

**PSP2.0**

# Greenvale North (Part 2)

**WURUNDJERI WOI-WURRUNG  
COUNTRY**

## Precinct Structure Plan

**JUNE 2025**



## ACKNOWLEDGMENT OF THE TRADITIONAL OWNERS

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The Victorian Planning Authority acknowledges Victorian Aboriginal people as the First Peoples and Traditional Owners and Custodians of the land and water on which we rely.

We proudly acknowledge Victoria's Aboriginal communities and their rich culture and pay our respects to their Elders past and present. The VPA also recognises the intrinsic connection of Traditional Owners to Country and acknowledges their contribution in the management of land, water and resources.

The Greenvale North (Part 2) Precinct Structure Plan is located on the traditional lands of the Wurundjeri Woi-wurrung People of the Kulin Nation. The Wurundjeri Woi-wurrung People are represented by the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation.

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.

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## 1.0 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 Hume Planning Scheme), or any other provision of the Hume Planning Scheme that references this PSP.

The PSP is structured as follows:

#### 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.

#### 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.

#### Part 4: Appendices

Part 4 contains the technical and administrative information required to support the implementation of the strategic land use context and place-making elements of the PSP. It includes tables, plans, diagrams and definitions. These include:

- Precinct infrastructure plan and table
- Summary land use budget and property-specific land use budget
- Cross-sections
- Canopy street tree calculation methodology
- Glossary of terms.

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.

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



Development must comply with all other relevant Acts and approvals.

## 1.2 Purpose of the PSP

A PSP is a long-term plan to guide future urban development. It enables the transition from non-urban to urban uses and defines the place-based outcomes to be achieved. Use and development controls are applied using the Urban Growth Zone. The Schedule to the zone outlines what permits may be granted under the controls.

The PSP also describes the services needed to support the new community and how the services will be delivered. It provides developers, investors, government authorities, local council and the local community with an outline for future development.

This PSP will also ensure the protection of Melbourne's drinking water within the Greenvale Reservoir from the impacts of surrounding development by adopting key requirements from Melbourne Water.

Using Objectives, Requirements and Guidelines to be addressed in permit applications, this PSP:

- provides the planning provisions to protect the Greenvale Reservoir.
- provides the planning provisions for permit applications.
- outlines investment and staging to deliver critical infrastructure needed to support the projected population in the PSP.
- where appropriate, identifies the shared funding roles for a diverse range of open spaces, transport and community infrastructure.

## 1.3 Objectives, requirements and guidelines

A planning application and subsequent planning permit must implement the outcomes of the PSP. The outcomes are expressed as the Vision, 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 the responsible authority may apply discretion 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 must be generally in accordance with the PSP. A guideline may include or reference a plan, table or figure in the PSP.

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

## 1.4 Strategic policy context

The Greenvale North (Part 2) PSP is listed in [Victoria's Housing Statement – The decade ahead 2024-2034](#) as a priority project. Progression of this PSP supports the Victorian Government's aim to facilitate a sustainable supply of greenfield land for new housing in Melbourne's growing suburbs.

The PSP area was identified as an 'investigation area' in the [Greenvale North R1 Precinct Structure Plan](#) (Growth Areas Authority, 2011) pending design of critical drainage infrastructure needed to protect the Greenvale Reservoir. The PSP area was identified in the [North Growth Corridor Plan](#) (2012) as 'existing open space', owing to its status as an 'investigation area'.

The PSP area was included in the study areas of multiple technical reports that informed the [Craigieburn West Precinct Structure Plan](#) (Victorian Planning Authority, gazetted into the Hume Planning Scheme in 2021).

At the time of writing, estates within the Greenvale North R1 PSP area have either been fully developed or are nearing full development. Planning for the protection of the Greenvale Reservoir has been advanced by Melbourne Water.

The PSP has been designed as a small, logical extension of residential development between the Greenvale North R1 and Craigieburn West PSP areas. The PSP will contribute towards and rely on infrastructure provided in nearby PSP developments. In relation to drainage, the reservoir protection works required within the Greenvale North (Part 2) PSP will connect with surrounding bund sections A, B1, B2, D (located within the Greenvale North R1 PSP). This infrastructure, together with a retarding basin in the Craigieburn West PSP (reference YCWL-01), will complete the Reservoir Protection Mechanism, to prevent urban runoff from entering the Greenvale Reservoir. The PSP is the final structure plan within the Yuroke Creek Development Services Scheme (DSS) catchment area. This DSS supports delivery of drainage infrastructure provision critical to the protection of the Greenvale Reservoir. It also enables connections to established and planned PSP areas around the Greenvale Reservoir.

The [Precinct Structure Planning Guidelines: New Communities in Victoria](#) were completed in 2021. These guidelines implement the 20-minute neighbourhood principles through seven hallmarks that new PSPs in Victoria must address. Some of the seven hallmarks are either not applicable or require adaptation for this PSP due to its size and location. For example, the anticipated population for the precinct does not generate the need for dedicated activity centres, community facilities, schools or sports fields within the PSP. The PSP does not have a suitable context to accommodate these facilities which are also provided in neighbouring urban developments.

More information is provided in the PSP metrics scorecard in Section 2.2 of this document and discussed further in the [Greenvale North \(Part 2\) PSP Background Report](#).

## 1.5 Regional context

The Greenvale North (Part 2) PSP area is approximately 23km north of the Melbourne city centre in Melbourne's Northern growth corridor. The corridor is located in the broader Yarra Catchment and has experienced significant population growth over the past decade.

The PSP is within the Hume growth area which extends beyond the Western Ring Road and the established urban areas of Gladstone Park and Broadmeadows. The Hume growth area includes the suburbs of Greenvale, Roxburgh Park and Craigieburn in the City of Hume, and Donnybrook in the neighbouring City of Whittlesea. The Hume growth area is bordered by the Hume Highway to the east and Mickleham Road to the west. Craigieburn Station is located 4.2km northeast of the site and Roxburgh Park Station is located approximately 4.2km southeast of the site.

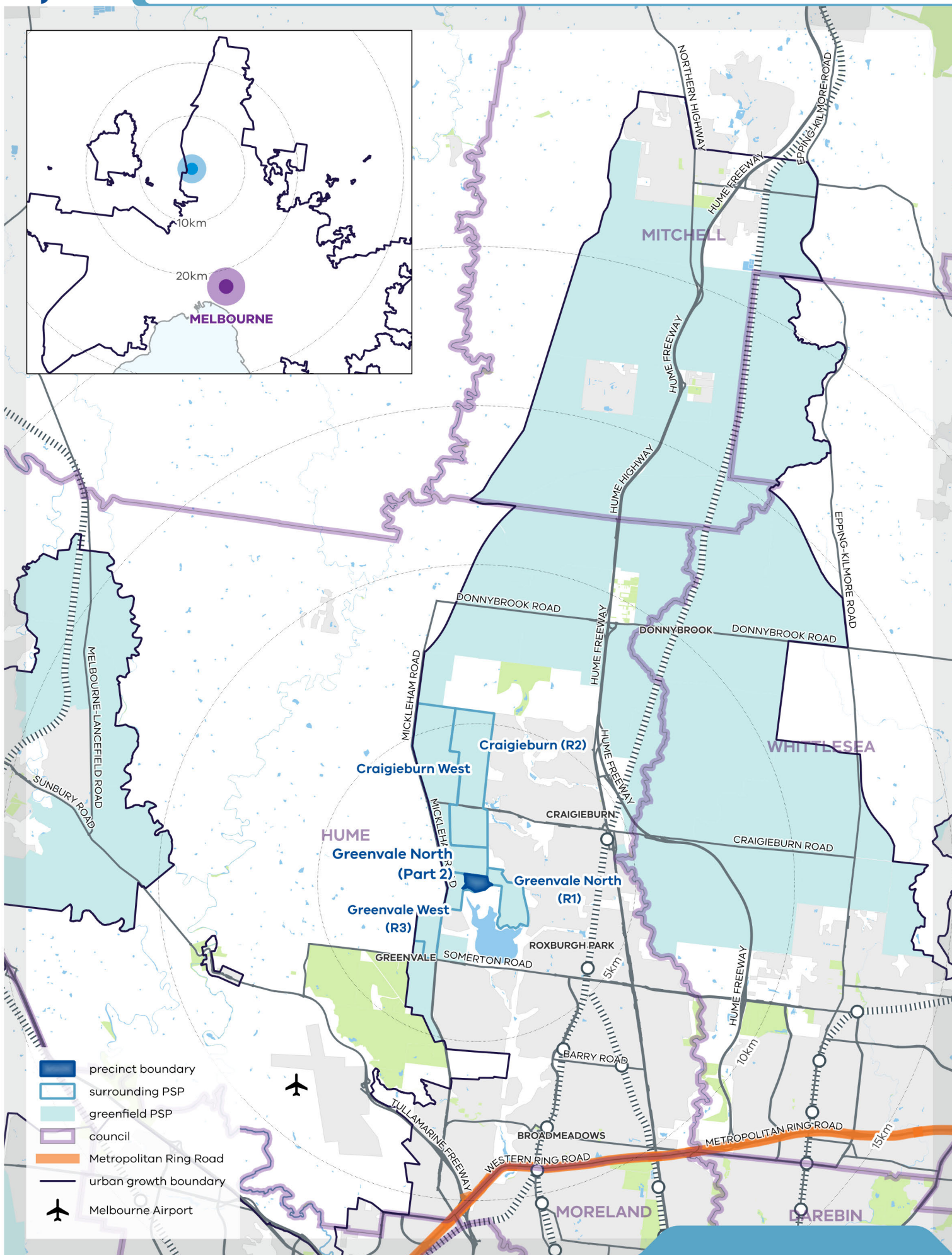
The PSP is located approximately 7km northeast of Melbourne Airport and is not within any Australian Noise Exposure Concept (ANEC) or Numbers Above (N-above) noise contour extents under all future scenarios shown in Melbourne Airport's Third Runway Major Development Plan Flight Path and Noise Tool.

Neighbouring PSPs in the Greenvale area including Greenvale North R1, Craigieburn West, Craigieburn R1 and Greenvale West have been completed. Development of the surrounding PSPs is either completed or currently underway.

Craigieburn Town Centre is located approximately 2km north of the site. The town centre is developing and will serve existing and future residents of the growth corridor. It is situated on the north-eastern corner of Craigieburn Road and the future Aitken Boulevard (E14) Bus Rapid Transit (BRT) Route, enabling convenient access from the surrounding region. The town centre will provide in excess of 50,000sqm of retail floorspace at full development enabling local employment opportunities.

The PSP is located within the Yuroke Creek DSS area, directly adjacently to the Greenvale Reservoir (Reservoir). The Reservoir is a critical drinking water supply asset in Melbourne's northwest. It serves as a key asset in meeting the summer demand and is part of Melbourne's protected catchment system, receiving water from upper catchments via Silvan Reservoir. The Yuroke Creek flows through the PSP which is diverted around Greenvale Reservoir to protect drinking water quality. The existing interface between established development and the Greenvale Reservoir site links into Strategic Cycling Corridor (SCC) routes that provide a cycling connection to the Melbourne city centre via the Broadmeadows Valley Trail.





## 1.6 Precinct features

The PSP is a place within the traditional lands of the Wurundjeri Woi-wurrung People and is currently used for broadacre farming purposes. The precinct is characterised by its gradual fall from north-east to south-west towards the natural Yuroke Creek watercourse that flows through the precinct.

The Yuroke Creek watercourse, and land within 200m of it, are areas of Aboriginal cultural heritage sensitivity (*Aboriginal Heritage Regulations 2018*). In planning for the precinct, opportunities for conserving and enhancing the environmental and Aboriginal cultural heritage values of the creek have been prioritised.

There is also an identified Aboriginal Heritage Place (Victorian Aboriginal Heritage Register - VAHR 7822-1105) situated in the PSP, which has been considered and defined in consultation with the Wurundjeri Woi-Wurrung Cultural Heritage Aboriginal Corporation.

Any high-impact activity (as defined under the *Aboriginal Heritage Regulations 2018*) within 200m of Yuroke Creek, or within 50 metres of the identified Aboriginal Heritage Place will require a mandatory Cultural Heritage Management Plan (CHMP) to be completed.

There are no post-contact sites of significance situated in the PSP.

A pipe track easement bisects the PSP area. The easement results in development constraints but also offers the opportunity for a shared user path to connect the PSP with the developing Mt Aitken Reserve and area to the north-east.

Water reserves and trees are dispersed throughout the site, including four large River red gums (*Eucalyptus camaldulensis*) in the south. The PSP is bounded to the south by a vegetated buffer within the secure Greenvale Reservoir site. Open spaces have been planned around identified native vegetation for retention. The PSP has been prepared to ensure integration of the precinct into the cultural, natural and urban context.

Kangaroos are present on land within the precinct boundary. Landowners are responsible for managing risks caused by wildlife on their land and for ensuring land use change does not contravene the *Wildlife Act 1975* and *Prevention of Cruelty to Animals Act 1956*. Authorisation from Department of Energy, Environment and Climate Action (DEECA) is required under the *Wildlife Act 1975* for any proposals to undertake lethal control, wildlife disturbance or trapping of wildlife.

## 1.7 Background information

The *Greenvale North (Part 2) PSP 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 spatial planning for the precinct.

The Background Report summarises considerations and research that has informed the preparation of the PSP. This includes the key findings from the PSP technical studies for matters such as drainage, transport, utilities, economics, and community facilities. The technical studies are available at [vpa.vic.gov.au/project/greenvale-north-2/](https://vpa.vic.gov.au/project/greenvale-north-2/).

## 1.8 Infrastructure Contributions Plan (ICP)

The legal framework for the infrastructure contributions plan (ICP) system is 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 Greenvale North (Part 2) Precinct will be bound by the Greenvale North (Part 2) Standard Infrastructure Contributions Plan (the ICP). The ICP sets out requirements for infrastructure funding across the Greenvale North (Part 2) Precinct and will be incorporated in the Hume Planning Scheme. Infrastructure items included in the ICP are outlined in the Precinct Infrastructure Plan (PIP) provided as [Appendix 1](#) to this document.

## 1.9 Native Vegetation Precinct Plan (NVPP)

The Greenvale North R1 Native Vegetation Precinct Plan (NVPP) has been updated concurrently with the PSP. The NVPP identifies:

- native vegetation to be protected.
- native vegetation that can be removed, destroyed or lopped without a planning permit.
- the offsets that must be sourced by landowners, prior to the removal of native vegetation mapped for removal as per the NVPP.

The statutory basis for the NVPP is Clause 52.16 of the Hume Planning Scheme.

The updated NVPP will be incorporated into the Hume Planning Scheme under Clause 72.04 (Incorporated documents) and is a separate document to the Greenvale North (Part 2) PSP. The updated NVPP sits within the *Greenvale North R1 Precinct Structure Plan* document.



## 2.0 PSP OUTCOMES

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### 2.1 PSP vision

The Greenvale North (Part 2) precinct will be a residential neighbourhood defined by a strong emphasis on the natural features of the site. The precinct is defined by its highly valued vista of the Greenvale Reservoir, sloped topography and native vegetation. The precinct will respond to the landscape features within and around it, providing sensitive interfaces between the reservoir and urban development. The precinct will also protect established native vegetation and provide an urban form that responds to the natural undulation of the land.

The PSP will guide growth in the precinct over the next 10 years and enable delivery of the Reservoir Protection Mechanism to Melbourne Water's satisfaction to protect the Greenvale Reservoir water supply catchment. The bund within the PSP will be similar to those established in the Greenvale North R1 Precinct Structure Plan and Craigieburn West Precinct Structure Plan.

The PSP will integrate with the adjoining established residential areas of the Greenvale North R1 and Craigieburn West PSP areas. It will provide high-quality residential neighbourhoods, a pedestrian-friendly transport network and generous community-centred open spaces that match the character of the established neighbouring communities.

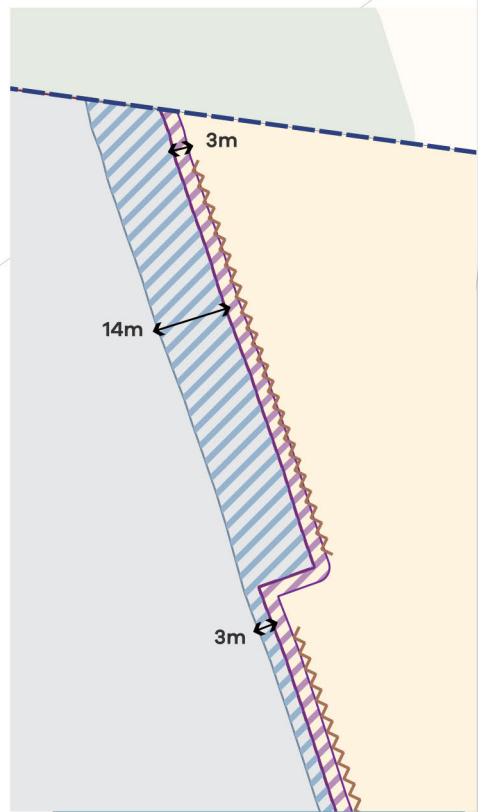
The PSP will contain residential dwellings with a variety of densities and typologies to service the diverse housing needs in Melbourne's growing north-west. The new community will have convenient access to essential goods and services. The PSP will utilise and support key employment and activity centres provided in the Greenvale North R1 and Craigieburn West PSP area.

The streets in the PSP have been planned to enable public transport access and provide safe and efficient active transport movements for the community that connect with the Greenvale North R1 and Craigieburn West PSP communities. The PSP will have a tree-lined, sensitive interface with the secure Greenvale Reservoir site to the satisfaction of Melbourne Water. The PSP will provide an efficient shared use path along the pipe track easement and Greenvale Reservoir interface to connect with the surrounding urban developments. The precinct will support an active and healthy community through prioritising active modes of transport.

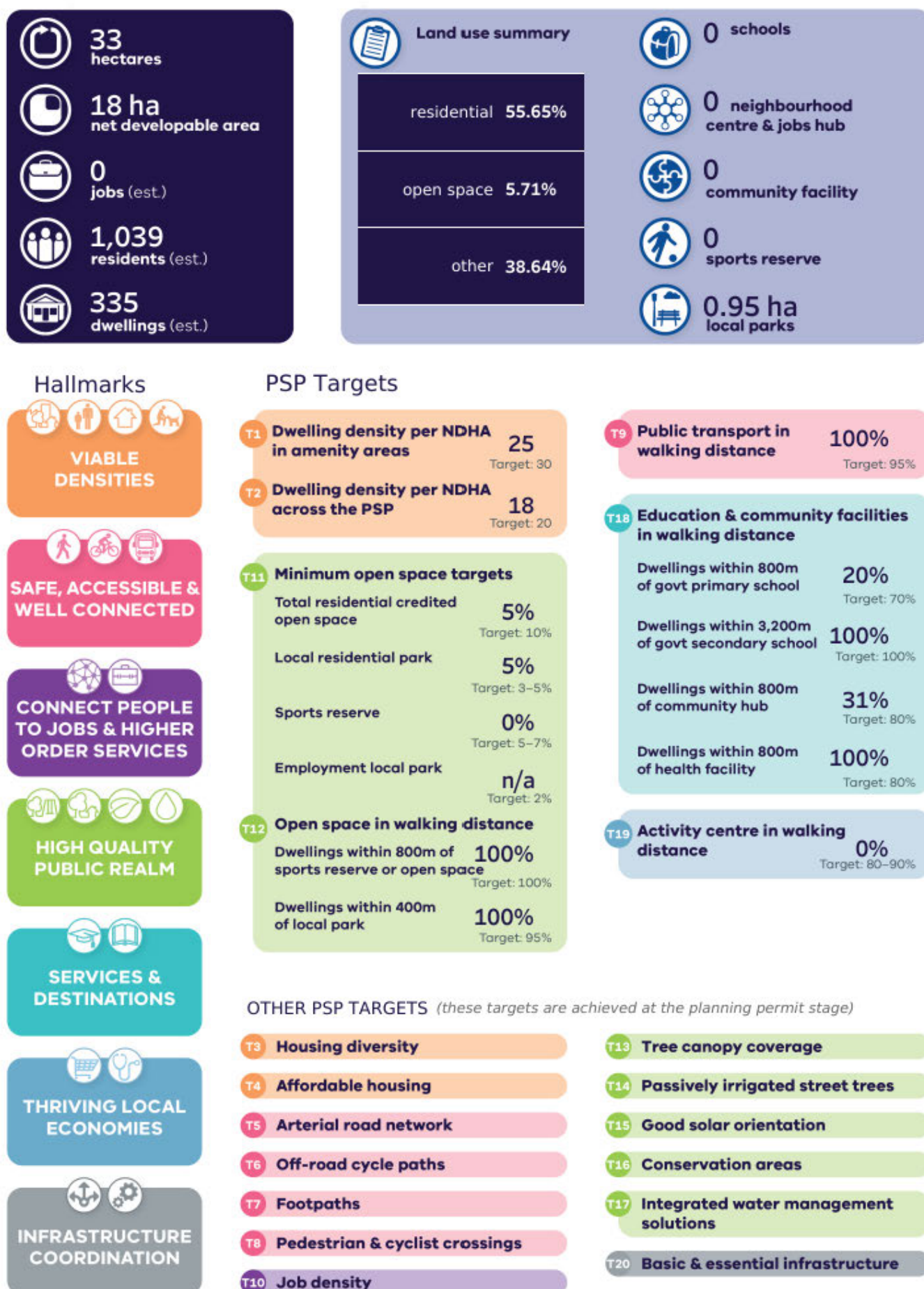
## 2.2 PSP purpose

The Greenvale North (Part 2) Precinct Structure Plan has been prepared by the Victorian Planning Authority. The purpose of this PSP is to:

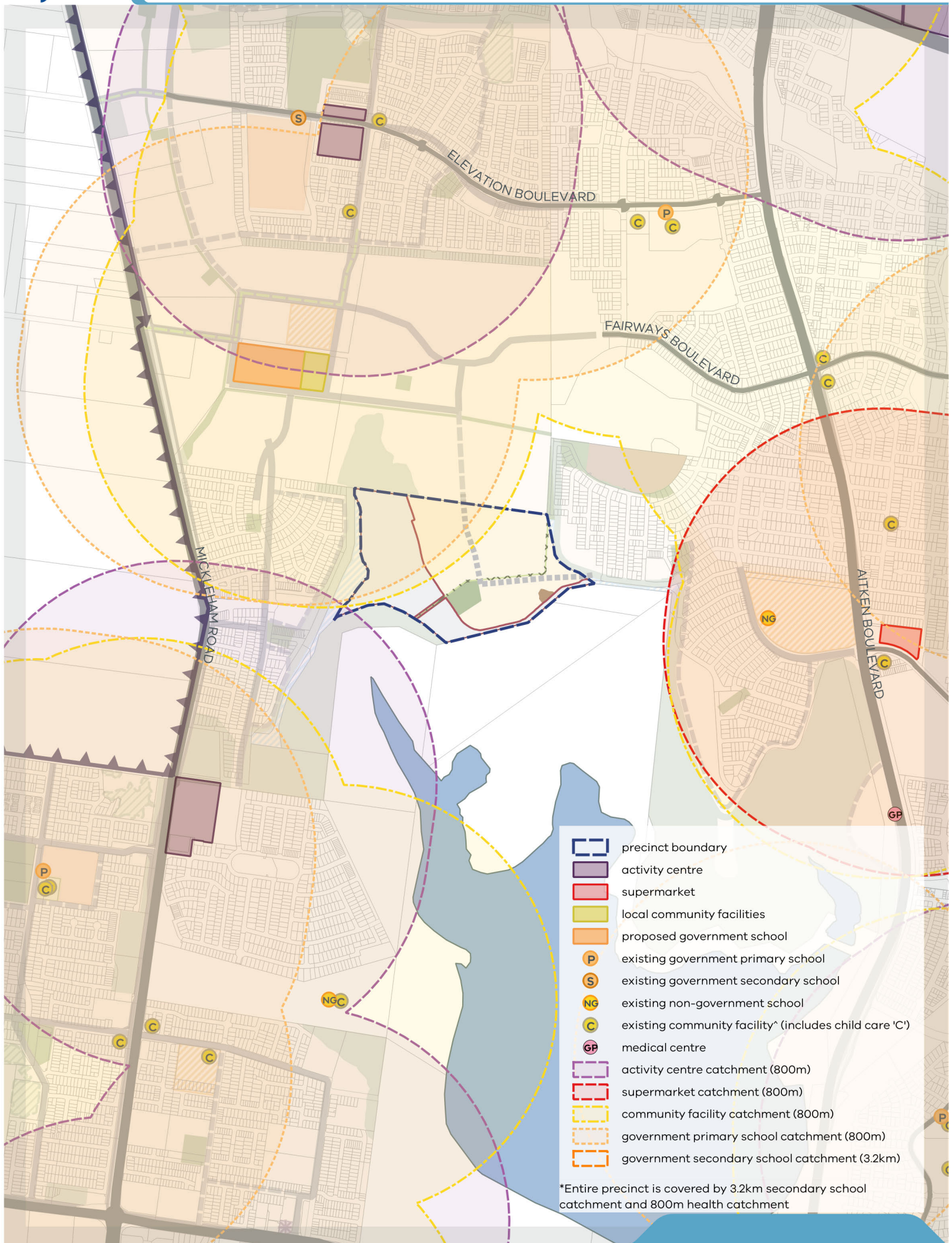
- 1:** Protect Melbourne's drinking water supply catchment by outlining land, design, interface and staging requirements to protect the Greenvale Reservoir from stormwater runoff from urban development.
- 2:** Enable timely delivery of integrated transport infrastructure including public and active transport, and pedestrian friendly design to connect the neighbourhood to employment facilities, community facilities and activity centres.
- 3:** Create a residential neighbourhood with diverse housing types supported by a generous community-centred local park and sensitive interfaces with the Greenvale Reservoir to create a healthy and connected community.
- 4:** Ensure the protection of Aboriginal cultural heritage sites and areas of sensitivity.
- 5:** Integrate significant vegetation and biodiversity into the neighbourhood design to protect and enhance the natural features of the land.





**Figure 1** PSP performance summary








## 3.0 IMPLEMENTATION

### 3.1 Viable densities

#### 3.1.1 Objectives - viable densities

OBJECTIVES		IMPLEMENTATION TOOLS	
<b>O1</b>	To facilitate affordable housing.		<b>G2</b> <b>G3</b>
<b>O2</b>	To facilitate subdivision and development that contributes to delivery of higher density and diversity of housing options.	<b>R1</b> <b>R2</b> <b>R3</b>	<b>G1</b> <b>G4</b> <b>G6</b> <b>G7</b>
<b>O3</b>	To facilitate housing diversity and density within the precinct that supports access to local services, jobs and, sustainable and public transport options.	<b>R1</b>	<b>G5</b> <b>G6</b>

#### 3.1.2 Requirements and guidelines - viable densities

##### REQUIREMENTS

- R1** Subdivision for residential development must be generally in accordance with [Plan 4 Housing](#) and [Table 1 Housing density and diversity](#) to the satisfaction of the responsible authority. Subdivisions that can demonstrate how target densities can be achieved over time may be considered.
- R2** Residential subdivisions including road alignment, lot diversity and housing typologies must demonstrate a contextually appropriate response to development on sloped land and must:
- minimise landscape visual scarring and avoid the need for large amounts of cut and fill.
  - minimise flooding risks for dwellings lower than the street, including through kerbing heights and crossover/ driveway profiles, or other design outcomes.
- All to the satisfaction of the responsible authority.
- R3** Residential subdivisions including road alignment, lot diversity and housing typologies must positively respond to the natural features of the area, including (but not limited to):
- topographical features and slopes
  - landscape values and sensitive interface areas
  - Aboriginal cultural heritage areas.

##### GUIDELINES

- G1** Residential subdivisions within amenity areas nominated for higher density development in [Plan 4 Housing](#) should demonstrate how a minimum of three housing typologies can be achieved. Where a residential subdivision is of a scale unsuitable to support three housing typologies the subdivision may rely on other typologies within the area if the proposed development will contribute to housing diversity in the vicinity.
- G2** Residential subdivision and development that contributes to meeting the 8% affordable housing target is encouraged.
- G3** Where social and affordable housing is provided consideration should be given to meeting the needs of different income ranges generally in accordance with [Table 2 Affordable housing demand by income ranges by governor in council order](#) and household sizes generally in accordance with [Table 3 Social and affordable housing demand by number of bedroom](#).
- G4** Significant landscape features, such as high points, vegetation, open space and waterways, should be used as focal points for view lines along streets.



## GUIDELINES

- G5** Specialised housing forms, such as retirement living, or aged care should:
- Respond to and integrate with adjoining development, avoiding inactive interfaces and blank facades to the public street network.
  - Be accessible by public transport.
- G6** Prior to the certification of a plan of subdivision for the first stage of subdivision, the permit holder should demonstrate:
- A commitment to Environmentally Sustainable Design outcomes through design guidelines in line with NatHERS rating 7.5 star for lots greater than 300m<sup>2</sup>.
- G7** Retaining walls over 1 metre should be avoided along the street edge, and the height and extent of retaining walls generally minimised.

**Table 1** Housing density and diversity

AMENITY AREA	
<b>Housing catchment area</b>	Applies to land which is located within 50m walkable catchment of the local park.
<b>Target density</b>	Average of <b>25</b> dwellings or more per NDHa – the topography in this area may prevent the attainment of the target. Where a lower density is delivered, the precinct must still provide the total number of dwellings identified in <a href="#">Table 4 Dwelling yields</a> .
<b>Target typologies</b>	<p><b>Character statement</b></p> <p>Development will have a modest scaled urban neighbourhood character, characterised by buildings up to three storeys in height. Mixed typologies will be applied throughout the amenity area to help create a sense of place, provide visual transition in built form, create view corridors and provide appropriate interfaces with other catchments areas.</p> <p><b>Typologies</b></p> <p>To support delivery of diverse housing outcomes in the amenity area, subdivision layouts should enable opportunities to deliver at least three (3) different housing typologies. The mix of dwelling typologies should include, but is not limited to:</p> <ul style="list-style-type: none"> <li>• Integrated/apartment developments</li> <li>• Mixed-use developments</li> <li>• Attached multi-unit developments/townhouse developments</li> <li>• Semi-detached/duplex style developments (e.g. Small Lot Housing Code products)</li> <li>• Medium-rise social and affordable housing</li> <li>• Key worker accommodation.</li> </ul> <p><b>Decision guidance</b></p> <ul style="list-style-type: none"> <li>• Low to mid-rise developments should be prioritised around the periphery of amenity areas.</li> <li>• Small Lot Housing Code products should be located abutting other amenity areas however the provision of higher densities (and associated housing typologies) should be safeguarded for future development.</li> <li>• Social and affordable housing and key worker accommodation should be located close to the bus capable road network.</li> <li>• Rear-loaded lots with active frontages are encouraged in the amenity area.</li> </ul>

### BALANCE AREA

**Housing catchment area** Applies to land which is located outside of the nominated amenity area.

**Target density** Average of **17.5** dwellings or more per NDHa

**Target typologies** **Character statement**

Development will have a neighbourhood character characterised by buildings up to two-three storeys in height. Housing will generally comprise detached and semi-detached typologies, however more intensive forms of development such as Small Lot Housing Code and attached townhouses may be provided in certain locations.

#### Typologies

To support delivery of diverse housing outcomes in the balance area, subdivision layouts should enable opportunities to deliver at least two (2) different housing typologies. The mix of dwelling typologies should include, but is not limited to:

- Attached townhouse development
- Semi-detached/duplex style development
- Detached traditional style housing
- Multi-unit low-rise social and affordable housing
- Retirement living
- Small Lot Housing Code products (in limited cases).

#### Decision guidance

Higher density products (e.g. attached town houses and Small Lot Housing Code products etc.) should be located in areas adjacent to the amenity area, or where it can be demonstrated that a positive contribution will be made to the planned neighbourhood character and emerging place identity.

**Table 2** Affordable housing demand by income ranges by governor in council order

INCOME BAND	% OF AFFORDABLE HOUSING DEMAND
Very Low	78
Low	22
<b>TOTAL</b>	<b>100</b>

**Table 3** Social and affordable housing demand by number of bedroom

NUMBER OF BEDROOMS	NO. OF HOUSEHOLD NOMINATIONS FOR AFFORDABLE HOUSING	% OF AFFORDABLE HOUSING DEMAND
1	3,346	50
2	1,378	21
3	1,233	18
4+	722	11
<b>TOTAL</b>	<b>6,679</b>	<b>100</b>

**Table 4** Dwelling yields

CATCHMENT	NDA (HA)	DWELLINGS/NDHA	NO. OF DWELLINGS (APPROXIMATE)
Amenity Area	1.7	25	44
Balance Area	16.7	17.5	291
<b>TOTAL</b>	<b>18.4</b>	<b>18.2</b>	<b>335</b>
Indicative population of 3.1 persons per dwelling			<b>1,039 (approx.)</b>





## 3.2 Safe, accessible and well-connected

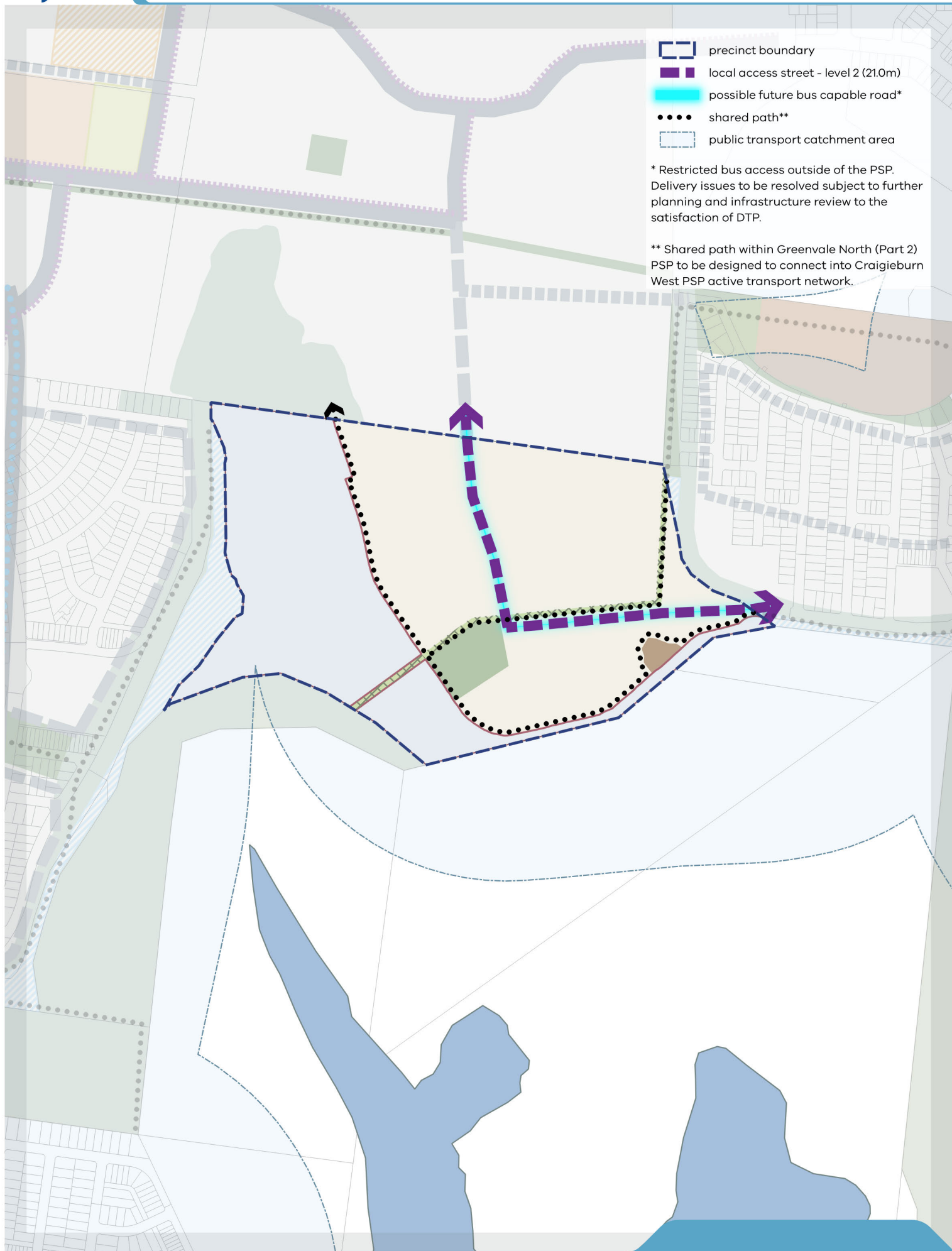
### 3.2.1 Objectives - safe, accessible and well-connected

OBJECTIVES		IMPLEMENTATION TOOLS	
<b>O4</b>	To deliver a safe, accessible, and well-connected walkable neighbourhood that establishes strong connections to key destinations, such as the activity centres, community facilities, schools and open spaces, in Greenvale, Craigieburn and Roxburgh Park.	<b>R4</b>	<b>G8</b>
		<b>R5</b>	<b>G9</b>
		<b>R6</b>	
		<b>R7</b>	
<b>O5</b>	To provide a road network that enables the provision of public transport.	<b>R4</b>	
		<b>R5</b>	

### 3.2.2 Requirements and guidelines - safe, accessible and well-connected

REQUIREMENTS	
<b>R4</b>	Local streets must be designed and developed generally in accordance with the relevant cross sections in <a href="#">Appendix 4</a> , and in <a href="#">Plan 5 Movement Network</a> , unless otherwise agreed by the relevant authority.
<b>R5</b>	Any road/interim road nominated in <a href="#">Plan 5 Movement Network</a> as a potential public transport route must be constructed (including partial construction where relevant) in accordance with the corresponding cross section in the PSP 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>	Pedestrian and cyclist crossings must be provided generally in accordance with those indicated in <a href="#">Plan 5 Movement Network</a> . These crossings must be provided every 400–800m, where appropriate and address any accessibility barriers.
<b>R7</b>	Design of all subdivisions and streets must: <ul style="list-style-type: none"> <li>• Provide high amenity including careful and deliberate design (scale, design speeds, configuration, street furniture and landscaping treatments).</li> <li>• Provide footpaths on both sides of the street.</li> <li>• Provide a permeable, direct and safe street network prioritising walking and cycling, particularly to schools and activity centres.</li> <li>• Provide safe and accessible crossing points throughout the PSP, including transition between on and off-road bicycle networks.</li> <li>• Minimise vehicle crossovers along the reserve within the PSP area.</li> <li>• Provide safe and efficient pedestrian and cyclist crossings at key desire lines and on regular intervals appropriate to the function of the road and public transport provision.</li> <li>• Provide continuous, direct and convenient walking and cycling access to key destinations and public transport services.</li> <li>• Minimise crossings of the pipe track.</li> </ul>
GUIDELINES	
<b>G8</b>	A variety of cross sections should be used in subdivision layouts for local streets, to create differentiation, sense of place and neighbourhood character. Alternative cross sections should ensure that: <ul style="list-style-type: none"> <li>• Sufficient provision is made for bus capable routes where applicable.</li> <li>• Relevant minimum road reserve widths for the type of street are maintained.</li> <li>• Sufficient provision is made for street tree planting to achieve 30% canopy tree coverage in the public realm.</li> <li>• Minimum required carriageway dimensions are maintained to ensure safe and efficient operation of buses where required and emergency vehicles on all streets.</li> <li>• The performance characteristics of standard cross sections as they relate to pedestrian and cycle use are maintained.</li> </ul> All to the satisfaction of the responsible authority.
<b>G9</b>	Alternative footpath or shared user path approaches may be used where they enhance walkability and permeability, and respond to the purpose of the place and character of the urban form to the satisfaction of the responsible authority.







### 3.3 High quality public realm

#### 3.3.1 Objectives - high quality public realm

OBJECTIVES		IMPLEMENTATION TOOLS	
<b>O6</b>	To contribute to the protection of areas of Aboriginal cultural heritage and living cultural values through the urban form and open space network, and encourage suitable interpretations of these values throughout subdivision design.	<b>R8</b>	<b>G10</b> <b>G13</b>
<b>O7</b>	To create a sustainable urban landscape that: <ul style="list-style-type: none"> <li>Is focused on achieving carbon neutrality by reducing greenhouse gas emissions.</li> <li>Enhances existing biodiversity through habitat protection.</li> <li>Celebrates Aboriginal cultural heritage and landscape values within the precinct.</li> <li>Mitigates urban heat island effect.</li> </ul>	<b>R8</b> <b>R9</b> <b>R10</b> <b>R11</b> <b>R12</b>	<b>G10</b> <b>G11</b> <b>G12</b> <b>G13</b> <b>G15</b>
<b>O8</b>	To create safe, functional and enjoyable streetscapes and local parks.	<b>R16</b> <b>R17</b> <b>R18</b>	<b>G10</b> <b>G11</b> <b>G12</b> <b>G15</b>
<b>O9</b>	To create a layout of lots, streets and open spaces that ensure the retention and establishment of trees to form a continuous tree canopy.	<b>R9</b> <b>R10</b> <b>R11</b> <b>R16</b>	<b>G11</b> <b>G12</b> <b>G15</b>
<b>O10</b>	To develop sustainable water, drainage and wastewater systems that: <ul style="list-style-type: none"> <li>Protects, conserves, and improves biodiversity, waterways and other natural resources.</li> <li>Maintains or enhances the safety, health and wellbeing of people and property.</li> </ul>	<b>R12</b> <b>R13</b> <b>R14</b> <b>R15</b> <b>R16</b>	<b>G13</b> <b>G14</b> <b>G15</b> <b>G16</b>
<b>O11</b>	To create a safe, resilient, water sensitive and environmentally sustainable urban environment that responds to climate change and other hazards.	<b>R9</b> <b>R10</b> <b>R11</b> <b>R12</b> <b>R13</b> <b>R14</b> <b>R15</b>	<b>G11</b> <b>G12</b> <b>G13</b> <b>G14</b> <b>G15</b> <b>G16</b>
<b>O12</b>	To provide a sensitive interface between the Greenvale Reservoir site and urban development.	<b>R16</b>	

#### 3.3.2 Requirements and guidelines - high quality public realm

REQUIREMENTS	
<b>R8</b>	Applications for development and subdivision must consider the protection, retention, enhancement and integration of places of Aboriginal cultural values as per the objectives of a Cultural Heritage Management Plan.
<b>R9</b>	Canopy tree coverage within the public realm must achieve a minimum of 30% coverage (excluding uncredited/encumbered areas, areas within the secure Greenvale Reservoir site or those dedicated to biodiversity or native vegetation conservation).
<b>R10</b>	Street trees must be provided on both sides of all roads/streets (excluding laneways) in accordance with the cross section, and at regular intervals, appropriate to tree size at maturity.
<b>R11</b>	A landscape plan must specify tree species which are suitable to the local climate and soil conditions, to the satisfaction of the responsible authority.
<b>R12</b>	A landscape plan must implement integrated water management and water sensitive design outcomes to the satisfaction of the responsible authority.

## REQUIREMENTS

- R13** Applications for development and subdivision must, through the preparation of an Integrated Water Management Plan:
- Contribute to outcomes applicable to the development identified in the [Yarra Strategic Directions Statement](#) (September 2018) and [Yarra Catchment Scale IWM Plan](#) (September 2022).
  - Contribute to outcomes applicable to the development in the [Craigieburn West Integrated Water Management Issues and Opportunities Report](#) (Alluvium 2019).
  - Protect downstream waterways as per applicable stormwater volume reduction and infiltration targets in Environment Protection Authority's Publication 1739.1: [Urban stormwater management guidance](#) and Melbourne Water's [Healthy Waterways Strategy](#) (2018).
  - Contribute to potable water reduction targets applicable to the development in the [Greater Melbourne Urban Water and System Strategy](#).
  - Design waterways and integrated water management to the satisfaction of Melbourne Water.
  - Overland flow paths and piping within road reserves will be connected and integrated across property/parcel boundaries.
  - Demonstrate that Melbourne Water and the responsible authority freeboard requirements for overland flow paths will be adequately contained within the road reserves.
  - Supply and use of recycled water for residential and public realm purposes.
- To the satisfaction of Yarra Valley Water, Melbourne Water and the responsible authority.
- R14** Stormwater runoff from the development must meet the performance objectives of, and/or demonstrate compliance with the following documents prior to discharge to receiving waterways and as outlined in [Plan 6 Public Realm and Water](#) in unless otherwise approved by Melbourne Water and the responsible authority:
- Current approved version of Melbourne Water's Greenvale Reservoir Catchment: Drinking Water Quality Risk Management Plan.
  - Commonwealth Scientific and Industrial Research Organisation's Best Practice Environmental Management Guidelines for Urban Stormwater.
  - Yuroke Creek Development Services Scheme.
- R15** The final layout and design of constructed waterways, stormwater infrastructure and associated paths, boardwalks, bridges, and plantings must be to the satisfaction of Melbourne Water and the responsible authority, including appropriate considerations to mitigate flood flows into receiving waterways, and the risk of erosion from sodic soils and dispersive soils.
- R16** The Overland Flow Path must be designed and delivered generally in accordance with the relevant cross sections in [Appendix 4](#), implementing the Overland Flow Path Performance Criteria to address the final bund design, to the satisfaction of Melbourne Water.
- R17** Land designated for local parks must be finished and maintained to a suitable standard, prior to the transfer of land, to the satisfaction of the responsible authority.
- R18** Any fencing of public open space must be visually permeable to facilitate public safety and passive surveillance.

## GUIDELINES

- G10** Aboriginal cultural heritage should be recognised through the design of public places, infrastructure and interpretive installations in ways that meet the aspirations of the Registered Aboriginal Party. Meaningful opportunities should be explored through Aboriginal cultural heritage interpretation trails along public path networks in areas of known historic cultural history or areas of Aboriginal cultural heritage sensitivity, in consultation with relevant stakeholders.
- G11** Calculation of the canopy tree coverage may be demonstrated using the method described at [Appendix 5](#). Alternative methods may be used where they demonstrate achievement of the minimum 30% canopy tree cover target to the satisfaction of the responsible authority.

## GUIDELINES

**G12** Canopy trees should have an average canopy foliage diameter of 6.4m at maturity in summer. Where this cannot be achieved because of local climate and soil conditions, a suitable species should be selected which closest achieves suitable canopy cover, to the satisfaction of the responsible authority. The requirement for a minimum 30% canopy tree coverage within the public realm must still be met.

**G13** Integrated water management systems should be designed to:

- Contribute to a sustainable built environment (stormwater and waste water).
- Maximise habitat values for local flora and fauna species.
- Enable future harvesting and/or treatment and re-use of stormwater.
- Protect and manage environmental values in relation to water quality and suitable hydrological regimes (both surface and groundwater).
- Recognise and respond to Aboriginal cultural heritage significance and identified Aboriginal cultural heritage values, with a focus on protection and harm avoidance/minimisation.

**G14** Integrated water management systems that exceed the performance objectives of the Commonwealth Scientific and Industrial Research Organisation's [Best Practice Environmental Management Guidelines for Urban Stormwater](#) and that meet the performance objectives of the EPA 1739.1 [Urban stormwater management guidance](#) are highly encouraged and can be considered, all to the satisfaction of Melbourne Water, Yarra Valley Water, and the responsible authority.

**G15** 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 by adopting Water Sensitive Urban Design initiatives such as overland flow paths, rain gardens and/or locally treated stormwater for irrigation.

**G16** Alternative irrigation may be considered where it can be demonstrated through a comprehensive alternative plan (such as an Integrated Water Management Plan) that passive irrigation is either unnecessary or inferior to the proposed alternative (for example, recycled water irrigation of street trees in mandated recycled water areas). Alternative irrigation must still comply with the current approved version of Melbourne Water's Greenvale Reservoir Catchment: Drinking Water Quality Risk Management Plan.

**Table 5** Open space delivery

PARK ID	AREA (HA)	TYPE	LOCATIONAL ATTRIBUTES	RESPONSIBILITY
<b>CREDITED OPEN SPACE</b>				
<b>LP-01</b>	0.95ha	Local Park	Park located in the south-west of the precinct. Encompasses three (3) native trees to be retained.	Hume City Council
<b>UNCREDITED OPEN SPACE</b>				
<b>N/A</b>	0.21ha	Aboriginal Cultural Heritage Area	Aboriginal Heritage Place.	Hume City Council
<b>N/A</b>	0.73ha	Utility Easement	Existing YVW pipe easement with planned shared user path.	Hume City Council and Yarra Valley Water



\* Refer to amended Greenvale R1 NVPP

IWM opportunities identified for Greenvale North (Part 2) PSP can contribute to the seven strategic outcomes in the Yarra IWM Forum Strategic Directions Statement.

The PSP cannot compel specific IWM solutions, rather setting the forward direction and investigation by key stakeholders including council, Melbourne Water, Yarra Valley Water and DEECA to determine implementation, operation, and maintenance requirements.

-  precinct boundary
-  Yuroke Creek DSS
-  waterbodies
-  indicative bund area
-  embankment drain
-  steepened functional design
-  proposed DSS drainage outfall
-  local park
-  utility facility
-  local park catchment (400m)
-  utilities easement
-  utility facility
-  Aboriginal Heritage Place
-  Aboriginal Heritage Place buffer
-  trees to be retained\*
-  habitat zone\*
-  Golden Sun Moth habitat



**Table 6** Applicable strategic outcomes of the Yarra IWM Forum Strategic Directions Statement



**Effective and affordable wastewater systems**

- Recycled water for residential uses (Yarra Valley Water)



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

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



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

- Support the health of existing vegetation (Council, Development)



**Community values reflected in place-based planning**

- Community engagement for IWM initiatives (Council, Yarra Valley Water, Melbourne Water)
- Understand the future community (Council, Development)



**Jobs, economic growth and innovation**

- Potential diversion of stormwater to adjacent agricultural land (Council, Melbourne Water, Yarra Valley Water, Development)



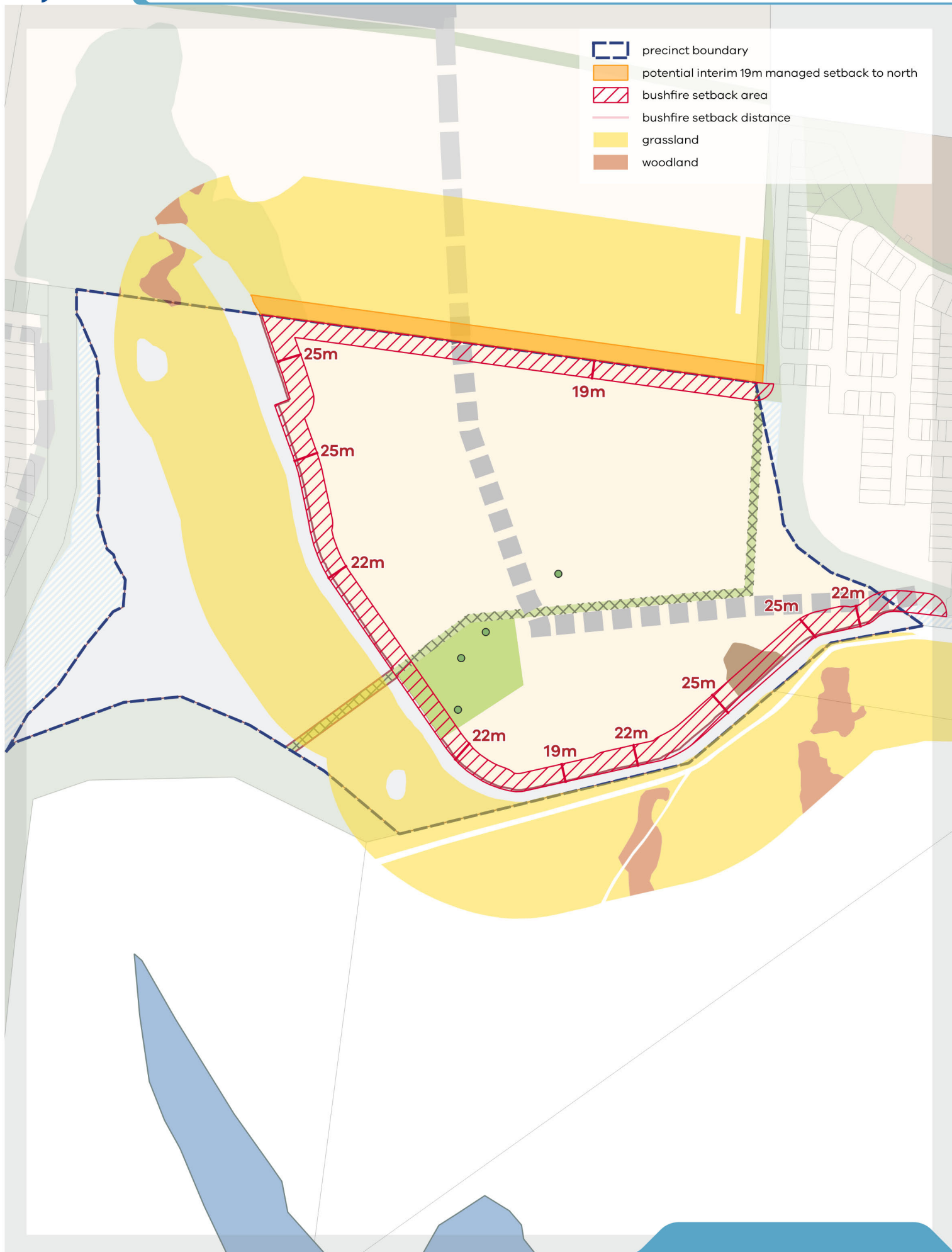
## 3.4 Bushfire management

### 3.4.1 Objectives - bushfire management

OBJECTIVES		IMPLEMENTATION TOOLS	
<b>O13</b>	To appropriately avoid or mitigate potential risk associated with bushfire.	<b>R19</b>	<b>G17</b>
		<b>R20</b>	<b>G18</b>
		<b>R21</b>	<b>G19</b>
		<b>R22</b>	<b>G20</b>
			<b>G21</b>

### 3.4.2 Requirements and guidelines - bushfire management

REQUIREMENTS	
<b>R19</b>	All dwellings must be built to a BAL-12.5 construction standard in accordance with the Settlement Planning strategies of <i>Clause 13.02-1S</i> .
<b>R20</b>	Vegetation within the bushfire hazard area shown on <a href="#">Plan 7 Bushfire</a> must be managed to achieve the separation distances identified in <a href="#">Plan 7 Bushfire</a> .
<b>R21</b>	Development adjoining bushfire hazard areas shown on <a href="#">Plan 7 Bushfire</a> must include a publicly accessible perimeter road and be setback in accordance with <a href="#">Plan 7 Bushfire</a> , unless the bushfire hazard has been reassessed, removed, managed or adjoining the local park to the satisfaction of the responsible authority.
<b>R22</b>	Where a setback from a bushfire hazard area is required in <a href="#">Plan 7 Bushfire</a> , unless otherwise agreed by the responsible authority and relevant fire authority, vegetation within the setback must be managed as follows: <ul style="list-style-type: none"> <li>a) Grass must be short cropped and maintained during the declared fire danger period.</li> <li>b) All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.</li> <li>c) Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.</li> <li>d) Plants greater than 10 centimetres in height must not be placed within 3m of a window or glass feature of the building.</li> <li>e) Shrubs must not be located under the canopy of trees.</li> <li>f) Individual and clumps of shrubs must not exceed 5 sq. metres in area and must be separated by at least 5 metres.</li> <li>g) Trees must not overhang or touch any elements of the building.</li> <li>h) The canopy of trees must be separated by at least 2 metres.</li> </ul>
GUIDELINES	
<b>G17</b>	All vegetation outside of a bushfire hazard area shown on <a href="#">Plan 7 Bushfire</a> should be managed to ensure a low risk of bushfire.
<b>G18</b>	A reliable water supply for firefighting is to be provided, via a conventional reticulated hydrant system, in accordance with the hydrant objective for residential subdivision at <i>Clause 56.09-3</i> (Hume Planning Scheme, 2014).
<b>G19</b>	Subdivision should include a network of streets that provide multiple evacuation routes away from bushfire risks and areas of bushfire hazard.
<b>G20</b>	Where a setback is required from a bushfire hazard, the setback should be provided on public land where practical.
<b>G21</b>	Landscape design and plant selection in open spaces, including waterways and drainage corridors, should not increase bushfire risk.







## 3.5 Thriving local economies

### 3.5.1 Objectives - thriving local economies

#### OBJECTIVES

#### IMPLEMENTATION TOOLS

#### O14

To facilitate a future opportunity for a local convenience shop to provide local amenity to support a diverse and sustainable economy.

G22

### 3.5.2 Requirements and guidelines - thriving local economies

#### GUIDELINES

#### G22

Future sites for commercial activities should be considered along the Local Access Street – Level 2 (subject to future permit) in the general location identified on [Plan 2 Place Based Plan](#).



## 3.6 Infrastructure coordination

### 3.6.1 Objectives - infrastructure coordination

OBJECTIVES		IMPLEMENTATION TOOLS	
<b>O15</b>	To protect the Greenvale Reservoir from stormwater runoff from urban development.	<b>R23</b>	
<b>O16</b>	To guide the timing and delivery of development and infrastructure to ensure early availability for the community.	<b>R24</b> <b>R25</b> <b>R26</b> <b>R27</b> <b>R28</b>	<b>G23</b> <b>G24</b> <b>G25</b>

### 3.6.2 Requirements and guidelines - infrastructure coordination

REQUIREMENTS	
<b>R23</b>	The reservoir protection works for the Greenvale Reservoir must be completed by Melbourne Water prior to the commencement of any works (construction or earthworks) on the land. Melbourne Water will not consider any interim or out-of-sequence works or development within the Yuroke Creek DSS catchment.
<b>R24</b>	Utilities must be placed outside of the secure Greenvale Reservoir site and natural waterway corridors or on the outer edges of these corridors in the first instance. Where services cannot avoid crossing or being located within these areas, they must be located to avoid disturbance to existing waterway values, Aboriginal cultural heritage values, and native vegetation to the satisfaction of the Department of Energy, Environment, and Climate Action, Melbourne Water, and the responsible authority.
<b>R25</b>	Development applications must demonstrate how the development will: <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 and cyclists access to existing shared user paths.</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>• Locate essential and other services to avoid and minimise impacts to conservation areas, Aboriginal cultural heritage values and habitat zones to the satisfaction of the responsible authority.</li> </ul>
<b>R26</b>	Drainage from stormwater infrastructure must be designed to minimise impacts on biodiversity.

## REQUIREMENTS

- R27** Subdivision of land within the PSP must provide for the timely provision of all local infrastructure and meet the cost for all local infrastructure, other than that provided for within the Greenvale North (Part 2) ICP. This includes, but is not limited to:
- All local streets.
  - Local bus stop infrastructure (where locations have been agreed in writing by Head, Transport for Victoria).
  - Landscaping, including canopy tree planting of all existing and future roads and local streets for a minimum establishment period of 24 months.
  - Intersection works and traffic management measures along local streets.
  - Hume City Council approved fencing and landscaping (where required) along reserves.
  - Pedestrian and bicycle paths and equestrian trails along local streets, utilities easements, waterways and within local parks including bridges, intersections, and barrier crossing points.
  - Bicycle parking facilities.
  - Appropriately scaled lighting (including wildlife friendly lighting) along all roads, major shared bicycle and pedestrian paths, and traversing public open space
  - Local drainage system, including land and works for water services (i.e. pressure reducing stations) and water sensitive urban design (WSUD) features.
  - Construction of culverts for waterway crossings of boulevard connector streets, connector streets and local streets.
  - Local street and pedestrian path crossings of waterways or electricity transmission easement unless outlined as the responsibility of another agency in [Table 7 Precinct infrastructure](#).
  - Provision of water tapping, potable and recycled water connection points for any potential open space.
  - 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.
  - Construction of pedestrian and bicycle paths along waterways and open space.

- R28** All public open space must be finished to a standard that satisfies the requirements of the responsible authority prior to the transfer of the public open space, including but not limited to:
- Removal of all existing and disused structures, foundations, pipelines, stockpiles and contaminated soil.
  - 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.
  - Clearing of rubbish, weeds, and rocks, levelled, topsoiled, and grassed with warm climate grass (unless conservation reserve requirements dictate otherwise).
  - Provision of water tapping, potable and recycled water connection points.
  - Sewer, gas, and electricity connection points must also be provided to land identified as local parks.
  - Planting of trees and shrubs (with drought tolerant species).
  - Adequate protection of existing trees that are to be retained including exclusion zones.
  - Vehicular exclusion devices (preferably vegetative or may be fence, bollards, or other suitable method).
  - Maintenance access points.
  - Construction of pedestrian and bicycle paths around the perimeter of the reserve, connecting and linking into any other surrounding paths or points of interest.
  - 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.

## GUIDELINES

**G23** Out of sequence development (except any within the Yuroke Creek DSS catchment which is prohibited pursuant to R23) should only be by negotiation and agreement between a developer and the impacted infrastructure providers and not impose unreasonable additional burden on infrastructure providers.

**G24** Utilities and other infrastructure should avoid traversing habitat zones and areas for conservation identified in the Greenvale North R1 Native Vegetation Precinct Plan where practical.

**G25** Integrated water management systems should be designed to:

- Maximise habitat values for local flora and fauna species.
- Protect and manage habitat for Matters of National Environmental Significance in relation to water quality and suitable hydrological regimes (both surface and groundwater).
- Minimise impacts to identified Aboriginal cultural heritage.







## 4.0 APPENDICES

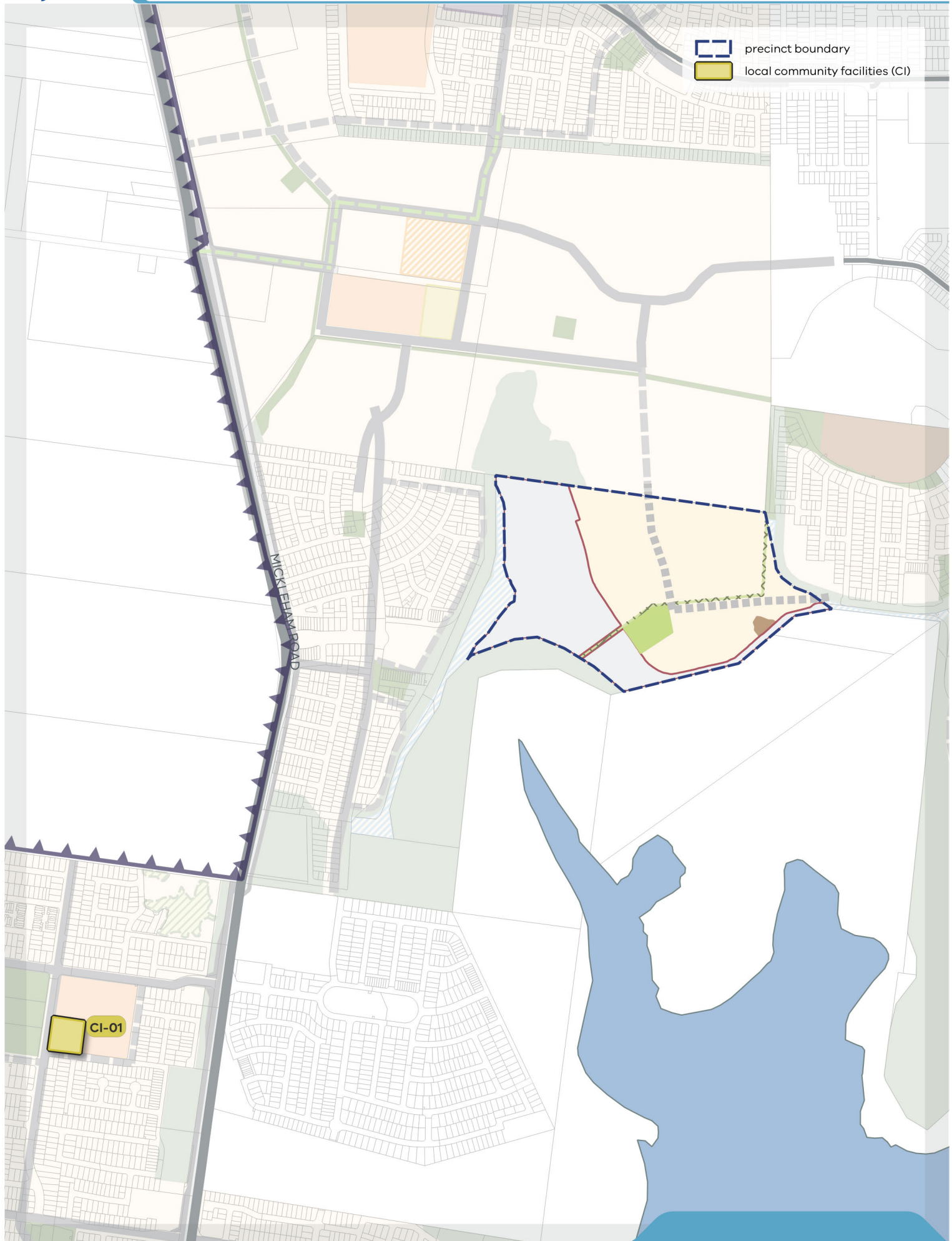
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## Appendix 1 Precinct infrastructure table

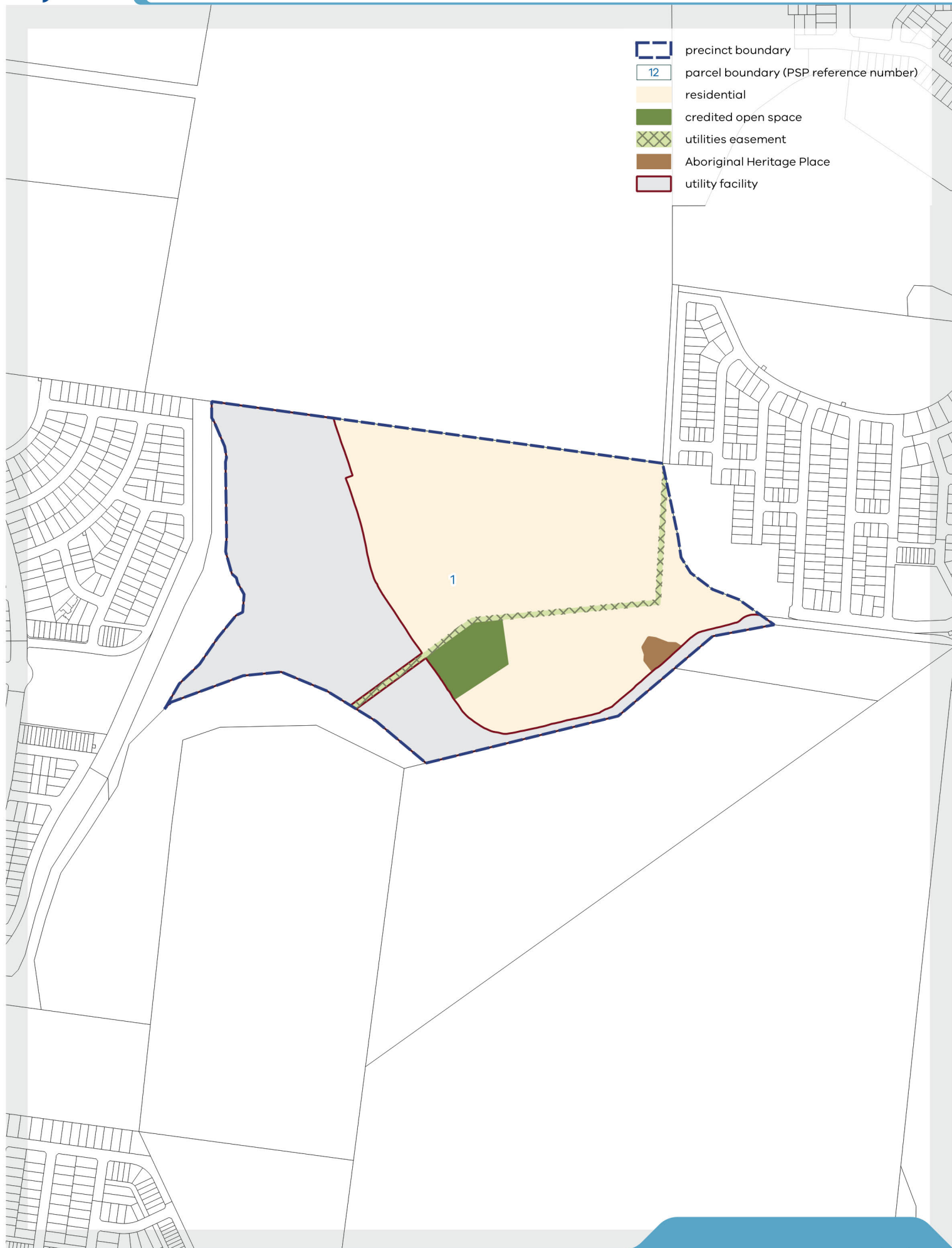
**Table 7** Precinct infrastructure

CATEGORY	PIP REFERENCE NO.	TITLE AND DESCRIPTION	LEAD AGENCY	COMPONENT INCLUDED IN ICP			INDICATIVE TIMING (YEARS)	APPORTIONMENT FUNDING SOURCE	APPORTIONMENT TO GREENVALE NORTH (PART2) PSP
				ULTIMATE LAND	INTERIM CONSTRUCTION	ULTIMATE CONSTRUCTION			
Drainage and Water	N/A	<b>Reservoir Protection Mechanism</b> Suitably constructed and landscaped reservoir protection mechanism with 600mm freeboard provision above the 1-in-1,000,000 AEP flood level to the satisfaction of Melbourne Water.	Melbourne Water	N/A	N/A	N/A	0-10	Yuroke Creek DSS	N/A
Drainage and Water	N/A	<b>Greenvale Reservoir Fencing</b> Security fence with educational signage to the satisfaction of Melbourne Water	Melbourne Water	N/A	N/A	N/A	0-10	Yuroke Creek DSS	N/A
Public Open Space	LP-01	<b>Local Park</b> Local Park containing three (3) NVPP trees for retention.	Developer works	Y	N/A	N/A	0-10	N/A	N/A
Shared User Path	N/A	<b>Shared User Path</b> Shared User Path, with minimum width of 3 metres, within YVW easement constructed to the satisfaction of the relevant authority.	Developer works	N/A	N/A	N/A	0-10	N/A	N/A
Community Infrastructure	CI-01	<b>Greenvale West: Community Centre expansion</b> Expansion of the Greenvale West Community Facility (GW (R3) – CI-01–CI-02 in Greenvale West DCP).	Hume City Council	N	N	Y	0-10	N/A	100%
Transport	No ICP transport items as defined by Ministerial Direction on the Preparation and Content of Infrastructure Contribution Plans.								

-  precinct boundary
-  local community facilities (CI)



-  precinct boundary
-  parcel boundary (PSP reference number)
-  residential
-  credited open space
-  utilities easement
-  Aboriginal Heritage Place
-  utility facility

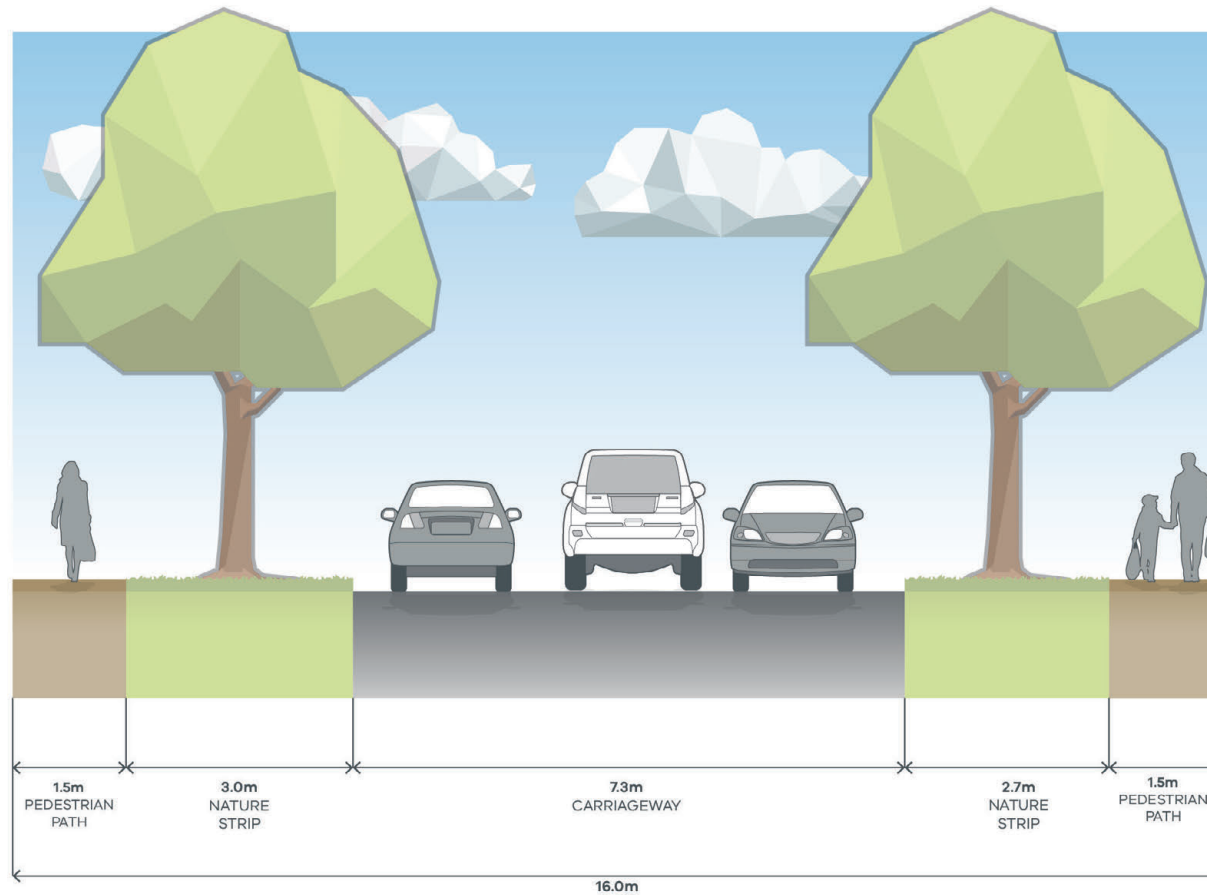




**Table 8** Summary land use budget

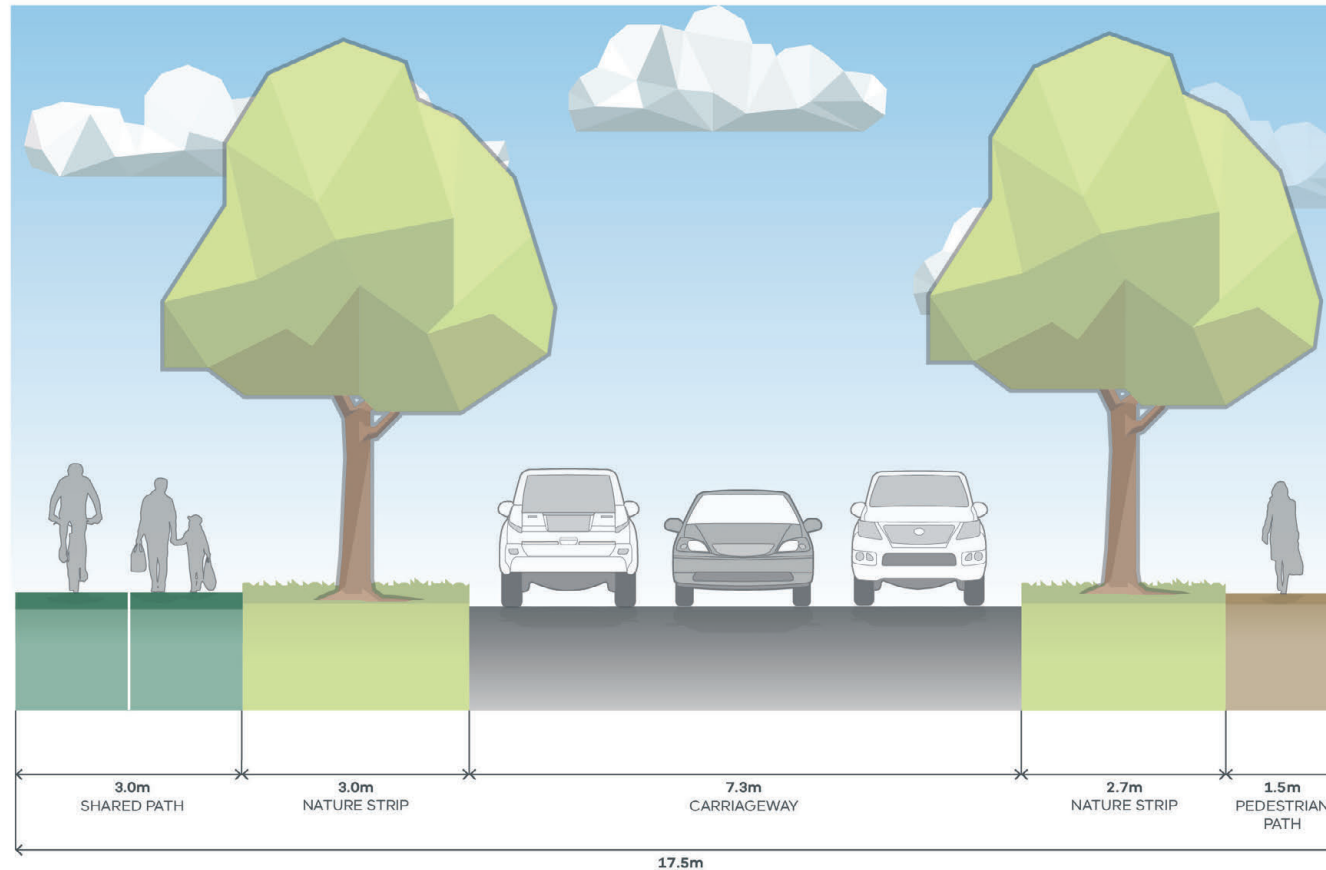
DESCRIPTION	HECTARES	% OF TOTAL	% OF NDA
<b>TOTAL PRECINCT AREA (HA)</b>	<b>33.09</b>	<b>100%</b>	
<b>OPEN SPACE</b>			
<b>UNCREDITED OPEN SPACE</b>			
Utilities easements	0.73	2.19%	3.94%
Aboriginal Heritage Place	0.21	0.65%	1.16%
<b>SUB-TOTAL UNCREDITED OPEN SPACE</b>	<b>0.94</b>	<b>2.84%</b>	<b>5.10%</b>
<b>CREDITED OPEN SPACE</b>			
Local park (ICP land)	0.95	2.87%	5.16%
<b>SUB-TOTAL CREDITED OPEN SPACE</b>	<b>0.95</b>	<b>2.87%</b>	<b>5.16%</b>
<b>TOTAL ALL OPEN SPACE</b>	<b>1.89</b>	<b>5.71%</b>	<b>10.26%</b>
<b>OTHER</b>			
Utility facility (secure Greenvale Reservoir site)	12.78	38.64%	69.42%
<b>SUB-TOTAL OTHER</b>	<b>12.78</b>	<b>38.64%</b>	<b>69.42%</b>
<b>TOTAL NET DEVELOPABLE AREA – (NDA) HA</b>	<b>18.41</b>	<b>55.65%</b>	
<b>NET DEVELOPABLE AREA – RESIDENTIAL (NDAR) HA</b>	<b>18.41</b>	<b>55.65%</b>	

## Local Access Street Level 1 (16m)



### NOTES:

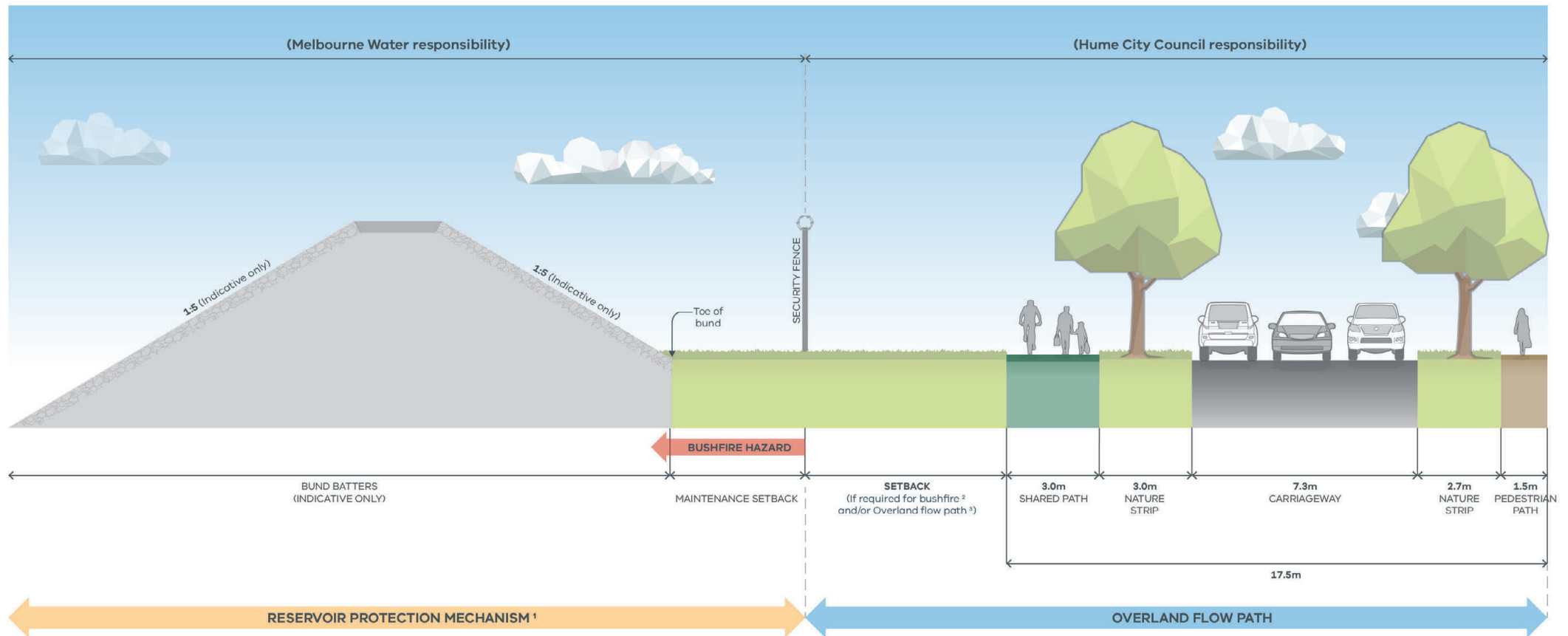
- Minimum street tree mature height 12 metres.
- All kerbs are to be B2 Barrier Kerb.
- Infrastructure that crosses roads should be located where driveways are located so as to avoid any disturbance to tree root zone.
- Indicate minimum dimensions (W/L/D) for tree root zone that can support 30% canopy coverage (refer to EDCM or Council Standards for this particular location).
- Verge widths may be reduced where roads abut open space with the consent of the responsible authority.

**Local Access Street Level 1 (17.5m)**

## NOTES:

- Minimum street tree mature height 12 metres
- 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.
- Infrastructure that crosses roads should be located where driveways are located so as to avoid any disturbance to tree root zone.
- Indicate minimum dimensions (W/L/D) for tree root zone that can support 30% canopy coverage (refer to EDCM or Council Standards for this particular location).

## Local Access Street Level 1 (17.5m) Reservoir Interface



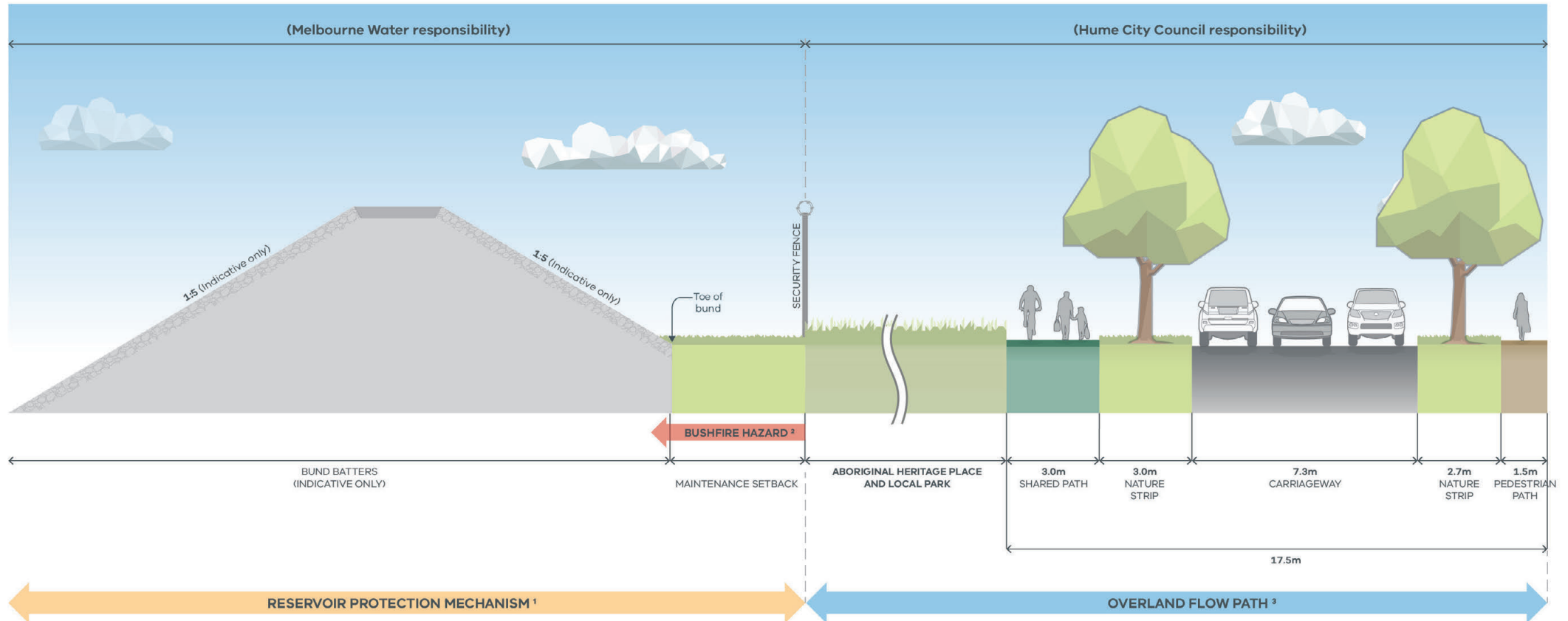
### NOTES:

- Minimum street tree mature height 12 metres.
- 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 stormwater runoff from urban development must be prevented from entering the drinking water supply in the Greenvale Reservoir to the satisfaction of the relevant authority.
- A local drainage solution must be provided to divert stormwater runoff away from the Greenvale Reservoir to the satisfaction of the relevant authority.
- Infrastructure that crosses roads should be located where driveways are located so as to avoid any disturbance to tree root zone.
- Indicate minimum dimensions (W/L/D) for tree root zone that can support 30% canopy coverage (refer to EDCM or Council Standards for this particular location).
- Security fence is not to scale.

1. Final design, extent and vertical alignment of the bund is to be determined by Melbourne Water. Final bund cross sections to be determined by Melbourne Water through the Reservoir Protection Mechanism design.
2. Bushfire hazard setback to be determined at time of the subdivision application.
3. Extent to be determined through the Reservoir Protection Mechanism design and implementation of the Overland Flow Path Performance Criteria.



## Local Access Street Level 1 (17.5m) Reservoir Interface: Aboriginal Heritage Place & Local Park

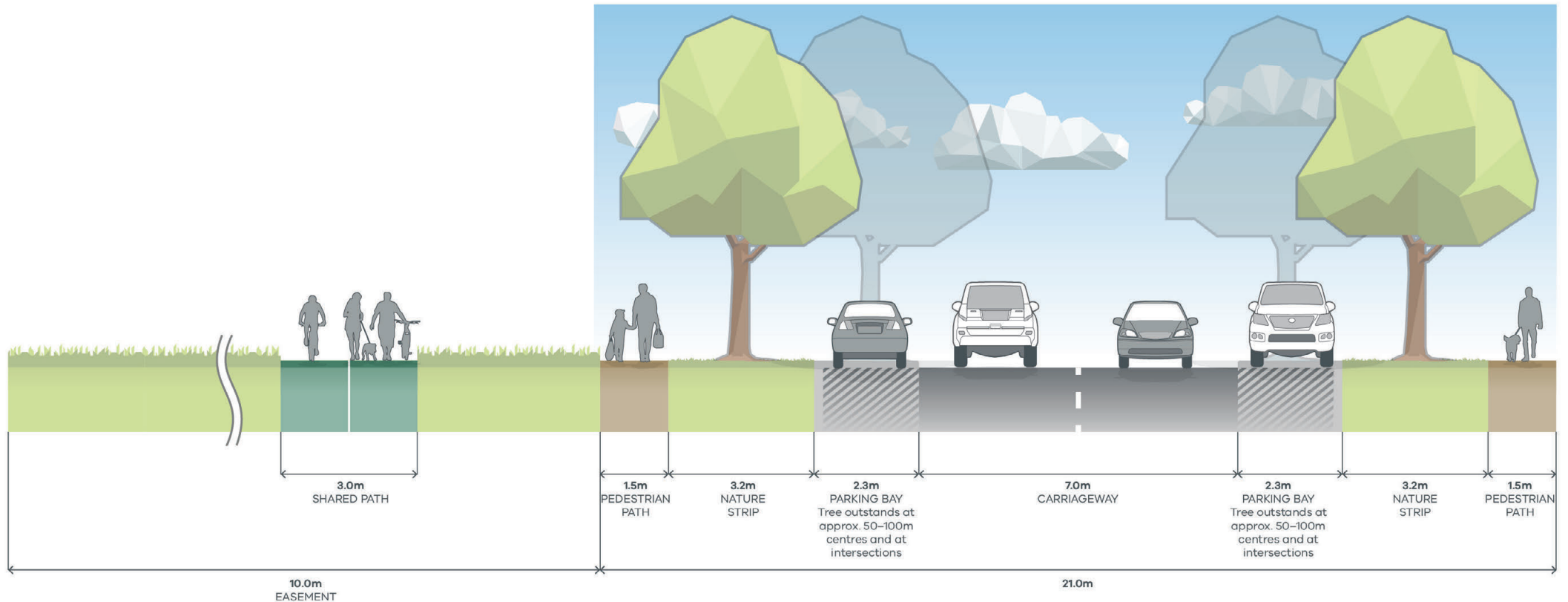


### NOTES:

- Minimum street tree mature height 12 metres.
- 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 stormwater runoff from urban development must be prevented from entering the drinking water supply in the Greenvale Reservoir to the satisfaction of the relevant authority.
- A local drainage solution must be provided to divert stormwater runoff away from the Greenvale Reservoir to the satisfaction of the relevant authority.
- Infrastructure that crosses roads should be located where driveways are located so as to avoid any disturbance to tree root zone.
- Indicate minimum dimensions (W/L/D) for tree root zone that can support 30% canopy coverage (refer to EDCM or Council Standards for this particular location).
- Aboriginal Heritage Place, Local Park and Security Fence are not to scale.

1. Final design, extent and vertical alignment of the bund is to be determined by Melbourne Water. Final bund cross sections to be determined by Melbourne Water through the Reservoir Protection Mechanism design.
2. Bushfire hazard setback to be determined at time of the subdivision application.
3. Extent to be determined through the Reservoir Protection Mechanism design and implementation of the Overland Flow Path Performance Criteria.

## Local Access Street Level 2 (21m)



### NOTES:

- Minimum street tree mature height 12 metres.
- 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.
- Infrastructure that crosses roads should be located where driveways are located so as to avoid any disturbance to tree root zone.
- Indicate minimum dimensions (W/L/D) for tree root zone that can support 30% canopy coverage (refer to EDCM or Council Standards for this particular location).
- Where no Yarra Valley Water easement adjoins the road and land use on both sides may vary, only the 21-metre road reserve section is applicable.

## Appendix 5 Canopy tree cover calculation methodology

The following calculation method is the VPA's recommended approach of how to calculate achievement of the minimum 30% canopy tree cover requirement in the PSP. It is based on a combination of technical methods, whereby the optimal tree canopy for any given tree species (i.e. the theoretical maximum canopy width) is higher than the actual expected canopy outcome (i.e. the projected canopy). The method is outlined as follows:

- Calculate the optimal canopy width of a single tree for each tree species.
- Calculate the projected canopy width of a single tree for each tree species =  $(0.75 \times \text{Optimal tree canopy width})$ .
- Calculate the projected canopy tree cover area of a single tree for each tree species =  $\pi \times (\text{Projected canopy width} \div 2)^2$ .
- Total the quantity of trees for each tree species within the study area.
- Multiply the projected canopy tree cover area of a single tree by the total number of trees for each tree species within the study area.
- Total the area of designated as public land within the study area (private land is excluded).
- Divide the total aggregated projected canopy cover for each tree species by the total area of designated as public land in the study area.

\*Note: When calculating the percentage of canopy tree coverage in the public realm for trees on or close to private realm boundaries, only the portion of the tree's canopy within the public realm can contribute towards the calculation. Any portion of the canopy that extends into the private realm cannot be included towards the calculation. Conversely, a tree within the private realm where the tree's canopy extends into the public realm, the extended portion of the canopy can be included towards the calculation but only when the tree is protected from pruning, lopping and removal.

At the subdivision permit stage, a landscape plan and associated canopy tree schedule should be provided by the applicant to demonstrate compliance with the minimum 30% canopy tree cover requirement in the PSP. The landscape plan should demarcate all public realm land (refer to Glossary for definition) to identify the locations within the subdivision area that have contributed to the calculation of 30% canopy tree cover across the subdivision area. A notation should also be included on the landscape plan that notes the total area of public realm land within the subdivision area. The canopy tree schedule outlines how the canopy tree cover calculation has been applied to a subdivision area. Examples of landscape plan and canopy tree schedule are provided below.

**Table 9** Example of canopy tree schedule

TREE SPECIES	TREE OPTIMAL WIDTH	TREE PROJECTED WIDTH	CANOPY COVER PER TREE (M <sup>2</sup> )	TREE QUANTITY	TOTAL CANOPY COVER PER SPECIES (M <sup>2</sup> )
<i>Example:</i>	<i>12 metres</i>	<i>0.75 x 12 = 9 metres</i>	<i><math>\pi \times \text{Projected radius}^2</math> e.g. <math>\pi \times (9 \div 2)^2 = 63.6\text{m}^2</math></i>	<i>No. trees in designated area</i>	<i>Canopy cover Area x No. of trees</i>
Lemon-scented Gum (Corymbia citriodora)	12	9	63.6	8	508.8
Banksia integrifolia (Coastal Banksia)	7	5.25	21.6	6	130
Red Flowering Yellow Gum (Eucalyptus leucoxylon)	9	6.75	35.8	12	429
Corymbia maculate (Spotted Gum)	12	9	63.6	21	1335
TOTAL CANOPY COVER ACROSS THE PUBLIC REALM (M <sup>2</sup> )					2402.8
TOTAL AREA OF DESIGNATED PUBLIC REALM (M <sup>2</sup> )					6723
TOTAL CANOPY TREE COVER % ACROSS THE PUBLIC REALM					36%



**Figure 2** Example plan of subdivision area on the landscape plan



## Appendix 6 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>active transport</b>	Transport requiring physical activity, typically walking and cycling but also including e-mobility, and other forms of micromobility.
<b>bund</b>	The bund, known as bund C, forming part of the Reservoir Protection Mechanism, to be located generally as shown on the <a href="#">Reservoir Interface cross sections</a> (pages 36-37), to be designed and constructed by or on behalf of Melbourne Water.
<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>community facilities</b>	Infrastructure provided by government or non-government organisations for accommodating a range of community support services, programs, and activities. This includes facilities for education and learning (e.g. government and non-government schools, universities, adult learning centres); early years (e.g. preschool, maternal and child health, childcare); health and community services (e.g. hospitals, aged care, doctors, dentists, family and youth services, specialist health services); community (e.g. civic centres, libraries, neighbourhood houses); arts and culture (e.g. galleries, museums, performance space); sport, recreation and leisure (e.g. swimming pools); justice (e.g. law courts); voluntary and faith (e.g. places of worship) and emergency services (e.g. police, fire and ambulance stations).
<b>Development Services Scheme (DSS)</b>	A development services scheme is a master plan for drainage in a specific catchment area prepared and administered by Melbourne Water. They guide the standards that need to be met for flood protection, water quality and waterway health.
<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 Aboriginal cultural 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>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>Greenvale Reservoir Protection Assets</b>	The Greenvale Reservoir Protection Assets include: <ol style="list-style-type: none"> <li>1 in 1-million AEP Retarding Basin and its embankment</li> <li>Yuroke Creek Outfall works</li> <li>Earthen Bund (Bund C)</li> <li>Steepened Functional Design</li> </ol>
<b>gross developable area</b>	Total precinct area excluding encumbered land, arterial roads and other roads with four or more lanes.
<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>Native Vegetation Precinct Plan (NVPP)</b>	A plan, as specified in Clause 52.16 of the Hume Planning Scheme, relating to native vegetation within a defined area that may form part of the precinct structure plan. Native vegetation precinct plans are incorporated into local planning schemes and listed in the schedule to Clause 52.16.
<b>net developable area</b>	Land within a precinct available for development. This excludes encumbered land, arterial roads, railway corridors, government schools, 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>optimal canopy tree cover</b>	The width of a specific tree species in a healthy condition

TERM	DEFINITION
<b>Overland Flow Path</b>	The Overland Flow Path on the development side of the Reservoir Protection Mechanism, indicatively shown on the <a href="#">Reservoir Interface cross sections</a> (pages 36-37), prevents the accumulation of water adjacent to the Reservoir Protection Mechanism and ensure the flow of water adjacent to the bund towards the Yuroke Creek outfall. The Overland Flow Path may include reserves, verges and constructed elements such as maintenance roads or setbacks, shared or pedestrian paths, nature strips and roads.
<b>Overland Flow Path Performance Criteria</b>	Overland Flow Path Performance Criteria means a design and development that: <ul style="list-style-type: none"> <li>• Implements the requirements of the Greenvale Reservoir Catchment Drinking Water Quality Risk Management Plan 2008.</li> <li>• Does not compromise the ability of the Greenvale Reservoir Protection Mechanism to stop urban run-off entering the Greenvale Reservoir in a 1-in-1 million AEP flood event including freeboard.</li> <li>• Does not compromise the structural integrity or function of the bund.</li> <li>• Addresses climate change parameters of Australian Rainfall and Runoff (AR&amp;R) 2019 (as revised from time to time).</li> <li>• Is in accordance with the Melbourne Water design for the Greenvale Reservoir Protection Mechanism, including the bund and Overland Flow Path.</li> <li>• Implements safe road requirements, as follows: <ul style="list-style-type: none"> <li>• The development is to make provision for overland flows utilising roads and/or reserves.</li> <li>• Alignment of roads and reserves with any adjoining estates or stages must ensure continuity and provide uninterrupted conveyance of overland flows.</li> <li>• Any road or access way intended to act as an overland flow path must be designed and constructed to comply with the floodway safety criteria either as outlined in the DELWP Guidelines for Development in Flood Affected Areas (February 2019) or, where appropriate, to Council's requirements and standards, to the satisfaction of Melbourne Water.</li> </ul> </li> </ul>
<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>projected canopy tree cover</b>	The width of a specific tree species that accounts for a smaller canopy tree cover (calculated as 0.75 x the optimal canopy width).
<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>public realm</b>	Land to be used or developed for an allowable public purpose that is freely accessible to everyone regardless of their economic or social conditions. This includes freely accessible public open space, waterways and foreshores, community and recreation facilities, public plazas/squares transport infrastructure (including all public street reserves and laneways) and any other land set aside for other public purposes. It however does not include uncredited open space such as biodiversity/conservation areas and areas of open space that may not be freely accessible to the public (e.g., non-accessible drainage reserves and waterway corridors)
<b>Reservoir Protection Mechanism</b>	The Reservoir Protection Mechanism includes a large retarding basin with high embankment wall, including associated inlet channels and chutes, the bund (and associated access path(s) and security fence) and Yuroke Creek outfall works, but does not include the Overland Flow Path. These assets are required to protect the Greenvale Reservoir from urban development runoff in a 1-in-1 million Annual Exceedance Probability (AEP) flood event.
<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>secure Greenvale Reservoir site</b>	The reservoir and any land within the extent of the secure Greenvale Reservoir site that is not to be publicly accessible. The site is not considered to be public realm.
<b>sensitive interface</b>	A design or engineered response that does not significantly contrast with the existing landform.

TERM	DEFINITION
<b>steepened functional design alignment</b>	Is a modified bund C alignment with local steepening of the safety batter slopes from 1V:5H to 1V:3H at the Heritage Interface Area.
<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 (regarding basins/wetlands) to reduce the load on drains.



# **Greenvale North (Part 2)**

**WURUNDJERI WOI-WURRUNG COUNTRY**

## **Precinct Structure Plan**

**June 2025**