

# Campbelltown Industry & Innovation Precincts

Landscape Master Plan, Strategies and  
Techniques



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# Introduction

# Introduction

## Overview

Campbelltown City Council engaged Oxygen to prepare a landscape master plan for the Magill and Newton industrial precincts within Campbelltown City Council.

The purpose of the master plan is to provide guidance and design standards for streetscapes and the public realm within each precinct. This includes capital works undertaken by Campbelltown City Council, as well as privately funded projects.

## How the master plans will be used

- As a reference manual for use by administration staff responsible for the planning, design, construction and ongoing maintenance of street trees and verges.
- As a guiding document to improve the appearance and function of each precinct and engage local businesses; encouraging them to further enhance their premises.
- To support budgeting for capital and recurrent works.

## Objectives

Key Objectives of the master plan are to:

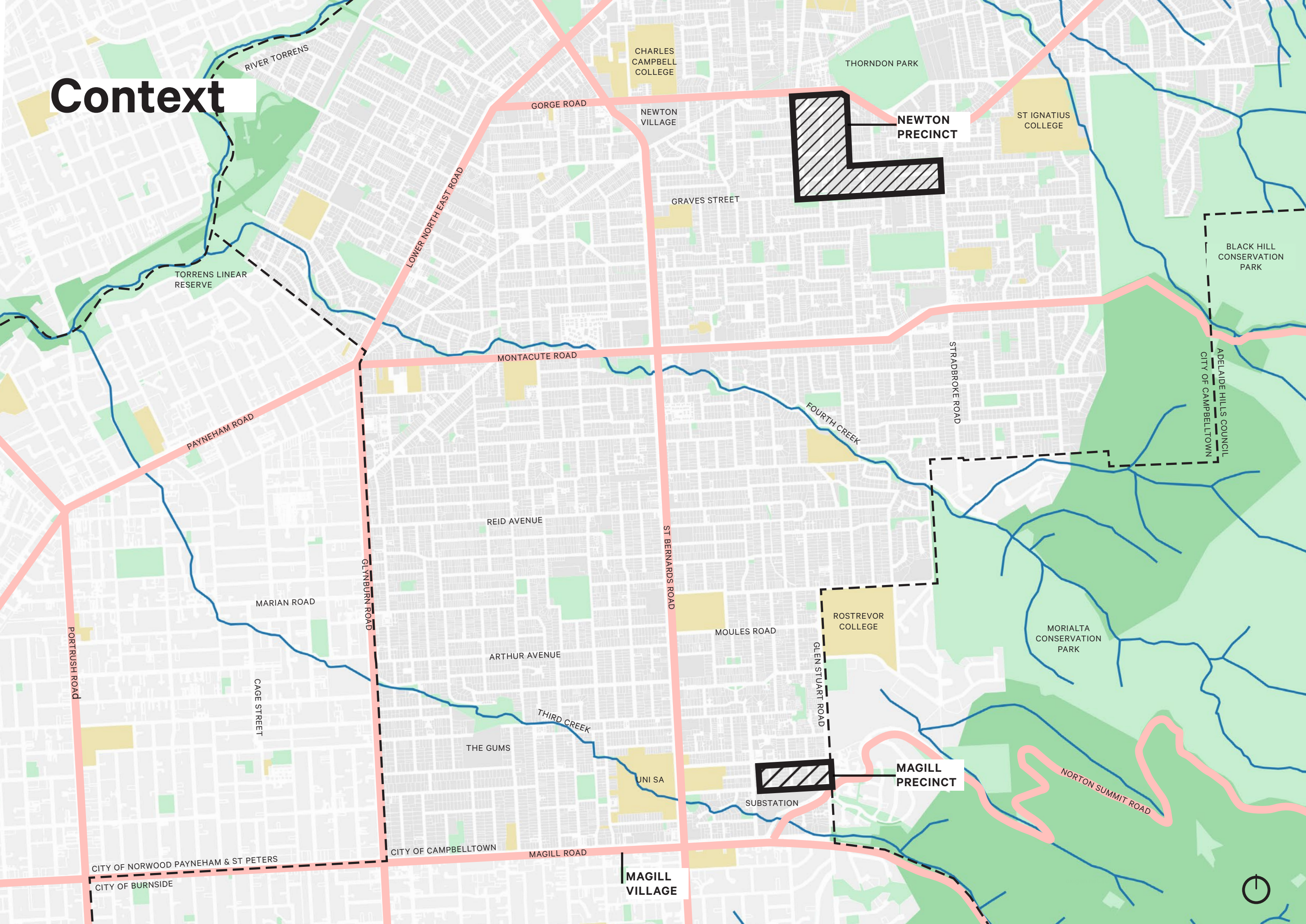
- 1 Enhance local landscape character and visual amenity.
- 2 Make streets more attractive for walking and cycling.
- 3 Visually soften the appearance of the industrial precincts.
- 4 Celebrate and reinforce the Flavours of Campbelltown Food Trail.
- 5 Work to mitigate the effects of increased temperatures in urban areas caused by the urban heat island.
- 6 Incorporate legacy street tree planting that establishes a green infrastructure cover for the future.
- 7 Incorporate ongoing maintenance requirements and staged implementation.
- 8 Support economic uplift.



DESIRED CHARACTER



# Context



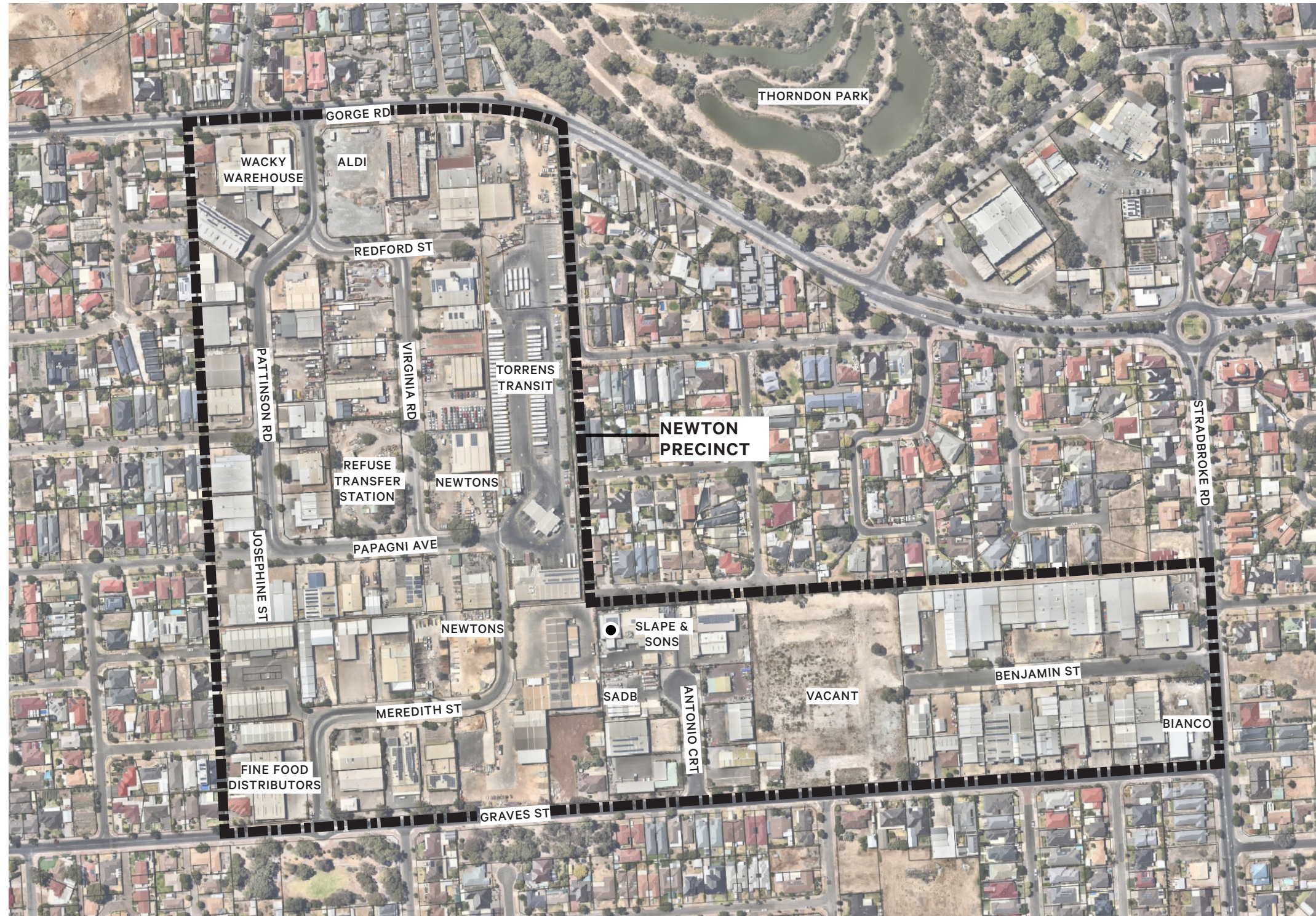


# Existing Precincts



# Site Character

## Newton Precinct



Generally the existing site character of the precinct is defined by:

- Wide road reserves and travel lanes.
- On-street parking located on both sides of the street.
- Footpaths located on one side or not at all.
- Few large street trees.
- Overhead powerlines one side with some streets clear of overhead power lines.
- Solid or mesh fencing to private properties.
- Minimal planting in verges and private properties.
- Industrial land uses surrounded by residential dwellings.



BENJAMIN STREET



PAPAGNI AVENUE

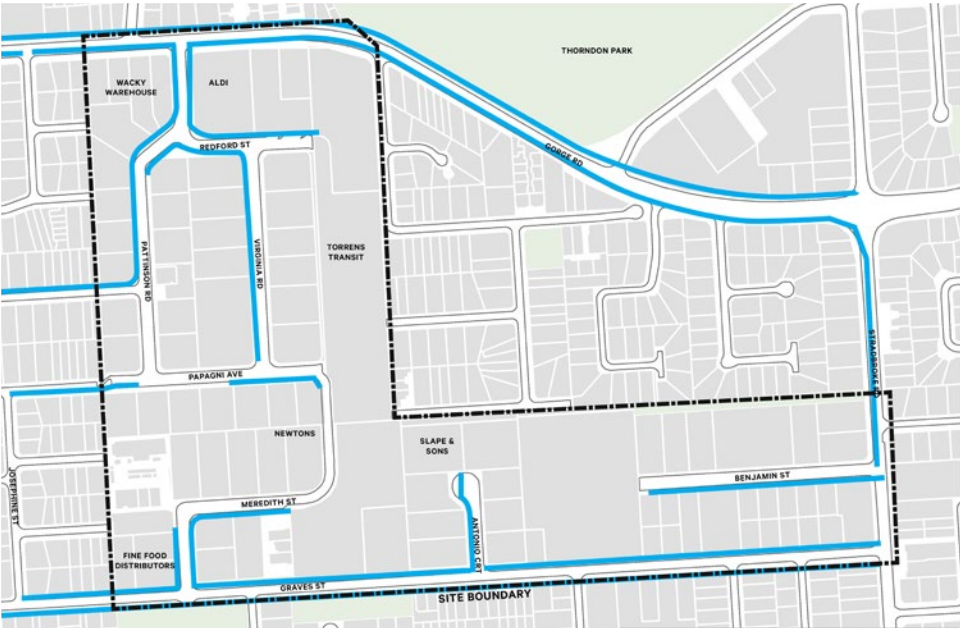


MEREDITH STREET



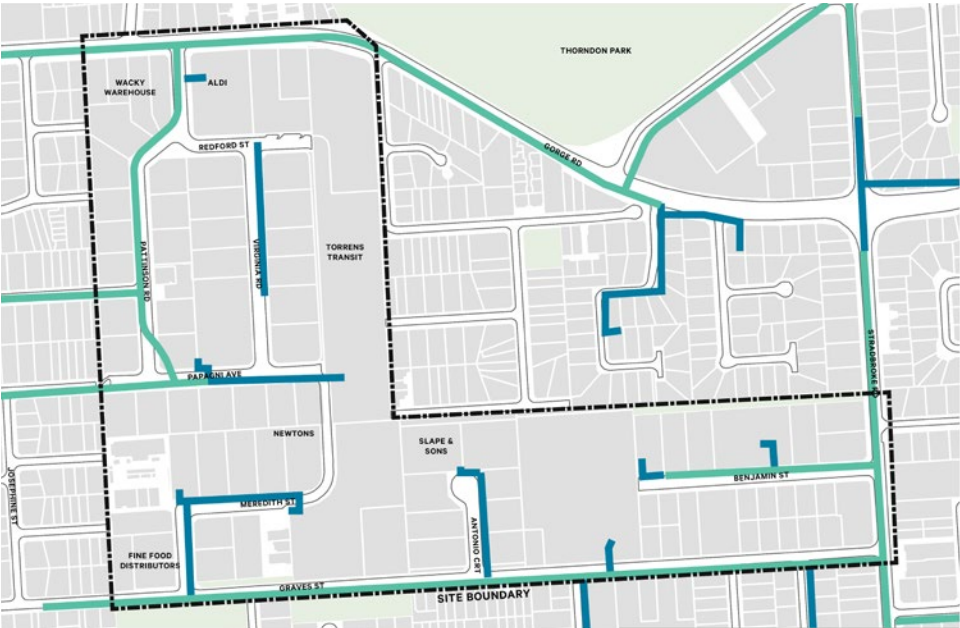
# Existing

## Newton Precinct



Footpaths

- Site Boundary
- Existing Footpath



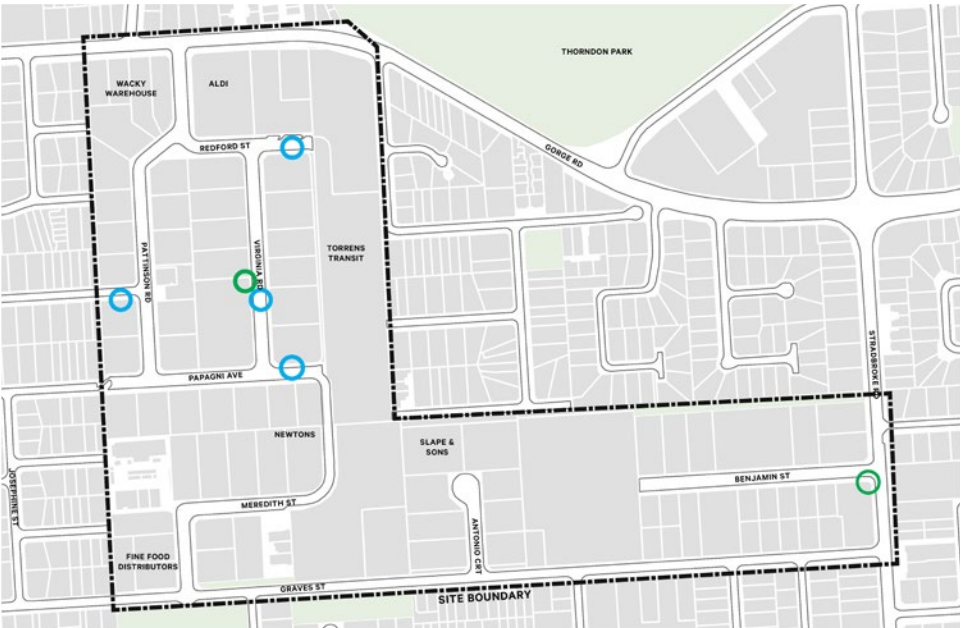
Electrical Services

- Site Boundary
- High Voltage Underground Cable
- SAPN High Voltage Overhead Line



Stormwater

- Site Boundary
- U/G Stormwater Pipe
- Stormwater Node



Large Trees

- Site Boundary
- Existing Large Tree (Private)
- Existing Large Tree (Verge)



Land Development Plan Zone

- Site Boundary
- Mixed Use
- Urban Employment
- Residential



Bike Direct & Bus Stops

- Site Boundary
- On-road Bicycle
- Secondary Bicycle
- Bus Route
- Bus Stop



# Site Character

## Magill Precinct



Generally the existing site character of the Magill precinct is defined by:

- Industrial uses surrounded by residential dwellings.
- Substation located south of the precinct.
- Narrow road reserves and travel lanes.
- Cars parking on the road and within the verge.
- Footpaths located on one side or not at all.
- Large trees located within private properties.
- Occasional medium sized street trees.
- Overhead power lines on one side with some high voltage overhead power lines (Hender Avenue).



HENDER AVENUE



LANGMAN AVENUE

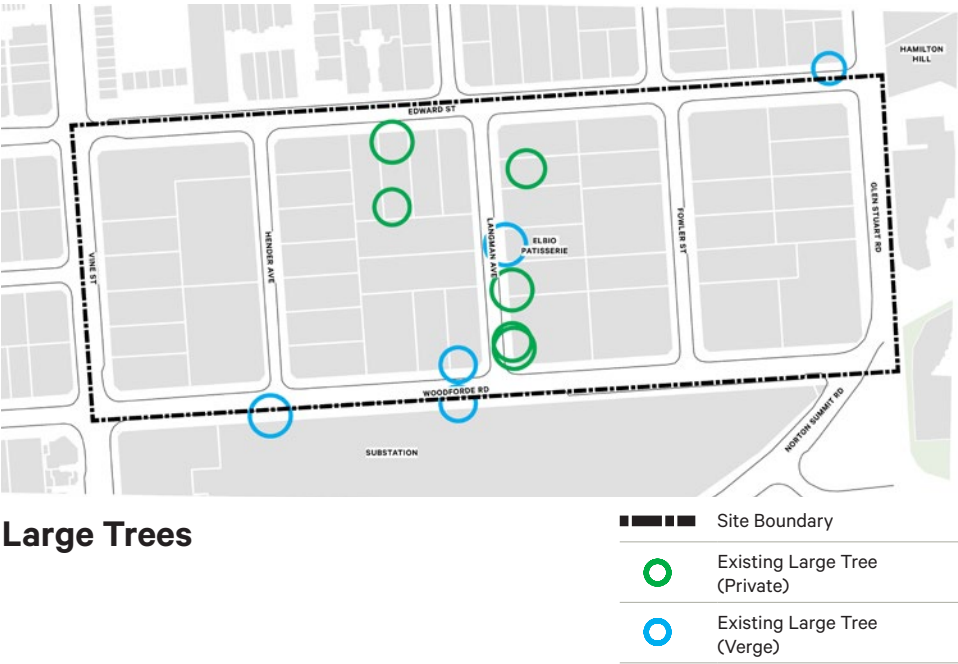
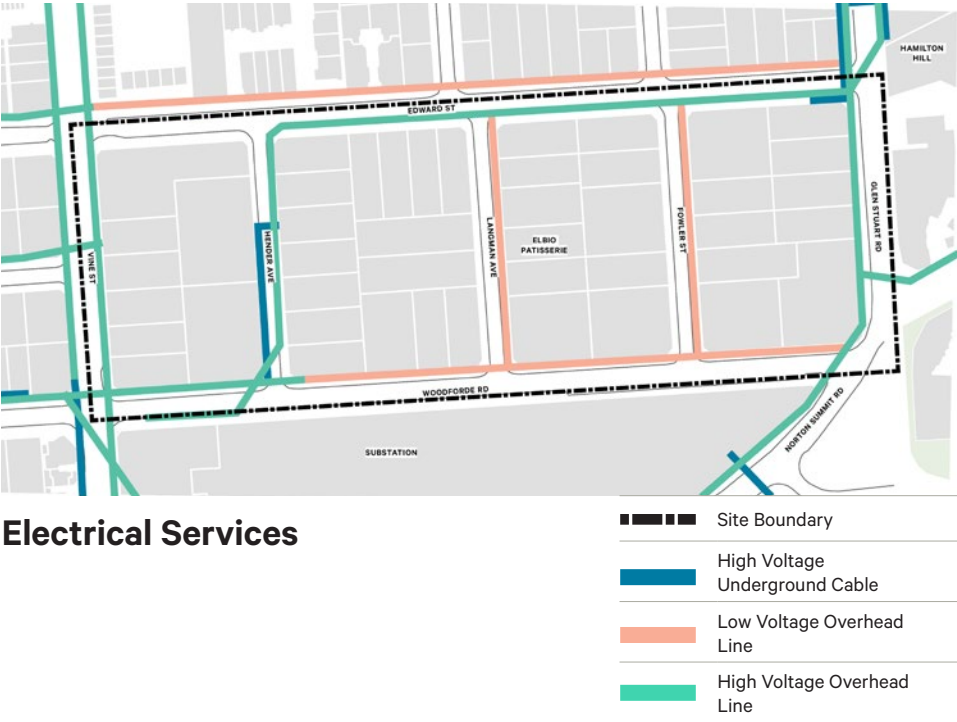
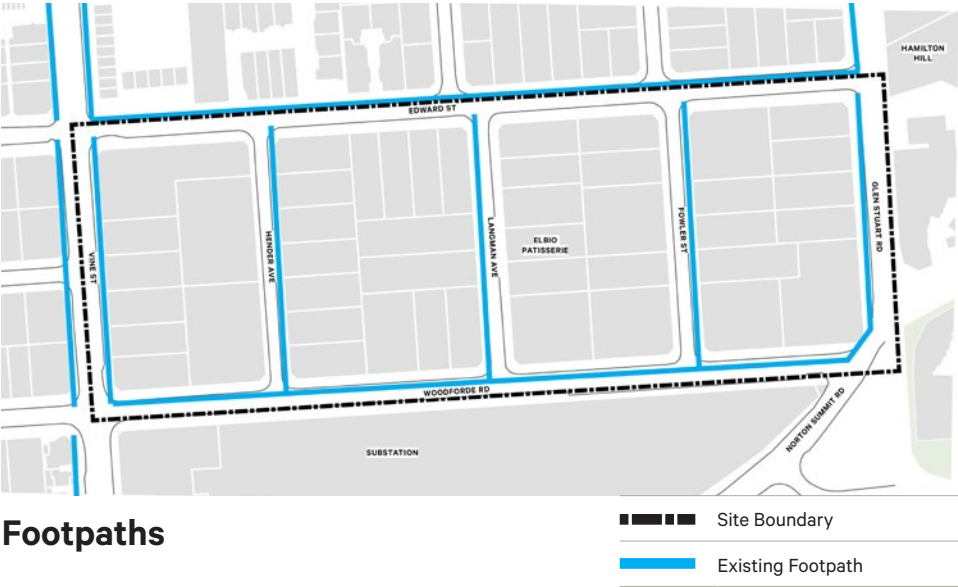


WOODFORDE ROAD



# Existing

## Magill Precinct



# Principles

# Principles

In line with Council’s Economic Development Plan, the protection of our natural environment should be incorporated into the promotion of economic development.



## Sense of Place

The unique sense of place and character of the precincts is reinforced with robust materials and elements that provide a distinctive, consistent and attractive aesthetic.



## Function

Industrial uses within the precincts are supported with the application of functional and robust materials and elements.



## Quality

Public realm quality is supported with a selection of high quality and enduring urban elements.



## Durability

Elements are robust and long lasting. Whole-of-life costs are considered.



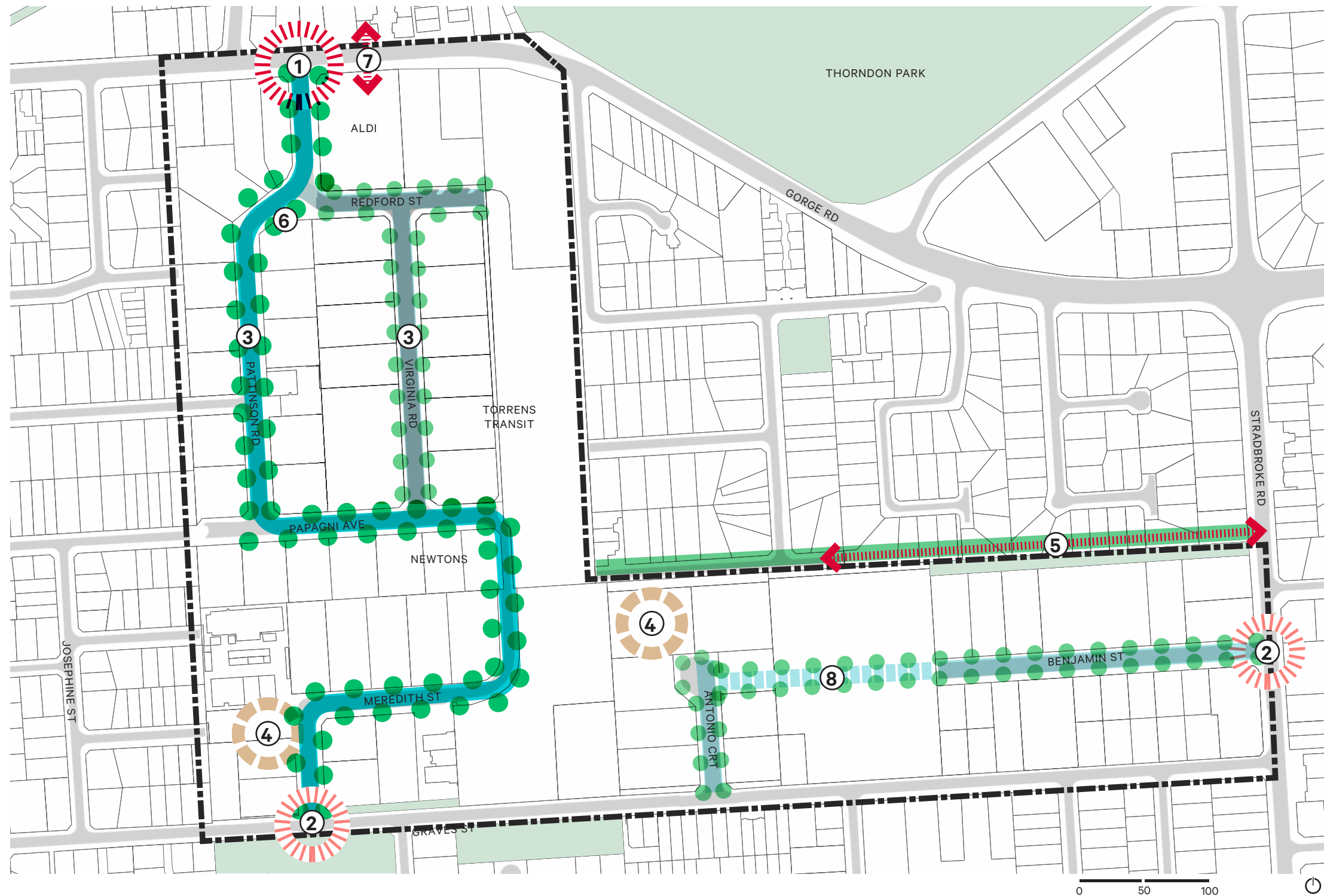
## Maintenance

Maintenance and management requirements are considered to ensure longevity.

# Strategies



# Newton Precinct Strategies



## Key moves

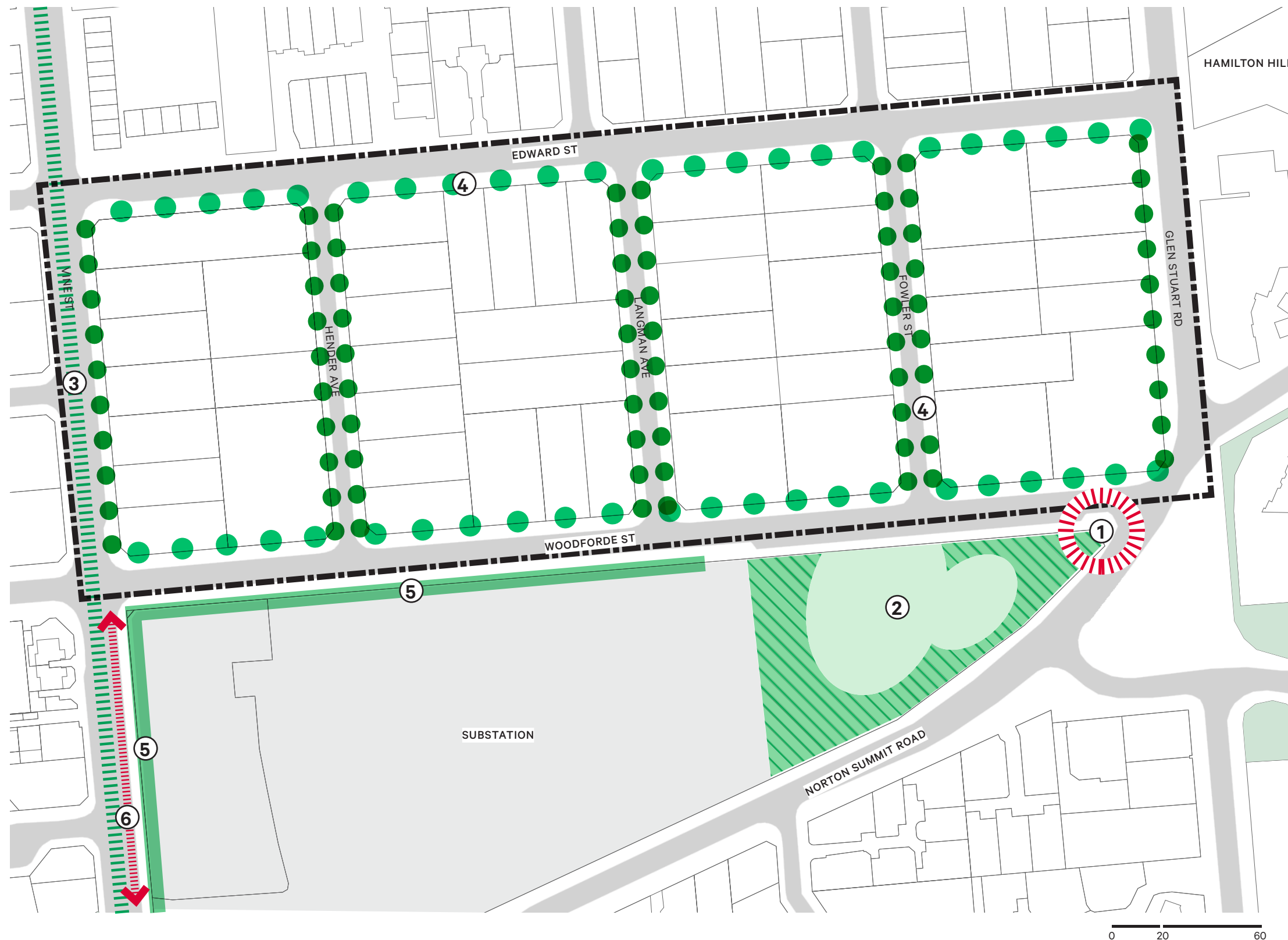
- 1 Incorporate marker entrance sign at Gorge Road.
- 2 Provide entrance signs consistent with Wayfinding Strategy (Light industrial).
- 3 Reinforce a hierarchy of streets supported by wider footpaths and large street trees.
- 4 Reinforce Food Trail destinations (ie. outdoor dining, signage).
- 5 Provide a landscape buffer & pedestrian connection (possible art integration).
- 6 Incorporate up-lighting to existing trees.
- 7 Enhance pedestrian crossings.
- 8 Investigate link between Benjamin Street and Antonio Court (subject to agreement with land owner).

## Other considerations

- Incorporate WSUD opportunities.
- Improve fencing at interface with residential areas.
- Improve fencing to street frontage and residential interface.
- Incorporate bespoke public art and wayfinding.
- Enhance car parking and reinforce safe and functional vehicle access requirements.
- Provide buffer planting between industrial and residential zones.
- Link to other food industry businesses.



# Magill Precinct Strategies



## Key moves

- 1 Provide entrance sign (minor city entrance as per Wayfinding strategy).
- 2 Explore opportunities for open space incorporating native planting and lawn (subject to approval).
- 3 Reinforce Vine Street median planting style and provide rest stops.
- 4 Enhance streets with footpaths to both sides and street trees.
- 5 Provide buffer planting to substation.
- 6 Enhance link to Magill Road.

## Other considerations

- Reinforce Food Trail destinations (ie. outdoor dining, signage).
- Investigate WSUD opportunities.
- Improve fencing to street frontage and residential interface.
- Incorporate dedicated car parking along streets.
- Incorporate bespoke public art and wayfinding (eg. link to market gardens and food history).

# Techniques

# Techniques

Streetscape and public realm techniques are described in the following section.

- Paving
- Verges
- Street trees
- Planting & Water Sensitive Urban Design
- Street lighting
- Public art & up-lighting of trees
- Signage & wayfinding
- Vehicle control

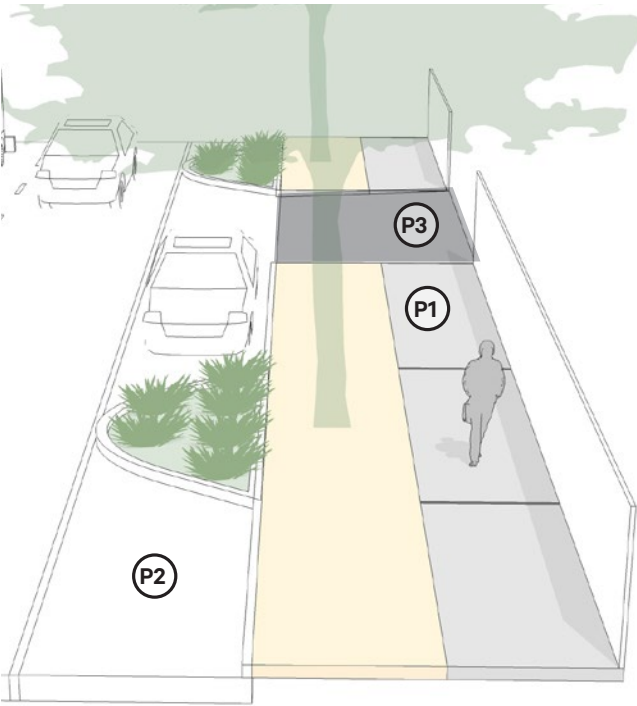


# Paving

## Overview

Paving materials and standards include:

- Concrete unit pavers for use along footpaths.
- Vehicle rated exposed aggregate insitu concrete crossovers.
- Minimum 1.5m wide footpaths.
- Footpaths on both sides of the street.
- Permeable paving adjacent existing trees and WSUD raingardens.



WSUD / PARKING  
VERGE MIN 1.0M  
FOOTPATH 1.5M

## Selections

### P1 Concrete unit paving

Description	'Longo' concrete unit paver.
Colour	Charcoal (80%) & Oyster (20%).
Finish	Light Shot Blast.
Dimension	250mm x 85mm x 60mm.
Supplier	Boral.
Performance requirements	<ul style="list-style-type: none"><li>— Compacted subgrade and base to suit application.</li><li>— Tolerance of max +/- 2mm lippage.</li><li>— To comply with Australian Standards for slip &amp; skid resistance.</li><li>— Not vehicle rated.</li><li>— Stretcher bond pattern with header course.</li></ul>
Maintenance	<ul style="list-style-type: none"><li>— General cleaning.</li><li>— Lift broken/chipped pavers and replace.</li></ul>



EXAMPLE FOOTPATH UNIT PAVING

### P2 Permeable concrete unit paving

Description	'Eco Trihex' concrete interlocking paver.
Colour	Charcoal (80%) & Natural (20%).
Finish	Light Shot Blast.
Dimension	181mm x 188mm x 80mm
Supplier	Adbri.
Performance Requirements	<ul style="list-style-type: none"><li>— Compacted subgrade and base to suit application.</li><li>— To comply with Australian Standards for slip &amp; skid resistance.</li><li>— Heavy vehicle load rated.</li><li>— Install matching Abri 'Hollandstone' header pavers as required.</li><li>— Pemeable pavement adjacent existing trees and WSUD raingardens.</li></ul>
Maintenance	<ul style="list-style-type: none"><li>— General cleaning.</li><li>— Top up Infill of Pave-Lok.</li></ul>



EXAMPLE PERMEABLE PAVING

### P3 Crossovers

Description	Insitu reinforced concrete.
Colour	Charcoal to match P1
Material & Finish	Inverts – smooth steel trowel. Crossover – washed 1mm reveal.
Supplier	Hanson, Premix or equal.
Performance Requirements	<ul style="list-style-type: none"><li>— Compacted sub-base.</li><li>— Invert must be formed from one piece of concrete.</li><li>— To comply with Australian Standards for slip &amp; skid resistance.</li><li>— Tolerance of max +/- 2mm lippage.</li></ul>
Maintenance	<ul style="list-style-type: none"><li>— General cleaning.</li></ul>



EXAMPLE CROSSOVER PAVING

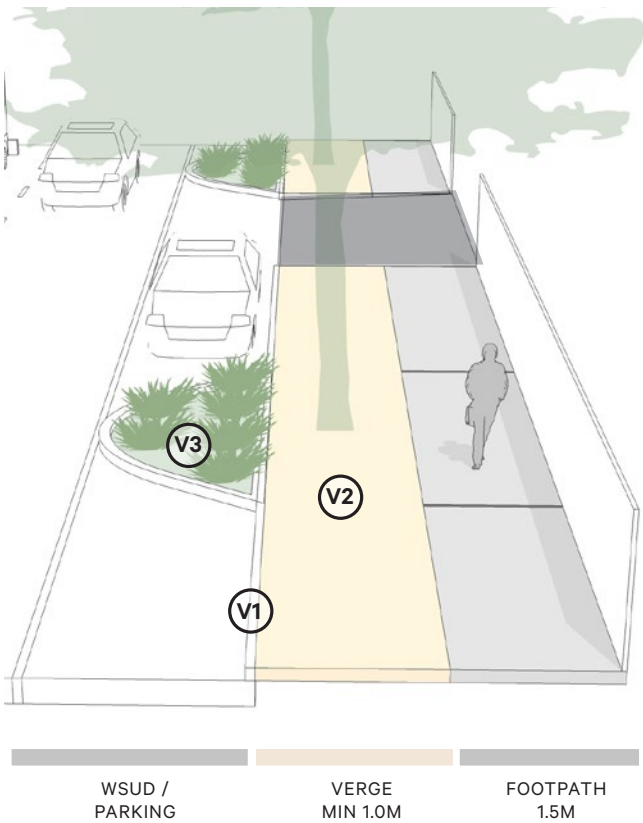


# Verges

## Overview

Verge materials and standards include:

- Compacted granulitic sand verges.
- Barrier kerbs for vehicle control.
- Fitzgeralds gravel within WSUD raingardens.
- Minimum 1.0m wide verges.



## Selections

### V1 Concrete barrier kerb & watertable

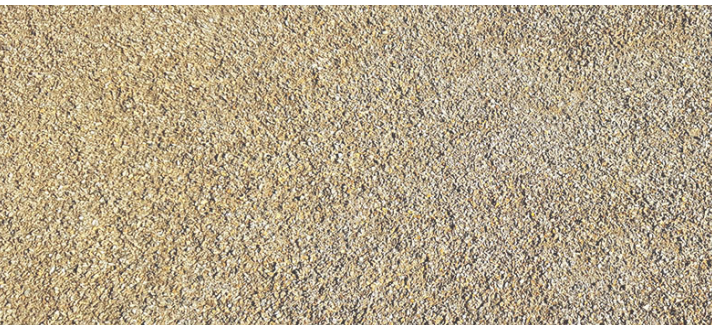
Description	Insitu concrete.
Colour	Portland Grey.
Finish	Smooth steel trowel.
Dimension	— Kerb: 150mm wide x 150mm high. — Watertable: 300mm wide.
Supplier	Various.
Performance requirements	— To Council standards.
Maintenance	— General cleaning.



EXAMPLE KERB & WATERTABLE

### V2 Compacted granulitic sand

Description	8 mm quarry sand with Soil Bond.
Finish	Compacted.
Supplier	Fitzgeralds Quarry.
Performance requirements	— Compacted subgrade to suit application. — Install in flat areas only - max grade 1:50 or 2%. — Lightly tamped within 750mm of adjacent tree.
Maintenance	— Top up infill and compacting as required. — Removal of surface weed growth as required.



EXAMPLE COMPACTED GRANULITIC

### V3 Gravel

Description	40mm gravel.
Supplier	Fitzgeralds Quarry or similar approved.
Performance requirements	— Maintain 75mm depth. — Finish 50mm below adjacent surfaces.
Maintenance	— Clear debris and top-up as required.



EXAMPLE GRAVEL



# Street Trees

## Overview

- A variety of evergreen (north-south) and deciduous (east-west) street tree species are proposed.
- Species are selected to support amenity and a pedestrian friendly environment that encourages walking and cycling.
- Street trees that drop hard seeds and can present a danger to pedestrians are not used.
- Tree health is supported by:
  - Suitable tree pit preparation.
  - Selecting quality advanced tree stock exhibiting good growth and form, including quality root systems.
  - Suitable planting techniques.
  - Suitable placement to avoid vehicle damage.
  - Avoiding compaction around the base of the trees.
- Incorporation of root control barriers.

## Street tree selections

	DECIDUOUS (EAST-WEST)	EVERGREEN (NORTH SOUTH)	FEATURE (IE ENTRANCES)
<i>Acer campestre</i>			
<i>Brachychiton acerifolius</i>			
<i>Brachychiton populneus</i>			
<i>Brachychiton rupestris</i>			
<i>Cercis canadensis</i>			
<i>Corymbia maculata</i>			
<i>Eucalyptus leucoxylon rosea</i> ‘Scarlet’			
<i>Geijera parviflora</i>			
<i>Jacaranda mimosifolia</i>			
<i>Lagerstroemia indica</i>			
<i>Melia azedarach</i> ‘Elite’ (non-fruiting)			
<i>Koelreuteria bipinnata</i>			



*Acer campestre*



*Brachychiton acerifolius*



*Brachychiton populneus*



*Brachychiton rupestris*



*Cercis canadensis*



*Corymbia maculata*



*Eucalyptus leucoxylon rosea* ‘Scarlet’



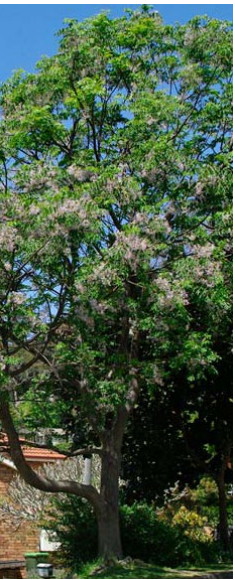
*Geijera parviflora*



*Jacaranda mimosifolia*



*Lagerstroemia indica*



*Melia azedarach* ‘Elite’ (non-fruiting)



*Koelreuteria bipinnata*



# Planting & Water Sensitive Urban Design

## Overview

Planting at key entrances and nodes contributes towards the appearance and structure of the precincts. Planting beds are used to:

- Mark entry points.
- Provide a distinct and recognisable landscape character.
- Enhance amenity and interest.
- Assist stormwater management.
- Support biodiversity.

Water Sensitive Urban Design raingardens located within streets and verges:

- Capture and clean stormwater before it enters the wider network.
- Integrate within the wider street design, strategically located in optimum areas for stormwater collection.
- Provide passive irrigation to planting and street trees.
- Incorporate slotted kerbs and kerb inlets (ie TreeNet).

## Species selections

<i>Agave attenuata</i>
<i>Banksia marginata</i>
<i>Chrysocephalum</i> sp.
<i>Correa</i> sp.
<i>Cyperus</i> sp.
<i>Dianella</i> sp.
<i>Disphyma crassifolium</i>
<i>Ficinia nodosa</i>
<i>Goodenia varia</i>
<i>Grevillea lavandulacea</i> ‘Winter Delight’
<i>Juncus</i> sp.
<i>Lomandra longifolia</i>
<i>Mentha diemenica</i>
<i>Scaevola</i> ‘Purple Fusion’
<i>Senecio serpens</i>
<i>Themeda</i> sp.
<i>Trachelospermum</i> ‘Flat Mat’
<i>Westringia</i> ‘Mundi’

## Desired character



EXAMPLE PLANTING STYLE



# Street Lighting

## Overview

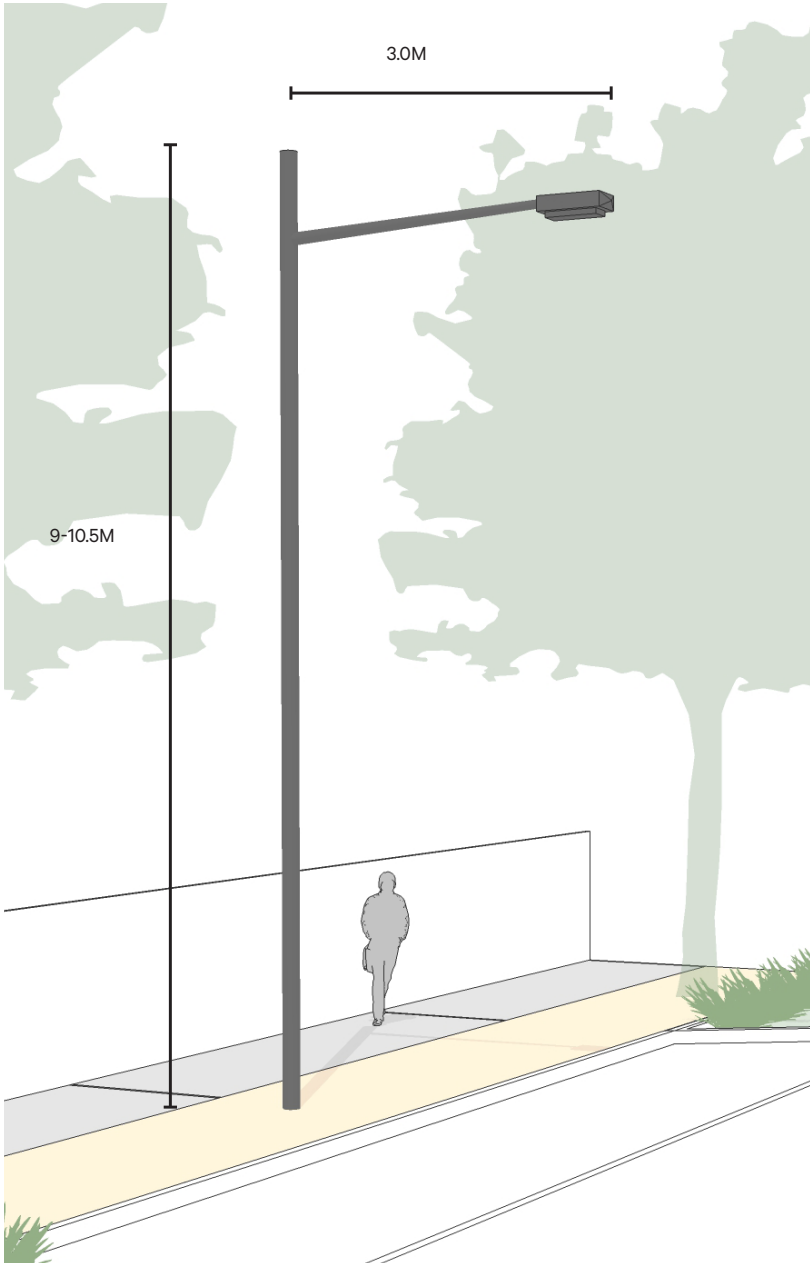
Street lighting within the precincts includes:

- Replacement of existing stand-alone galvanised poles with new bespoke poles and luminaires.
- Installation of new poles where existing lighting does not meet Australian Standards.
- Integration of Smart Technologies within the light poles.
- Retention of existing LED luminaires
- Selection of new luminaires where required to meet SAPN and AEMO requirements.

## Selections

### L1 Street lighting

Description	Street light.
Luminaire	Selection in consultation with SAPN. 3000K colour temperature.
Pole	Shape - 150 diameter straight round. Finish - Painted steel.
Colour	Luminaire & Pole : Equivalent to Dulux 'Charcoal'.
Dimension	Height to meet SAPN requirements.
Performance requirements	<ul style="list-style-type: none"><li>— To meet SAPN and AEMO current requirements.</li><li>— Pole to accommodate Smart Technologies.</li><li>— Stand alone pole (possibly in Newton) or fixed to an existing stobie (possibly in Magill).</li></ul>
Maintenance	<ul style="list-style-type: none"><li>— Replacement of LED lamps.</li><li>— Touch-up painting of poles when damaged.</li></ul>



EXAMPLE STAND-ALONE LIGHT POLE AND LED FITTING

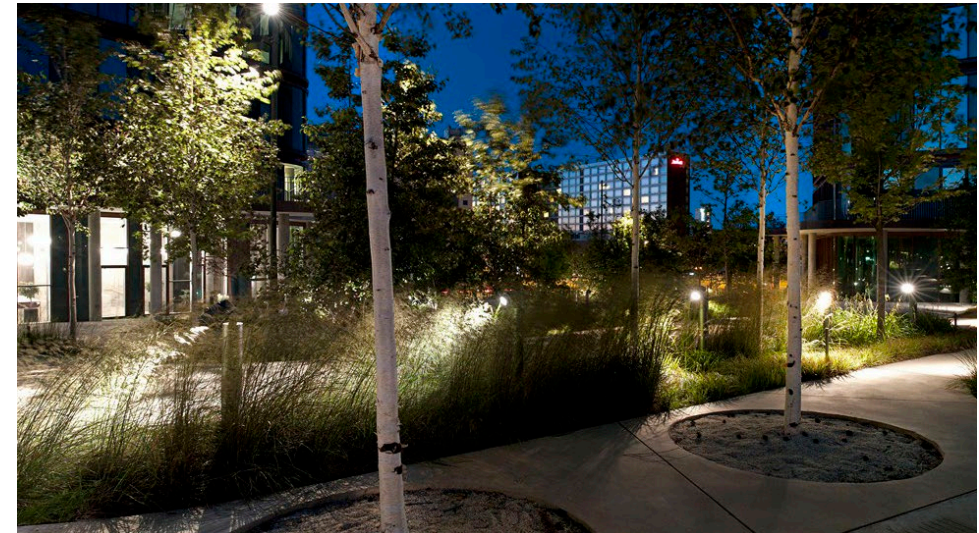
# Public Art & Up-lighting of Trees

## Overview

Public art and up-lighting of trees within each precinct includes:

- Activating places by providing an original, innovative and stimulating environment.
- Linking and highlighting places of interest, including the Food Trail.
- Integrating public art with other public realm elements, including fencing, paving, lighting, facades, structures and wayfinding.
- Up-lighting significant trees at key destinations.

## Desired character



EXAMPLE PUBLIC ART AND UP-LIGHTING OF TREES



# Precinct Identity

## Overview

A unique signage suite has been developed by Council for each precinct that is recognisable and unique. In addition to Council’s signage, an opportunity has been identified for incorporation of a bespoke entrance sign for the Newton precinct.

Signage within the precincts:

- Provides opportunities for unique branding.
- Is distinctive and bold.
- Is strategically located.
- Is integrated with the landscape.
- Supports the Campbelltown Food Trail.
- Incorporates lighting.
- Incorporates ‘Industry and Innovation Precinct tag line’.

## Council standard signage



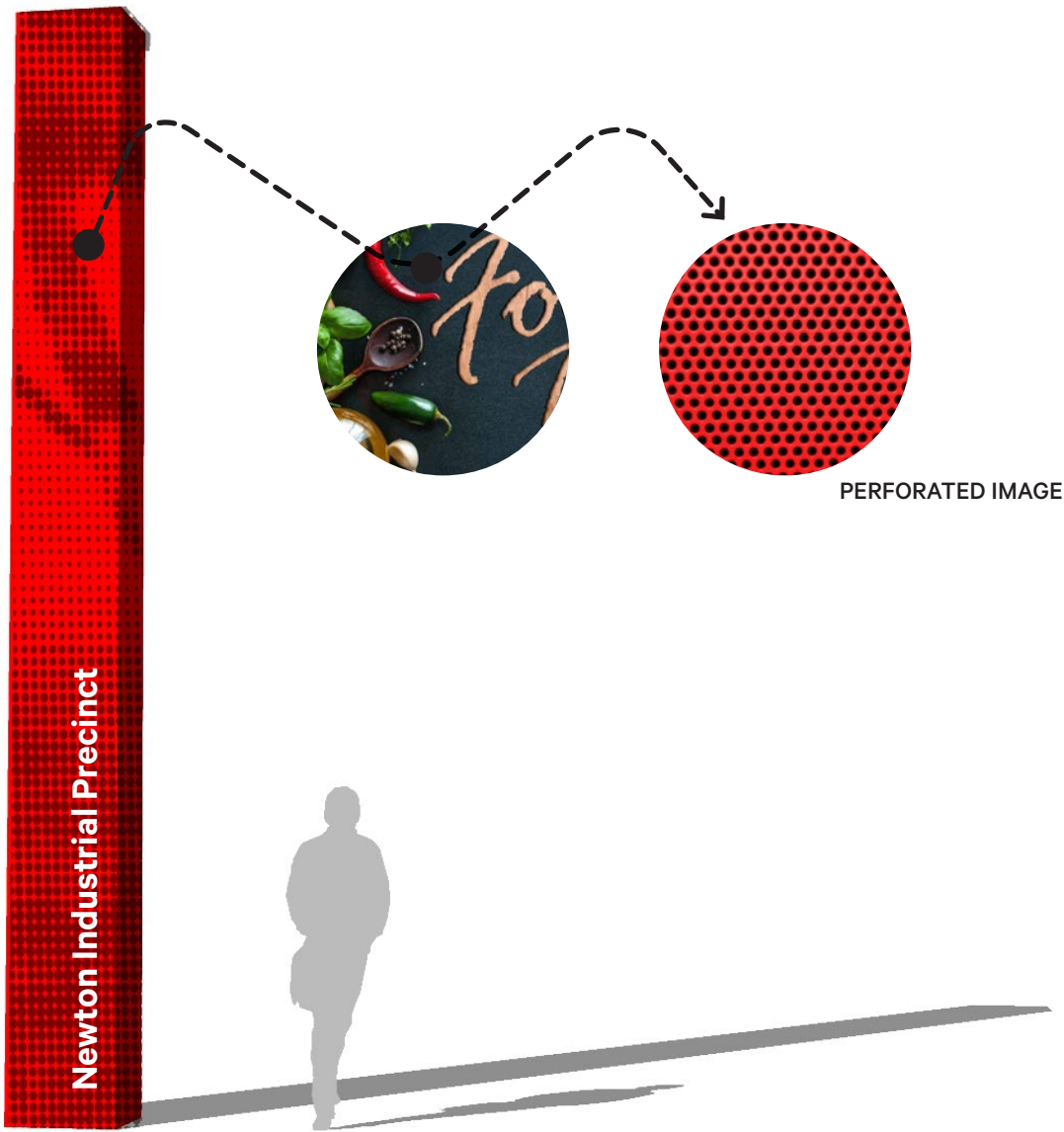
COUNCIL STANDARD SIGNAGE



COUNCIL STANDARD FINGERBOARD

## Possible additional bespoke signage

Integration of existing colours and branding at Newton



EXAMPLE BESPOKE ENTRANCE MARKER POSSIBLY INSTALLED WHERE FOOD TRAIL BUSINESSES ARE CLUSTERED



# Vehicle Control

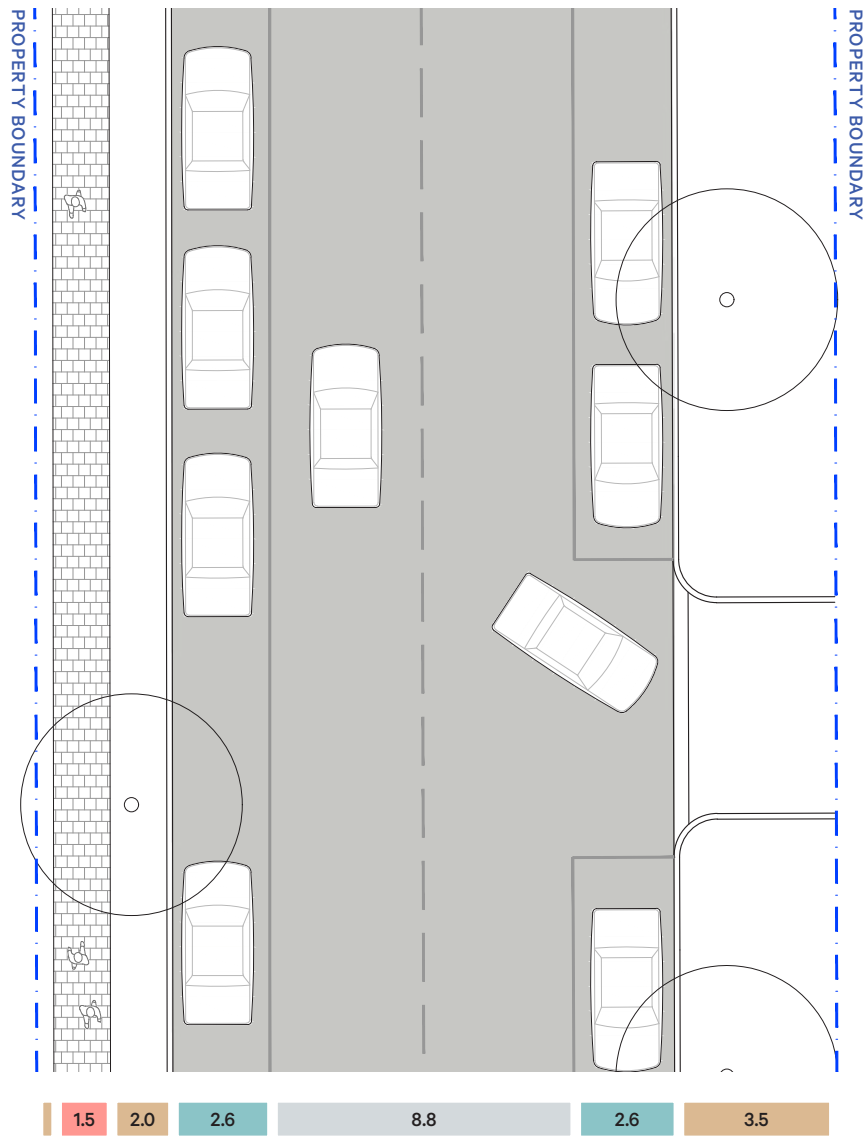
## Newton Precinct

### Opportunities

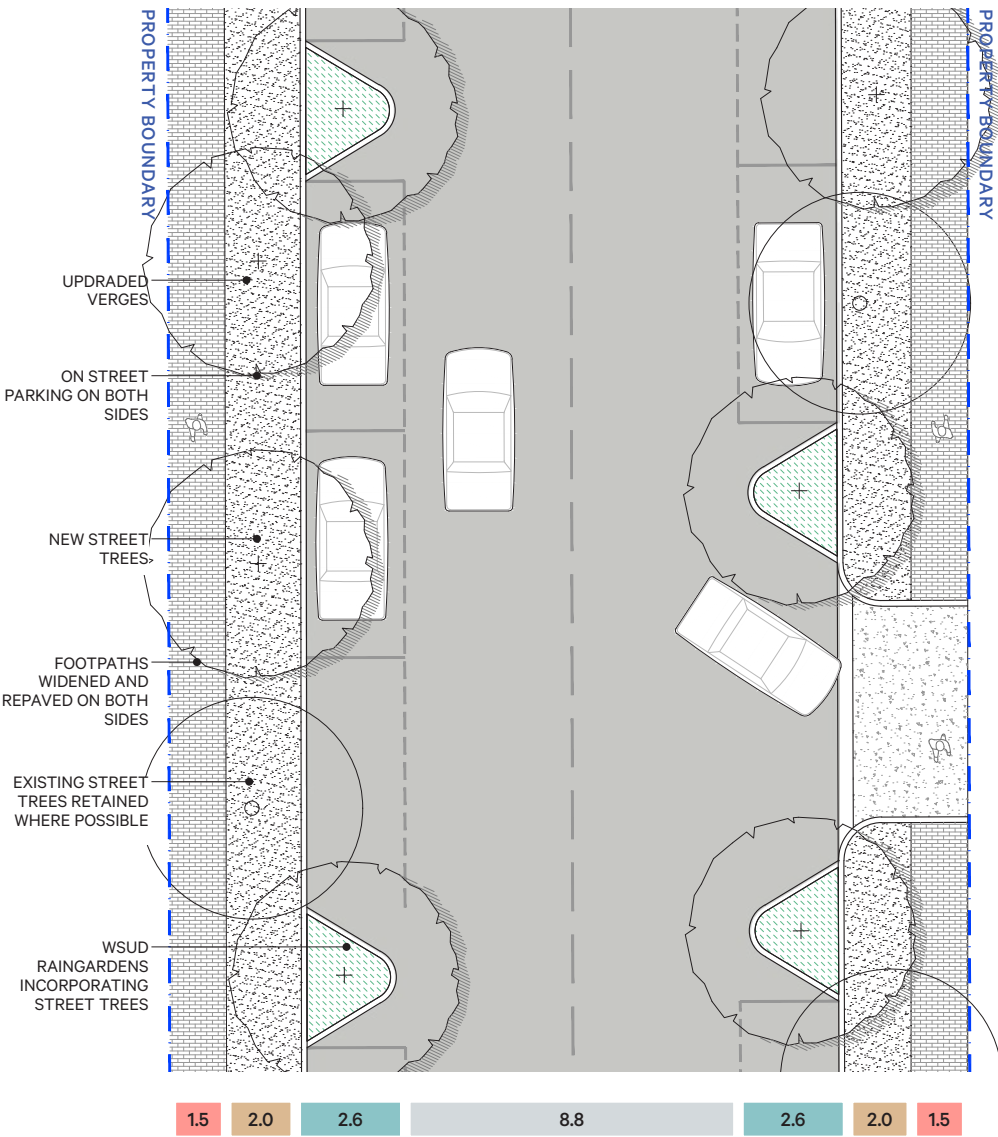
Vehicle control and car parking in the Newton precinct includes:

- Providing dedicated parallel parking.
- Incorporating Water Sensitive Urban Design raingardens to capture and filter stormwater.
- Incorporating wide parking bays to accommodate service vehicles.
- Providing barrier kerbs (250-300mm high) to prevent vehicles from accessing the verge where required.
- Incorporating cycling infrastructure and promotion.

### Typical existing



### Possible parking alternative



**LEGEND**

- FOOTPATH
- VERGE
- WSUD / PARKING
- TRAVEL LANE
- PROPERTY BOUNDARY

# Vehicle Control

## Magill Precinct

### Overview

Vehicle control and car parking in the Magill precinct includes:

- Providing one way access and parallel on-street and indented car parking along Hender Avenue, Langman Avenue and Fowler Street.
- Providing angled parking within the Glen Stuart Road verge.
- Incorporating Water Sensitive Urban Design raingardens to capture and filter stormwater.
- Providing kerbs to prevent vehicles from accessing the verge.

Note: Further analysis and consultation to be undertaken regarding specific road requirements for local delivery trucks.



### LEGEND

- EXISTING INDENTED ON-STREET PARKING
- POSSIBLE INDENTED ON-STREET PARKING
- POSSIBLE ONE WAY STREETS

# Hender Avenue

## Magill Precinct

### Overview

Hender Avenue is typically characterised by the following:

- Narrow road reserve (typically 11.2m wide) and travel lanes (6m wide).
- High voltage overhead power lines on the eastern side.
- Occasional street trees along the western side comprising native and exotic species.
- Footpath on the eastern side.
- Restricted parking on the eastern side (no standing between 8am-5pm).

### Opportunities

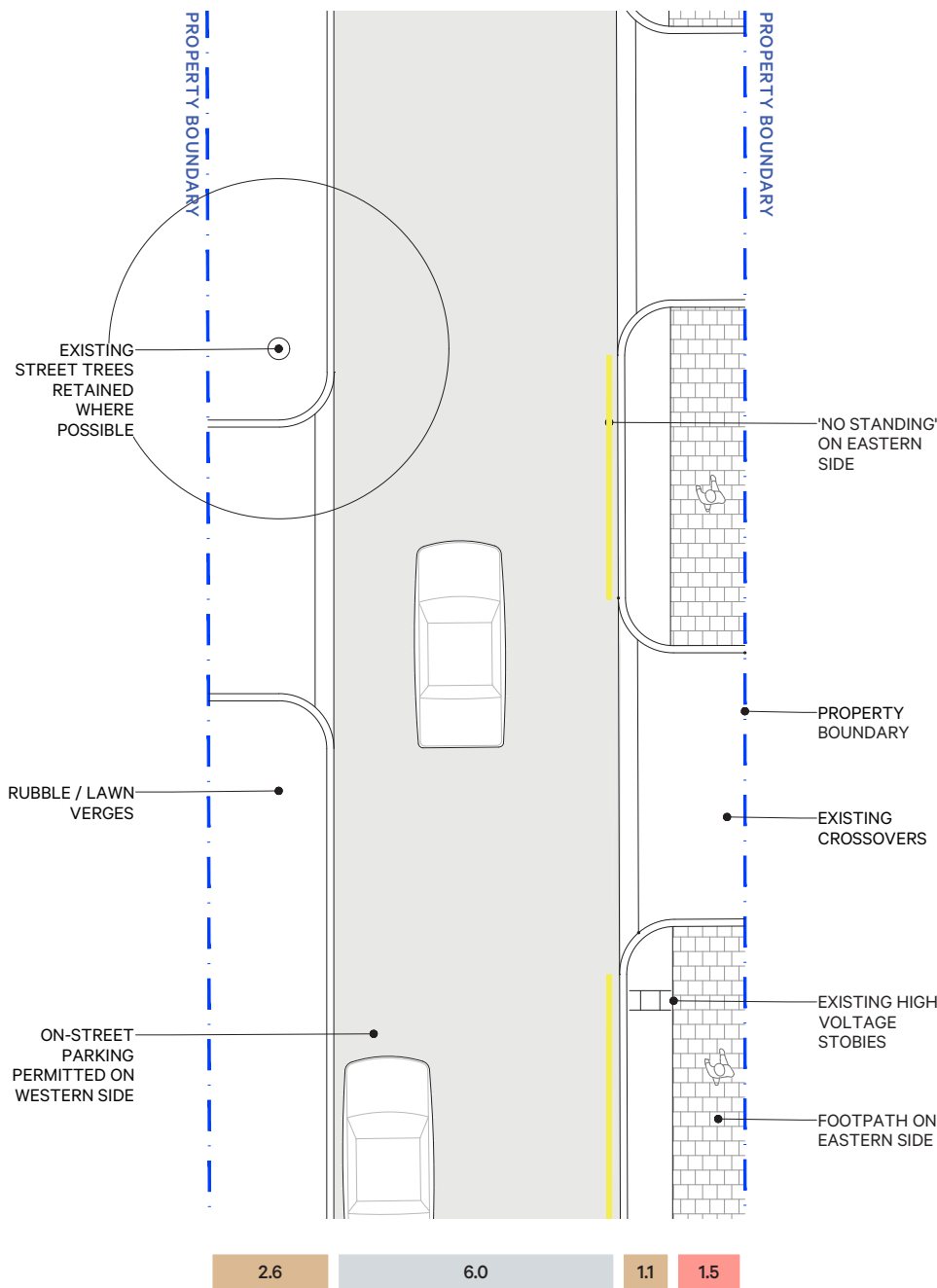
Vehicle control along Hender Avenue includes:

- One-way vehicle movement (direction to be confirmed).
- Indented parking on western side (up to 8 spaces).
- On-street parking on eastern side (up to 9 spaces).
- Verge and footpath upgrades consistent with techniques described in part 5 of this report.

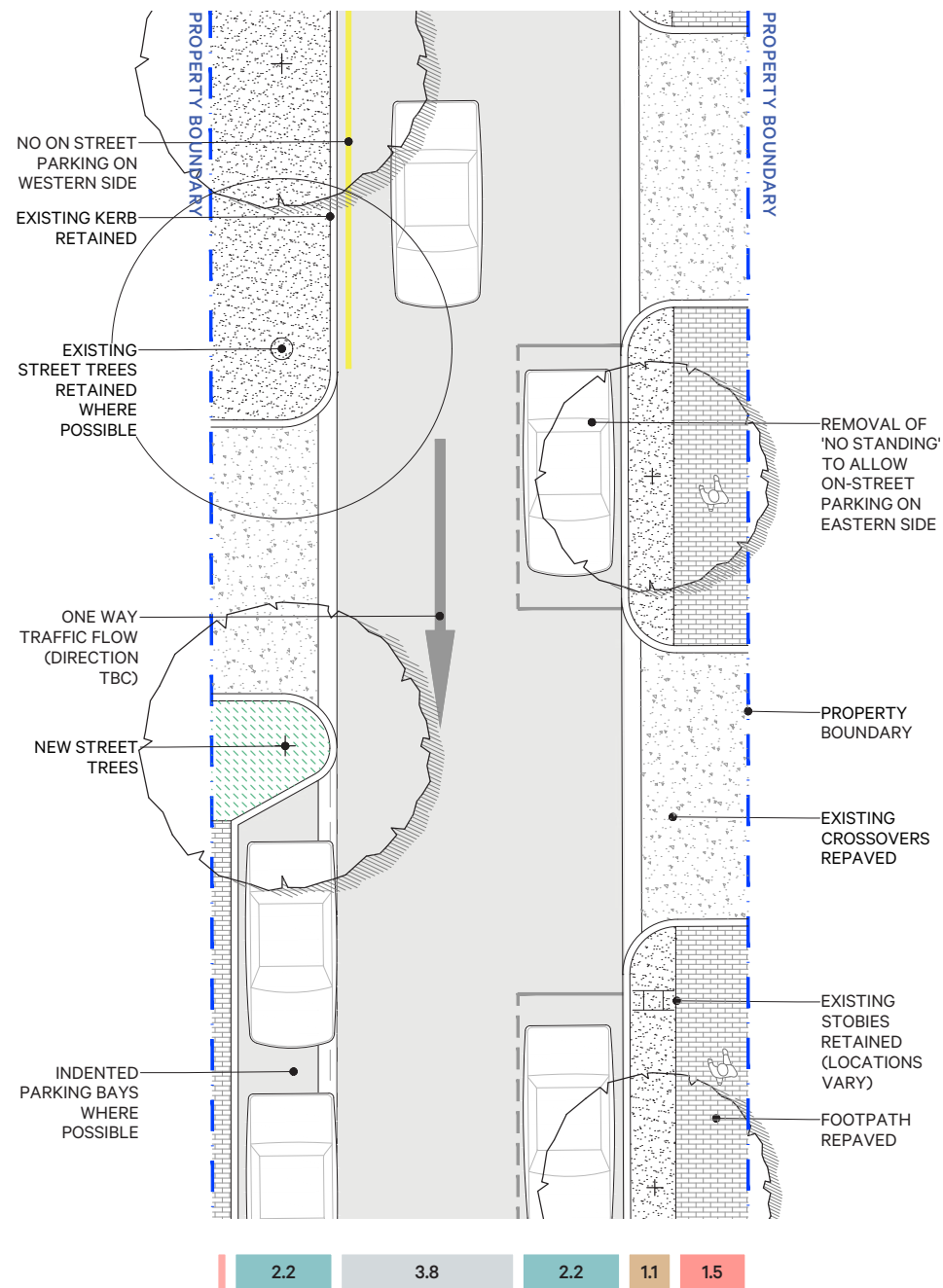
#### LEGEND

- FOOTPATH
- VERGE
- WSUD / PARKING
- TRAVEL LANE
- PROPERTY BOUNDARY

### Typical existing



### Possible alternative



# Langman Avenue

## Magill Precinct

### Overview

Langman Avenue is typically characterised by the following:

- Typically wider road reserve (15.3m wide) and travel lane (9m wide).
- Overhead power lines on the eastern side.
- Occasional street trees along both sides comprising native and exotic species.
- Footpath on the western side.
- On-street parking on both sides.

### Opportunities

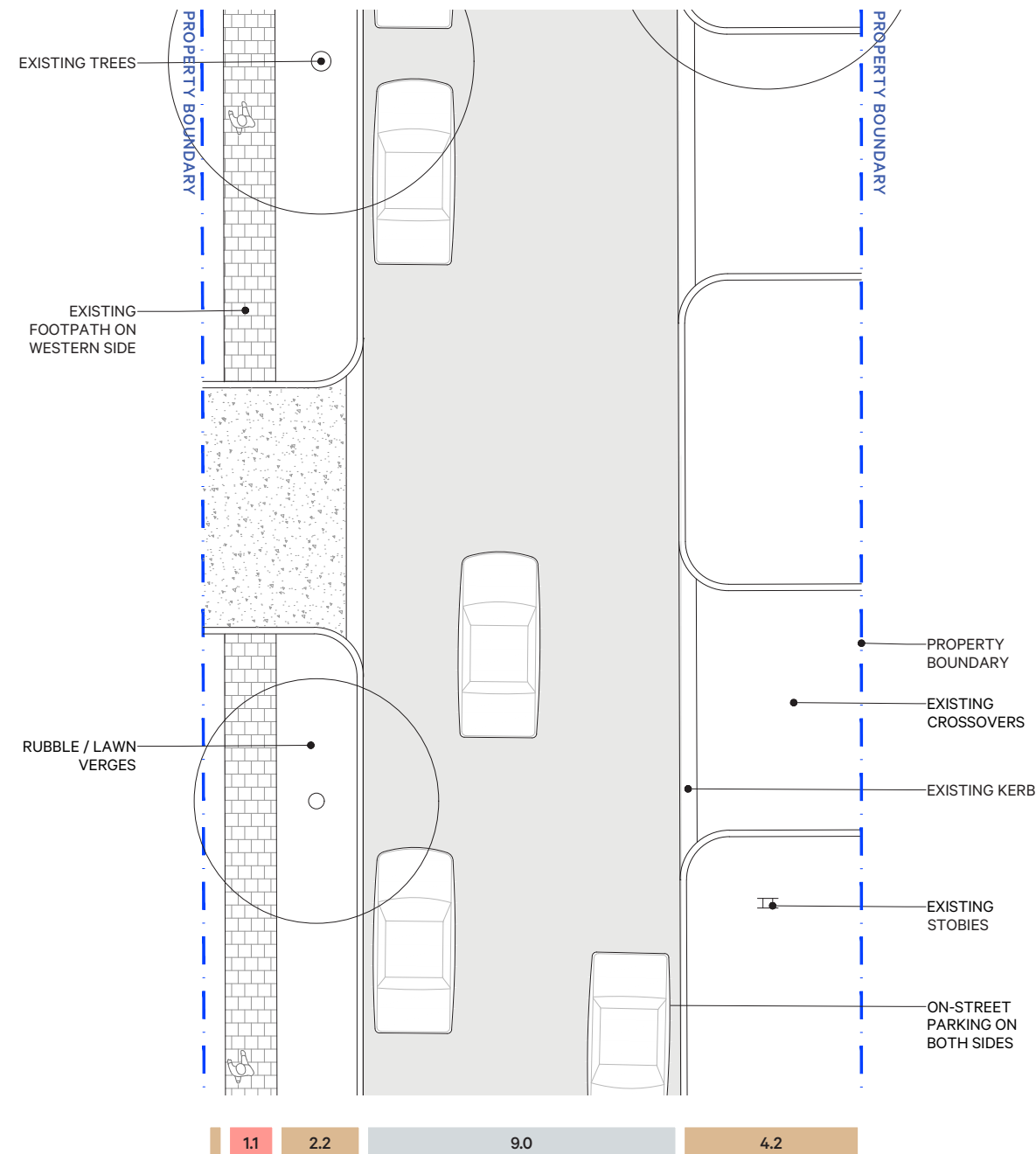
Vehicle control along Langman Avenue includes:

- One-way vehicle movement (direction to be confirmed).
- New kerb on the eastern side to accommodate on-street parking (up to 13 spaces).
- On-street parking on the western side (up to 15 spaces).
- Verge and footpath upgrades consistent with techniques described in part 5 of this report.

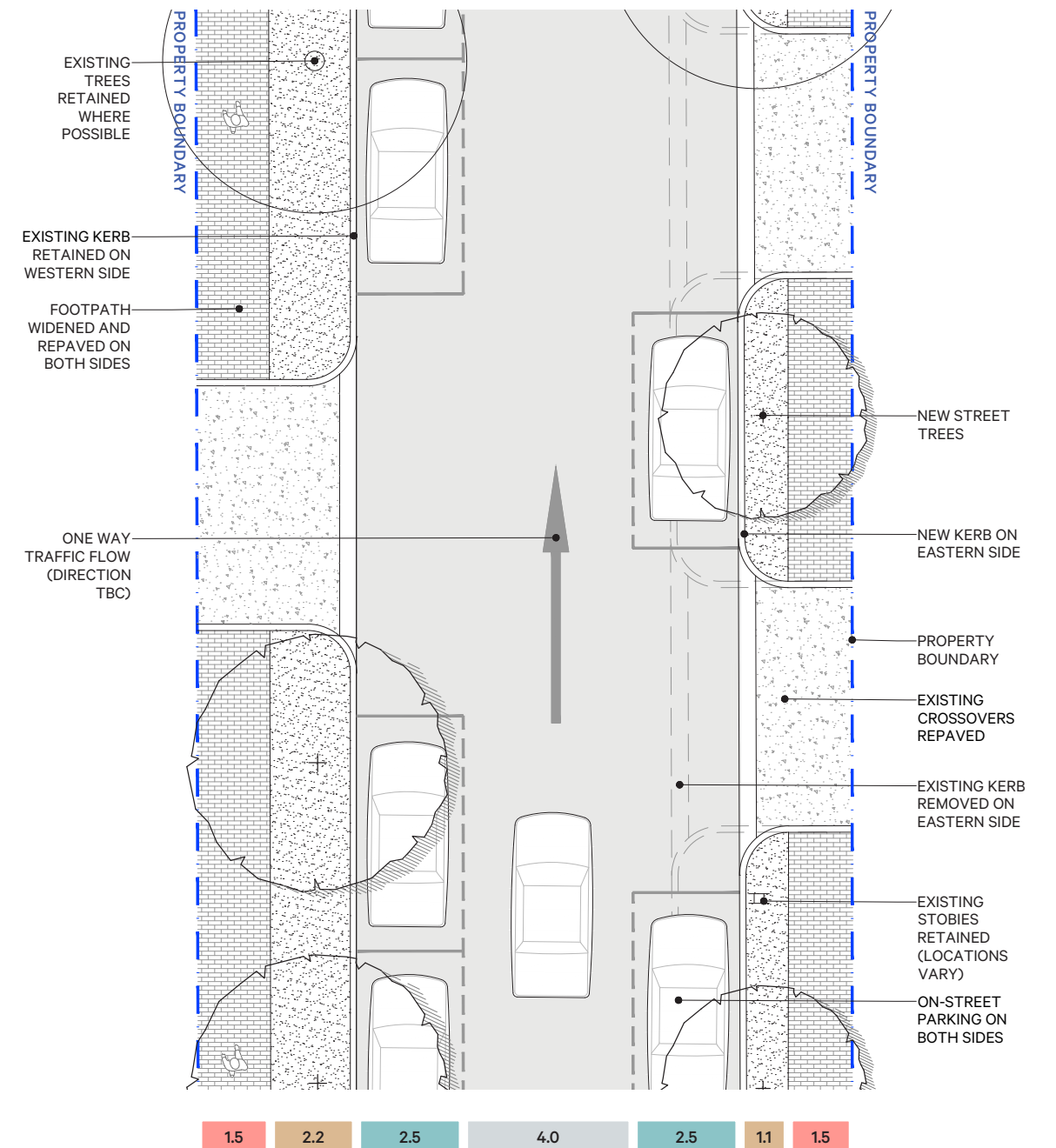
#### LEGEND

- FOOTPATH
- VERGE
- WSUD / PARKING
- TRAVEL LANE
- PROPERTY BOUNDARY

### Typical existing



### Possible alternative





# Fowler Street

## Magill Precinct

### Overview

Fowler Street is typically characterised by the following:

- Road reserve width of 15.3m with 9m wide travel lane.
- Overhead power lines on eastern side.
- Occasional street trees along both sides comprising native and exotic species.
- Footpath on eastern side.
- On-street parking on both sides.

### Opportunities

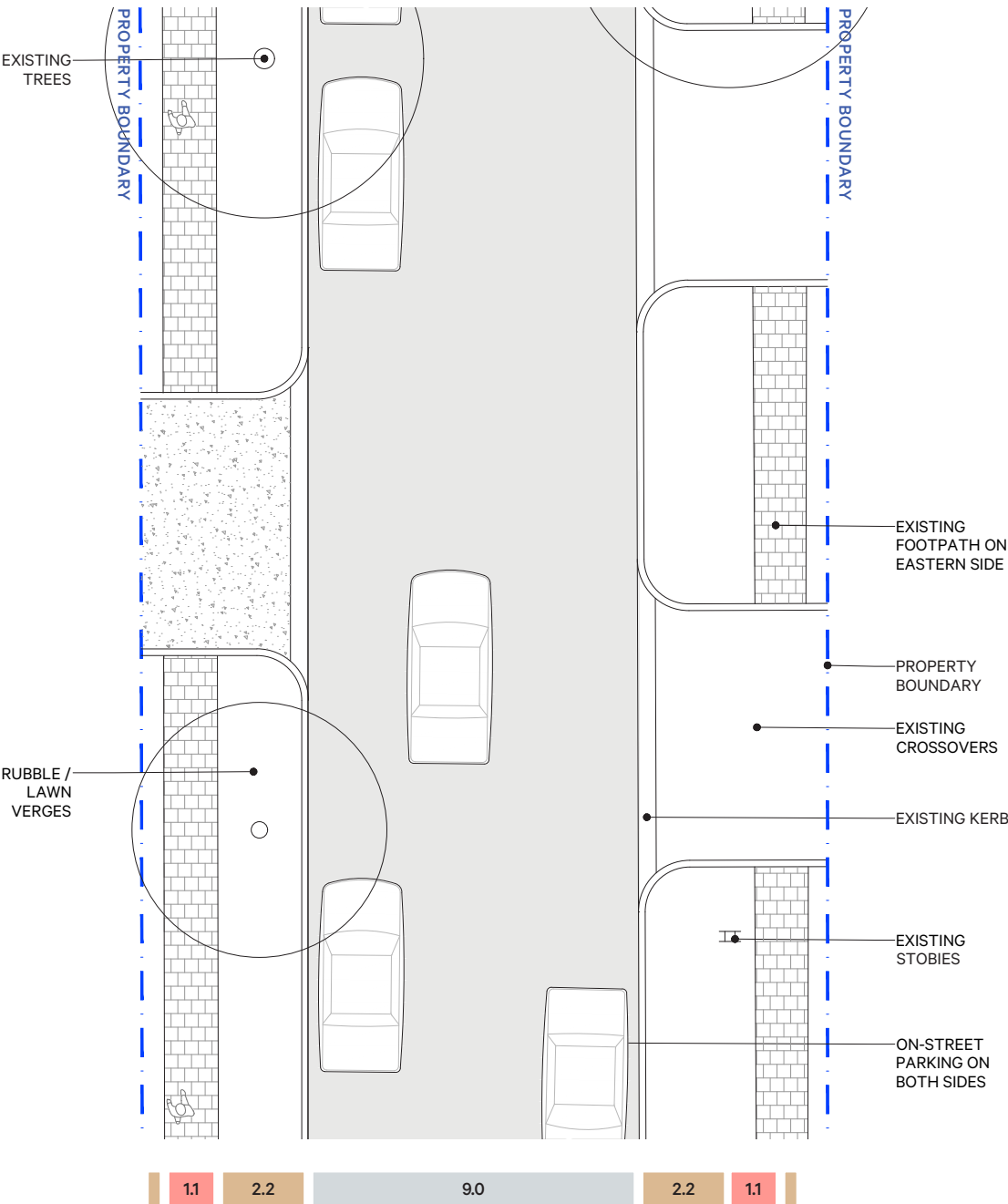
Vehicle control along Fowler Street includes:

- One-way vehicle movement (direction to be confirmed).
- On-street parking on the western side (up to 14 spaces).
- Indented parking on the eastern side (up to 11 vehicles).
- Verge and footpath upgrades consistent with techniques described in part 5 of this report.

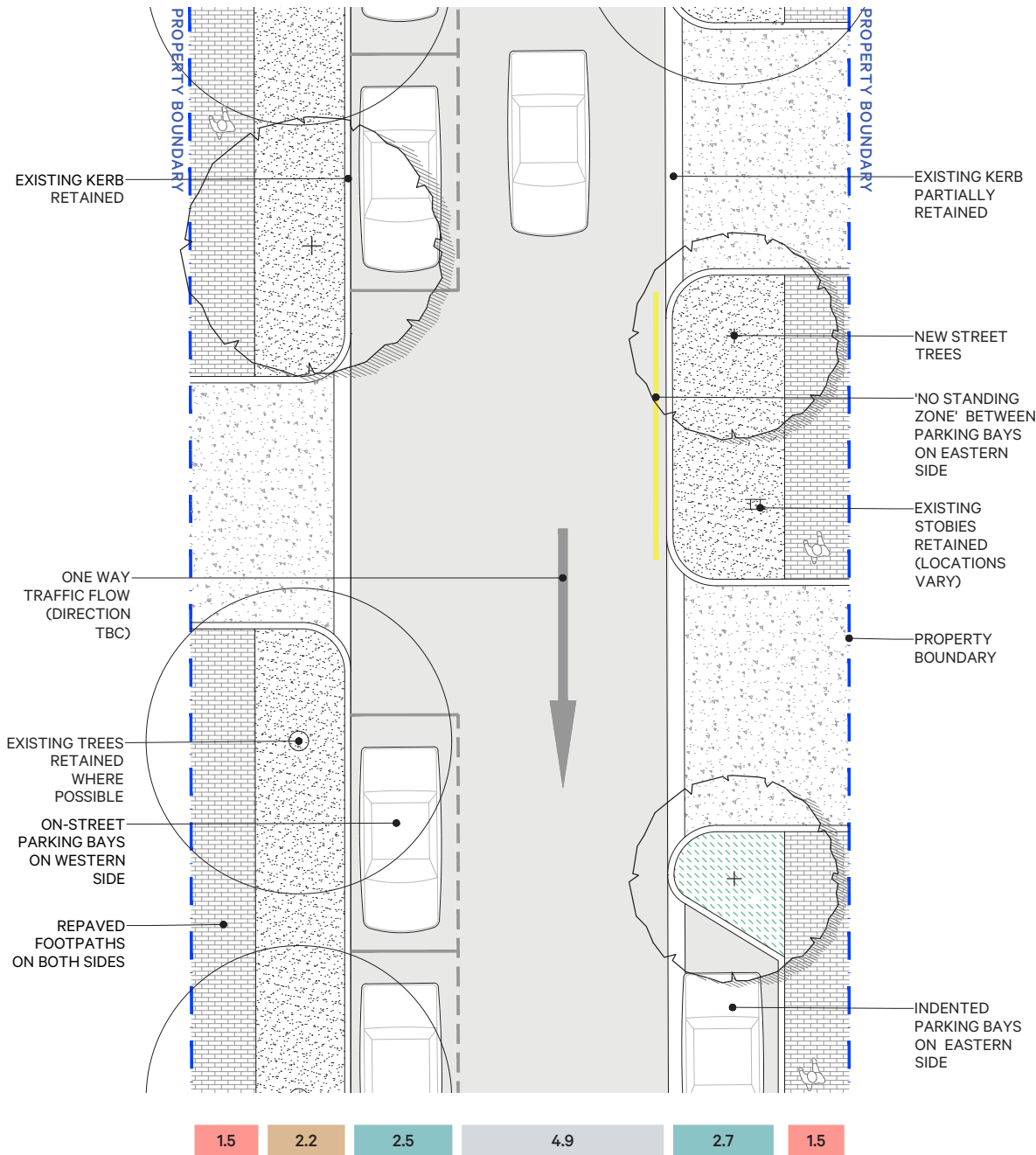
#### LEGEND

- FOOTPATH
- VERGE
- WSUD / PARKING
- TRAVEL LANE
- PROPERTY BOUNDARY

### Typical existing



### Possible alternative



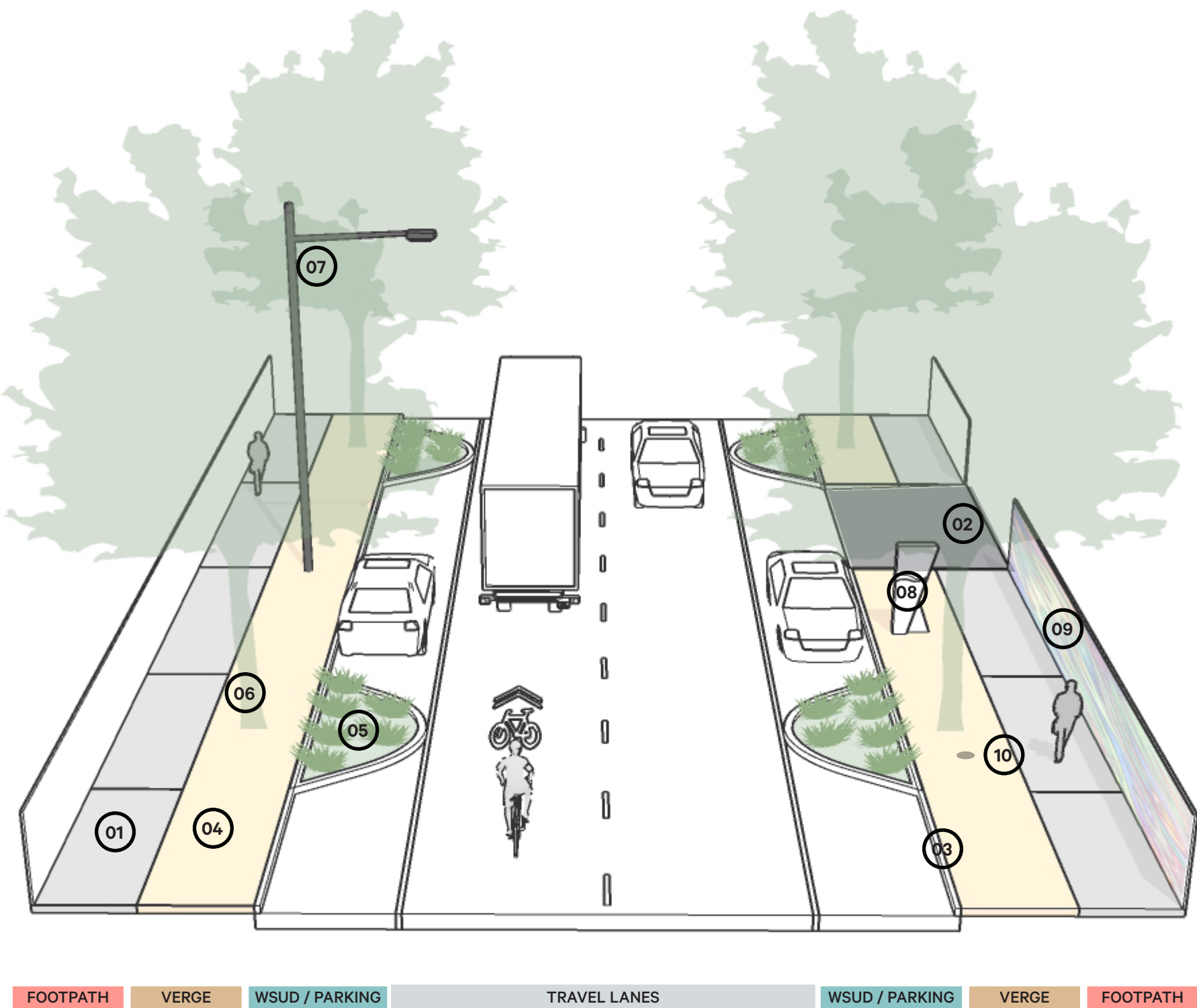
# Applying the Techniques

# Newton Precinct

## Key moves

- 01**  
Continuous paved footpaths on both sides of the street (P1).
- 02**  
Robust washed insitu reinforced concrete crossovers (P3).
- 03**  
Barrier kerbs to prevent vehicles accessing the verge (V1).
- 04**  
Compacted granulitic sand verges (V2).
- 05**  
Water Sensitive Urban Design raingardens incorporating gravel mulch (V3).
- 06**  
Street trees for shade and amenity.
- 07**  
LED street lighting for safety and comfort (L1).
- 08**  
Signage to reinforce precinct identity.
- 09**  
Opportunities for public art (fences and tree borders).
- 10**  
Feature up-lighting.

Refer Pg 18-19 for paving/verge selections.

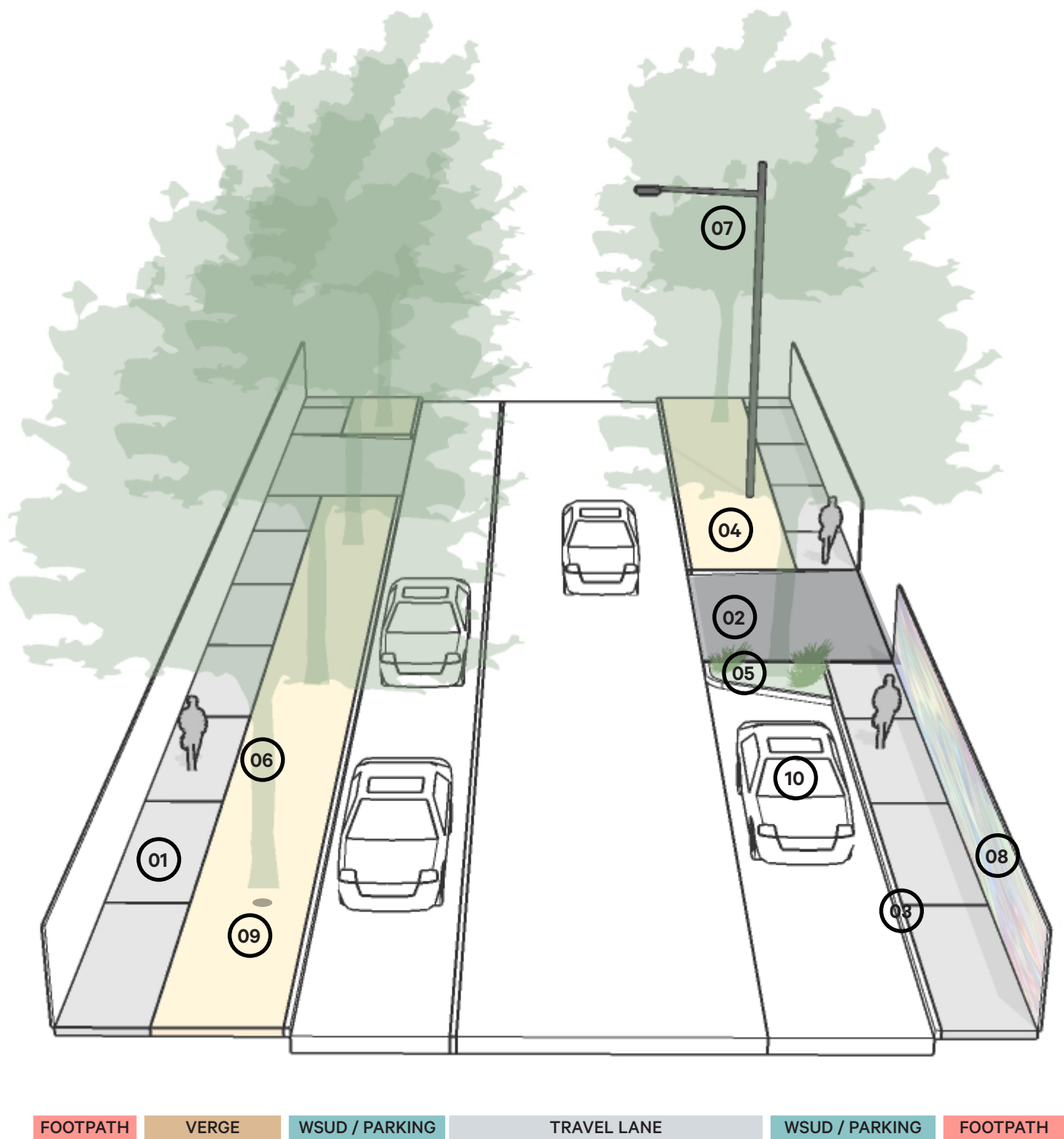


# Magill Precinct

## Key moves

- 01**  
Continuous paved footpaths on both sides of the street (P1).
- 02**  
Robust washed insitu reinforced concrete crossovers (P3).
- 03**  
Barrier kerbs to prevent vehicles parking within the verge (V1).
- 04**  
Compacted granulitic sand verges (V2).
- 05**  
Water Sensitive Urban Design raingardens (V3).
- 06**  
Street trees for shade and amenity.
- 07**  
LED street lighting for safety and comfort (L1).
- 08**  
Opportunities for public art.
- 09**  
Opportunities for feature up-lighting.
- 10**  
On-street parallel parking

Refer Pg 18-19 for paving/verge selections.





# oxygen<sup>®</sup>

People, nature and space.

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