



Oakdale South - MOD 4
Landscape
September 2017



Prepared by:



SITE IMAGE
Landscape Architects

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INTRODUCTION

This report has been prepared to support the proposed Section 96 revisions to the approved State Significant Development (SSD 6917) for the staged development of the Oakdale South Estate (OSE).

The aim of this report is to provide the revised concept landscape design response for the revised masterplan and Stage 1 DA. The report responds to the Secretary's Environmental Assessment Requirements (SEARs) as they relate to landscape architecture/ design specifically:

Urban Design and Visual: Suitable landscaping incorporating endemic species; This report supports an Environmental Impact Statement (EIS) prepared in respect of the proposal and should be read in conjunction with the EIS and development plans submitted with the SSDA. The SEARS relevant to this SSD have been considered and are addressed in this report as follows:

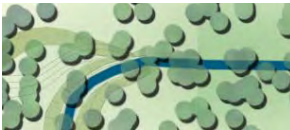
- The SSD approval sets out:
- An overarching planning framework to guide the staged development of the OSE including:
- An Indicative Master Plan and Structure Plan;
 - Development Controls for the OSE;
 - A Biodiversity Offset Strategy.
- Stage 1 Development of the Estate including:
1. A package of estate-wide site preparation works to be implemented in stages including:
 - Subdivision;
 - Bulk earthworks (including construction of detention basins); and
 - Construction of retaining walls, road and utility infrastructure/services.
 - Environmental management measures and protocols for the site.
 2. Development for the purposes of warehousing and distribution including:
 - The construction of warehouse buildings in Precincts 1;
 - The construction of hardstand, loading, car parking and landscaping in Precincts 1;
 - The fit out and use of buildings in Precincts 1 for generic warehousing and distribution uses.

Landscape Concept Master Plan

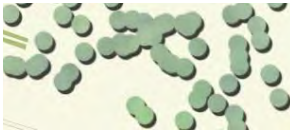
The landscape concept masterplan demonstrates the vision for the Oakdale South Estate (OSE). Various proposed landscape upgrades, rehabilitation and enhancements are proposed.



Bioretention basin



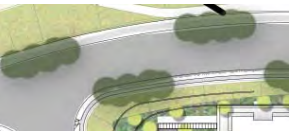
Creek & Riparian Zone



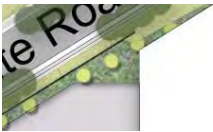
Biodiveristy Zone



Landscape Node



Estate Streetscape



On site presentational landscaping



On site buffer planting



Vegetated embankments



Typical Landscape Site Section

This section has been produced to graphically demonstrate the interfaces and relationship of intended landscape treatments across the subject site.



Defendable zone



Ecology fence



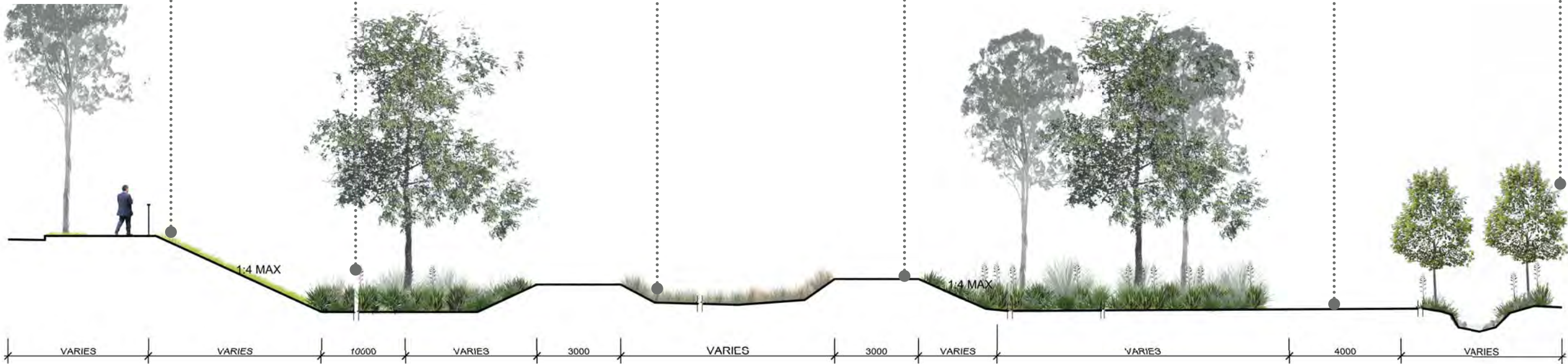
Bio-retention basin



Spray seal maintenance road
4m for Fire Service, 3m for basin and biodiversity



Riparian zone



SCALE 1:150

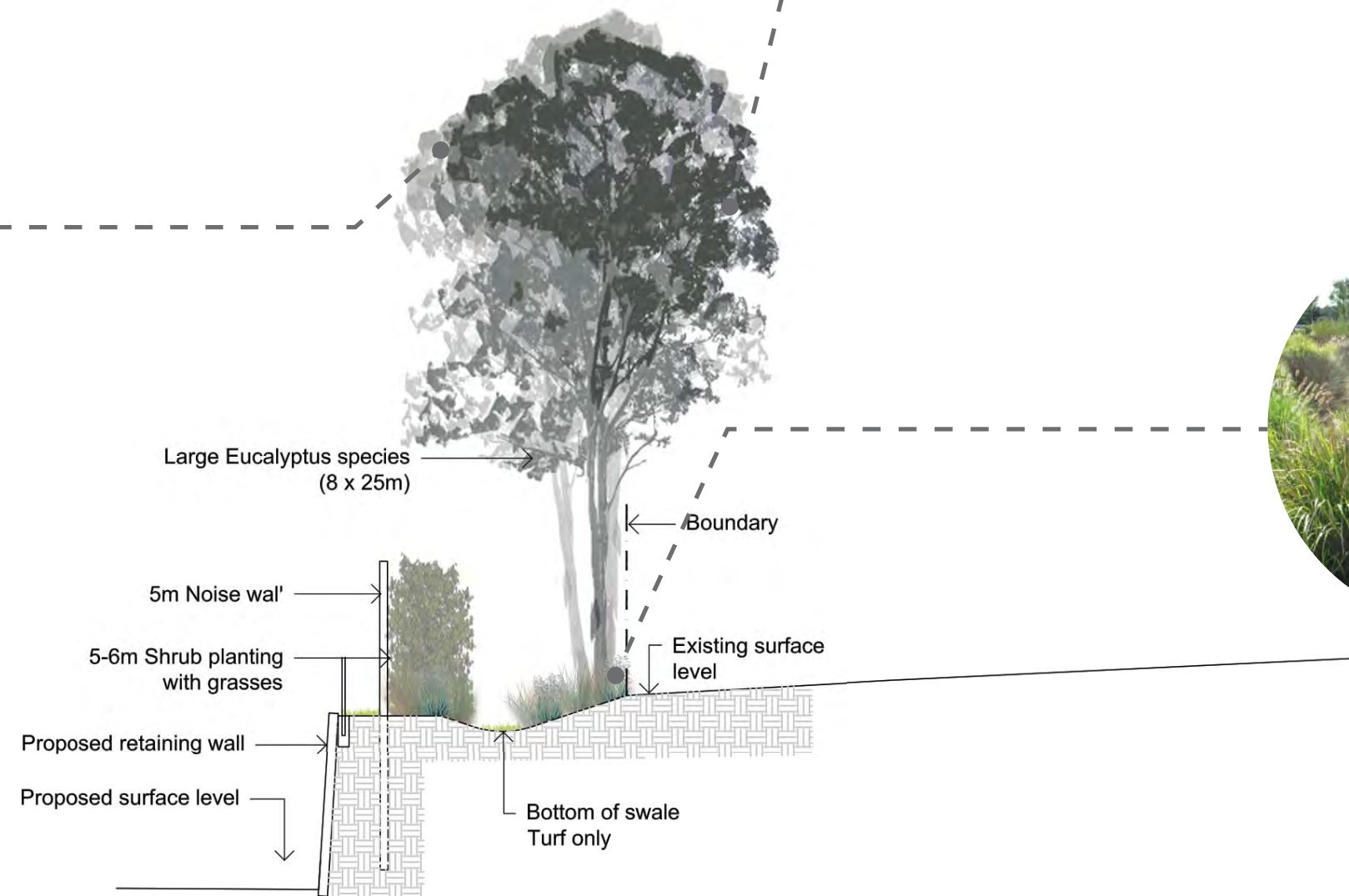
Southern Boundary Landscape Section



Section AA (Southern Boundary)
1:200 (Adapted from Civil section)

SCALE 1:200

The site plan illustrates the layout of the proposed development. It features several building footprints, including Precinct 4 (containing building 4A) and Precinct 5 (containing buildings 6A and 6B). Other buildings are labeled 1A, 1B, 1C, 1D, 2A, 2B, 3A, 3B, 3C, 3D, and 4A. The plan also shows parking lots, access roads, and a transmission easement. The 'SOUTHERN BOUNDARY' is indicated on the left, and the 'EASTERN BOUNDARY' is indicated at the bottom. A red line along the southern boundary marks the 'Extent of noise wall'.



 **Section BB (Eastern Boundary)**
1:100 (Adapted from Civil section)



BRICKWORKS
LIFEWAYS

Goodman























Oakdale South - MOD 4 | Landscape
























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Vegetation Typologies



									
Typology 1 Streetscape	Typology 2 Landscape Nodes	Typology 3 Basins	Typology 4 Biodiversity Zone	Typology 5 Riparian Zone	Typology 6 Defendable Zone	Typology 7 On Lot Landscaping	Typology 8 Existing Managed Grasses	Typology 9 Embankment Turf	Typology 10 Boundary Planting
Refer to Street Tree Masterplan. Copse detail, ballast stone base.	Formalised planting to create legibility and amenity.	Bioretention species in accordance with Penrith City Council WSUD Guidelines.	Various rehabilitated plant communities, refer to Biodiversity Offset Strategy by Cumberland Ecology	Rehabilitation of creekline included in biodiversity offsets.	Managed clear turf zone as stipulated by fire consultant	Presentation landscaping, softening of built form and amenity creation	Powerline easement, retain existing pastoral grassses and reinstate as required by civil works	Turf to civil embankment	Screen planting to boundary
									

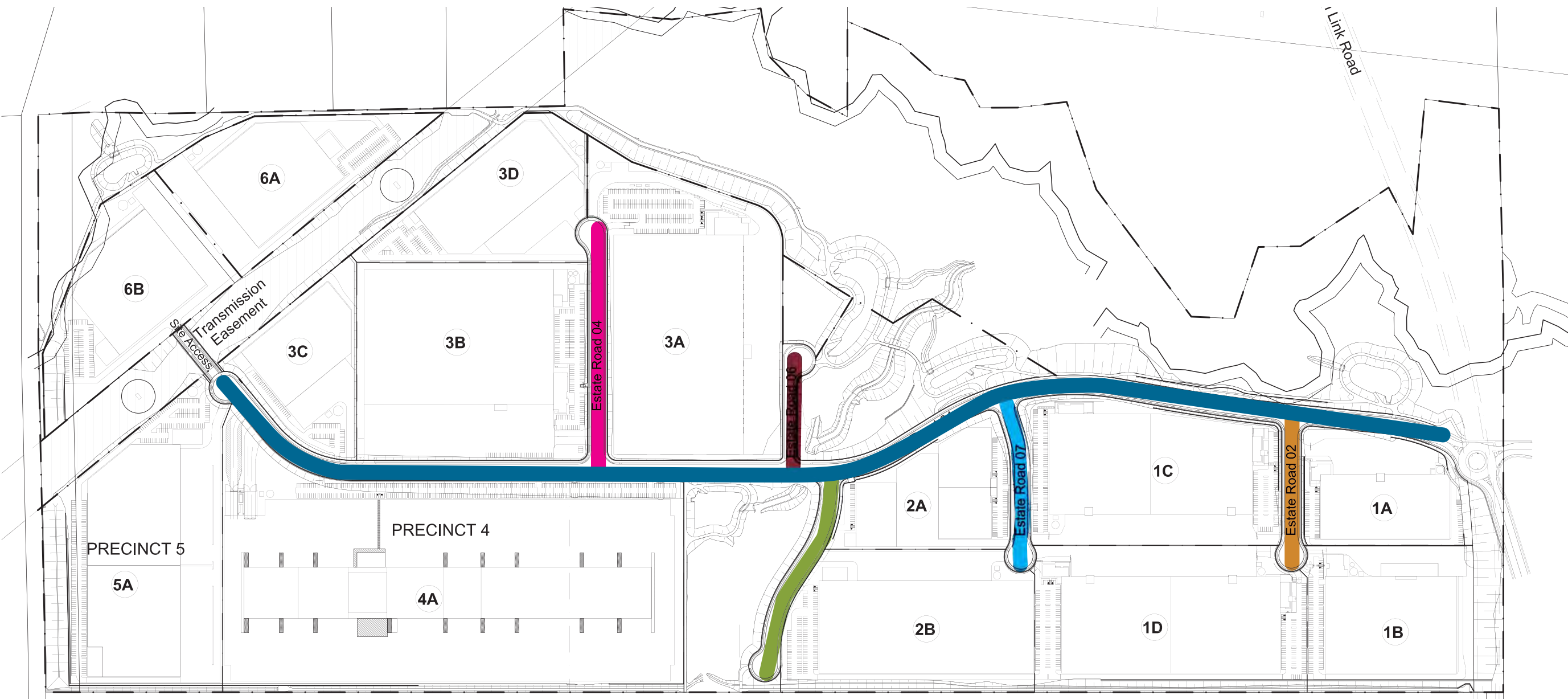
Typical Species List and Reference Table

										
Typology 1	Typology 2	Typology 3	Typology 4	Typology 5	Typology 6	Typology 7	Typology 8	Typology 9	Typology 10	
Streetscape	Landscape Node	Basins	Biodiversity Zone	Riparian Zone	Defendable Zone	On Lot Landscaping	Existing Managed Grasses	Embankment Turf	Boundary Planting	
Refer to Street Tree Masterplan. LR-007	Indicative Plant List	Indicative Plant List	Refer Biodiversity Offset Strategy by Cumberland Ecology	Refer Biodiversity Offset Strategy by Cumberland Ecology	Managed clear turf zone as stipulated by fire consultant	Indicative Plant List			Indicative Plant List	
Road 1 / Estate Road: - <i>Corymbia maculata</i>	Trees: - <i>Brachychiton acerifolius</i>	Basin Planting: - <i>Carex appressa</i>				Trees: - <i>Cupaniopsis anacardioides</i>			Trees: - <i>Eucalyptus Crebra</i> - <i>Eucalyptus moluccana</i> - <i>Eucalyptus tereticornis</i>	
Road 2: - <i>Eucalyptus crebra</i>	Shrubs & Accents: - <i>Doryanthes excelsa</i>					Shrubs & Accents: - <i>Doryanthes excelsa</i> - <i>Westringia fruticosa</i>			Shrubs & Accents: - <i>Acmena smithii</i> var. <i>minor</i>	
Road 3: - <i>Angophora subvelutina</i>	- <i>Westringia fruticosa</i>					Grasses: - <i>Dianella 'Breeze'</i> - <i>Lomandra longifolia</i>			Grasses: - <i>Pennisetum 'Nafray'</i>	
Road 4: - <i>Eucalyptus molucanna</i>	- <i>Juncea sp/</i>									
Road 5: - <i>Eucalyptus crebra</i>	Grasses: - <i>Poa 'Eskdale'</i>									
Refer to Street Tree Masterplan. Copse detail, ballast stone base.	Formalised planting to create legibility and amenity.	Native grass planting in basin, potential expansion of biodiversity zone on batter.	Various rehabilitated plant communities, refer to Biodiversity Offset Strategy by Cumberland Ecology	Rehabilitation of creekline included in biodiversity offsets.	Managed clear turf zone as stipulated by fire consultant	Presentational landscaping, softening of built form and amenity creation	Existing pastoral grasses, maintained under powerline easement.	Turf planting to embankment	Native screening to boundary	
										



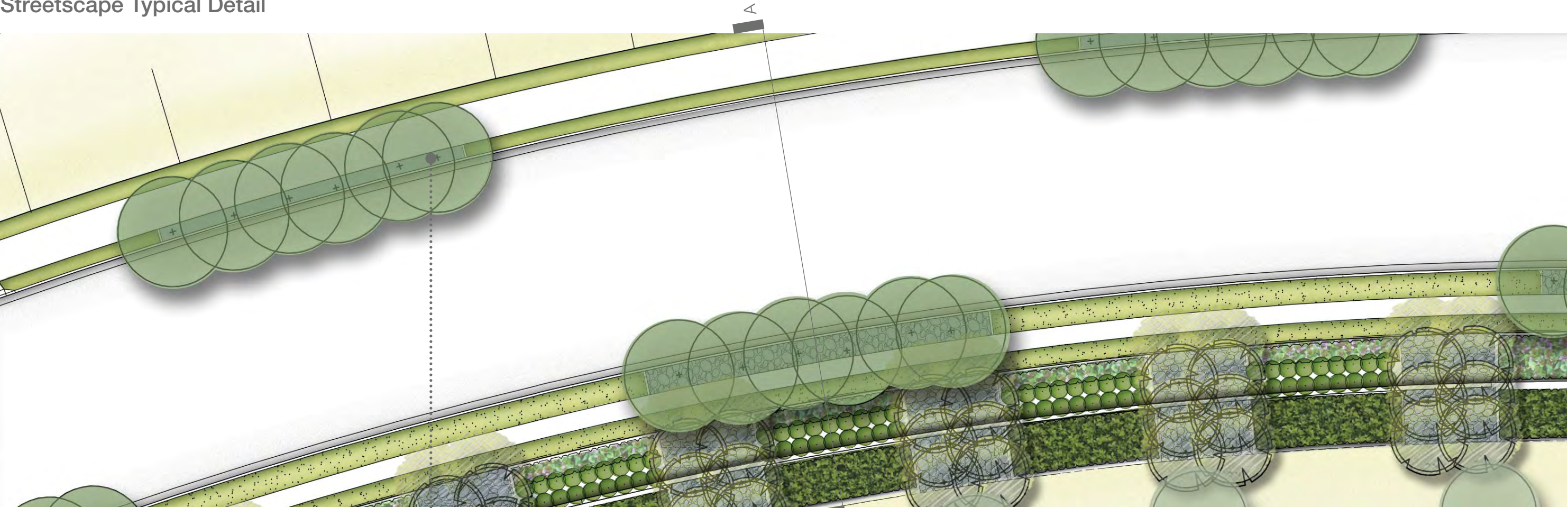
Street Tree Master Plan

This section has been produced to graphically demonstrate the interfaces and relationship of intended landscape treatments across the subject site.



<div>Estate Road (Road 1)</div> <div><i>Corymbia maculata</i> Spotted Gum 30m (h) x 8m (w)</div> <div></div>	<div>Road 2</div> <div><i>Eucalyptus crebra</i> Narrow-leaved Ironbark 15m (h) x 6m (w)</div> <div></div>	<div>Road 3</div> <div><i>Angophora subvelutina</i> Broad-leaved Apple 18m (h) x 8m (w)</div> <div></div>	<div>Road 4</div> <div><i>Eucalyptus moluccana</i> Grey Box 25m (h) x 6m (w)</div> <div></div>	<div>Road 6</div> <div><i>Eucalyptus crebra</i> Narrow-leaved Ironbark 15m (h) x 6m (w)</div> <div></div>	<div>Road 7</div> <div><i>Eucalyptus crebra</i> Narrow-leaved Ironbark 15m (h) x 6m (w)</div> <div></div>
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Streetscape Typical Detail

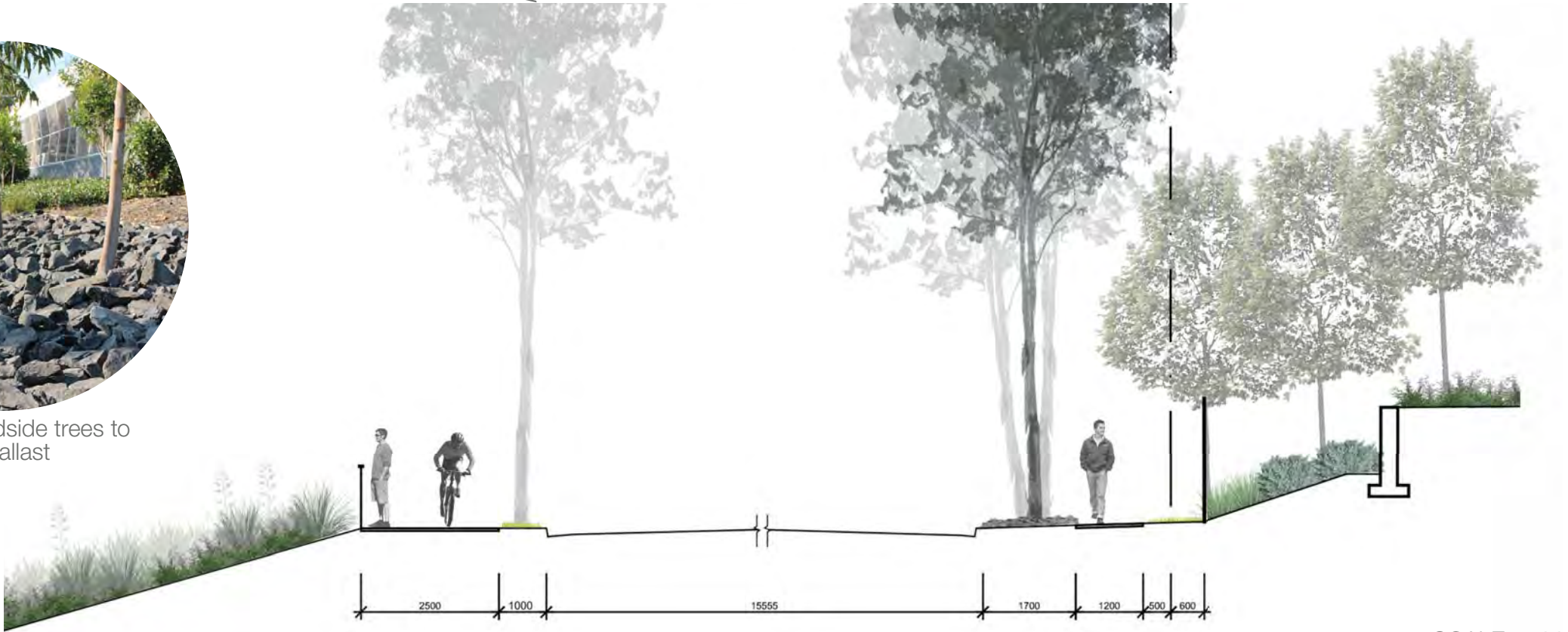


SCALE 1:250

Proposed trees flanking both side of all proposed streets. The main estate road shall consist of a 2.5m shareway for pedestrians and cyclists. Grass verge shall separate 'copse' street tree planting, based in ballast, with organic mulch underlay.



Copses of roadside trees to be in ballast



SCALE 1:100

Landscape Node 1 - Plan & Section



Block seating, potentially incorporating salvaged heritage items (circa. 1850 brickwork)

To ensure adequate respite and relaxation amenity, Landscape nodes are proposed along the main spine road, interfacing with natural biodiversity landscape works. These nodes shall provide shade, visual separation from vehicles, views, seating, and potentially host interpretive art of European historical artefact found on site.



Ballustrade on top of key stone wall (Detail Indicative)



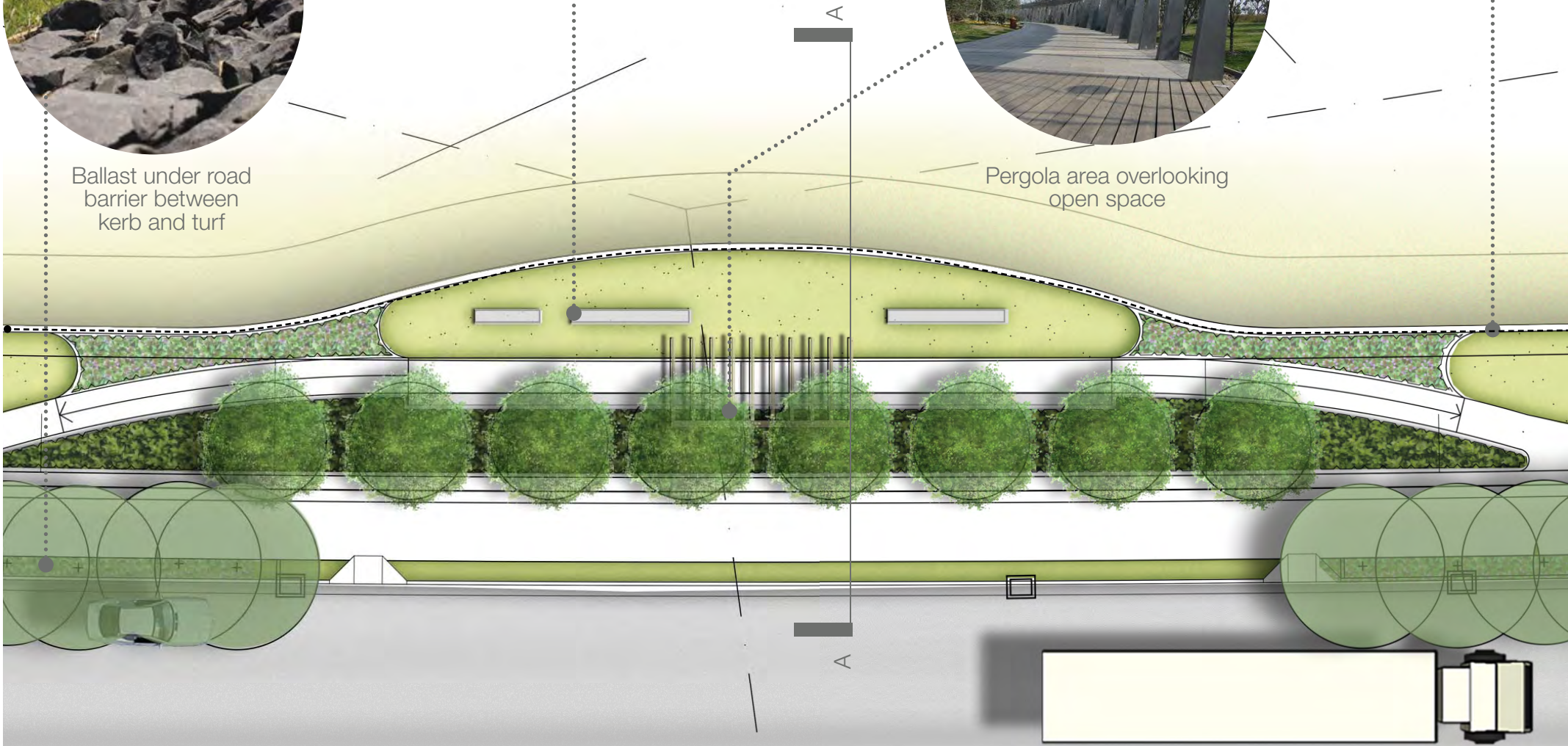
Feature native plantings to enhance wayfinding and legibility



Ballast under road barrier between kerb and turf



Pergola area overlooking open space



SCALE 1:250



SCALE 1:75

Landscape Node 2 - Plan / Section



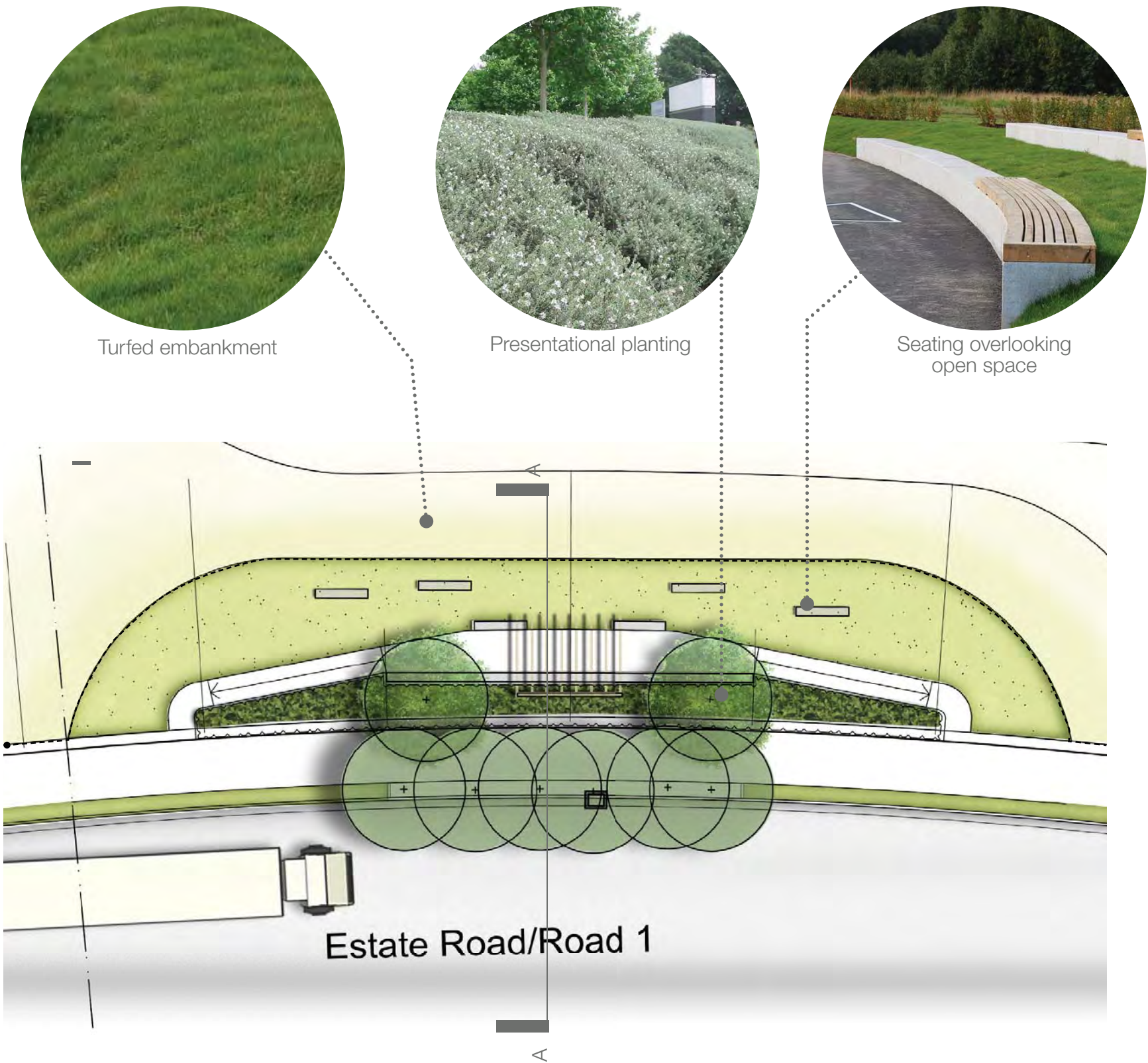
Nodes shall be strategically placed close to office administration areas, entries etc to 'cluster' activity, and provide convenience and accessibility for workers of nearby facilities.

Landscapes nodes shall also be used by pedestrians and cyclists, create a sense of place and legibility across the site.

The use of feature planting and pergola structures will further enhance these areas, and create a focal points for the greater estate



SCALE 1:100



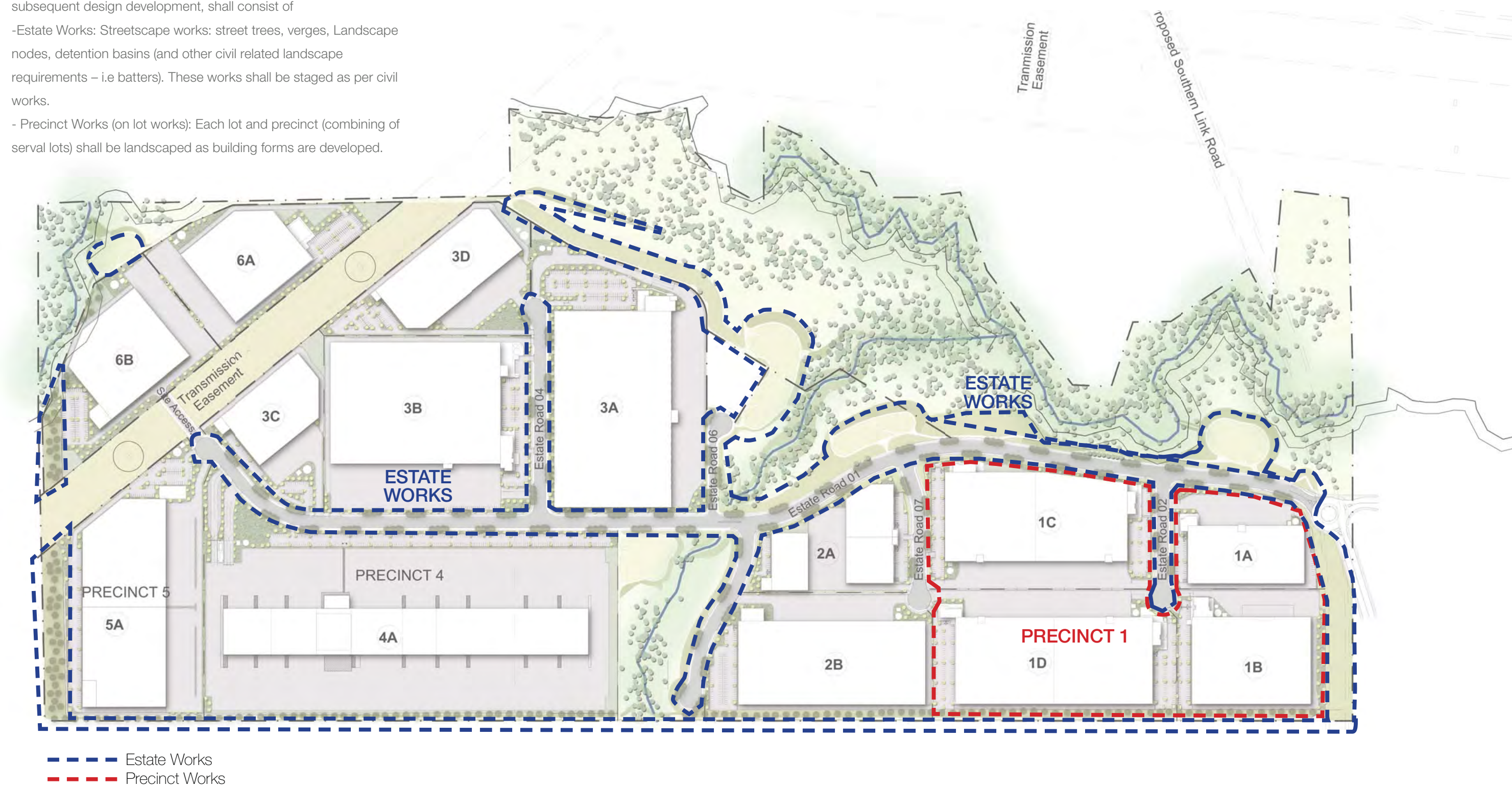
SCALE 1:250

Stage 1 Development

Landscape Scope of Works

The landscape works described specifically in this report, and subsequent design development, shall consist of

- Estate Works: Streetscape works: street trees, verges, Landscape nodes, detention basins (and other civil related landscape requirements – i.e batters). These works shall be staged as per civil works.
- Precinct Works (on lot works): Each lot and precinct (combining of serval lots) shall be landscaped as building forms are developed.





Oakdale South - MOD 4
Estate Landscape Works
September 2017

BRICKWORKS

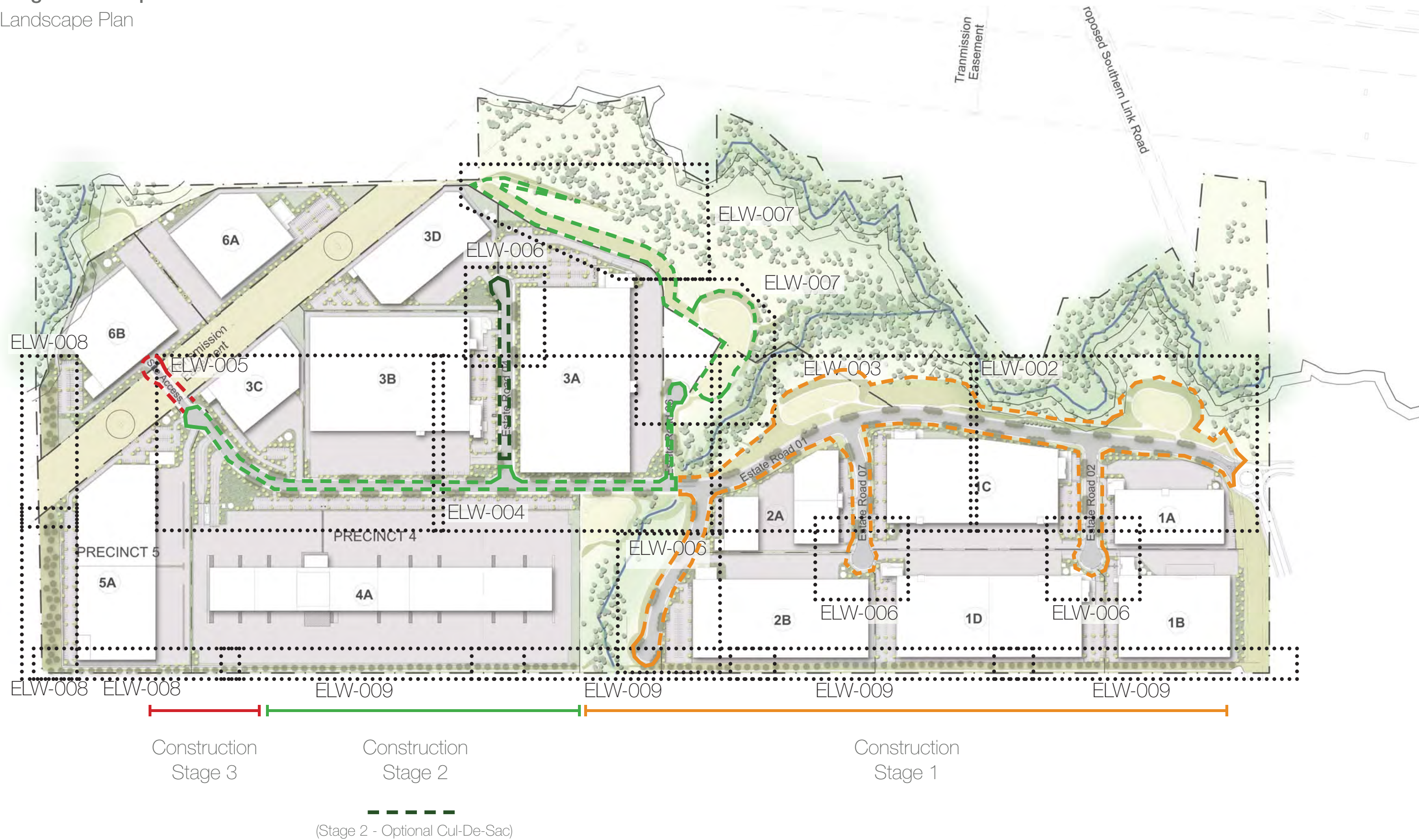


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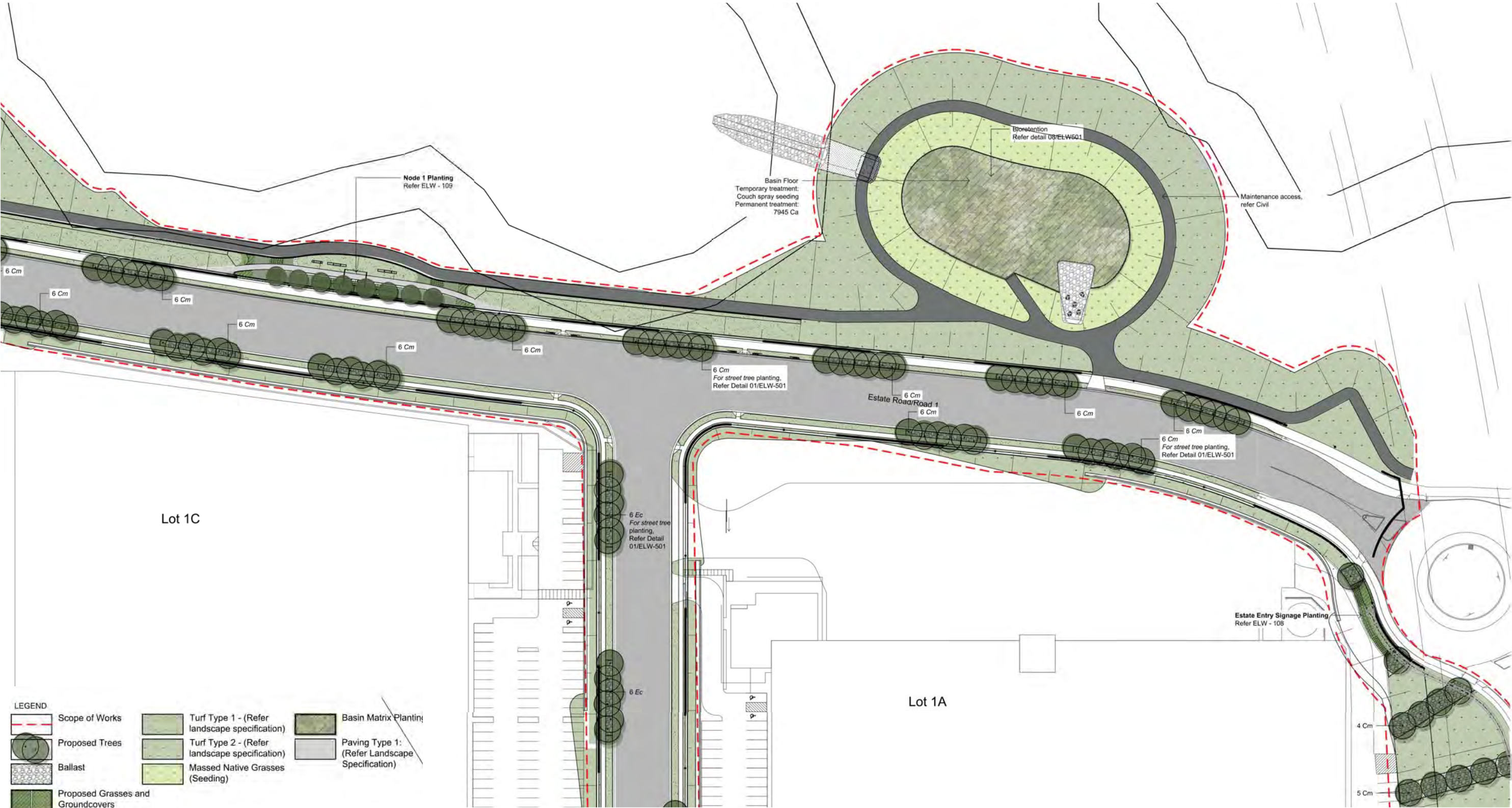


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Stage 1 Development Works
Landscape Plan



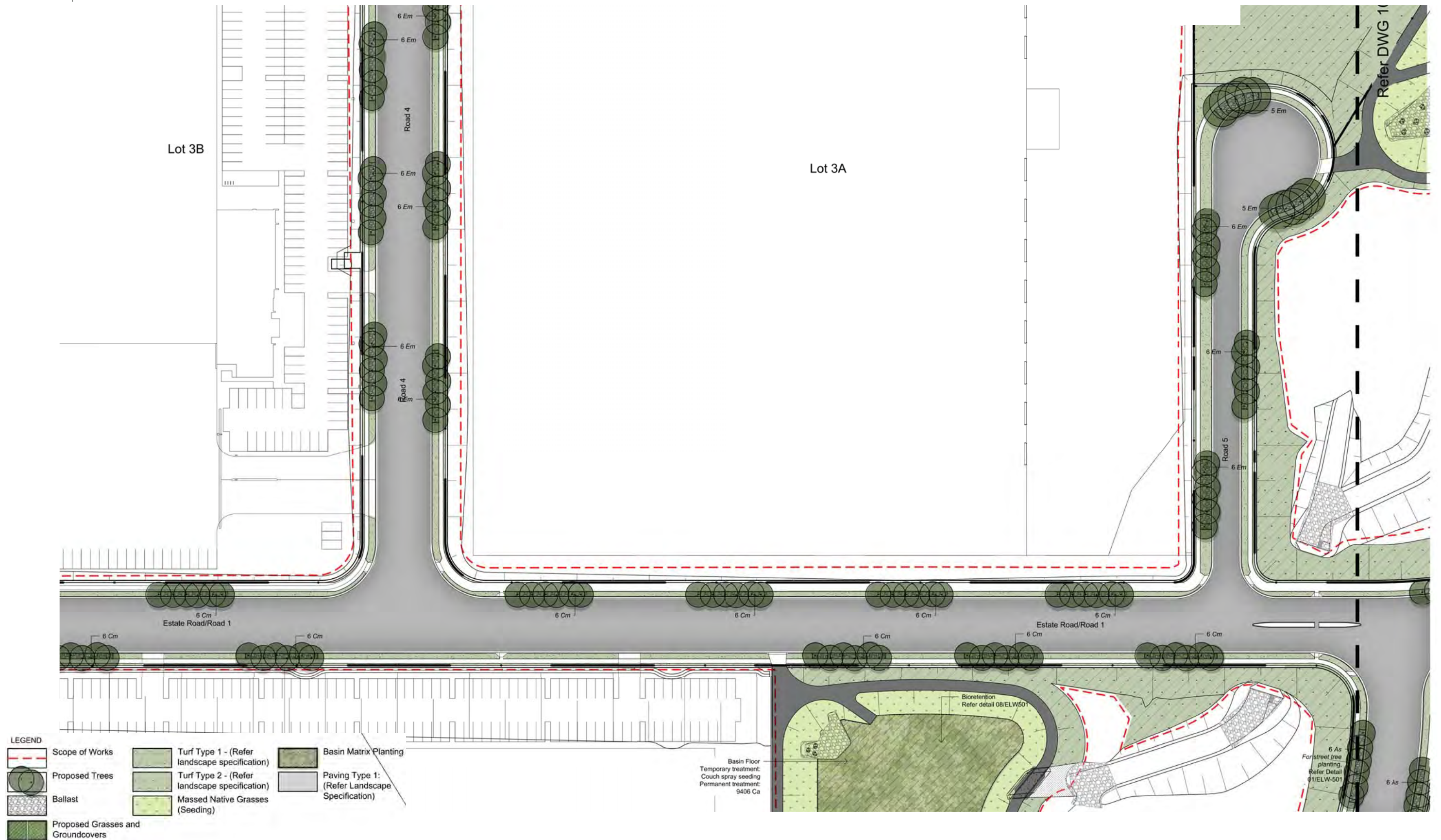
Estate Landscape Works
Landscape Plan



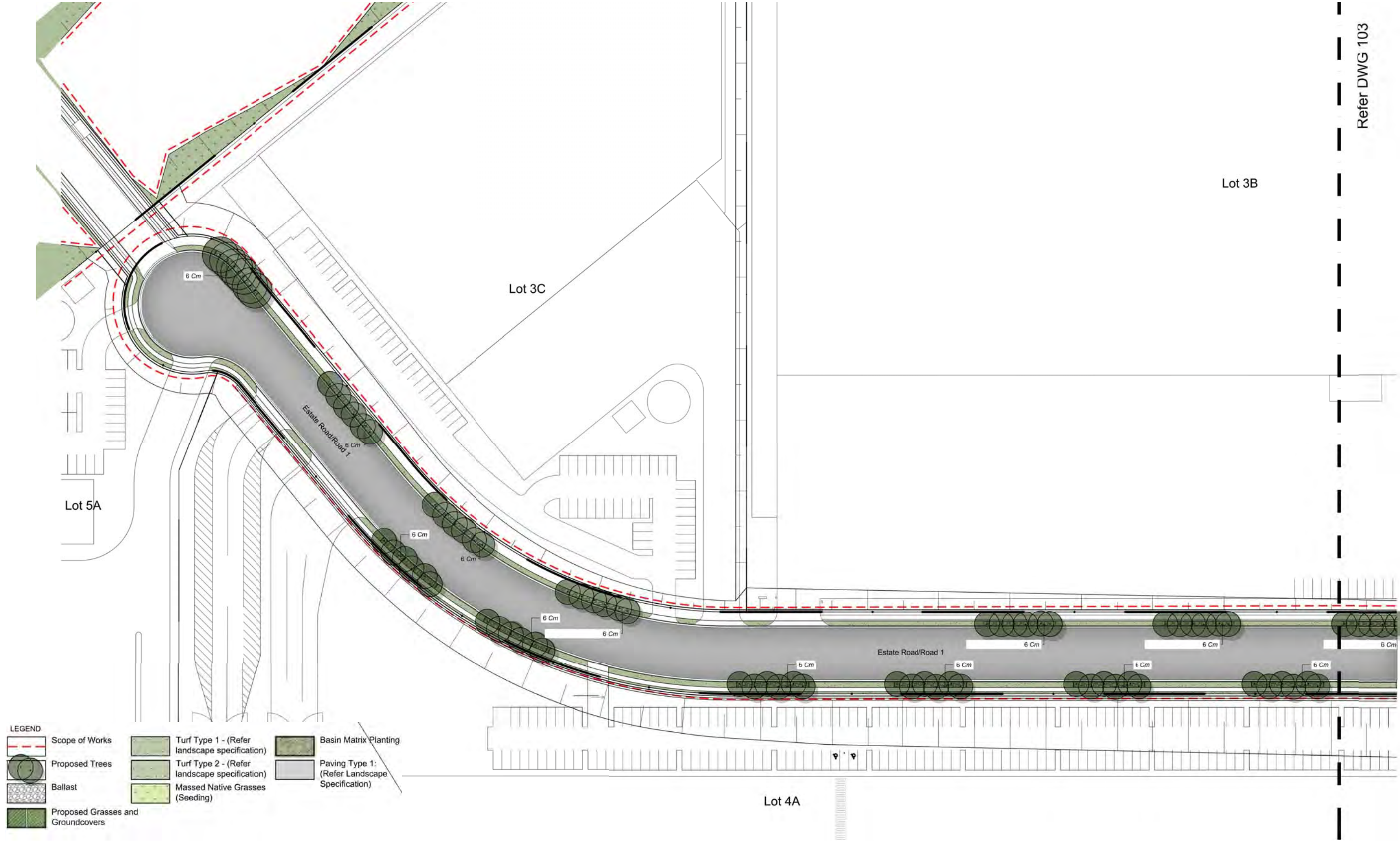
Landscape Plan



Landscape Plan



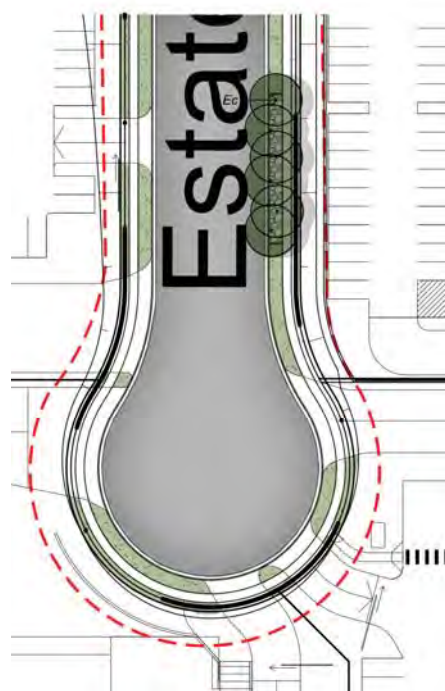
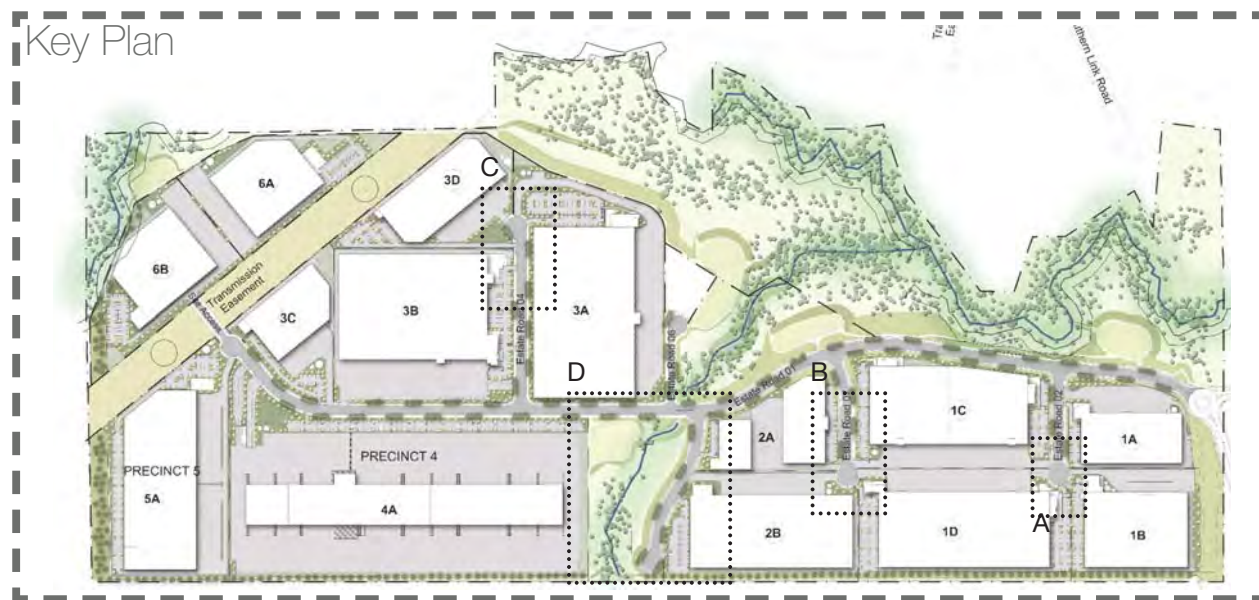
Estate Landscape Works
Landscape Plan



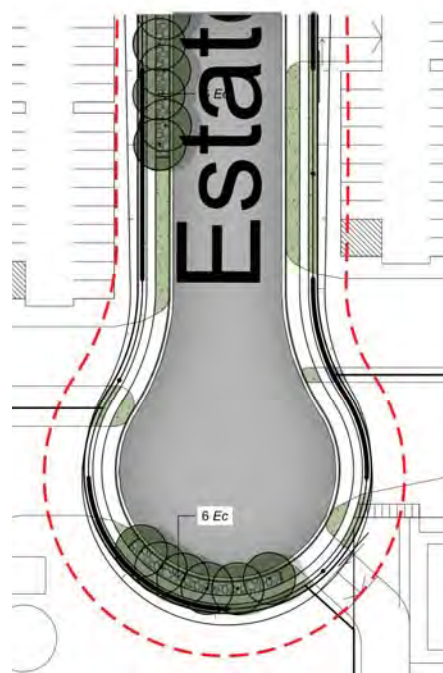
Refer DWG 103

Landscape Plan

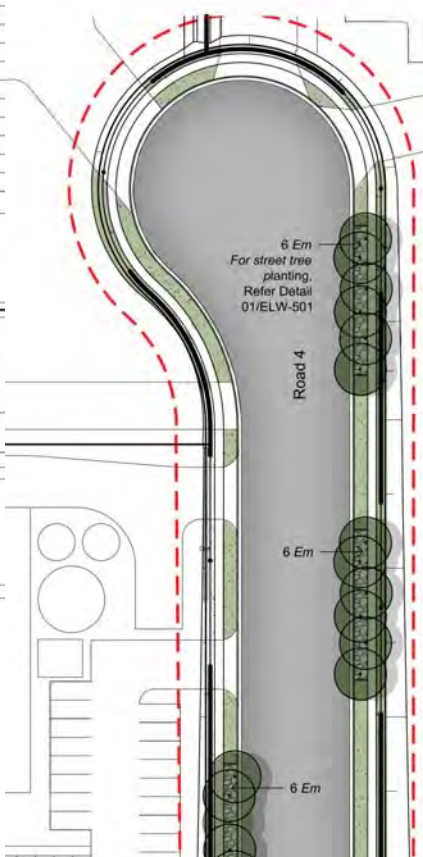
Key Plan



Plan A



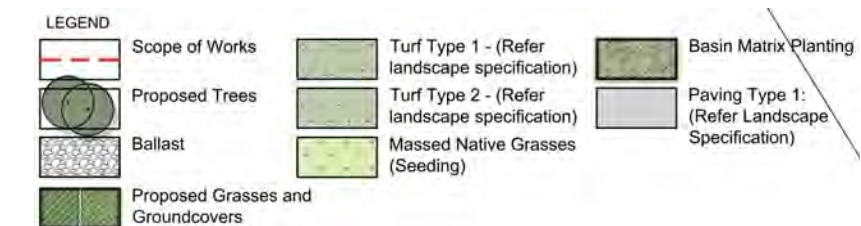
Plan B



Plan C



Plan D



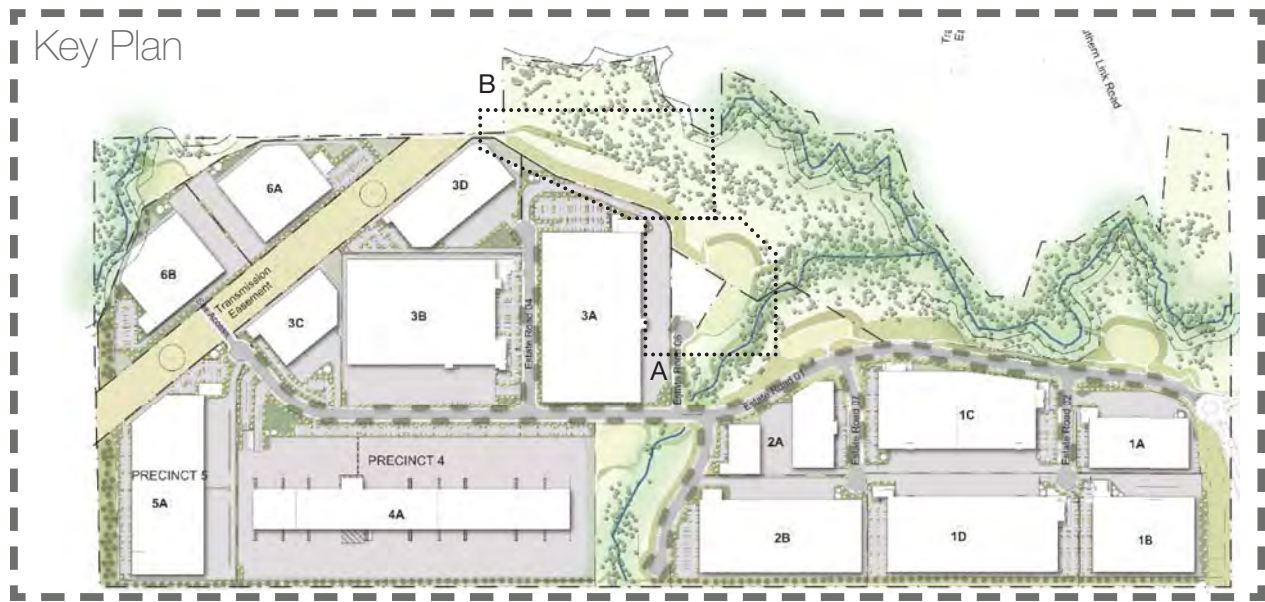
Estate Landscape Works
Landscape Plan



Plan A



Plan B



Key Plan

Landscape Plan

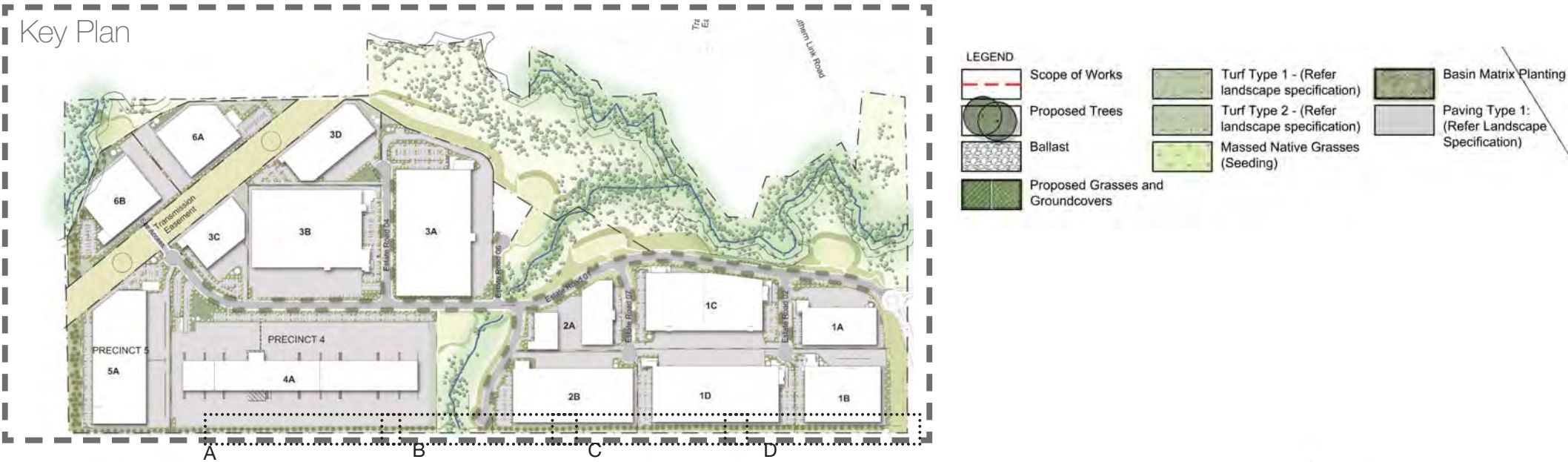
Plan B

Plan C

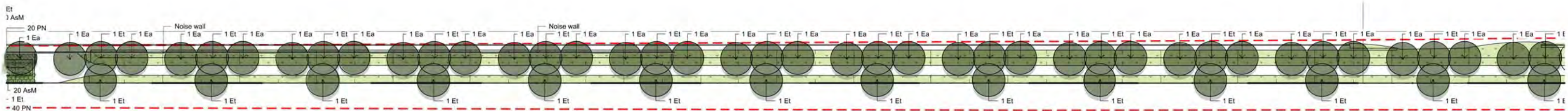
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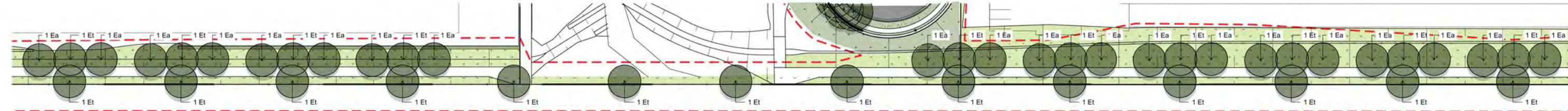
Estate Landscape Works
Landscape Plan



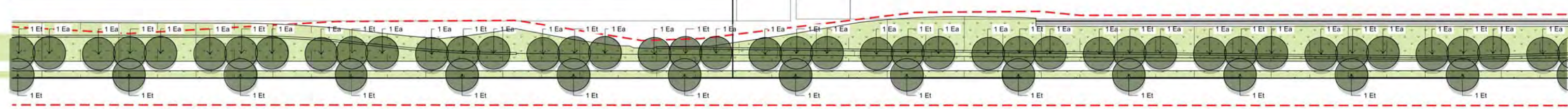
Plan A



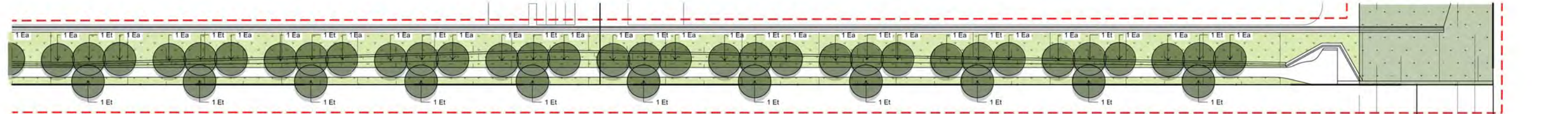
Plan B



Plan C



Plan D

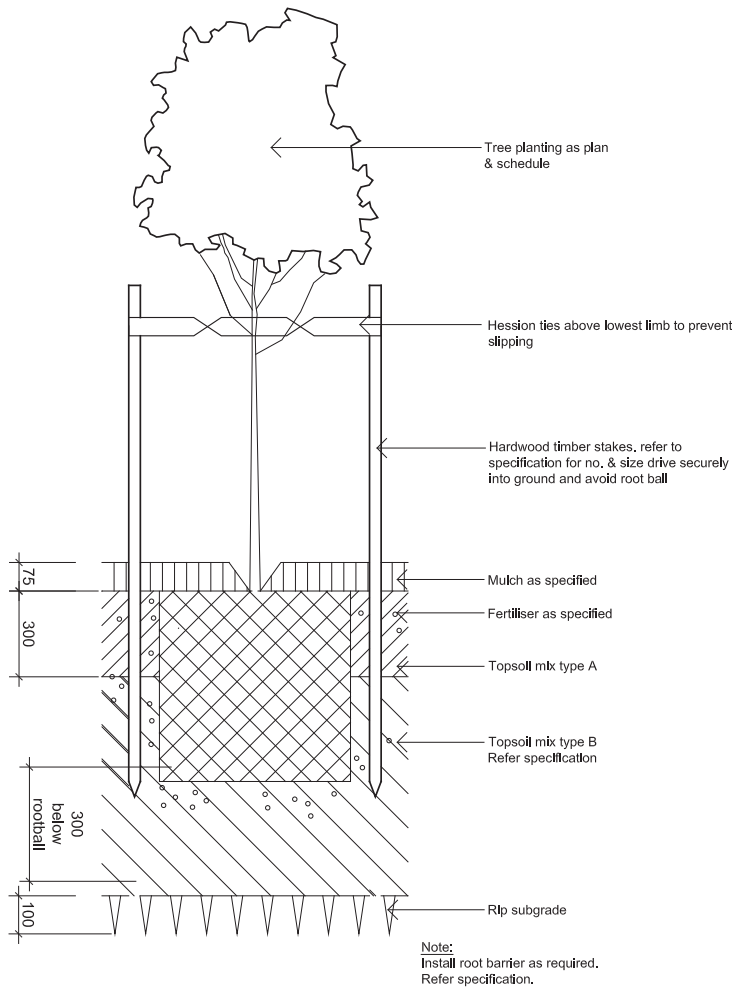
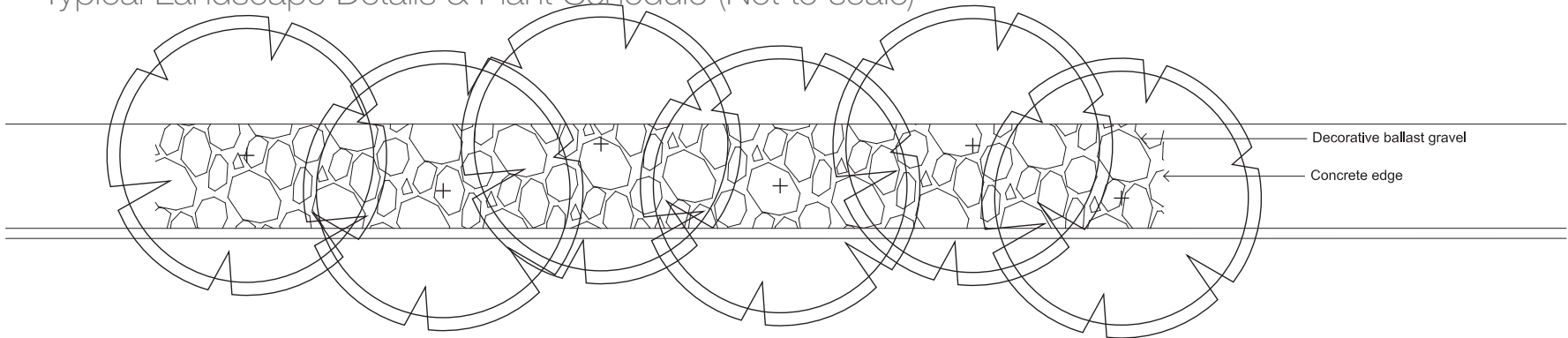


Estate Landscape Works

Typical Landscape Details & Plant Schedule (Not to scale)

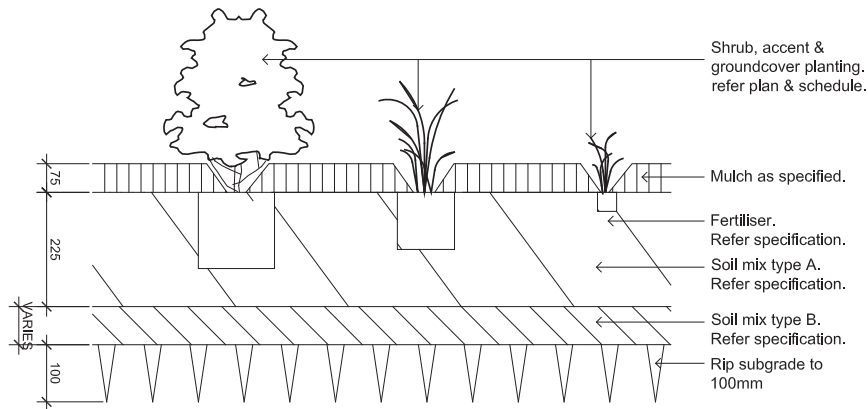
01 Street Tree Planting Detail

ELW-501



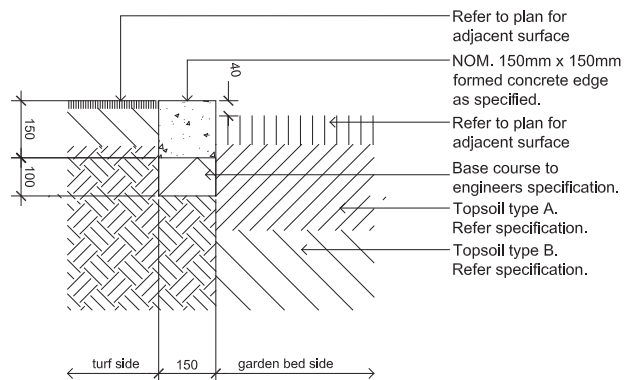
02 DETAIL - 75-200L TREE PLANTING ON GRADE

ELW-501



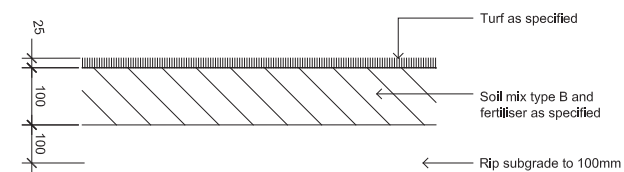
03 SHRUB, ACCENT & GROUNDCOVER PLANTING ON GRADE

ELW-501



04 TYPICAL CONCRETE EDGE

ELW-501

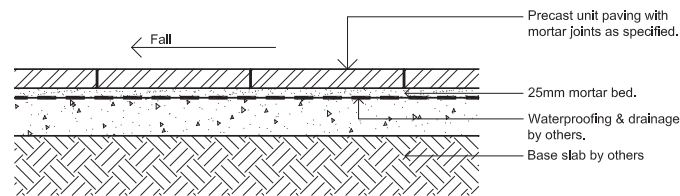


05 DETAIL -TURF ON EVEN GRADE

ELW-501

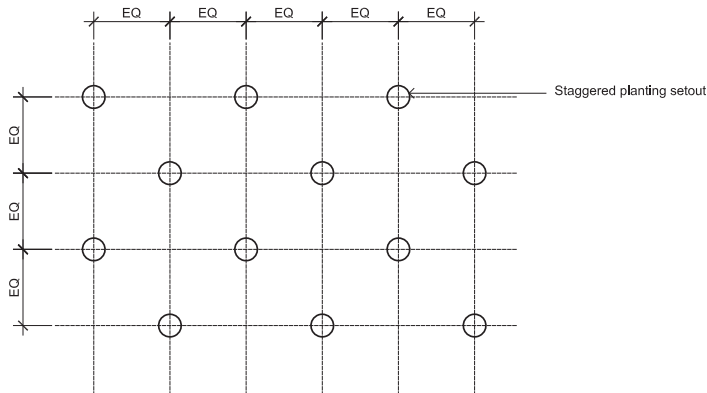
Code	Botanical Name	Common Name	Mature Height (m.)	Mature Spread (m.)	Spacings	Pot Size	CPW	Quantity
Trees								
As	Angophora subvelutina	Broad-leaved Apple	25	15	As Shown	75L	+	48
Ca	Cupaniopsis anacardioides	Tuckeroo	8	8	As Shown	200L		11
Cm	Corymbia maculata	Spotted Gum	30	8	As Shown	75L	+	303
Ea	Eucalyptus amplifolia	Cabbage Gum	30	8	As Shown	75L	*	143
Ec	Eucalyptus crebra	Narrow Leaved Ironbark	15	6	As Shown	75L	*	60
Em	Eucalyptus moluccana	Grey Box	20	8	As Shown	75L	*	82
Et	Eucalyptus tereticornis	Forest Red Gum	30	8	As Shown	75L	*	148
Li	Lagerstroemia indica 'Natchez'	Crepe Myrtle	8	6	As Shown	75L		2
Shrubs								
AsM	Acmena smithii var. minor	Dwarf Lillypilly	3	2	As Shown	300mm		1048
CE	Callistemon 'Endeavour'	Bottlebrush	2.5	2.5	As Shown	300mm		878
CLJ	Callistemon viminalis 'Little John'	Little John Bottlebrush	0.8	0.8	As Shown	300mm		86
GM	Grevillea Moonlight	Moonlight Grevillea	4	3	As Shown	300mm		250
NGS	Nandina 'Gulf Stream'	Nandina	0.75	0.5	As Shown	300mm		498
Ri	Rhaphioloipsis indica	Indian Hawthorn	2.5	2.5	As Shown	300mm		302
Groundcovers and Grasses								
PN	Pennisetum 'Nafay'	Nafay Pennisetum	0.6	0.6	5/m2	150mm		31883
TT	Trachelospermum jasminoides 'Tricolour'	Tricolour	0.5	2	5/m2	150mm		710
Basin Matrix Planting								
Ca	Carex appressa	Tussock Sedge	0.5	0.5	5/m2	75mm Tube		38081

Plant quantities and arrangement subject to design development



06 PRECAST UNIT PAVERS ON SUSPENDED SLAB

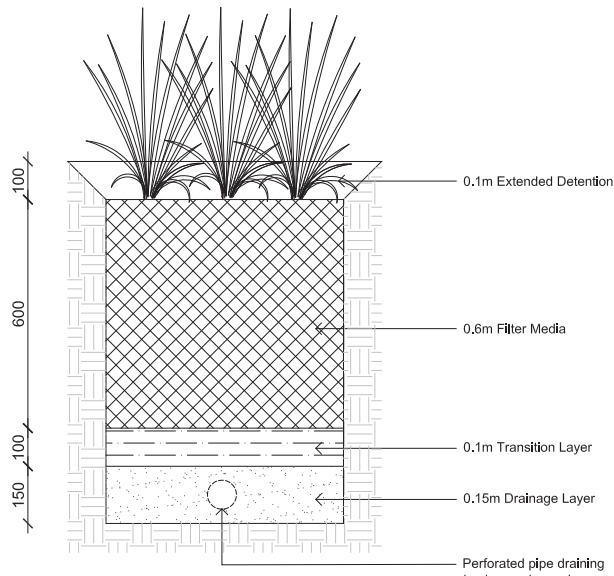
ELW-501



07 PLAN - MATRIX PLANTING

SCALE N/A

ELW-501

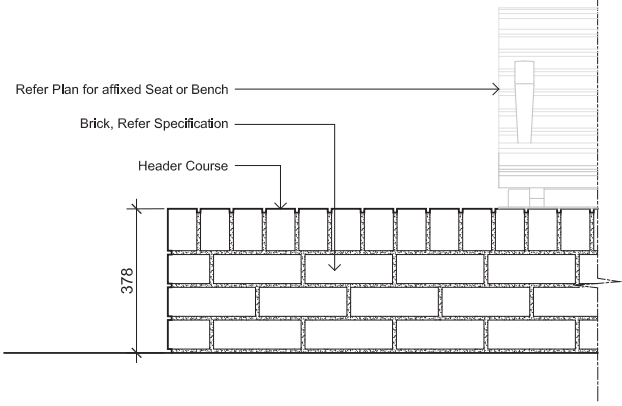


08 SECTION - BIORETENTION

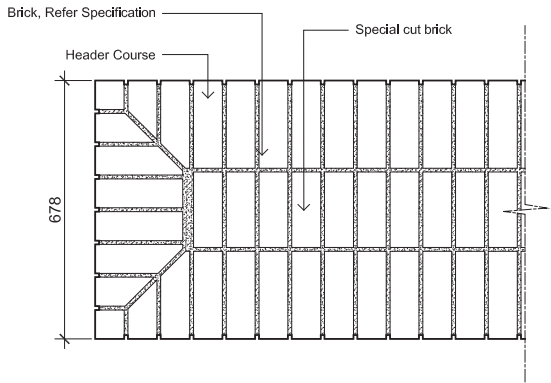
ELW-501

Estate Landscape Works

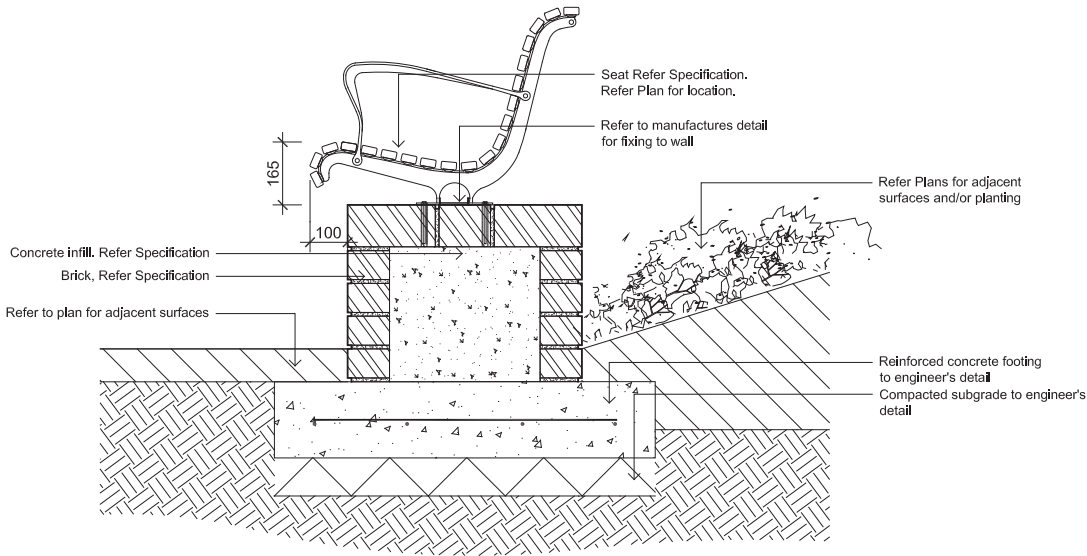
Typical Landscape Details (Not to scale)



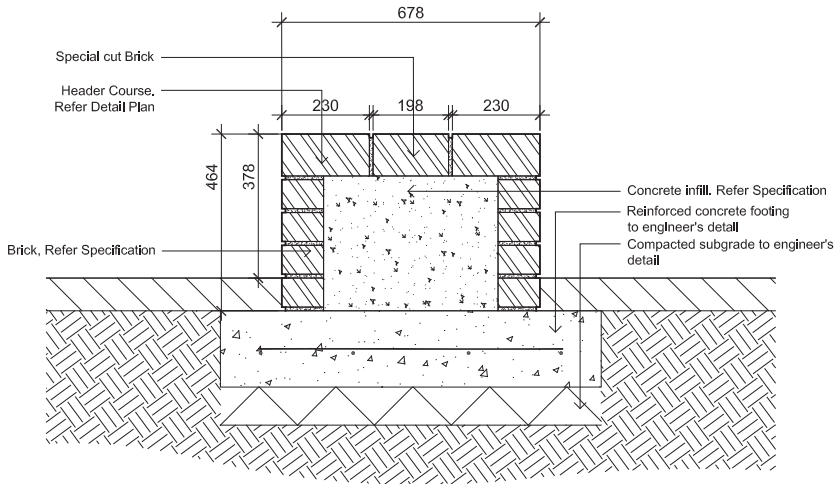
01 TYPICAL BRICK SEATING WALL ELEVATION
ELW-502



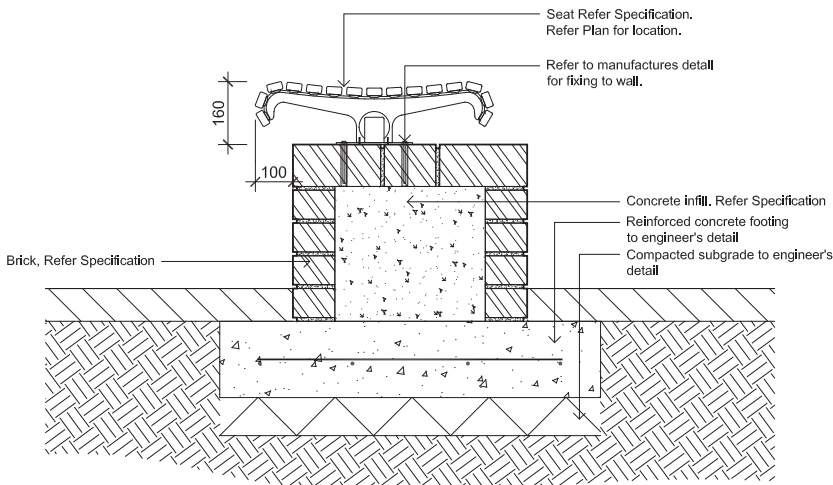
02 TYPICAL BRICK SEATING WALL PLAN
ELW-502



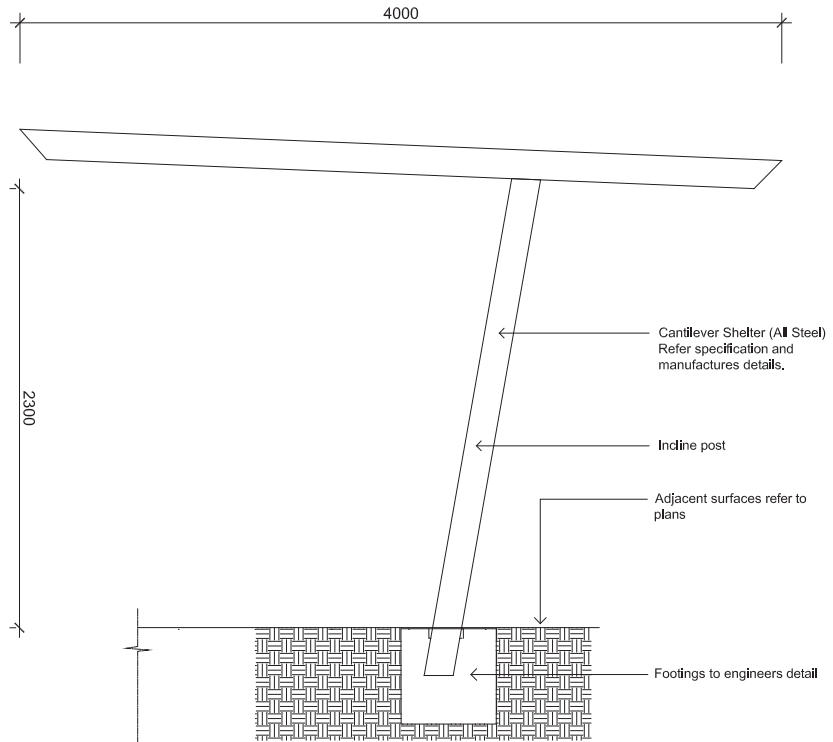
05 BRICK SEATING WALL WITH SEAT
ELW-502



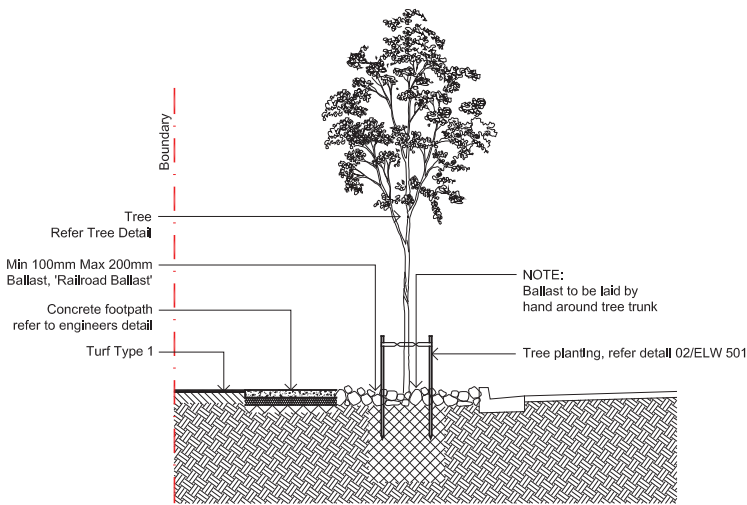
03 TYPICAL BRICK SEATING WALL
ELW-502



06 BRICK SEATING WALL WITH BENCH
ELW-502



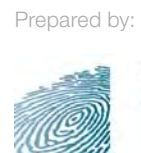
04 PERGOLA
ELW 502



07 Street Tree Planting Detail
ELW-502



Oakdale South - MOD 4
Precinct 1 Landscape
September 2017



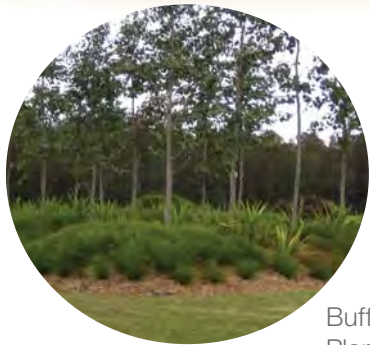
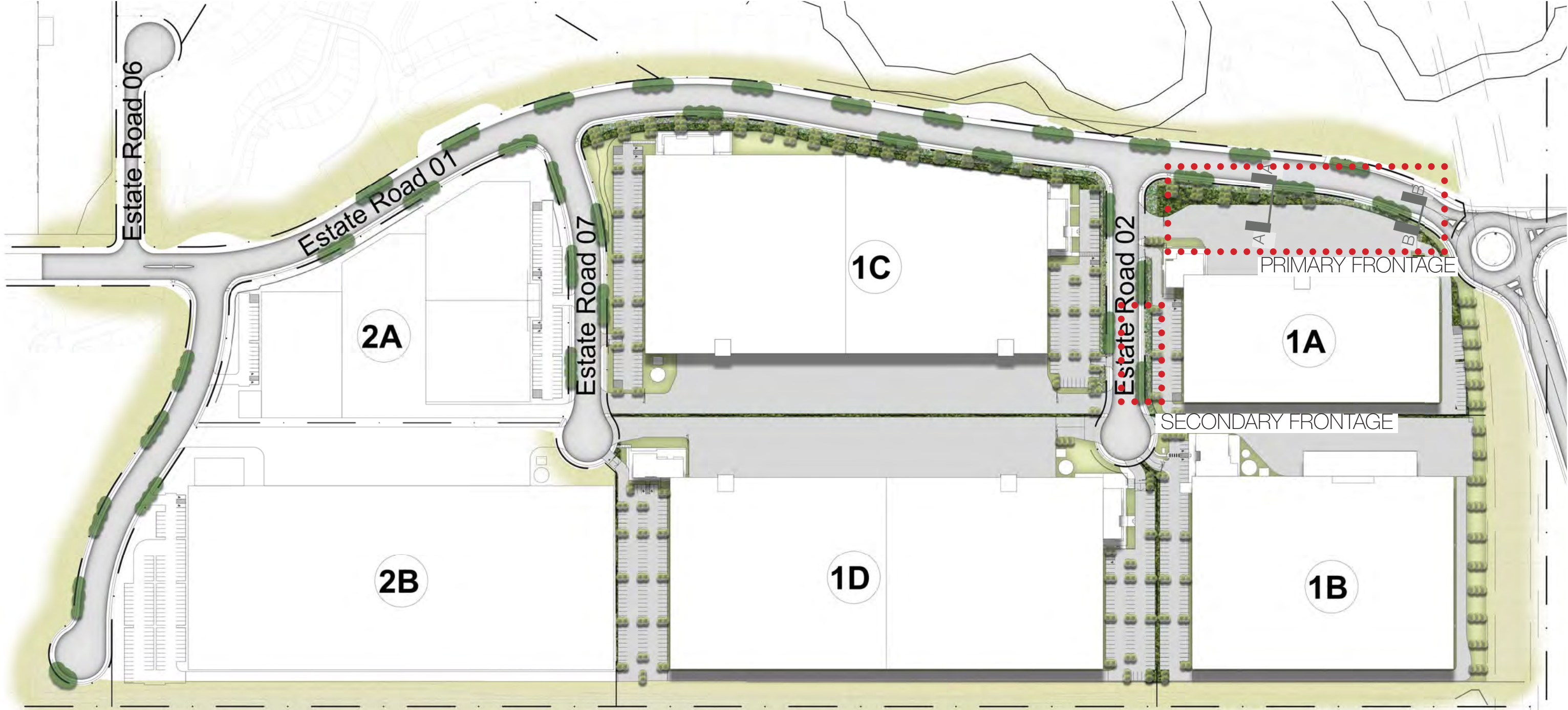
Prepared by:



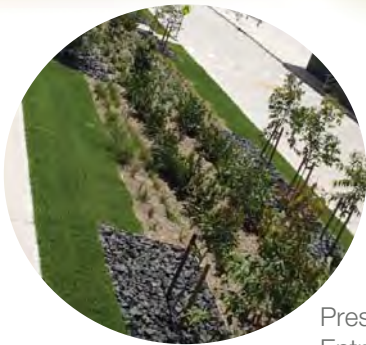
SITE IMAGE
Landscape Architects

Lot Landscaping - Precinct 1

Landscape Plan (Not to scale)



Buffer / Screen
Planting



Presentation /
Entry Planting



Feature 'Railroad
Rock Ballast' Banding



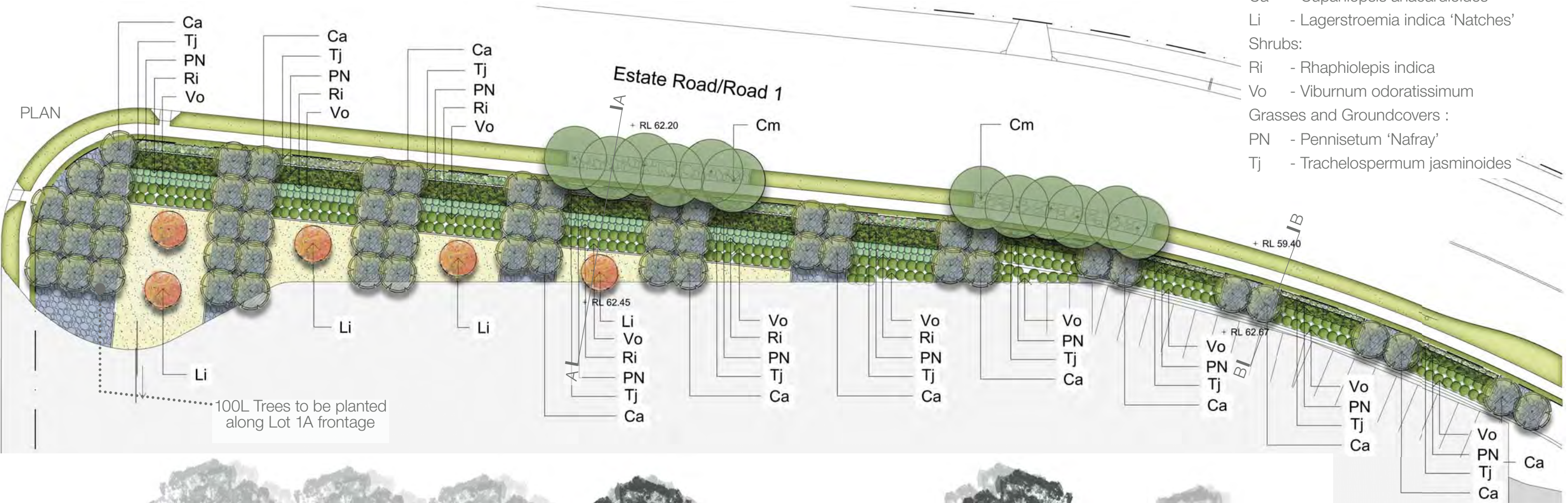
Secondary Planting
Zone - Grid of Trees in Turf



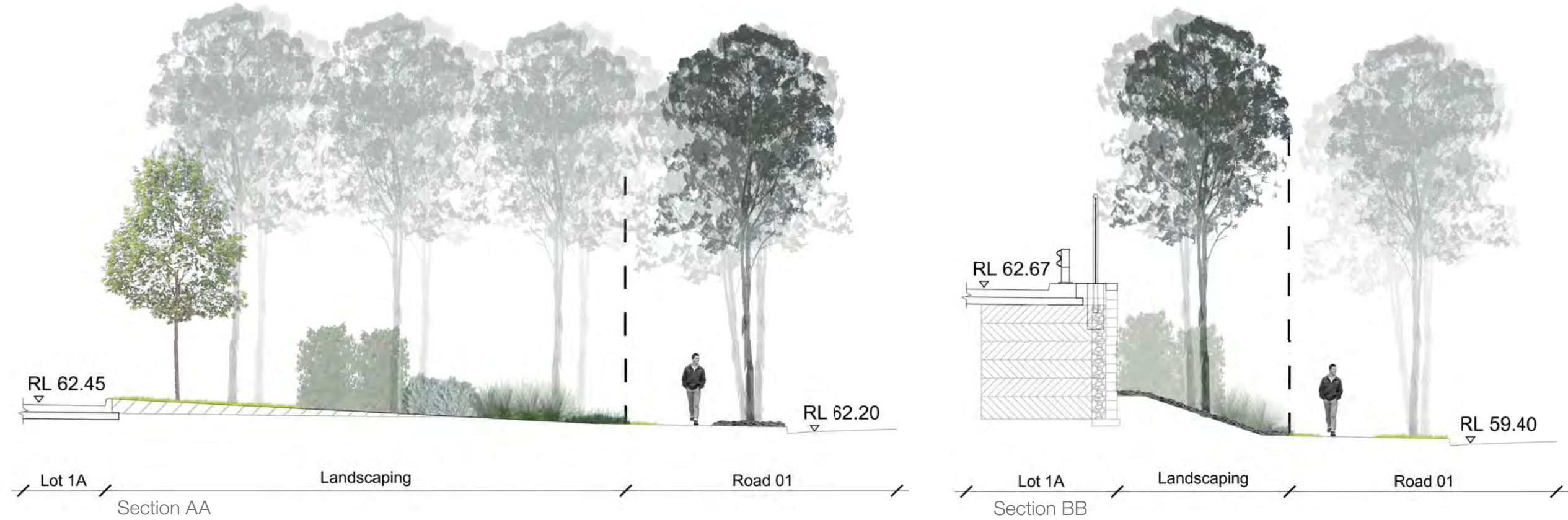
Carpark
Planting

Lot Landscaping - Precinct 1

Primary Presentational Frontage - Typical Landscape Detail Plan

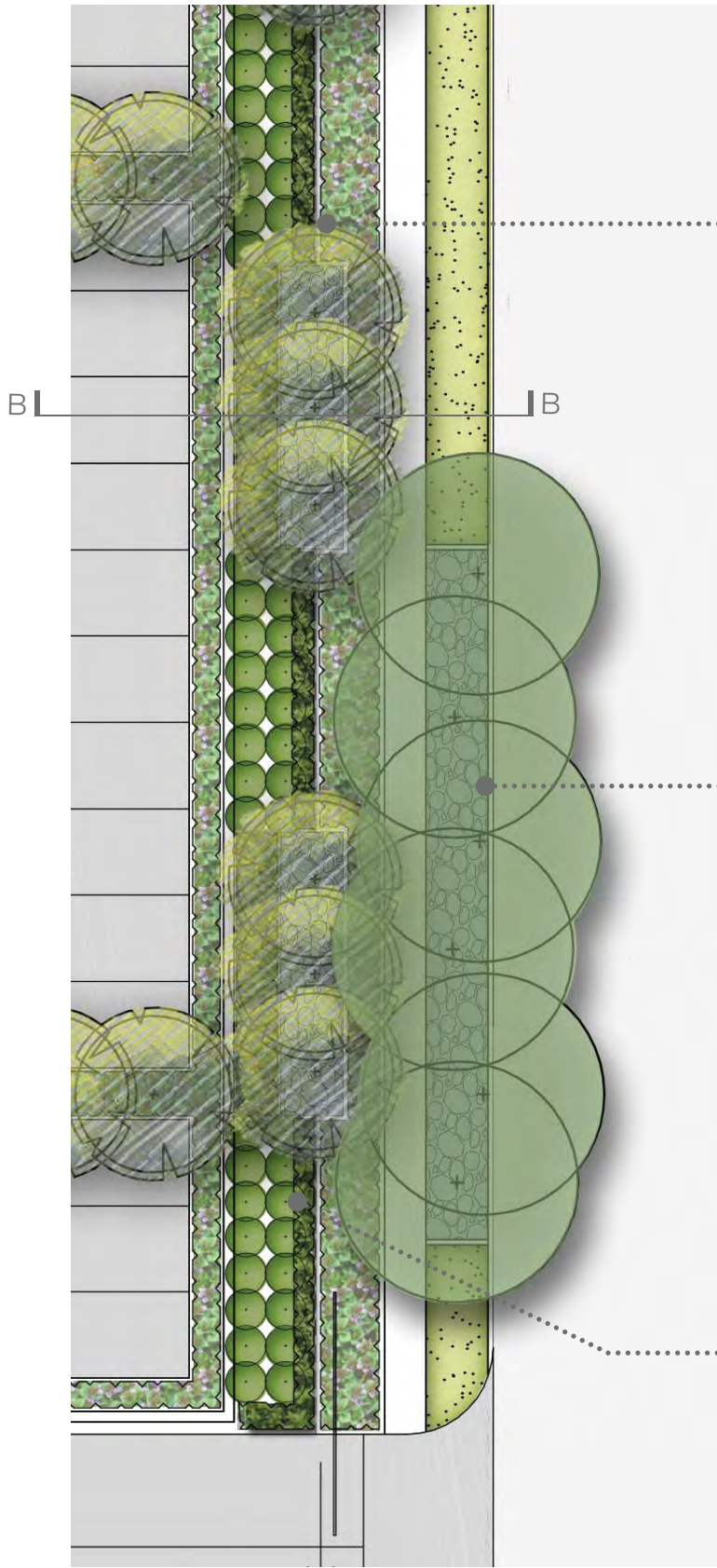


- Trees:
- Cm - *Corymbia maculata*
 - Ca - *Cupaniopsis anacardioides*
 - Li - *Lagerstroemia indica* 'Natches'
- Shrubs:
- Ri - *Raphiolepis indica*
 - Vo - *Viburnum odoratissimum*
- Grasses and Groundcovers :
- PN - *Pennisetum* 'Nafray'
 - Tj - *Trachelospermum jasminoides*





SECION B | SCALE 1:100



PLAN | SCALE 1:200



Mass planted grasses



Ballast bays



Native hedges

Lot Landscaping - Precinct 1

Planting Palette

Botanical Name	Common Name	Mature Height (m.)	Mature Spread (m.)	Pot Size
Trees				
<i>Angophora floribunda</i>	Rough-barked Apple	20	8	75L
<i>Cupaniopsis anacardioides</i>	Tuckeroo	8	8	100L
<i>Corymbia maculata</i>	Spotted Gum	30	8	100L
<i>Eucalyptus amplifolia</i>	Cabbage Gum	30	8	75L
<i>Eucalyptus crebra</i>	Narrow Leaved Ironbark	15	6	25L
<i>Eucalyptus moluccana</i>	Grey Box	20	8	25L
<i>Eucalyptus tereticornis</i>	Forest Red Gum	30	8	75L
<i>Lagerstroemia indica</i> 'Natchez'	Crepe Myrtle	8	6	100L
<i>Pyrus calleryana</i>	Callery Pear	11	7	75L
<i>Tristaniopsis laurina</i> 'Luscious'	Water Gum	9	8	75L
<i>Melaleuca decora</i>	White Feather Honeymyrtle	7	3	25L
<i>Melaleuca nodosa</i>	Ball Honey-myrtle	4	2.5	25L
<i>Melaleuca styphelioides</i>	Prickly Leaved Paperbark	7	3	75L
Shrubs				
<i>Acacia falcata</i>	Sickle Wattle	4	2	300mm
<i>Callistemon</i> 'Endeavour'	Bottlebrush	2.5	2.5	300mm
<i>Kunzea ambigua</i>	Tick Bush	2.5	2.5	300mm



Corymbia maculata



Cupaniopsis anacardioides



Tristaniopsis laurina 'Luscious'



Poa labillardieri



Pyrus calleryana



Pyrus calleryana



Myoporum parvifolium



Callistemon 'Endeavour'



Dianella caerulea 'Breeze'



Phormium tenax 'Purpurea'



Pennisetum 'Nafray'



Westringia fruticosa