

Warners Bay

Mount Hutton

Swansea

Toronto

Morriset

GLENDALE STREETScape MASTER PLAN

Version 2 Revised Adopted

Draft for Approval

~~VERSION 1 - ADOPTED BY COUNCIL - 27th JUNE 2016 - PM14/0075~~



Belmont

Cardiff

Charlestown



1. Lifestyle 2030.
Broad planning vision for Lake Macquarie for managing population and employment
Lake Macquarie City Council - Adopted 11 March 2013

2. Lake Macquarie Local Environmental Plan 2014 (LMLEP 2014)
Land use zones and permissible uses within Lake Macquarie
Lake Macquarie City Council - Adopted 13 May 2013.

3. Lake Macquarie Development Control Plan (DCP 2014)
General guidelines for development within Lake Macquarie
Lake Macquarie City Council – Adopted 11 June 2013.

4. Area Plans
Specific guidelines for development within town centres.

Lake Macquarie City Council - Contained within the Town Centre Area Plans - Glendale Regional Centre, Adopted December 2015 and the DCP.

5. Streetscape Master Plans
Streetscape planning within town centres
Lake Macquarie City Council

6. Streetscape Technical Guidelines
Details and installation requirements for town centres
Lake Macquarie City Council – Under development

Note:
Check LMCC website www.lakemac.com.au for current versions of planning control documents.

Owner: Asset Management
Users: All Council Staff, the community and developers.
Prepared by: City Design - City Projects

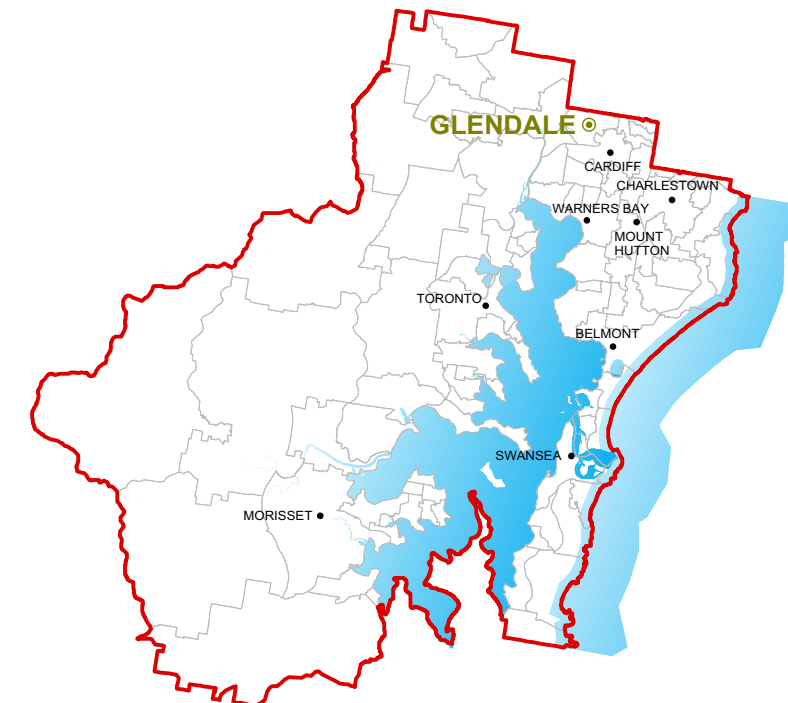
Issue	Ver.	Date	Notes
Adopted	1	2016 - JUN	Adopted by Council
Adopted Revised	2	2017 - Dec	Revised following adoption of Glendale Area Plan Rev 16 and the Glendale Streetscape Technical Guidelines

LAKE MACQUARIE TOWN CENTRE STREETSCAPE MASTER PLANS

The 2008/2009 Management Plan and Budget identified the need to provide high quality public domains and a city identity. The Streetscape Master Plans provide a document that identifies this vision and provides a plan for its implementation. The Streetscape Master Plans are intended to improve the aesthetic appearance of the town centres, promote the areas personality, increase opportunity, accessibility, functionality, economic effect and provide a modern easily maintainable public domain. The Streetscape Master Plans ensure a unified approach to undertaking public domain works by Council, developers and the community. They can also assist in directing public and private investments and will inform the chamber of commerce in the preparation of strategic plans. The Streetscape Master Plans are substantially focused on the areas **currently zoned B1 Neighbourhood and B2 Local Centre** ~~under the Lake Macquarie LEP 2014.~~ These are the areas of each of the town centres where the majority of commercial activity will occur. These areas are also the most likely to undergo change in the future.

The consideration and collation of all relevant issues resulted in this overall priority order for the Streetscape Master Plans for Lake Macquarie City's nine major town centres:

1. Charlestown - ~~completed and adopted by Council;~~
2. Cardiff - ~~completed and adopted by Council;~~
3. Belmont - ~~completed and adopted by Council;~~
4. Toronto - ~~completed and adopted by Council;~~
5. Morisset - ~~completed and adopted by Council;~~
6. Warners Bay - ~~completed and adopted by Council;~~
7. Swansea - ~~completed and adopted by Council;~~
8. Mount Hutton - ~~completed and adopted by Council; and~~
9. Glendale - ~~completed and adopted by Council.~~



OBJECTIVES OF TOWN CENTRE STREETSCAPE MASTER PLANS

- To provide a clear vision and identity for each town centre;
- To provide a clear guide for Council, the community and developers;
- To create vibrant active town centres;
- To provide consistencies within Lake Macquarie;
- To preserve and enhance the uniqueness of Lake Macquarie's town centres;
- To ensure high quality outcomes; and
- To reduce asset maintenance costs.

EXTENT OF TOWN CENTRE STREETSCAPE MASTER PLANS

Generally aligned with the Area Plan, the areas covered by the Streetscape Master Plan are the public areas owned and /or managed by council. The focus is on the streetscape elements within the road reserve and include street trees, tree guards, furniture, bins, bike racks, drinking fountains, bollards, lighting, paving, public art and town centre signage. For consistency the streetscape treatments should be extended onto private land at building setbacks, building forecourts, arcade entrances, pedestrian lanes etc, and where logical to address pedestrian links. These details will be resolved through the development application (DA) process. New developments need to address the streetscape as prescribed by this plan. Items and selections nominated in this plan will be reviewed periodically by LMCC in accordance with relevant legislation.

TOWN CENTRE PERSONALITIES

Town centre personalities have been developed for the nine town centres. These have been derived to provide a strong town centre identity and theme for enhancing character, heritage and sense of place. The nine main town centres personalities are:

- Charlestown** - the Central Business District
- Cardiff** - the Skills & Trades Centre
- Belmont** - the Activity Centre
- Toronto** - the Lakeside Village
- Morisset** - Nurtures the Spirit of Community
- Warners Bay** - the Lifestyle Centre
- Swansea** - the Seaside Village
- Mount Hutton** - the Growing Community
- Glendale** - the Dynamic Services Hub

AIMS OF THE GLENDALE STREETSCAPE MASTER PLAN

- To provide a structure for Glendale as the *Dynamic Services Hub*;
- To enhance the character of Glendale as a destination Town Centre;
- To increase the pedestrian amenity throughout the centre;
- To create visual and physical links between the Town Centre and the Winding Creek corridor;
- To increase soft landscaping throughout the town centre; and
- To implement urban detailing that rationalises street clutter.

VISION FOR THE GLENDALE STREETSCAPE MASTER PLAN

- To create a vibrant Town Centre destination through activation of the street and built form;
- To link precincts through a cohesive Town Centre character;
- To enhance the character of streets surrounding the commercial areas;
- To prioritise active and public transport through logical and comfortable pedestrian connectivity;
- To integrate water sensitive urban design (WSUD) principles and enhance amenity of soft landscape in roadways;
- To provide sustainable water cycle management by minimising the consumption of imported water supplies, and to improve downstream water quality; and
- To provide high quality urban furniture and detailing, and promote opportunity for public art.

CONSTRAINTS

- The town centre is dominated by vehicles. The major road infrastructure running through the town centre creates disconnected hubs and restrictive pedestrian access;
- Visual awareness of the creek ecosystem and opportunities to interact with the creek from the town centre is limited;
- Winding creek bisects the town centre and creates areas subject to flooding; and
- Inwardly focused major shopping centre provides little interaction with surrounding streets.

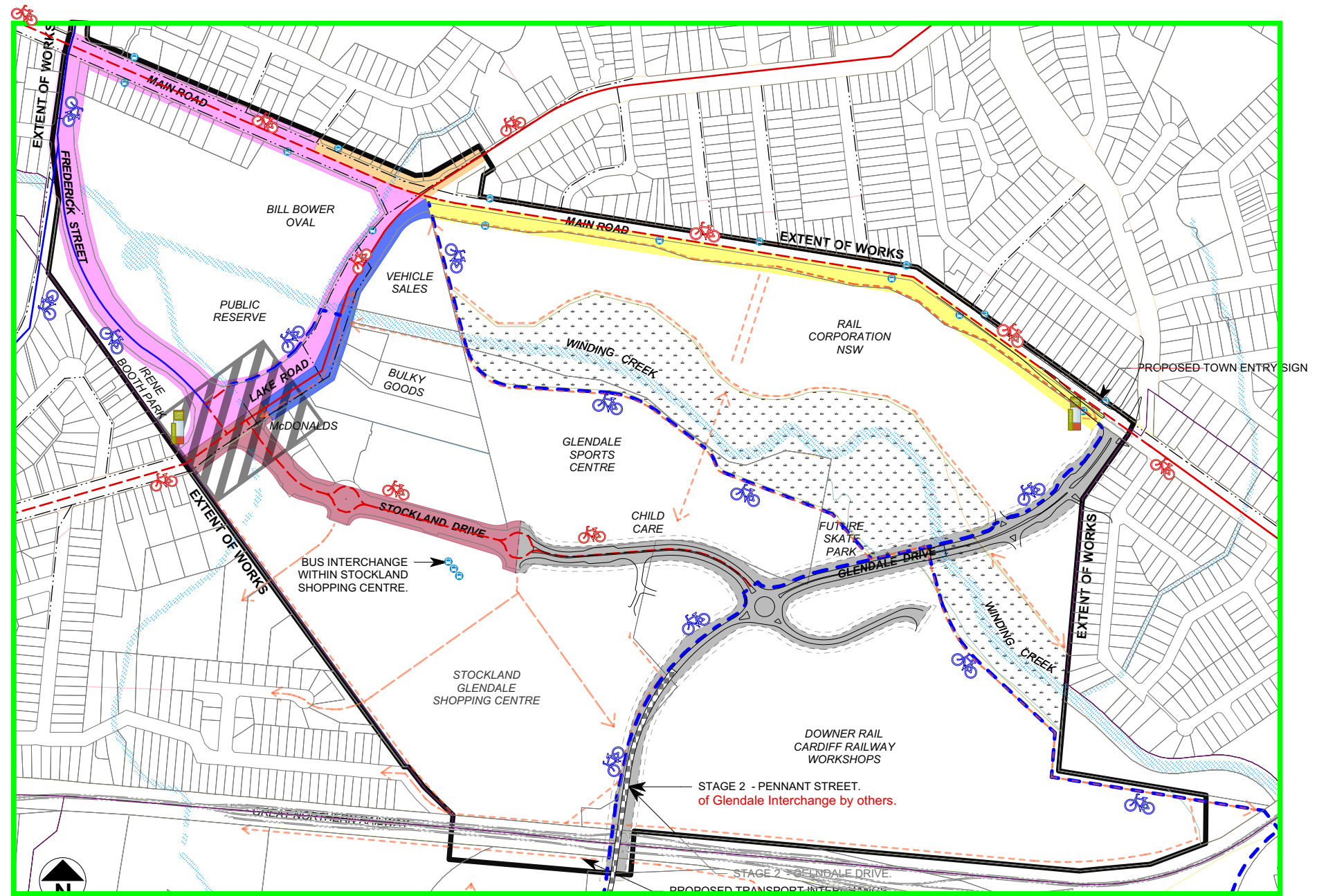
ADDITIONAL PLANNING CONSIDERATIONS FOR GLENDALE STREETSCAPE MASTER PLAN:

Note: Refer Page 2 for Planning Controls.

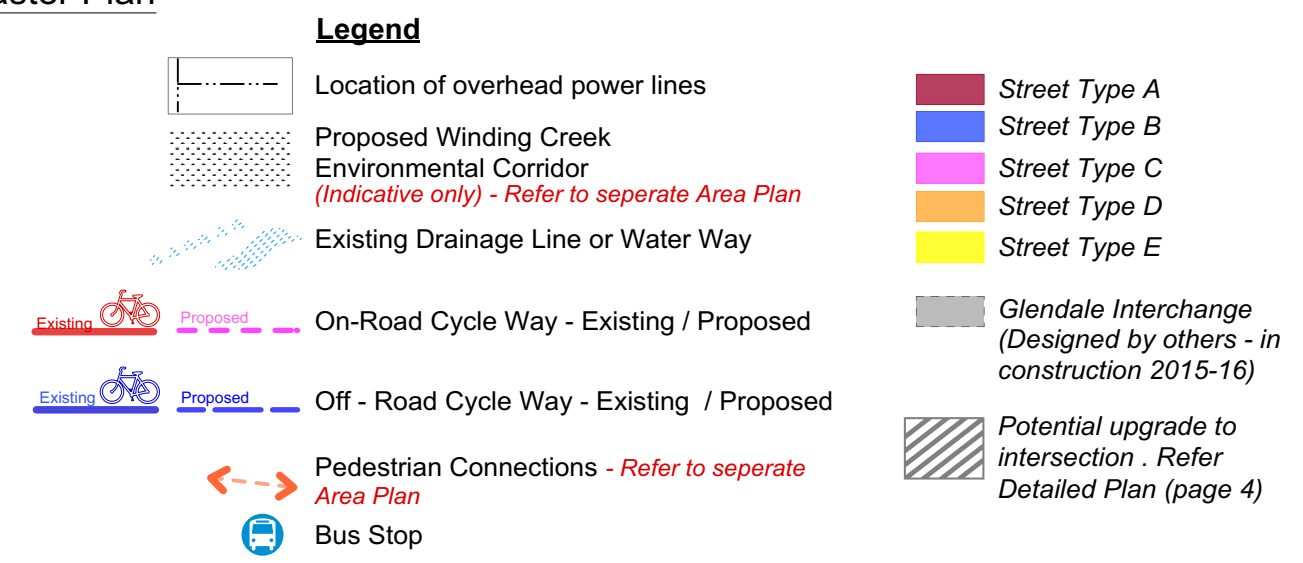
- Town Centre Area Plans - Glendale Regional Centre;
- Edgeworth Renewal Corridor;
- LMCC Cycling Strategy 2021;
- LMCC Public Art Strategy;
- LMCC Footpath Strategy;
- LMCC Footpath Dining Policy;
- Public Art Policy;
- Crime Prevention Through Environmental Design (CPTED) Guideline;
- Asset Management Plans - Current conditions and replacement schedule - Draft; and
- Section 94 Catchment Contribution Plans.

These documents have been reviewed and considered as part of this plan. Where these initiatives or any others are adopted or modified the Streetscape Master Plan should be updated to reflect this.

The Master Plan has been developed from on-site observations, cadastral plans and aerial photographs. Dial Before You Dig (DBYD) service information has been reviewed and considered. It is the responsibility of the planners, developers, and contractors to accurately locate services and adopt this Master Plan for individual sites. The details are indicative and to be used as a guide only. Measurements may vary on site.



MP Glendale Streetscape Master Plan
1:7500 at A3



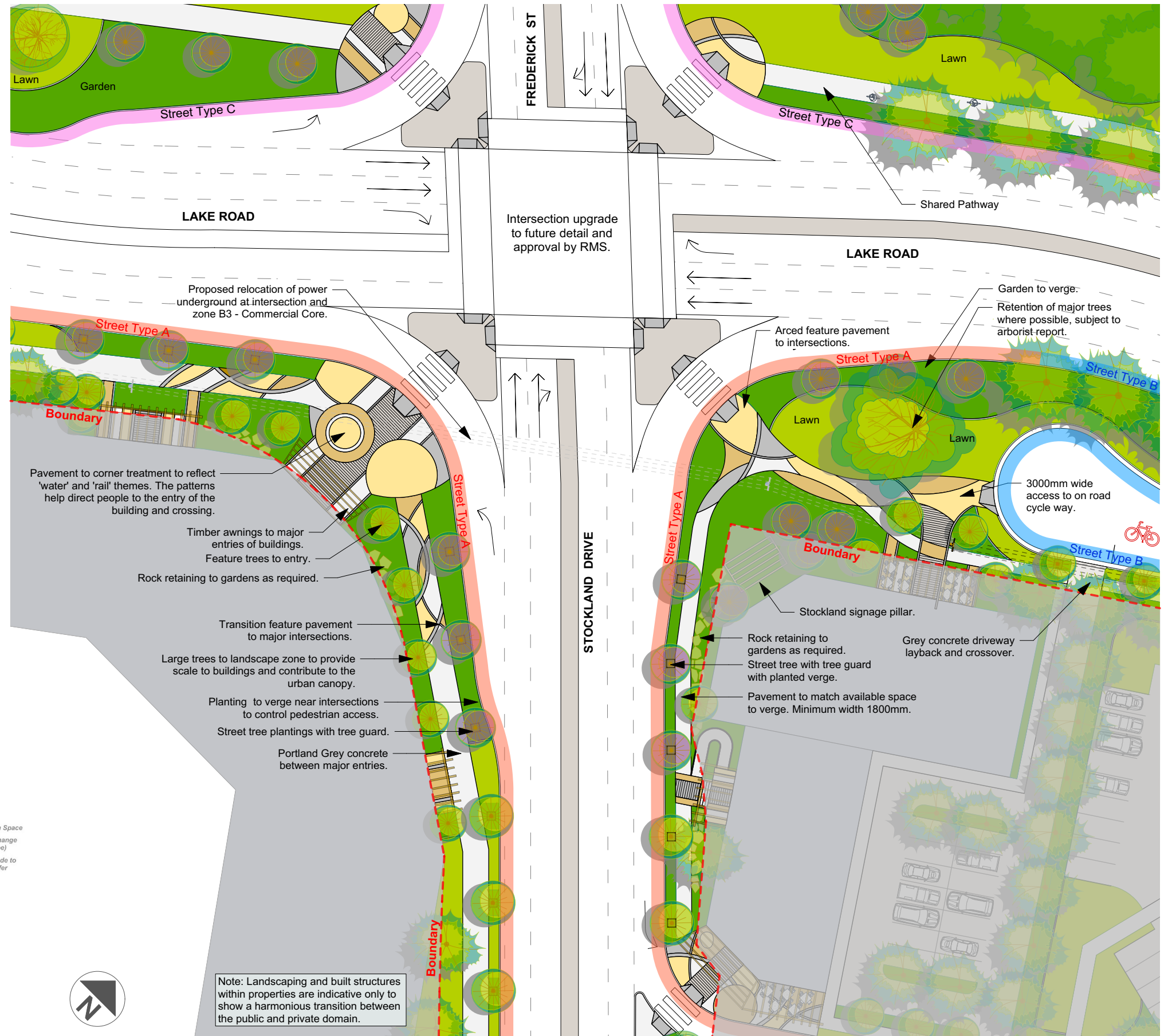
DESIGN NOTES

The current roundabout at Lake Road, Stockland Drive and Frederick Street is nearing capacity. It is proposed to upgrade this to a signalled intersection at a future date. This upgrade will improve connectivity for pedestrians, cyclists, and vehicles.

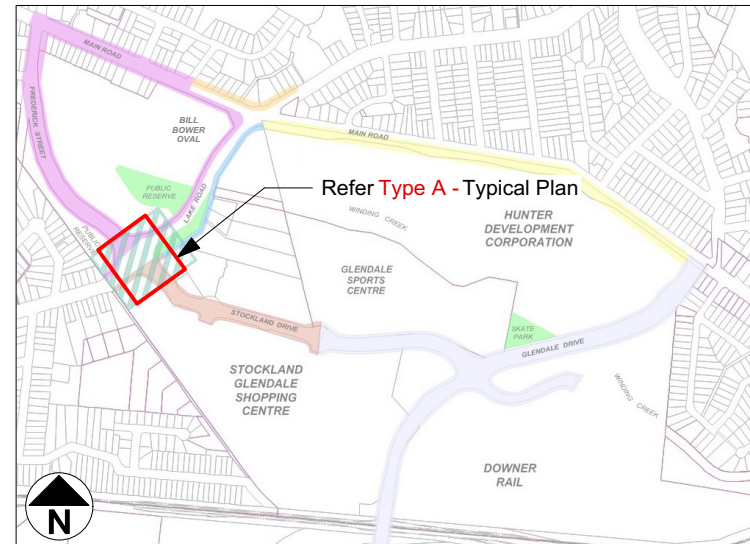
In accordance with the Glendale Area Plan, the buildings are proposed to be built to the front boundary. This will provide greater opportunities to activate the street frontage and incorporate the buildings into the landscape. Awnings allow for clear identification of the building entries and provide sheltered spaces for alfresco dining.

The use of similar landscape elements throughout the different pavement selections allows for simple transitions between the different street types.

Gardens are provided along the kerb line close to busy intersections to minimise unintended pedestrian access.



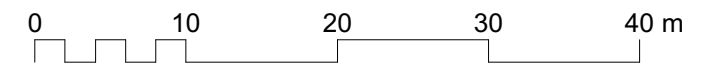
KEY



- Street Type A
- Street Type B
- Street Type C
- Street Type D
- Street Type E
- Additional Green Space
- Glendale Interchange (outside of scope)
- Proposed upgrade to intersection - refer Detailed Plan.

Note: Landscaping and built structures within properties are indicative only to show a harmonious transition between the public and private domain.

1 DETAILED PLAN - Lake Road Round About Upgrade
Scale: 1:500



DESCRIPTION

Stockland Drive is the major entrance roadway into the commercial core of Glendale Town Centre, which is a hub for retail, pedestrian and recreation purposes.

OBJECTIVES

- To create a strong sense of place with activated street frontages; and
- Increase pedestrian amenity and connections to recreational facilities, retail and commercial businesses, and the surrounding neighbourhoods.

EXISTING CONSTRAINTS

- A vehicle focused town centre;
- Inwardly focused shop fronts with little street activation; and
- Car parks providing a barrier between the street and buildings.

DESIGN RESPONSE

Working with the new built form as defined within the Glendale Area Plan, this plan will:

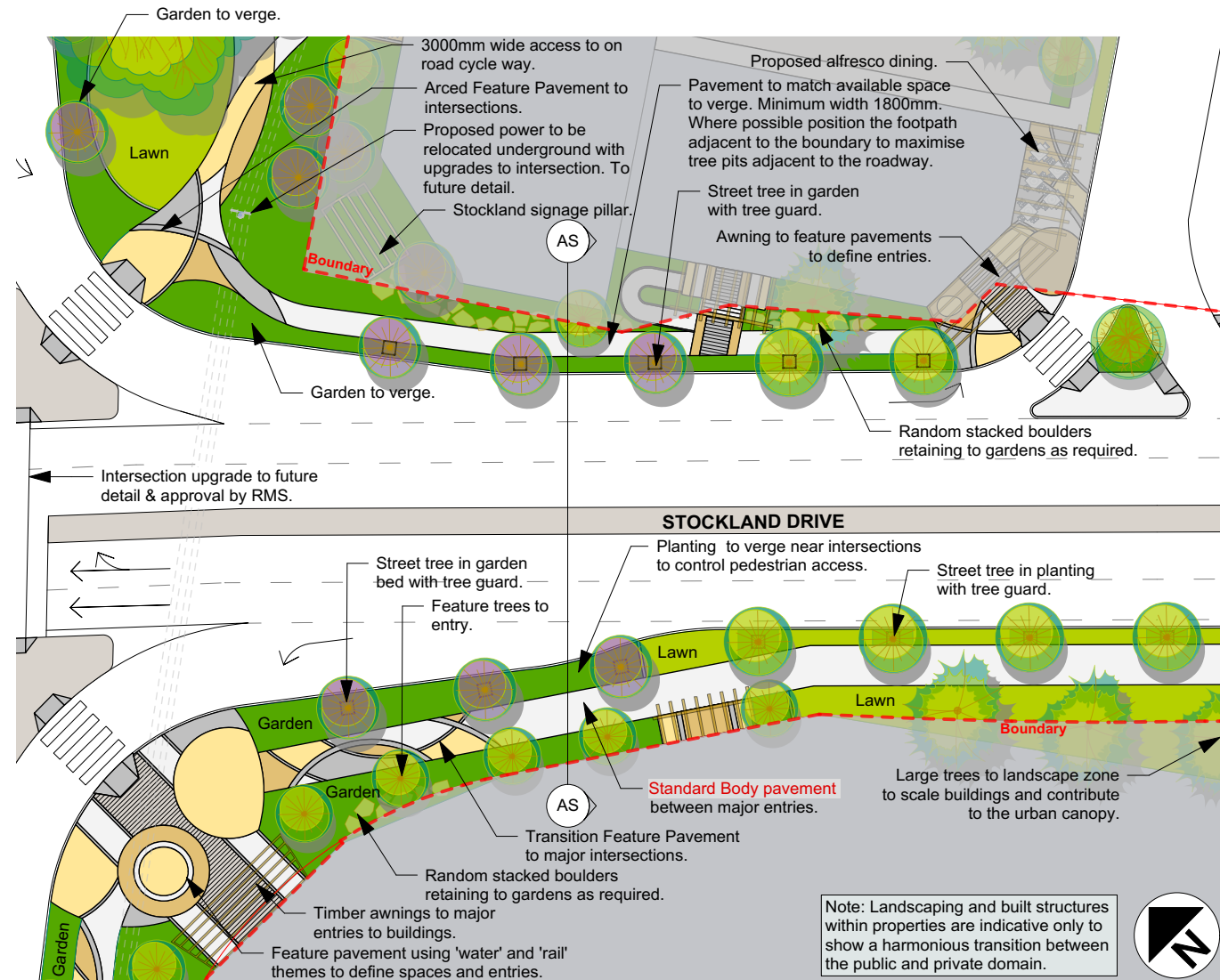
- Provide opportunities for people to meet and greet in shared areas that are defined by feature pavement;
- Increase soft edge planting to the roadway, strengthening the landscape presence and defining safe pedestrian movement;
- Provide transition spaces from different street types; and
- Maintain 3m wide shared paths on the southern side of the road.

TYPICAL DIMENSIONS

Road reserve width: 26.0m to 29.5m
Verge width: 3.2m (North), 4.5 to 5.2m (South).

ZONING

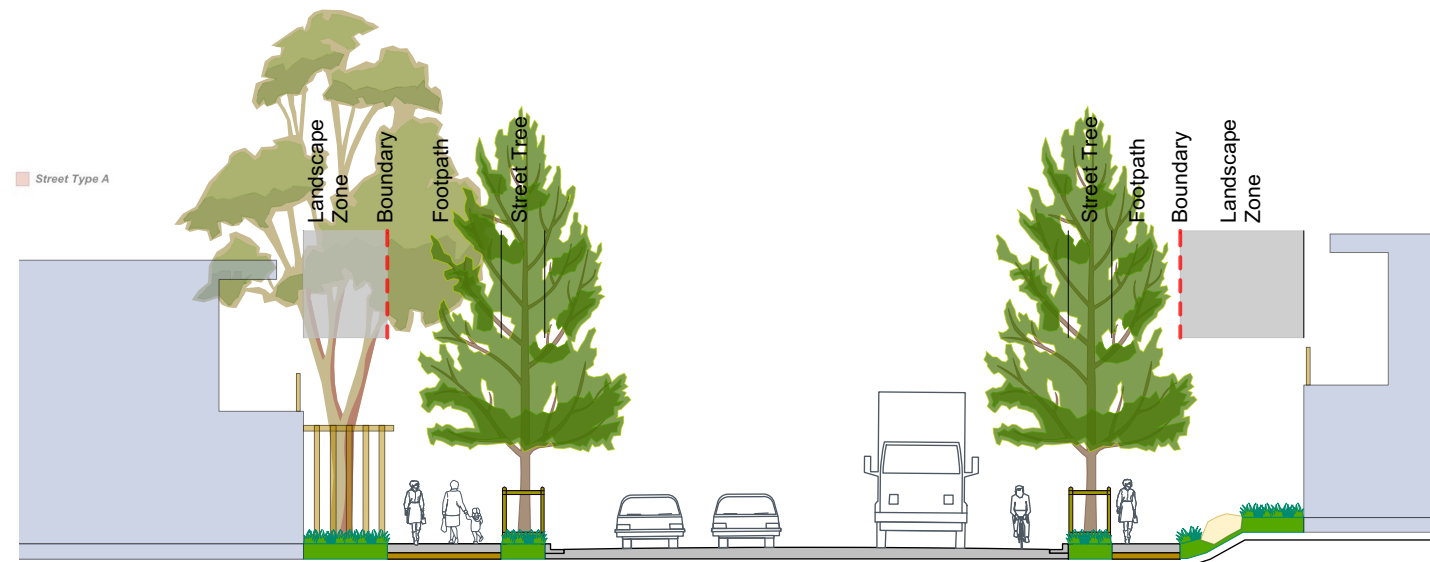
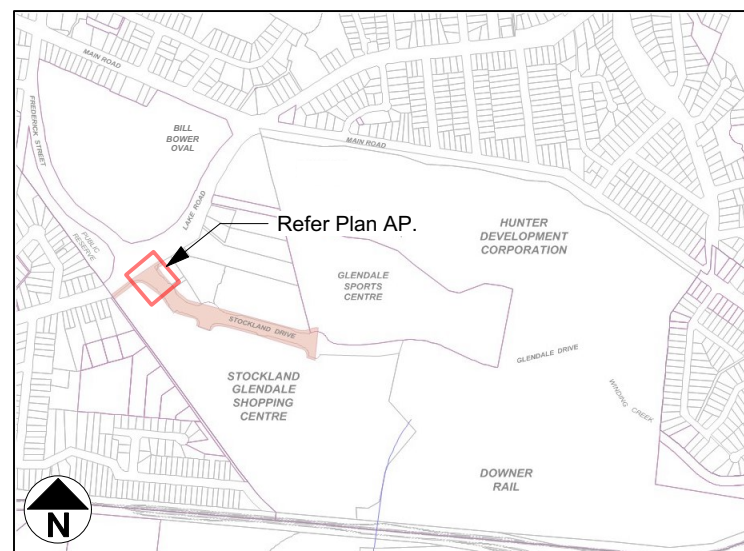
LEP Zone: B3 Commercial Core.
Adjacent landuse(s): B4 Mixed Use, RE1 Public Recreation, R3 Medium Density Residential.



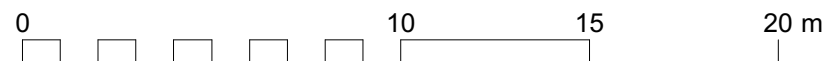
AP Type A - Typical Plan
Scale: 1:500



KEY



AS Type A - Cross Section
Scale: 1:200



Materials and Furniture Selections

NOTE: Full details are provided in a separate document - Glendale Streetscape Technical Guidelines (GSTG).

FURNITURE

Furniture to be clustered at prominent locations and facilities like bus stops and shop entries to help create activity nodes. Placement of furniture to maintain a 1500mm clear pedestrian zone close to the building in accordance with AS1428.4.

Custom Elements

Locations: At prominent locations with high use.
Selection: **Glendale Custom** Bike Rack - Railway

Bench Seats

Locations: At key locations identified by LMCC.
Selection: Aluminium bench seat with back and armrests.

Waste Receptacles - Recycling and Rubbish Bins

Locations: At key locations including bus stops, taxi stands and outside food outlet areas. Final locations to be identified by LMCC.
Selection: 240L Fire Proof Bin. Colour Grey Smoke with anodised aluminum hood. **Refer GSTG.**

Bike Racks

Locations: At key locations like hubs and alfresco dining.
Selection: Refer GSTG.

Drinking Fountains

Locations: At key locations like hubs and near pedestrian and cycle routes.
Selection: Refer GSTG.

Bollards

Locations: Where required to prevent and deter vehicle and/or pedestrian access.
Selection: Refer GSTG.

PAVEMENT

Standard Body: Concrete pavement - standard. 3000mm wide shared pathway to southern side of street, and minimum width 1800mm to northern side of the street.

Major entries of buildings and Corner intersections Treatment: Themes of 'Rail' and 'Water' patterns of Feature Paving. Themes & patterns refer to Glendale Urban Character Guidelines within this document.

Corner Treatment: Varied circular patterns of Feature Paving for allowance of easy transition for pedestrians. Patterns refer to the Glendale Urban Guidelines within this document.

Feature Paving: Combination of selected segmental pavers, concrete pavements or and cobble setts, refer to CGTG.

Kerb Ramp & Driveway Crossover: Concrete pavement - standard refer GSTG.

Tactile Ground Surface Indicator (TGSi): 400x400mm charcoal pavers, set-out to AS1428.4.

STREET PLANTING

Street Tree Selections: Eucalyptus cladocalyx 'Vintage Red' & Pyrus calleryana 'Chanticleer'. Refer the Street Tree Master Plan on page 11 for extent of plantings.

Spacings: Approximately 10m

Trees to Landscape Zone: Corymbia citriodora 'Scentuous', Magnolia grandiflora 'Little Gem', Tristaniopsis laurina 'Luscious'. Refer page 10 for details.

Spacings: To reflect the final design as detailed.

Ground Covers: Lomandra 'Tanika', Lomandra 'Shara', Grevillea juniperina, Dianella caerulea 'Breeze', Carpobrotus 'Aussie Rambler', Westringia 'Mundi'.

DESCRIPTION

This street type adjoins the existing commercial area of bulky goods commercial properties. It is serviced by a minor road that runs parallel to Lake Road. An existing footpath network runs partially along the eastern side of the road. There are no existing street tree plantings in this section.

OBJECTIVES

- To enhance the character of the streetscape through tree planting and planted verges;
- To increase pedestrian amenity and connections to recreational facilities; and
- To strengthen the green corridor along Lake Road.

EXISTING CONSTRAINTS

- Poor pedestrian connectivity at either end of the street; and
- Overhead power lines along the eastern side of the street.

DESIGN RESPONSE

- Provide a planting plan to create a gateway for motorists, cyclists and pedestrians moving through the area;
- The use of WSUD tree pits where appropriate;
- Increase the pedestrian amenity with connections along the street with suitably sized street trees under the power lines; and
- Provide a cycle link which will run through the site along Winding Creek.

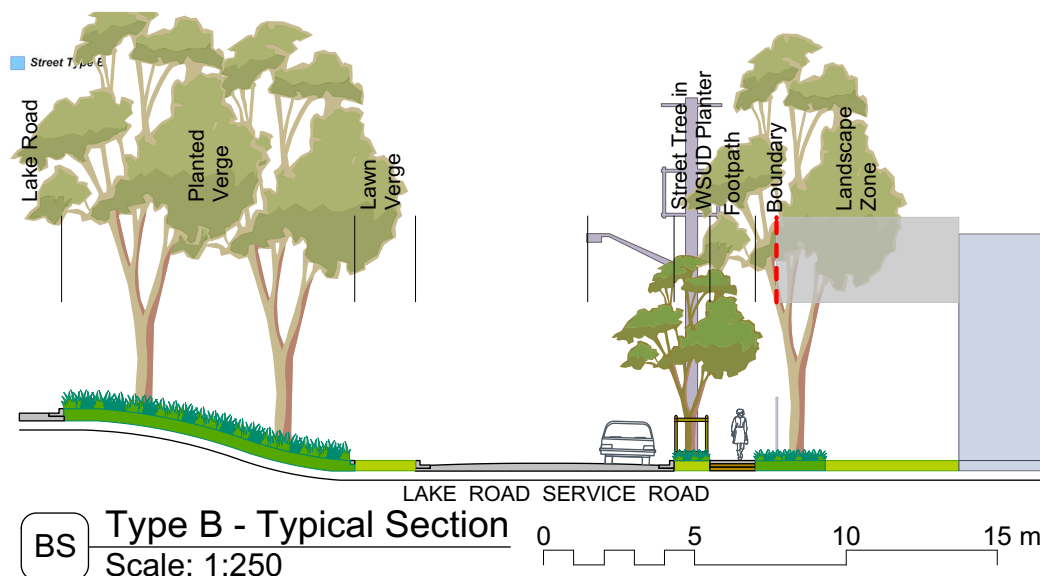
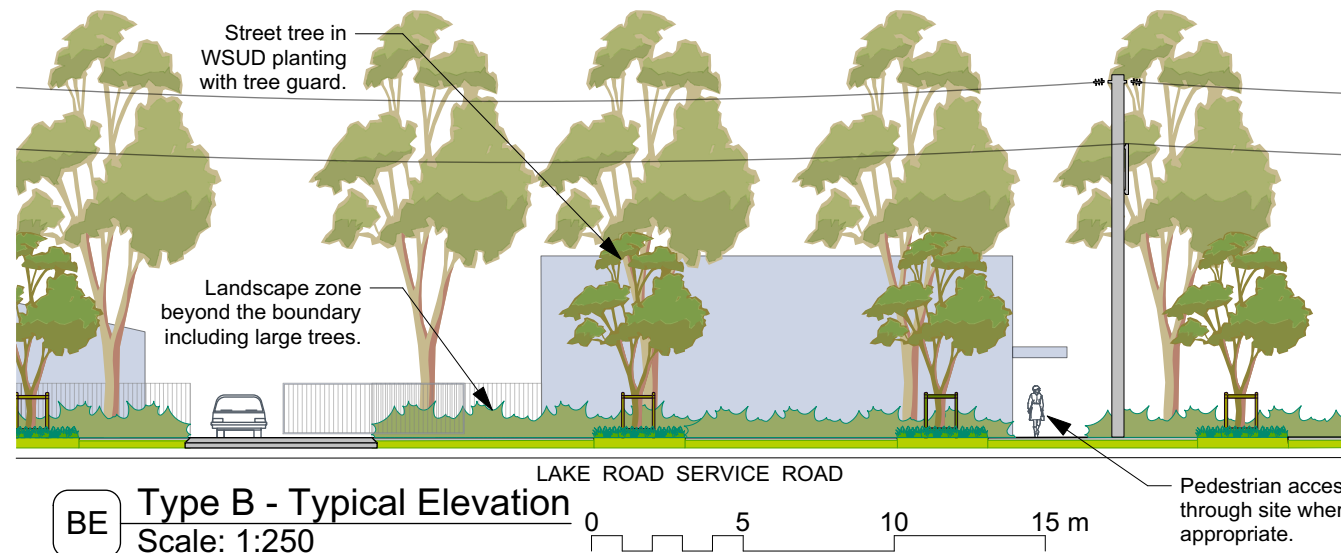
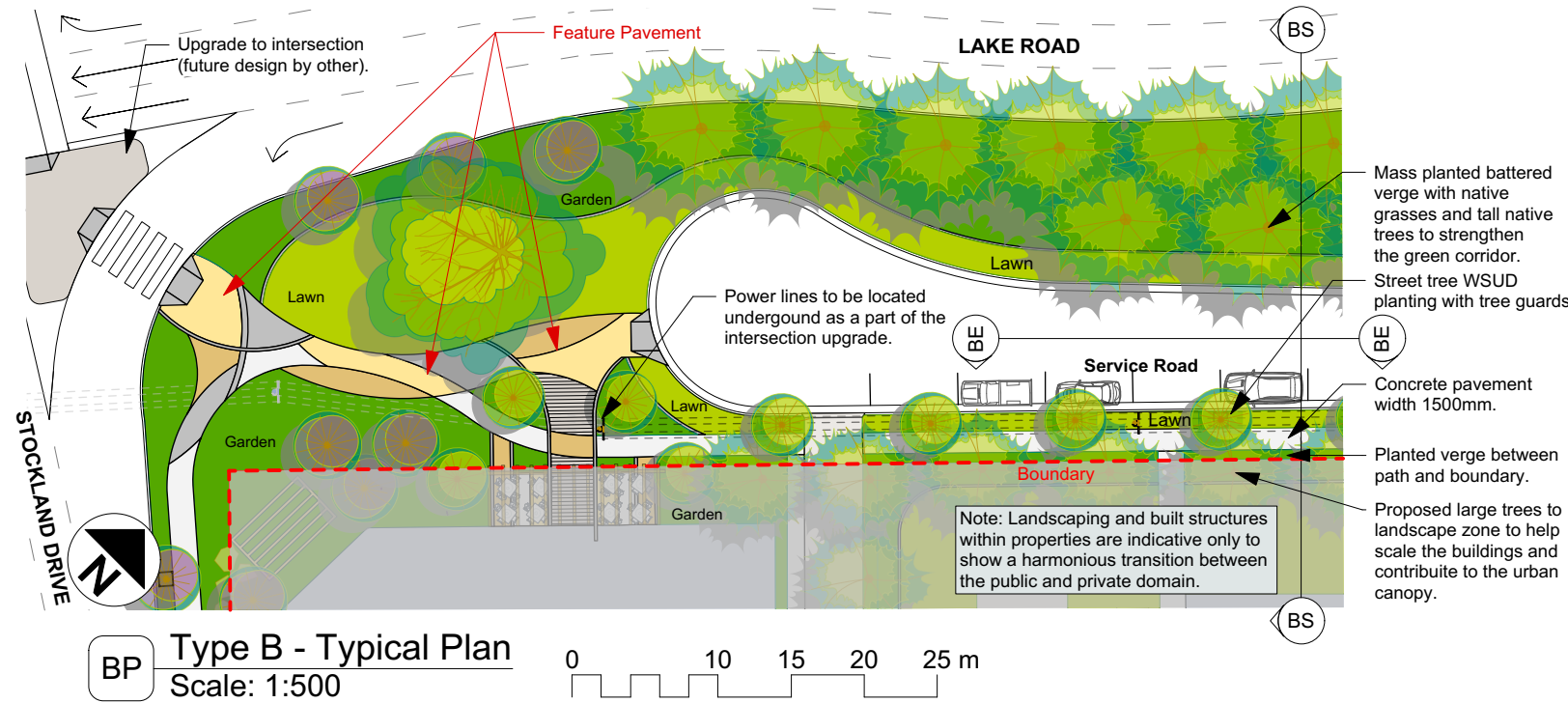
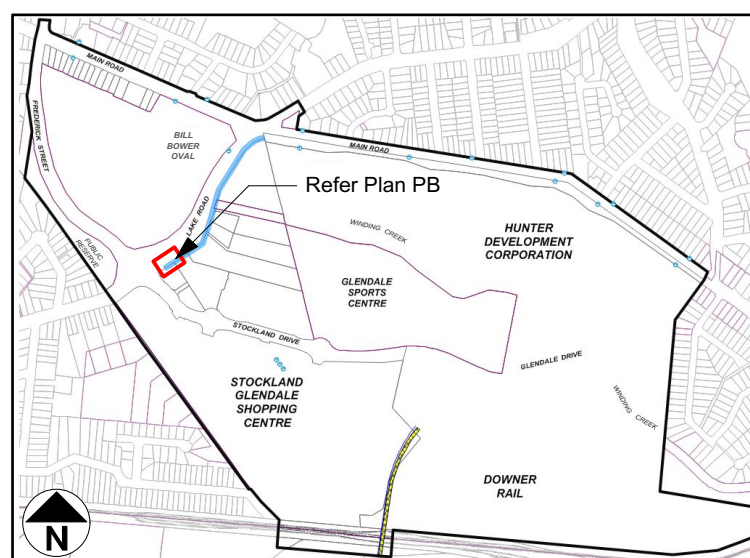
TYPICAL DIMENSIONS

Road width: 8.0m
Verge width: Varies - 4.5m average

ZONING

LEP Zone: E2 Environmental Conservation, RE1 Public Recreation, B3 Commercial Core.
Adjacent landuse(s): Low and Medium Residential.

KEY



Materials and Furniture Selections

NOTE: Full details are provided in a separate document - Glendale Streetscape Technical Guidelines (GSTG).

FURNITURE

Furniture to be clustered at prominent locations and facilities like bus stops and shop entries to help create activity nodes. Placement of furniture to maintain a 1500mm clear pedestrian zone close to the building in accordance with AS1428.4.

Custom Elements

Locations: At prominent locations with high use.
Selection: Refer GSTG.

Bench Seats

Locations: At key locations identified by LMCC.
Selection: Aluminum bench seat with back armrests;

Waste Receptacles - Bins

Locations: At key locations including bus stops, taxi stands and outside food outlet areas.
Selection: 240L Fire Proof Bin. Colour Grey Smoke with anodised aluminum hood. Refer GSTG.

Bollards

Locations: Where required to prevent and deter vehicle and/or pedestrian access.
Selection: Refer GSTG

PAVEMENT

Standard Body: Concrete pavement - standard refer GSTG. 1500mm wide to the eastern side of the street.

Corner Treatment: Varied circular patterns of Feature Paving for allowance of easy transition for pedestrians. Patterns refer to the Glendale Urban Guidelines within this document.

Feature Paving: Combination of selected segmental pavers, concrete pavements or and cobble setts, refer to CGTG.

Kerb Ramp & Driveway Crossover: Concrete pavement - standard refer GSTG.

Tactile Ground Surface Indicator (TGSi): 400x400mm charcoal pavers, set-out to AS1428.4.

STREET PLANTING

Street Tree in WSUD Planter: Cupaniopsis anacardioides.

Spacings: Approximately 10m

Street Tree to Battered Verge: Corymbia maculata 'Little Mac'

Spacings: Approximately 5m centres. Allow for clear sight lines to road signage.

Trees to Landscape Zone: Corymbia citriodora 'Scentuous', Magnolia grandiflora 'Little Gem', Tristaniopsis laurina 'Luscious', Eucalyptus cladocalyx 'Vintage Red'. Refer page 10 for details.

Spacings: To reflect the final design as detailed.

Ground Covers: Lomandra 'Tanika', Lomandra 'Shara', Grevillea juniperina, Dianella caerulea 'Breeze', Carpobrotus 'Aussie Rambler', Westringia 'Mundi'.

WSUD Ground Covers: Lomandra fluviatilis 'Shara', Carex spp., Dianella caerulea 'Breeze'.

DESCRIPTION

The western side of Lake Road consists of public reserve and Bill Bower Oval adjacent to Winding Creek. A narrow footpath exists along the frontage of Bill Bower Oval and returns for a short distance down Lake Road. There is no continuity of this path to the Town Centre. A footpath across the frontage of Irene Booth Memorial Park provides pedestrian connectivity to the Town Centre via refuges in the roundabout. There are no uniform street tree plantings along Lake Road with only sporadic clumping of native trees associated with the detention ponds of Winding Creek. This stretch of Lake Road has no formalised pathway, shade or separation from vehicles.

OBJECTIVES

- To increase the sense of entry and to improve pedestrian amenity at the two major roadway intersections within Glendale;
- To provide a structure to the plantings; and
- Provide shared pathway routes and connections that facilitate access to the public reserves, sports fields, and the wider cycle network.

EXISTING CONSTRAINTS

- Limited existing infrastructure with poor connectivity to surrounding street networks; and
- Existing overhead power along Main and Lake roads.

DESIGN RESPONSE

- Provide a planting plan to create a gateway for motorists, cyclists and pedestrians moving through the area;
- Use WSUD tree pits where appropriate;
- Define lawn and landscape areas within reserves to maximise use; and
- Utilise Council standard pavement selections to maximise coverage, with feature corner treatments as highlights to the area and links to the rest of the town centre.

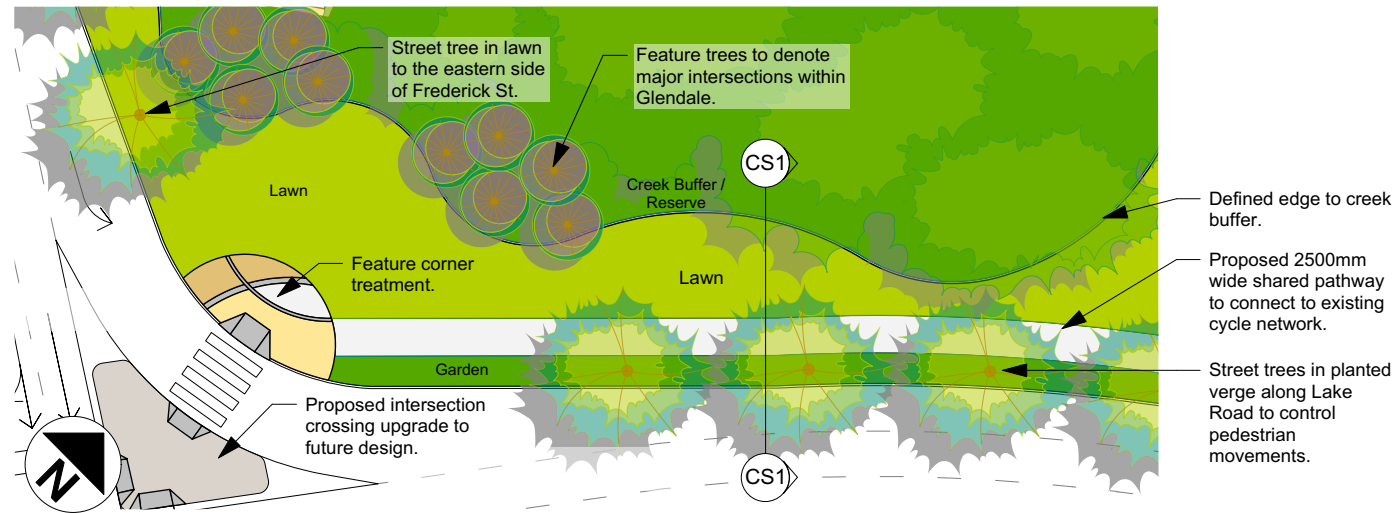
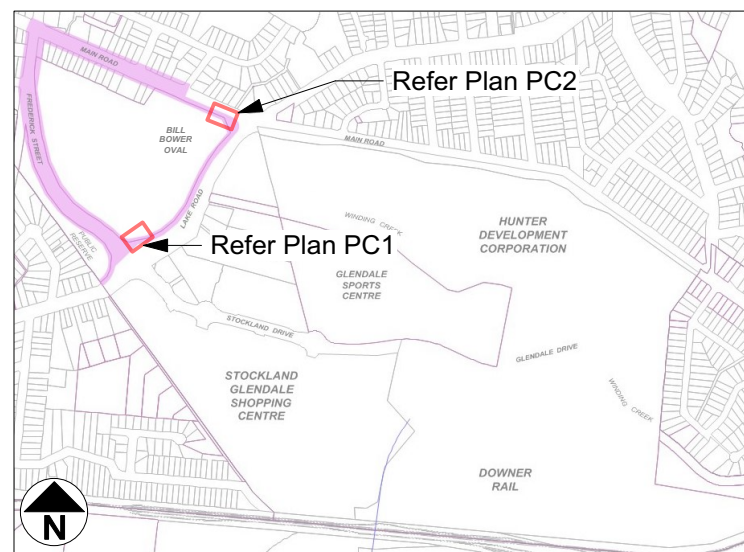
TYPICAL DIMENSIONS

Road width: 13.5m (Frederick St), 25.0m (Lake and Main Road).
Verge width: 3.8 to 7.0m (South),

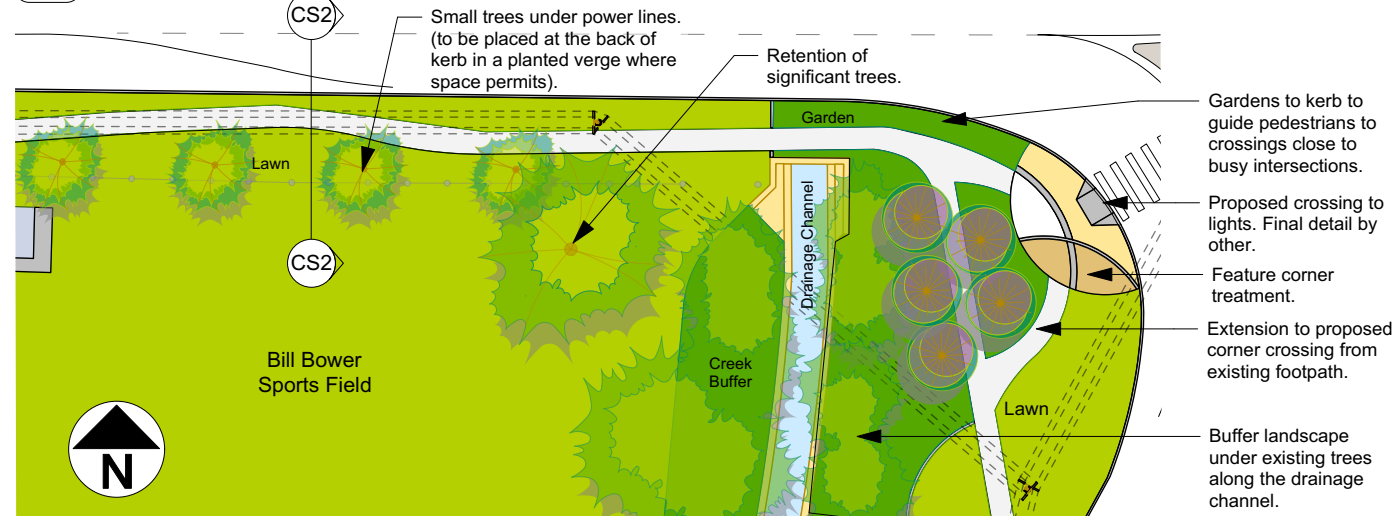
ZONING

LEP Zone: RE1 Public Recreation, R3 Medium Density Residential.
Adjacent landuse(s): B4 Mixed Use.

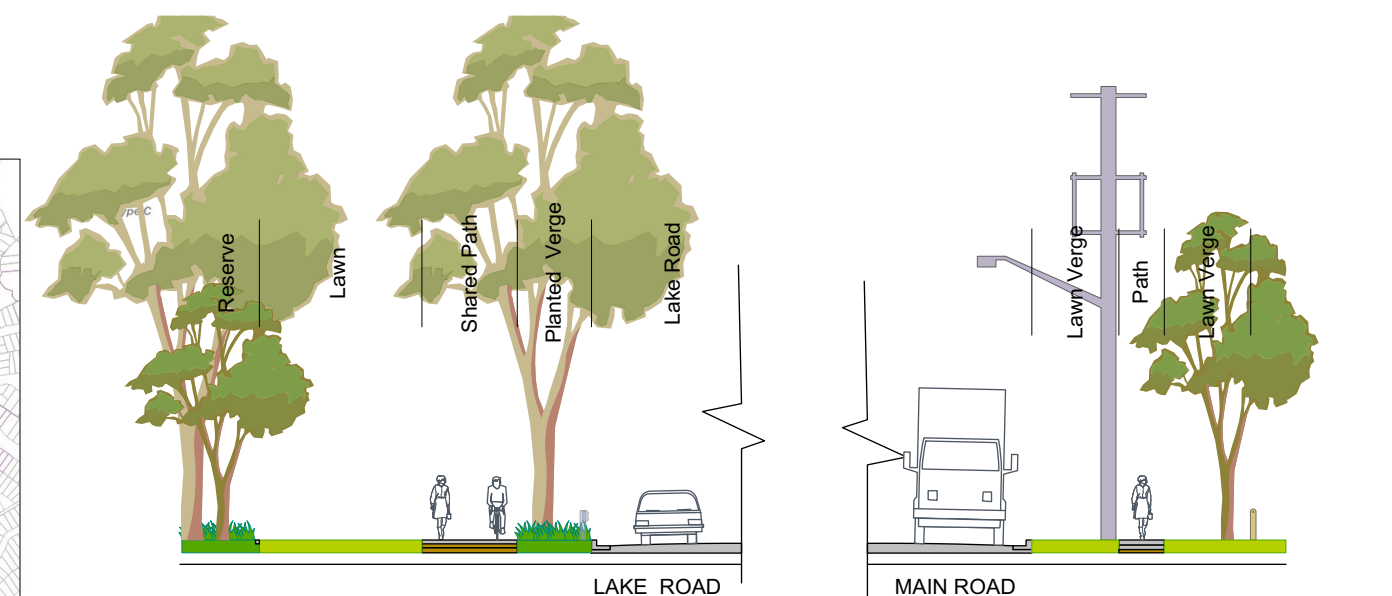
KEY



CP1 Type C - Typical Plan 1
Scale: 1:500

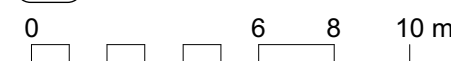


CP2 Type C - Typical Plan 2
Scale: 1:500



CS1 Type C - Typical Section 2
Scale: 1:200

CS2 Type C - Typical Section 1
Scale: 1:200



Materials and Furniture Selections

NOTE: Full details are provided in a separate document - Glendale Streetscape Technical Guidelines (GSTG).

FURNITURE

Furniture to be used in association with bus stops. No additional furniture within the road reserve for Street Type C. Furniture to be included within public and sport reserves. For all selections, refer GSTG for standard furniture selections.

PAVEMENT

Standard Body: Concrete pavement - standard.
Corner Treatment: Varied circular patterns of Feature Paving for allowance of easy transition for pedestrians. Patterns refer to the Glendale Urban Guidelines within this document.
Feature Paving: Combination of selected segmental pavers, concrete pavements or and cobble setts, refer to CGTG.

Corner Treatment: Corner treatments to be varied. Circular in shape to allow for easy transition for pedestrians. Refer to the Glendale Urban Character Guidelines within this document for details of pavement surfaces.

Kerb Ramp & Driveway Crossover: Concrete pavement - standard refer GSTG.

Tactile Ground Surface Indicator (TGSi): 400x400mm charcoal pavers, set-out to AS1428.4.

STREET PLANTING

Street In Planting to Lake Road: *Corymbia maculata* 'Little Mac',
Spacings: Approximately 10m.

Feature Tree to Road Intersections: *Eucalyptus cladocalyx* 'Vintage Red'
Spacings: To reflect the final design as detailed.

Small Trees Under Power Lines: *Corymbia citriodora* 'Scentuous'
Spacings: Approximately 10m.
Refer the Street Tree Master Plan on page 11 for extent of plantings.

Ground Covers: *Lomandra* 'Tanika', *Lomandra* 'Shara', *Grevillea juniperina*, *Dianella caerulea* 'Breeze', *Carpobrotus* 'Aussie Rambler', *Westringia* 'Mundi'.

DESCRIPTION

A local centre located on the northern corner of the cross-roads. Single and two story buildings with awnings that extend out across full width footpaths. The road is extremely busy with poor pedestrian connectivity to other areas of the Town Centre. Little to no street plantings exist within this section of the Town Centre due to narrow verges, wide awnings and overhead power lines.

OBJECTIVES

- To create a neighbourhood hub with strong connections to the surroundings; and
- Increase plantings within the streetscape to provide a buffer between the pedestrians and traffic.

EXISTING CONSTRAINTS

- Wide awnings and overhead power lines restricting tree selections and growth;
- Limited pedestrian connectivity to other areas of the town centre; and
- Ad hoc pavement installation creating a disjointed appearance to the streetscape.

DESIGN RESPONSE

- Provide a minimum width 2400mm wide pavement to the building line with gardens to the kerb line;
- Allow for wider sections of pavement for the installation of street furniture;
- Provide banding to break up the pavement and allow for incremental installation of the pavement; and
- Use WSUD principles to maximise the success of the planted gardens.

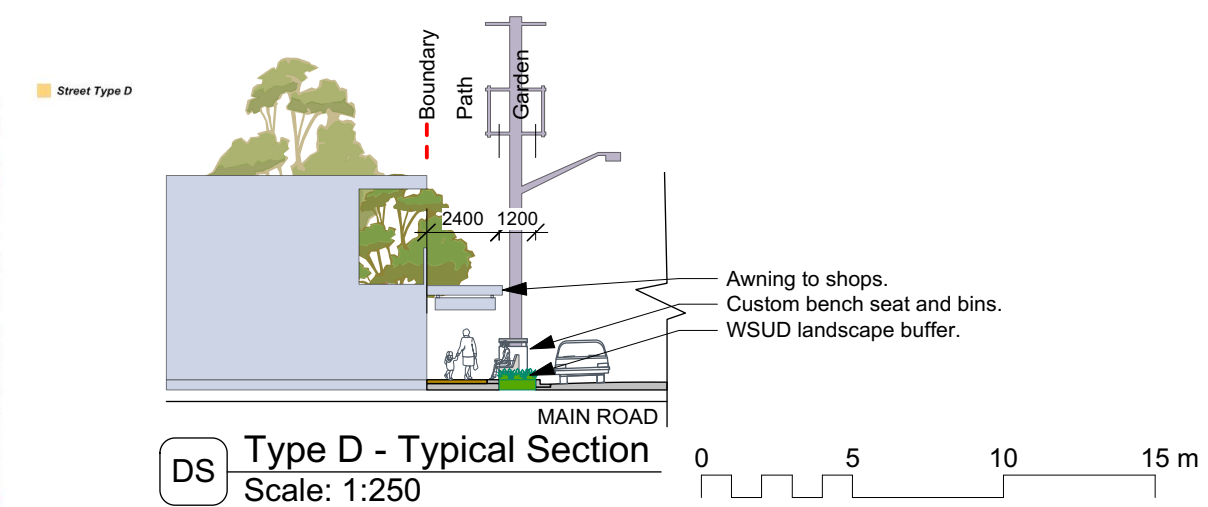
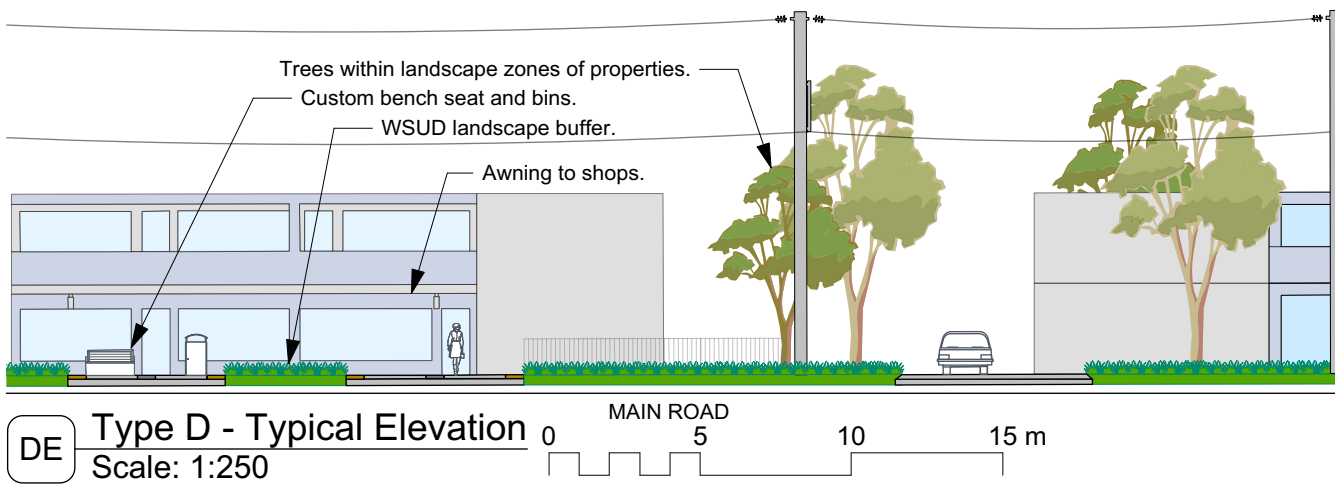
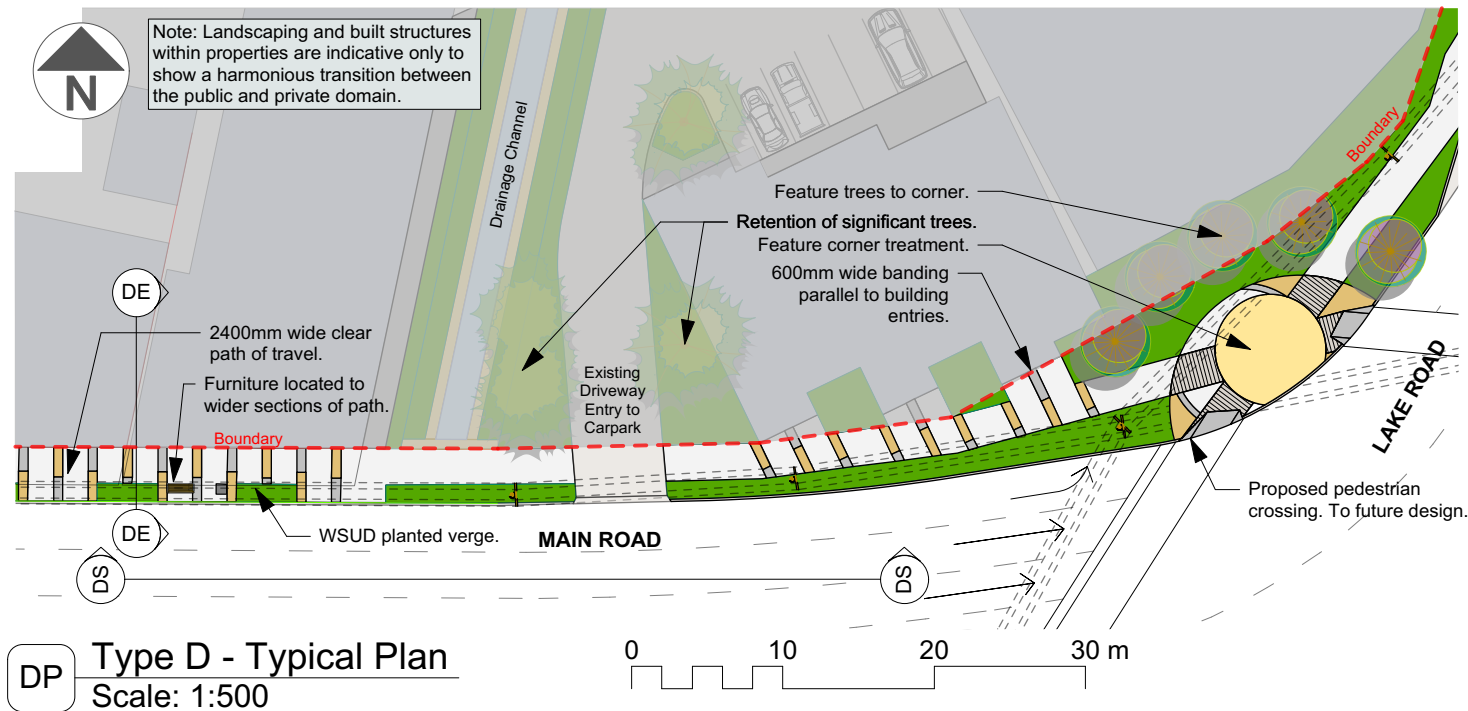
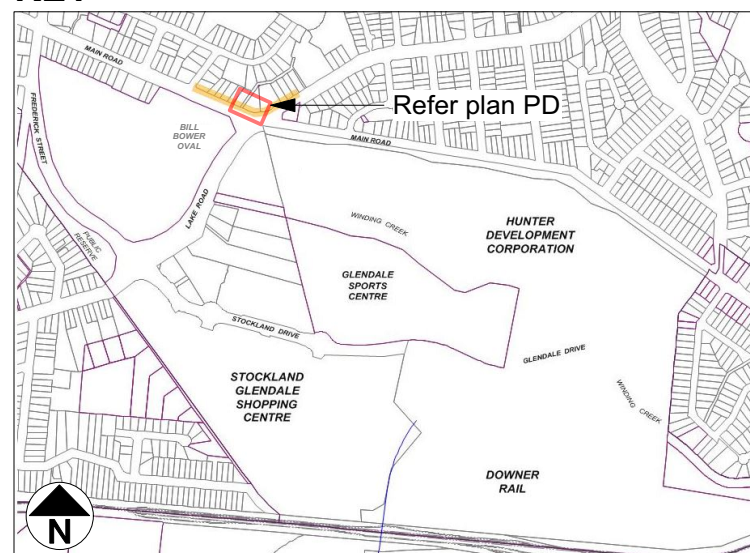
TYPICAL DIMENSIONS

Road width: 23.0m (typical).
Verge width: 3.8m.

ZONING

LEP Zone: B4 Mixed Use
Adjacent landuse(s): R3 Medium Density Residential

KEY



Materials and Furniture Selections

NOTE: Full details are provided in a separate document - Glendale Streetscape Technical Guidelines (GSTG).

FURNITURE

Furniture to be clustered at prominent locations and facilities like bus stops and shop entries to help create activity nodes. Placement of furniture to maintain a 2400mm clear pedestrian zone close to the building in accordance with AS1428.4.

Custom Elements

Locations: At key locations identified by LMCC. Close to bus stops and food shops.

Selection: Glendale feature bench seat. Refer GSTG.

Bench Seats

Locations: At key locations identified by LMCC.

Selection: Aluminum bench seat with back and armrests. Refer GSTG.

Waste Receptacles - Bins

Locations: At key locations including bus stops, taxi stands and outside food outlet areas. Final locations to be identified by LMCC.

Selection: 240L Fire Proof Bin. Colour Grey Smoke with anodised aluminum hood. Refer GSTG.

Bike Racks

Locations: At key locations like hubs and alfresco dining.

Selection: Refer GSTG.

Bollards

Locations: Where required to prevent and deter vehicle and/or pedestrian access.

Selection: Refer GSTG

PAVEMENT

Standard Body: Concrete pavement - standard, refer GSTG.
Corner Treatment: Varied circular patterns of Feature Paving; for allowance of easy transition for pedestrians. Patterns refer to the Glendale Urban Guidelines within this document.

Feature Paving: Combination of selected segmental pavers, concrete pavements or and cobble setts, refer to CGTG.

Banding: Cobble Setts, refer GSTG.;

Nominated banding size: 600(W) x 2000(L)mm at 2.5m to 3m centres spacing & to suit the site, extend banding & Standard Body pavement to the kerb and/or the building.

Colour - Two colour tones to be alternated between the kerb side and the building side of the footpath.

Border/— Kerb Ramp & Driveway Crossover: Concrete pavement - standard, refer GSTG.

Tactile Ground Surface Indicator (TGSI): 400x400mm charcoal pavers, set-out to AS1428.4.

STREET PLANTING

Feature Tree to Road Intersections: Eucalyptus cladocalyx 'Vintage Red'

Spacings: To reflect the final design as detailed.

Ground Covers: Lomandra 'Tanika', Lomandra 'Shara', Grevillea juniperina, Dianella caerulea 'Breeze', Carpobrotus 'Aussie Rambler', Westringia 'Mundi'.

WSUD Ground Covers: Lomandra fluviatilis 'Shara', Carex spp., Dianella caerulea 'Breeze'.

DESCRIPTION

This location will become the northern commercial edge of the Glendale town centre and will consist of mixed use development. It is the main connector route between Cardiff and the M1 motorway. Winding Creek divides the site from the main commercial centre. It is currently bushland and pastoral fields.

OBJECTIVES

- To create an integrated landscape between the street, the buildings and existing bushland by incorporating large significant trees and street tree plantings; and
- Increase pedestrian and cycle amenity through dedicated foot and cycle paths.

EXISTING CONSTRAINTS

- Currently the site is largely un-developed and heavily vegetated;
- The site is disconnected from the rest of the Glendale town centre; and
- There is no cycle or pedestrian amenity.

DESIGN RESPONSE

- To provide a strong landscape buffer that will maintain the bushland character that currently exists;
- The footpath will allow for dual street tree planting and a winding pedestrian experience;
- The pavement design will reflect water movement and be organic in nature. The materials will match the commercial zone; and
- Timber arbours are encouraged within the landscape zones to buildings to identify entries and increase connections to the streetscape.

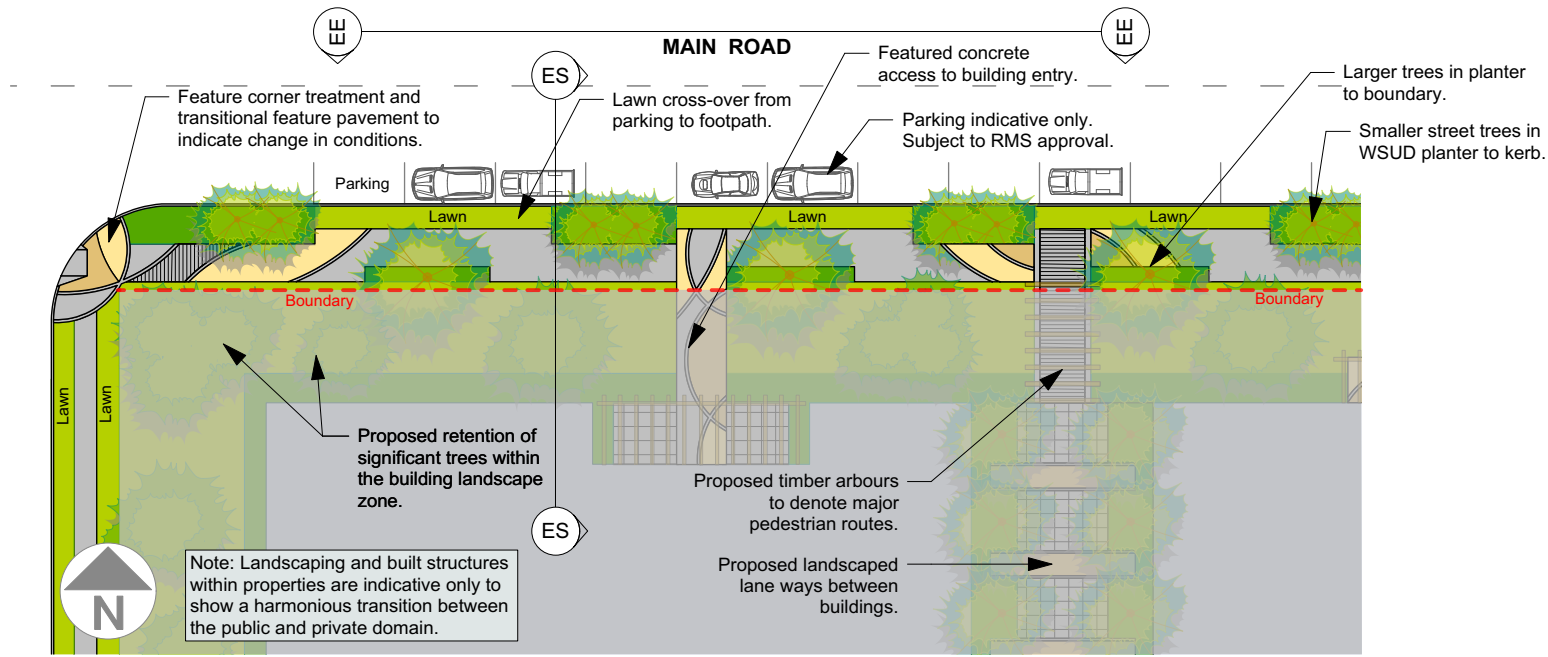
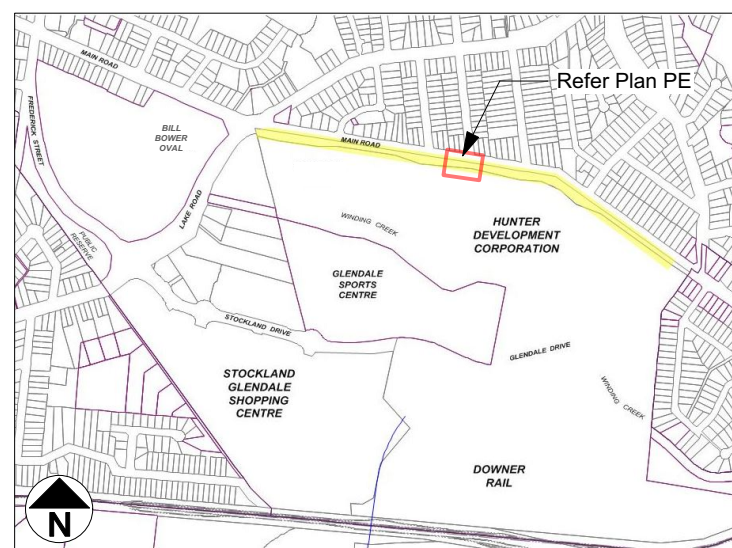
TYPICAL DIMENSIONS

Road reserve width: 21.0m (typical), 10.5 additional easement. Verge width: 5.0m (proposed).

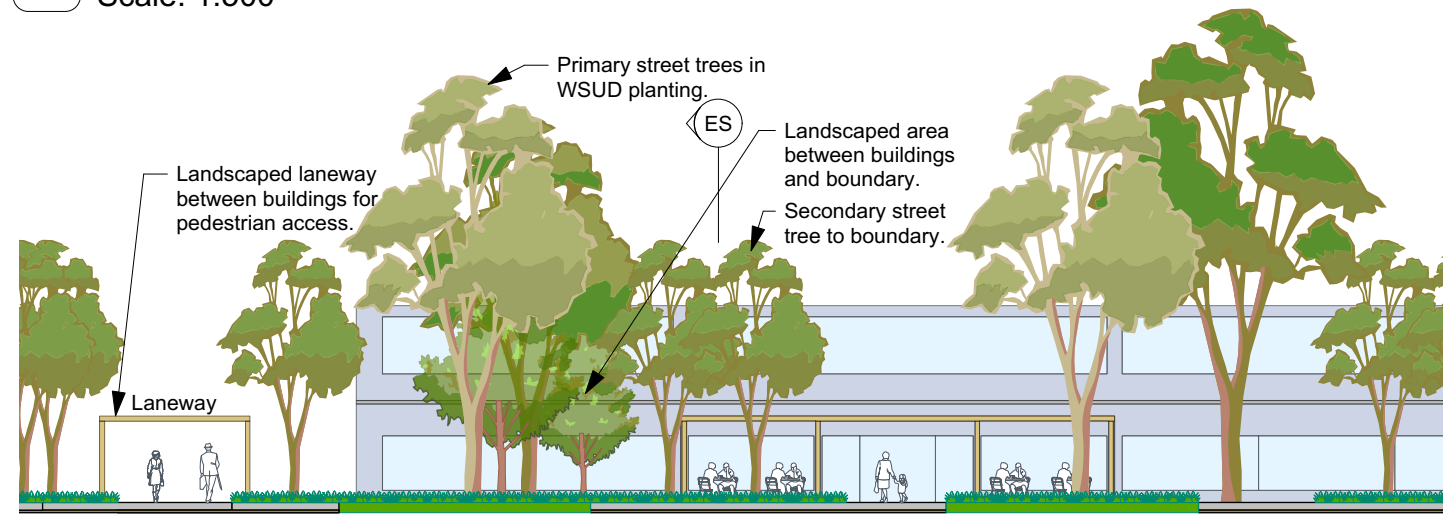
ZONING

LEP Zone: B4 Mixed Use.
Adjacent landuse(s): R3 Medium Residential, E2 Environmental Conservation, SP2 Infrastructure.

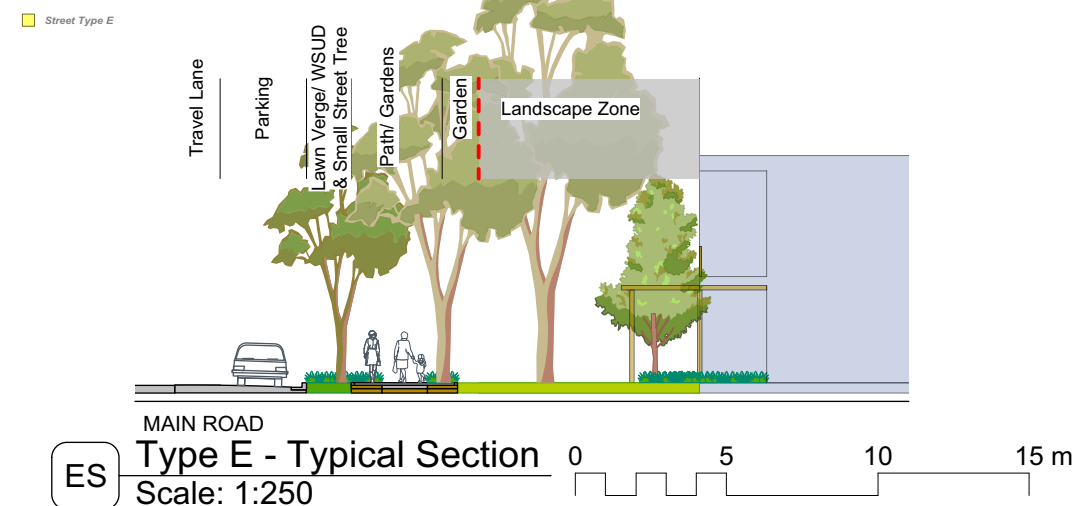
KEY



EP Type E - Typical Plan
Scale: 1:500



EE Type E - Typical Elevation
Scale: 1:250



ES Type E - Typical Section
Scale: 1:250

Materials and Furniture Selections

NOTE: Full details are provided in a separate document - Glendale Streetscape Technical Guidelines (GSTG).

FURNITURE

Furniture to be clustered at prominent locations like bus stops and shop entries to help create activity nodes. Placement of furniture to maintain a 1500mm clear pedestrian zone close to the building in accordance with AS1428.4.

Bench Seats

Locations: At key locations identified by LMCC.
Selection: Aluminum bench seat with back and armrests. Refer GSTG.

Waste Receptacles - Recycling and Rubbish Bins

Locations: At key locations including bus stops, taxi stands, outside food outlet areas. Final locations to be identified by LMCC.
Selection: 240L Fire Proof Bin. Colour Grey Smoke with anodised aluminum hood. Refer GSTG.

Custom Elements

Locations: At prominent locations with high use.
Selections: Railway Bike Rack

Bike Racks

Locations: At key locations like hubs and alfresco dining.
Selection: Refer GSTG.

Drinking Fountains

Locations: At key locations like hubs and near pedestrian and cycle routes.
Selection: Refer GSTG.

Bollards

Locations: Where required to prevent and deter vehicle and/or pedestrian access.
Selection: Refer GSTG.

PAVEMENT

Standard Body: Concrete pavement - standard refer CGTG. A 1500mm central clear path of travel to be maintained with alternating 2500mm wide sections that allow for garden beds on both the boundary line and kerb side.

Entries and junctions Treatment: Themes of 'Rail' and 'Water' patterns of Feature Paving. Themes & patterns refer to Glendale Urban Character Guidelines within this document.

Corner Treatment: Varied circular patterns of Feature Paving for allowance of easy transition for pedestrians. Patterns refer to the Glendale Urban Guidelines within this document.

Feature Paving: Combination of selected segmental pavers, concrete pavements or and cobble setts, refer to CGTG.

Kerb Ramp & Driveway Crossover: Concrete pavement - standard refer GSTG.

Tactile Ground Surface Indicator (TGSi): 400x400mm charcoal pavers, set-out to AS1428.4.

STREET PLANTING

Street Tree in WSUD Planter: *Corymbia citriodora* 'Scentuous'.

Spacings: Approximately 10m

Large Street Trees To Garden: *Corymbia maculata* 'Little Mac'

Spacings: Approximately 10m centres.

Trees to Landscape Zone: *Corymbia citriodora* 'Scentuous', *Magnolia grandiflora* 'Little Gem', *Tristaniopsis laurina* 'Luscious', *Eucalyptus cladocalyx* 'Vintage Red'. Refer page 10 for details.

Spacings: To reflect the final design as detailed.

Ground Covers: *Lomandra* 'Tanika', *Lomandra* 'Shara', *Grevillea juniperina*, *Dianella caerulea* 'Breeze', *Carpobrotus* 'Aussie Rambler', *Westringia* 'Mundi'.

WSUD Ground Covers: *Lomandra fluviatillis* 'Shara', *Carex* spp., *Dianella caerulea* 'Breeze'.

DESCRIPTION

Street trees provide many benefits in the urban environment. They provide shade, thus reducing heat on the street and surrounding buildings. They provide habitat for native fauna. They change throughout the year with flowers, fruit and leaves, creating visual interest. They create a pleasant environment in which to spend time. Typical spacing's as well as proposed locations for trees within the road reserve have been detailed within the streetscape types, sheets 4 to 9. The locations shown in the typical plans are guidelines only that can be used for planning a development. Actual tree locations will be determined in the consultation with LMCC at the time a resident, property owner or developer proposes to install street trees. Allow for at least one tree per lot.

OBJECTIVES

- To contribute to a sense of place.
- To improve street microclimates.
- To complement the natural and scenic values of the Town Centre.
- To minimise long term maintenance.

EXISTING CONSTRAINTS

Overhead power lines throughout the Town Centre.
Undeveloped lots and lack of guttering and footpaths.

DESIGN RESPONSE

The use of native species is preferred. There are some exotic species existing within the town centre, and the use of these trees is continued to provide a consistent streetscape. Exotic species may also be used where their seasonal changes are required to add character to the streetscape.

PREFERRED TREES WITHIN LANDSCAPE ZONES



Buckinghamia celsissima
Ivory Curl Tree
Mature Height: 6-8 x 3-5 (HxW)
Description: Small to medium native tree with dark green leathery leaves. Profuse fragrant cream flowers in summer to autumn. Bronze new growth. Adaptable to most soils. Prefers moisture.



Magnolia grandiflora 'Little Gem'
Dwarf Magnolia
Mature Height: 6 x 3 (HxW)
Description: A small ornamental evergreen tree with large dark glossy leaves with bronze undersides. Large white flowers in spring.



Tristaniopsis laurina 'Luscious'
Kanooka / Water Gum
Mature Height: 7-10 x 6-7 (HxW)
Description: Small to medium evergreen tree with rounded dense form. Large shiny dark green leaves with coppery new growth. Cream flowers in summer.



Waterhousia floribunda 'Sweeper'
Weeping Lilly Pilly
Mature Height: 10-12 x 5-8 (HxW)
Description: A medium to large evergreen tree. Weeping foliage with glossy green leaves and dense growth. Clusters of small perfumed white flowers in summer and flushes of red growth in spring.

STREET TREES SELECTIONS



Callistemon salignus
Willow Bottlebrush
Mature Height: 4-6 x 3-4 (HxW)
Description: A small tree with dense habit. Bright pink new growth followed by cream coloured flowers in summer. Attractive papery bark. Formative pruning in early growth stages improves shape and appearance.



Corymbia citriodora 'Scentuous'
Lemon Sented Gum
Mature Height: 6-8 x 4-5 (HxW)
Description: A medium size tree with central leader. Light green lemon scented foliage with smooth greyish white bark.



Corymbia maculata 'Little Mac'
Dwarf Spotted Gum
Mature Height: 15-20 x 7-12 (HxW)
Description: A medium to large tree with central leader. Dark glossy leaves and cream flowers in spring. The bark is smooth grey with dimples. flaking sections exposes white new growth.



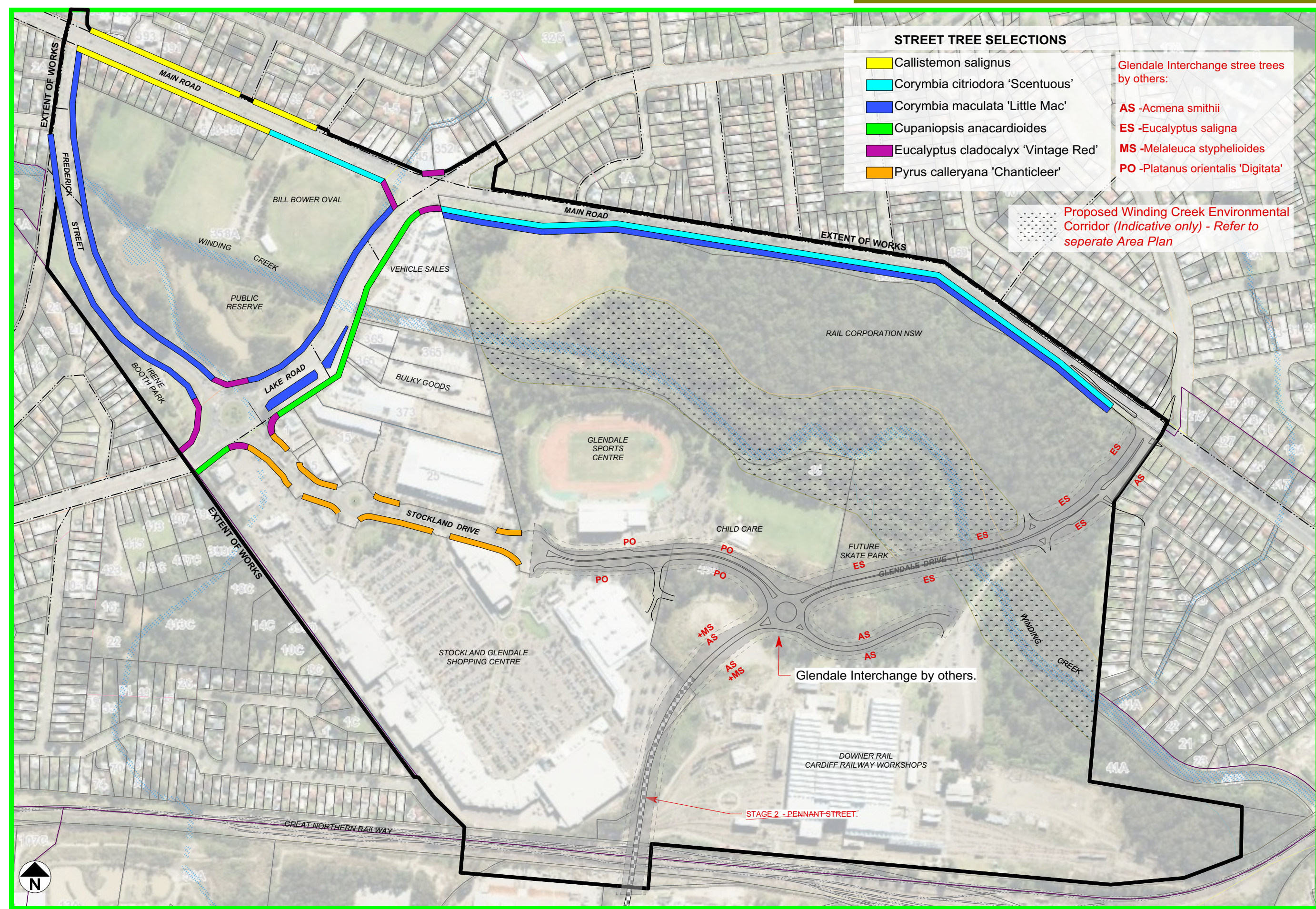
Cupaniopsis anacardioides
Tuckeroo
Mature Height: 5-8 x 5-8 (HxW)
Description: A medium sized native coastal rainforest tree. Wide spreading shade tree with a rounded crown. Attractive glossy green foliage with yellow flowers and orange seed. Adaptable to a wide range of soils. Tolerates coastal conditions, salt spray and part shade.



Eucalyptus cladocalyx 'Vintage Red'
Red Leafed Eucalyptus
Mature Height: 6-8 x 3-4m (HxW)
Description: A medium size tree with oval habit. Dark purple oval leaves and smooth greyish bark.



Pyrus calleryana 'Chanticleer'
Ornamental Pear
Mature Height: 11 x 6 (HxW)
Description: An upright ornamental pear with attractive foliage. Dark green leaves that turn orange and red in autumn. Masses of white flowers in spring. Grey-brown bark.



STM Street Tree Master Plan
Scale: 1:5000

DESIGN INTENT & THEMES

The Great Northern Railway and Winding Creek provides a strong urban character for the Glendale Town Centre. Interpretation of these themes can be seen in this document with a practical application of elements and finishes shown here. Parallel banding with perpendicular paving represents railway lines while organic flowing arcs and radiating circles reflect the movement of water. The combination of these elements creates a dynamic landscape that can be uniquely adapted to each site.

The use of Water Sensitive Urban Design (WSUD) principles within the landscape enforces the focus of water within the site and minimises the strain on resources.

Landscaped verges to comply with LMCC and RMS maintenance requirements. Landscaping to create a dense cover with offsets of a minimum 500mm from back of kerb. Refer LMCC landscape design guidelines.

Feature furniture and public art will help establish place making adding to the urban grain of the town centre.



- Images:
- | | |
|---|--|
| 1) Steam train at Fassifern (LMCC) | 10) Organic banded concrete (source unknown) |
| 2) Railway tracks at Fernleigh (LMCC) | 11) Planted verge in Adelaide (LMCC) |
| 3) Cockle Creek Station (LMCC) | 12) WSUD landscape Auckland (LMCC) |
| 4) Broken Pier at Cockle Creek (LMCC) | 13) WSUD verge in Rouse Hill (LMCC) |
| 5) Cockle Creek Water View (LMCC) | 14) WSUD landscape with banding ((Nelson Byrd Waltz) |
| 6) Concrete banded pavement (Nelson Byrd Waltz) | 15) Public art and furniture – Auckland foreshore (LMCC) |
| 7) Concrete and stone landscape (Nelson Byrd Waltz) | 16) Public art as furniture – Auckland Art Gallery (LMCC) |
| 8) Stone pavement (Nelson Byrd Waltz) | 17) Water in the landscape (LMCC) |
| 9) Exposed and coloured concrete (LMCC) | 18) Custom furniture in the landscape (Wraight + Associates) |

ELEMENTS & FINISHES

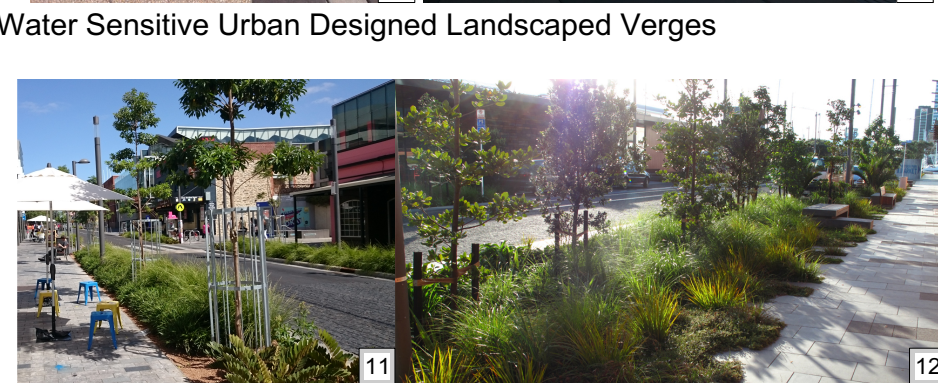
Refer Glendale Streetscape Technical Guidelines (GSTG).

Stone /Concrete Pavers, Plain concrete, Exposed and Coloured Concrete

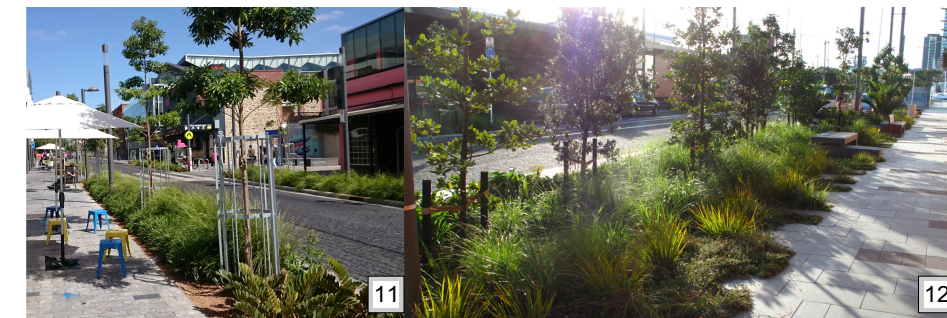
THEMES Rail



Water



Water Sensitive Urban Designed Landscaped Verges



Placemaking Through Unique Furniture and Public Art

