
- Project group 2
Community Facilities, Post Primary Schools and District Sport Reserves
- Project group 3
Trail network with rehabilitation and conservation works within creek corridor
- Project group 4
Bus stops on PPTN, street lighting and trail network along Princes Highway
- Project group 5
Community facilities (Children Services) and Primary Schools

5.4 Delivery and Monitoring

Cardinia Shire Council and the Growth Areas Authority will jointly implement the Precinct Infrastructure Plan.

Cardinia Shire Council and the Growth Areas Authority will work in conjunction as part of the Cardinia Infrastructure Working Group to manage the monitoring, review, implementation and prioritisation of identified projects.

Table 20: Infrastructure Project List - Within PSP Area

Project Group	Project Category	Title	Description	Lead Agency	Timing:
					S=2011-2016 M=2017-2022 L=2023+
TRANSPORT					
	Roads	Bayview Road	Construction (upgrade to urban standard) and realignment works at Princes Highway	Cardinia Shire Council	S-M
	Roads	Bridge Road (Rix Road extension)	Land acquisition and construction of duplicated carriageway from Officer South Road to Gum Scrub Creek	Cardinia Shire Council	S
	Roads	Brown Road	Construction (upgrade to sealed rural-style road)	Developer	L
	Roads	Brunt Road	Land acquisition and construction from Princes Highway to Rix Road	Cardinia Shire Council	M
	Roads	Brunt Road at-grade rail crossing	Safety upgrade, including road and rail line works	Cardinia Shire Council	M
	Roads	Commercial Access Lane at the rear of Peripheral Commercial (North of Princes Highway)	Land acquisition and construction from Bayview Road to western edge of Officer Primary School	Cardinia Shire Council	M-L
	Roads	Commercial Access Lane south of Officer Hall (North of Princes Highway)	Land acquisition and construction from Tivendale Road to Princes Highway	Cardinia Shire Council	M-L
	Roads	East-West Connector Street Boulevard	Land acquisition and construction from May Road to Timbertop Boulevard	Cardinia Shire Council	S-L
	Roads	East-West Connector Street Boulevard	Land acquisition and construction from Timbertop Boulevard to Gum Scrub Creek	Cardinia Shire Council	S-L
	Roads	East-west Local Access Street Level 2	Land acquisition and construction from Brunt Road to end of shared boundary between school/district reserve	Cardinia Shire Council	M
	Roads	Gum Leaf Lane upgrade (east of Station Street)	Land acquisition and construction from Station Street to end of Gum Leaf Lane, including land for intersection with north-south connector and associated roundabout	Cardinia Shire Council	S
	Roads	Gum Leaf Lane Extension (west)	Construction of road through Gilbert land	Cardinia Shire Council	S-M
	Roads	Kenilworth Avenue	Construction from Brunt Road to Beaconsfield	Cardinia Shire Council	M
	Roads	Main Street	Construction from Princes Highway to Bridge Road	Developer	S
	Roads	Main Street grade separated crossing	Provision of land and construction of grade separated crossing of rail line	Developer	S
	Roads	May Road	Construction (to urban standard) north of East-West Connector Street Boulevard	Cardinia Shire Council	L
	Roads	McMullen Road	Construction (upgrade to urban standard)	Cardinia Shire Council	M

Project Group	Project Category	Title	Description	Lead Agency	Timing:
					S=2011-2016 M=2017-2022 L=2023+
	Roads	North-South Arterial	Upgrade of local road from Princes Highway to Gum Leaf Lane extension	VicRoads	L
	Roads	North-South Arterial and grade separated crossing	Construction from Gum Leaf Lane extension to Rix Road (including grade-separated overpass)	VicRoads	L
	Roads	North-South Arterial / Officer South Road	Construction of third lane of each carriageway from Princes Freeway to Rix Road	VicRoads	L
	Roads	North-south connector street	Land acquisition and construction from Rix Road extension to Kenilworth Avenue	Cardinia Shire Council	L
	Roads	Princes Highway	Construction of third lane of each carriageway east of Brunt Road	VicRoads	L
	Roads	Rix Road extension	From Brunt Road/Rix Road intersection to the west	Cardinia Shire Council	L
	Roads	Rix Road upgrade	Land acquisition and construction from Rix Road to Officer South Road	Cardinia Shire Council	S-L
	Roads	Starling Road	Construction (upgrade to urban standard)	Cardinia Shire Council	S-M
	Roads	Station Street	Interim upgrade from Princes Highway to Rix Road	Cardinia Shire Council	S
	Roads	Station Street at-grade rail crossing	Safety upgrade, including road and rail line works	Cardinia Shire Council	S-M
	Roads	Stephens Road upgrade	Land acquisition and partial construction from Rix Road to Princes Freeway	Cardinia Shire Council	S-M
	Roads	Timbertop Boulevard	Land acquisition and construction	Cardinia Shire Council	S
	Roads	Tivendale Road	Construction (upgrade to urban standard)	Cardinia Shire Council	S-M
	Roads	Whiteside Road	Land acquisition and construction from Princes Highway to East-West Connector Street Boulevard	Cardinia Shire Council	S-M
	Roads	Whiteside Road	Construction (to urban standard) north of East-West Connector Street Boulevard	Cardinia Shire Council	L
	Intersections	Princes Highway & Bayview Road/ North South Arterial	Land acquisition and construction of signalised intersection	Cardinia Shire Council	S-M
	Intersections	Princes Highway & Bayview Road/ North South Arterial	Upgrade of intersection to ultimate standard	VicRoads	L
	Intersections	North-South Arterial & Gum Leaf Lane extension	Construction of unsignalised intersection	Developer	S-M
	Intersections	North-South Arterial & Gum Leaf Lane extension	Upgrade of intersection to ultimate standard (including signals)	VicRoads	L
	Intersections	Princes Highway & Whiteside\Brunt Road	Land acquisition and construction of signalised intersection	Cardinia Shire Council	S-M

Project Group	Project Category	Title	Description	Lead Agency	Timing:
					S=2011-2016 M=2017-2022 L=2023+
	Intersections	Princes Highway & Whiteside\Brunt Road	Upgrade of intersection to ultimate standard	VicRoads	L
	Intersections	Princes Highway & Timbertop Boulevard	Land acquisition and construction of signalised intersection	Cardinia Shire Council	S
	Intersections	Princes Highway & Timbertop Boulevard	Upgrade of intersection to ultimate standard	VicRoads	L
	Intersections	Princes Highway & Tivendale Road	Land acquisition and construction of signalised intersection to ultimate standard	Cardinia Shire Council	S
	Intersections	Princes Highway & Starling Road	Land acquisition and construction of signalised intersection	Cardinia Shire Council	S
	Intersections	Princes Highway & Starling Road	Upgrade of intersection to ultimate standard	VicRoads / Developer	L
	Intersections	Princes Highway & McMullen Road	Land acquisition and construction of signalised intersection, demolition of weighbridge	Cardinia Shire Council	M
	Intersections	Princes Highway & McMullen Road	Upgrade of intersection to ultimate standard	VicRoads	M-L
	Intersections	North-South Arterial & Rix Road	Land acquisition and construction of signalised intersection	Cardinia Shire Council	S
	Intersections	North-South Arterial & Rix Road	Upgrade of intersection to ultimate standard and closure of Officer South Road at Rix Road	VicRoads	L
	Intersections	North-South Arterial & East-West Connector between Rix Road and Princes Freeway	Construction of signalised intersection	Developer	S
	Intersections	North-South Arterial & East-West Connector between Rix Road and Princes Freeway	Upgrade of intersection to ultimate standard	VicRoads	L
	Intersections	East West Connector Street Boulevard & Whiteside Road	Construction of signalised intersection	Cardinia Shire Council	S-M
	Intersections	East West Connector Street Boulevard & Timbertop Boulevard	Construction of signalised intersection	Cardinia Shire Council	S
	Intersections	Gum Leaf Lane & Station Street	Construction of signalised intersection	Cardinia Shire Council	S
	Intersections	Officer Town Centre Main Street & Officer Town Centre Loop Road	Construction of signalised intersection (first intersection north of rail line)	Developer	S
	Intersections	Officer Town Centre Main Street & Gum Leaf Lane extension	Construction of signalised intersection (second intersection north of rail line)	Developer	S

Project Group	Project Category	Title	Description	Lead Agency	Timing:
					S=2011-2016 M=2017-2022 L=2023+
	Intersections	Bridge Road (Rix Road extension) & Main Street	Construction of signalised intersection	Developer	S
	Intersections	Bridge Road (Rix Road extension) & North-South Connector Street	Construction of signalised intersection	Developer	S
	Intersections	Princes Freeway & North South Arterial (Officer South Road Freeway Interchange)	Land acquisition and construction for north-west ramp, including interim signalised intersection of off ramp with Officer South Road	Cardinia Shire Council	S
	Intersections	Princes Freeway & North South Arterial (Officer South Road Freeway Interchange)	Land acquisition for north-east ramp	Cardinia Shire Council	L
	Intersections	Princes Freeway & North South Arterial (Officer South Road Freeway Interchange)	Construction of north-east ramp, including upgrade of signalised intersection with Officer South Road	VicRoads	L
	Intersections	East West Connector Street Boulevard & Bayview Road	Construction of roundabout	Cardinia Shire Council	M
	Intersections	East West Connector Street Boulevard & Tivendale Road	Construction of roundabout	Cardinia Shire Council	S
	Intersections	East West Connector Street Boulevard & Starling Road	Construction of roundabout	Cardinia Shire Council	S
	Intersections	East West Connector Street Boulevard & McMullen Road	Construction of roundabout	Cardinia Shire Council	M
	Intersections	East-West Connector Street (Gum Leaf Lane Extension) and North-South Connector Street (Timbertop Boulevard extension south of Princes Highway)	Construction of roundabout	Developer	S
	Intersections	Brunt Road & East-West Local Access Street Level 2 (north of rail line)	Construction of roundabout	Cardinia Shire Council	M-L
	Intersections	Rix Road & Brunt Road	Construction of roundabout	Cardinia Shire Council	M
	Intersections	Rix Road & Stephens Road	Construction of roundabout	Cardinia Shire Council	S
	Bridges	Bridge Road (Rix Road extension) over Gum Scrub Creek	Funding to Match CRDCP Item #DI_RO_9b	Cardinia Shire Council	S

Project Group	Project Category	Title	Description	Lead Agency	Timing:
					S=2011-2016 M=2017-2022 L=2023+
	Bridges	Officer Town Centre link road over Gum Scrub Creek	Funding to Match CRDCP Item #DI_RO_9a	Cardinia Shire Council	M
PUBLIC TRANSPORT					
	Rail	Officer Railway Station upgrade		Department of Transport	Undetermined
	Bus	Principal Public Transport Network (PPTN) Services	Upgrade of PPTN services through Precinct	Department of Transport	Undetermined
	Bus	Principal Public Transport Network (PPTN) Bus Stops	Provision of Bus Stops Along Northern and Southern Sides of Princes Highway	Developer (unless otherwise specified in the Officer Development Contributions Plan)	S-L
	Bus	Local Bus Network Services	Introduction or extension of existing services or delivery of new bus services into the Precinct	Department of Transport	Undetermined
	Bus	Local Bus Network Bus Stop	Provision of Local Bus Stops Throughout the Precinct	Developer (unless otherwise specified in the Officer Development Contributions Plan)	S-L
COMMUNITY					
	Community Centre	Library within Officer Town Centre (includes U3A)	Land acquisition and construction in Officer Town Centre	Council	S
	Community Centre	Aquatic Centre within Officer Town Centre	Land acquisition	Council	L
	Community Centre	Community Facility	Community meeting place (Aged Services / Performing Arts Rehearsal Space)	Council	S-M
	Community Centre	Community Facility (Children's Services) - (MCH & double kindergarten)	Land acquisition and construction in Hub A: Timbertop Boulevard North	Council	S
	Community Centre	Community Facility (Children's Services) - (MCH & triple kindergarten)	Land acquisition and construction in Hub C: Starling-McMullen Road	Council	M
	Community Centre	Community Facility (Children's Services) - (MCH & double kindergarten)	Land acquisition and construction in Hub D: Brunt Road / Timbertop Boulevard South	Council	S

Project Group	Project Category	Title	Description	Lead Agency	Timing:
					S=2011-2016 M=2017-2022 L=2023+
	Community Centre	Community Facility - Youth Facility	Construction in Hub D: Brunt Road / Timbertop Boulevard South (co-located with Active Open Space Buildings)	Council	L
	Community Centre	Construction of Community Facility (Children's Services) - (MCH & triple kindergarten)	Land acquisition and construction in Hub E: Rix Road East	Council	S-M
	Education	Primary School	Primary School in Hub A: Timbertop Boulevard North	DEECD	S
	Education	Primary School	Primary School in Hub C: Starling-McMullen Road	DEECD	M
	Education	Primary School	Primary School in Hub D: Brunt Road / Timbertop Boulevard South	DEECD	L
	Education	Special School	Special School in Hub D: Brunt Road / Timbertop Boulevard South	DEECD	L
	Education	Secondary School (Post Primary School)	Post Primary School in Hub D: Brunt Road / Timbertop Boulevard South	DEECD	L
	Education	Secondary School (Post Primary School)	Post Primary School in Hub G: Gum Scrub Creek	DEECD	S
	Education	Special School	Special School in Hub G: Gum Scrub Creek	DEECD	S
OPEN SPACE & LANDSCAPING					
	Active Open Space	Sport and Recreation Reserve	Land acquisition and construction in Hub D: Brunt Road / Timbertop Boulevard South	Cardinia Shire Council	M
	Active Open Space	Sport and Recreation Reserve	Land acquisition and construction at McMullen Road (Officer Recreation Reserve)	Cardinia Shire Council	M
	Passive Open Space	Parklands	Land acquisition and construction of district passive reserve adjacent to Cardinia Creek Parklands	Cardinia Shire Council	M-L
	Passive Open Space	Leber Property - Bushland Park	Embellishment of native vegetation reserve	Developer	S
	Urban Park	Urban Park	East of Station Street, located between Princes Highway and Gum Leaf Lane	Cardinia Shire Council	M
TRAIL NETWORK					
	Trail Network	Shared path	Princes Highway (North side) from O'Neill Road to Gum Scrub Creek	Council/VicRoads	M
	Trail Network	Shared path	Princes Highway (South side) from Brunt Road to North-South Arterial	Council/VicRoads	M
	Trail Network	Shared path	Princes Highway (South side) from North-South Arterial to Gum Scrub Creek	Council/VicRoads	M

Project Group	Project Category	Title	Description	Lead Agency	Timing:
					S=2011-2016 M=2017-2022 L=2023+
	Pedestrian bridge	Pedestrian bridge over drainage line	Drainage line located between Tivendale & Starling Roads	Cardinia Shire Council	M-L
	Pedestrian bridge	Pedestrian bridge over Gum Scrub Creek	South east of McMullen Road Sport & Recreation Reserve	Cardinia Shire Council	M
	Pedestrian bridge	Pedestrian bridge over Gum Scrub Creek	Within proximity to Princes Highway	Cardinia Shire Council	S
	Pedestrian bridge	Pedestrian bridge over Gum Scrub Creek	Central to Princes Highway and railway reservation	Cardinia Shire Council	S-M
	Pedestrian bridge	Pedestrian bridge over Gum Scrub Creek	Within proximity to Hub G: Gum Scrub Creek	Cardinia Shire Council	S
	Pedestrian underpass	Pedestrian underpass of railway line	Located between Brunt Road and North-South Arterial, aligned with Timbertop Boulevard (South)	Cardinia Shire Council	L
	Pedestrian underpass	Pedestrian underpass of railway line	Within proximity of Station Street	Cardinia Shire Council	L
	Trail Network	Shared path	Along Gum Scrub Creek	Cardinia Shire Council	S-L
	Trail Network	Shared path	Along drainage line located between Tivendale & Starling Roads	Cardinia Shire Council	M-L
	Trail Network	Shared path	Adjacent to drainage line located between Princes Highway and the urban park west of Officer Town Centre	Cardinia Shire Council	S-M
	Trail Network	Shared path	Adjacent to drainage line located between Bridge/Rix Road and Princes Freeway	Developer	S
	Trail Network	Shared path	Adjacent to Princes Freeway	Cardinia Shire Council	S-L

Table 21: Infrastructure Project List - Outside PSP Area

Project Group	Project Category	Title	Description	Lead Agency	Timing
					S=2011-2016 M=2017-2022 L=2023+
TRANSPORT					
	Roads	Beaconsfield Freeway Interchange	Construction of eastern ramps and second bridge over Freeway	VicRoads	L
	Roads	Cardinia Road grade separation	Construction of grade separation at rail line	VicRoads	L
	Roads	Cardinia Road Freeway Interchange	Construction of second bridge over Freeway	VicRoads	L
	Roads	East-West Connector Street Boulevard	Land acquisition and construction from O'Neill Road to May Road	Cardinia Shire Council / Developer	M
	Roads	Grices Road	Construction of Grices Road east of Cardinia Creek	VicRoads / Cardinia Shire Council	L
	Roads	Grices Road bridge	Construction of bridge over Cardinia Creek	VicRoads	L
	Roads	Monash Freeway	Construct the third lane of each carriageway from Hallam to Pakenham	VicRoads	L
	Roads	North South Arterial / Officer South Road Freeway Interchange	Construction of south eastern ramp	VicRoads	L
	Roads	Officer South Road	Upgrade from Officer South Road Freeway Interchange to the future Thompsons Road	Cardinia Shire Council / VicRoads	M
	Roads	O'Neill Road upgrade	Land acquisition and construction from old Princes Highway to the new East-West connector boulevard	Cardinia Shire Council	M
	Roads	Rix Road	Duplication east of Gum Scrub Creek	Cardinia Shire Council	S
	Roads	Thompsons Road bridge	Construction of bridge over Cardinia Creek	VicRoads	L
	Roads	Thompsons Road	Construction of Thompsons Road east of Cardinia Creek	VicRoads / Cardinia Shire Council	L
	Intersections	Beaconsfield Freeway Interchange	Construction of northern and southern signalised intersections	VicRoads	L
	Intersections	Cardinia Road Freeway Interchange	Upgrade of northern and southern intersections	VicRoads	L
	Intersections	Princes Highway and Cardinia Road	Upgrade Princes Highway and Cardinia Road Intersection	VicRoads	S
	Intersections	Princes Freeway & North South Arterial (Officer South Road Freeway Interchange)	Land acquisition and construction for south-west ramp, including land for interim on-ramp and signalised intersection with Officer South Road	Cardinia Shire Council	S
	Intersections	Princes Freeway & North South Arterial (Officer South Road Freeway Interchange)	Land acquisition and upgrade of south-west ramp to ultimate standard	VicRoads	M-L

Project Group	Project Category	Title	Description	Lead Agency	Timing
					S=2011-2016 M=2017-2022 L=2023+
	Intersections	Princes Freeway & North South Arterial (Officer South Road Freeway Interchange)	Construction of south-east ramp, including upgrade of signalised intersection with Officer South Road	VicRoads	L
	Intersections	Princes Highway and O'Neill Road	Land acquisition and construction of signalised intersection	Cardinia Shire Council	S-M
	Intersections	O'Neill Road and East West Connector Street Boulevard	Land acquisition and construction of roundabout	Cardinia Shire Council	S-M
PUBLIC TRANSPORT					
	Rail	Cardinia Road Station	Construction east of Cardinia Road	Department of Transport	S
	Bus	Principal Public Transport Network (PPTN) Services	Upgrade of PPTN services along the Princes Highway	Department of Transport	Undetermined
OPEN SPACE & LANDSCAPING					
	Passive Open Space	Gum Scrub Creek	Creation and embellishment of Gum Scrub Creek reserve east and south of Precinct	Cardinia Shire Council	S-L
	Passive Open Space	Cardinia Creek Parklands	Expansion and embellishment of Cardinia Creek reserve north, west and south of Precinct	Parks Victoria	Undetermined
TRAIL NETWORK					
	Pedestrian bridge	Gum Scrub Creek Pedestrian Underpass	Improvement of north-south connection under Freeway	Cardinia Shire Council	Undetermined
	Trail Network	Gum Scrub Creek Shared Path	South of Freeway, along waterway reserve	Cardinia Shire Council	Undetermined
	Trail Network	Cardinia Creek Shared Path	South of Freeway along creek reserve and north of Freeway via Kenilworth Avenue	Parks Victoria	Undetermined

06 Development Staging and Requirements

6.1 Development Staging

6.1.1 Objectives

The objectives for development staging are to:

- Provide for orderly delivery of infrastructure.
- Identify projects that are to be developer-funded works.
- Maintain access to properties as the road network develops.
- Enable Station Street to transition from a high-volume road to a connector street once the North South Arterial has been delivered.
- Ensure staging does not create circumstances in which residents will be unreasonably isolated from commercial and community facilities or public transport.

6.1.2 Implementation

The objectives for development staging are met by implementation of all of the following:

- Plan 5: Future Urban Structure; and
- Planning and design guidelines set out in Section 6.1.3.

6.1.3 Planning and Design Guidelines

Generally, staging will be determined by the development program of developers within the Precinct and the availability of infrastructure services.

The following planning and design guidelines must be met:

Development Staging

- Staging must, to the extent practicable, be integrated with adjoining developments, including the timely provision of connecting roads and walking/cycling paths.
- Access to each new lot must be via a sealed road.
- Stage development to enable the early delivery of community facilities.

Road Closures

- Access from May Road to Princes Highway is to be closed once alternative access is provided from the east-west Connector Street Boulevard.
- Station Street is to close at the existing level-crossing once the North South Arterial is constructed.
- Access from Kenilworth Avenue to Brunt Road is to close at the time the grade separation of Brunt Road and the rail line occurs. Alternative access from Kenilworth to Brunt Road is to be provided from new roads to the south, delivered in advance of the grade separation works.

Road Construction

Permits for subdivision, use or buildings and works not related to pre-existing uses (whichever is first) will trigger the following road construction requirements. Each road is to be delivered to the satisfaction of the relevant road authority.

- Prior to the transfer of land for the North-South Arterial to Council, the developer is to construct an intersection that connects:
 - the westerly extension of Gum Leaf Lane (through the Gilbert property)
 - the east-west connector street
 - the southerly extension of Bayview Roadto the satisfaction of the relevant roads authority.
- The section of Brown Road abutting the following properties is to be sealed as a condition of their development:
 - Lot 1 TP419319;
 - Lot 1 TP552980;
 - Lot 1 Block B LP433;
 - Lot 1 TP148724;
 - Lot 1 Block A LP433;
 - Lot 14 Block A LP433;
 - Lot 1 LP92392; and
 - Lot 1 PS422710.
- The section of Hickson Road (west) abutting the following lots is to be sealed along the length of the shared property boundary to the nearest sealed road, as a condition of their development:
 - Lot 3 LP7847;
 - Lot 1 TP142643;
 - Lot 1 TP92937; and
 - Lot 1 TP94911.

Access from Hickson Road (west of the future North South Arterial) to Officer South Road is to be closed once alternative access has been provided from Rix Road to the south.

- Hickson Road (west) is to be extended to the north, east of the North South Arterial, as a requirement of the development of Lot 1 TP110576 and Lot 1 TP117593. The road must provide a connection to the encumbered land abutting the rail line and accommodate an overland flow path.
- The section of Hickson Road (east) abutting the following lots is to be sealed along the length of the shared property boundary to the nearest sealed road, as a condition of their development:
 - Lot 1 TP90608;
 - Lot 1 TP602076;
 - Lot 1 TP201594;
 - Lot 1 TP549293;
 - Lot 30 LP7847; and
 - Lot 1 TP549393.
- The section of Rix Road (west of Brunt Road that is a Local Access Street Level 1) is to be sealed by abutting development along the length of the shared property boundary to the nearest sealed road, unless otherwise agreed in writing by the relevant roads authority.
- Commercial access lanes to provide rear access to Peripheral Commercial lots between Tivendale and Starling Roads are to be provided to the satisfaction of the relevant roads authority.

- The subdivision of Lots 1 & 2 PS605125 must create access to the following lots to the satisfaction of the responsible authority:
 - Lot 1 TP557408;
 - Lot 1 TP298289;
 - Lot 1 TP234744;
 - Lot 1 PS428045;
 - Lot 1 TP417192; and
 - Lot 7 LP51354.

Pedestrian / Path Facilities (including associated road widening)

- Pedestrian crossings across boulevard connector roads for high pedestrian activity generating uses (such as private schools or retirement villages) are to be provided to the satisfaction of the responsible authority.

Permits for subdivision, use or buildings and works not related to pre-existing uses (whichever is first) will trigger the requirements set out below.

- Where McMullen Road is to be delivered to the standard of a Connector Road, a minimum of 2.5 metres of land for road widening is to be provided from the following lots abutting the east side of the existing road reservation:
 - Lot 2 LP209820;
 - Lot 1 LP209820; and
 - Lot 1 LP124053.

Prior to the transfer of the land, a 2.5 metre path is to be constructed to the satisfaction of Cardinia Shire Council.

- Where Starling Road is to be delivered to the standard of a Connector Road, a minimum of 2.5 metres of land for road widening is to be provided from the following lots abutting the west side of the existing road reservation:
 - Lot 8 Block B LP433;
 - Lot 1 TP223900; and
 - Lot 5 LP66670.

Prior to the transfer of the land, a 2.5 metre path is to be constructed to the satisfaction of Cardinia Shire Council.

- Where Bayview Road is to be delivered to the standard of a Connector Road north of the East West Connector Street Boulevard, a minimum of 2.5 metres of land for road widening is to be provided from the following lots abutting the west side of the existing road reservation:
 - Lot 11 Block D LP433;
 - Lot 3 PS343758;
 - Lot 2 PS343758;
 - Lot 2 PS422710; and
 - Lot 1 PS422710.

Prior to the transfer of the land, a 2.5 metre path is to be constructed to the satisfaction of Cardinia Shire Council.

- Where Rix Road is to be delivered to the standard of a Connector Road west of Brunt Road, a minimum of 2.5 metres of land for road widening is to be provided from the following lots abutting the south side of the existing road reservation:
 - Lot 1 LP207729;
 - Lot 5 LP213919; and
 - Lot 4 LP213919.

Prior to the transfer of the land, a 2.5 metre path is to be constructed to the satisfaction of Cardinia Shire Council. The extent of road widening is to be determined by the location of the path and/or any services relative to native vegetation that is to be retained in the Officer Native Vegetation Precinct Plan (September 2011).

- Where Rix Road is to be delivered to the standard of a Connector Street Boulevard east of Brunt Road, a minimum of 1.5 metres of land for road widening is to be provided from the following lots abutting the north side of the existing road reservation:

- Lot 2 LP204371;
- Lot 1 PS321354; and
- Lot 2 PS321354.

Prior to the transfer of the land, a 1.5 metre path is to be constructed to the satisfaction of Cardinia Shire Council. The extent of road widening is to be determined by the location of the path and/or any services relative to native vegetation that is to be retained in the Officer Native Vegetation Precinct Plan (September 2011).

- Where Tivendale Road is to be delivered to the standard of Section 5e: Access Street Level 2, a minimum of 1.5 metres of land for road widening is to be provided from the following lots abutting the west side of the existing road reservation:

- Lot 1 TP552980;
- Lot 1 TP121672; and
- Lot 1 TP202168.

Prior to the transfer of the land, a 1.5 metre path is to be constructed to the satisfaction of Cardinia Shire Council.

- Where Lot 1 TP433123 (Maranatha Christian School) abuts the rail line, a minimum 10 metre reservation along the length of the rail reservation is to be provided for the purposes of a landscape trail.

Prior to the transfer of the land, a 2.5 metre path is to be constructed to the satisfaction of Cardinia Shire Council, unless otherwise agreed in writing.

Open Space

- Where landscaping and provision of park infrastructure is not funded by the DCP, it is to be fully funded by the developer.

Public Transport Delivery (Bus Network)

The Public Transport Plan (refer Plan 16) sets out the future public transport route(s) throughout the PSP area and identifies potential bus stops. Bus stops are identified as concrete hard stand areas, with shelters required in locations of higher activity including activity centres, schools and active open space reserves. The plan also details how the PSP area integrates with surrounding precincts to ensure connectivity for potential public transport routes.

Subdivisions that contain roads identified for a potential public transport route and associated bus stops will require mandatory conditions as outlined in the Schedule to the Urban Growth Zone relevant to this Precinct Structure Plan (UGZ3 and UGZ4).

For the purpose of Clause 52.36-1 of the Scheme, a development is consistent with the Officer Precinct Structure Plan (September 2011) where the following requirements are met:

- A road nominated on Plan 16: Public Transport as a potential bus route is constructed in accordance with its corresponding cross section specified in Section 4.6.3; and

- Signalised intersections that contain an existing or proposed Principal Public Transport Network (PPTN) route (refer Plan 16) include bus priority measures to mitigate delays to bus travel times, to the satisfaction of the Director of Public Transport; and
- Any roundabouts or other road management devices on potential bus routes are constructed to accommodate ultra low floor buses in accordance with the Public Transport Guidelines for Land Use and Development (DOT 2008).

Buildings and Works

- Buildings and works on Lot 1 TP433123 (Maranatha Christian School) must not be located within 10 metres of the rail reservation.

The following planning and design guidelines should be met:

- out-of-sequence development will be considered on a case-by-case basis, subject to considerations of land supply levels and housing affordability.

07 Other Information

7.1 Acronyms

AAV	Aboriginal Affairs Victoria
ABS	Australian Bureau of Statistics
AMP	Access Management Policy (VicRoads)
AS	Australian Standard
B1Z	Business 1 Zone
B4Z	Business 4 Zone
BAL	Bushfire Attack Level
CAD	Central Activities District
CBD	Central Business District
CC	Community Centre
CFFP (S&R)	Community Facility Funding Program (Sport & Recreation)
CHMP	Cultural Heritage Management Plan
CIL	Community Infrastructure Levy
CPTED	Crime Prevention Through Environmental Design
CSC	Cardinia Shire Council
DCP	Development Contributions Plan
DCPO	Development Contributions Plan Overlay
DDA	Disability Discrimination Act
DDO	Design and Development Overlay
DDS	Discount Department Store
DEECD	Department of Education and Early Childhood Development
DIL	Development Infrastructure Levy
DoT	Department of Transport
DPCD	Department of Planning and Community Development
DSE	Department of Sustainability and Environment
DSS	Development Services Scheme
EAO	Environmental Audit Overlay
EPBC	Environmental Protection and Biodiversity Conservation Act 1999
ESO	Environmental Significance Overlay
EVC	Ecological Vegetation Community
FFG	Flora & Fauna Guarantee Act 1998
FO	Floodway Overlay
FTE	Full Time Equivalent

GAA	Growth Areas Authority
GDA	Gross Developable Area
GLA	Gross Leasable Area
GWZ	Green Wedge Zone
HACC	Home and Community Care
HO	Heritage Overlay
IN1Z	Industrial 1 Zone
LDR	Low Density Residential
LDRZ	Low Density Residential Zone
LPPF	Local Planning Policy Framework
LSIO	Land Subject to Inundation Overlay
MAC	Major Activity Centre
MSS	Municipal Strategic Statement
NAC	Neighbourhood Activity Centre
NCC	Neighbourhood Convenience Centre
NDA	Net Developable Area
NVPP	Native Vegetation Precinct Plan
OHSC	Out of School Hours Care
PAC	Principal Activity Centre
PAO	Public Acquisition Overlay
PCRZ	Public Conservation & Recreation Zone
PIP	Precinct Infrastructure Plan
PPRZ	Public Park & Recreation Zone
PPS	Post Primary School
PPTN	Principal Public Transport Network
PrS	Private School
PS	Primary School
PSP	Precinct Structure Plan
PUZ4	Public Use Zone 4 (Transport)
R1Z	Residential 1 Zone
RDZ	Road Zone
SLA	Statistical Local Area
SLO	Significant Landscape Overlay
SoHo	Small Office / Home Office
SS	Special School
TOD	Transit Oriented Development

UDF	Urban Design Framework
UFZ	Urban Floodway Zone
UGB	Urban Growth Boundary
UGZ	Urban Growth Zone
VPD	Vehicles per Day
VPO	Vegetation Protection Overlay
WONS	Weeds of National Significance
WSUD	Water Sensitive Urban Design

7.2 Glossary of Terms

Active Open Space	Land set aside for the specific purpose of formal outdoor sports by the community.
Activity Centre	Focus for business, shopping, working and leisure, and usually community facilities. Well served by public transport and containing higher density development. Growth areas include Principal Activity Centres, Major Activity Centres, Specialised Activity Centres, Neighbourhood Activity Centres and Local Centres.
Allotment (or Lot)	A part (consisting of one or more pieces) of any land (except a road, a reserve, or common property) shown on a plan, which can be disposed of separately and includes a unit or accessory unit on a registered plan of strata subdivision and a lot or accessory lot on a registered cluster plan.
Arterial Road	A higher order road providing for moderate to high volumes at relatively high speeds. A minimum four lane cross section generally applies. See Local Arterial Road and Existing/Future State Arterial Road.
Barrier housing	A type of dwelling which incorporates sound barriers into the design of a wall or edge.
Bulky Goods	Large format retailing, generally comprising hardware, whitegoods, lighting, furniture and furnishings and other large showroom-based uses.
Bushfire Attack Level	<p>The Bushfire Attack Level (BAL) is a rating system used to define the level of exposure a bushfire will have on a building. It is measured in terms of the radiant heat exposure or the direct flame contact from a bushfire as well as considering the impact from burning embers.</p> <p>The BAL rating for a dwelling takes into account a number of factors including predicted fire danger, the slope of land, types of surrounding vegetation and its proximity to any building.</p>
Capital Expenditure	A payment made, or to be made for one-off long term infrastructure in terms of the Precinct Infrastructure Plan or Development Contributions Plan.
Civic facilities	Government offices and services. Generally Council facilities.
Co-location	Adjoining land uses to enable complementary programs, activities and services and shared use of resources. For example, the co-location of schools and active open space.
Commercial	Land used for office, administration and other commercial/business activities, such as finance, telecommunications and corporate headquarters.
Community Facilities	See Community Infrastructure
Community Hub	A cluster of facilities that enable people to meet and participate in a range of activities, programs, services and events. Often identifiable by the co-location of schools, open space, community facilities and local shops.
Community Infrastructure	Public and private, State, Council and non-council facilities which accommodate community support services, programs and activities (e.g. preschool, child care, youth services, aged services, community meetings, sporting competition, arts, performing arts, informal recreation, cultural activities, health programs, education activities, emergency services, civic, community support).

Community services	Encompasses a range of services including child care centres, support services, churches and Centrelink.
Connector Street	A lower order street providing for low to moderate volumes and moderate speeds linking local streets to the arterial network. A Council road.
Convenience retail	Includes convenience store/shop, milkbar, takeaway shop and convenience restaurant
Convenience store	A small store, which stocks a range of everyday goods including milk, bread and other basic groceries. Generally less than 500 square metres in size.
Core Business	Land generally used for a shop (i.e. a Supermarket) and other retail uses where a product is sold. For example a food store, bakery, clothing store, hairdresser etc.
Council information	Information kiosk co-located with other services.
Cultural facilities	Cultural centres and that perform a range of different roles such as performances and exhibition, functions and events and/or classes and cultural development activities.
Defendable space	<p>Defendable Space is an area of land between the bushfire hazard (i.e. vegetation) and a building which is managed to reduce fuel loads and reduce potential radiant heat levels, flame, ember and smoke attack.</p> <p>Defendable space also provides an area from which buildings can be actively defended.</p> <p>Defendable space is made up of two components. An inner zone (to eliminate direct flame contact) and an outer zone (to reduce fire intensity). The inner zone is more intensively managed than the outer zone.</p>
Department store	A regional store type, which offers a wide range of higher-order and discretionary household goods. Examples include David Jones and Myer.
Development Contributions Plan (DCP)	Sets out the contributions expected from each individual landowner to fund infrastructure and services. Refer to Part 3B of the Planning and Environment Act 1987.
Discount department store	A sub-regional store type, which offers a wide range of household goods. Examples include Big W, K-Mart, Target and Harris Scarfe.
Existing/Future State Arterial Road	A higher order road that is a declared State road or identified as a future declared State Road, under the Road Management Act 2004. Typically used for inter-suburban journeys and linking to freeways.
Freeway	A high speed and high volume road with the highest level of access control and typically used for longer distance journeys across the metropolitan area and country Victoria. All freeways are managed by VicRoads.
Frontage	The road alignment at the front of a lot. If a lot abuts two or more roads, the one to which the building, or proposed building, faces.
General store	See convenience store
Green travel plan	A plan produced by a business or organisation that encourages the use of public transport and other more sustainable means of travel by employees and customers. May include initiatives such as car sharing, incentives to walk and cycle, commitments to increasing efficiency of fleet vehicles and use of renewable energy sources for fuel.
Gross Developable Area	Total area bounded by the precinct boundary.

Growth Area	Areas on the fringe of metropolitan Melbourne designated for large-scale growth. The following municipal councils: Cardinia Shire; Casey City; Hume City; Melton Shire; Mitchell Shire; Whittlesea City; Wyndham City.
Growth Area Framework Plan (GAFP)	Government document that set long-term strategic planning direction to guide the creation of a more sustainable community in the growth areas.
Growth Areas Authority (GAA)	A statutory authority established by the Victorian Government to work in partnership with councils and government agencies, and provide advice to government on the coordination of land development, infrastructure and service provision in the growth areas.
Hospitality	Includes restaurants and cafes, hotel and tavern
Housing Density (Gross)	Housing yield divided by gross developable area.
Housing Density (Net)	Housing yield divided by net developable area.
Housing yield	Number of dwellings.
Industrial	Land used for heavy industry, manufacturing, engineering works, warehousing, distribution and supporting industry.
Joint Use	See Shared Use
Large format retail store	A retail store generally comprising 400 square metres or more, other than a Supermarket, Discount Department Store or Department Store. Includes mini majors.
Local Arterial Road	Similar to an arterial road, but generally more modest in terms of speed and volume. Supplements the declared arterial network and managed by the relevant local council.
Major Activity Centre (MAC)	Defined in Melbourne 2030, page 48. Anchored by Discount Department Store(s) and/or Department Store. Provides for a wide range of discretionary shopping and services needs, in addition to meeting the weekly needs of its catchment.
Medical services	Includes dental, optometry, sports medicine, chiropractic, physiotherapy and other medical services.
Meeting space	Includes local meeting rooms and amenities for a range of local resident activities (community meetings, community education, social and recreational groups).
Mini major	Includes stores such as Best & Less, Priceline, Rebel Sport and Borders.
Native Vegetation	Plants that are indigenous to Victoria, including trees, shrubs, herbs, and grasses.
Native Vegetation Precinct Plan (NVPP)	Sets out requirements for the protection and removal of native vegetation for a defined area or precinct.
Neighbourhood Activity Centre (NAC)	Defined in Melbourne 2030, page 49. To be anchored by a supermarket that is at least 2,500 square metres gross leasable floor area, with a broad range of supporting retail goods and services. Provides for weekly shopping and services needs of its catchment.

Neighbourhood Convenience Centre (NCC)	An activity centre which provides for daily needs of its catchment. Generally anchored by a convenience store, NCCs provide a small range of goods and services. Generally does not contain a supermarket. Provision of minor supermarkets (approximately 1000 square metres) may be considered on a case-by-case basis, however the delivery of these stores must not prejudice the delivery or timing of full-size (over 3000 square metre stores) in NACs or MACs
Net Developable Area (NDA)	Area available for development for housing or employment. Includes lots and streets (local and most collector roads unless otherwise specified in the Land Use Budget - refer Plan 6). Excludes schools, open space, conservation areas, drainage, arterial and sub-arterial roads. The term 'Net Developable Area' is commonly used in reference to the Precinct, however may also be used in reference to the Net Developable Area of any property.
Office	Refer to the Land Use Terms at Clause 74 of the Cardinia Planning Scheme.
Open Space Corridor	Linear open space, generally along river and creek lines, railway lines or similar, which link together to form a network and provide active transport connections in the community to key destinations and facilities.
Operational Expenditure	An ongoing cost for infrastructure in terms of the Precinct Structure Plan or Development Contributions Plan (PSP Guidelines, 2008, Section 8).
Passive Open Space	Parks, gardens, linear corridors and reserves that are made available for passive recreation, play and relatively low levels of physical activity including walking, cycling, hiking, revitalisation, contemplation and enjoying nature.
Peripheral Commercial	Land used for a variety of uses other than 'shop'. May include bulky goods, restaurants, cafes, hairdressers, medical centres and residential. Refer to the Schedule to the Urban Growth Zone that applies to the land in the Cardinia Planning Scheme.
Personal services	A range of retail services which include hairdressers and beauty salons.
Precinct Infrastructure Plan (PIP)	Summarises how infrastructure and services necessary for the precinct will be delivered.
Precinct Structure Plan (PSP)	A statutory document that describes how a precinct or series of sites within a growth area will be developed over time. A PSP sets out the broad environmental, social and economic parameters for the use and development of land within the precinct.
Principal Activity Centre (PAC)	Defined in Melbourne 2030, page 47.
Principal Public Transport Network (PPTN)	A high-quality public transport network that connects Principal and Major Activity Centres, and comprises the existing radial fixed-rail network, extensions to this radial network and new cross-town bus routes.
Professional services	Encompasses office-based uses, such as accountants, lawyers, employment agencies, computer services, drafting and surveying, architecture and design services, telecommunications and insurance.
Public Open Space	Land set aside in a plan or land in a plan zoned or reserved under a planning scheme for public recreation or public resort; or as parklands; or for similar purposes. Incorporates active and passive open space.

Public Transport Interchange	Places where people can access or change between multiple public transport routes, for example, between train and bus or a multi-route bus station at a major activity centre.
Recreation, leisure & gym facilities	Includes fitness centres and gymnasiums, karate and calisthenics clubs, personal training studios.
Retail services	A range of commercial services available to the public and conducted from a shopfront environment, including banks, credit unions, travel agents, printing and photocopying services and post offices, as well as personal services. See personal services
Road	Includes highway, street, lane, footway, square, court, alley or right of way, whether a thoroughfare or not and whether accessible to the public generally or not.
Rooftop plant	Services located on the rooftop of buildings, including ventilation units, telecommunications facilities, lift shafts and aerials. May include satellite dishes.
Service Business	Land used for combined office/warehouse (sales/administration/warehouse/distribution) and outlets servicing local needs including trade supplies, equipment hire, motor repairs, motor vehicle sales, boat or caravan sales.
Services for young people	Services for young people that include the provision of opportunities to socialise, participate in activities and access meeting spaces.
Shared Use	When schools, councils and community organisations come together to plan, build and in some cases jointly manage a single facility to be used by multiple service providers, e.g. the concept of using a school as a community facility is about enabling the school to provide for wider community utilisation.
Showroom	A building with a high visibility, extensively glazed façade used to display goods. May sell motor vehicles, electrical appliances, lighting or Bulky Goods. Generally more than 1000 square metres. See definition of Bulky Goods
Small Lot Housing Code	Planning and Design Guidelines setting out the requirements for building envelopes on plans of subdivision on lots with an area less than 300 square metres.
Slip lane	A slip lane is an area of road for left turning vehicles that is separated, at some point, from other parts of the road by a painted island or traffic island. It does not require left turning vehicles to enter the intersection to complete the manoeuvre. As opposed to stand up lane (see definition).
Social Infrastructure	Community Infrastructure and public open space.
SoHo	Small Office/Home Office. Generally provides a dwelling and an office space integrated into the one building, usually with a separate entrance for each use.
Specialised Activity Centre	Defined in Melbourne 2030, page 49.
Stand up lane	A stand-up lane is a road traffic lane that requires left turning vehicles to enter the intersection to complete the manoeuvre. As opposed to slip lane (see definition).

Supermarket	A store generally more than 1,000 square metres in size, which principally sells food and groceries (meat, fresh produce, baked goods, canned and packaged food, cleaning and other household products and pet supplies. Often includes liquor and a small range of discretionary items including basic clothing, pharmaceutical and stationery goods.
Unencumbered land	Land unencumbered by other constraints (such as land required by Melbourne Water for drainage purposes, land within service easements, land identified as having environmental or heritage significance).
Urban Growth Boundary (UGB)	A management tool to contain urban areas and limit their expansion. It divides land that is urban – to be used for housing, shops, factories – from land that is non-urban and to be used for purposes such as conservation, agriculture, mineral extraction, airports and the like.
Urban Growth Zone (UGZ)	Applies to land identified for future urban development to manage transition of non-urban land into urban land; to encourage development of well-planned and well-serviced new urban communities in accordance with an overall plan; to reduce the number of development approvals needed in areas where an agreed plan is in place; and to safeguard non-urban land from use and development that could prejudice its future urban development.
Water Sensitive Urban Design (WSUD)	Aims to provide water-quality treatment as well as flood management and to reduce the pollution carried to our waterways. Key principles include minimising water resistant areas; recharging natural groundwater aquifers (where appropriate) by increasing the amount of rain absorbed into the ground; encouraging on-site reuse of rain; encouraging on-site treatment to improve water quality and remove pollution; using temporary rainfall storage (retarding basins/wetlands) to reduce the load on drains.

7.3 References

- Biosis Research Pty. Ltd. 2008: Growling Grass Frog Conservation Management Plan for the VicUrban Development, September 2008
- Biosis Research Pty. Ltd. 2006: Officer Structure Plan: Flora and fauna assessment draft report. Unpublished report prepared for Cardinia Shire Council
- Biosis Research Pty. Ltd. 2005: Pakenham Bypass: Conservation Management Plan for the Growling Grass Frog *Litoria raniformis*, Pakenham, Victoria. Unpublished report prepared for VicRoads
- Biosis Research Pty. Ltd. 2004: Pakenham Bypass: Growling Grass Frog *Litoria raniformis* 2003/04 survey, Pakenham and surrounds Victoria. Unpublished report prepared for VicRoads
- Biosis Research Pty. Ltd. 2006: Officer Structure Plan, Flora and Fauna Assessment, March 2006
- Buchan Group 2011: Officer Town Centre Masterplan, Revision E, May 2011
- Butler & Associates 1996: Cardinia Shire Heritage Study, Vol 3 Heritage Places
- Context Pty Ltd 2011: Response to GAA comments on revisions to Officer HO boundaries, January 2011
- Context Pty Ltd 2010: Proposed revisions of HO boundaries in Officer Township, Final Report, October 2010
- Department of Planning and Community Development (DPCD) 2007: Development Contributions Guidelines, March 2007
- Department of Sustainability and Environment (DSE) 2006: A Plan for Melbourne's Growth Areas
- Department of Sustainability and Environment (DSE) 2005: Potentially Contaminated Land, General Practice Note, June 2005
- Department of Sustainability and Environment (DSE) 2005: Safer Design Guidelines for Victoria, June 2005
- Department of Sustainability and Environment (DSE) 2005: Activity Centre Design Guidelines, January 2005
- Department of Sustainability and Environment (DSE) 2004: Guidelines for Higher Density Residential Development, October 2004
- Department of Sustainability and Environment (DSE) 2002: Victoria's Native Vegetation Management - a Framework for Action
- Department of Transport (DOT) 2008: Public Transport Guidelines for Land Use Development.
- Ecology Australia Pty. Ltd. 2011: Officer Precinct Structure Plan Cardinia Creek Conservation Management Plan, September 2011
- Ecology Australia Pty. Ltd. 2004a: Shire of Cardinia, Indigenous Vegetation Survey, Pakenham Growth Corridor & adjoining area. Unpublished report by Ecology Australia Pty. Ltd. prepared for Cardinia Shire Council.
- Ecology Australia Pty. Ltd. 2004b: Shire of Cardinia, Indigenous Vegetation Survey, An Inventory of site of Biodiversity Significance in the Pakenham Growth Corridor and adjoining area. Unpublished report by Ecology Australia Pty. Ltd. prepared for Cardinia Shire Council.
- Ecology Partners Pty. Ltd. 2011a: Biodiversity Assessment Report: Officer Precinct Structure Plan, Officer, Victoria, May 2011
- Ecology Partners 2011b: Officer Precinct Structure Plan Conservation Management Plan (excluding Cardinia Creek), Officer, Victoria, September 2011
- Ecology Partners 2011c: Officer Native Vegetation Precinct Plan, September 2011
- Ecology Partners 2011d: Officer Net Gain Strategy, September 2011
- Ecology Partners 2009: Officer Precinct Structure Plan, Target Significant Flora and Fauna Surveys, Officer, Victoria April 2009

Ecology Partners Pty. Ltd. 2008: Flora and Fauna Assessment of the Cardinia Employment Corridor (west), Officer, Victoria. Unpublished report by Ecology Partners Pty. Ltd. prepared for Cardinia Shire Council.

Ecology Partners 2008: Officer Structure Plan, Flora and Fauna Assessment, Officer, Victoria June 2008

Ecology Partners 2006: Strategic Advice on the Growling Grass Frog *Litoria raniformis*: Officer Structure Plan, Officer, Victoria June 2006

Growth Areas Authority 2009: Precinct Structure Planning Guidelines

Hansen Partnership 2011: Officer West, Cardinia, Landscape Assessment, Prepared by Hansen Partnership Pty Ltd for Cardinia Shire Council Pty Ltd, January 2011

Heritage Council of Victoria 2010: Conservation Management Plans: Managing Heritage Places – A Guide, June 2010

Meinhardt Infrastructure & Environment 2011: Officer Precinct Structure Plan Desktop Environmental, Hydrology and Geotechnical Assessment, Prepared for the Growth Areas Authority, February 2011

Parks Victoria, Cardinia Creek Parklands Future Directions Plan, December 2002

SMEC 2011a: Officer Precinct Structure Plan Future Traffic Estimates and Road Infrastructure Requirements report, September 2011

SMEC 2011b: Officer Development Contributions Plan Infrastructure Costs for Road, Traffic Management & Trail Items, September 2011

SMEC 2011c: Officer Road Network – Intersection Layout Plans, September 2011

SMEC 2011d: Officer Road Network – General Layout Plans, September 2011

Stormy Water Solutions 2011: Officer South Road Drain, Officer, Proposed Drainage Strategy, September 2011

Stormy Water Solutions 2011: Drainage Strategy – Officer Road Drain West, Downstream of the Railway, April 2011

Stormy Water Solutions 2011: Grasslands Retarding Basin and Wetland Functional Design, Officer, April 2011

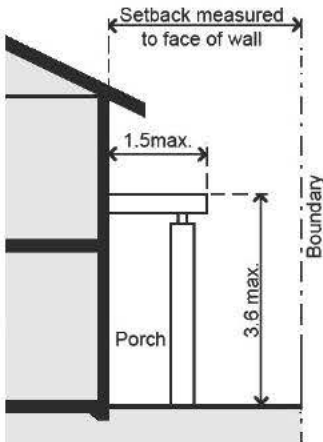
Tardis Enterprises Pty Ltd 2011: Officer Precinct Structure Plan, Desktop Cultural Heritage Assessment, January 2011

Tardis Enterprises Pty Ltd 2009: Officer Precinct Structure Plan, Desktop Cultural Heritage Assessment, May 2009

Terramatrix Pty Ltd 2011: Fire Risk Assessment Study North West Corner - Officer Precinct Structure Plan, Report Commissioned by Cardinia Shire Council

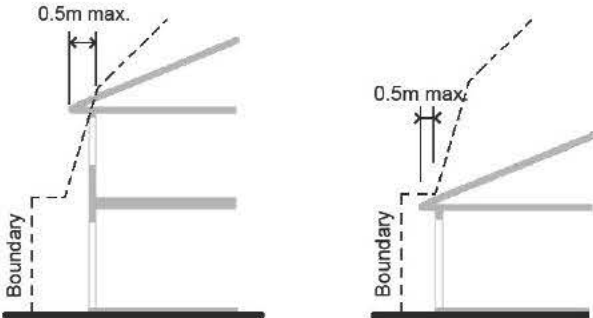
VicRoads 2006: Access Management Policies, Version 1.02 including Guidelines for Transport Impact Assessment Reports, May 2006

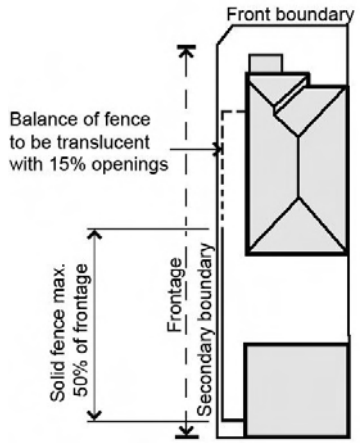
Appendix A: Small Lot Housing Code

1	Front street setback	1.1	The front wall of a dwelling must be set back from the front boundary of the lot at least the distance below:	
			Land to which the standard applies	Front setback as measured to face of wall
			Land specified in the Housing Plan in the PSP as High Density Residential A or High Density Residential B.	1.5 metres or 4 metres for a declared road
			Land specified in the Housing Plan in the PSP as Medium Density or land specified in a subdivision permit.	3 metres or 4 metres for a declared road or 1.5 metres if the dwelling fronts a public park
	Garage setback	1.2	A garage door or opening that is accessed from the front street must be set back from the front wall of the dwelling at least 0.8 metres.	
2	Encroachment into front setback	2.1	Porches, verandahs and pergolas that have a maximum height of less than 3.6 metres above natural ground level and are open on at least two sides may encroach no more than 1.5 metres into the front setback measured to the outermost point such as eaves fascia of the porch, verandah and pergola including gutters.	
		2.2	Balconies at the second storey may project no more than 1 metre into the front setback measured to the outermost point such as eaves fascia of the porch, verandah and pergola including gutters.	
				

3	Building height	3.1	The maximum height of a dwelling must not exceed 10 metres from natural ground level unless the slope of the natural ground level where the building height is measured is 4% or more, in which case the maximum building height must not exceed 11 metres.		
4	Permeability	4.1	The following minimum areas of a lot must not be covered by impervious surfaces:		
		Land to which the standard applies		Permeability	
		Land specified in the Housing Plan in the PSP as High Density Residential A or High Density Residential B.		No minimum area	
		Land specified in the Housing Plan in the PSP as Medium Density or land specified in a subdivision permit.		10%. The area may be the average of lots of attached dwellings that are constructed simultaneously.	
5	On a lot carparking	5.1	Minimum number of car spaces to be provided:		
		Land to which the standard applies		3 bedrooms or more	2 bedrooms or less
		Land specified in the Housing Plan in the PSP as High Density Residential A or High Density Residential B.		1 covered space	1 covered space
		Land specified in the Housing Plan in the PSP as Medium Density or land specified in a subdivision permit.		2 car spaces including 1 covered space	1 covered space
		A car space provided in front of a garage must have a minimum depth of 5 metres.			
6	Side and rear setbacks	6.1	A wall not on or within 200mm of a boundary must be set back from side or rear boundaries 1 metre, plus 0.3 metres for every metre of height over 3.6 metres up to 6.9 metres, plus 1 metre for every metre of height over 6.9 metres. Where the setback is to a laneway the setback may be reduced by up to half the width of the laneway.		
		6.2	Sunblinds, verandahs, porches, fins, sunhoods, screens, eaves, fascias, gutters, masonry chimneys, flues, pipes, domestic fuel or water tanks, and heating or cooling equipment or other services may encroach not more than 0.5 metres into the setbacks of this standard.		
7	Side street setbacks	7.1	A wall that faces a side street must be setback from the boundary of the lot at least the distance specified in the table.		

		7.2	A corner wall at a splayed boundary must be set back from the boundary of the lot at least the distance in the table.			
		7.3	A porch, verandah or pergola at a side street must be translucent on at least 2 sides and not more than 4 metres in length and set back from the side street at least the distance specified in the table.			
			Land to which the standard applies	Secondary boundary setback as measured to face of wall:	Setback to corner splay as measured to face of wall:	Setback of translucent element to a secondary boundary:
			Land specified in the Housing Plan in the PSP as High Density Residential A or High Density Residential B.	Nil setback	-	Nil setback
			Land specified in the Housing Plan in the PSP as Medium Density or land specified in a subdivision permit.	1.5 metres	1.0 metres	0.5 metres
8	Walls on boundaries	8.1	<p>A wall constructed on or within 200mm of a side or rear boundary of a lot or a carport constructed on or within 1 metre of a side or rear boundary of a lot may:</p> <ul style="list-style-type: none"> • fully abut the boundary where the maximum height of the wall does not exceed 3.6 metres; and • abut the boundary above 3.6 metres for the length of an existing or simultaneously constructed wall. <p>The height difference between abutting walls must be no more than 1 storey.</p> <p>These requirements do not apply to a wall constructed on or within 150mm of a boundary with a laneway.</p>			
9	Overlooking above ground floor	9.1	<p>Windows at a second level and above must be set back 4.5 metres from a side or rear boundary; or</p> <ul style="list-style-type: none"> • must be obscured to 1.7 metres; or • must have a sill height of 1.7 metres. <p>The setback of a window to a laneway may be reduced by up to half the width of the laneway.</p>			

		9.2	A roof top area that is private open space must be set back 4.5 metres from a side or rear boundary or must be obscured to a height of 1.7 metres at the perimeter of the rooftop area for any portion of the perimeter that is within 4.5 metres of a side or rear boundary. The setback to a laneway may be reduced by up to half the width of the laneway.
10	Daylight	10.1	Eaves including gutters may project no more than 0.5 metres in to a side or rear setback.
			
11	Private open space	11.1	<p>If a dwelling has 3 or more bedrooms:</p> <ul style="list-style-type: none"> at least 25 square metres of private open space at the side or rear of the dwelling with a minimum dimension of 3 metres must be provided; or a balcony of least 12 square metres of private open space with a minimum dimension of 3 metres must be provided; or a roof-top area of 12 square metres of private open space with a minimum dimension of 3 metres must be provided.
		11.2	<p>If a dwelling has two bedrooms or less:</p> <ul style="list-style-type: none"> at least 15 square metres of private open space at the side or the rear of the dwelling with a minimum dimension of 3 metres must be provided; or if the private open space is provided as a balcony or rooftop area the minimum area may be reduced to no less than 10% of the dwelling (excluding garages) or 6 square metres with a minimum dimension of 2 metres, whichever is the greater.
		11.3	Private open space that is provided at the side or rear of the dwelling or as a balcony must be directly accessible from either a living room or dining room.

		11.4	For the purposes of this Code a roof top area is not an additional storey.
12	Front fence	12.1	A fence constructed forward of the front wall or encroachment in to the front setback must not exceed 1.2 metres in height. Above 0.7 metres the fence must be no more than 85% solid. This requirement does not apply to a front fence within 3 metres of a declared road.
13	Side fence	13.1	Where a fence faces a secondary boundary (side street) solid fencing must not exceed 50% of the length of the front and side boundary with maximum unbroken lengths of 10 metres. The balance of the fence must be no more than 85% solid. The height of a fence must not exceed 2 metres.
			 <p>The diagram shows a side elevation of a house with a gabled roof. A dashed line represents the 'Front boundary' and another dashed line represents the 'Secondary boundary'. A fence is shown along the secondary boundary. A vertical dimension line indicates that the 'Balance of fence to be translucent with 15% openings' and another vertical dimension line indicates that the 'Solid fence max. 50% of frontage'.</p>
14	Integration with the street	14.1	<p>Where garage doors or openings are located at the front of a dwelling:</p> <ul style="list-style-type: none"> the width of the garage doors or openings must not exceed 40% of the lot's total street front width if the dwelling is single storey, or if the dwelling is 2 or 3 storeys the area of garage doors or openings must not exceed 25% of the area of the front facade of the dwelling. <p>The area of the front facade of the dwelling is measured from a two-dimensional elevation plan and excludes any area of the roof of the dwelling.</p>
			Vehicle access to a car space or garage on the lot must be from the rear of the dwelling if the lot has a front width of 6.0 metres or less.

15 Front facade articulation

15.1 The front façade of each dwelling must have a minimum standard of articulation comprising at least two components of Group A OR at least one component of Group A and one component of Group B:

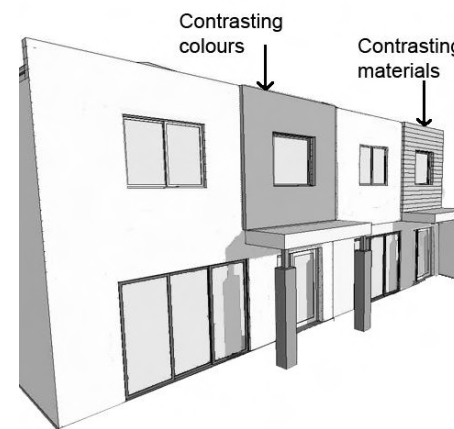
Group A

1. A plan profile stepped a minimum 0.3 metre in depth for a length of at least 1 metre.
 2. An underhang or overhang architectural element stepped a minimum 0.3 metre for a distance of at least 1 metre.
 3. Balconies, porches, pergolas, fins, sunhoods and screens which have a minimum depth of 0.3 metre and a minimum aggregate dimension of 2 metres.
- Eaves are not articulation for this part.



Group B

1. Two or more contrasting wall colours and/or tones.
2. Feature materials including stained timber, stone, steel, metallic surfaces or profiled wall cladding.



16 Side facade articulation

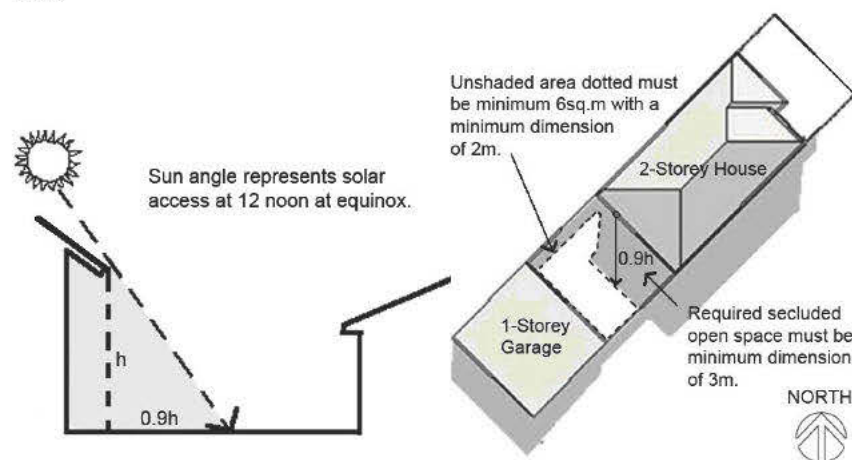
- 16.1 Where a wall of a dwelling exceeds 10 metres in length and faces a side street there must be a minimum standard of articulation of:
- a plan profile stepped a minimum 0.3 metre in depth for a length of at least 1 metre to limit any unbroken length to 10 metres; or
 - contrasting material for at least 2 metres to limit any unbroken length to 10 metres; or
 - contrasting wall colours for at least 2 metres to limit any unbroken length to 10 metres.



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.

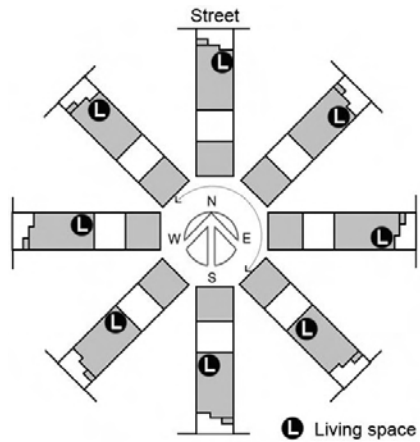
17 Sunlight to private open space

- 17.1 Where private open space is provided at the side or rear of a dwelling it must have a minimum area of 6 square metres of direct sunlight with a minimum dimension of 2 metres measured at ground level at noon on the equinox. The length of the shadow cast by walls and fences is calculated as $0.9h$ where 'h' is the height of the wall or fence. This requirement does not apply to private open space provided as a balcony or roof top area.



18 Solar orientation

- 18.1 A house must contain a principal living space that faces within 45 degrees of true north and/or east. A principal living space is a living room or a dining room.



19 Vehicle access

- 19.1 Vehicle access to a car space or garage on the lot must not be from a private road or access way.

