



**CLOUSTON** associates



**Great River NSW Pty Ltd**  
**LANDSCAPE DEVELOPMENT APPLICATION**

**Penrith , NSW**

**S18-0072**

Issue D • 09/01/2019



**PENRITH LAKES INDUSTRIAL SUBDIVISION  
LANDSCAPE DA**

Prepared for

**Great River NSW Pty Ltd**

Prepared by

**CLOUSTON Associates**

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Document	Issue	Date	Status	Reviewed	Verified	Validated
S18-0072	A	11.12.2018	DRAFT	AD	JH	-
S18-0072	B	14.12.2018	FINAL	CC	JH	CL
S18-0072	C	19.12.2018	FINAL	AD	JH	JH
S18-0072	D	09.01.2019	FINAL	AD	CL	CL

Note: this document is preliminary unless validated.

## LANDSCAPE DESIGN STATEMENT

The Penrith Lakes Industrial precinct is a proposed light industrial estate subdivision. The site falls along the southern edge of the Penrith Lakes Parklands. While currently under development, once complete the Parklands will cover 1935Ha and include housing and employment areas.

The proximity of the site to the Penrith Lakes Parklands and the site's location on the northern bank of the Nepean River with views to the Blue Mountains escarpment places the estate at the heart of one of Western Sydney's most important, ecological, recreational and scenic landscapes.

In recognising and reflecting this pivotal setting, the landscape design seeks to integrate the estate into its landscape context with simple design responses that recognise the industrial nature of the landuse and will:

- Enhance pedestrian and cycle connectivity
- Offer opportunities for future links to the Great North Walk along the Nepean River
- Conserve critical views to the Blue Mountains along east west streets
- Reflect the agricultural/post-industrial heritage of the site through entry statement artwork
- Draw on the native species of the Nepean River Floodplain.

The design intent of core elements of the proposed landscape are briefly outline below.

### KEY VIEWS AND VISTAS

The streets in the subdivision have been aligned to ensure that long views to the Blue Mountains escarpment are retained, such as from the site entry off Lugard Street.

### VEHICLE ARRIVAL AND ENTRIES

The two entries will feature distinctive trees planting, with minor signage at the Lugard Street entry and a public art piece (reflecting the site's prior agricultural and industrial uses) in a landscape median on the main Old Castlereagh Road entry.

### STREETSCAPE DESIGN

The streetscape will provide an important role in not only as a functional space for movement and transportation but also establishing the character and identity of the estate.

Key components of the streetscape will include:

- Continuous pedestrian footpath and street crossing network of minimum 1.2m width for safe access through the estate
- A 2.5m wide shared path connecting Old Castlereagh Road and Castlereagh Road (via Lugard St)
- Street tree hierarchy for the major and minor streets of Native indigenous River Plain species
- Native local wetland planting for central street wetlands
- Possible future pedestrian connection to extended Great River Walk

### STREET TREES

Street trees have been located on lot boundaries to allow for driveways to easily be located within the lots. Smaller tree species, with a maximum mature height of 8-10m have been selected for the majority of the street planting. This will ensure minimal impacts on large vehicle access to the industrial lots. Larger trees 20m + mature heights have been limited to the central spaces on the wider wetland streets to provide variety and canopy cover.

### CASTLEREAGH ROAD BOUNDARY

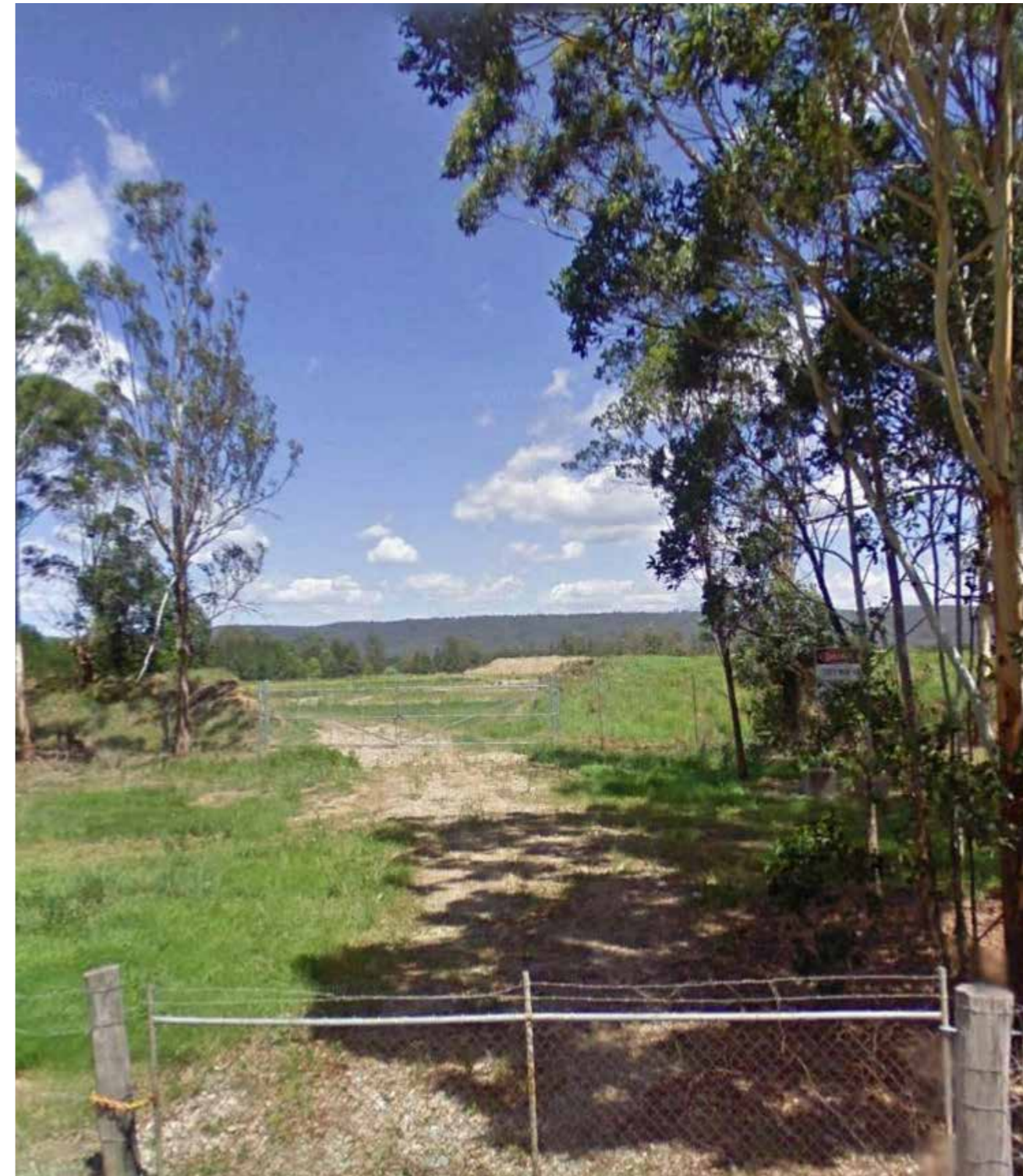
The existing tree planting immediately adjoining the Castlereagh Road boundary will be retained and complemented by the planting of native mass planting (including shrubs, groundcovers and native grasses) on the adjoining embankment within the site boundary

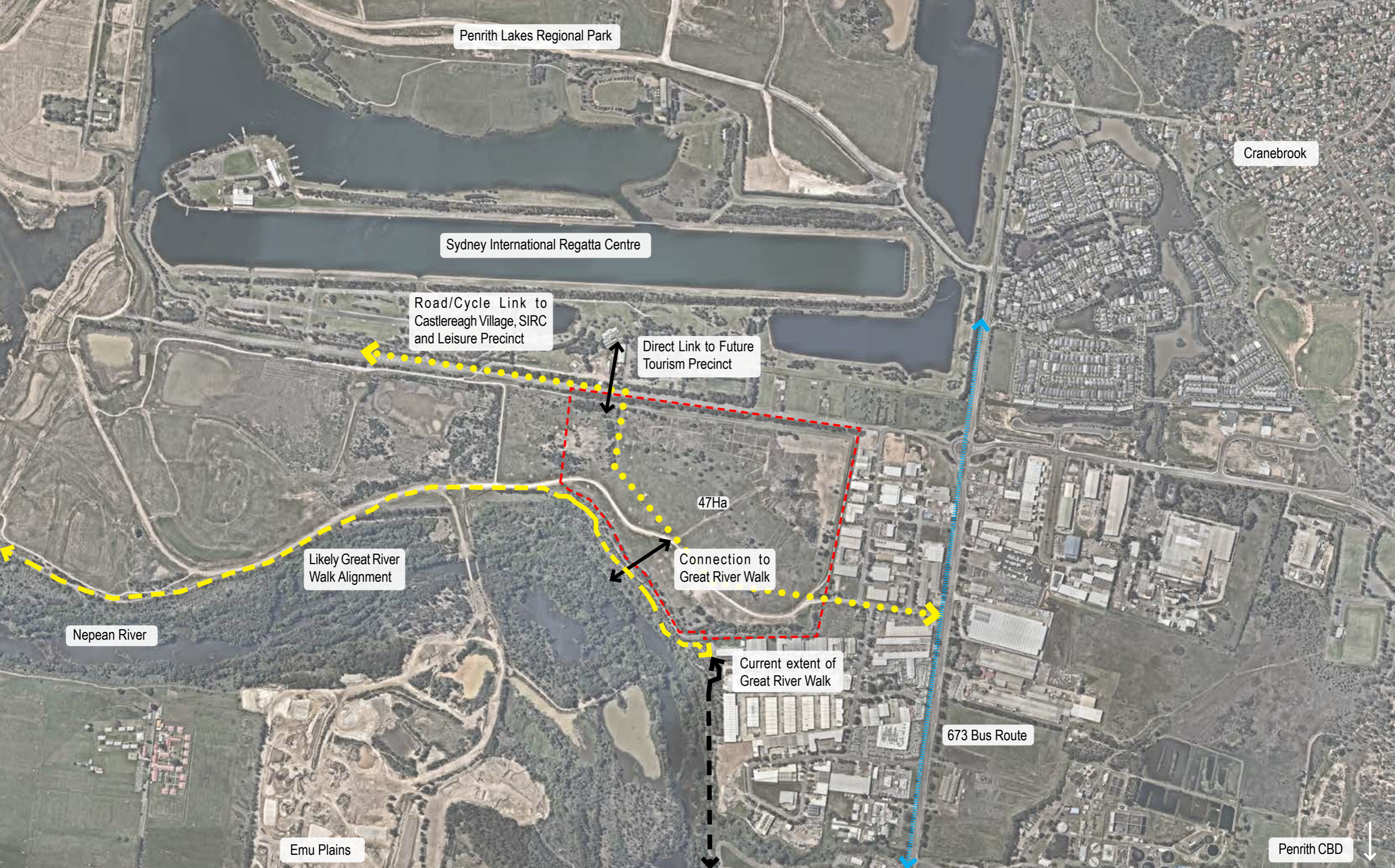
### WETLANDS MEDIANS

Native macrophyte wetland species will be used in the wetland medians which are expected to hold permanent water. These species will be tolerant of and adaptive to minor water level change throughout the year. Riparian shrubs and groundcovers will be planted on the wetland banks with trees lining the edges of the wetland medians.

### MAINTENANCE AND PLANT HEALTH

All plant species, path surfaces and the likes have been chosen to be robust and of generally low maintenance suitable for the nature of the site. Street trees will be protected from large vehicles by careful placement of protective kerbs.





Penrith Lakes Regional Park

Cranebrook

Sydney International Regatta Centre

Road/Cycle Link to Castlereagh Village, SIRC and Leisure Precinct

Direct Link to Future Tourism Precinct

47Ha

Connection to Great River Walk

Likely Great River Walk Alignment

Current extent of Great River Walk

673 Bus Route

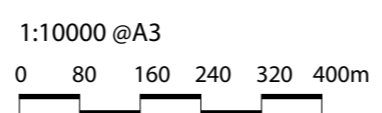
Nepean River

Emu Plains

Penrith CBD



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### CONNECTIONS AND OPPORTUNITIES

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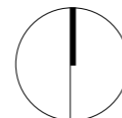
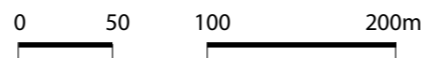
**LEGEND**

- |                                |                               |
|--------------------------------|-------------------------------|
| Site Boundary                  | Wetland Planting Mix          |
| <b>LARGE TREES</b>             | Native Grass Planting Mix     |
| <i>Angophora floribunda</i>    | Batter Planting Hydroseed Mix |
| <i>Corymbia eximia</i>         | Turf                          |
| <i>Eucalyptus crebra</i>       | Road                          |
| <i>Eucalyptus saligna</i>      | Existing Vegetation           |
| <i>Syncarpia glomulifera</i>   |                               |
| <b>SMALL TREES</b>             |                               |
| <i>Agonis flexuosa</i>         |                               |
| <i>Angophora bakeri</i>        |                               |
| <i>Brachychiton populneus</i>  |                               |
| <i>Buckinghamia celsissima</i> |                               |
| <i>Elaeocarpus reticulatus</i> |                               |
| <i>Melaleuca decora</i>        |                               |



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**GENERAL ARRANGEMENT PLAN**

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**LEGEND**

	Site Boundary	<b>SMALL TREES</b>		Agonis flexuosa
<b>LARGE TREES</b>			Angophora bakeri	
	Angophora floribunda		Brachychiton populneus	
	Corymbia eximia		Buckinghamia celsissima	
	Eucalyptus crebra		Elaeocarpus reticulatus	
	Eucalyptus saligna		Melaleuca decora	
	Syncarpia glomulifera			
	Wetland Planting Mix		Turf	
	Native Grass Planting Mix		Road	
	Batter Planting Hydroseed Mix		Existing Vegetation	

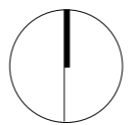
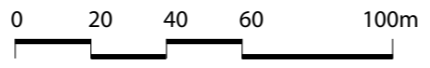


Refer to LA01.04



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










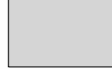


DETAIL PLAN - LA01.02

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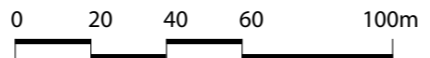
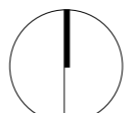
**LEGEND**

	Site Boundary	<b>SMALL TREES</b>	
<b>LARGE TREES</b>			Agonis flexuosa
	Angophora floribunda		Angophora bakeri
	Corymbia eximia		Brachychiton populneus
	Eucalyptus crebra		Buckinghamia celsissima
	Eucalyptus saligna		Elaeocarpus reticulatus
	Syncarpia glomulifera		Melaleuca decora
	Wetland Planting Mix		Turf
	Native Grass Planting Mix		Road
	Batter Planting Hydroseed Mix		Existing Vegetation



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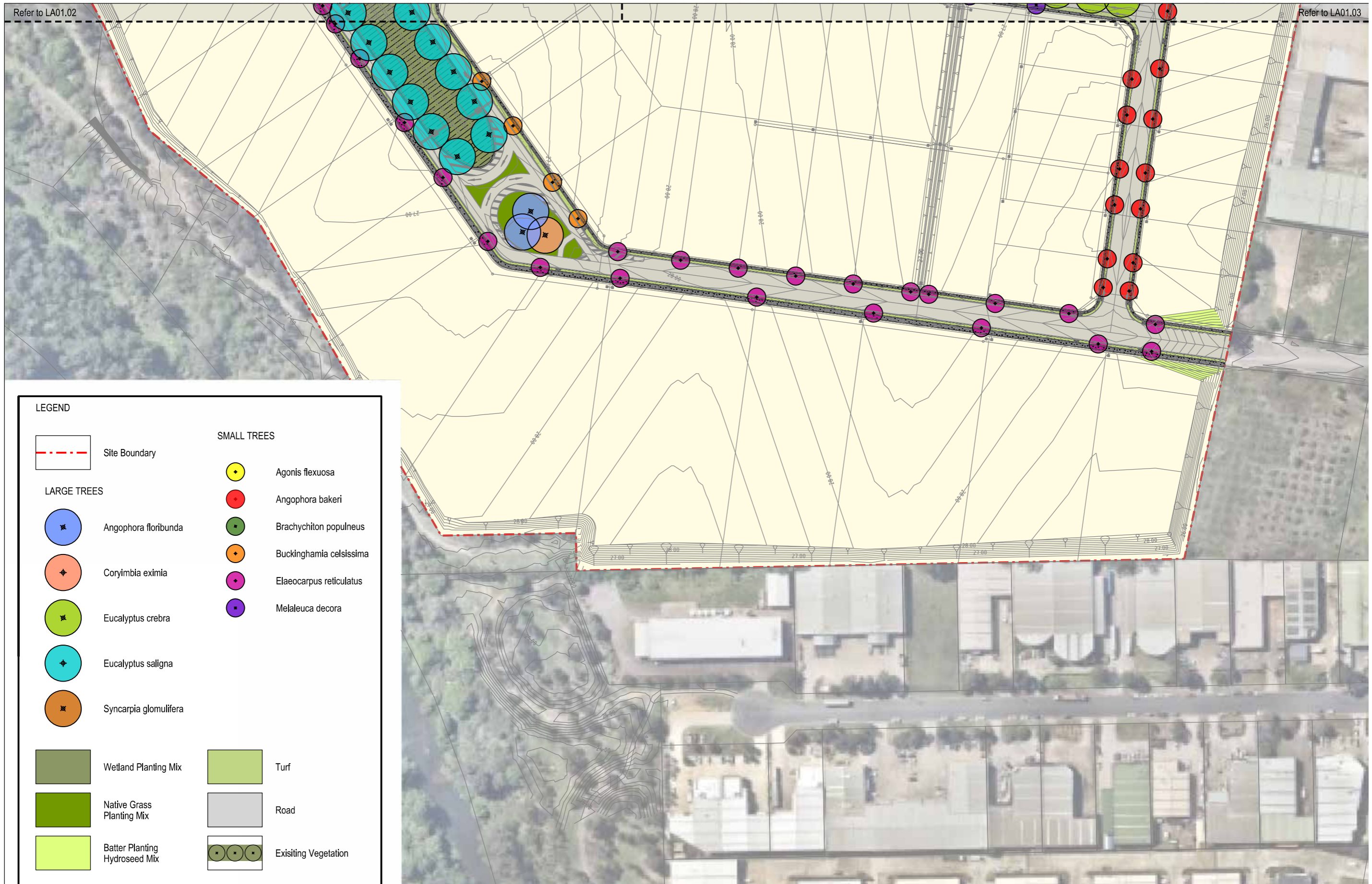



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DETAIL PLAN - LA01.03

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**LEGEND**

Site Boundary

**LARGE TREES**

- Angophora floribunda
- Corymbia eximia
- Eucalyptus crebra
- Eucalyptus saligna
- Syncarpia glomulifera

**SMALL TREES**

- Agonis flexuosa
- Angophora bakeri
- Brachychiton populneus
- Buckinghamia celsissima
- Elaeocarpus reticulatus
- Melaleuca decora

Wetland Planting Mix

Native Grass Planting Mix

Batter Planting Hydroseed Mix

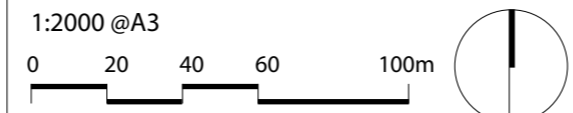
Turf

Road

Existing Vegetation



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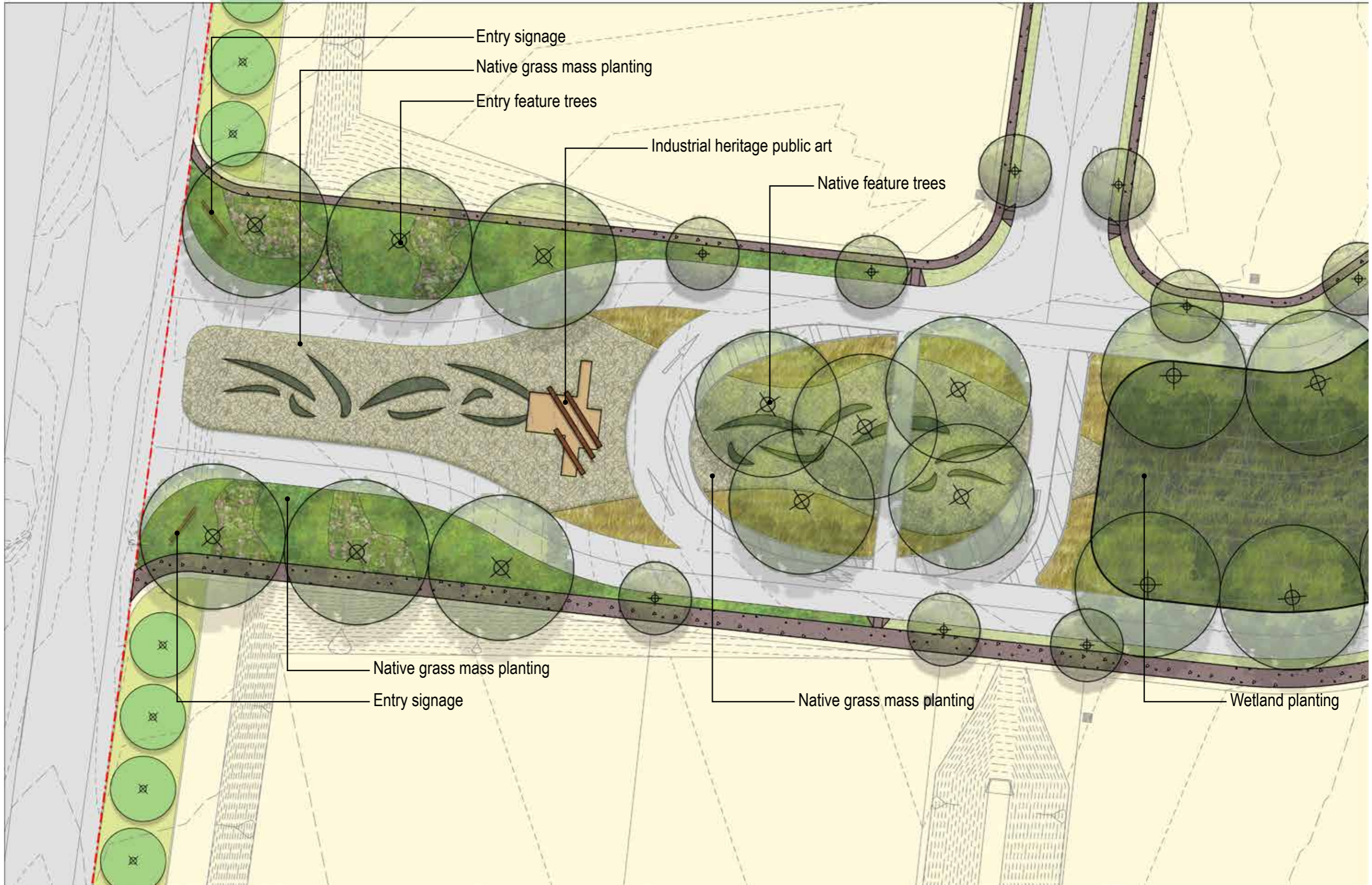
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DETAIL PLAN - LA01.04

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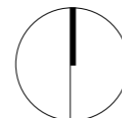
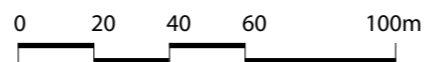
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**ENTRY AREA - PLAN**

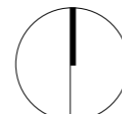
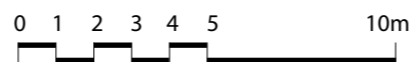
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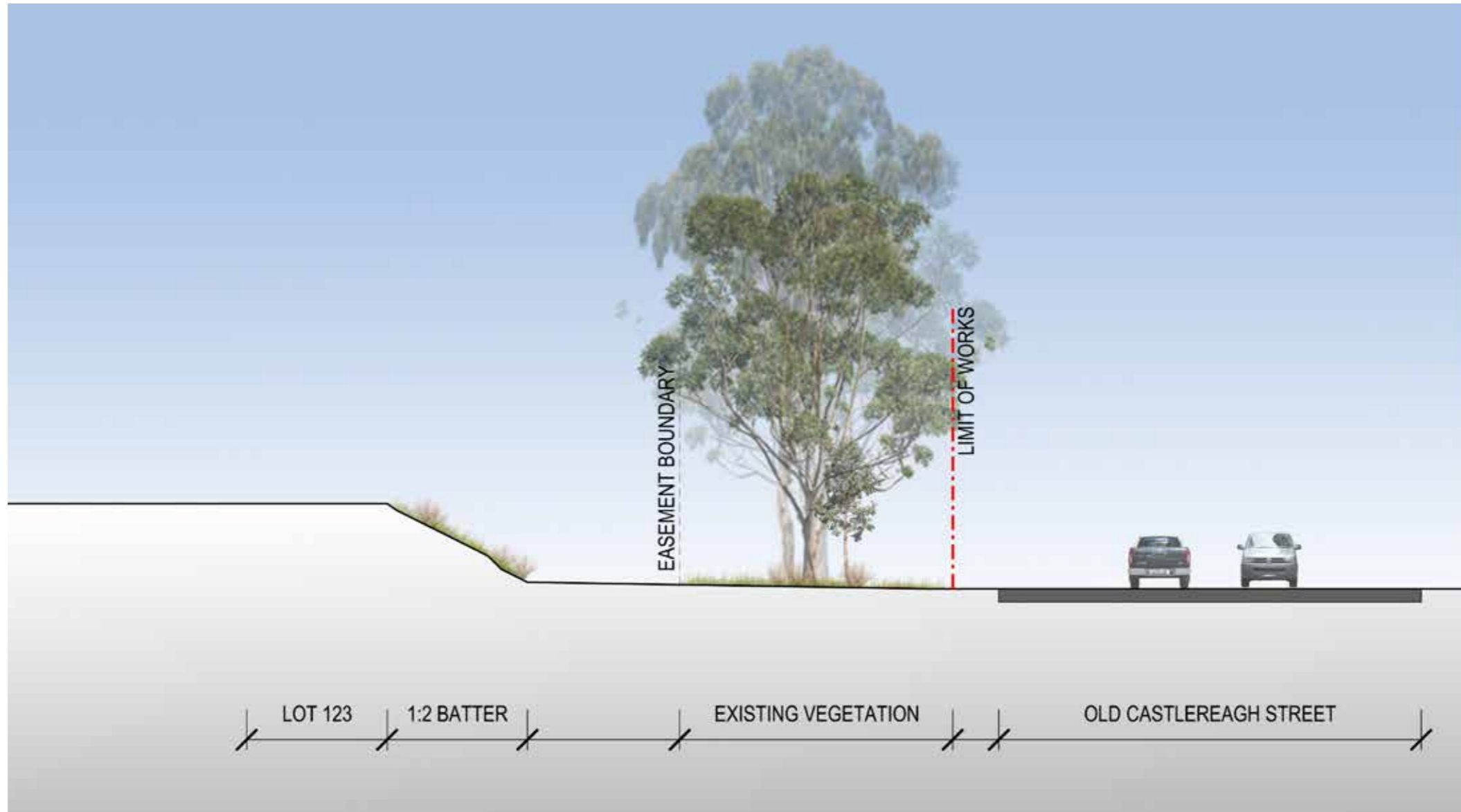


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**ENTRY AREA - SECTION AA**

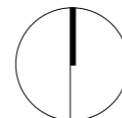
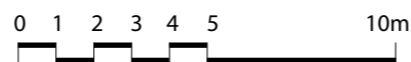
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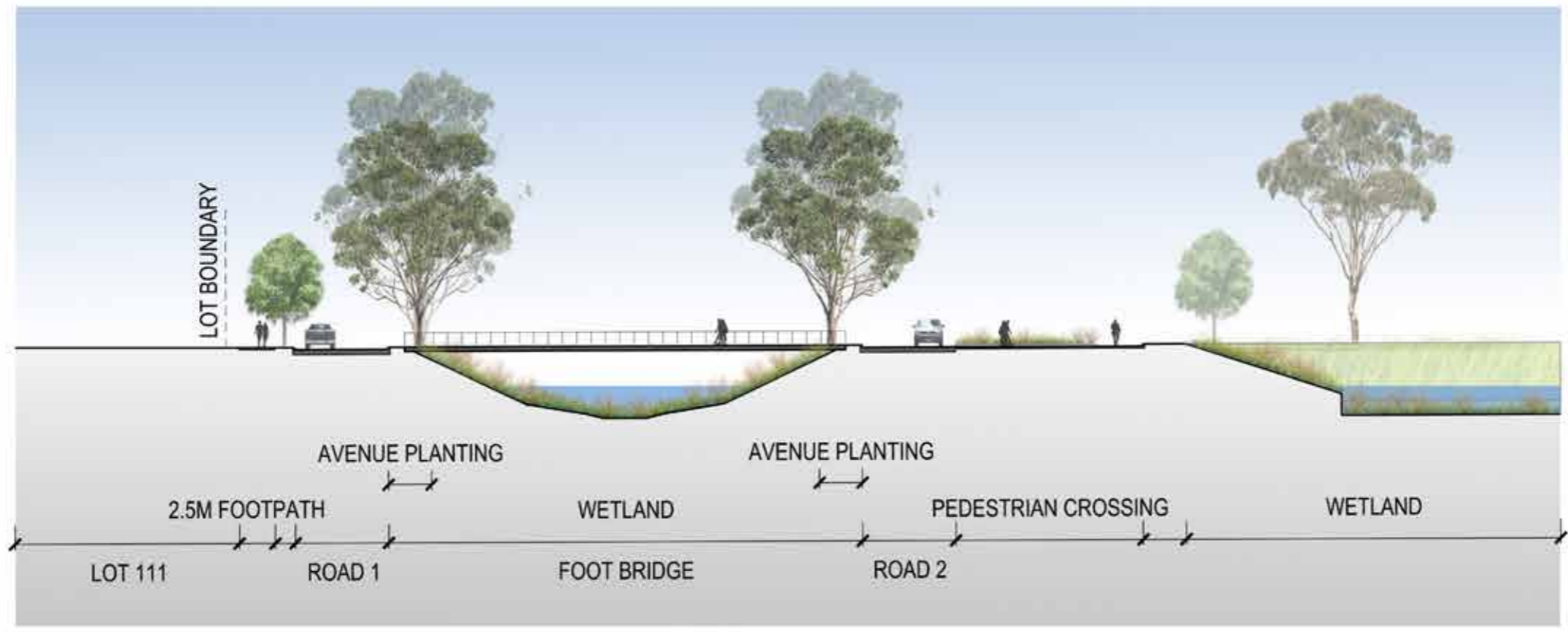


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**OLD CASTLEREAGH STREET - SECTION BB**

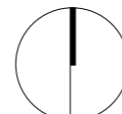
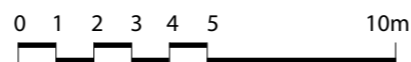
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**WETLAND SPINE - SECTION CC**

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## CHARACTER IMAGES

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Trees

Small Trees

Native Grasses



*Eucalyptus crebra*  
Narrow Leafed Ironbark



*Eucalyptus saligna*  
Sydney Blue Gum



*Brachychiton populneus*  
Kurrajong



*Elaeocarpus reticulatus*  
Blueberry Ash



*Lomandra fluviatilis* 'Shara'  
Lomandra 'Shara'



*Lomandra longifolia* 'Tanika'  
Lomandra 'Tankia'



*Syncarpia glomulifera*  
Turpentine



*Agonis flexuosa*  
Willow Myrtle



*Buckinghamia celsissima*  
Ivory Curl Flower



*Melaleuca decora*  
Honey Myrtle



*Poa labillardieri* 'Eskdale'  
Poa 'Eskdale'



*Imperata cylindrica*  
Blady Grass



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INDICATIVE PLANTING PALETTE

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## Wetland Planting



*Baumea articulata*  
Bare Twig Rush



*Carex appressa*  
Tall Sedge



*Dichelachne micrantha*  
Short Haired Plume Grass



*Microlaena stipoides*  
Weeping Grass



*Acacia ulicifolia*  
Prickly Moses



*Callistemon pallidus*  
Lemon Bottlebrush



*Lomandra longifolia*  
Spiky Headed Mat-rush



*Juncus usitatus*  
Mat Rush



*Tetragonia tetragonioides*  
Warrigal greens



*Themeda triandra*  
Kangaroo Grass



*Hardenbergia violacea*  
Purple Coral Pea



*Kennedia rubicunda*  
Dusky Coral Pea

## Batter Planting



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INDICATIVE PLANTING PALETTE

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**PENRITH LAKES INDUSTRIAL SUBDIVISION**

CODE	BOTANICAL NAME	COMMON NAME	Indicative mature height (metre)	Pot Sizes	Indicative densities (p/m <sup>2</sup> )
<b>TREES</b>					
Aflo	<i>Angophora floribunda</i>	Rough Barked Apple	30m	75L	As Shown
Cex	<i>Corymbia eximia</i>	Yellow Bloodwood	20m	75L	As Shown
Ecr	<i>Eucalyptus crebra</i>	Narrow Leafed Ironbark	35m	75L	As Shown
Esa	<i>Eucalyptus saligna</i>	Sydney Blue Gum	50m	75L	As Shown
Sgl	<i>Syncarpia glomulifera</i>	Turpentine	60m	75L	As Shown
<b>SMALL TREES</b>					
Afle	<i>Agonis flexuosa</i>	Willow Myrtle	8m	75L	As Shown
Aba	<i>Angophora bakeri</i>	Narrow Leafed Apple	8m	75L	As Shown
Bpo	<i>Brachychiton populneus</i>	Kurrajong	10m	75L	As Shown
Bce	<i>Buckinghamia celsissima</i>	Ivoary Curl Flower	10m	75L	As Shown
Ere	<i>Elaeocarpus reticulatus</i>	Blueberry Ash	8m	75L	As Shown
Mde	<i>Melaleuca decora</i>	Honey Myrtle	10m	75L	As Shown
<b>WETLAND PLANTING MIX</b>					<b>TOTAL</b>
Ava	<i>Baumea articulata</i>	Bare Twig Rush	1.5m	Tube	4
Cap	<i>Carex appressa</i>	Tall Sedge	0.8m	Tube	6
Clo	<i>Carex inversa</i>	Knob Sedge	0.5m	Tube	6
Dmi	<i>Dichelachne micrantha</i>	Short Haired Plume Grass	1.2m	Tube	4
Dre	<i>Dianella longifolia</i>	Blue Flax Lilly	0.8m	Tube	4
Eov	<i>Dichondra repens</i>	Kidney Weed	N/A	Tube	8
Eac	<i>Eleocharis sphacelata</i>	Tall Spike Rush	2m	Tube	4
Icy	<i>Imperata cylindrica</i>	Blady Grass	1.2m	Tube	8
Jus	<i>Juncus usitatus</i>	Mat Rush	1.1m	Tube	4
Llo	<i>Lomandra longifolia</i>	Spiky Headed Mat-rush	0.8m	Tube	4
Rte	<i>Tetragonia tetragonioides</i>	Warrigal greens	N/A	Tube	6
Tau	<i>Themeda triandra</i>	Kangaroo Grass	1.2m	Tube	8
<b>NATIVE GRASS PLANTING MIX</b>					<b>TOTAL</b>
Dre	<i>Dianella revoluta</i>	Blue Flax-Lily	1m	Tube	6
Lfl 'Sha'	<i>Lomandra fluviatilis 'Shara'</i>	Lomandra 'Shara'	0.4m	Tube	3
Llo 'Tan'	<i>Lomandra longifolia 'Tanika'</i>	Lomandra 'Tankia'	0.8m	Tube	4
Pla 'Esk'	<i>Poa labillardieri 'Eskdale'</i>	Poa 'Eskdale'	0.7m	Tube	6
Tau	<i>Themeda triandra</i>	Kangaroo Grass	1.2m	Tube	8
<b>BATTER PLANTING HYDROSEED MIX</b>					<b>TOTAL</b>
	<i>Acacia ulicifolia</i>	Prickly Moses	3m	Seed	3%
	<i>Bothriochloa macra</i>	Red Leg Grass	1m	Seed	15%
	<i>Callistemon pallidus</i>	Lemon Bottlebrush	5m	Seed	2%
	<i>Chloris truncata</i>	Windmill Grass	1m	Seed	15%
	<i>Danthonia tenuior</i>	Wallaby Grass	1.2m	Seed	20%
	<i>Hardenbergia violacea</i>	Purple Coral Pea	0.5m	Seed	5%
	<i>Kennedia rubicunda</i>	Dusky Coral Pea	0.5m	Seed	5%
	<i>Microlaena stipoides</i>	Weeping Grass	0.7m	Seed	15%
	<i>Themeda triandra</i>	Kangaroo Grass	1.2m	Seed	20%



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**INDICATIVE PLANT SCHEDULE**

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