

**PSP 2.0**

**VICTORIA**  
State  
Government

# Officer South Employment

PRECINCT STRUCTURE PLAN

BUNURONG COUNTRY

## Draft for public consultation

SEPTEMBER 2023

**vpa**  
Victorian Planning Authority

The **Victorian Planning Authority proudly acknowledges** Victoria's Aboriginal community and their rich culture and pays respect to their Elders past and present.

**We acknowledge** Aboriginal people as Australia's first peoples and as the Traditional Owners and custodians of the land and water on which we rely.

**We recognise** and value the ongoing contribution of Aboriginal people and communities to Victorian life and how this enriches us.

**We embrace** the spirit of reconciliation, working towards the equality of outcomes and ensuring an equal voice.

The Officer South Employment Precinct is located on the traditional lands of the Bunurong People. The Bunurong People are represented by the Bunurong Land Council Aboriginal Corporation (BLCAC).

We acknowledge the Bunurong People as the Aboriginal Traditional Owners of their unceded Country. We acknowledge their ongoing connection to this land, and we pay our respects to their Elders past and present.

*'Cardinia' has been identified as the anglicised interpretation of an eastern Kulin term roughly translated to "looking east from the creek" (BCLAC)*

We thank BLCAC for their engagement throughout this project.

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This planning report was developed by the Victorian Planning Authority (VPA) on behalf of the Victorian Government.

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# 1 CONTEXT

## 1.1 How to read this document

The Precinct Structure Plan (PSP) guides land use and development where a planning permit is required under the Urban Growth Zone (Clause 37.07 of the Cardinia Planning Scheme), or any other provision of the Cardinia Planning Scheme that references this PSP.

### Part 1: Context

The first part contains an overview of the PSP document and the function of individual components as well as infrastructure contributions required to deliver the precinct

PSP Guidelines refers to the **Precinct Structure Planning Guidelines: New Communities in Victoria**, available on [the VPA website](#)



### Part 2: PSP Outcomes

A planning application and subsequent planning permit must implement the outcomes of the PSP.

The outcomes are expressed as:

- the **vision**, which is the overarching unique place-based outcome intended for this PSP
- the **purpose**, which sets out how the PSP will deliver on the vision for the precinct
- the **place-based plan**, which is a plan of the future community

The **PSP performance summary** illustrates performance against the targets set out in the PSP Guidelines. Where targets are not met, the PSP identifies the reasons why the targets have not been met, and what alternative approaches have been adopted to comply with the PSP Guidelines principles.

### Part 3: Implementation

Each **hallmark** is implemented according to the following sub-structure:

- **PSP objectives:** The PSP identifies a set of place-based objectives to achieve the vision and purpose for the precinct. These provide the guidance required to achieve the specific outcomes sought for each of the seven hallmarks within the precinct
- **PSP implementation and delivery:** To assist with understanding how to implement the strategies, the PSP provides guidance in the form of requirements, plans, tables and diagrams
- **Place-based requirements and guidelines:** Provides decision making guidance when exercising discretion to determine if an application meets the relevant requirement

Alternative strategies to achieve the vision and objectives may be considered by the responsible authority. Alternative strategies must demonstrate how they will achieve the vision and objectives of the PSP.

To assist with understanding where alternative approaches may be supported, **plans, tables and diagrams** identify the level of flexibility that may be considered.

Not every aspect of land use, development or subdivision is addressed in this PSP. A responsible authority may manage development and issue permits as relevant under its general discretion. The [Generally in Accordance Guidance Note](#) is available on the VPA website to provide direction in the application of discretion where a PSP applies.

Development must comply with Acts and approvals where relevant e.g., the *Environment and Biodiversity Conservation Act 1999* or the *Aboriginal Heritage Act 2006*, amongst others.

## 1.2 Objectives, requirements and guidelines

A planning application and subsequent planning permit must implement the outcomes of the PSP. The outcomes are expressed as the PSP Vision, PSP Purpose and Objectives in the following chapters.

Each chapter of the PSP contains requirements and guidelines as relevant. Requirements must be adhered to in developing the land. Where they are not demonstrated in a permit application, requirements will usually be included as a condition on a planning permit however they may not be of the same wording as in the structure plan. A requirement may reference a plan, table or figure in the structure plan.

Guidelines express how discretion will be exercised by the responsible authority in certain matters that require a planning permit. If the responsible authority is satisfied that an application for an alternative to a guideline implements the outcomes and /or objectives, the responsible authority may consider the alternative. Alternative solutions put forward must be generally in accordance with the PSP. A guideline may include or reference a plan, table or figure in the PSP.

Meeting these Requirements and Guidelines will implement the Vision, Purpose and Objectives of the PSP.

## 1.3 Purpose of the PSP

The purpose of the PSP is to activate the PSP outcomes by:

- providing the planning conditions for private industry delivery
- identifying and, where appropriate, providing the shared funding for a diverse range of open spaces and community infrastructure
- ensuring planning permit applications will generate the population to support investment in critical infrastructure.

## 1.4 Regional and strategic policy context

*Plan Melbourne 2017–2050*, the *Melbourne Industrial and Commercial Land Use Plan* (MICLUP) and the *South-East Growth Corridor Plan* (2012) have identified the Officer South Employment Precinct to support a State Significant Industrial Precinct and Regionally Significant Commercial Area (including business with residential uses). These policies envisage the primary role for the precinct to cater for an employment and economic role, providing a long-term supply of employment land as part of a broader Officer–Pakenham employment corridor in Melbourne’s south-east (refer Plan 1: Regional Context).

## 1.5 Precinct features

The Officer South Employment Precinct is bound by Cardinia Creek to the west, Lower Gum Scrub Creek to the east, Princes Freeway to the north and green wedge to the south. The precinct area abuts several emerging growth area communities including Cardinia Road Employment PSP to the east, Minta Farm, Clyde North, Cardinia Creek South PSP to the west, and Officer PSP to the north.

The natural watercourses form a large transition zone between this precinct and the neighbouring communities to its east and west, providing a high-quality cultural and landscape amenity opportunity for its future population to enjoy. Aboriginal heritage areas of sensitivity are identified throughout the precinct and a cultural heritage investigation area is identified along Cardinia Creek, to be enhanced and protected through the PSP.

The VPA has consulted with Bunurong Land Council Aboriginal Corporation as the Traditional Owners of the land to help ascertain the important cultural values that are significant in the precinct. The Bunurong people’s heritage and story play an important role within the PSP, guiding outcomes that recognise the celebration of water, their journey (from the Dandenong Ranges to the south), Cardinia Creek life and the congregating of people and communities. Open spaces have been planned at identified high ground meeting places and connecting active path networks celebrate their journey in the east–west and north–south directions.

Two significant easements, a high-pressure gas and an electricity transmission easement, further divide the precinct into approximately three horizontal parts, which carry significant development constraints. There are also existing NBN fibre optic cables, additional gas distribution mains and high to very high retention value trees throughout the precinct.

A major existing sewer pumping station is located in the north of the precinct to provide wastewater services to the precinct and Officer. South East Water have proposed a sewer pumping station in the south of the precinct along Patterson Road to service the PSP catchment.

Public Acquisition Overlays (PAO) have been applied for the south-eastern freeway interchange ramps and for potential future widening along Thompsons Road. The Floodw Overlay (FO) north of Lecky Road at Lower Gum Scrub Creek has been amended to accommodate future infrastructure and updated floodway data, as detailed by the planning ordinances.

Plan 2: Precinct Features illustrates the existing natural and cultural features. These precinct features guide and influence the character of the precinct structure and its future neighbourhood, namely through:

- Aboriginal heritage areas of cultural sensitivity and landform
- Existing high value vegetation
- Environment Protection and Biodiversity Conservation (EPBC) protected species
- Post-contact heritage features and values
- Water features
- Treed view lines and views to the Dandenong Ranges.

Water will be a positive, visible, and significant contribution to the public realm and open space, including at key gateways of Thompsons Road, Grices and Lecky Road bridges and along the Officer South Road north-south gateway corridor. Celebrating water in the landscape will have multiple benefits by slowing and storing stormwater, including significant stormwater management strategies to protect the Koo Wee Rup Levy, and providing ecological regeneration and enhanced biodiversity. Significant changes of level within the Cardinia Creek corridor present areas where development could be restricted due to flooding and drainage constraints. This area is identified by a 'Development Services Scheme (DSS) serviceability line' on Plan 2.

The precinct has also been home to rural lifestyle and agricultural uses, including farming, horticulture, and equine industries. The potential extension of existing equestrian trails from the Cardinia Creek Parklands and City of Casey through the precinct may provide further support to the regional equestrian community, promoting tourism for the local economy.

There are two identified post-contact heritage sites situated within the precinct, being Cardinia Park, Former Gin Gin Bean Pre-Emptive Right Site at 410 Officer South Road, Officer (HO\_91), and Jesmond Dene House and Trees at 425 Officer South Road, Officer (HO\_92).

In addition, the site at 90 Handford Lane, Officer is on the Victorian Heritage Inventory (H7921-0129) as it contains historical archaeological remains including artefact scatters, exotic plantings and building remains.

The Officer South Employment PSP has been prepared to ensure the seamless integration of the precinct into its key cultural, natural, and urban features.

Refer to the *Officer South Employment Precinct Background Report* for a more detailed discussion of regional context and features that have informed spatial planning outcomes sought by this PSP.

## 1.6 Infrastructure contributions plan

The legal framework for the infrastructure contributions plan (ICP) system is primarily set out in the *Planning and Environment Act 1987* (P&E Act). The main component of the ICP legislation is contained in Part 3AB of the P&E Act.

Development proponents within the Officer South Employment Precinct will be bound by the Officer South Employment Supplementary Infrastructure Contributions Plan (the ICP). The ICP sets out requirements for



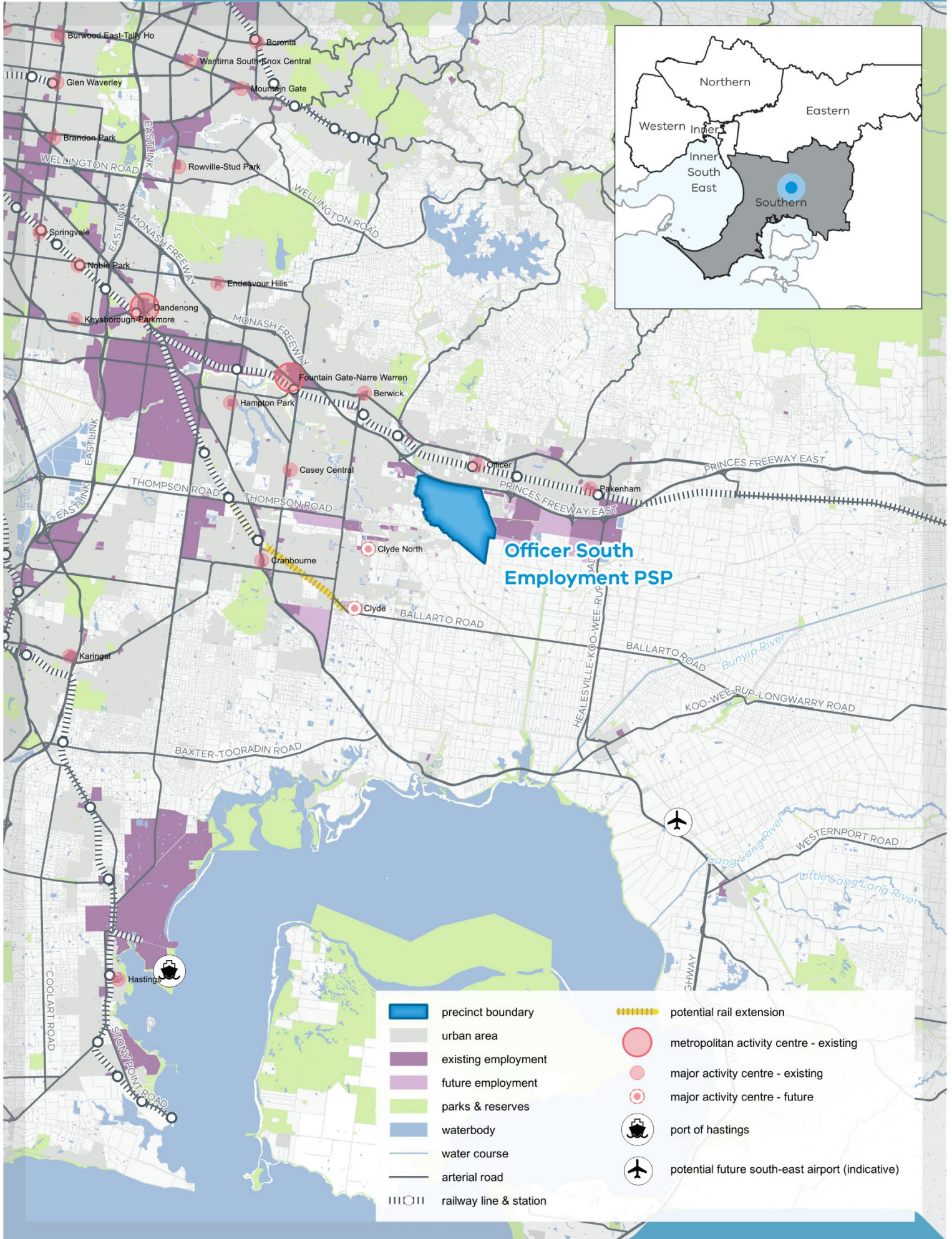
infrastructure funding across the Officer South Employment Precinct and will be incorporated in the Cardinia Planning Scheme.

## 1.7 Background information

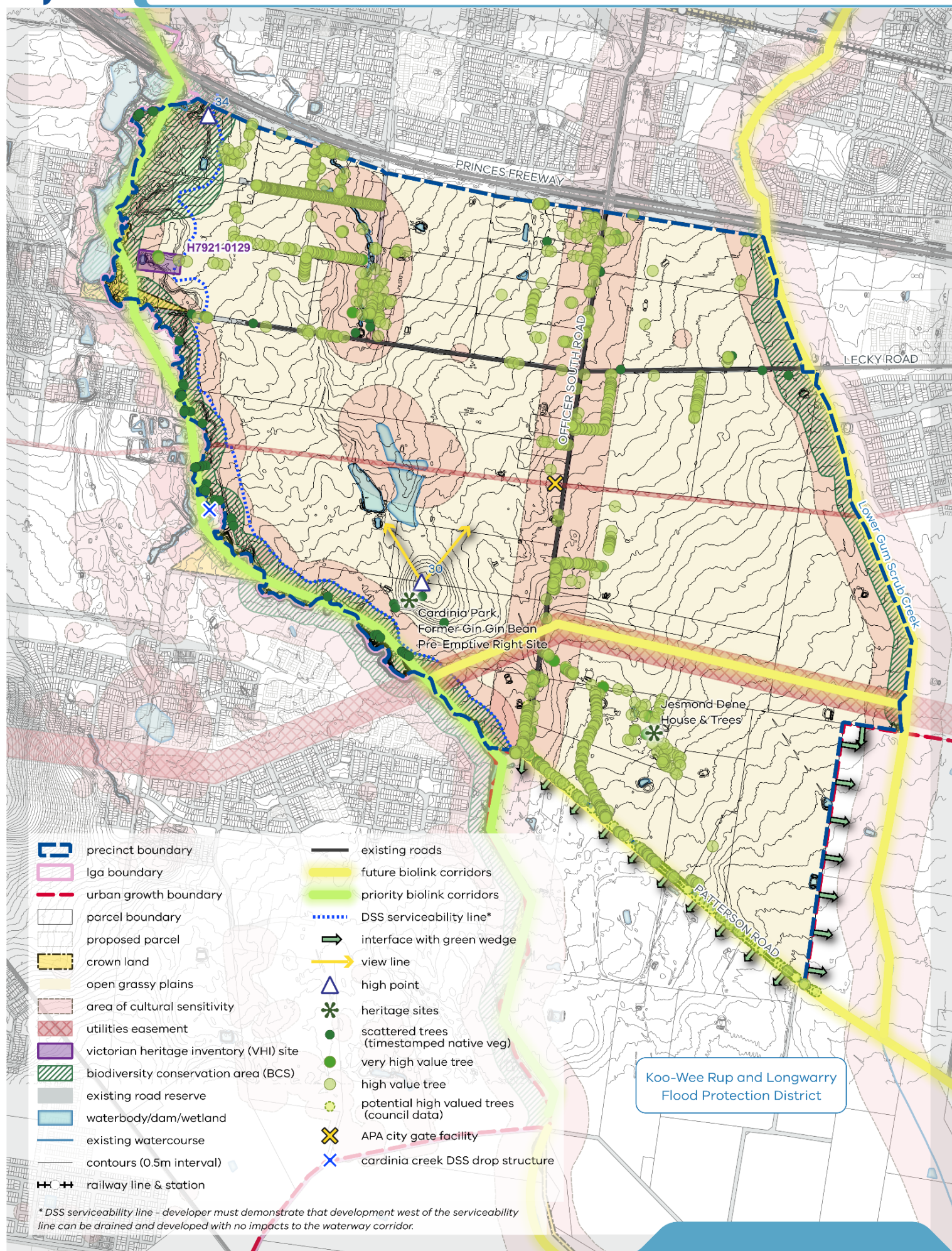
The *Officer South Employment Precinct Background Report* provides detailed background information relating to the precinct, including its strategic and local context, physical attributes and provides a detailed account of the VPA's position on various challenges in the precinct based on the 20-minute neighbourhood principles.

The Background Report Summaries highlight considerations and research that have informed the preparation of the PSP, including the key findings from the various technical studies such as arboriculture, drainage, open space, transport, utilities, economics, and community facilities.

The *Officer South Employment Precinct Background Report* with the associated technical report summaries is available on the [Officer South Employment webpage](#). The technical studies are available at <https://vpa.vic.gov.au/project/officer-south-employment/#supporting-documentation>.









## 2 PSP OUTCOMES

### 2.1 PSP vision

*'Officer South Employment will become an innovative and sustainable employment precinct that will deliver a high amenity regionally-significant commercial area and state-significant industrial precinct, combined with a modern and diverse urban living hub to form a unique working and living environment.'*

*The precinct forms the core of the Officer–Pakenham State Significant Industrial Precinct and will deliver south-east Melbourne's next generation of industrial, manufacturing and logistics enterprises estimated to bring approximately 22,000 diverse jobs closer to emerging communities in Cardinia Shire and the City of Casey.*

*The urban structure promotes large and intensive industrial land uses within the core of the precinct, making Officer South Employment the prime location for heavy industries to thrive in the south-east region. It will attract primary industries such as agriculture and mining, as well as next-generation manufacturing for knowledge-based sectors and health care. Complemented by a sleeve of light industrial, and freight and logistics industries, commercial businesses will be able to leverage off industries to take full advantage of the new and exciting employment landscape to inspire innovation.*

*Excellent connectivity on a north–south and east–west axis connects Officer South Employment to major infrastructure. The north–south axis connects to the Officer Major Activity Centre, Officer Train Station and a potential future south-east airport. The precinct provides significant freight movement via Thompsons Road allowing direct access to broader south-east employment precincts and population centres.*

*Employment-focused land integrates with a compact 20-minute neighbourhood forming part of an expanded Cardinia Road community. The residential precinct provides a range of housing options and community facilities, creating vibrant and diverse twenty-four-hour activation for workers and residents. It is estimated that Officer South Employment will be home to around 5,000 residents with a walkable, high amenity environment, drawing on a character green spine that links to key destinations anchored by active open space. The local town centre and community hub, provide extensive local opportunities for shopping, education, community services, entertainment and recreation.*

*Officer South Employment will protect conservation areas along the high valued waterways to ensure the protection of habitat for matters of national environmental significance. The natural features of Cardinia and Lower Gum Scrub Creeks will benefit the workers and residents within the precinct and are protected by a complex water management system. The unique natural attributes of the precinct, quality path networks and local parks create an environment conducive to discovery of highlighted heritage and cultural values areas within Officer South Employment.*

*A beacon for climate change resilience through sustainability and innovation, integrating a high amenity built environment and a significant active transport network, Officer South Employment is the new template for employment precincts of the future. This precinct exemplifies the principles of living locally and will be a primary choice for establishment of industry and businesses of the future.'*

### 2.2 PSP purpose

#### 1. Provide for employment and industries of the future

Officer South Employment provides a Regionally Significant Commercial Area (RSCA) and a State Significant Industrial Precinct (SSIP) as part of the broader Pakenham–Officer SSIP corridor, south-east Melbourne's future premier economic and employment hub.

The employment landscape has significantly changed in recent years, shifting the standard employment model to a work-life focused environment. Officer South Employment is creating an employment precinct that focuses on the new movement and place of our working environment, delivering a high amenity



residential area which encourages residents to walk, cycle and scooter to work via an efficient active transport network.

An ample supply of industrial land across the precinct will allow for businesses to drive the diversity of industries and their location. The configuration of the commercial land ensures that the SSIP is safeguarded from the new community area, and provides a wide array of opportunities including retail, services and offices that will activate the frontages of Officer South Road, Lecky Road, and the Princes Freeway.

Employment areas are configured to capitalise on the locational attributes that will support industries of the future. Large land parcels and direct access to gas and high voltage power encourages and supports industries to expand their businesses, and additionally leverage off access to the key freight corridor of Thompsons Road and beyond to the potential future south-east airport.

## 2. Value-add to existing communities

The precinct delivers a diverse range of knowledge-based, manufacturing, logistics and agribusiness enterprises for existing and emerging communities, meaning surrounding residents have more job choice and can work closer to home.

The precinct's high amenity and well-designed residential neighbourhood provides the population to deliver broader community needs, including two primary schools (government and non-government), local town centre, and sports reserve. The new housing diversity PSP targets ensure that there are more housing choices which will unlock options for key worker and affordable housing within a walkable catchment.

Additional mixed-use precincts around local parks plan for a connected community that can take advantage of small local eating and work opportunities at key destinations. These small sub-hubs allow for potential small workshop/ shared workspaces, eateries and shop top residences to create an active, practical, and vibrant environment.

## 3. Release key transport/economic links

Officer South Employment incorporates strategic planning for the alignment of Thompsons Road, a pivotal east-west arterial freight route that will unlock the Pakenham-Officer SSIP. In addition, Grices and Lecky Roads will provide essential east west connections to the adjoining residential precincts in Cardinia Road Employment, Minta Farm and Clyde North enabling residents with good access to employment and surrounding community destinations. Within the precinct, the active and public transport links connect surrounding townships of Officer, Berwick, and Pakenham.

## 4. Integrate complementary community and open space assets

Officer South Employment will capitalise on the existing and proposed amenity and recreational values of green spaces within utility easements, Cardinia Creek, Lower Gum Scrub Creek, and future drainage assets. Its active and passive open space networks provide key points of destination within the precinct, to enable community and employees of the broader region to access and use these areas for leisure and recreation purposes via its connected road, active and public transport networks. The precinct provides for the establishment of Biodiversity Conservation Strategy (BCS) conservation areas to ensure the protection of connected habitat for Growling Grass Frogs within the precinct.

## 5. Respond to sustainable environmental and drainage needs

Officer South Employment fosters the coordinated delivery of servicing and onsite integrated water management opportunities to facilitate a sustainably responsive precinct. It will contribute to the long-term conservation of significant flora and fauna species through establishment and protection of habitat, particularly within BCS conservation area 36, providing high quality connected habitat corridors.

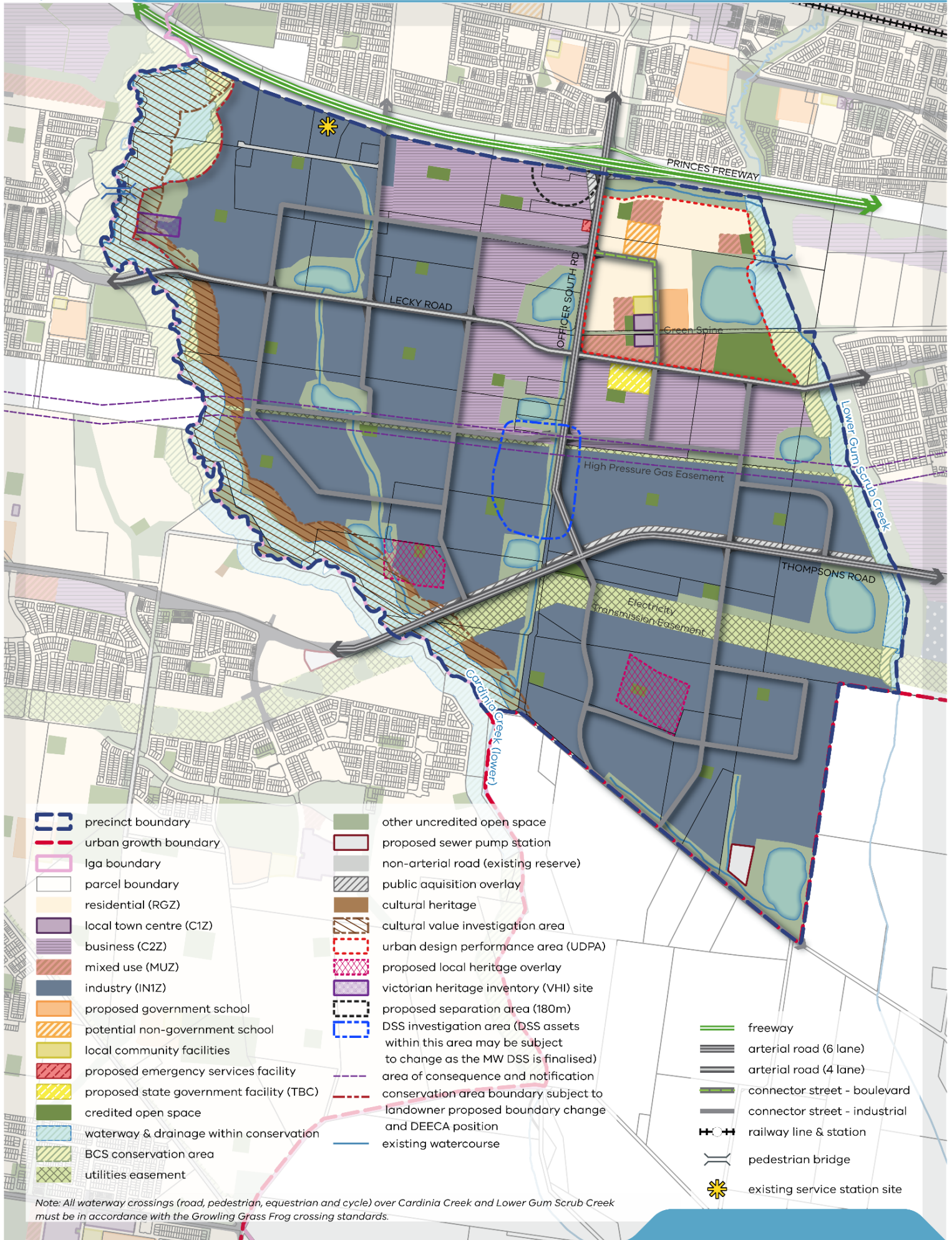
The precinct's integrated water management (IWM) strategy outlines the priorities available to ensure stormwater management and water use can be considered in the design and delivery of built form, streets,

open space, and drainage assets. These opportunities are subject to further innovation, supported by future investigations into 'closed loop' water systems and stormwater harvesting and reuse.

## **6. Future-proof industry-ready services and infrastructure**

The Officer South Employment PSP implements appropriate planning mechanisms to facilitate innovative utility service systems and infrastructure design and delivery. These delivery mechanisms encourage consideration of opportunities for green star construction, carbon reduction, clean energy generation and smart city technology through development of its utility networks, built form, parks and transport solutions.

The PSP provides for the staging of development of the precinct that aligns with infrastructure provision which will also assist with the forecasting of development to plan for future services.



Note: All waterway crossings (road, pedestrian, equestrian and cycle) over Cardinia Creek and Lower Gum Scrub Creek must be in accordance with the Grouling Grass Frog crossing standards.



## 2.3 Precinct snapshot



### Land use summary

residential	2.69%
activity centre	0.14%
transport	4.70%
community	0.40%
education	0.61%
open space	31.22%
industrial	47.02%
commercial	11.76%
mixed use	1.28%
other	0.19%

2 primary schools  
1 government  
1 private

1 neighbourhood centre & jobs hub

1 community facility

1 sports reserve

14.91 ha local parks

### Hallmarks



VIABLE DENSITIES



SAFE, ACCESSIBLE & WELL CONNECTED



CONNECT PEOPLE TO JOBS & HIGHER ORDER SERVICES



HIGH QUALITY PUBLIC REALM



SERVICES & DESTINATIONS



THRIVING LOCAL ECONOMIES



INFRASTRUCTURE COORDINATION

### PSP Targets

T1 Dwelling density per NDHA in amenity areas **36** ✓  
Target: 30

T2\* Dwelling density per NDHA across the PSP **37** ✓  
Target: 20

T11 Minimum open space targets #  
Total residential credited open space **24%** ✓  
Target: 10%

Local residential park **5%** ✓  
Target: 3–5%

Sports reserve **18%** ✓  
Target: 5–7%

Employment local park **2%** ✓  
Target: 2%

T12 Open space in walking distance  
Dwellings within 800m of sports reserve or open space **100%** ✓  
Target: 100%

Dwellings within 400m of local park **100%** ✓  
Target: 95%

T9 Public transport in walking distance **100%** ✓  
Target: 95%

T18 Education & community facilities in walking distance

Dwellings within 800m of govt primary school **100%** ✓  
Target: 75%

Dwellings within 3,200m of govt secondary school **100%** ✓  
Target: 100%

Dwellings within 800m of community hub **100%** ✓  
Target: 80%

Dwellings within 800m of health facility **100%** ✓  
Target: 80%

T19 Activity centre in walking distance **100%** ✓  
Target: 80–90%

# Figure includes CREP demand generated shortfall.  
\*T2 applies to the residential component of the PSP only

### OTHER PSP TARGETS (these targets are achieved at the planning permit stage)

T3 Housing diversity

T4 Affordable housing

T5 Arterial road network

T6 Off-road cycle paths

T7 Footpaths

T8 Pedestrian & cyclist crossings

T10 Job density

T13 Tree canopy coverage

T14 Passively irrigated street trees

T15 Good solar orientation

T16 Conservation areas

T17 Integrated water management solutions

T20 Basic & essential infrastructure



## 3 IMPLEMENTATION

### 3.1 Thriving local economies

*Plan Melbourne* identifies that the Officer-Pakenham SSIP is a key industrial precinct in the south-east region. The Officer South Employment precinct provides a total of 1,069 hectares of key opportunity for the region and acts as a gateway precinct for the broader Officer-Pakenham SSIP, a key future export and employment centre for the region.

The *Melbourne Industrial and Commercial Land Use Plan* (MICLUP) envisages that the Officer South Employment precinct will deliver a State Significant Industrial Precinct (SSIP) and a Regionally Significant Commercial Area (RSCA), with no more than 50 per cent of the RSCA to be designated for residential purposes.

#### State Significant Industrial Precinct

The Officer South Employment precinct provides a key opportunity for the region and acts as a gateway precinct for the broader Officer-Pakenham SSIP, a key export and employment centre for the region.

Key industry opportunities for the precinct include:

- Manufacturing for primary industries (agriculture/mining)
- Manufacturing for knowledge sectors (professional services)
- Manufacturing for health care
- Manufacturing for transport industries (rolling stock and infrastructure)
- Transport and logistics, particularly moving manufactured products
- Wholesaling
- Business serving professional services.

A future-ready precinct, Officer South Employment aspires for innovative technology and smart city opportunities, to not only support a growing economic landscape but become a catalyst for delivering to adaptable new businesses, directly supported by key worker housing and public transport networks for a truly flexible employment environment.

#### Regionally Significant Commercial Area

The Officer South Employment RSCA will provide a significant role in helping to accommodate the commercial demand for the longer term to allow for changing market conditions. This commercial area will provide for an essential buffer between the core industrial activity and neighbouring residential areas of the precinct. The commercial area will evolve over time and will become a beacon of innovation.

Key industry opportunities for the precinct include:

- Specialised facilities
- Dispersed institutional facilities
- Urban services, office, and retail facilities.

The precinct accommodates land for a proposed emergency services site and future proposed state government facility that may provide a health campus and mental health services to the broader catchment and is envisaged to evolve over time. A work hub or industry training institute (centre of excellence) delivered as part of the local neighbourhood centre with potential links to a proposed state government facility and surrounding commercial uses, may provide an economic and community enabler with space for business leaders, educators, and residents to meet and share ideas, work, learn and conduct business.

#### Industrial sub-precincts

Extensive opportunities exist for Officer South Employment to lead the vision for an industrial precinct of rich character and place value. Sub-precincts that are arranged to leverage the wealth of the site's offerings, will help to guide future development and inspire optimum outcomes. Figure 1: Sub-precinct Concept Plan

illustrates possible aspirations for the site, demarcating important site to industry relationships that can be drawn upon to achieve sustainable and potentially carbon neutral outcomes for future generation industrial and commercial enterprise.

Figure 1: Sub-precinct Concept Plan

## Officer South Employment Sub-precinct concept

### Princes Enterprise Precinct

Located along the Princes Freeway it enables high exposure to passing traffic and promotes a strong connection to Officer and the adjoining commercial precincts. Its Industrial 1 and Commercial 2 zoning provides the ability to accommodate a diverse mix of industries, including potential **research and innovation premises, warehousing and premium logistics and transport-based industries.**

### Cardinia Creek Precinct

The land abutting Cardinia Creek is strategically important providing quality natural amenity to surrounding areas. complemented by the adjacent wetland and interfacing with the cultural value investigation area, this precinct will provide a high-quality SSIP industrial interface to surrounding high amenity areas, and industrial buffering to the western residential communities. It provides flexibility to the SSIP, allowing for smaller to medium lots to be developed to respond to market demand, helping to accommodate high profile light industry operations with a customer focus and high quality presentation to industries such as **wood products and furniture manufacturers, IT industries, textiles and music industries.**

### Commercial Gateway Precinct

Premium quality service and commercial frontage to Lecky Road and Officer South Road, this precinct provides a quality northern gateway, complements the residential interfaces and provides a clear transition between more intensive industries and the proposed Officer South township. It will provide small to medium lots, mid-rise density, high quality frontage to Lower Gum Scrub Creek and can accommodate **service industries, consumer electronics and business parks**, etc that benefit from arterial connections with wider communities and businesses. The inclusion of a proposed state government facility nearby the neighbourhood activity centre introduces it as a key innovation precinct suitable for **research and development** facilities such as a potential future centre of excellence.

### Cardinia Park Heritage Precinct

Existing heritage buildings including very high-quality trees are a key feature to the Officer South Employment precinct. Opportunity lies for these locally heritage protected sites to be re-purposed into business capital ventures and to set this precinct apart from other industrial centres in the south-east corridor. Closely located with neighbouring heavy industry and complemented by the adjacent wetland and interfacing with the cultural value investigation area, this precinct will provide much-needed relief to the working environment, repurposed as **industry information centres, integrated upmarket public supply depots, plant nursery** and even **potential breweries.** The adaptive re-use of these premises will provide an opportunity for standout industrial business with no adverse impacts to the surrounding industrial uses.

### Green spines/links

An abundance of green links solidify Officer South as a new order employment precinct that offers bio-links, wetlands and retention of age-old trees to help mitigate the impacts of an industrial environment to climate change. Officer South Road is to be recognised as a key significant transport link that will promote adjacent green and blue networks. The gas and electricity easements will accommodate numerous plant species encouraging flora to thrive and fauna to move between the two major creeks that hug Officer South in the north-south axis. The old Lecky Road alignment has been repurposed to a green spine that links several key destinations such as Lower Gum Scrub Creek and extensive wetlands, the local primary school and active open space, the neighbourhood centre and village square.



### The Village

The precinct will be an **integrated and connected neighbourhood** that provides for a range of diverse housing options including small lot housing, rear-accessed townhouses and apartment living, which will support living locally and provide for **key worker housing** to the employment area. The co-located amenities will support the adjoining community at Cardinia Road Employment precinct. By delivering two schools, a local town centre and premium open space of 2.5 ha of parkland, 21 ha of wetlands, an 8.5 ha sports reserve, all within a 400m walk, this compact residential precinct will bring 24-hour life to the State and Regionally Significant employment hub.

### Prime Industrial Core Precinct

A robust area of SSIP safeguarded by an Industrial 1 zone and surrounding commercial and light industrial development, this precinct will provide large scale parcels for heavy industrial enterprise to excel. A key part of Officer South Employment, its strong connections to the principal freight network will attract industries such as **advanced manufacturing and engineering** for the construction and transportation industries, **scientific research and chemical production, aerospace**, and others that may require threshold distances and large land parcels.

### Gin Gin Bean Green Wedge Interface Precinct

Located next to the green wedge farming land and including the Gin Gin Bean Pre-Emptive Right Site this precinct has a premium quality interface to the southern farmland and urban growth boundary. The sub-precinct will offer key opportunities to **food and fibre** industries to leverage farming and agricultural businesses of the green wedge, and provide opportunities for the distribution of goods and services to local communities. The transmission easement can provide urban farming opportunities and ancillary uses such as public car parking, while water intensive industries are able to leverage off substantial drainage assets in this precinct.

### Alternative mode of transport network

Opportunity for a high-speed, signposted e-scooter/cycle network and alternative transport, or autonomous shuttle route with electricity charging infrastructure. An east-west link via Lecky and Grices Roads as well as a north-south link to Officer will provide high grade access to key destinations of Officer Train Station and Minta Farm Innovation precinct.

## Objectives

### Place-based objectives – thriving local economies

<b>O1</b>	To deliver a local town centre that can accommodate the range of jobs, services, amenities, and activities that supports its role and function, and meets the changing economic climate and social needs of Officer South Employment precinct.
<b>O2</b>	To deliver a diverse and vibrant employment precinct to establish the south-east region as a hub for smart city initiatives, advanced manufacturing and engineering with diversified industrial activities and supporting services.
<b>O3</b>	To grow a vibrant local, regional, and international food economy which supports growers and enables people to access produced food by developing food chains which support growers to participate and operate in their chosen marketplace (e.g. food co-ops, farmers markets and retail spaces).

## Requirements and Guidelines

### Requirements and Guidelines – thriving local economies

<b>R1</b>	Industrial uses are to be located where potential amenity impacts are minimised and high levels of access to arterial roads can be achieved through subdivision design.
<b>R2</b>	Where cafes, restaurants, convenience shops and convenience restaurants are provided in commercial / mixed use areas, they must front open space, conservation areas and waterways, and arterial road or connector street.
<b>G1</b>	Employment sectors are encouraged in commercial and industrial areas at key locations and sub-precincts, as identified in Figure 1 Sub-precinct Concept Plan. Facilities such as the proposed Centre of Excellence are encouraged in commercial / mixed use areas where the sites have high-amenity and are well serviced with access to transport and community facilities.
<b>G2</b>	<p>Job densities and commercial development within the RSCA and local town centre must be generally in accordance with:</p> <ul style="list-style-type: none"> <li>Table 1: Anticipated employment creation in the precinct</li> <li>Table 2: Local town centre composition and delivery guide</li> <li>Table 10: Local town centre performance requirements and guidelines</li> </ul> <p>and demonstrate how it contributes to the achievement of the minimum job density and the local town centre Design Principles in Appendix 6 Local town centre design criteria</p>

**Table 1: Estimated employment generation**

LAND USE	NDA (HA)	ESTIMATED JOBS
<b>State Significant Industrial Precinct (SSIP)</b>	502.6	10,236
<b>Regionally Significant Commercial Area (RSCA)</b>	125.7	11,008
<b>Residential (includes local town centre 1.5 ha &amp; Mixed Use 13.7 ha)</b>	43.9	769
<b>TOTAL</b>	<b>672.2</b>	<b>22,013</b>

**Table 2: Local town centre composition and delivery guide**

ACTIVITY CENTRE	PERFORMANCE REQUIREMENTS	PERFORMANCE OUTCOMES
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Local town centre	Land area (Ha) = 1.5 Retail floor space (m <sup>2</sup> ) = 2,300 Commercial floor space (m <sup>2</sup> ) = 1,600	The purpose of the Officer South Employment local town centre is to service all residents within the precinct and meet their day-to-day retail and community needs. The Officer South Employment local town centre will provide for a small grocery store.
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## 3.2 Connect people to jobs and higher order services

### Objectives

#### Place-based objectives – connect people to jobs and higher order services

<b>O4</b>	To create a high amenity employment precinct that responds appropriately to the environmental sensitivity of the waterways, conservation and heritage areas, and interface with adjacent residential precincts and rural land, to attract a diversity of businesses and employers and provide jobs to support the Casey–Cardinia Growth area.
<b>O5</b>	To maximise accessibility of the precinct through the strengthening of links to the Princes Freeway, Thompsons Road and to the surrounding arterial road network opening key gateways to the Dandenong National Employment and Innovation Cluster (NEIC), potential future south-east airport and Port of Hastings.
<b>O6</b>	To facilitate a public transport network that supports access to high intensity uses and higher order services with connectivity between key regional destinations such as the Officer Train Station and key industrial, commercial, and residential precincts.
<b>O7</b>	To establish a thriving production and distribution precinct with improved existing and new freight connections that capitalise on strong arterial roads, rail, and the potential future south-east airport.
<b>O8</b>	To provide land for local and regional employment and economic activity and to secure job density.

### Requirements and guidelines

#### Place-based requirements and guidelines – connect people to jobs and higher order services

<b>R3</b>	Commercial and industrial development is to be well integrated through: <ul style="list-style-type: none"> <li>A road network design that creates a permeable environment between adjoining developable parcels and provides direct connections to arterial roads; and</li> <li>Building design that positively contributes to the public realm with a strong visual address and active frontages to primary street frontages, delivering a high amenity outcome</li> </ul> to the satisfaction of the responsible authority.
<b>R4</b>	Provide a diversity in lot sizes at subdivision to meet the needs of a range of commercial business and industries and ensure large lots are protected for large footprint economic and employment uses.

<b>G3</b>	Commercial and industrial premises should achieve a maximum street setback of three metres to promote an active streetscape and public realm. The front setback should be landscaped with canopy trees where practical and vegetation to promote water sensitive urban design and to help reduce the impact of the urban heat island effect.
<b>G4</b>	Car parks should be landscaped with canopy trees (minimum of one tree per six bays) and have adequate pedestrian paths to provide direct, dedicated accessways from parking to building entrances.
<b>G5</b>	Mixed use areas co-located with local parks should build on the surrounding residential uses to accommodate small scale businesses including offices, home based businesses, retail premises and creative enterprise.
<b>G6</b>	<p>Development should consider the inclusion of smart technology to facilitate, support and advance growth as well as encourage ongoing innovation. This may be achieved through:</p> <ul style="list-style-type: none"> <li>• establishment of IoT (Internet of Things) sensor infrastructure to capture environmental and transport data to help monitor air and water quality, heat island effect, microclimates, climate change resilience and movement of vehicles and people</li> <li>• establishment of IoT infrastructure to enhance the community's ability to engage and participate in the digital economy</li> <li>• automated lighting to respond to the movement of people and the surrounding environment to improve the safety and vibrancy of private and public spaces</li> <li>• Wi-Fi stations and digital local community boards for social and wayfinding information.</li> </ul>

### 3.3 Safe, accessible and well-connected

#### Objectives

##### Place-based objectives – Safe, accessible and well connected

<b>O9</b>	To deliver an integrated transport and permeable movement network and design that effectively balances the role of movement and place.
<b>O10</b>	To create a high amenity, safe, accessible, direct, and comfortable walking and cycling environment that allows residents and employees to be active and travel safely and directly between key destinations, local parks, Lower Gum Scrub and Cardinia Creeks.
<b>O11</b>	To facilitate innovation and alternatives to fossil fuel through delivery of essential supporting infrastructure, including end of trip facilities, solar energy capture, smart city conduit, ICT infrastructure and electric vehicle charging infrastructure.
<b>O12</b>	To provide a safe and accessible road layout that identifies and considers bushfire protection measures in the design of the local street network.
<b>O13</b>	To maximise accessibility for all ages and abilities to employment areas and community facilities, with a particular focus on active and public transport networks.

#### Requirements and guidelines

##### Place-based requirements and guidelines – Safe, accessible and well connected

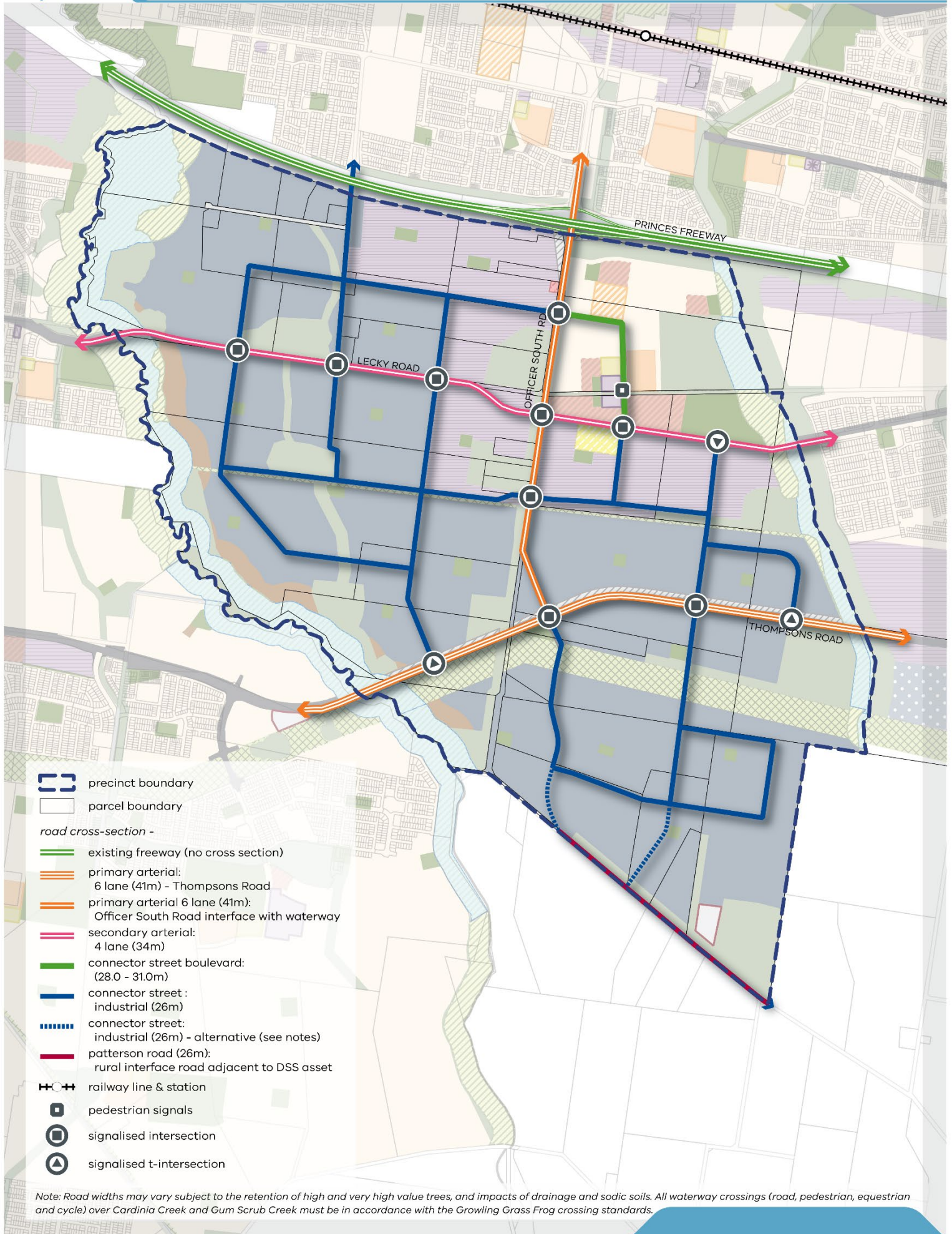
<b>R5</b>	Road networks and street types must be designed and developed to an urban standard generally in accordance with the cross sections in Appendix 7 unless otherwise agreed by the
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	relevant authority. Any interim road nominated in Plan 5: Public Transport and Active Path Networks as a potential public transport route must be constructed in accordance with the corresponding cross section in the precinct structure plan and the Department of Transport and Planning's guidance for public transport and land use development, to the satisfaction of the responsible authority.
<b>R6</b>	Any connector road or local access street abutting a community or education facility must be designed to achieve slow vehicle speeds and incorporate a shared path and provide designated pedestrian crossing points, including hard stand areas within the verge, for clear accessibility within the vicinity of a proposed school site and community facility.
<b>R7</b>	The widths of shared use paths and bicycle paths must be in accordance with current Austroads guidelines, to the satisfaction of the responsible authority.
<b>R8</b>	<p>Key destinations (active and public open space, local town centre, community facilities and commercial centres) must:</p> <ul style="list-style-type: none"> <li>• be accessible by active and public transport routes</li> <li>• provide active street frontages</li> <li>• provide bicycle parking facilities</li> <li>• include fast charge charging stations for electric vehicles</li> </ul> <p>to the satisfaction of the responsible authority.</p>
<b>R9</b>	<p>Design of all subdivisions, streets/roads must provide:</p> <ul style="list-style-type: none"> <li>• A permeable, direct, and safe street network prioritising walking and cycling</li> <li>• Footpaths, at least 1.5 metres wide, on both sides of all streets and roads, except adjacent to community facilities where 1.8 metre footpaths are required to comply with Council's <i>Enhanced Standard Universal Design Standard 2020</i>, or unless otherwise specified by the precinct structure plan and relevant cross section in Appendix 7</li> <li>• Shared paths, bicycle paths, and or alternative transport networks, where identified in the precinct structure plan and relevant cross section in Appendix 7</li> <li>• Consistent wayfinding and interpretative signage are created to connect all shared paths, cycle paths while raising awareness of the natural values of the precinct</li> <li>• Safe pedestrian crossings of all roads, local streets, intersections, at key desire lines and destinations and on regular intervals appropriate to the function of the road and public transport provision</li> <li>• Safe and convenient transition between on- and off-road bicycle networks all to the satisfaction of the coordinating roads authority and the responsible authority</li> <li>• Local service road, internal loop road or rear lane to lots fronting arterial roads to the satisfaction of the coordinating road authority</li> <li>• Convenient access to local and regional points of interest and destinations for effective integration with neighbouring properties, parkland, and sports reserves</li> <li>• Direct and convenient access to public transport services for walking, cycling and other forms of active transport.</li> </ul>
<b>R10</b>	If roundabouts are to be used at arterial intersections, safe pedestrian and cyclist connections are to be provided with appropriately located pedestrian operated signals.
<b>R11</b>	All signalised intersections must be designed having regard to the <i>Guidance for Planning Road Networks in Growth Areas November 2015</i> and be to the satisfaction of the Department of Transport and Planning (DTP).

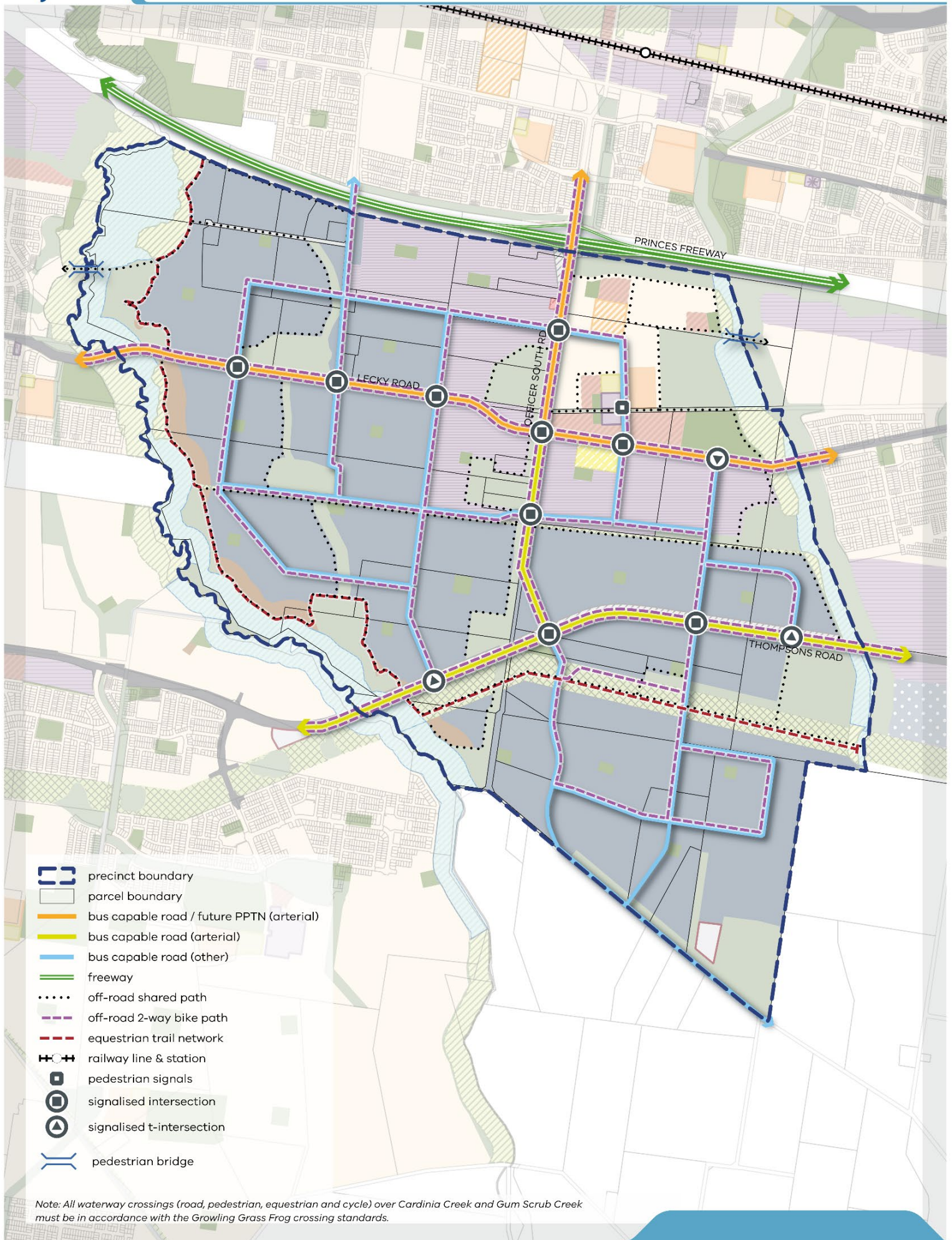
<b>R12</b>	Subdivision layouts and the street network must be designed to safely manage stormwater runoff to the satisfaction of Melbourne Water and the responsible authority.
<b>R13</b>	Public pedestrian, equestrian paths, local roads and infrastructure must be located outside conservation drainage and waterway areas unless shown on Plan 5 Public Transport and Active Paths Network and Plan 13 Utilities Plan. If waterway and conservation crossings are required, they must be planned (and co-located where applicable) to maintain the waterway gully form, drainage function and minimise disturbance to native vegetation and habitat for Growling Grass Frog, Australian Grayling and Dwarf Galaxias habitat and to the satisfaction of Melbourne Water, Department of Transport and Planning (DTP), Department of Energy, Environment and Climate Action (DEECA) and the responsible authority. Future waterway crossings cannot fill in or block the waterway gully form.
<b>R14</b>	Commercial, industrial and retail premises at-grade parking, including loading and storage areas are to be provided at either the side or rear of the building, with direct pedestrian paths connecting off-street car parks to the primary entrances of buildings.
<b>G7</b>	Location and design of walkways or pedestrian and cycle paths in addition to those described through the standard cross sections should consider the need for appropriate lighting and passive surveillance.
<b>G8</b>	In addition to waterway crossings shown on Plan 11: Precinct Infrastructure, development proponents should provide waterway crossings at intervals no greater than 400 metres or corresponding with all perpendicular through roads or pedestrian and cycle paths. This does not include waterway crossings within the BCS conservation area.
<b>G9</b>	Culs-de-sac should be avoided unless a shared access way to an adjacent road or cul-de-sac is provided. Where culs-de-sac cannot be avoided, they should not negatively impact walkability and utilise green links throughout the precinct.
<b>G10</b>	<p>The frequency and impact of vehicular crossovers on verges of connector roads should be minimised using a combination of:</p> <ul style="list-style-type: none"> <li>• rear loaded lots with laneway access</li> <li>• vehicular access from the side streets</li> <li>• combined or grouped crossovers</li> <li>• increased lot widths.</li> </ul>
<b>G11</b>	<p>Direct off-road active network paths should be delivered between key destination points such as:</p> <ul style="list-style-type: none"> <li>• the local town centre including the commercial precinct or local employment areas, local parks, active open space and school destinations</li> <li>• access to surrounding precincts, including the Officer Train Station and Town Centre regional destinations.</li> </ul> <p>These active network paths may be located along desired internal pedestrian corridors outside the road reserve where not shown on Plan 5: Public Transport and Active Path Networks.</p>
<b>G12</b>	<p>A variety of connector roads and local access street cross sections should be utilised in subdivision layouts, as per Appendix 7, to create differentiation, placemaking and neighbourhood character.</p> <p>Alternative cross sections should ensure that:</p> <ul style="list-style-type: none"> <li>• Minimum required carriageway dimensions are maintained to ensure safe and efficient operation of emergency vehicles on all streets, as well as low line buses on connector streets</li> </ul>

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|  | <ul style="list-style-type: none"><li>• The performance characteristics of standard cross sections as they relate to pedestrian and cycle use are maintained</li><li>• Relevant minimum road reserve widths for the type of street are maintained</li><li>• Appropriate on-street carparking is provided</li></ul> <p>to the satisfaction of the responsible authority.</p> |
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### 3.4 High quality public realm

#### Objectives

##### Place-based objectives – High quality public realm

<b>O14</b>	To support the protection and conservation of cultural heritage and traditional owner values.
<b>O15</b>	To create integrated and linked networks of open space and facilities that provide equitable access for residents and workers for sport and recreation; leisure; environmental and cultural benefits and visual amenity along waterways, gas and electrical easements, streets, parks, and public spaces.
<b>O16</b>	To facilitate safe, resilient, water sensitive, environmentally sustainable urban environments that respond to climate change and other hazards.
<b>O17</b>	To protect and enhance areas of biodiversity and native vegetation value (local, state, nationally significant) including the bio links and BCS conservation areas along Cardinia Creek and Lower Gum Scrub Creek.
<b>O18</b>	To develop sustainable water, drainage and wastewater systems that protect, conserve and improve biodiversity, waterways and other natural resources and maintains or enhances the safety, health and wellbeing of people and property.
<b>O19</b>	To create a sustainable urban landscape focused on achieving carbon neutrality by reducing greenhouse gas emissions, which enhances the existing biodiversity, cultural heritage, drainage, and landscape values within the precinct and mitigates urban heat island effect.
<b>O20</b>	To plan for the long-term conservation of flora and fauna species through the protection of habitat and bio links across the precinct, particularly habitat for Growling Grass Frog, and Australian Grayling and Dwarf Galaxias in the BCS conservation areas along Cardinia Creek and Lower Gum Scrub Creek.
<b>O21</b>	To foster Workplace Integrated Social Enterprises (WISE) and community initiatives which provide a reliable and affordable source of fresh produce to people experiencing household food insecurity.

#### Requirements and guidelines

##### Place-based requirements and guidelines – High quality public realm

<b>R15</b>	<p>Subdivision applications must deliver an open space network that must:</p> <ul style="list-style-type: none"> <li>• Respond to the <i>Cardinia Shire Council Developer Landscape Guidelines Policy 2017</i> (or as amended)</li> <li>• Consider the <i>Cardinia Shire Council Recreation Reserve Facility Standards Policy 2019</i> (or as amended)</li> <li>• Include a range of open space shapes and typologies</li> <li>• Maximise the amenity and value of service to open space through the provision of paths, trails, and other recreational elements</li> <li>• Respond to the values of any adjoining open space, waterways, trees, and Aboriginal and post-contact heritage</li> <li>• Provide flexible recreational opportunities that allow for urban agriculture uses required by the community</li> </ul>
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	<ul style="list-style-type: none"> <li>provide space allocation for future energy infrastructure</li> </ul> <p>to the satisfaction of the responsible authority.</p>
<b>R16</b>	<p>Trees and vegetation in streets, civic places and the passive open space network must be provided in accordance with the <i>Cardinia Shire Council Developer Landscape Guidelines 2017</i> (or as amended), and must:</p> <ul style="list-style-type: none"> <li>comprise a mix of native flowering and non-flowering species and include either native, indigenous, and exotic species and any other species as appropriate to the location and design and local conditions. Edible planting (e.g. fruits, nuts, herbs and bush foods) are encouraged</li> <li>be larger species to facilitate continuous canopy cover</li> <li>be planted in modified and improved soil to support tree establishment</li> <li>be appropriately sized to nature strips, nearby utilities, and buildings.</li> </ul>
<b>R17</b>	<p>Applications to subdivide land within the PSP area must be accompanied by a Landscape Plan which illustrates and quantifies canopy tree coverage within the public realm and open space to an average of 30 per cent (excluding areas dedicated to biodiversity or native vegetation conservation).</p> <p>The plan must specify:</p> <ul style="list-style-type: none"> <li>Suitable tree species for the relevant area</li> <li>Irrigation arrangement of trees during the establishment and subsequent phases</li> </ul> <p>to achieve this target at maturity and during the summer months.</p>
<b>R18</b>	<p>Development must provide for a minimum 19 metre perimeter road bushfire interface at the conservation area boundary, drainage reserves, constructed waterways, easements and the southern and south-east boundary adjoining the Green Wedge. The bushfire interface area may incorporate paths, open space, and drainage infrastructure. Where a setback from a bushfire hazard area is required by Plan 8: Bushfire Hazard Areas, vegetation within the setback must be managed as follows, unless otherwise agreed by the responsible authority and relevant fire authority:</p> <ul style="list-style-type: none"> <li>Grass must be short cropped and maintained during the declared fire danger period</li> <li>All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period</li> <li>Shrubs must not be located under the canopy of trees</li> <li>Individual and clumps of shrubs must not exceed five square metres in area and must be separated by at least five metres</li> <li>The canopy of trees must be separated by at least two metres</li> <li>There must be a clearance of at least two metres between the lowest tree branches and ground level</li> <li>Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building</li> <li>Plants greater than 10 centimetres in height must not be placed within three metres of a window or glass feature of the building.</li> </ul> <p>Consultation is required with Department of Energy, Environment and Climate Action Melbourne Strategic Assessment (DEECA MSA), Country Fire Authority (CFA) and council to confirm the conservation area planting and bushfire risk implications prior to undertaking a development application.</p>
<b>R19</b>	<p>Where a local park illustrated on Plan 6 spans multiple parcels, the first development proponent to lodge a permit application for land containing the park must prepare a master plan for the entire park. Consultation with all relevant landowners must be undertaken as part of the master plan preparation.</p>
<b>R20</b>	<p>Pre- and post-contact cultural heritage and history must be recognised through the design of public places and infrastructure.</p>



<b>R21</b>	Trees with Aboriginal cultural significance identified through the <i>Cultural Heritage Management Plan</i> (CHMP) must be protected, situated in a passive open space context, and be away from direct traffic, including pathways.
<b>R22</b>	Signage or opportunities for cultural celebration and interpretation must be explored and must be integrated into the public realm, utilised along equestrian trails and walking paths at conservation areas to support and contribute to the knowledge and understanding of the local Aboriginal Cultural Heritage of the Bunurong people
<b>R23</b>	A mandatory <i>Cultural Heritage Management Plan</i> is required to be undertaken prior to development occurring within the cultural value investigation area as identified in Plan 3. Interface outcomes with culturally sensitive sites must be delivered in conjunction with the <i>Cultural Heritage Management Plan</i> and in consultation with the BLCAC.
<b>R24</b>	Naming opportunities for, neighbourhoods, roads, streets, parks, wetlands or conservation zones, passive or active open spaces and community or local town centres must be given To Traditional Owners, represented by BLCAC.
<b>R25</b>	Reinstatement of creeks, waterways, water bodies, other water features must be undertaken with indigenous species, with species selection undertaken in consultation with BLCAC.
<b>R26</b>	Development impacting Victorian Heritage Inventory site H7921-0129 must obtain a <i>Heritage Act 2017</i> Consent to authorise any works that may affect historical archaeological remains at the place.
<b>R27</b>	All conservation areas identified in Plan 7 must be retained in accordance with relevant legislation.
<b>R28</b>	Existing high, very high and potential high value trees as per Plan 2 and Plan 7 must be retained within public open space, including road reserves, biolink and the public realm where possible. Open space designs must include measures to support and increase biodiversity values, such as the planting of indigenous plants, water features or nesting boxes.
<b>R29</b>	<p>Stormwater runoff from the development must meet the performance objectives of the <i>Commonwealth Scientific and Industrial Research Organisation Best Practice Environmental Management Guidelines for Urban Stormwater</i> (or as amended) prior to discharge to receiving waterways and as outlined in Plan 9: Integrated Water Management, unless otherwise approved by Melbourne Water and the responsible authority.</p> <p>Proposals that exceed the performance objectives are highly encouraged and can be considered, all to the satisfaction of South East Water, Melbourne Water, and the responsible authority.</p>
<b>R30</b>	<p>Planning permits must require the preparation of an IWM Plan which clearly identifies how development will contribute towards:</p> <ul style="list-style-type: none"> <li>• Outcomes applicable to the development identified in the DEECA <i>Western Port Strategic Directions Statement</i> (September 2018) and <i>Western Port IWM Catchment Scale Plan</i> (September 2022)</li> <li>• Outcomes applicable to the development identified in the <i>Officer South Employment Precinct Integrated Water Management Strategy</i> (Spiire, April 2022)</li> <li>• Protection of downstream waterways via stormwater volume reduction and infiltration targets applicable to the development outlined in Melbourne Water's <i>Healthy Waterway Strategy</i> (2018)</li> <li>• Potable water reduction targets applicable to the development outlined in the <i>Greater Melbourne Urban Water and System Strategy</i></li> <li>• Waterways and integrated water management outcomes which enable land to be used for multiple recreation and environmental purposes</li> <li>• Supply and use of recycled water for residential and public realm purposes, and if agreed by South East Water, for Industrial and commercial land</li> </ul> <p>to the satisfaction of South East Water, Melbourne Water, and the responsible authority.</p>
<b>R31</b>	The final layout and design of constructed wetlands, retarding basins, constructed waterways, stormwater infrastructure and associated paths, boardwalks, bridges and planting, must be designed to the satisfaction of Melbourne Water and the responsible authority, including

	appropriate considerations to mitigate flood flows and volumes into the receiving waterways, and the risk of erosion from sodic soils and dispersive soils.
<b>R32</b>	<p>Drainage waterways are to be designed in accordance with Plan 9: Integrated Water Management and Melbourne Water's relevant Development Services Scheme. Waterways must be delivered to:</p> <ul style="list-style-type: none"> <li>• provide safe drainage and flood protection</li> <li>• incorporate environmental, cultural and amenity value</li> <li>• provide an open drainage system</li> </ul> <p>all to the satisfaction of Melbourne Water and the responsible authority.</p>
<b>R33</b>	For development draining into Lower Gum Scrub Creek, development proposals must also demonstrate the management of stormwater flow volume, via the delivery of the diversion system as part of the ultimate assets of Melbourne Water's Development Services Schemes and/or via a stormwater harvesting/reuse, to the satisfaction of Melbourne Water and the responsible authority.
<b>R34</b>	Stormwater conveyance and treatment must be designed in accordance with the relevant Development Services Scheme or Development Services Strategy, and Plan 9: Integrated Water Management to avoid or mitigate the risk of erosion of sodic and/or dispersive soils, and to appropriately manage flow rate and flow volume, to the satisfaction of Melbourne Water and the responsible authority.
<b>R35</b>	<p>Potential management methods to avoid or mitigate the risk of erosion of sodic and/or dispersive soils may include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Widening the buffer distances between the core riparian zone and the outside vegetated buffers that allows sufficient tolerances for channel migration</li> <li>• Diversion of water away from sodic and/or dispersive materials</li> <li>• Minimising potential convergence and/or ponding of surface flows</li> <li>• Compacting to reduce pore spaces and minimise water movement through material</li> <li>• Physical and chemical soil ameliorants</li> <li>• Maintenance of topsoil across undisturbed land, preferably with grasses to provide surface soil stability and root anchorage</li> <li>• Minimising the amount of time land is exposed (e.g. by staging development)</li> <li>• Ensuring that culverts and drains excavated into dispersive subsoils are capped with non-dispersive topsoil, gypsum stabilised and vegetated.</li> </ul>
<b>R36</b>	Where local parks and recreation areas occur adjacent to BCS conservation areas, they must be designed to complement the outcomes required in Section 5 of the BCS relating to Conservation Area 36 and allow for bushfire buffer requirements outside the conservation area to the satisfaction of the Secretary DEECA.
<b>R37</b>	Any proposed development or works within a BCS conservation area must obtain the approval of DEECA, must be generally in accordance with the corresponding conservation area concept plans (Appendix 2) and cross sections (Appendix 7). No planting of tall shading trees is permitted where Growling Grass Frog wetland Areas of Strategic Importance is adjacent to the conservation area boundary.
<b>R38</b>	Public lighting must be designed and baffled to prevent light spill and glare within and adjacent to the BCS conservation area, unless otherwise agreed by the DEECA.
<b>R39</b>	<p>Development in or adjacent to the BCS conservation area must:</p> <ul style="list-style-type: none"> <li>• Ensure natural or pre-development hydrological patterns are maintained in conservation areas</li> <li>• Maintain passage for fauna species including Growling Grass Frog, Australian Grayling, and Dwarf Galaxias</li> <li>• Minimise utility corridors intercepting the conservation area</li> <li>• Ensure there are no impacts from overshadowing to Growling Grass Frog wetlands (existing and proposed) or native vegetation patches</li> </ul>

	<ul style="list-style-type: none"> <li>• Mitigate flood flows and volumes into the receiving waterways</li> <li>• Must be consistent with the cross section in Appendix 7.</li> </ul>
<b>R40</b>	Any infrastructure crossing Cardinia Creek and Lower Gum Scrub Creek must be designed to avoid impacting native vegetation within the BCS conservation area to the greatest extent feasible and must be designed and constructed in accordance with the <i>Growling Grass Frog Crossing Design Standards</i> (2017) to the satisfaction of DEECA, Melbourne Water and responsible authority.
<b>R41</b>	Drainage from stormwater treatment infrastructure must be designed to have no net impact on habitat for Matters of State and National Environmental Significance within BCS conservation areas to the satisfaction of the DEECA.
<b>R42</b>	The conservation area boundary must be fenced to exclude vehicles to the satisfaction of DEECA, allowing for pedestrian and maintenance access where required.
<b>R43</b>	The vegetation within the bushfire hazard areas shown on Plan 8, must be managed to a level that ensures it does not result in a vegetation class that would require a greater 'separation distance' than that specified in Plan 8.
<b>R44</b>	<p>The final layout and design of constructed wetlands, retarding basins, and stormwater quality treatment infrastructure adjacent to BCS conservation areas must consider:</p> <ul style="list-style-type: none"> <li>• the potential to supply treated stormwater for Growling Grass Frog wetlands</li> <li>• hydraulic and hydrological requirements to ensure habitat protection and ecological requirements of Dwarf Galaxias and Australian Grayling within Cardinia Creek</li> </ul> <p>to the satisfaction of Melbourne Water and the Secretary DEECA.</p>
<b>R45</b>	Subdivision and development surrounding or relating to site HO_92 at 425 Officer South Road must ensure the 'original gate' from the Patterson era located in the property, identified in Plate 4 shown on page 33 of the <i>Officer South Employment PSP - Post-contact Heritage Assessment</i> (BHM 2022) is transferred to the Berwick-Pakenham Historical Society and restored.
<b>R46</b>	<p>Planning of developments within the precinct must:</p> <ul style="list-style-type: none"> <li>• Aim to integrate with the conservation area in a manner that will not degrade the habitat values, such as introducing weeds, pest animals, contaminants, and major alterations to the hydrology</li> <li>• Take into consideration any effects that development may cause downstream on the Western Port Ramsar wetland. Increased sediment or contaminant loads should not increase above current baseline conditions. This may require some developments to store and treat stormwater on site and have appropriate controls for contaminant spills or leaks.</li> </ul>
<b>R47</b>	Development must consider locating service lanes or roads separating the Princes Freeway and development within the precinct to mitigate bushfire hazard.
<b>G13</b>	Where a canopy tree cannot be provided because of local climate and soil conditions, a suitable species may be selected which closest achieves this diameter. The requirement for a minimum 30% canopy tree coverage within the public realm should still be met.
<b>G14</b>	Open spaces should have a frontage road to all edges except when abutting a community hub or drainage reserve, or where housing fronts open space with an access way to the satisfaction of the responsible authority. Access ways are not an acceptable interface to the BCS conservation area where a 30 m conservation interface is shown on Figures 3–7 in Appendix 2 Conservation area concept plans.
<b>G15</b>	A consistent suite of lighting and furniture should be used across residential neighbourhoods and employment areas, appropriate to the type and role of public space, to the satisfaction of the responsible authority.
<b>G16</b>	<p>Where developed, linear parks should be located and designed to:</p> <ul style="list-style-type: none"> <li>• Enhance the wider walking and cycling network</li> <li>• Connect and integrate key neighbourhood destinations and landscape features</li> <li>• Support residential and employment neighbourhood legibility and sense of place</li> <li>• Enhance the diversity of open space environments and access to urban agriculture</li> <li>• Provide active frontages</li> </ul>

	<ul style="list-style-type: none"> <li>Avoid vehicle crossings</li> </ul> <p>to the satisfaction of the responsible authority.</p>
<b>G17</b>	Where possible, salvaged rocks should be incorporated into the design of waterways, retaining structures, fences, and other landscape features.
<b>G18</b>	Significant landscape features, such as high points, vegetation, open space, and waterways should be used as focal points for view lines along streets.
<b>G19</b>	Subdivision design should incorporate natural and constructed design elements which respond to local heritage, neighbouring land uses and topography to assist in place making and the achievement of a 'sense of place'.
<b>G20</b>	Subdivision design should respond sensitively to the visual setting and character of pre- and post- contact heritage places and values by providing appropriate distance to new industrial buildings through large lot configurations at these sites.
<b>G21</b>	<p>Subdivision and development surrounding or relating to site HO_92 at 425 Officer South Road:</p> <ul style="list-style-type: none"> <li>Should consider providing an open space buffer/public reserve between the boundaries of the HO and any future development</li> <li>Should not reduce the extent of the garden area surrounding the house as it is presently defined within the heritage overlay boundary.</li> </ul>
<b>G22</b>	Subdivision and development surrounding site HO_91 at 410 Officer South Road should consider providing an open space buffer/ public reserve between the northern and western boundaries of the garden. The layout and planting of the open space should aim to preserve the views from the Cardinia Creek homestead to the east. There should be no reduction in the extent of the garden area surrounding the house as it is presently defined.
<b>G23</b>	Prior to demolition the contents of the dairy at 185 Officer South Road should be recorded in detail and provided to the Berwick-Pakenham Historical Society along with the contents of the dairy; namely the intact brick and render water trough and the tin feed room which relate to early twentieth century farming practices.
<b>G24</b>	Existing vegetation and trees should be retained, protected, and enhanced to provide habitat and movement corridors for local fauna. Where existing vegetation exists along a street, roads may be realigned or reserve widths may be varied to ensure that the provision of footpaths, utility services, and drainage does not compromise the long-term health of the vegetation, to the satisfaction of the responsible authority.
<b>G25</b>	<p>Development and subdivision should:</p> <ul style="list-style-type: none"> <li>protect and manage Matters of State and National Environmental Significance, particularly within conservation areas, in relation to water quality and suitable hydrological regimes (both surface and groundwater).</li> <li>enable supply of gravity fed treated stormwater for existing and future Growling Grass Frog wetlands.</li> <li>maximise habitat values for local flora and fauna species support flood sensitive planning and urban design (FSPUD) outcomes</li> <li>recognise and respond to Aboriginal cultural heritage significance.</li> </ul>
<b>G26</b>	Where a Cultural Heritage Management Plan is required, this should provide recommendations for the ongoing management and maintenance of creeks, wetlands and water features. Any such ongoing management and maintenance requirements should be considered to be included as an appropriately worded condition on a relevant planning permit. Where possible management and maintenance requirements should be consistent for the length of the cultural value investigation area.
<b>G27</b>	<p>Voluntary CHMPs should be undertaken in the following locations if a high impact activity, as listed in Division 5 of the <i>Aboriginal Heritage Regulations 2018</i>, is undertaken:</p> <ul style="list-style-type: none"> <li>land immediately adjacent to anabranches of Cardinia Creek.</li> <li>prominent sandy rises located near a waterway.</li> </ul>



<b>G28</b>	Drainage assets and public open space areas should be located adjacent with the conservation area and waterways to provide a buffer to development where appropriate to the satisfaction of the responsible authority.
<b>G29</b>	Development proposals should enhance habitat for native flora and fauna, providing opportunities for people to experience nature in urban areas. This should demonstrate the principles of Biodiversity Sensitive Urban Design (BSUD) to the satisfaction of the responsible authority that: <ul style="list-style-type: none"> <li>• Protects and creates habitat</li> <li>• Helps species disperse</li> <li>• Encourages positive human-nature interaction.</li> </ul>
<b>G30</b>	The design and layout of public open space within commercial and residential areas, community facilities, transmission easements and sporting reserves should consider space for growing, harvesting, distributing, and consuming food where appropriate. This should be achieved using Flood Sensitive Planning and Urban Design initiatives such as urban farming, raised garden beds, car space gardens, rooftop gardens and community gardens that utilise rainwater or recycled water as negotiated with South East Water.
<b>G31</b>	Applications should consider a range of IWM options as indicated in Plan 9: Integrated Water Management. Potential IWM options may include but are not limited to: <ul style="list-style-type: none"> <li>• Rainwater tanks on all industrial, commercial, and residential lots</li> <li>• Passive irrigation of trees in the public realm, include all streets and public open space</li> <li>• Local stormwater harvesting systems to service the watering needs of future open spaces</li> <li>• Regional scale rainwater tanks collecting roof water from all industrial, commercial and residential lots to be reticulated back within the precinct</li> <li>• Supplying stormwater of the right quality to existing and future Growling Grass Frog wetlands</li> <li>• Use of Melbourne Water stormwater management assets to provide green corridors and community amenity</li> <li>• Identifying designs to maximise opportunities for infiltration</li> <li>• Regional scale stormwater harvesting systems to service the watering needs of the precinct and beyond.</li> </ul>
<b>G32</b>	Development and subdivision should: <ul style="list-style-type: none"> <li>• avoid and minimise impacts to conservation areas including with regard to the location of essential and other services</li> <li>• provide appropriately managed and sensitively designed community access to conservation and landscape values areas and ensure protection of the primary conservation and landscape values can be maintained.</li> </ul>
<b>G33</b>	The design and layout of roads, road reserves, and public open space should optimise water use efficiency and long-term viability of vegetation, tree canopy and public uses to contribute to a sustainable and green urban environment. This should be achieved through the use of overland flow paths, passive watering and Water Sensitive Urban Design initiatives such as street swales, rain gardens and/or locally treated storm water for irrigation.

**Table 3: Credited open space delivery**

PARK ID	AREA	TYPE	LOCATIONAL ATTRIBUTES	RESPONSIBILITY
<b>ACTIVE OPEN SPACE</b>				
SR-01	8.11	Local Sports Reserve	Located in the north of the precinct to serve the Officer South Employment and Cardinia Road Employment residential	Cardinia Shire Council

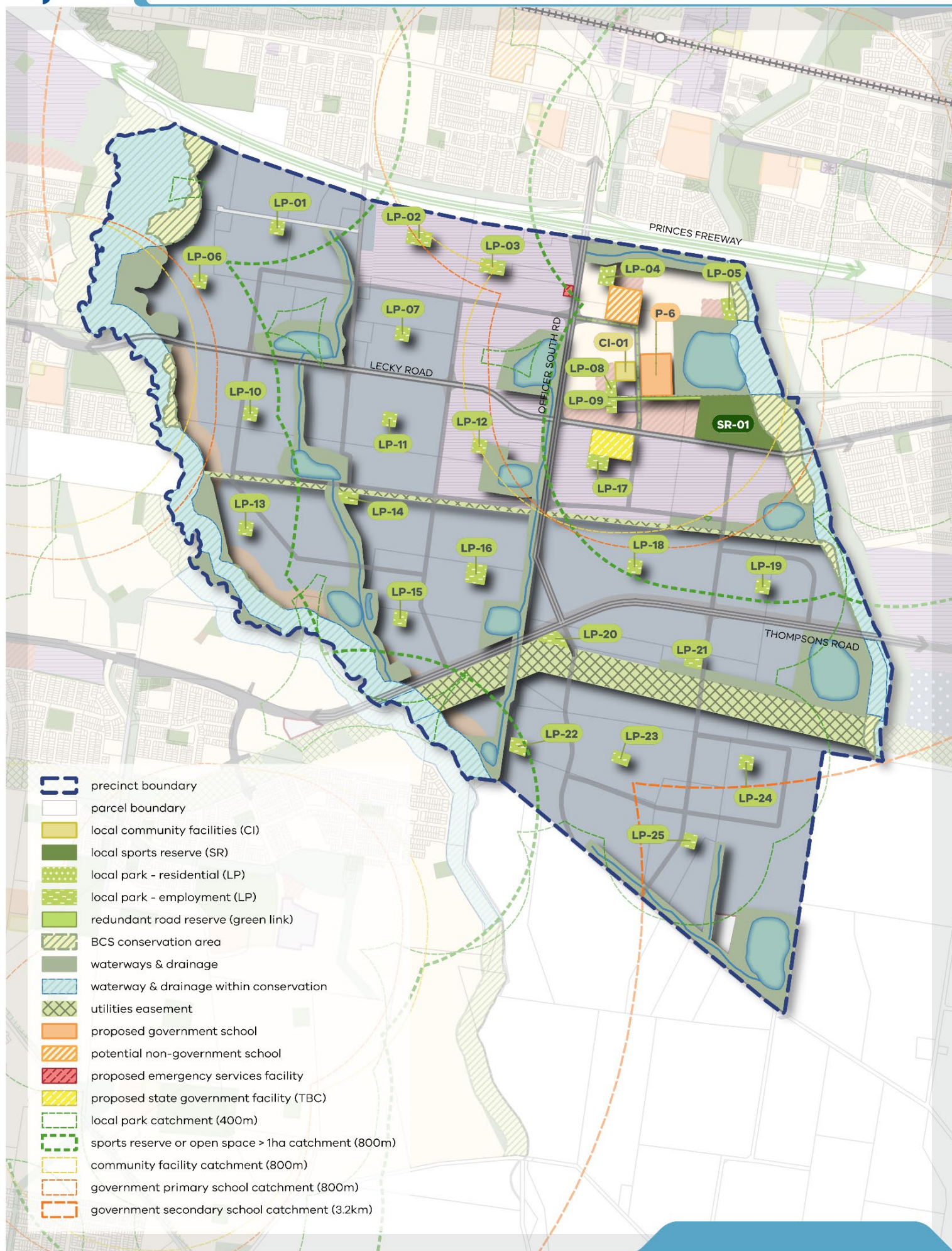
			areas, and broader catchment via the street network.	
<b>LOCAL PARKS</b>				
LP-01	0.50	Local Park	Located to provide passive open space to the industrial area.	Cardinia Shire Council
LP-02	0.90	Local Park	Located to provide passive open space to the commercial area.	Cardinia Shire Council
LP-03	0.90	Local Park	Located to provide passive open space to the commercial area.	Cardinia Shire Council
LP-04	0.75	Local Park	Located to provide passive open space to the residential area.	Cardinia Shire Council
LP-05	0.75	Local Park	Located to provide passive open space to the residential area.	Cardinia Shire Council
LP-06	0.50	Local Park	Located to provide passive open space to the industrial area.	Cardinia Shire Council
LP-07	0.50	Local Park	Located to retain existing vegetation (refer Plan 9) within a passive open space.	Cardinia Shire Council
LP-08	0.43	Local Park	Located to provide passive open space next to the local town centre.	Cardinia Shire Council
LP-09	0.32	Local Park	Located to provide passive open space next to the local town centre.	Cardinia Shire Council
LP-10	0.50	Local Park	Located to provide passive open space to the industrial area.	Cardinia Shire Council
LP-11	0.50	Local Park	Located to provide passive open space to the industrial area.	Cardinia Shire Council
LP-12	0.50	Local Park	Located to provide passive open space in the commercial area next to a drainage reserve.	Cardinia Shire Council
LP-13	0.50	Local Park	Located to provide passive open space to the industrial area.	Cardinia Shire Council
LP-14	0.56	Local Park	Located to provide passive open space along the gas easement in the industrial area.	Cardinia Shire Council
LP-15	0.50	Local Park	Located to provide passive open space next to the heritage overlay.	Cardinia Shire Council
LP-16	1.00	Local Park	Located to provide passive open space to the industrial area.	Cardinia Shire Council
LP-17	0.75	Local Park	Located to provide passive open space next to a proposed state government facility.	Cardinia Shire Council
LP-18	0.50	Local Park	Located to provide passive open space to the industrial area.	Cardinia Shire Council

LP-19	0.50	Local Park	Located to provide passive open space to the industrial area.	Cardinia Shire Council
LP-20	0.67	Local Park	Located to provide passive open space next to Thompsons Road and Officer South Road intersection.	Cardinia Shire Council
LP-21	0.75	Local Park	Located to provide passive open space to the industrial area.	Cardinia Shire Council
LP-22	0.63	Local Park	Located to provide passive open space next to the heritage overlay.	Cardinia Shire Council
LP-23	0.50	Local Park	Located to provide passive open space to the industrial area.	Cardinia Shire Council
LP-24	0.50	Local Park	Located to provide passive open space to the industrial area.	Cardinia Shire Council
LP-25	0.50	Local Park	Located to provide passive open space to the industrial area.	Cardinia Shire Council

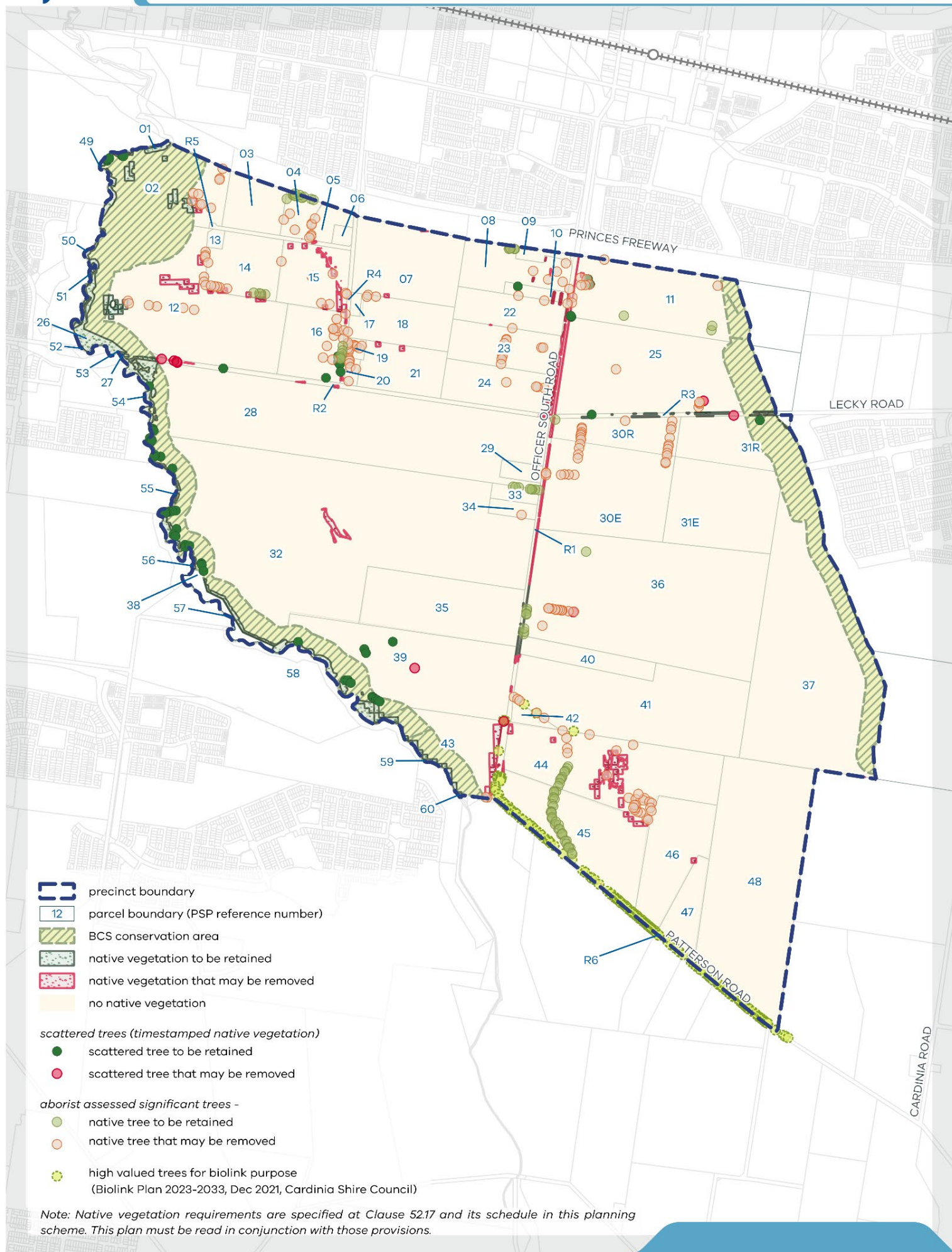
**Table 4: Bushfire hazard vegetation management and setback requirements**

Slope Class	Vegetation	Setback Distance in accordance with AS3959 – 2018 (or as amended)
All upslopes and flat land	Grassland and Shrubland	19 m
	Scrub	27 m
	Woodland	33 m
	Forest	48 m

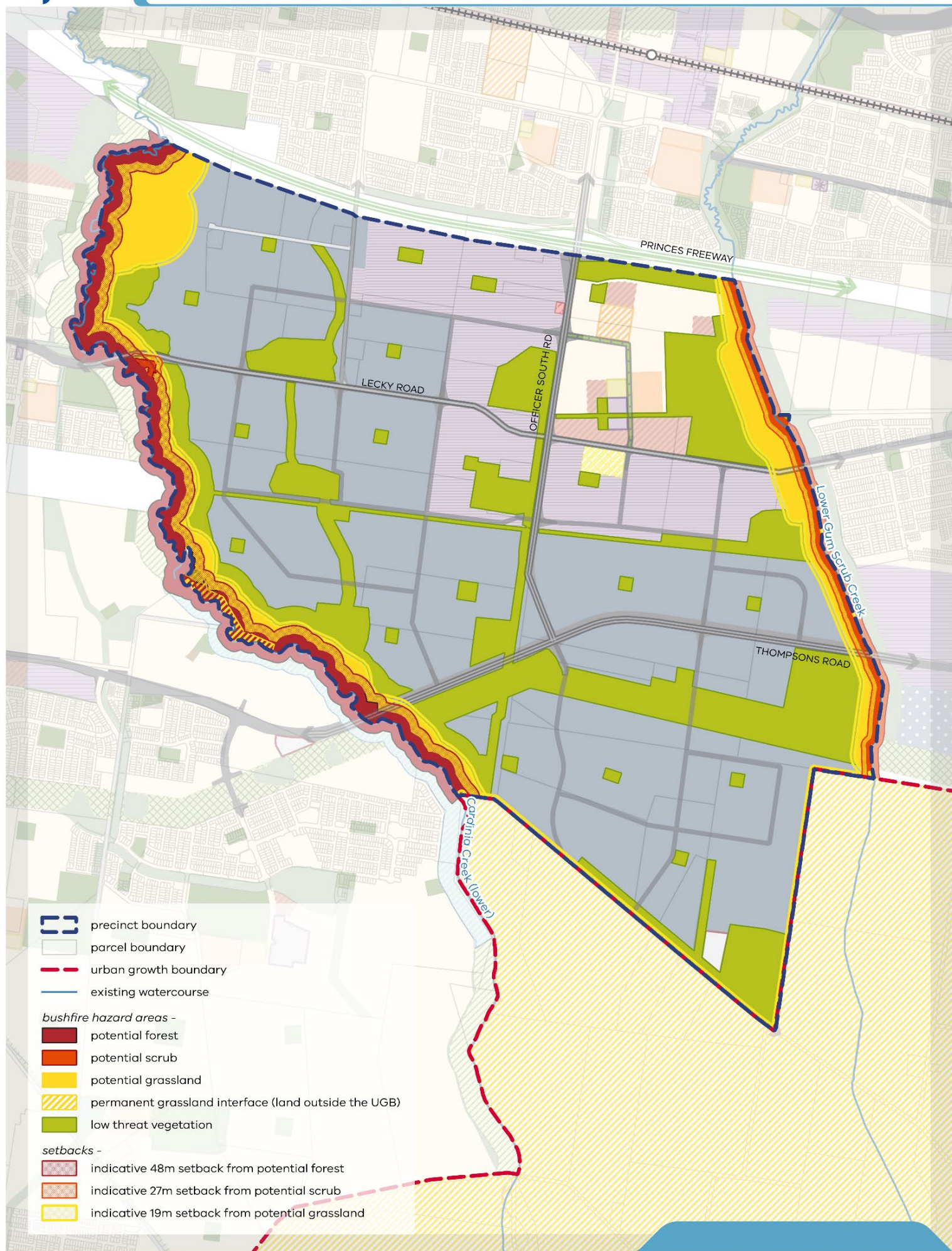




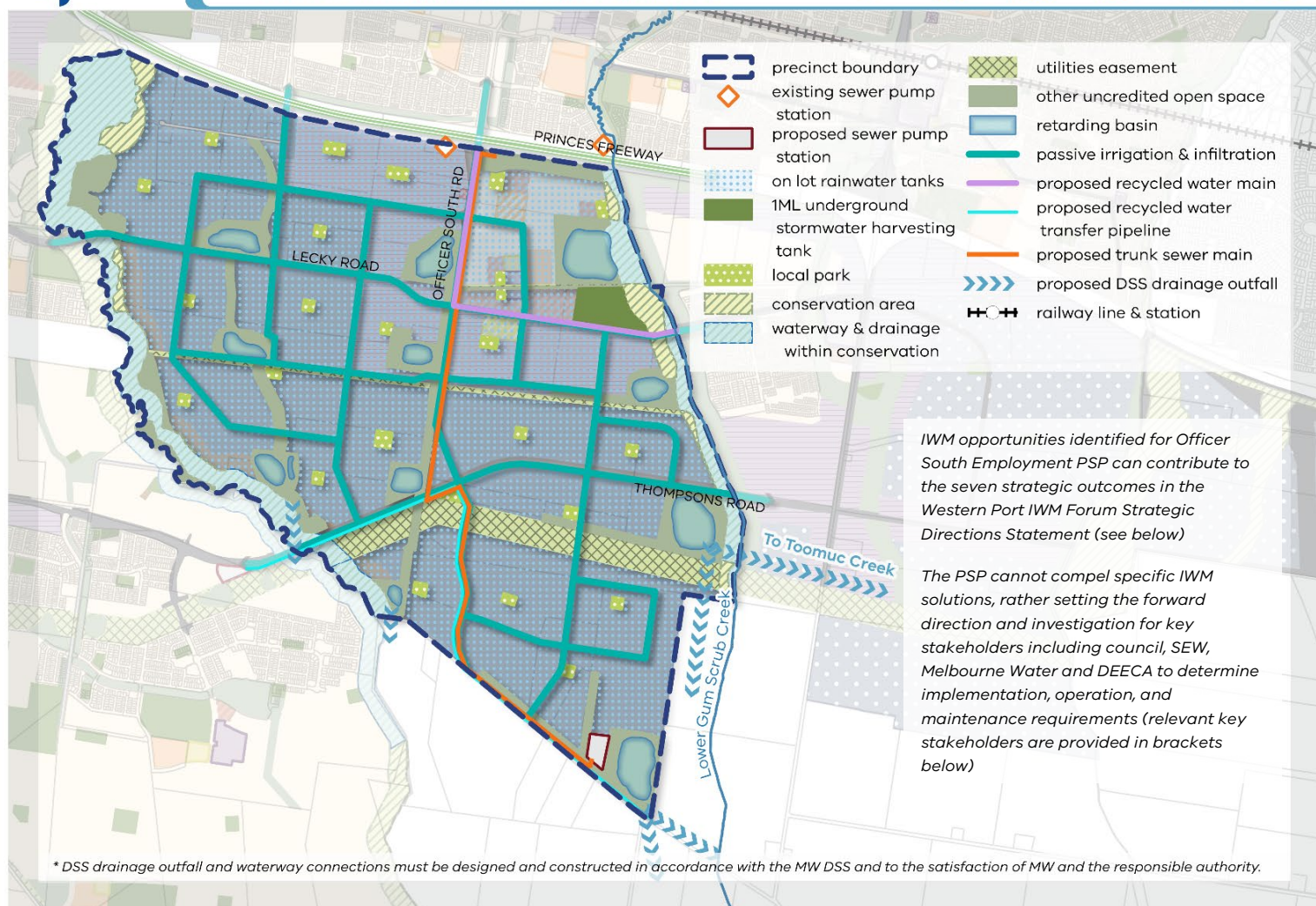












### Jobs, economic growth, and innovation

- Water to support jobs and economic growth (**council, SEW**)



### Effective and affordable wastewater systems

- Sewer pumping station and raising main (**SEW**)
- Recycled water for residential and employment uses (**SEW**)



### Safe, secure, and affordable supplies in an uncertain future

- Lot-scale rainwater and stormwater harvesting substitution for potable water demands (**council, SEW**)
- Regional scale rainwater and stormwater harvesting (**MW, council, SEW**)
- Stormwater for alternative use – storage and transfer infrastructure (**MW, SEW**)



### Healthy and valued urban, rural, agricultural, and green landscapes

- Passive irrigation of street trees to support tree health and achieve minimum tree canopy coverage targets (**council**)
- Stormwater harvesting for passive and active open space irrigation (**council**)
- Drainage reserves and conservation areas provide green corridors for increased amenity (**MW, council, DEECA**)



### Opportunities are sought to manage existing and future flood risks and impacts

- Flood mitigation via the Melbourne Water Development Services Scheme (**MW**)



### Healthy and valued waterways and marine environments

- Stormwater infiltration via Water Sensitive Urban Design (**council, MW**)
- Stormwater supply to Growling Grass Frog conservation areas (**MW, DEECA**)
- Stormwater supply to Growling Grass Frog conservation areas



### Community values are reflected in place-based planning

- Community engagement for IWM initiatives (**council, SEW**)

### 3.5 Viable densities

The Officer South Employment residential precinct is a compact and high amenity place to live, work and play. A 20-minute neighbourhood that strongly promotes walking and cycling to work, it will be a standout urban residential neighbourhood that delivers a high-quality urban design outcome. Designated as an Urban Design Performance Area (UDPA), a master plan and vision is required to be provided and assessed through performance-based criteria that sets the benchmark for the subdivision, buildings, and road and active movement networks to ensure high quality outcomes.

Targeting higher densities than the surrounding neighbourhoods, approximately 1,600 homes will be delivered in the designated residential area alongside essential community infrastructure. The Officer South Employment community will be the life hub, bringing people, amenity, and community facilities to the precinct.

## Objectives

### Place-based Objectives – viable densities

<b>O22</b>	To provide diversity of housing types and choice (lot size and physical form of housing) to meet community needs, including increased densities, accessible and specialised housing, and affordable and social housing options.
<b>O23</b>	To deliver diverse streetscapes and neighbourhoods that support the type of density and housing to meet the quality of urban design outcomes.
<b>O24</b>	To deliver a highly accessible, functional, and vibrant local town centre that encourages social interaction, focuses on activating the Lecky Road green spine with high quality architecture and active street frontages, and creates a strong sense of place.
<b>O25</b>	To deliver an accessible network of neighbourhood community hubs across the precinct (particularly to local parks) that provide access to social, recreation, and health services that include flexible, adaptable design and facilitate a variety of uses.
<b>O26</b>	Prepare for the impacts of climate change by facilitating resilient environmentally sustainable design, subdivision and development.

## Requirements and guidelines

### Place-based requirements and guidelines – viable densities

<b>R48</b>	<p>Prior to the subdivision of any land located wholly or partly in the UDPA on Plan 3 a Concept Master plan for the Urban Design Performance Area shown in Plan 10 must be submitted for approval by the responsible authority. The Concept Master plan must address the following:</p> <ul style="list-style-type: none"> <li>• Develop a series of urban design principles to guide the outcomes for the UDPA precinct in accordance with the PSP.</li> <li>• Reflect consideration of the performance outcomes outlined by Table 6 UDPA Performance Measures.</li> <li>• Preliminary staging and indicative development timing.</li> <li>• Include a high-level concept layout that provides a clear indication of: <ul style="list-style-type: none"> <li>○ placemaking elements, character precincts and destinations, including a hierarchy of public spaces to provide social interaction and local events</li> <li>○ designated key sites/locations for higher quality product that signifies key destinations and nodes such as key intersections that mark a sense of place</li> </ul> </li> </ul>
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	<ul style="list-style-type: none"> <li>○ key views and connectivity to the active sports park and conservation area including the pedestrian bridge to Cardinia Road Employment Precinct community</li> <li>○ appropriate land uses and their integration of community facilities and services</li> <li>○ medium density providing connections and active interfaces with adjacent streets, open space, and waterways</li> <li>○ safe and effective internal vehicle and pedestrian circulation, including dedicated pedestrian thoroughfares and car parking solutions</li> <li>○ indicative treatments for interfaces with non-residential land uses</li> <li>○ a high-level street, cycle and shared path network that promotes connectivity to and through the local town centre to connect with key points of destination such as the Officer South Road drainage corridor, Lecky Road green spine and the local parks</li> <li>○ measures to prioritise pedestrians and cyclists, including a network that utilises green links and amenity corridors</li> <li>○ indicative provisions for car parking, including how on-street car parking is minimised through efficiencies and shared off-street car parking facilities</li> <li>○ quality built form design outcomes to landmark sites.</li> <li>• Include a high-level preliminary proposal for climate resilience measures to meet the sustainability objectives of the PSP. Environmentally Sustainable Development principles are to be explored in all development, including: <ul style="list-style-type: none"> <li>○ material re-use and recycling</li> <li>○ use of materials with reduced embodied energy</li> <li>○ renewable electricity self-generation, car charge schemes, smart grids and battery storage that can provide back-up power during a grid outage</li> <li>○ use of tools such as Built Environment Sustainability Scorecard (BESS) to demonstrate best practise environmental design and development that significantly exceeds minimum standards</li> <li>○ measures that reduce the urban heat island effect; and</li> <li>○ waste management initiatives.</li> </ul> </li> <li>• Include a preliminary landscape plan and preliminary vision for the streets and public realm and how the 30% tree canopy cover will be achieved.</li> <li>• Provide a preliminary Integrated Water Management Strategy which includes preparation of interface plans with drainage reserves and waterway corridors.</li> <li>• Provide indicative typologies to illustrate the variation of built form proposed for the residential precinct, including higher quality product for designated sites on key view lines and destination points.</li> <li>• Provide Built Form Design Guidelines for landmark sites outlining the benchmark level of built form articulation, material palette, building envelope and environmentally sustainable design.</li> </ul> <p>Once approved, all subdivision applications must be generally in accordance with the Vision and layout of the Concept Master plan.</p>
<b>R49</b>	Subdivisions must respond to Plan 2 and Plan 10 with minimum densities and typologies per catchment as stated in Table 5, to provide a diverse neighbourhood character with a range of lot sizes and dwelling types in appropriate locations throughout the residential area.
<b>G34</b>	Specialised housing forms, such as lifestyle communities, retirement living, or aged care should:

	<ul style="list-style-type: none"> <li>• respond to and integrate with adjoining development, avoiding inactive interfaces and blank facades to the public street network</li> <li>• be located within a walkable catchment area shown on Plan 10</li> <li>• be accessible by public transport and shared path networks</li> <li>• not present a barrier to movement through the surrounding road, public transport, pedestrian and active transport movement network</li> <li>• incorporate back up power solutions to improve safety for vulnerable residents during power outages.</li> </ul>
<b>G35</b>	Additional local convenience centre uses may be located in the designated mixed-use areas adjoining local parks subject to demonstrating that they do not compromise the role and function of the primary local town centre, to the satisfaction of the responsible authority. The ancillary centres are to provide opportunities for activating the local park, such as provision for cafes, small grocer, take-away and home office/small businesses without diminishing the density requirements for that area.
<b>G36</b>	An application for subdivision of land into residential lots or development of land for residential or mixed-use purposes should provide eight per cent minimum of all housing within the UDPA affordable and social housing, as defined by the <i>Planning and Environment Act 1987</i> , in accordance with affordable and social housing policy, evidence and guidance.
<b>G37</b>	<p>Subdivision should provide for a local street separating development from DSS assets, sporting reserves and local parks. Where subdivision does not propose a local street separating development, design and layout options should demonstrate:</p> <ul style="list-style-type: none"> <li>• lots directly fronting open space and landscape value areas should be set back at least 4.5 metres</li> <li>• lots directly fronting open space should allow for vehicular access via a rear laneway</li> <li>• a four metre wide access way should be provided as the primary point of access from a footpath or shared path with a minimum width of 1.5 metres along the lot frontage</li> <li>• subdivision design should avoid side or rear fence treatments fronting open space and DSS assets</li> <li>• subdivision design should maximise opportunities for informal passive surveillance</li> <li>• subdivision design should not limit the use of adjacent open space.</li> </ul> <p>All to the satisfaction of the responsible authority and where adjacent to a waterway to the satisfaction of the responsible authority and Melbourne Water.</p>
<b>G38</b>	Home-based businesses are encouraged in residential and mixed-use areas at key locations to maximise the use of high-visibility locations and protect the amenity and integrity of core residential areas. They are encouraged in residential areas where sites front onto arterial roads and overlook open space corridors.
<b>G39</b>	Screening of waste collection points, service and car parking areas should provide appropriate landscaping with planting of canopy trees to minimise amenity impacts with adjoining development, and heat island effect.

**Table 5: Housing density and diversity**

CATCHMENT	HOUSING TYPOLOGY	
	TARGET DENSITY	TARGET TYPOLOGIES
<b>Amenity-based Density Area</b>  <b>22.1 NDHA</b>	Average 36 dwellings per ha  Target quantity 797 dwellings	<p>To support diverse housing outcomes, the master plan and subsequent subdivision applications must include opportunities for the delivery of at least three different housing typologies. The mix of dwelling typologies should include, but is not limited to:</p> <ul style="list-style-type: none"> <li>• integrated and apartment-style development</li> <li>• multi-unit development for sites near schools and community facilities</li> <li>• attached townhouse-style development</li> <li>• semi-detached/duplex-style development/Small Lot Housing Code product</li> <li>• Low to mid-rise medium density development surrounding the school and amenity areas.</li> </ul> <p>Mixed typology helps break up the density, create view corridors and provide a sensitive interface to the school.</p>
<b>Mixed Use Area</b>  <b>13.7 NDHA</b>	Average 40 dwellings per ha  Target quantity 548 dwellings	<p>To support diverse housing outcomes, the master plan and subsequent subdivision applications must include opportunities for at least three different typologies including but not limited to:</p> <ul style="list-style-type: none"> <li>• attached townhouse-style development with small office accommodation</li> <li>• 2–3 storey integrated and apartment style development</li> <li>• walk-up low-rise apartment-style development</li> <li>• shop-top retail low-rise (2–3 storey) residential development with cafes and local produce stores to activate parks.</li> <li>• social and affordable, key worker accommodation near the local town centre and Lecky Road commercial precinct.</li> </ul> <p>Encourage higher rise and density development to face and frame amenity and assist in creating a sense of place with passive surveillance and activity. Opportunity for key destination hubs at parks and schools promote opportunities for key worker accommodation located close to the bus capable road network.</p>
<b>Town Centre Area</b>  <b>1.5 NDHA</b>	Average 40 dwellings per ha  Target quantity 60 dwellings	<p>To support diverse housing outcomes, the master plan and subsequent subdivision applications must include opportunities for the delivery of at least two different housing typologies within the centre to promote diversity. The mix of dwelling typologies should include, but is not limited to:</p>



CATCHMENT	HOUSING TYPOLOGY	
	TARGET DENSITY	TARGET TYPOLOGIES
		<ul style="list-style-type: none"> <li>3–5 storey integrated and apartment style development with concealed integrated car parking</li> <li>Walk-up low-rise apartment style development with concealed integrated car parking</li> <li>Shop-top retail low-rise (2–3 storey) residential development for sites closer to the local parks</li> <li>Social and affordable, key worker accommodation located close to the Lecky Rd commercial precinct.</li> </ul> <p>High-density and high-quality development surrounding and within the local town centre to create destination points, aid with scale to create view corridors within the precinct and provide a sensitive interface to the community centre.</p>
<b>Balance Area</b> <b>6.6 NDHA</b>	<p>Average 32 dwellings per ha</p> <p>Target quantity 211 dwellings</p>	<p>To support diverse housing outcomes, the master plan and subsequent subdivision applications must include opportunities for the delivery of at least two-three different housing typologies that promote affordable housing outcomes such as:</p> <ul style="list-style-type: none"> <li>Semi-detached/duplex-style development/Small Lot Housing Code product</li> <li>Multi-unit affordable housing development for sites closer to the local parks</li> <li>Detached traditional-style housing</li> <li>Low-rise social housing projects</li> <li>Attached townhouse development.</li> </ul> <p>Low to mid-rise development to help diversify housing choice, create view corridors, and provide the opportunity for density relief.</p>

**Table 6: UDPA performance measures**

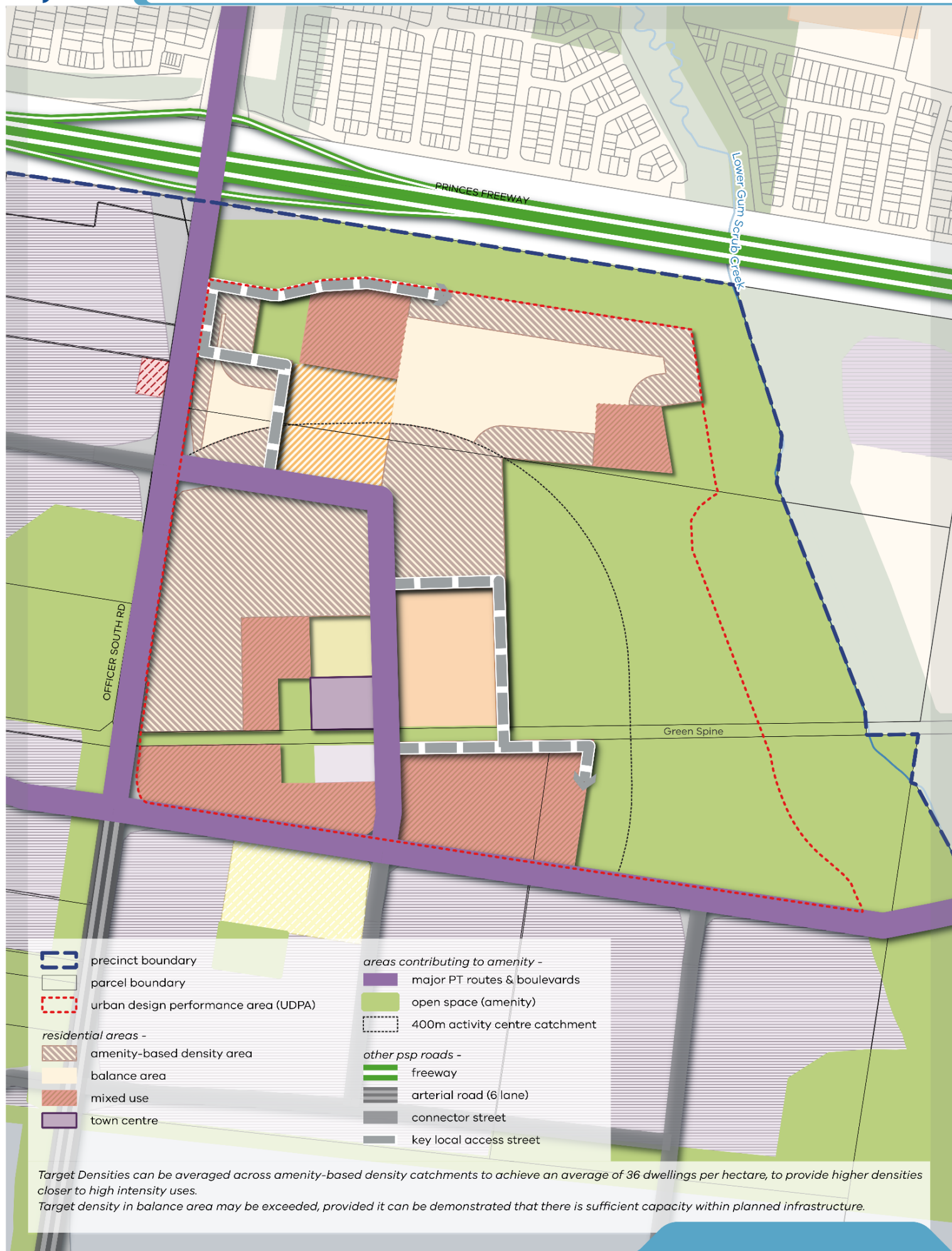
URBAN DESIGN PRIORITY ELEMENTS	PERFORMANCE REQUIREMENTS	
	REQUIRED PERFORMANCE CRITERIA	BENCHMARK ACCEPTABLE OUTCOMES
<b>URBAN STRUCTURE</b>	<p>Provide a permeable and legible urban structure that enables a cohesive 20-minute neighbourhood and promotes:</p> <ul style="list-style-type: none"> <li>a response to the natural landform, place-based features, and solar orientation</li> </ul>	<ul style="list-style-type: none"> <li>The use of varied block sizes and proposed built form provide a cohesive pattern and articulation to avoid heavily built-up street interfaces.</li> <li>The structure further dissects the residential precinct into sub-precincts to provide distinct and varied neighbourhoods throughout.</li> <li>Clear view lines to the local town centre from key vantage points are maintained to promote wayfinding and sense of place.</li> </ul>

URBAN DESIGN PRIORITY ELEMENTS	PERFORMANCE REQUIREMENTS	
	REQUIRED PERFORMANCE CRITERIA	BENCHMARK ACCEPTABLE OUTCOMES
	<ul style="list-style-type: none"> <li>equitable access to amenity and local destinations</li> <li>creates identifiable precincts creating a clear understanding of place.</li> </ul>	<ul style="list-style-type: none"> <li>Larger lots are planned to accommodate future higher-density mixed-use apartment development in proximity to the local town centre.</li> <li>Pedestrian links break up the built environment and promote walkability and culs-de-sac are only strategically used to ensure a permeable built environment.</li> <li>Road and shared path interfaces are provided to conservation areas and points of destination to facilitate equitable access to precinct features.</li> <li>Walkable open spaces are connected via a network of active paths and key road structure, encouraging social interaction as a key role within the precinct.</li> </ul> <p><b>Local town centre</b></p> <p>Refer to Appendix 6: Local town centre design criteria</p> <p>The urban structure creates an active and inviting hub by diverting strategic routes to the local town centre core. It should be oriented for optimum solar gain and minimise overshadowing of the Lecky Road green spine and village square and provide a pattern of small lots to activate the village square. Large lots or potentially modular block patterns are to be provided to enable future lot subdivision or consolidation to promote sustainability.</p>
<b>BUILT FORM</b>	<p>Ensure a varied and visually stimulating built environment by introducing diverse housing typologies, building scale and form that supports:</p> <ul style="list-style-type: none"> <li>diverse accommodation through flexible floor plan layout, and building articulation</li> <li>gradual transition of scale throughout the precinct</li> <li>housing affordability</li> </ul>	<ul style="list-style-type: none"> <li>The master plan applies at least three variations of built form and/or typology and uses this to promote various sub-precinct characters.</li> <li>Rear-loaded typology is maximised to promote a safe high pedestrianised environment.</li> <li>Taller building heights of 4–5 levels are concentrated around, or connect with, the local town centre and commercial zoned areas to create a hub experience within these areas.</li> </ul>

URBAN DESIGN PRIORITY ELEMENTS	PERFORMANCE REQUIREMENTS	
	REQUIRED PERFORMANCE CRITERIA	BENCHMARK ACCEPTABLE OUTCOMES
	<ul style="list-style-type: none"> <li>a cohesive planned future character that promotes a sense of community, safety, and inclusion.</li> </ul>	<ul style="list-style-type: none"> <li>Key sites at terminating view lines of key roads, pedestrian routes, and precinct gateways are earmarked for taller built form to signify the important role they play in the centre as wayfinding features.</li> </ul> <p><b>Local town centre</b></p> <p>Refer to Appendix 6: Local town centre design criteria</p> <p>The local town centre should use diverse commercial/retail form to promote all-hours activation for a potential 24-hour commercial and industrial precinct. To promote sustainability, the built form should promote adaptability to cater for future growth and incremental change via a staged development approach.</p>
<b>MOVEMENT &amp; PLACE</b>	<p>Create a pedestrian-focused environment that:</p> <ul style="list-style-type: none"> <li>Connects people to services, community facilities, and destinations of natural and cultural amenity</li> <li>Provides a safe and cohesive road, public transport, and active transport network</li> <li>Connects the Officer South Employment community with its local context</li> <li>Provides various opportunities for pedestrians to linger.</li> </ul>	<ul style="list-style-type: none"> <li>A clear road hierarchy identifies direct routes to key destinations such as community facilities and high amenity areas.</li> <li>Public transport connects the precinct with direct access to Officer Train Station via Officer South Road, and connections to Cardinia Road Employment Precinct and Minta Farm via Grices/Lecky Road.</li> <li>Thompsons Road provides a key freight link to key eastern employment areas and the potential future south-east airport.</li> <li>Road, cycle, and shared path networks create various journeys to designated meeting places and connections such as the Lower Gum Scrub Creek pedestrian bridge.</li> <li>The landscape treatment of road reserves and the public realm varies to help introduce different precincts and promote character.</li> <li>Pedestrian movement is prioritised by minimising crossovers and providing a separate fast motorised mobility network.</li> <li>Streets and active corridors (green spine) include drinking fountains, public seating and at-ground lighting to paths to encourage lingering and all hours use.</li> </ul> <p><b>Local town centre</b></p>



URBAN DESIGN PRIORITY ELEMENTS	PERFORMANCE REQUIREMENTS	
	REQUIRED PERFORMANCE CRITERIA	BENCHMARK ACCEPTABLE OUTCOMES
		<p>Refer to Appendix 6: Local town centre design criteria.</p> <p>The local town centre should prioritise commuter friendly and conveniently located public transport and last mile transport infrastructure. Coordinated within the centre, appropriate bicycle/scooter parking is provided in highly visible locations and close to pedestrian desire lines and key destinations, paired with public seating for lingering and socialising.</p>
<b>SUSTAINABILITY &amp; INNOVATION</b>	<p>Create a sustainable and climate resilient neighbourhood by:</p> <ul style="list-style-type: none"> <li>embracing innovation in technology and design</li> <li>Enhancing the environmental values to promote clean energy and a carbon neutral precinct</li> <li>Considering shade and heat island effect</li> <li>Supporting the reduction of travel distances and dependence on private vehicles</li> <li>Creating pedestrian-centric zones to encourage alternative modes of transport</li> </ul>	<ul style="list-style-type: none"> <li>Buildings incorporate passive design and are naturally ventilated.</li> <li>The built form reduces greenhouse gas emissions associated with the occupation and the ongoing use of buildings by considering passive solar orientation, green energy solutions and adaptability and repurpose.</li> <li>Solar energy is used and a microgrid is adopted for the residential precinct, including mandatory electrical only services to homes/buildings and electric vehicle charging stations in key destinations.</li> <li>The development implements use of recycled water.</li> <li>The master plan incorporates water sensitive urban design principles such as stormwater reuse for passive irrigation.</li> <li>Increased tree coverage to large hard covered areas such as car parks decrease the heat island effect.</li> <li>The master plan exceeds 20-minute neighbourhood principles delivering a network of amenities within less than 400 metres.</li> </ul> <p><b>Local town centre</b></p> <p>Refer to Appendix 6: Local town centre design criteria.</p>



## 3.6 Services and destinations

### Objectives

#### Place-based objectives – Services and destinations

<b>O27</b>	To support education and community infrastructure and facilities that cater for multiple social needs, and that are located to equitably and efficiently maximise their accessibility and shared use with adjoining precincts and the broader region.
<b>O28</b>	To develop a local town centre that services the local and wider community with strong connections through Officer South Road and Lecky Road.
<b>O29</b>	To deliver key destinations connected to the cycling and active path network that are designed within flexible open space to promote cultural and social activities/events.
<b>O30</b>	To encourage investment and support education and training opportunities for technical industries within the local town centre where closely located by the commercial land uses.

### Requirements and guidelines

#### Place-based requirements and guidelines – Services and destinations

<b>R50</b>	Proposed government school sites must have a minimum of two road frontages (three preferred), one of which must be a bus-capable connector road. All roads fronting school sites must be wide enough to simultaneously accommodate safe and efficient: <ul style="list-style-type: none"> <li>pedestrian movement</li> <li>two-way traffic and cycling movement</li> <li>student drop-off zones, and indented parking of cars and buses.</li> </ul>
<b>R51</b>	Any lot created for a proposed government school site must be designed and serviced to the satisfaction of Department of Education.
<b>R52</b>	Any lot created for a proposed state government facility must be designed and serviced to the satisfaction of Department of Health as identified in Plan 3 Place-based Plan.
<b>G40</b>	Subdivision and development should facilitate integration of schools, sports reserves, and community facilities where they are co-located and promote: <ul style="list-style-type: none"> <li>Integration with neighbouring facilities to maximise efficiencies through the sharing of car parking and other complementary infrastructure</li> <li>Out-of-hours use, street activation and permeability</li> <li>Safe and convenient pedestrian and cyclist access.</li> </ul>
<b>G41</b>	Educational, community or civic infrastructure not shown on Plan 3 should be located within or proximate to a local town centre, community facility, as appropriate.
<b>G42</b>	Public health and justice services should be located within or adjacent to a community facility or local town centre and with access to public transport.
<b>G43</b>	The land identified as a proposed state government facility may be used for an alternative purpose such as a local pop-up park, which is generally in accordance with the PSP and consistent with the provision of the applied zone, until such time the Department of Health requires the land. Any use must be consistent with the priorities of the <i>Victorian Public Health and Well-being Plan</i> . When the land is required by the Department of Health, the land must



	be finished to a standard that satisfies the requirements of the Department of Health prior to the transfer of the land back to the Department of Health.
<b>G44</b>	<p>Where the responsible authority is satisfied that land shown as a potential non-government school site is unlikely to be used for a non-government school, the land may be used for an alternative purpose which is generally in accordance with the PSP and consistent with the provisions of the applied zone. The development/subdivision of the PSP must be 80 per cent complete and the responsible authority must be in receipt of a letter from the proposed education provider stating that the land is no longer required.</p> <p>The responsible authority must verify the need for the potential school with the education provider by referring to the Background Report and Community Infrastructure Assessment of the subject PSP area.</p> <p>Further guidance on this can be found in the VPA's 'Non-government School Planning Guidance Note'.</p>
<b>G45</b>	The indicative configuration of community facility and sports field as illustrated in Plan 8 may be altered to the satisfaction of the relevant responsible authorities.
<b>G46</b>	Common boundaries of school sites with residential uses should be avoided whenever possible to avoid potential adverse amenity impacts on residential areas and potential future land use conflicts.
<b>G47</b>	Drop off/pick up facilities for the proposed government primary school and adjacent kindergarten facility should be located in close proximity where practicable.
<b>G48</b>	The amount of on street parking available on roads and streets which abuts a proposed government school site should be maximised.
<b>G49</b>	The indicative layout of community facilities and open space as illustrated in Plan 3 and Plan 6 may be altered to the satisfaction of the relevant responsible authorities. Where the alterations may impact a proposed government school site, the Department of Education should be consulted by the responsible authority to ensure that the changes are also to the satisfaction of that department.
<b>G50</b>	Education, industry institutions and business training premises should be near key public and active transport links.
<b>G51</b>	Ensure appropriate traffic management and road design is adopted around the development of the non-government primary school to limit congestion along the connector boulevard within the UDPA.
<b>G52</b>	Land in the electricity transmission easement should be utilised to support community facilities related to walking, cycling and equestrian paths/trails as part of the broader open space network and service utilities, such as roads, renewable energy sources and the like.

### 3.7 Infrastructure coordination

#### Objectives

##### Place-based objectives – Infrastructure coordination

<b>O31</b>	To plan for development and infrastructure that encourages leveraging of existing and planned infrastructure, and the timely delivery of new infrastructure.
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<b>O32</b>	To actively pursue innovative and sustainable models for infrastructure delivery, and long-term strategic infrastructure opportunities that align with the UN Sustainable Development Goals.
<b>O33</b>	To encourage environmentally sustainable design and development and encourage the use of sustainable energy across the precinct, including generation, storage and distribution.
<b>O34</b>	To plan for an integrated water management system that reduces reliance on reticulated potable water, increases the re-use of alternative water through stormwater harvesting and water recycling contributing towards a sustainable and green urban environment.
<b>O35</b>	To encourage diversion of waste from landfill, minimise waste generation and increase recovery of more resources with circular economy considerations.
<b>O36</b>	Facilitate development that is adapted and resilient to climate-related hazards and supports the transition to net zero greenhouse gas emissions.

## Requirements and guidelines

### Place-based requirements and guidelines – Infrastructure coordination

<b>R53</b>	All above ground electricity cables (excluding substations and cables with a voltage of 66kv or greater) must be placed underground where feasible, including above ground cables as part of the upgrade of existing roads or subdivision works.
<b>R54</b>	Above ground utilities (such as electricity substations, kiosk, and sewer pumps) must be identified at the subdivision design stage to ensure effective integration with the surrounding neighbourhood, to minimise amenity impacts and be designed to the satisfaction of the relevant authority. Where that infrastructure is intended to be in public open space, the land required to accommodate that infrastructure will not be counted as contributing to public open space requirements specified and will be additional to the areas designated in Table 3.
<b>R55</b>	The inclusion of public art and complementary infrastructure along pedestrian, bicycles and shared use paths and equestrian trails must be consistent with the <i>Cardinia Shire Council Developer Landscape Guidelines January 2017</i> (or as amended) and <i>Cardinia Shire Council Public Art Policy 2017</i> (or as amended).
<b>R56</b>	Utilities and other infrastructure must avoid traversing areas for conservation identified in Plan 7.
<b>R57</b>	For development abutting Officer South Road arterial road, staging must prioritise the delivery of the road and drainage infrastructure, to the satisfaction of the responsible authority. Delivery of the arterial road must prioritise construction to property boundaries where an inter-parcel connection is intended or indicated by Plan 12, in accordance with the staging requirements of the permit.
<b>R58</b>	Development staging must be generally in accordance with Plan 12 (Infrastructure and Staging Plan) and Table 7 (PIP) and must provide for the timely provision and delivery of the following infrastructure to the satisfaction of the responsible authority: <ul style="list-style-type: none"> <li>• Connection to any arterial road network and seek to co-ordinate the delivery of these roads in conjunction with the timing of the arterial road connections located external to the precinct</li> <li>• Connector streets and connector street bridges</li> <li>• Street connections between properties, constructed to the property boundary</li> <li>• On- and off-road pedestrian and bicycle network paths</li> </ul>

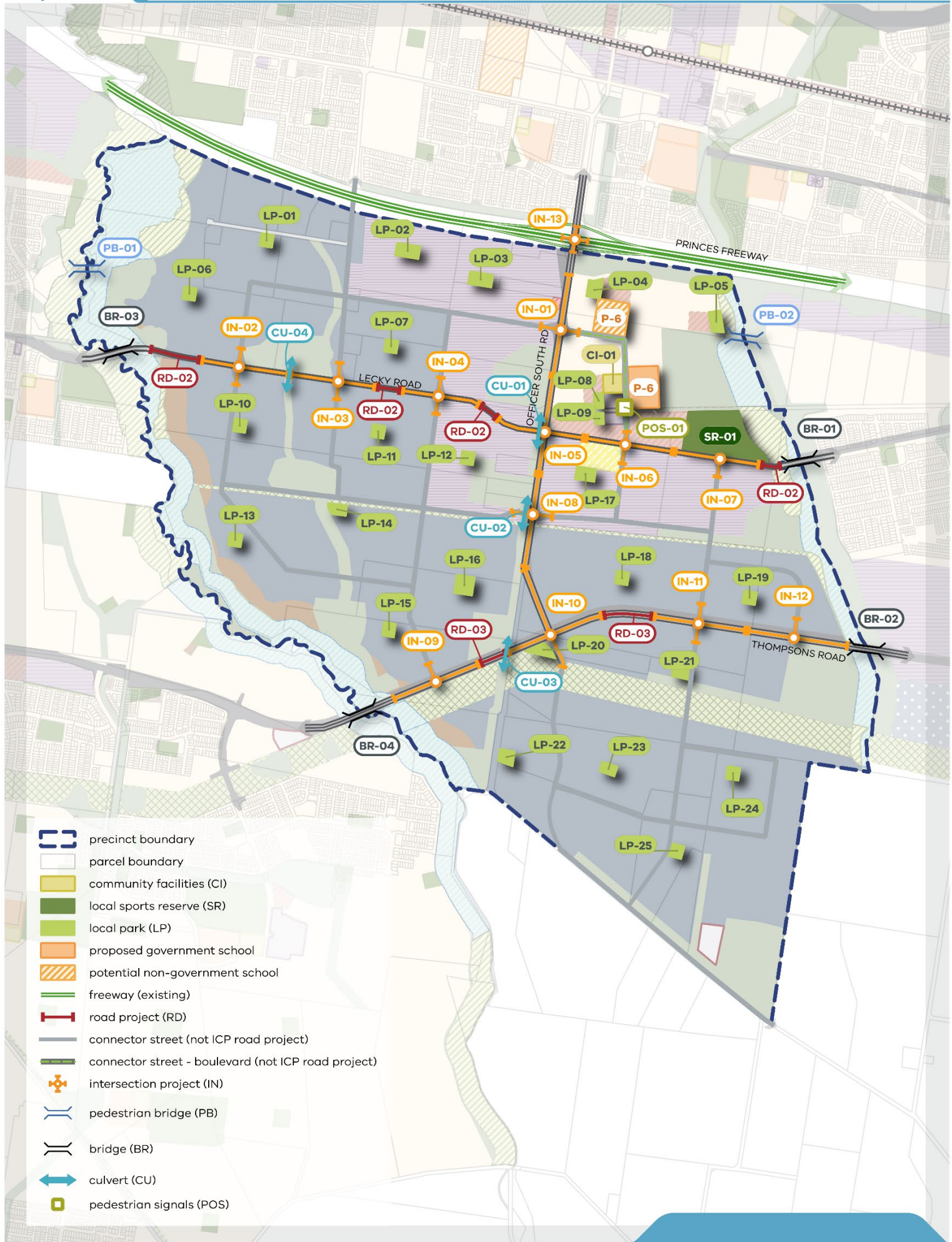
	<ul style="list-style-type: none"> <li>• Safe pedestrian path/s (crushed rock or alternative interim provision where deemed appropriate) from any existing pedestrian network/s to proposed connections to facilitate connectivity to services, transport, community infrastructure and adjoining communities</li> <li>• Drainage infrastructure</li> <li>• Essential infrastructure</li> <li>• Land for community infrastructure, sports fields, local open space including urban agriculture.</li> </ul>
<b>R59</b>	<p>Staging of development must be determined by the development proposals on land within the precinct and the availability of infrastructure services, see reference to Plan 12. Development applications must demonstrate how the development will:</p> <ul style="list-style-type: none"> <li>• Integrate with adjoining developments, including the timely provision of roads and connections</li> <li>• Provide for the delivery of community facilities, open space, and amenity to new residents to the satisfaction of the responsible authority</li> <li>• Provide sealed road access to each new allotment</li> <li>• Provide safe pedestrian access to existing pedestrian networks</li> <li>• Deliver any necessary trunk service extensions, including confirmation of the agreed approach and timing by the relevant service provider to the satisfaction of the responsible authority</li> <li>• Avoid and minimise impacts to conservation areas with regard to the location of essential and other services to the satisfaction of the responsible authority.</li> </ul>
<b>R60</b>	<p>Subdivision of land within the PSP must provide for and meet the cost for all local infrastructure, other than that provided for within the Officer South Employment ICP. This includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>• All roads not provided by the Officer South Employment ICP</li> <li>• Local bus stop infrastructure (where locations have been agreed in writing by Head, Transport for Victoria)</li> <li>• Landscaping, including canopy tree planting of all existing and future roads and local streets for a minimum establishment period of 24 months as per the <i>Cardinia Council Landscape Developer Guidelines</i> (or as amended)</li> <li>• Intersection works and traffic management measures along arterial roads, connector streets, and local streets</li> <li>• Council approved fencing and landscaping (where required) along arterial roads and reserves</li> <li>• Pedestrian and bicycle paths and equestrian trails along local arterial roads, connector roads, utilities easements, local streets, waterways and within local parks including bridges, intersections, and barrier crossing points</li> <li>• Bicycle parking facilities</li> <li>• Electric vehicle charging stations</li> <li>• Optic fibre conduit within the road reservation for Smart City initiatives</li> <li>• Appropriately scaled lighting (including wildlife friendly lighting) along all roads, major shared bicycle, and pedestrian paths, and traversing public open space</li> <li>• Local drainage system, including land and works for water services (i.e. pressure reducing stations) and water sensitive urban design (WSUD) features</li> <li>• Construction of culverts for waterway crossings of boulevard connector streets, connector streets and local streets</li> </ul>

	<ul style="list-style-type: none"> <li>Local street and pedestrian path crossings of waterways or electricity transmission easement unless outlined as the responsibility of another agency in Table 12</li> <li>Provision of water tapping, potable and recycled water connection points for any potential open space</li> <li>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</li> <li>Construction of pedestrian and bicycle paths along waterways and open space.</li> </ul>
<b>R61</b>	<p>All public open space (where not otherwise provided via the Officer South Employment ICP) must be finished to a standard that satisfies the requirements of the responsible authority prior to the transfer of the public open space, including but not limited to:</p> <ul style="list-style-type: none"> <li>Removal of all existing and disused structures, foundations, pipelines, stockpiles and contaminated soil</li> <li>Basic levelling including the supply and spread of minimum 75 mm topsoil and subsoil if required on the proposed areas of open space to provide a stable free draining surface</li> <li>Clearing of rubbish, weeds, and rocks, levelled, topsoiled, and grassed with warm climate grass (unless conservation reserve requirements dictate otherwise)</li> <li>Provision of water tapping, potable and recycled water connection points</li> <li>Sewer, gas, and electricity connection points must also be provided to land identified as sports reserve and local reserves</li> <li>Planting of trees and shrubs (with drought tolerant species)</li> <li>Adequate protection of existing trees that are to be retained including exclusion zones</li> <li>Vehicular exclusion devices (preferably vegetative or may be fence, bollards, or other suitable method)</li> <li>Maintenance access points</li> <li>Construction of pedestrian and bicycle paths around the perimeter of the reserve, connecting and linking into any other surrounding paths or points of interest</li> <li>Installation of park furniture including barbeques, shelters, tables, local scale playgrounds and other local scale play elements such as half basketball courts and hit-up walls, skate parks with associated amenities, rubbish bins and appropriate paving to support these facilities, consistent with the type of public open space.</li> </ul>
<b>R62</b>	<p>Where an inter-parcel connection is intended or indicated in the PSP, streets must be constructed to property boundaries at the relevant stage of development required or approved by the responsible authority. Provision should be made for temporary vehicle turning until the inter-parcel connection is delivered.</p>
<b>R63</b>	<p>Other than perpendicular road crossings of the gas transmission pipeline easement, no road or carriageway easements are to be relocated on gas pipeline easements unless to the satisfaction of the pipeline owner and operator.</p>
<b>R64</b>	<p>Development must ensure sensitive land uses are minimised within the consequence area shown on Plan 13 in Appendix 1 subject to planning controls responding to the high-pressure gas transmission pipeline and that construction is managed to minimise risk of any adverse impacts. Clear access must be provided to the APA City Gate Facility at all times to the satisfaction of the operator and facility owner.</p>
<b>R65</b>	<p>Utilities must be placed outside of conservation areas and waterway corridors identified in Plan 3. Where services cannot avoid crossing or being located within a conservation area or waterway corridor, they must be located to avoid disturbance to existing waterway values,</p>

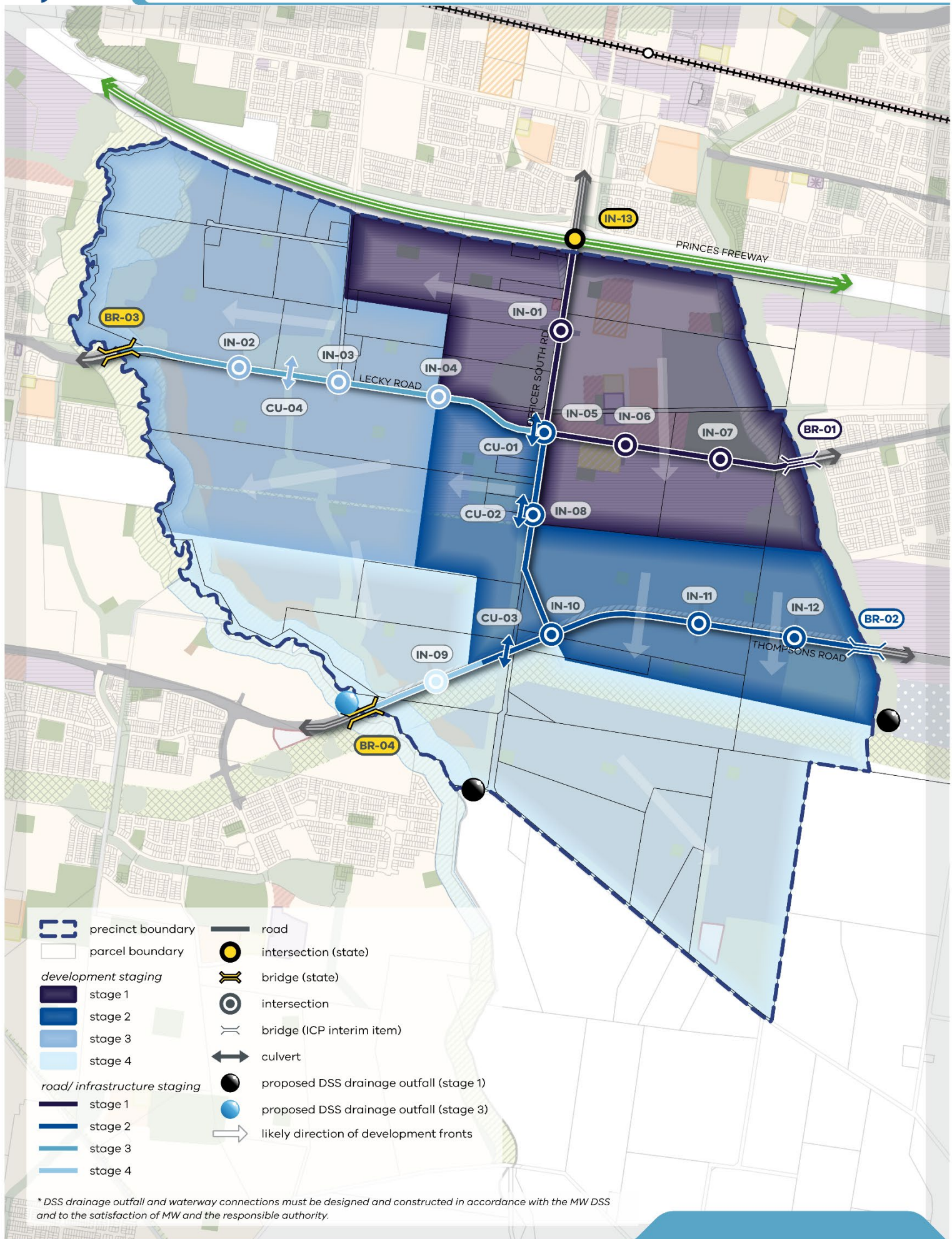


	native vegetation, significant landform features, heritage sites and habitats to the satisfaction of DEECA, Melbourne Water, BLCAC and the responsible authority or consolidate utilities into dedicated service corridors.
<b>R66</b>	Subdivision layout and design must ensure that no construction standard will result in a rating of higher than BAL - 12.5. This can be achieved through applying setbacks consistent with those outlined in Plan 8.
<b>R67</b>	Development staging must provide for the delivery of ultimate waterway and drainage infrastructure, including stormwater quality treatment, and consider opportunities for early establishment of waterways to the satisfaction of Melbourne Water and the responsible authority. Where it cannot be demonstrated to the satisfaction of Melbourne Water that this is not possible, staged development proposals must demonstrate how any interim solution adequately manages flow rates and flow volume, treats stormwater generated from the development and how this will enable delivery of an ultimate drainage solution, to the satisfaction of Melbourne Water and the responsible authority. Development construction staging and interim solutions must avoid or mitigate the risk of soil erosion and water and waterway degradation from sodic and/or dispersive soils.
<b>R68</b>	Where there are no alternative options other than passing through BCS Conservation Areas, subdivisional development must consolidate utilities into dedicated service corridors.
<b>R69</b>	Any lot created for a proposed sewer pump station site must be designed and serviced to the satisfaction of South East Water.
<b>G53</b>	Development and subdivision should aim for carbon neutrality and implement opportunities for local renewable energy generation technology and infrastructure.
<b>G54</b>	The delivery of underground services should be coordinated, located, and bundled (using common trenching) to maintain the cross-section widths of paths and nature strips as shown in the PSP and to facilitate trees and other planting within road reserve.
<b>G55</b>	Subdivision design should provide emergency services with good access/egress to the arterial road network to maximise coverage and reduce response times.
<b>G56</b>	All new above-ground utilities, including temporary utilities, should be located outside of key view lines, and screened to the satisfaction of the responsible authority.
<b>G57</b>	Trunk services should be placed along general alignments as advised by the relevant servicing authorities.
<b>G58</b>	Design and location of underground services should be guided by requirements as per Appendix 8.
<b>G59</b>	Minimise the number of utility and road crossings, including local roads, over the high transmission gas pipeline easement within the precinct to align with Plan 3 and Figure 8.
<b>G60</b>	Utilities should generally be located within the road reserve. Where this is not practical, easements to place utilities at the rear of lots may be considered where there is no practical alternative.
<b>G61</b>	<p>Staging of development should be determined largely by the development proposals on land within the precinct and the availability of infrastructure services, see reference to Plan 12. Development applications should demonstrate how the development will:</p> <ul style="list-style-type: none"> <li>• integrate with adjoining developments, including the timely provision of roads and path connections, to a practical extent</li> <li>• provide for the early delivery of community facilities, open space, and amenity to new residents to the satisfaction of the responsible authority</li> </ul>

	<ul style="list-style-type: none"> <li>provide sealed road access to each new allotment</li> <li>deliver any necessary trunk service extensions, including confirmation of the agreed approach and timing by the relevant service provider</li> <li>avoid and minimise impacts to conservation areas with regard to the location of essential and other services.</li> </ul>
<b>G62</b>	<p>Infrastructure projects identified in Plan 11 should be delivered as per the timing priority identified in the timing column of Appendix 4.</p> <p><b>Note:</b> Project delivery timing outlined in Appendix 4 is indicative and subject to periodic review by the relevant responsible authority.</p>
<b>G63</b>	Any utility infrastructure running adjacent to or crossing a high-pressure gas transmission pipeline should cross at 90 degrees unless approved otherwise by the responsible authority and be engineered to protect the integrity of the asset to the satisfaction of the responsible authority and gas pipeline owner/operator.
<b>G64</b>	The existing gas distribution assets will require a 2.1 m clearance from title boundaries and a 3.0m clearance from proposed building facades, inclusive of verandas and canopies.
<b>G65</b>	The asset manager may consider the gas easement to be located within the front of private lots where there is car parking and landscaping. In this scenario, the asset manager retains the legal access to the pipeline. Approval from the asset manager and responsible authority must be obtained prior to proceeding with any construction.
<b>G66</b>	For all landscaping, paths and public furniture/exercise equipment proposed within a gas easement, a landscape plan must be submitted to the responsible authority in consultation with the service owner/operator demonstrating species, their location and who will be responsible for the ongoing management of landscaping within the easement.
<b>G67</b>	Sports fields, community facilities, local parks and playgrounds should be delivered as early as possible within the residential neighbourhood and may be delivered in stages.
<b>G68</b>	<p>Development should consider Environmentally Sustainable Development principles, such as the inclusion of, but not limited to:</p> <ul style="list-style-type: none"> <li>material re-use and recycling (use of materials with reduced embodied energy)</li> <li>electrical self-generation, car charge schemes, smart grids, and battery storage</li> <li>use of tools such as Built Environment Sustainability Scorecard (BESS) &amp; Sustainable Subdivisions Framework</li> <li>measures that reduce the urban heat island effect</li> <li>waste management initiatives</li> <li>development should facilitate the reduction of environmental impacts and resource use through: <ul style="list-style-type: none"> <li>public realm design and connectivity.</li> <li>facilitation of alternative energy generation systems</li> <li>access to public and integrated active transport networks.</li> </ul> </li> </ul>
<b>G69</b>	Road design, line markings, traffic signs and other road infrastructure should, where practical, meet best practice standards for autonomous vehicles including shuttle services.









## 4 APPENDICES

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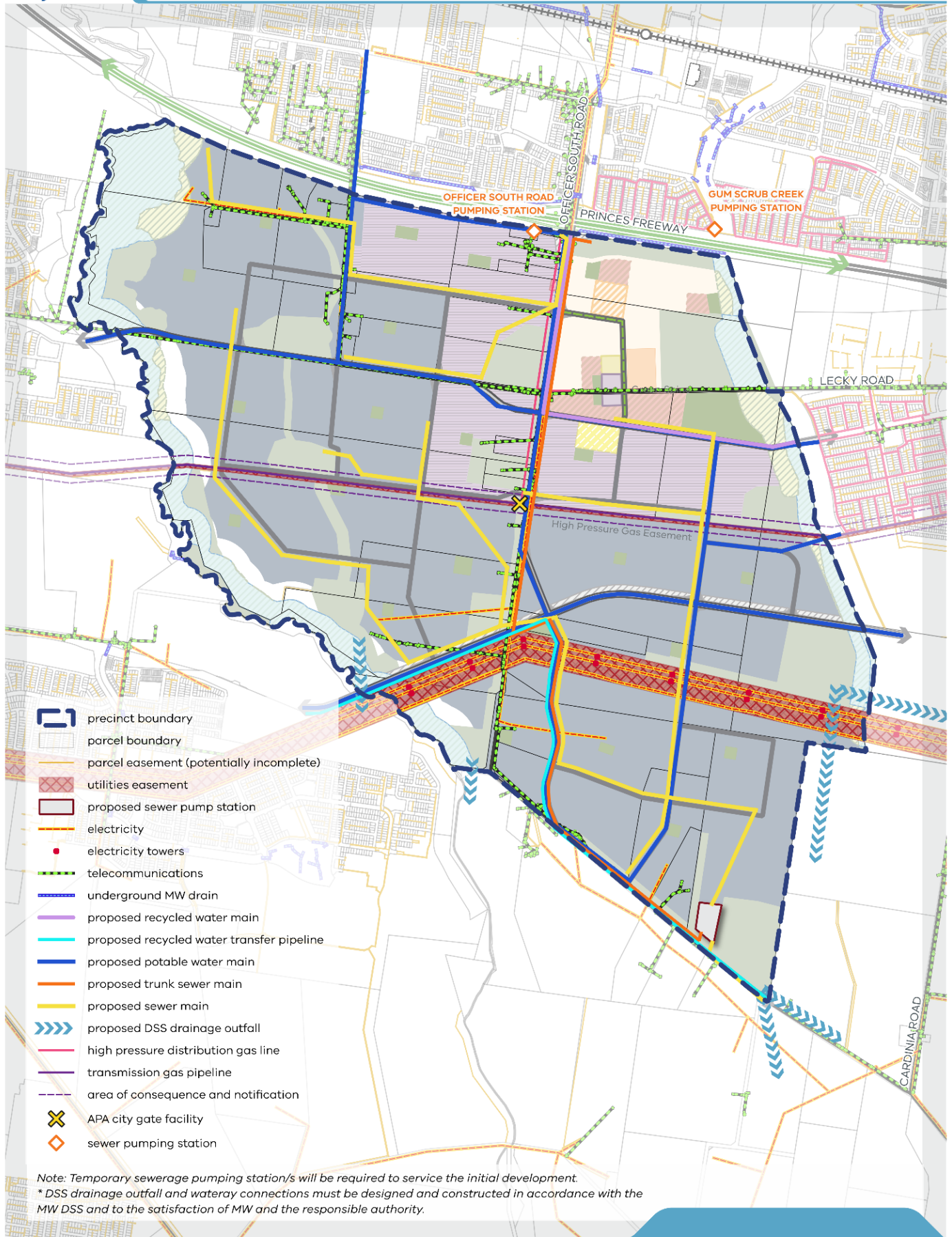
## Appendix 1

Plan 13  
Utilities

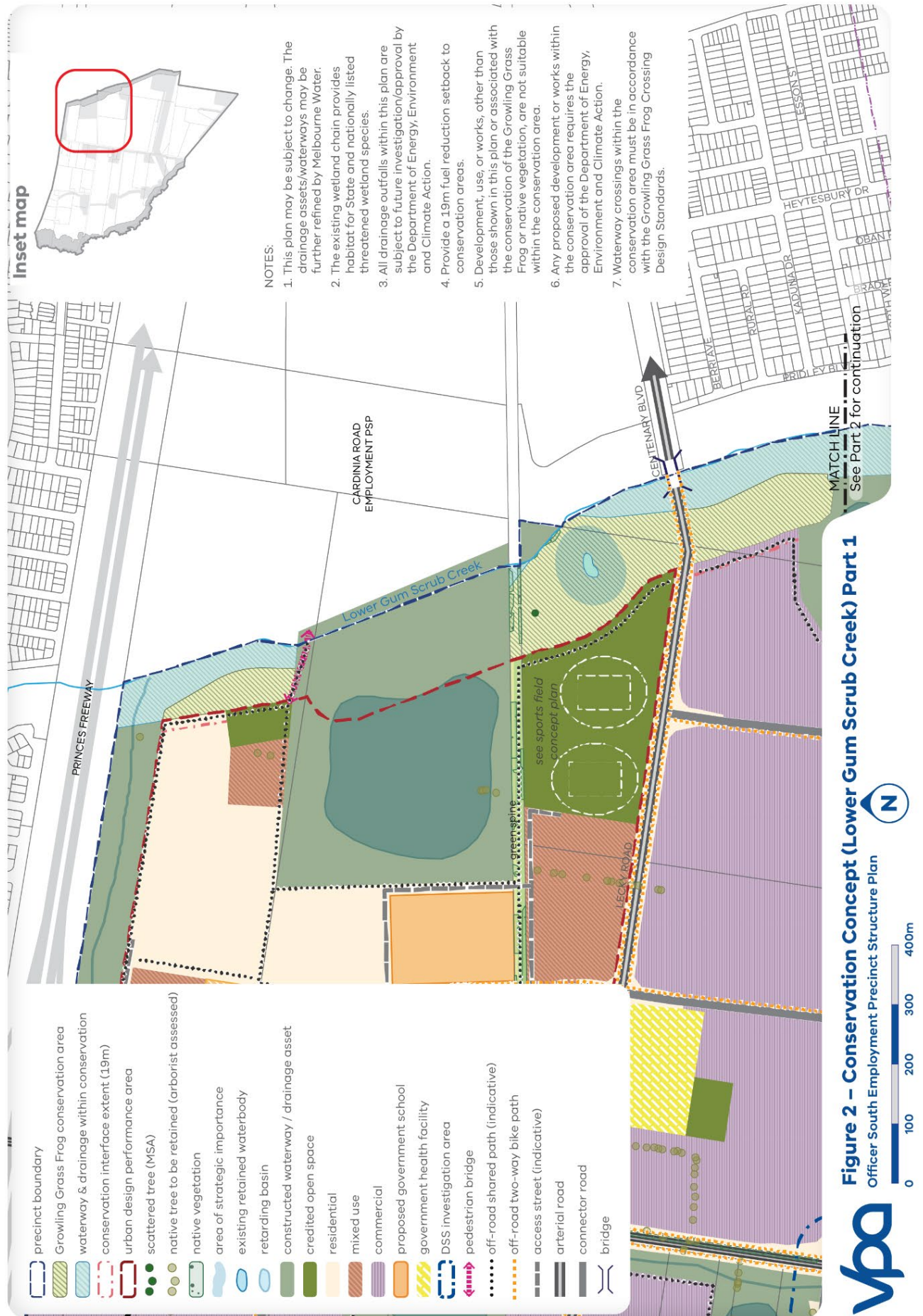
Officer South Employment Precinct Structure Plan

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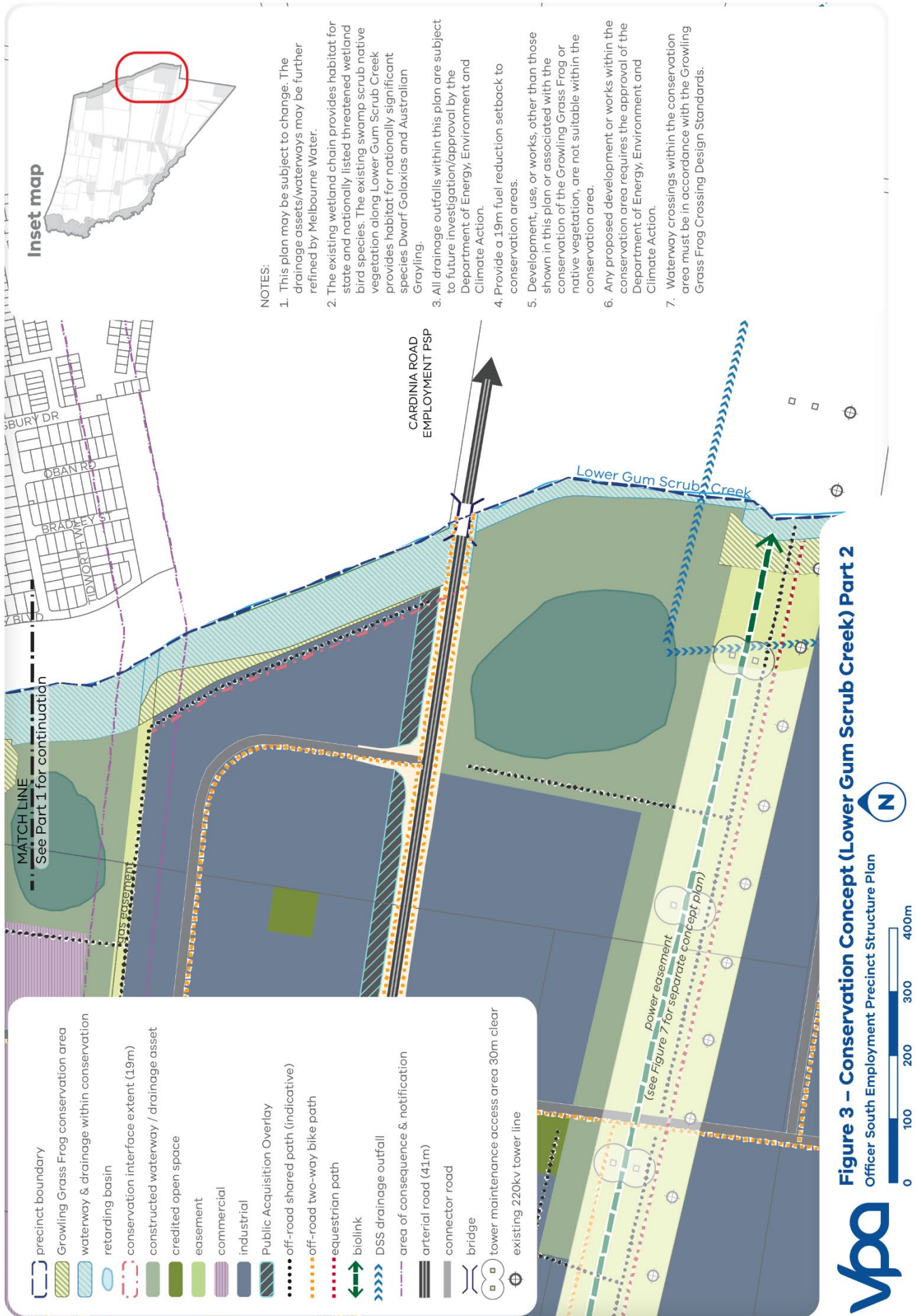
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## Appendix 2 Conservation area concept plans









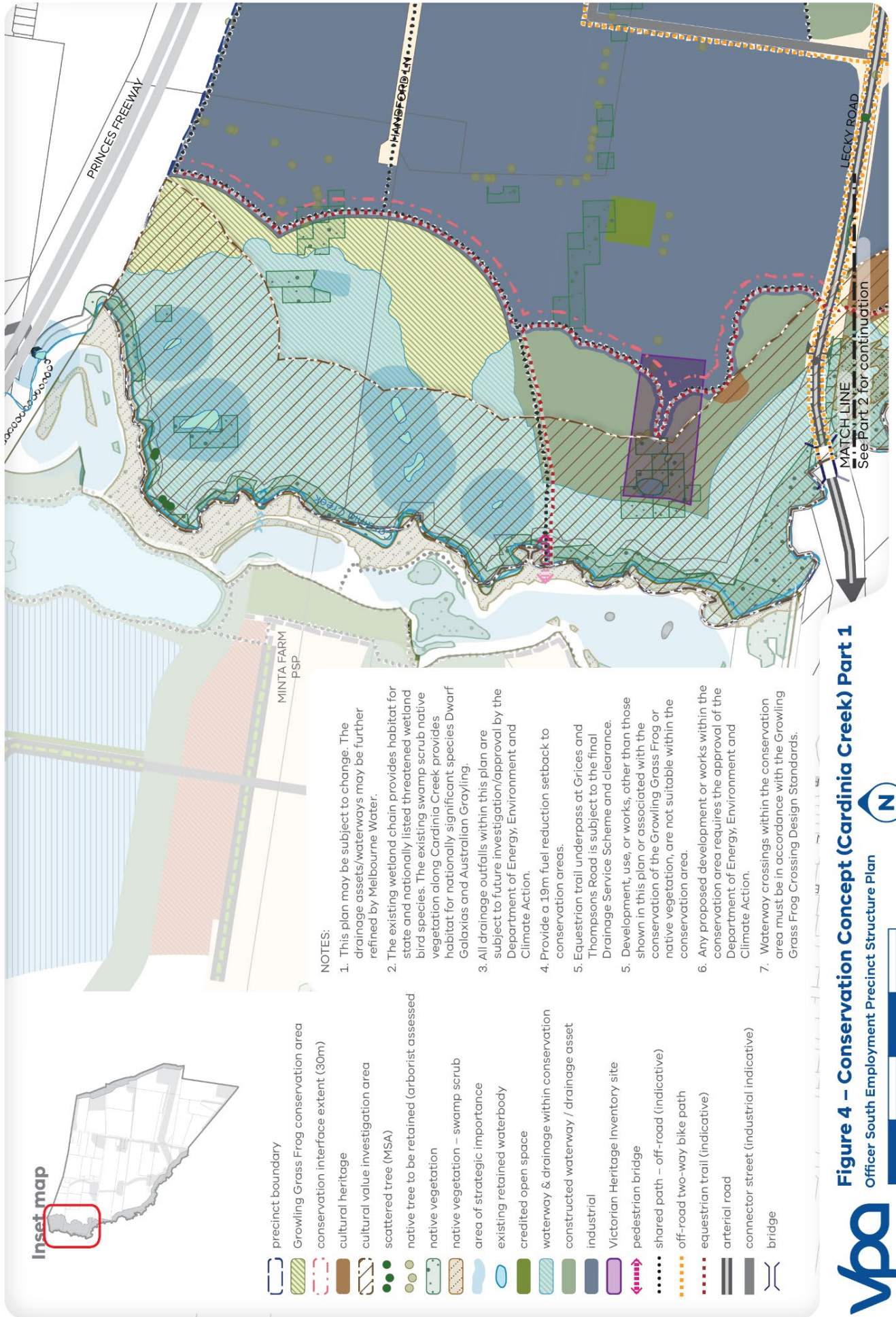


Figure 4 – Conservation Concept (Cardinia Creek) Part 1

Officer South Employment Precinct Structure Plan



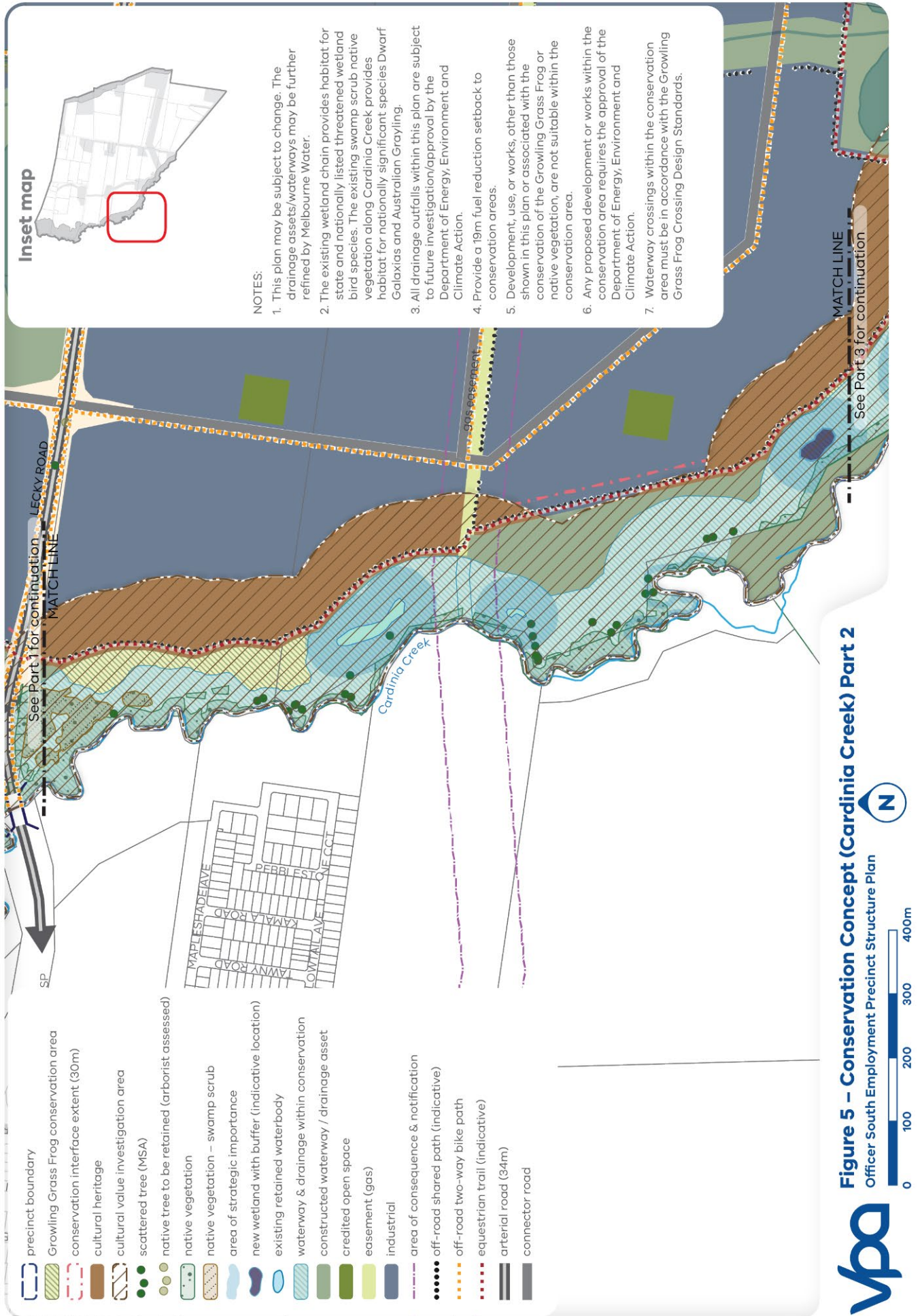
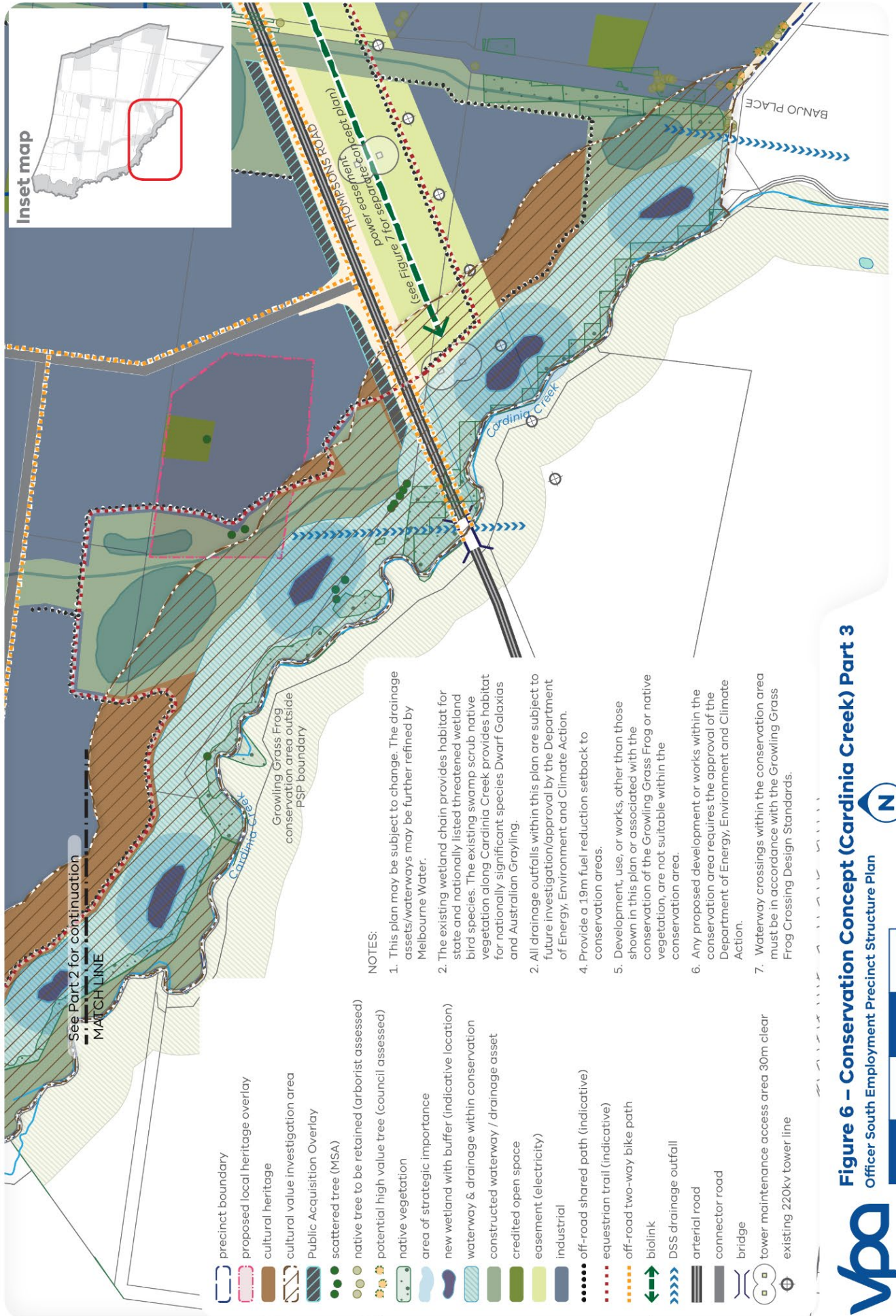


Figure 5 – Conservation Concept (Cardinia Creek) Part 2

Officer South Employment Precinct Structure Plan





**Figure 6 – Conservation Concept (Cardinia Creek) Part 3**

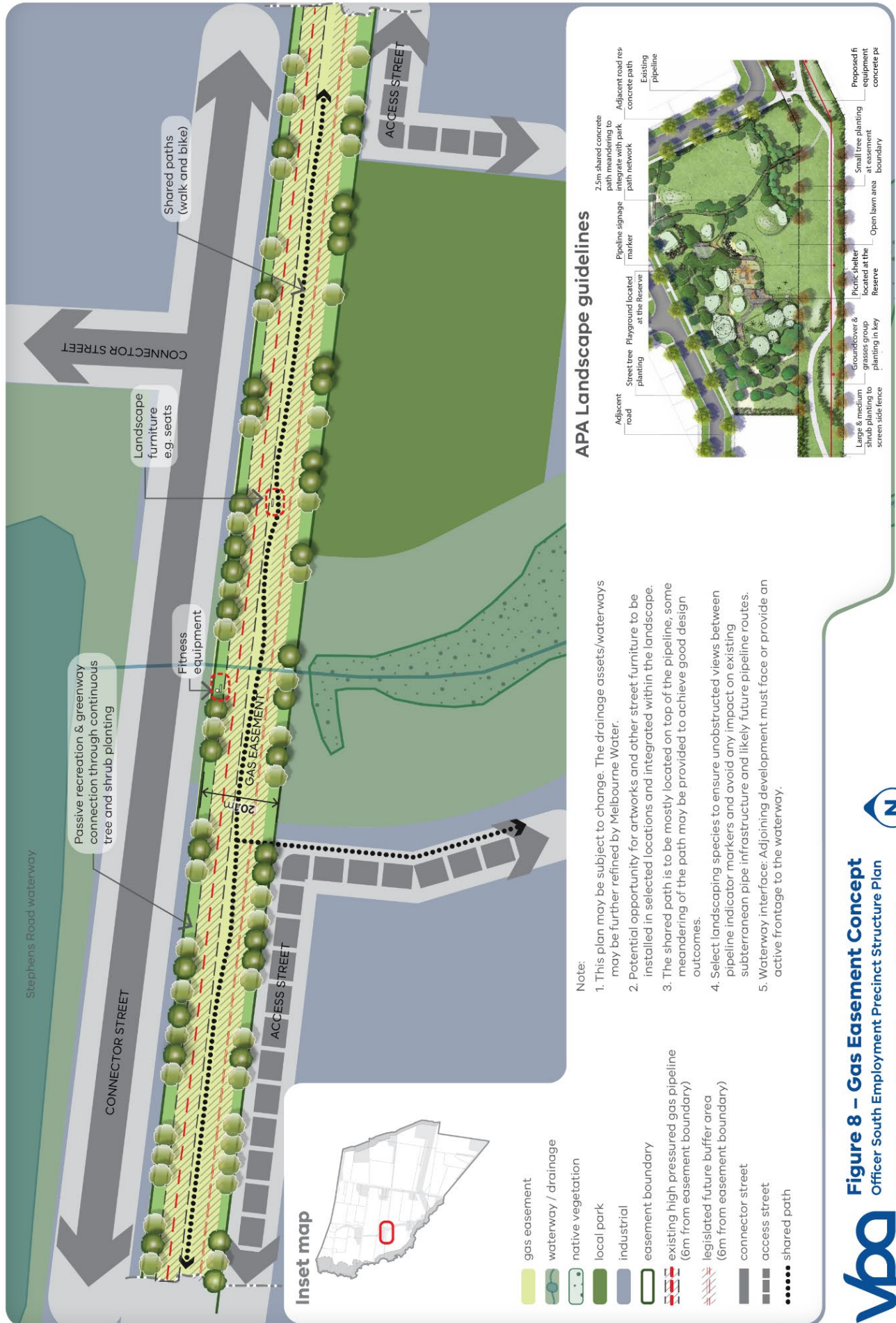
Officer South Employment Precinct Structure Plan



## Appendix 3 Electricity and gas easement concept plans



**Figure 7 – Power Easement Concept**  
Officer South Employment Precinct Structure Plan





## Appendix 4 Precinct infrastructure

**Table 7: Precinct infrastructure**

Category	PIP Reference No.	Title	Description	Lead agency	Component Included in ICP			Timing	Apportionment Funding Source	Apportionment to the ICP
					Ultimate land	Interim Construction	Ultimate Construction			
Road	RD-01	Officer South Road	Arterial Road (41 m). Provision of land for a 41 m wide road reserve and construction of upgraded carriageway.	Cardinia Shire Council	Yes	Yes	No	S-M	N/A	100.00%
Road	RD-02	Lecky Road	Arterial Road (34 m). Provision of land for a 34 m wide road reserve and construction of upgraded carriageway.	Cardinia Shire Council	Yes	Yes	No	S-M	N/A	100.00%
Road	RD-03	Thompsons Road	Arterial Road (41 m). Provision of land for a 41 m wide road reserve and construction of upgraded carriageway.  * additional 29 m may be required to deliver the road and will be subject to a PAO	Cardinia Shire Council	Yes	Yes	No	M	N/A	100.00%
Intersection	IN-01	Officer South Road/East-west Connector (North)	Construction of an interim primary arterial to connector signalised 4-way intersection	Cardinia Shire Council	Yes	Yes	No	S-M	N/A	100.00%

Category	PIP Reference No.	Title	Description	Lead agency	Component Included in ICP			Timing	Apportionment Funding Source	Apportionment to the ICP
					Ultimate land	Interim Construction	Ultimate Construction			
Intersection	IN-02	Lecky Road/North-south Connector (West)	Construction of an interim secondary arterial to connector signalised 4-way intersection	Cardinia Shire Council	Yes	Yes	No	M-L	N/A	100.00%
Intersection	IN-03	Lecky Road/North-south Connector (West)	Construction of an interim secondary arterial to connector signalised 4-way intersection	Cardinia Shire Council	Yes	Yes	No	M-L	N/A	100.00%
Intersection	IN-04	Lecky Road/North-south Connector (West)	Construction of an interim secondary arterial to connector signalised 4-way intersection	Cardinia Shire Council	Yes	Yes	No	S-M	N/A	100.00%
Intersection	IN-05	Lecky Road/Officer South Road	Construction of a primary arterial to secondary arterial 4-way signalised intersection	Cardinia Shire Council	Yes	Yes	No	M	N/A	100.00%
Intersection	IN-06	Lecky Road/North-south Connector (West)	Construction of a secondary arterial to connector signalised 4-way intersection	Cardinia Shire Council	Yes	Yes	No	S-M	N/A	100.00%
Intersection	IN-07	Lecky Road/South Connector (West)	Construction of an interim secondary arterial to connector signalised T intersection	Cardinia Shire Council	Yes	Yes	No	S-M	N/A	100.00%
Intersection	IN-08	Officer South Road/East-west Connector (Central)	Construction of a primary arterial to connector signalised 4-way intersection	Cardinia Shire Council	Yes	Yes	No	S-M	N/A	100.00%

Category	PIP Reference No.	Title	Description	Lead agency	Component Included in ICP			Timing	Apportionment Funding Source	Apportionment to the ICP
					Ultimate land	Interim Construction	Ultimate Construction			
Intersection	IN-09	Thompsons Road/North Connector (West)	Construction of a primary arterial to connector signalised T intersection	Cardinia Shire Council	Yes	Yes	No	L	N/A	100.00%
Intersection	IN-10	Officer South Road/Thompsons Road	Construction of a primary arterial to primary arterial 4-way signalised intersection	Cardinia Shire Council	Yes	Yes	No	M	N/A	100.00%
Intersection	IN-11	Thompsons Road/North-south Connector (East)	Construction of a primary arterial to connector signalised 4-way intersection	Cardinia Shire Council	Yes	Yes	No	M	N/A	100.00%
Intersection	IN-12	Thompsons Road/North Connector (East)	Construction of a primary arterial to connector signalised 4-way intersection	Cardinia Shire Council	Yes	Yes	No	M	N/A	100.00%
Intersection	IN-13	Officer South Freeway Interchange Intersection	Ultimate signalisation and provision of primary arterial under freeway	Department of Transport	No	No	No	L	N/A	-
Culvert	CU-01	Lecky Road Culvert	Construction of culvert crossing over the 40m wide drainage corridor of secondary arterial interim	Cardinia Shire Council	No	No	Yes	S-M	N/A	100.00%
Culvert	CU-02	Connector Road Culvert	Construction of culvert crossing over the 45m wide drainage corridor of primary arterial interim intersection extent	Cardinia Shire Council	No	No	Yes	S-M	N/A	100.00%



Category	PIP Reference No.	Title	Description	Lead agency	Component Included in ICP			Timing	Apportionment Funding Source	Apportionment to the ICP
					Ultimate land	Interim Construction	Ultimate Construction			
Culvert	CU-03	Thompsons Road Culvert	Construction of culvert crossing over the 50m wide drainage corridor of primary arterial interim	Cardinia Shire Council	No	No	Yes	M	N/A	100.00%
Culvert	CU-04	Lecky Road Culvert	Construction of culvert crossing over the 45m wide drainage corridor of secondary arterial interim	Cardinia Shire Council	No	No	Yes	M-L	N/A	100.00%
Bridge	PB-01	Minta Farm Pedestrian Bridge	Construction of a shared pedestrian and cyclist bridge over Cardinia Creek into Minta Farm PSP	Cardinia Shire Council	No	No	Yes	M-L	Minta Farm ICP	50.00%
Bridge	PB-02	Cardinia Road Employment Precinct (CREP) Pedestrian Bridge	Construction of a shared pedestrian and cyclist bridge over Lower Gum Scrub Creek into Cardinia Road Employment Precinct	Cardinia Shire Council	No	No	Yes	M	Cardinia Shire	50.00%
Bridge	BR-01	Lecky Road Bridge	Construction of a secondary arterial road bridge (interim standard) over Lower Gum Scrub Creek into CREP in accordance with the Growling Grass Frog Conservation Area requirements	Cardinia Shire Council	No	Yes	No	S-M	Cardinia Road Employment Precinct/ Cardinia Shire	50.00%
Bridge	BR-02	Thompsons Road Bridge	Construction of an arterial road bridge (interim standard) over Lower Gum Scrub Creek into the CREP	Cardinia Shire Council	No	Yes	No	M-L	Cardinia Road Employment	50.00%

Category	PIP Reference No.	Title	Description	Lead agency	Component Included in ICP			Timing	Apportionment Funding Source	Apportionment to the ICP
					Ultimate land	Interim Construction	Ultimate Construction			
			in accordance with the Growling Grass Frog Conservation Area requirements						Precinct/ Cardinia Shire	
Bridge	BR-03	Grices Road Bridge	Construction of a secondary arterial road bridge (ultimate) over Cardinia Creek into Clyde North PSP in accordance with the Growling Grass Frog Conservation Area requirements	Department of Transport	No	No	No	L	N/A	-
Bridge	BR-04	Thompsons Road Bridge	Construction of an arterial road bridge (ultimate) over Cardinia Creek into the Cardinia Creek South PSP in accordance with the Growling Grass Frog Conservation Area requirements	Department of Transport	No	No	No	L	N/A	-
Pedestrian Operated Signals	POS-01	Connector Boulevard Pedestrian Operated Signals	Construction of pedestrian operated signals along the connector boulevard	Cardinia Shire Council	No	No	Yes	S-M	N/A	100.00%
Community Infrastructure	CI-01	Level 2 Community Centre	Purchase of land and construction of a Community Centre including four kindergarten rooms	Cardinia Shire Council	Yes	N/A	Yes	S-M	N/A	34.00%

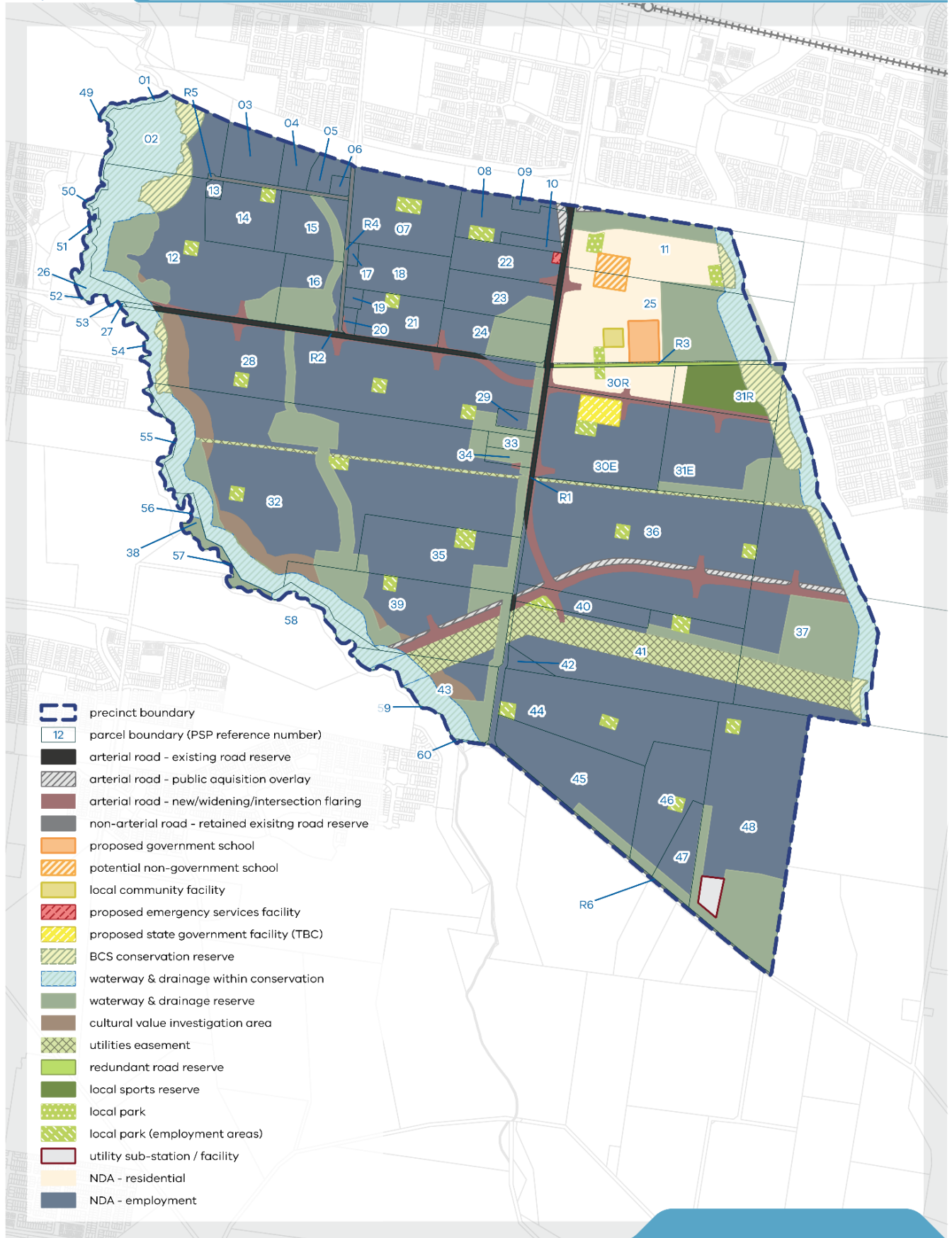
Category	PIP Reference No.	Title	Description	Lead agency	Component Included in ICP			Timing	Apportionment Funding Source	Apportionment to the ICP
					Ultimate land	Interim Construction	Ultimate Construction			
Government School	N/A	Green spine Proposed P6	Purchase of land and construction of a Proposed Government Primary School	Department of Education and Training	No	No	No	S-M	N/A	-
Non-Government School	N/A	Potential Non-Government Primary School	Purchase of land and construction of a potential Non-Government Primary School	Non-Government School Provider	No	No	No	S-M	N/A	-
Community Infrastructure	N/A	Proposed State Government Facility	Purchase of land and construction of a proposed State Government Facility	Department of Health	No	No	No	M-L	N/A	-
Community Infrastructure	N/A	Proposed emergency services facility	Purchase of land and construction of a proposed emergency services facility	Victorian Health Building Authority	No	No	No	M	N/A	-
Sporting Reserve	SR-01	Sports Fields	Purchase of land and construction of sports fields, hard courts, and multipurpose pavilion.	Cardinia Shire Council	Yes	N/A	Yes	S-M	N/A	34.00%
Utilities	N/A	Proposed Sewer Pump Station	Purchase of land and construction of a proposed sewer pump station	South East Water	No	No	No	M	N/A	-
Local Park	LP-01	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	M-L	N/A	-
Local Park	LP-02	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	S-M	N/A	-



Category	PIP Reference No.	Title	Description	Lead agency	Component Included in ICP			Timing	Apportionment Funding Source	Apportionment to the ICP
					Ultimate land	Interim Construction	Ultimate Construction			
Local Park	LP-03	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	S-M	N/A	-
Local Park	LP-04	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	S-M	N/A	-
Local Park	LP-05	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	S-M	N/A	-
Local Park	LP-06	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	M-L	N/A	-
Local Park	LP-07	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	M-L	N/A	-
Local Park	LP-08	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	S-M	N/A	-
Local Park	LP-09	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	S-M	N/A	-
Local Park	LP-10	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	M-L	N/A	-
Local Park	LP-11	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	M-L	N/A	-
Local Park	LP-12	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	M	N/A	-
Local Park	LP-13	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	L	N/A	-
Local Park	LP-14	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	M-L	N/A	-

Category	PIP Reference No.	Title	Description	Lead agency	Component Included in ICP			Timing	Apportionment Funding Source	Apportionment to the ICP
					Ultimate land	Interim Construction	Ultimate Construction			
Local Park	LP-15	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	L	N/A	-
Local Park	LP-16	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	L	N/A	-
Local Park	LP-17	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	S-M	N/A	-
Local Park	LP-18	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	M	N/A	-
Local Park	LP-19	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	M	N/A	-
Local Park	LP-20	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	L	N/A	-
Local Park	LP-21	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	M	N/A	-
Local Park	LP-22	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	L	N/A	-
Local Park	LP-23	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	L	N/A	-
Local Park	LP-24	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	L	N/A	-
Local Park	LP-25	Passive Open Space	Provision of land for a local park	Cardinia Shire Council	Yes	No	No	L	N/A	-

## Appendix 5 Land use budget





**Table 8: Summary land use budget**

Description	PSP		
	Hectares	% of Total	% of NDA
<b>TOTAL PRECINCT AREA (ha)</b>	1,068.9		
<b>TRANSPORT</b>			
Arterial road - existing road reserve	8.73	0.82%	1.30%
Arterial road - public acquisition overlay	6.59	0.62%	0.98%
Arterial road - new / widening / intersection flaring (ICP land)	29.15	2.73%	4.34%
Non-arterial road - retained existing road reserve	5.76	0.54%	0.86%
<b>Sub-total transport</b>	50.23	4.70%	7.47%
<b>COMMUNITY &amp; EDUCATION</b>			
ICP community facilities	1.00	0.09%	0.15%
Proposed government school	3.50	0.33%	0.52%
Potential non-government school	3.00	0.28%	0.45%
Potential government facility / emergency services	3.25	0.30%	0.48%
<b>Sub-total community &amp; education</b>	10.75	1.01%	1.60%
<b>OPEN SPACE</b>			
<b>Uncredited open space &amp; regional open space</b>			
BCS conservation reserve	19.36	1.81%	2.88%
Cultural value investigation area	15.90	1.49%	2.36%
Waterway and drainage reserve	143.11	13.39%	21.29%
Waterway and drainage within conservation	87.88	8.22%	13.07%
Utilities easements	42.93	4.02%	6.39%
Redundant road reserve	1.50	0.14%	0.22%
<b>Sub-total uncredited open space &amp; regional open space</b>	310.68	29.06%	46.22%
<b>Credited open space</b>			
Local network park (ICP land)	14.91	1.39%	2.22%
Local sports reserve (ICP land)	8.11	0.76%	1.21%
<b>Sub-total credited open space</b>	23.02	2.15%	3.42%
<b>Total all open space</b>	333.69	31.22%	49.64%
<b>OTHER</b>			
Utilities sub-stations / facilities (acquired by relevant authority)	2.00	0.19%	0.30%
<b>Sub-total other</b>	2.00	0.19%	0.30%
<b>TOTAL NET DEVELOPABLE AREA – (NDA) Ha</b>	<b>672.23</b>	<b>62.89%</b>	
<b>NET DEVELOPABLE AREA – RESIDENTIAL (NDAR) Ha</b>	<b>43.97</b>	<b>4.11%</b>	
<b>NET DEVELOPABLE AREA – EMPLOYMENT (NDAE) Ha</b>	<b>628.26</b>	<b>58.78%</b>	
<b>Credited open space breakdown</b>			
Local network park (ICP Residential land)	2.25	0.21	5.12%
Local sports reserve (ICP Residential land)	8.11	0.76	18.45%
<b>Subtotal</b>	<b>10.36</b>	<b>0.97</b>	<b>23.56%</b>
Local network park (ICP Employment land)	12.66	1.18	2.01

**Table 9: Property-specific land use budget**

Parcel ID (Officer South (OS) – parcel number )	Total Area (Hectares)	Transport						Community/Education				Open Space							Total Net Developable Area (Hectares)	Total Contribution Land (Hectares)	Transport (Hectares)	Residential Community and Recreation (Hectares)	Commercial & Industrial Community and Recreation (Hectares)
		Arterial Road – Existing Road Reserve	Arterial Road – Public Acquisition Overlay	Arterial Road – New / Widening / Intersection Flaring (ICP land)	Non-Arterial Road – Retained Existing Road Reserve	Redundant Road Reserve	Proposed Government School	Potential Non-Government School	Potential Government Facility / Emergency Services	ICP Community Facilities	Conservation Reserve	Waterway and Drainage Reserve	Utilities Easements	Utilities Sub-stations / facilities (acquired by relevant authority)	Local Sports Reserve (ICP land)	Local Network Park (ICP land)	Cultural Value Investigation Area	Waterway and Drainage within Conservation					
<b>Total PSP</b>	<b>1,068.90</b>	8.73	6.59	29.15	5.76	1.50	3.50	3.00	3.25	1.00	19.36	143.11	42.93	2.00	8.11	14.91	15.90	87.88	672.23	725.40	29.15	11.36	12.66
OS-01	2.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.54	-	-	-	-	-
OS-02	20.80	-	-	-	-	-	-	-	-	-	3.01	-	-	-	-	-	-	12.45	5.33	5.33	-	-	-
OS-03	8.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.28	8.28	-	-	-
OS-04	3.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	3.70	-	-	-
OS-05	2.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.94	2.94	-	-	-
OS-06	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00	1.00	-	-	-
OS-07	21.56	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	0.90	-	-	20.66	21.56	-	-	0.90
OS-08	11.26	-	0.63	-	-	-	-	-	-	-	-	-	-	-	-	0.90	-	-	9.73	10.63	-	-	0.90
OS-09	1.38	-	0.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.22	1.22	-	-	-
OS-10	2.00	-	0.04	0.00	-	-	-	-	0.25	-	-	-	-	-	-	-	-	-	1.96	1.96	0.00	-	-
OS-11	29.66	-	0.27	0.29	-	-	-	1.66	-	-	1.25	7.01	-	-	-	1.50	-	2.10	15.58	17.37	0.29	1.50	-
OS-12	54.56	-	-	0.87	-	-	-	-	-	-	3.57	10.18	-	-	-	0.50	0.18	10.82	28.44	29.81	0.87	-	0.50

OS-13	0.81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.81	0.81	-	-	-
OS-14	11.82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	-	-	11.32	11.82	-	-	0.50
OS-15	11.89	-	-	-	-	-	-	-	-	-	-	1.84	-	-	-	-	-	-	10.05	10.05	-	-	-
OS-16	12.01	-	-	0.10	-	-	-	-	-	-	-	6.77	-	-	-	-	-	-	5.15	5.24	0.10	-	-
OS-17	0.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.65	0.65	-	-	-
OS-18	12.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.15	12.15	-	-	-
OS-19	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00	1.00	-	-	-
OS-20	1.00	-	-	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.83	1.00	0.17	-	-
OS-21	10.92	-	-	0.29	-	-	-	-	-	-	-	-	-	-	-	0.50	-	-	10.12	10.92	0.29	-	0.50
OS-22	10.00	-	-	0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.55	9.75	0.20	-	-
OS-23	12.14	-	-	0.16	-	-	-	-	-	-	-	2.76	-	-	-	-	-	-	9.22	9.38	0.16	-	-
OS-24	12.10	-	-	0.43	-	-	-	-	-	-	-	6.38	-	-	-	-	-	-	5.29	5.72	0.43	-	-
OS-25	45.49	-	-	1.20	-	-	3.50	1.34	-	1.00	-	13.32	-	-	-	0.43	-	6.04	18.66	21.30	1.20	1.43	-
OS-26	4.46	-	-	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	4.40	-	0.06	0.06	-	-
OS-27	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	-	-	-	-	-
OS-28	78.85	-	-	3.45	-	-	-	-	-	-	1.36	4.70	-	-	-	1.50	4.18	3.45	60.20	65.15	3.45	-	1.50
OS-29	2.00	-	-	0.08	-	-	-	-	-	-	-	0.37	-	-	-	-	-	-	1.55	1.63	0.08	-	-
OS-30E	30.89	-	-	2.47	-	-	-	-	3.00	-	-	-	0.01	-	-	0.75	-	-	24.66	27.88	2.47	-	0.75
OS-30R	10.27	-	-	1.54	-	-	-	-	-	-	-	-	-	-	-	0.32	-	-	8.42	10.27	1.54	0.32	-
OS-31E	25.39	-	-	1.25	-	-	-	-	-	-	0.15	4.54	0.20	-	-	-	-	-	19.26	20.50	1.25	-	-
OS-31R	14.81	-	-	0.92	-	-	-	-	-	-	4.14	0.33	-	-	8.11	-	-	0.02	1.30	10.33	0.92	8.11	-



OS-32	128.71	-	-	0.26	-	-	-	-	-	-	0.40	17.70	3.47	-	-	1.06	7.85	12.52	85.45	86.77	0.26	-	1.06
OS-33	2.00	-	-	0.08	-	-	-	-	-	-	-	1.92	-	-	-	-	-	-	-	0.08	0.08	-	-
OS-34	2.00	-	-	0.17	-	-	-	-	-	-	-	1.61	-	-	-	-	-	-	0.22	0.39	0.17	-	-
OS-35	25.38	-	-	-	-	-	-	-	-	-	-	4.11	-	-	-	1.00	-	-	20.27	21.27	-	-	1.00
OS-36	76.46	-	2.95	7.44	-	-	-	-	-	-	-	-	2.35	-	-	1.00	-	-	62.73	71.17	7.44	-	1.00
OS-37	77.98	-	1.22	2.58	-	-	-	-	-	-	5.18	19.92	9.91	-	-	-	-	12.96	26.22	28.80	2.58	-	-
OS-38	7.13	-	-	-	-	-	-	-	-	-	-	2.54	-	-	-	-	-	4.59	-	-	-	-	-
OS-39	39.54	-	1.11	3.27	-	-	-	-	-	-	-	9.67	5.67	-	-	0.50	1.73	4.73	12.85	16.62	3.27	-	0.50
OS-40	7.06	-	0.21	1.35	-	-	-	-	-	-	-	-	-	-	-	0.47	-	-	5.04	6.86	1.35	-	0.47
OS-41	43.93	-	-	0.35	-	-	-	-	-	-	-	2.55	18.93	-	-	0.95	-	-	21.14	22.44	0.35	-	0.95
OS-42	1.63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.63	1.63	-	-	-
OS-43	18.32	-	-	-	-	-	-	-	-	-	-	3.53	1.44	-	-	-	1.96	8.56	2.85	2.85	-	-	-
OS-44	35.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.13	-	-	33.96	35.09	-	-	1.13
OS-45	26.29	-	-	-	-	-	-	-	-	-	-	1.89	-	-	-	-	-	-	24.40	24.40	-	-	-
OS-46	17.52	-	-	-	-	-	-	-	-	-	-	0.82	-	-	-	0.50	-	-	16.21	16.71	-	-	0.50
OS-47	7.33	-	-	-	-	-	-	-	-	-	-	1.22	-	-	-	-	-	-	6.11	6.11	-	-	-
OS-48	60.45	-	-	-	0.00	-	-	-	-	-	-	16.86	-	2.00	-	0.50	-	-	41.08	41.58	-	-	0.50
OS-49	0.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28	-	-	-	-	-
OS-50	0.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19	-	-	-	-	-
OS-51	0.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23	-	-	-	-	-
OS-52	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	-	-	-	-	-

OS-53	0.11	-	-	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	0.11	-	-	-	-	-
OS-54	0.25	-	-	-	-	-	-	-	-	-	-	0.06	-	-	-	-	-	0.20	-	-	-	-	-
OS-55	0.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24	-	-	-	-	-
OS-56	0.27	-	-	-	-	-	-	-	-	-	-	0.05	-	-	-	-	-	0.22	-	-	-	-	-
OS-57	0.19	-	-	-	-	-	-	-	-	-	-	0.19	-	-	-	-	-	-	-	-	-	-	-
OS-58	0.38	-	-	-	-	-	-	-	-	-	0.00	0.12	-	-	-	-	-	0.26	-	-	-	-	-
OS-59	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.33	-	-	-	-	-
OS-60	0.02	-	-	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	0.02	-	-	-	-	-
Sub-Total	1,047.73	-	6.59	29.15	0.00	-	3.50	3.00	3.25	1.00	19.07	142.94	41.97	2.00	8.11	14.91	15.90	87.34	669.00	722.17	29.15	11.36	12.66
OS-R1	7.33	4.38	-	-	-	-	-	-	-	-	-	0.01	0.35	-	-	-	-	-	2.59	2.59	-	-	-
OS-R2	5.42	4.30	-	0.00	-	-	-	-	-	-	-	0.11	-	-	-	-	-	0.37	0.64	0.64	0.00	-	-
OS-R3	2.49	0.04	-	-	-	1.50	-	-	-	-	0.29	-	0.62	-	-	0.00	-	0.05	-	0.00	-	0.00	-
OS-R4	1.94	0.01	-	-	1.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OS-R5	1.61	-	-	-	1.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OS-R6	2.39	-	-	-	2.22	-	-	-	-	-	-	0.06	-	-	-	-	-	0.12	-	-	-	-	-
Sub-Total	21.18	8.73	-	0.00	5.76	1.50	-	-	-	-	0.29	0.17	0.96	-	-	0.00	-	0.54	3.23	3.23	0.00	0.00	-

## Appendix 6 Local town centre design criteria

**Table 10: Local town centre performance requirements and guidelines**

Local town centre element	Performance requirements	Performance guidelines
<b>Key design elements</b>	<ol style="list-style-type: none"> <li>1. Must address all relevant elements of the Urban Design Guidelines of Victoria.</li> <li>2. Must integrate the local town centre core with the surrounding neighbourhoods, public transport, and community facilities.</li> <li>3. A centralised village square to be provided that will act as forecourt to the mixed use and focal point for surrounding retail and residential uses.</li> <li>4. The main streets to be designed to include dense canopy tree provision, outdoor dining and pedestrian activity and on-street parking.</li> </ol>	<ol style="list-style-type: none"> <li>1. Should respond to the surrounding site features, including the waterways, open space areas and other points of interest to create views and connections and the stories of the place.</li> <li>2. Should provide a neighbourhood with a pedestrian and active transport priority, with a focus on creating a resilient and accessible 20-minute neighbourhood.</li> <li>3. Mixed-use precincts should provide retail and/or office and commercial at ground level and primarily residential above ground level.</li> <li>4. Minimise barriers to pedestrian, bicycle/micro-mobility active transport access to the centre, notably across the north south connector boulevard road and loading and car parking areas.</li> <li>5. Development blocks should be based on a permeable layout to enable flexibility to suit a variety of land uses and allow viable short-term development as well as efficient long-term evolution.</li> </ol>
<b>Retail core (local town centre)</b>	<ol style="list-style-type: none"> <li>5. Must provide active frontages that address connector streets and boulevard connectors as a main street frontage.</li> <li>6. Must be accessible via the boulevard connector street from Lecky Road and Officer South Road.</li> <li>7. Must provide for the strong integration of the centre with the surrounding residential and education facilities, with a high level of surveillance along the primary streets for pedestrian access to the centre.</li> </ol>	<ol style="list-style-type: none"> <li>6. Should be integrated with the Lecky Rd green spine and utilise the active transport network.</li> <li>7. Separate pedestrian and cyclist paths to be delivered on the green spine, to integrate the local town centre core with the surrounding neighbourhoods, public transport, and community facilities.</li> <li>8. Specialty retail and mixed use to sleeve the anchor retail core and village square.</li> <li>9. Locate buildings which achieve high levels of articulation along the boulevard and connector streets, including (as appropriate) clear glazing and regular entrances, an appropriate range of building material/colour palette themes and architectural design treatments (including opportunities for</li> </ol>



		<p>signage integration into building design).</p> <p>10. Development on the west side of the north–south boulevard connector should provide capacity for ground floor specialist suites (office, medical services, etc) and independent retail and hospitality tenancies. Floor to ceiling heights should allow for adaptive use with a minimum of 3.6m on ground floor.</p>
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**Table 11: Local town centre design principles**

PRINCIPLE	OUTCOME
<p><b>PRINCIPLE 01</b></p> <p>Design the local town centre to be pedestrian-friendly and accessible by all modes of transport, while enabling private vehicle access. The local town centre should be easily, directly, and safely accessible for pedestrians, cyclists, public transport modes, private vehicles, service, and delivery vehicles with priority given to pedestrian movement, amenity convenience and safety.</p>	<ul style="list-style-type: none"> <li>Public transport infrastructure/facilities should be planned for commuter friendly/convenient locations adjacent to the local town centre.</li> <li>Bus stops should be provided to the satisfaction of the Department of Transport and Planning.</li> <li>Bicycle parking should be provided within the street network and public spaces in highly visible locations and close to pedestrian desire lines and key destinations.</li> <li>The design of buildings within the local town centre should have a relationship with and should interface to the public street network.</li> <li>Car parking areas should be located centrally to the site and to the rear and or side of street-based retail frontages.</li> <li>Car parking areas should be designated to ensure passive surveillance and public safety through adequate positioning and lighting.</li> <li>Car parking areas should be designed to provide dedicated pedestrian routes and areas of landscaping.</li> <li>On-street car parking should be provided either as parallel or angle parking to encourage short stay parking.</li> <li>Car parking ingress and egress crossovers should be grouped and limited.</li> <li>Car parking ingress or egress and car parking areas accommodating heavy vehicle movements should be designed to limit the pedestrian/vehicle conflict.</li> <li>Streets, public spaces, and car parks should be well lit to Australian standards and with pedestrian-friendly (generally white) light. Lighting should be designed to avoid unnecessary spill to the side or above.</li> </ul>

**PRINCIPLE 02**

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

- Development should complement and enhance the character of the surrounding area by responding appropriately to key visual cues associated with the topography of the local town centre location and its surrounds.
- The local town centre design should seek to minimise amenity and noise impacts resulting from the mix of uses by maintaining separation and transitional areas between retail and housing activities, such as open space, road networks and community facilities.
- The design of each building should contribute to a cohesive and legible character for the local town centre as a whole.
- Sites in prominent locations (such as at key intersections, surrounding public spaces and terminating key view lines and vistas) should be identified for significant buildings or landmark structures.
- The design of building frontages should incorporate the use of a consistent covered walkway or veranda to provide for weather protection.
- The built form should define the primary street frontage and be aligned with the property boundary.
- Street facades and all visible side or rear facades should be visually rich, interesting, and well-articulated and be finished in suitable materials and colours that contribute to the character of the local town centre.
- Materials and design elements should be compatible with the environment and landscape character of the broader precinct.
- Retail uses along street frontages should generally include access points at regular intervals to encourage activity along the length of the street.
- Retail and commercial buildings within the local town centre should generally be built to the property line.
- Public spaces should be oriented to capture north sun and protect from prevailing winds and weather.
- Landscaping of all interface areas should be of a high standard as an important element to complement the built form design.
- Urban art should be incorporated into the design of the public realm.
- Street furniture should be in areas that are highly visible and close to or adjoining pedestrian desire lines/gathering spaces and designed to add visual interest to the local town centre.
- Wrapping of car parking edges with built form, to improve street interface, should be maximised.
- Car parking areas should provide for appropriate landscaping with planting of canopy trees and dedicated pedestrian thoroughfares.

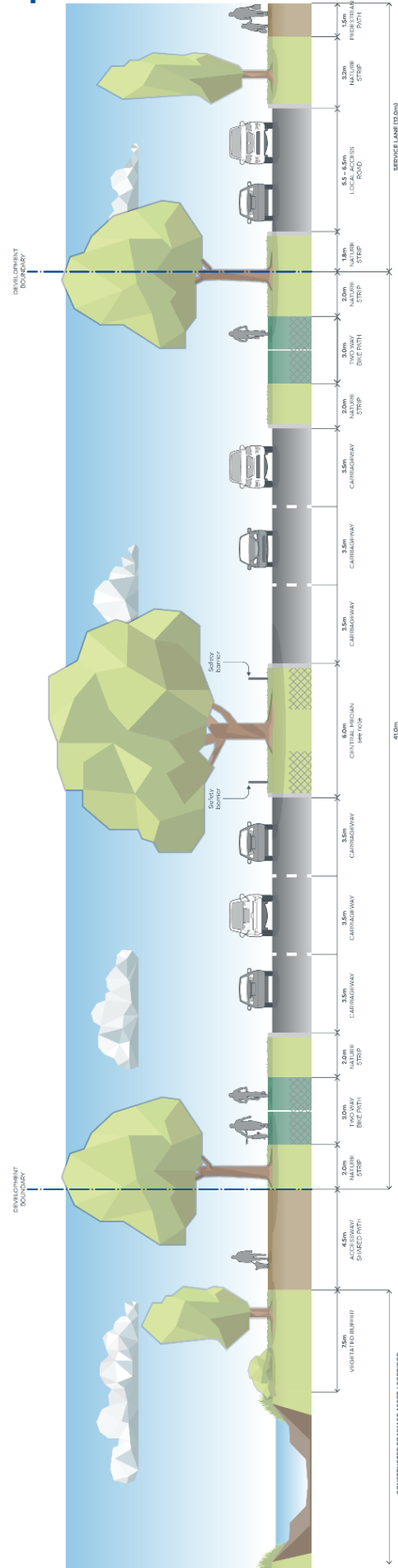
	<ul style="list-style-type: none"> <li>• Screening of centralised waste collection points should minimise amenity impacts with adjoining areas and users of the centre.</li> <li>• Where service areas are accessible from car parks, they should present a well-designed and secure facade to public</li> </ul>
<b>PRINCIPLE 03</b> Promote localisation, sustainability, and adaptability.	<ul style="list-style-type: none"> <li>• The local town centre should promote the localisation of services which will contribute to a reduction of travel distance to access local services and less dependence on the car.</li> <li>• Where appropriate, locate the local town centre in attractive settings and incorporate natural or cultural landscape features such as creeks and waterways, linear open space, pedestrian and cycle links and areas of high aesthetic value.</li> <li>• The local town centre should be designed to be sympathetic to its natural surrounds by: <ul style="list-style-type: none"> <li>○ Investigating the use of energy efficient design and construction methods for all buildings</li> <li>○ Including Water Sensitive Urban Design principles such as integrated stormwater retention and reuse (e.g. toilet flushing and landscape irrigation)</li> <li>○ Promoting safe and direct accessibility and mobility within and to and from the local town centre</li> <li>○ Including options for shade and shelter through a combination of landscape and built form treatments</li> <li>○ Ensuring buildings are naturally ventilated to reduce the reliance on plant equipment for heating and cooling</li> <li>○ Promoting passive solar orientation in the configuration and distribution of built form and public spaces</li> <li>○ Grouping waste collection points to maximise opportunities for recycling and reuse</li> <li>○ Promoting solar energy for water and space heating, electricity generation and internal and external lighting, and</li> <li>○ Investigating other opportunities for the built form to reduce greenhouse gas emissions associated with the occupation and the ongoing use of buildings.</li> </ul> </li> <li>• Encourage building design which can be adapted to accommodate a variety of uses over time.</li> </ul>



## Appendix 7

## Standard road cross sections & functional layout plans

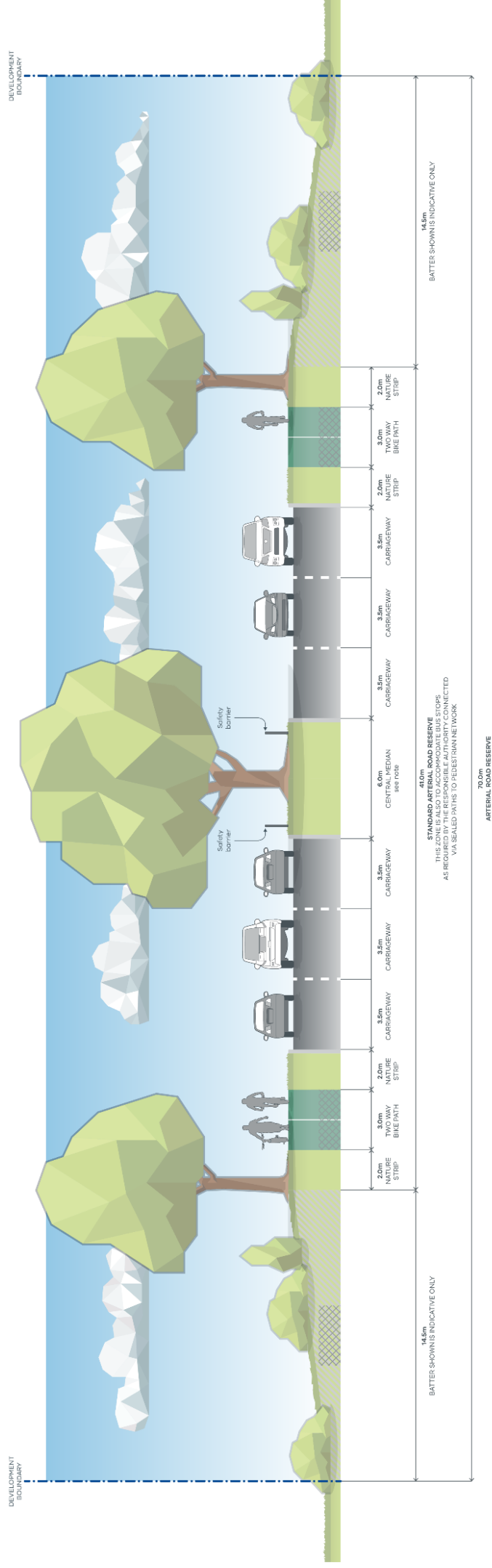
**Primary Arterial 6 Lane** – 41m – Officer South Road with waterway interface



## NOTES:

- Includes typical commercial / industrial interface both sides.
- Minimum street tree mature height 15 metres.
- Kerbs for arterial carriageways are to be SM2 Semi-Mountable Kerb, and local frontage roads are to be B2 Barrier Kerb.
- See *VicRoads Tree Planting Policy*. Large trees within the road reserve to be protected by safety barriers where required.
- Off-road two-way cycle path shall change to a shared path when traversing under Princes Freeway to allow pedestrian connectivity to the north
- Provides typical utility services and includes optic fibre conduit and ICP infrastructure for smart city applications.

## Primary Arterial 6 Lane – 70m – Thompsons Road



### NOTES:

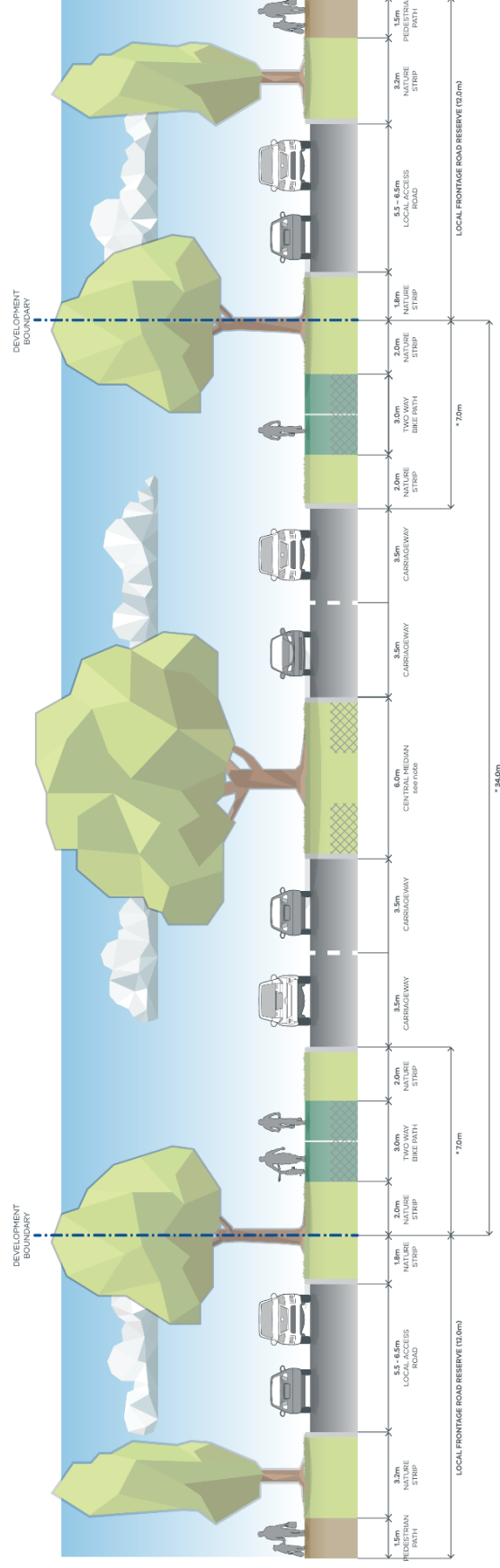
- Includes typical commercial/industrial interface both sides. Local frontage road reserves may provide a service road that connects back to the arterial road in accordance with Department of Transport requirements and standards.
- Minimum street tree mature height 15 metres.
- Kerbs for arterial carriageways are to be SM2 Semi-Mountable Kerb, and local frontage roads are to be B2 Barrier Kerb.
- See VicRoads *Tree Planting Policy*. Large trees within the road reserve to be protected by safety barriers where required.
- Final road reserve width may be reduced and is to be confirmed post-consultation.
- Provide typical utility services and include optic fibre conduit and ICP infrastructure for smart city applications.
- The off-road two-way cycle path shall be marked as a shared path until the local access road is constructed, at which point pedestrian paths are provided and the markings shall be amended to indicate a two-way cycle path as shown.

Potential locations for trunk services such as the 900mm diameter sewer main and 750mm diameter recycled water transfer main are indicated with a hatch pattern in the cross sections.

These locations are indicative only and are subject to finalisation post-PSP with the relevant stakeholders. Final location, depth and method of placement shall be to the satisfaction of the relevant authority.

Within tree protection zones, placement of any services must ensure there is minimal to no impact to trees or tree root zones to the satisfaction of the responsible authority.

## Secondary Arterial 4 Lane – 34m – Lecky Road



### NOTES:

- Includes typical commercial/industrial interface both sides.
- Minimum street tree mature height 15 metres.
- Kerbs for arterial carriageways are to be S/W2 Semi-Mountable Kerb, and local frontage roads are to be B2 Barrier Kerb.
- See *VicRoads Tree Planting Policy*. Large trees within the road reserve to be protected by safety barriers where required.
- \* Indicates that road reserve width is to increase where required to include the retention of very high and high value trees identified on the Precinct Features Plan where possible in accordance with Australian Standard AS 4970 2009.
- The off-road two-way cycle path shall be marked as a shared path until the local access road is constructed, at which point pedestrian paths are provided and the markings shall be amended to indicate a two-way cycle path as shown.
- Provides for provision of typical utility services and includes optic fibre conduit and ICP infrastructure for smart city applications.

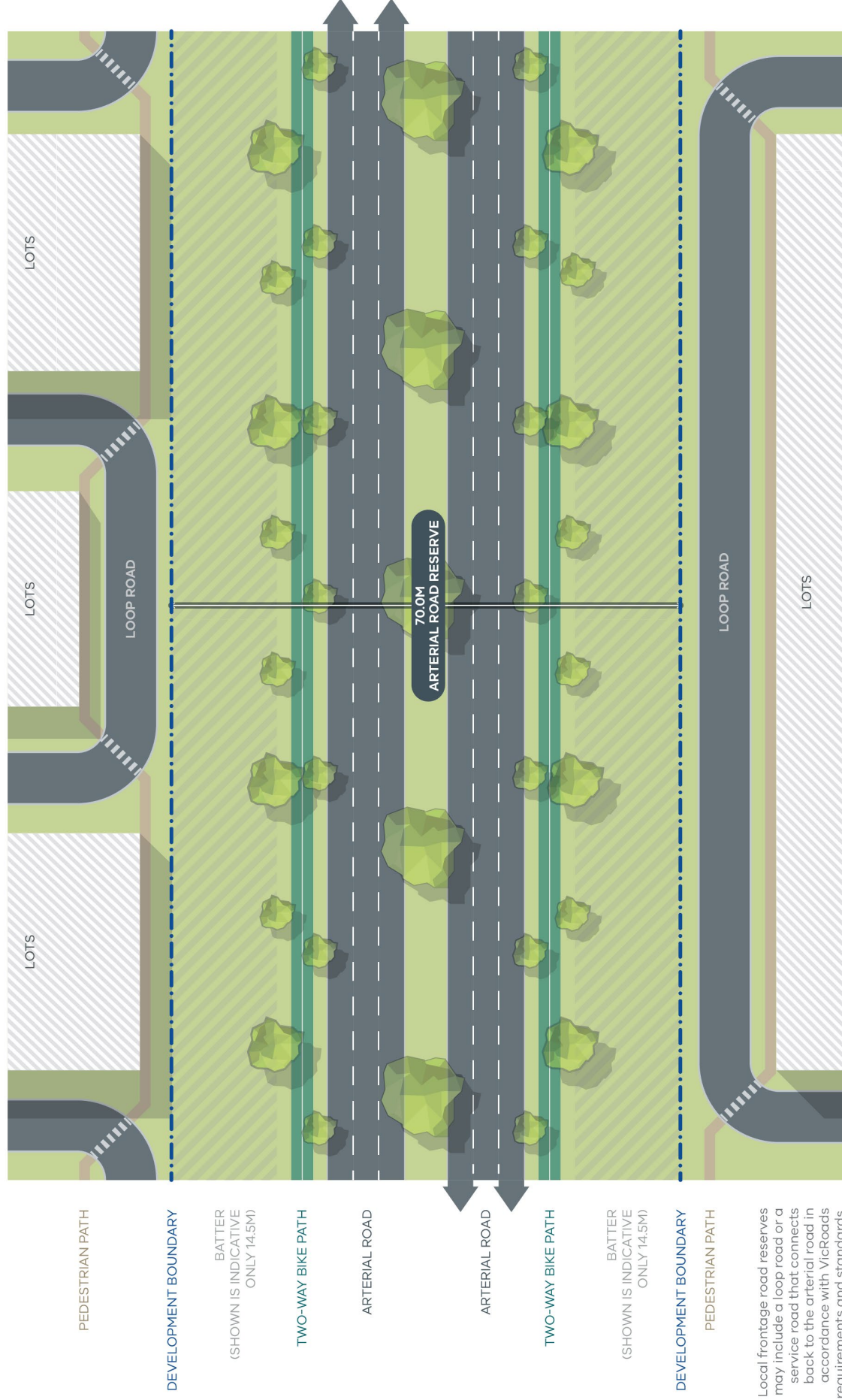


Potential locations for trunk services such as the 900mm diameter sewer main and 750mm diameter recycled water transfer main are indicated with a hatch pattern in the cross sections.

These locations are indicative only and are subject to finalisation post PSP with the relevant stakeholders. Final location, depth and method of placement shall be to the satisfaction of the relevant authority.

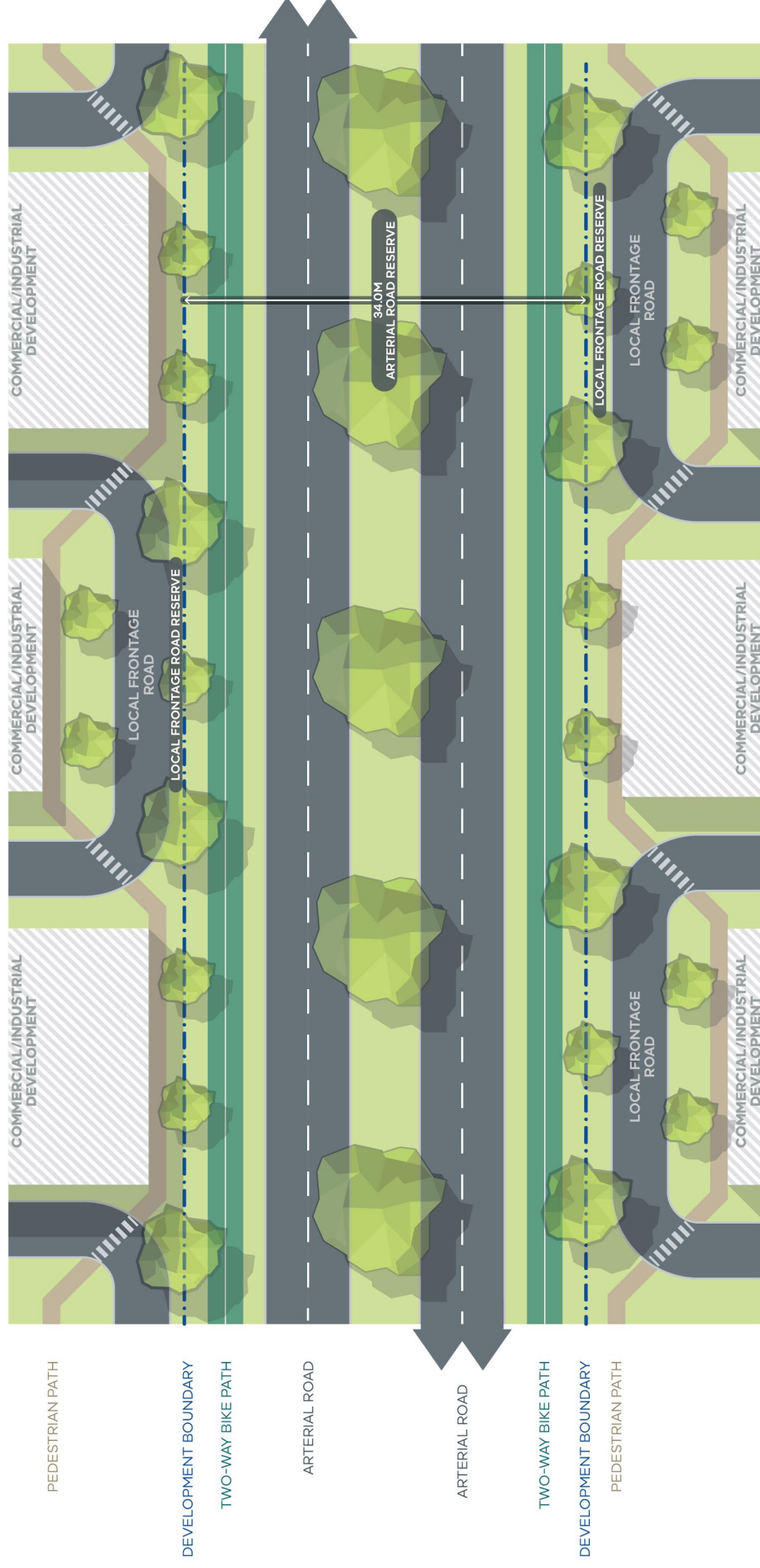
Within tree protection zones, placement of any services must ensure there is minimal to no impact to trees or tree root zones to the satisfaction of the responsible authority.

## Primary Arterial 6 Lane – 70m – Thompsons Road – Plan view

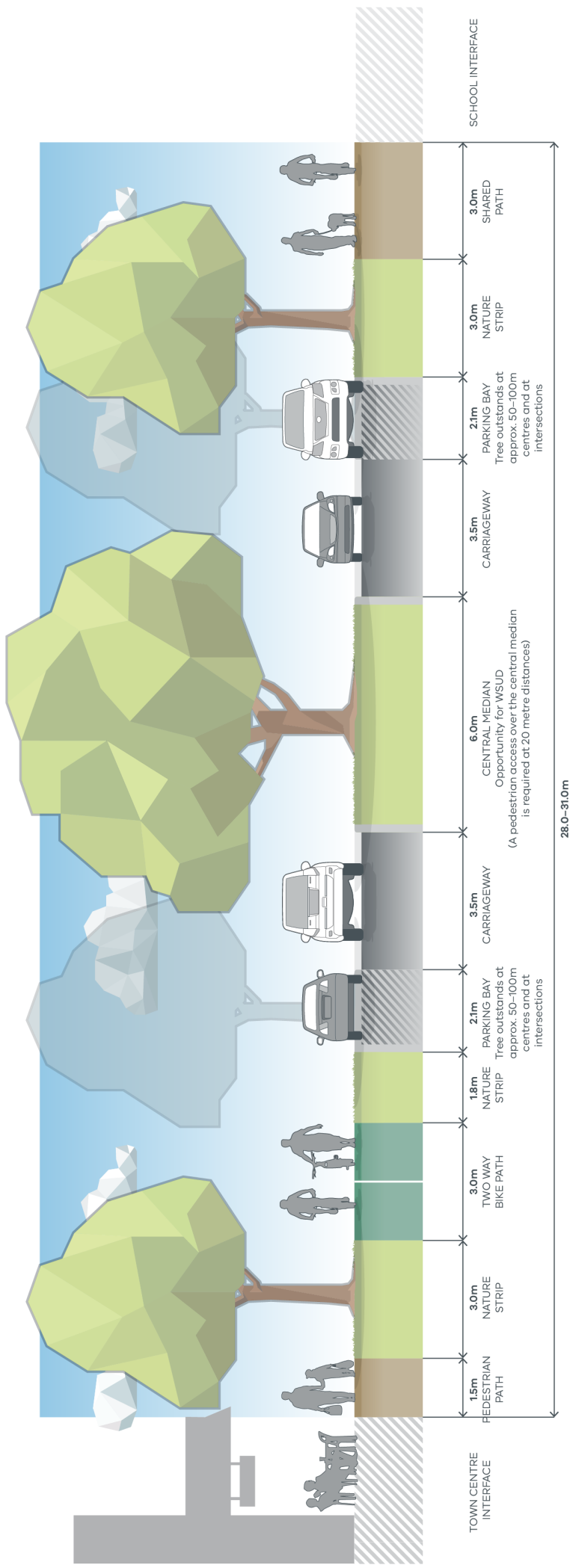




## Secondary Arterial 4 Lane – 34m – Plan view



## Connector Street Boulevard – 28m–31m – Residential

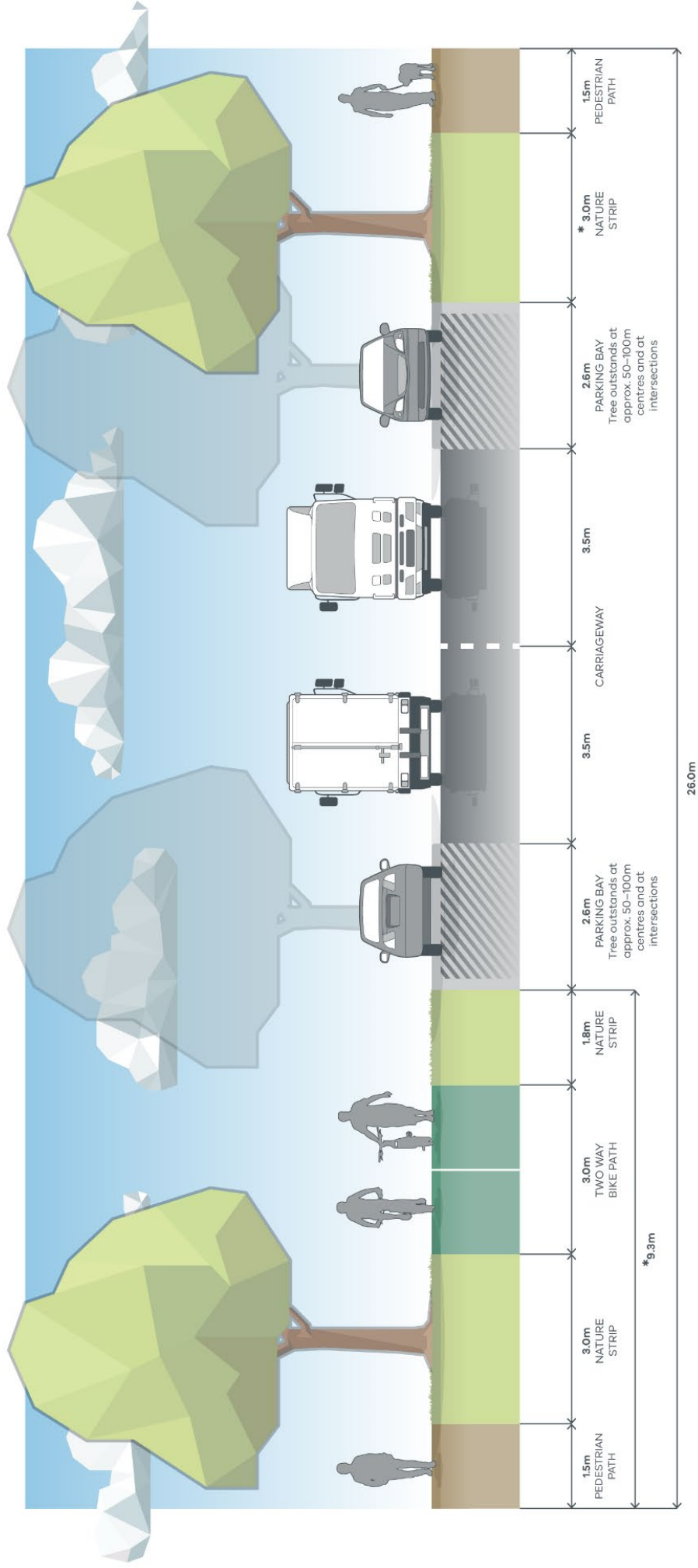


### NOTES:

- Include a central median with large canopy trees to create a boulevard effect. Trees are to be centrally planted in median.
- Topsoil used in central medians is to be sandy loam, with a minimum depth of 200mm. The surface of medians is to be free-draining with a minimum cross fall of 2%, and is to be planted with warm season grasses.
- In areas where high pedestrian volumes are expected (e.g. around schools and town centres), central medians should be paved with harder wearing surfaces such as granitic sand or other pavements. Canopy tree planting must be incorporated into additional paved area.
- Any garden beds in central medians are to be offset 1.5m from back of kerb.
- Kerb to central median is to be SM2 semi-mountable kerb.
- Depending on the location of breaks in the median, provide intermediate pedestrian crossing points to accommodate mid-block crossings.
- An alternative boulevard treatment can be achieved through a wider verge on one side capable of accommodating a double row of canopy trees.
- Variations to indicative cross-section may include water sensitive urban design (WSUD) outcomes. These could include but are not limited to bioretention tree planter systems and/or median bioretention swales. Such variations must be to the satisfaction of the responsible authority.
- Provides typical utility services and includes optic fibre conduit and ICP infrastructure for smart city applications.
- Accommodate bus stops zone as required by responsible authority connected via sealed paths to pedestrian network.
- The shared path to the school interface shall circle the schools perimeter in order to not continue past the school to the residential frontages. A pedestrian path is to front the residential development

## Connector Street – 26m – Industrial

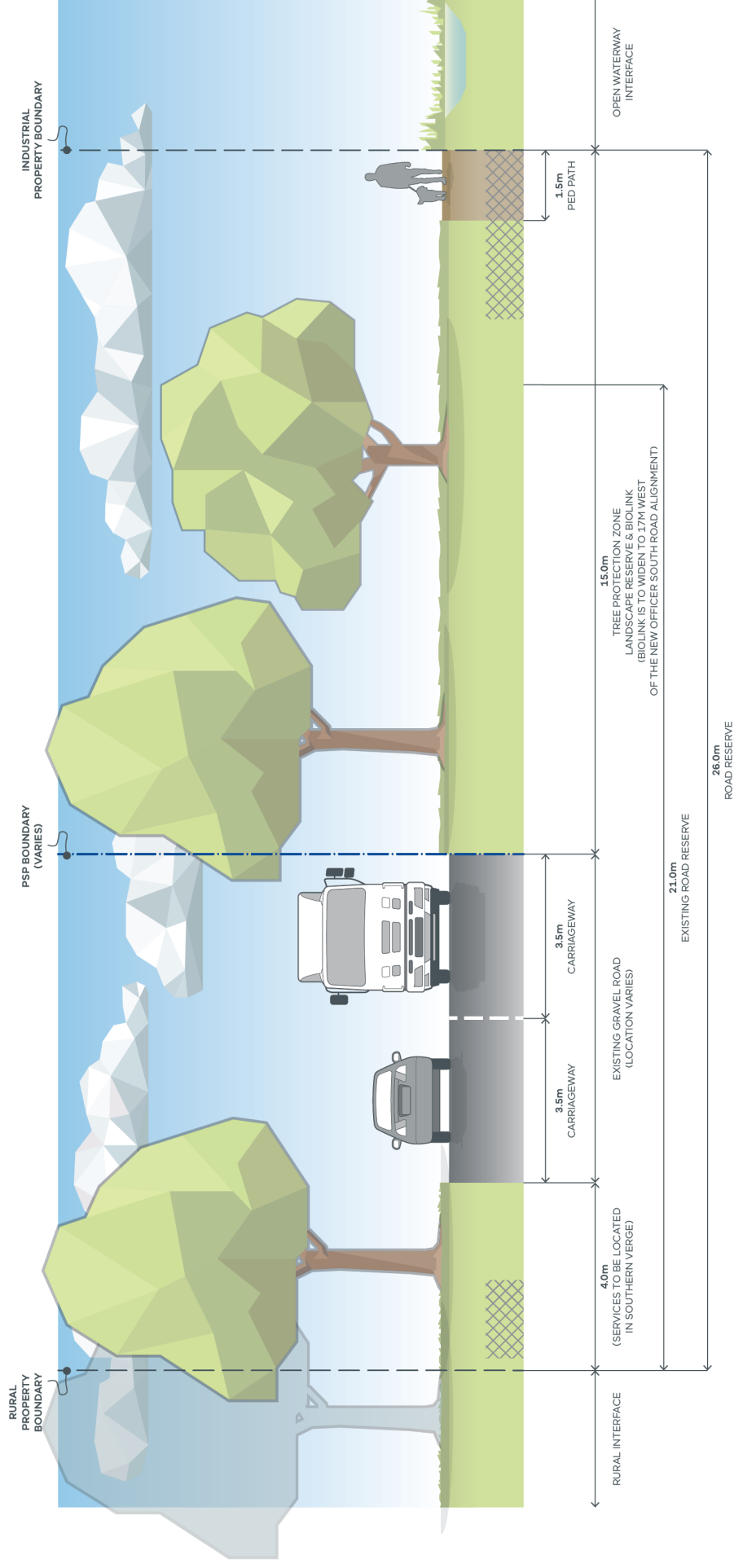
## VPA Standard Cross Section



### NOTES:

- Minimum street tree mature height 15 metres.
- All kerbs are to be B2 Barrier Kerb.
- Where roads about thoroughfares, grassed nature strip should be replaced with pavement. Canopy tree planting must be incorporated into any additional pavement.
- Verge widths may be reduced where roads about open space with the consent of the responsible authority.
- Variation to indicative cross-section may include water sensitive urban design (WSUD) outcome. These could include but are not limited to bioretention tree planter systems and/or median bioretention swales. Such variations must be to the satisfaction of the responsible authority.
- \* Varies indicates that road reserve width is to increase where required to included the retention of very high and high value trees identified on the Precinct Features Plan where possible *in accordance with Australian Standard AS 4970 2009.*
- Provides typical utility services and includes optic fibre conduit and ICP infrastructure for smart city applications.
- Where an industrial connector street is shown on the Public Transport and Active Path Networks Plan without an off-road 2-way cycle path, a 3.0m nature strip and 1.5m pedestrian path will be mirrored on either side of the road carriageways to provide a minimum 21.2m cross section

## Patterson Road – 26m – rural interface road adjacent open waterway



### NOTES:

- The PSP boundary location varies within the road reserve and in relation to the existing gravel road. The final road pavement and road reserve may vary from this cross section, protecting the biolink as the main focus of the road reserve design.
- To provide suitable access, the existing gravel road located both internal and external to the precinct boundary, is to be sealed to the satisfaction of the relevant authority.
- Existing trees within the biolink and very high to high value trees identified on the Precinct Features Plan should be retained where practical and to the satisfaction of the responsible authority.
- Where roads about thoroughfares, grassed nature strip should be replaced with pavement.
- Canopy tree planting must be incorporated into any additional pavement.
- Provide typical utility services and include optic fibre conduit and ICP infrastructure for smart city applications.

- An access way for maintenance purposes is required within the waterway reserve interfacing with the biolink. Melbourne Water in consultation with council will undertake a functional design of this constructed waterway to ensure waterway functions, maintenance, biolink requirements and sodic soil risks are applied. In relation to this waterway and the subdivision interface, refer to G37. For all the other PSP constructed waterways, refer to *Typical open waterway interface* cross section in Appendix 8.

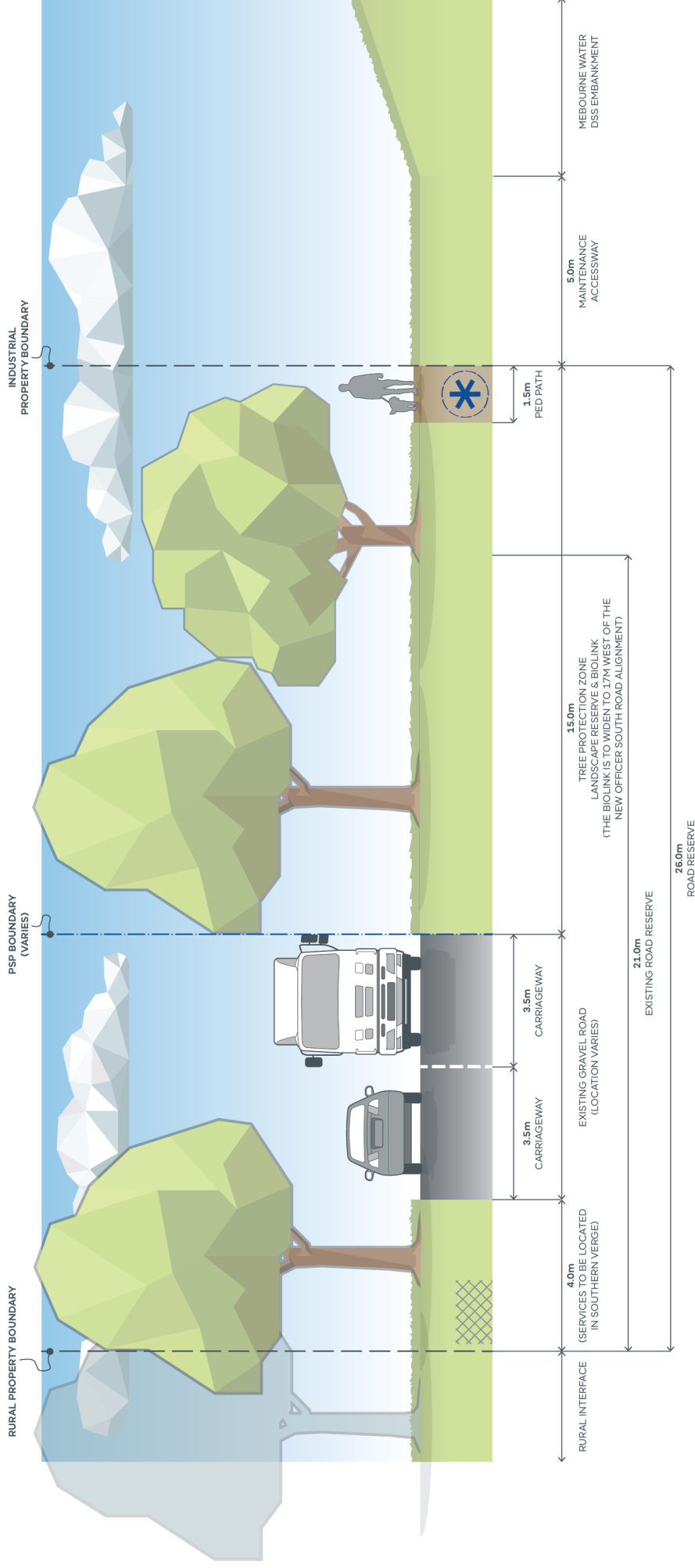


Potential locations for trunk services such as the 900mm diameter sewer main and 750mm diameter recycled water transfer main are indicated with a hatch pattern in the cross sections. These locations are indicative only and are subject to finalisation post-PSP with the relevant stakeholders. Final location, depth and method of placement shall be to the satisfaction of the relevant authority.

Within tree protection zones, placement of any services must ensure there is minimal to no impact to trees or tree root zones to the satisfaction of the responsible authority.



## Patterson Road – 26m – rural interface road adjacent retarding basin



### NOTES:

- The PSP boundary location varies within the road reserve and in relation to the existing gravel road. The final road pavement and road reserve may vary from this cross section, protecting the biolink as the main focus of the road reserve design.
- To provide suitable access, the existing gravel road located both internal and external to the precinct boundary, is to be sealed to the satisfaction of the relevant authority.
- Existing trees within the biolink and very high to high value trees identified on the Precinct Features Plan should be retained where practical and to the satisfaction of the responsible authority. No works are to occur within the Tree Protection Zone as per the Australian standards for tree protection unless to the satisfaction of the responsible authority.
- Provide typical utility services and include optic fibre conduit and ICP infrastructure for smart city applications.



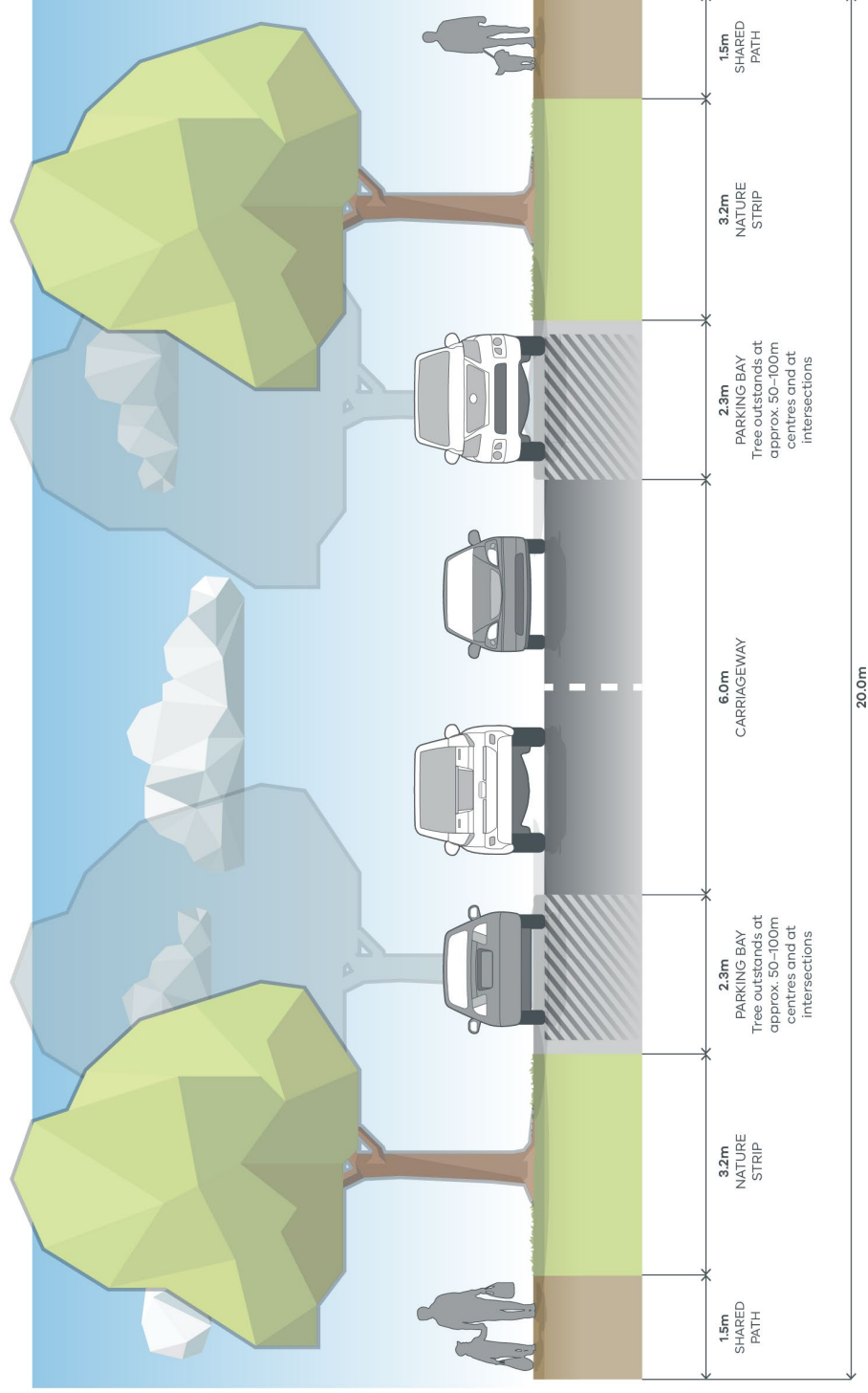
1500mm diameter Melbourne Water overflow pipe to be located under the pedestrian path for the last 100m of the road reserve, subject to further functional and detailed design to the satisfaction of Melbourne Water and responsible authorities. The biolink trees must be protected to the satisfaction of Cardinia Council.

Potential locations for trunk services such as the 900mm diameter sewer main and 750mm diameter recycled water transfer main are indicated with a hatch pattern in the cross sections. These locations are indicative only and are subject to finalisation post-PSP with the relevant stakeholders. Final location, depth and method of placement shall be to the satisfaction of the relevant authority.

Within tree protection zones, placement of any services must ensure there is minimal to no impact to trees or tree root zones to the satisfaction of the responsible authority.

## Local Access Street Level 2 – 20m – Residential

## VPA Standard Cross Section

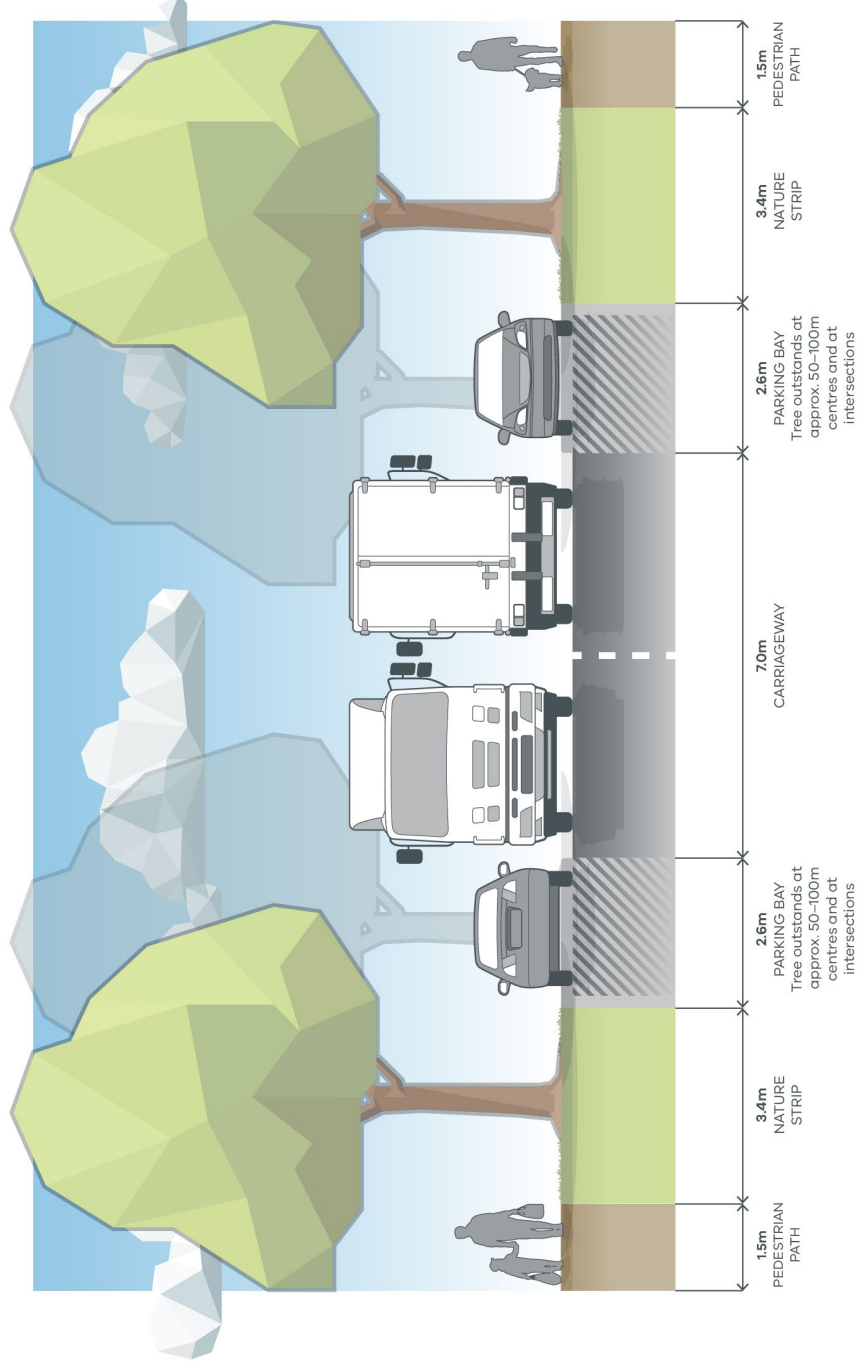


### NOTES:

- Minimum street tree mature height 12 metres
- All kerbs are to be B2 Barrier Kerb.
- Verge widths may be reduced where roads about open space with consent of the responsible authority.

## Local Access **Street** Level 2 – Industrial (22m)

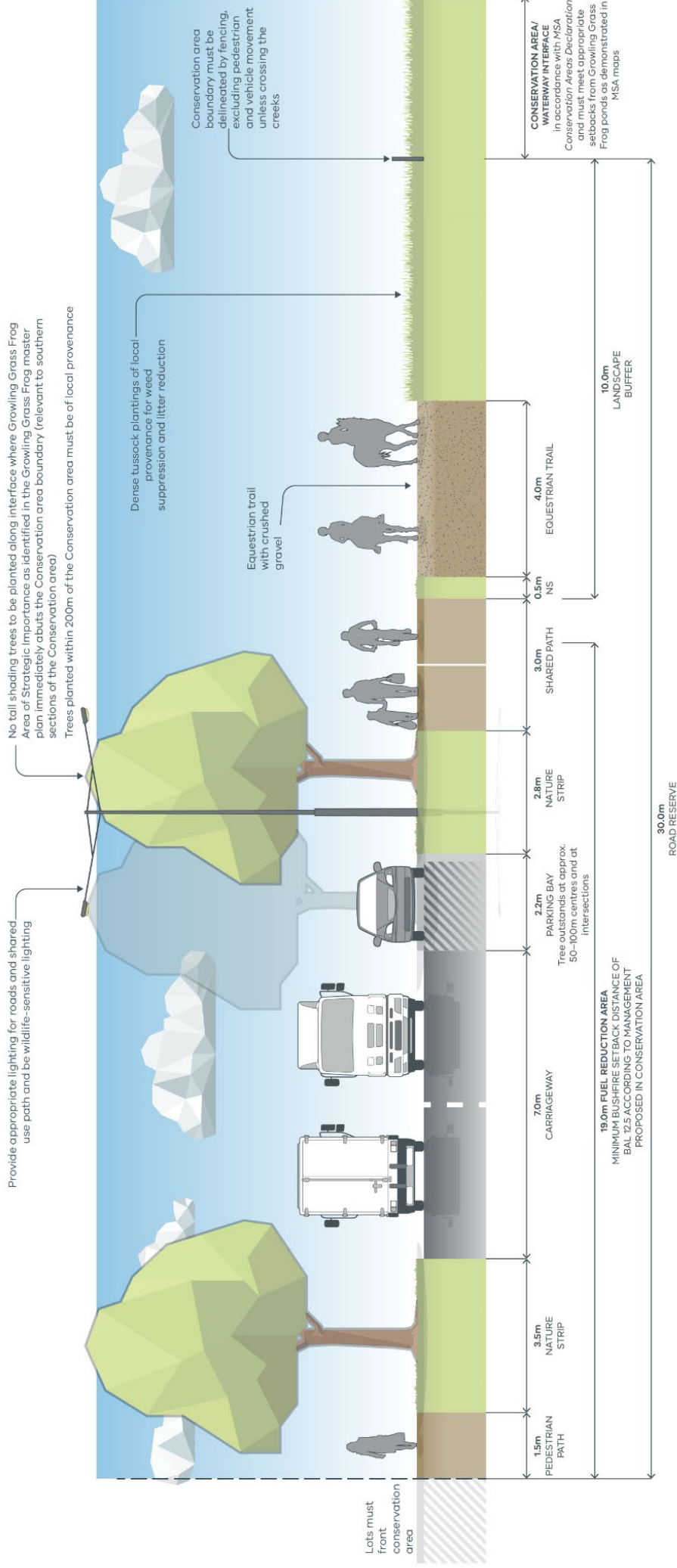
## VPA Standard Cross Section



### NOTES:

- All kerbs are to be B2 Barrier Kerb.
- Verge widths may be reduced where roads about open space with consent of the responsible authority.

## Local Access Street industrial – conservation interface

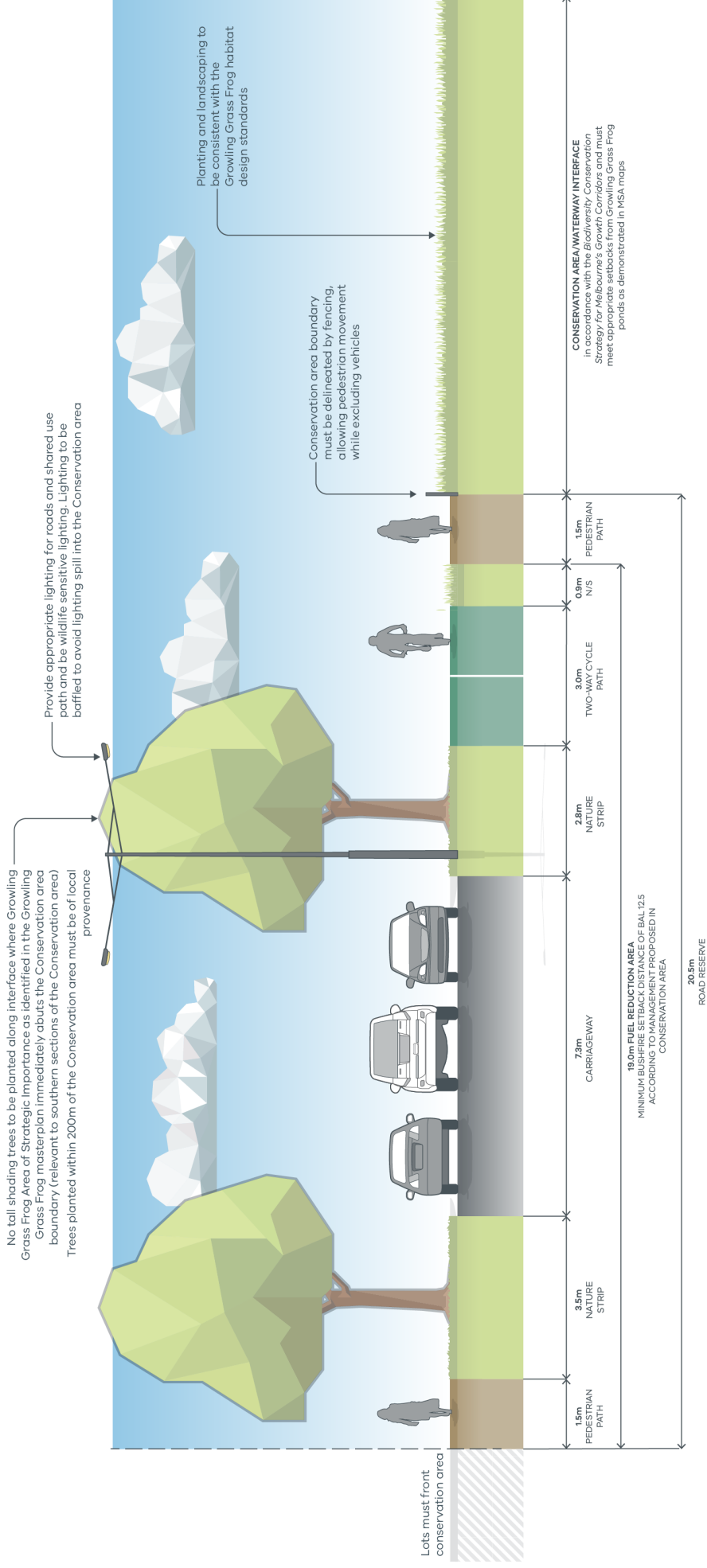


### NOTES:

- Street tree planting of a medium to large size appropriate for the widths and function of the street.
- All kerbs are to be B2 Barrier Kerb.
- Verge widths may be reduced where roads abut open space with the consent of the responsible authority.
- All necessary fire breaks must be outside of the conservation area.
- Fencing must be constructed in accordance with the recommendations in the DEECA requirements for permanent fencing around conservation areas under the Melbourne Strategic Assessment.
- Street lights installed in the nature strip must provide lighting for both the road and shared path and be wildlife sensitive lighting to assist reducing light spill into the Conservation Area, in accordance with the MSA Growing Grass Frog Crossing Design Standards.
- Nature strip trees must be indigenous species within 200m of Conservation areas, in accordance with the Cardinia Shire Council/Developer Landscape Guidelines.
- Space must be provided for off-road vehicle pull-over bays at maintenance access points (minimum 12m long x 2.1m wide).
- Provides typical utility services and includes optic fibre conduit and ICP infrastructure for smart city applications.



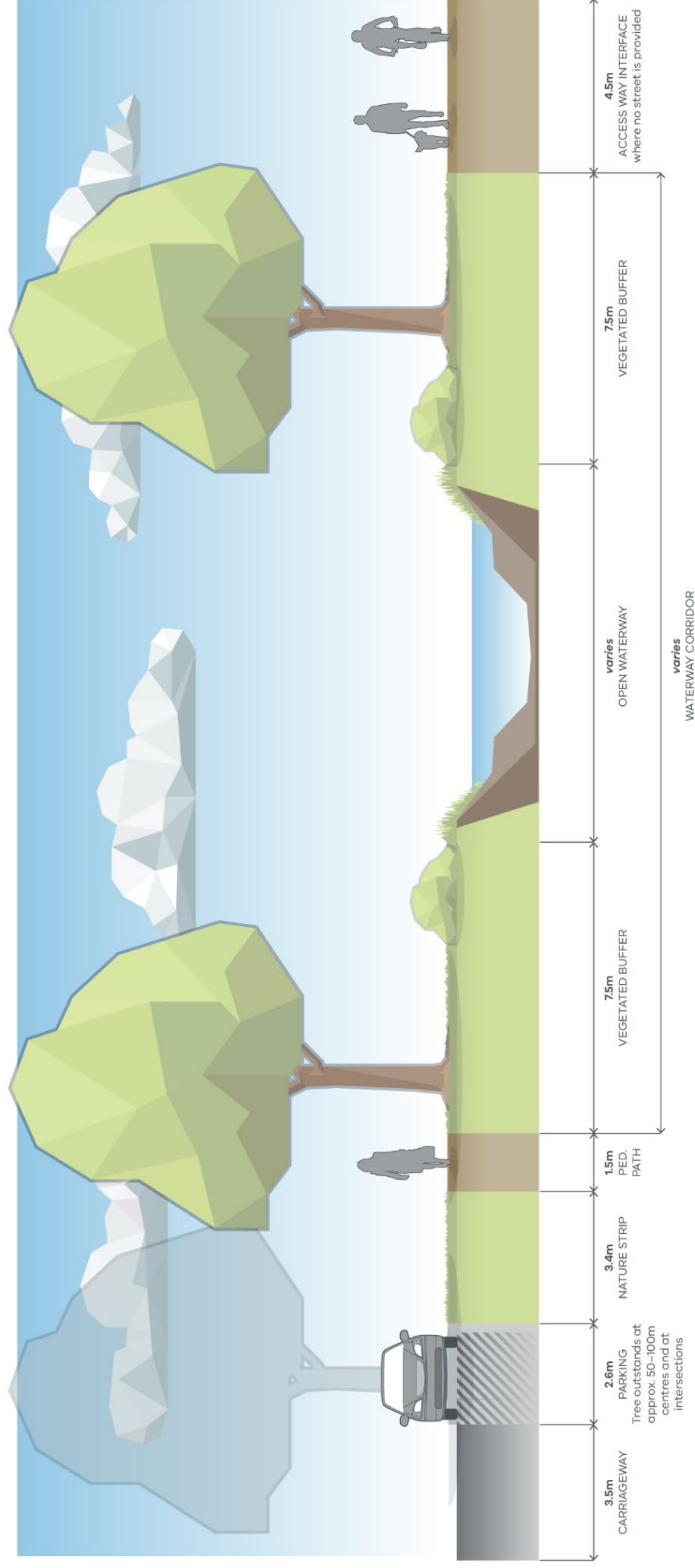
## Local Access Street residential – conservation interface



### NOTES:

- Street tree planting of a medium to large size appropriate for the widths and function of the street.
- All kerbs are to be B2 Barrier Kerb.
- Verge widths may be reduced where roads about open space with the consent of the responsible authority.
- All necessary fire breaks must be outside of the conservation area.
- Fencing must be constructed in accordance with the recommendations in the DEECA requirements for permanent fencing around conservation areas under the Melbourne Strategic Assessment.
- Street lights installed in the nature strip must provide lighting for both the road and shared path and be wildlife sensitive lighting to assist reducing light spill into the Conservation Area, in accordance with the Growing Grass Frog Crossing Design Standards.
- Nature strip trees must be indigenous species within 200m of Conservation areas, in accordance with the Cardinia Shire Council Developer Landscape Guidelines.
- Space must be provided for off-road vehicle pull-over bays at maintenance access points (minimum 12m long x 2.1m wide).
- Provides typical utility services and includes optic fibre conduit and ICP infrastructure for smart city applications.

## Typical open waterway interface



### NOTE:

- Shared pathways (including equestrian trails) and infrastructure is to be located outside the waterway corridor.
- This is a typical cross section for the constructed open waterways **excluding** Lower Gum Scrub Creek and the Patterson Road biolink waterway which addresses protected tree root zones.
- A 4.5m wide access way is to be included within the active edge zone for use as a maintenance track where no street interface is proposed. This can be co-used as a shared path or equestrian trail.

## Appendix 8 Design and location of underground services

The *Engineering Design and Construction Manual for Subdivision in Growth Areas* (April 2011) outline placement of services for a typical residential street environment. This approach is appropriate for most of the 'standard' road cross sections outlined in Appendix 7 – Standard road cross sections & functional layout plans, containing grassed nature strips, footpaths and road pavements.

### Non-standard road cross sections

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

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

General principles for service placement:

- Place gas and water on one side of road, electricity on the opposite side
- Place water supply on the high side of road
- Place services that need connection to adjacent properties closer to these properties
- Place trunk services further away from adjacent properties
- Place services that relate to the road carriageway (e.g. drainage, street light electricity supply) closer to the road carriageway
- Maintain appropriate services clearances and overlap these clearances wherever possible.

**Table 12: Design and location of underground services**

	Under pedestrian pavement	Under nature strips	Directly under trees	Under kerb	Under road pavement	Within allotments	Notes
<b>SEWER</b>	Preferred	Possible	Possible	No	Possible	Possible	
<b>POTABLE WATER</b>	Possible	Preferred	Preferred	No	No	No	Can be placed in combined trench with gas
<b>RECYCLED WATER</b>	Possible	Preferred	Preferred	No	No	No	
<b>GAS</b>	Possible	Preferred	Preferred	No	No	No	Can be placed in combined trench with potable water
<b>ELECTRICITY</b>	Preferred	Possible	Possible	No	No	No	Pits to be placed either fully in footpath or nature strip

<b>FTTH/TELCO</b>	Preferred	Possible	Possible	No	No	No	Pits to be placed either fully in footpath or nature strip
<b>DRAINAGE</b>	Possible	Possible	Possible	Possible	Possible	Possible	
<b>TRUNK SERVICES</b>	Possible	Possible	Possible	Possible	Possible	No	

## NOTES

- 1 Placement of services under road pavement is to be considered when service cannot be accommodated elsewhere in road reserve.
- 2 Placement of services beneath edge of road pavement/parking bays is preferable to within traffic lanes.
- 3 Services underneath pedestrian pavements may be considered where allotment size/frontage width allows adequate room to access and work on a pipe where connections to properties are within a pit.



## Appendix 9 Glossary of terms

TERM	DEFINITION
<b>activity centre</b>	Provide the focus for services, employment and social interaction. They are where people shop, work, meet, relax and live. Usually well-served by public transport, they range in size and intensity of use.
<b>affordable housing</b>	Has the same meaning as Section 3AA of the <i>Planning and Environment Act 1987</i> .
<b>Biodiversity Conservation Strategy (BCS)</b>	The <i>Biodiversity Conservation Strategy for Melbourne Growth Corridors</i> (State Government of Victoria, 2013).
<b>canopy cover</b>	The total area that all canopy tree foliage covers within the public realm.
<b>canopy tree</b>	A tree which has a potential canopy of foliage larger than 6.4m in diameter at maturity in the summer months.
<b>co-location</b>	Adjoining land uses to enable complementary programs, activities, and services as well as shared use of resources and facilities, for example, the co-location of schools and sporting fields.
<b>community facilities</b>	<p>Infrastructure provided by government or non-government organisations for accommodating a range of community support services, programs, and activities. This includes:</p> <ul style="list-style-type: none"> <li>• Facilities for education and learning (e.g. government and non-government schools, universities, adult learning centres)</li> <li>• Early years (e.g. preschool, maternal and child health, childcare)</li> <li>• Health and community services (e.g. hospitals, aged care, doctors, dentists, family and youth services, specialist health services)</li> <li>• Community (e.g. civic centres, libraries, neighbourhood houses)</li> <li>• Arts and culture (e.g. galleries, museums, performance space)</li> <li>• Sport, recreation and leisure (e.g. swimming pools)</li> <li>• Justice (e.g. law courts)</li> <li>• Voluntary and faith (e.g. places of worship) and</li> <li>• Emergency services (e.g. police, fire and ambulance stations).</li> </ul>
<b>encumbered land</b>	Land that is constrained for development purposes, including easements for power/transmission lines, sewer, gas, waterways/drainage; retarding basins/wetlands; landfill; conservation, protected vegetation and heritage areas. This land may be used for a range of activities (e.g. walking trails, sports fields) and is not credited. However, regard is taken to the availability of encumbered land when determining the open space requirement.
<b>fire threat edge</b>	The interface between urban development and an area which presents a permanent potential for fire to impact on a community.
<b>frontage</b>	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.
<b>gross developable area</b>	Total precinct area excluding encumbered land, arterial roads and other roads with four or more lanes.
<b>high density housing</b>	Housing with an average density of 40 dwellings or more per net developable hectare.

<b>housing density (gross)</b>	The number of houses divided by gross developable area.
<b>housing density (net)</b>	The number of houses divided by net developable area.
<b>linear open space network</b>	Corridors of open space, mainly along waterways that link together forming a network.
<b>land use budget table</b>	A table setting out the total precinct area, gross developable area, net developable area and constituent land uses proposed within the precinct.
<b>main street</b>	A function of an activity centre, where vitality and activity are created by orienting uses towards the street and ensuring that the primary address of all retail stores is the street. This would normally be a connector street rather than an arterial road.
<b>medium density housing</b>	Housing with an average density of 35–39 dwellings per net developable hectare.
<b>local town centre</b>	Activity centres that are an important community focal point and have a mix of uses to meet local needs. Accessible to a viable user population by walking, cycling and by local bus services and public transport links to one or more principal or major activity centres. This should be sufficient size to accommodate a supermarket.
<b>net developable area</b>	Land within a precinct available for development. This excludes encumbered land, arterial roads, railway corridors, government schools and community facilities and public open space. It includes lots, local streets, and connector streets. Net Developable Area may be expressed in terms of hectare units (i.e. NDHa).
<b>passive open space</b>	Open space that is set aside for parks, gardens, linear corridors, conservation bushlands, nature reserves, public squares and community gardens that are made available for passive recreation, play and unstructured physical activity including walking, cycling, hiking, revitalisation, contemplation and enjoying nature.
<b>principal public transport network</b>	Incorporated document <i>Principal Public Transport Network 2017</i> (Victorian Government, 2017), and <i>Principal Public Transport Network Area Maps</i> (Victorian Government, August 2018).
<b>principal freight network</b>	A strategic network of current and recognised future freight places and connecting movement corridors (road and rail) which are nationally, state and/or regionally significant.
<b>public open space</b>	Land that is set aside in the precinct structure plan for public recreation that incorporates active and passive open space.
<b>social housing</b>	A type of rental housing that is provided and/or managed by the government or by a not-for-profit organisation. Social housing is an overarching term that covers both public housing and community housing.
<b>sensitive response</b>	A design or engineered response that does not significantly contrast with the existing landform.
<b>unencumbered</b>	Land that is not constrained by uses required to enable development (including easements for power/transmission lines, sewer, gas, waterways/drainage: retarding basins/wetlands; landfill; conservation protection vegetation and heritage areas).
<b>water sensitive urban design</b>	A sustainable water management approach that aims to provide water-quality, flood management and green landscapes. Key principles include minimising water-resistant areas; recharging natural groundwater aquifers (where appropriate) by increasing the amount of rain absorbed into the ground; encouraging onsite reuse of rain and incorporation of rain gardens'

encouraging onsite treatment to improve water quality and remove pollution and using temporary rainfall storage (e.g., basins/wetlands) to reduce the load on drains.

**biodiversity  
sensitive urban  
design**

A protocol with the aim of transforming urban areas to have increased habitat and food resources for native species and ecological communities.



**Officer South Employment  
Precinct Structure Plan**

**September 2023**