

ARCADIA

 NEXTDC

S5 - NEXTDC DATA AND INNOVATION CENTRE SSDA LANDSCAPE REPORT

Prepared for NEXTDC
April 2024



We respectfully acknowledge the Traditional Custodians of the lands where we live and work. We acknowledge their unique ability to care for Country and deep spiritual connection to it. We honour Elders past, present and emerging whose knowledge and wisdom has and will ensure the continuation of cultures and traditional practices.

Rev A Issued 18th April 2024 MB

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EXECUTIVE SUMMARY

This Development Application has been prepared by Arcadia on behalf of NEXTDC Limited to accompany a detailed State Significant Development Application (SSDA) for the S5 data centre development at 269 Lane Cove Road, Macquarie Park. The legal description of the site is Lot 3 in Deposited Plan (DP) 1129811.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the project (SSD-63168959).

This report concludes that the proposed data centre development is suitable and warrants approval subject to the implementation of the following mitigation measures.

- / Replacement trees for high value trees as investigated within the Arborist report;
- / Alignment with the Waterloo Road Masterplan with the proposal of an Urban Dwell Zone.

Following the implementation of the above mitigation measures, the remaining impacts are appropriate.



Figure 1 Aerial Perspective from Lane Cove Road.
Source: HDR and Doug and Wolf 2024

INTRODUCTION

This report has been prepared to accompany a detailed SSDA for the proposed S5 data centre development at 269 Lane Cove Road, Macquarie Park (SSD-63168959).

The application seeks consent for construction and operation of a data centre development and includes site preparation works, bulk earthworks and infrastructure, and construction of the buildings, ancillary facilities, and associated site works.

The application also includes the delivery of two internal roads and an urban plaza adjacent to the Macquarie Park Metro Station entrance.

Specifically, the Project comprises the redevelopment of the site as summarised below:

- / Site preparation works including demolition and removal of existing structures, tree removal and bulk earthworks.
- / Staged construction and operation of two data centre buildings (Building A and Building B), each with a maximum height of 65 metres and a combined total gross floor area (GFA) of 46,935m² comprising 33,643m² of technical data hall floor space and 13,292m² of office, retail and innovation hub floor space.
- / Building A will be delivered in Stage 1, comprising:
 - Basement parking for 105 cars including four accessible spaces and 10 EV spaces.
 - Two retail tenancies at ground level: 335m².
 - Lobby and innovation hub including auditorium and training rooms: 3,192m²
 - NEXTDC and mission critical (MCX) office floor space: 9,765m².
 - Seven storeys of technical data floor space accommodating seven data houses: 17,258m².
 - Utilities including diesel generators (2MWe), above-ground water tanks for industrial water (460kL each), above-ground diesel storage tanks (110kL each) and an above-ground water tank for fire water (350kL each).
 - Business identification signage facing Waterloo Road and Lane Cove Road.

- / Building B will be delivered in Stage 2, comprising:
 - Seven storeys of technical data floor space accommodating seven data halls: 16,385m².
 - Construction of a sky bridge which will connect with Building A, providing direct access between the data halls.
 - Utilities including diesel generators (2MWe), above-ground water tanks for industrial water (460kL each), above-ground diesel storage tanks (110kL each) and an above-ground water tank for fire water (350kL each).
 - Business identification signage on the western and southern building facades.

- / Landscaping across the site in accordance with the project staging, delivering a mix of native and endemic plant species, shrubs and grasses, including 93 additional trees within a total area of 4,835m² deep soil and a resultant tree canopy cover of 6,211m².
- / Staged delivery of public domain works, including:
 - Stage 1: construction of the northern extent of Road 13 from Waterloo Road and urban plaza between Building A and Waterloo Road.
 - Stage 2: construction of the remaining southern extent of Road 13 and the full extent of Road 5.

- / Delivery of 90 megawatts of power (via a separate application with Ausgrid) with a 33kV switching station to be accommodated on site, as well as other site services, including stormwater infrastructure.



Figure 2 Front of House view from Waterloo Road.
Source: HDR and Doug and Wolf 2024

THE SITE

The site is located at 269 Lane Cove Road, Macquarie Park and is legally described as Lot 3 in Deposited Plan (DP) 1129811. It is located on the corner of Lane Cove Road and Waterloo Road and is made up of a single rectangular lot and is approximately 22,381m² in size. An aerial photograph of the site is provided at Figure 3.

The site is located in the City of Ryde Local Government Area (LGA) within the Macquarie Park corridor, an established employment precinct with a particular focus on innovation. Macquarie Park is a nationally significant research and employment centre and includes the head offices for some of Australia's leading companies including Foxtel, Optus and Siemens. The site is approximately 2km southeast of Macquarie University, and 1.5km southeast of Macquarie Shopping Centre.

Existing development includes a two-storey office furniture store (Work Arena) at the northern end of the site and offices and studios associated with Foxtel in the southern portion of the site. Scattered trees exist along the site boundaries, particularly within the western setback to Lane Cove Road, along the southern boundary and the eastern boundary.

Vehicle access to the site is currently provided from Waterloo Road with an internal driveway providing access to several at-grade parking areas. A further vehicle crossover has been constructed along the Lane Cove Road frontage; however, it is not currently in use and barriers have been installed prohibiting access.

The site is well serviced by public transport with several bus routes operating along Lane Cove Road and Waterloo Road. The entrance to Macquarie Park Metro Station is immediately to the north of the site. The site includes a lengthy frontage to Lane Cove Road which provides access to the M2 Hills Motorway and Epping Road.



Figure 3 Aerial Photograph of Site
Source: URBIS GIS 2023

DETAILED PROJECT DESCRIPTION

DESCRIPTOR	PROJECT DETAILS
Project Area	The site has a total area of approximately 22,381m ² . The entire site area will be disturbed as a result of the Project. The site does not contain any environmental constraints.
Proposed Use	Data centre with ancillary office and innovation space. Two retail premises at ground level.
Project Description	<ul style="list-style-type: none"> / Demolition of existing buildings and structures. / Site preparation works including tree removal, bulk earthworks, excavation and construction of retaining walls. / Staged construction of two data centre buildings including technical data hall floor space, ancillary office and innovation space and two ground floor retail premises. / Vehicle access via Waterloo Road with on-site car parking and loading within basement. / Associated landscaping including a trees, shrubs and grasses. / Business identification signage. / Staged delivery of public domain works via a Planning Agreement, including construction of Road 5 and Road 13 and an urban plaza between Building A and Waterloo Road. / Provision of required utilities, including an on-site switching station.
Gross Floor Area	Total GFA of 46,935m ² , broken down as follows: <ul style="list-style-type: none"> / Data halls/technical: 33,643m² / Lobby and Innovation hub: 3,192m² / MCX Office: 9,765m² / Retail including BOH 335m² / Total number of data houses: 14 data houses
Building Height	<ul style="list-style-type: none"> / Building A: office and innovation hub – 49 metres over 10-storeys / Building A: data centre – 65 metres over nine-storeys / Building B: data centre – 65 metres over nine-storeys
Proposed Floor Space	2.1:1

DESCRIPTOR	PROJECT DETAILS
Deep Soil Area	4,825m ² of deep soil area (21.6% of site area or 27.7% of developable site area)
Car Parking	105 car spaces including 4 DDA spaces and 10 EV spaces
Motorbike Spaces	11 spaces
Bicycle Spaces	12 spaces
Utilities	Provision of required utilities including: <ul style="list-style-type: none"> / 60 x diesel generators (2MWe). / 12 x above-ground diesel storage tanks (110kL each). / Eight above-ground water tanks for industrial water (460kL each). / Two above-ground water tanks for fire water (350kL each). / 33kV switching station.
Power Consumption	90 megawatts
Operations and Management	The facility will be constructed and operated by NEXTDC. The site will be operated on a 24-hour, 7 day a week basis.
Existing Services and Infrastructure	The site is fully serviced; however, existing services and infrastructure will be extended, adapted and augmented to meet the demands of the Project. A new 33kV switching station will be required to provide power to the site in the event of an emergency blackout to facilitate power to the generators.
Staging/Phasing	The Project will be constructed in two stages: <ul style="list-style-type: none"> / Stage 1 will include the early works for the entire site, construction of Building A, the urban plaza and the northern section of Road 13. / Stage 2 will include construction of Building B, including a skybridge connection to Building A, Road 5, and the remainder of Road 13.

ONE
SITE
APPRECIATION

CONTEXT

Macquarie Park, situated in the northern part of Sydney, NSW, is a bustling suburb known for its dynamic blend of commercial and residential spaces. Characterized by sleek, modern architecture, the area is dominated by contemporary office buildings and apartment complexes. Home to Macquarie University, the suburb exudes an intellectual atmosphere. With excellent public transport links and refreshing green spaces, Macquarie Park stands as a vibrant growing and well-connected community.

The project site is surrounded by future projects which illustrates the growth in Macquarie Park.

Regional



Local

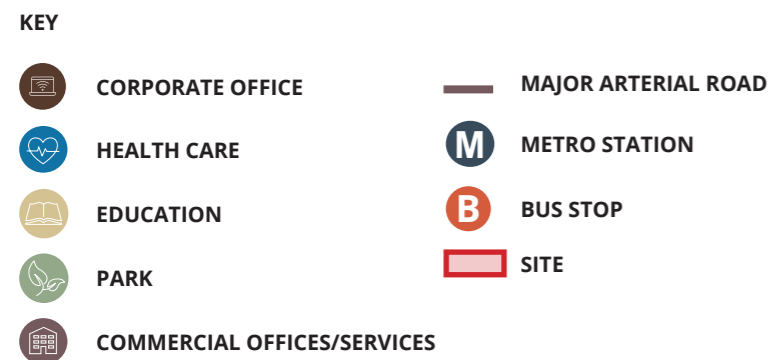
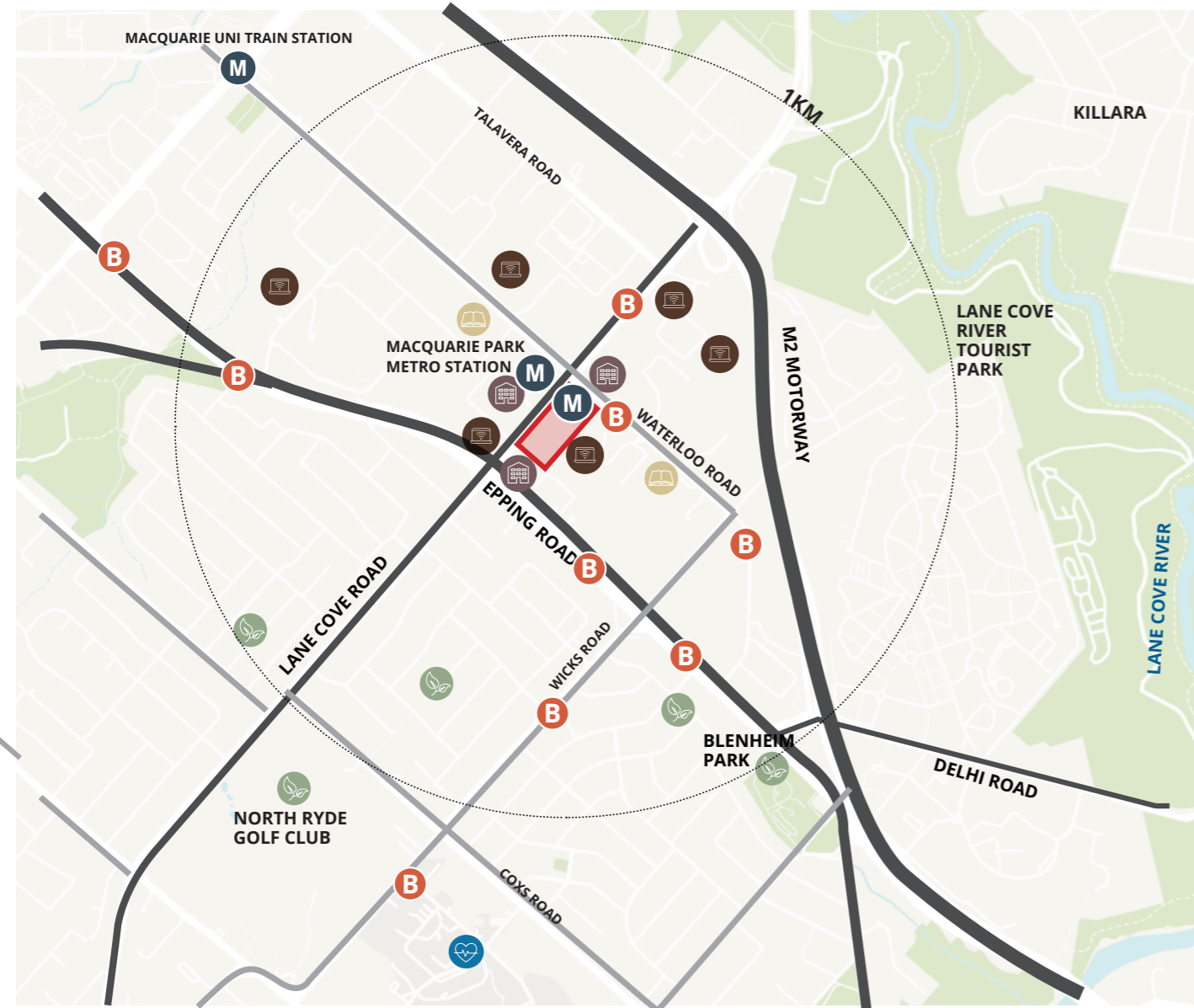
Surrounding Developments

1. Ryde Garden
2. Centrale
3. NBH Lachlan's Line
4. Dexus Business Park
5. 45-61 Waterloo Rd
6. 396 Lane Cove Rd
7. Starin Macquarie Park
8. 44 Waterloo Rd
9. NextDC S2 Data Centre
10. Stockland Techology Hub
11. Macquarie Corporate Centre
12. Macquarie Centre Redelopment
13. Prime Macquarie
14. Park One
15. Natura
16. Cottonwood Cress
17. Monika Macquarie Park
18. Ivanhoe Estate Redevelopment
19. Neue Macquarie Park
20. One Twenty Macquarie
21. Macquarie Park Village
22. Goodman Commerical Office Development
23. Build to Rent Appartments
24. Future School Precinct

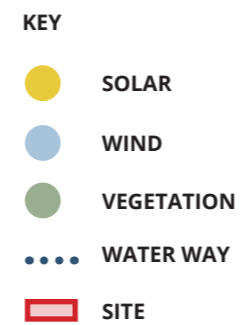
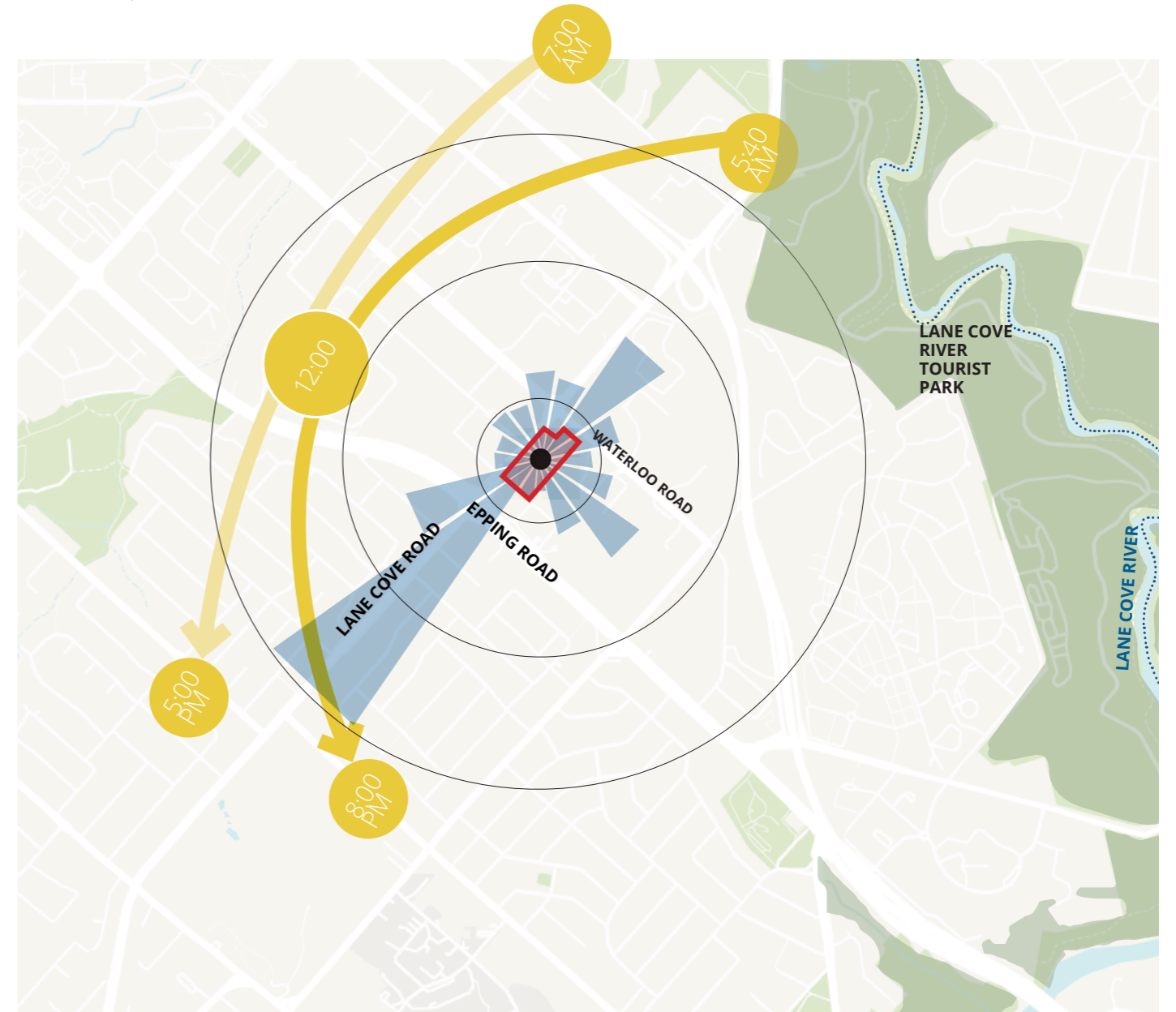


EXISTING SYSTEMS

Urban Systems



Natural Systems



HISTORY

Ancient Geological Context

The site is situated on the Hornsby plateau, a sedimentary sandstone plateau formed following the continental uplift of the late Triassic period. Millions of years of erosion from ancient Jurassic rivers formed the jagged, ventricular landscape characteristic of Sydney's ridge-lines, before draining into the vast and deep canyons we now call Sydney Harbour. Following the last ice age (approximately 12,000 years ago), glacial melt caused the sea levels to rise, flooding drainage canyons and forming Sydney Harbour and its tributary river system - including as Lane Cove river.

Dreaming stories tell of the migration of our first people following the last ice age, from the flooding canyons to higher ground, where clan groups lived and cared for Country for thousands of years.

Wallumedegal

The Wallumedegal clan of the Dharug Nation are the traditional custodians of the land where Macquarie Park now stands.

The totem for the Wallumedegal is the Snapper, 'Wallumai' in Dharug language. The clan likely named themselves after the Wallumai, which was once plentiful around the area and considered a great delicacy.

12,000BP - 1788

At the time of European arrival, the Wallumedegal clan of the Dharug Nation occupied the lands around Ryde and Lane Cove River, including the land upon which Macquarie Park now stands. The Wallumedegal clans were great trackers, fisher-people and hunters, and created a system of murus (pathways) along the ridge-lines, connecting to other clan groups and beyond. During the early years of colonisation, many of the clans that made up the Dharug Nation, including the Wallumedegal were decimated by small pox and became unable to maintain control of their ancestral lands.

Settlement - Present

Located North of the centre of the City of Ryde LGA, Macquarie Park once formed the greater North Ryde area. In 1792, much of the areas were granted to British service-men and was renamed the 'Field of Mars', owing to the Roman God of War. During the early years of the 1800s, further land grants were awarded to emancipated convicts as the colony expanded in search of raw materials and fertile farming lands.

Macquarie Park's historical development is characterized by several key milestones. The establishment of Macquarie University in 1964 laid the groundwork for the area's transformation into a thriving educational and research hub. Subsequently, Macquarie Park evolved into a major business and technology center, attracting multinational corporations and fostering innovation. The late 1990s saw the enhancement of accessibility with the construction of the M2 motorway, further contributing to its appeal for businesses and residents. The surge in residential development, including housing estates and apartment complexes, addressed the growing demand for housing near educational and employment opportunities. The area also witnessed the creation of retail and recreational facilities to meet the needs of its expanding population. In recent years, a focus on urban renewal and master planning has underscored efforts to develop a more integrated and sustainable community, emphasizing public spaces, green initiatives, and thoughtful urban design.



Previously Lucknow road (now Epping Road), 1938



ECOLOGY



- Source: Ecological Australia- BDAR waiver request letter - Mapped vegetation pg. 6
- | | | |
|---|---|--|
| KEY | | |
| STUDY AREA | PCT3586: NORTHERN SYDNEY SCRIBBLY GUM WOODLAND | PCT0: NOT CLASSIFIED |
| VEGETATION (SVTM, DPE 2022) | PCT3592: SYDNEY COASTAL ENRICHED SANDSTONE FOREST | |
| PCT3259: SYDNEY VOATSL SHALE-SANDSTONE FOREST | PCT3595: SYDNEY COASTAL SANDSTONE GULLY FOREST | |
| PCT3262: SYDNEY TURPENTINE IRONBARK FOREST | | |

Macquarie Park

The suburb of Macquarie Park shares its eastern boarder with Lane Cove National Park. The park extends from Pennant Hills down to Sydney harbour by a flowing river and range of lush forest typologies and ecologies.

The project site does not directly connect with the national park but has the opportunity to extend features of the forest into the busy area and create a canopy experience.

Shale - Sandstone Forest



Turpentine-Ironbark Forest



Scribbly Gum Woodland



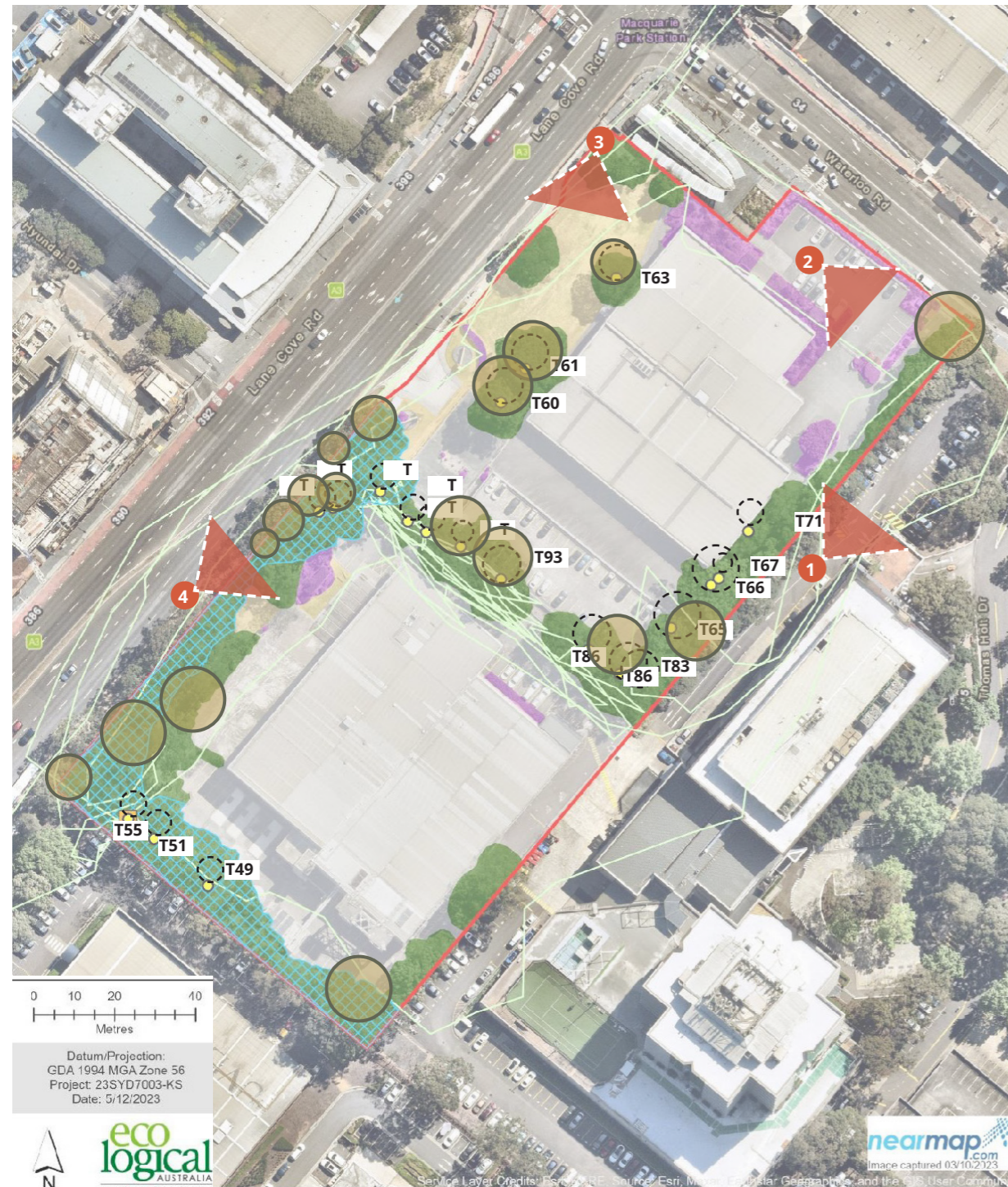
Sydney Sandstone Gully Forest



Local Fauna



SIGNIFICANT TREES AND TREES TO BE REMOVED

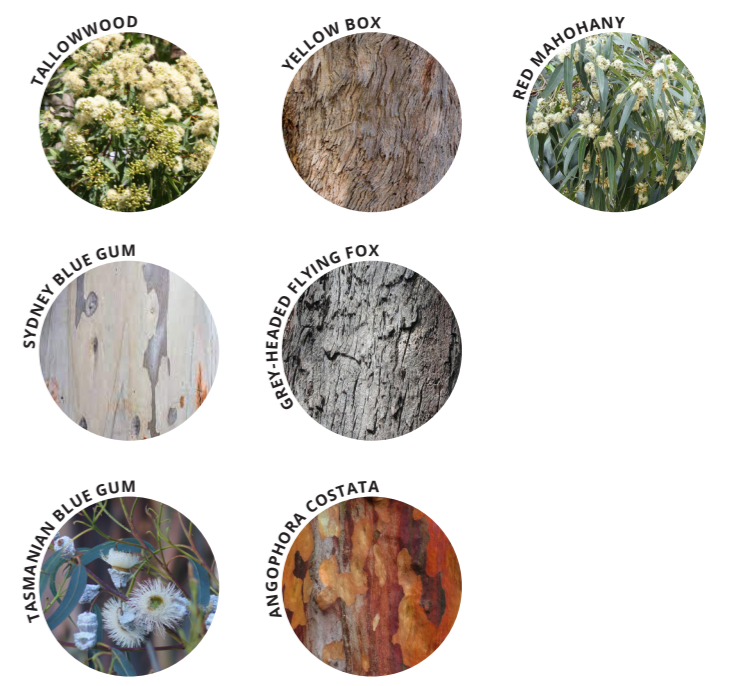


Source: Ecological Australia; BDAR waiver request letter - Valid vegetation pg. 7

KEY	STUDY AREA	VIEW DIRECTION	PLANT EXOTIC/NATIVE
PROPOSED TREES TO BE REMOVED	VALIDATED VEGETATION (ELA 2023)	EXOTIC GRASS	BUILT
HIGH VALUE RETENTION TREES	PLANTED (PCT3262: SYDNEY TURPENTINE IRONBARK FOREST)	PLANTED (PCT3262) - TO BE CONFIRMED	



TREE NO.	SPECIES	COMMON NAME
1	Eucalyptus microcorys	Tallowwood
34	Eucalyptus melliodora	Yellow Box
44	Eucalyptus resinifera	Red Mahogany
58	Eucalyptus saligna	Sydney Blue Gum
60	Eucalyptus Microcorys	Tallowwood
61	Eucalyptus Microcorys	Tallowwood
63	Eucalyptus globulus	Tasmanian Blue Gum
81	Eucalyptus saligna	Sydney Blue Gum
93	Eucalyptus saligna	Sydney Blue Gum
94	Eucalyptus saligna	Sydney Blue Gum
113	Angophora costata	Sydney Red Gum
120	Eucalyptus resinifera	Red Mahogany
125	Eucalyptus resinifera	Red Mahogany
128	Eucalyptus resinifera	Red Mahogany
132	Eucalyptus resinifera	Red Mahogany
139	Eucalyptus resinifera	Red Mahogany
147	Angophora costata	Sydney Red Gum
150	Eucalyptus resinifera	Red Mahogany
151	Eucalyptus resinifera	Red Mahogany
155	Angophora costata	Sydney Red Gum
156	Eucalyptus resinifera	Red Mahogany
162	Angophora floribunda	Rough-barked Apple



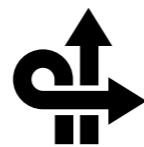
PROJECT SITE BOUNDARIES

Waterloo Road

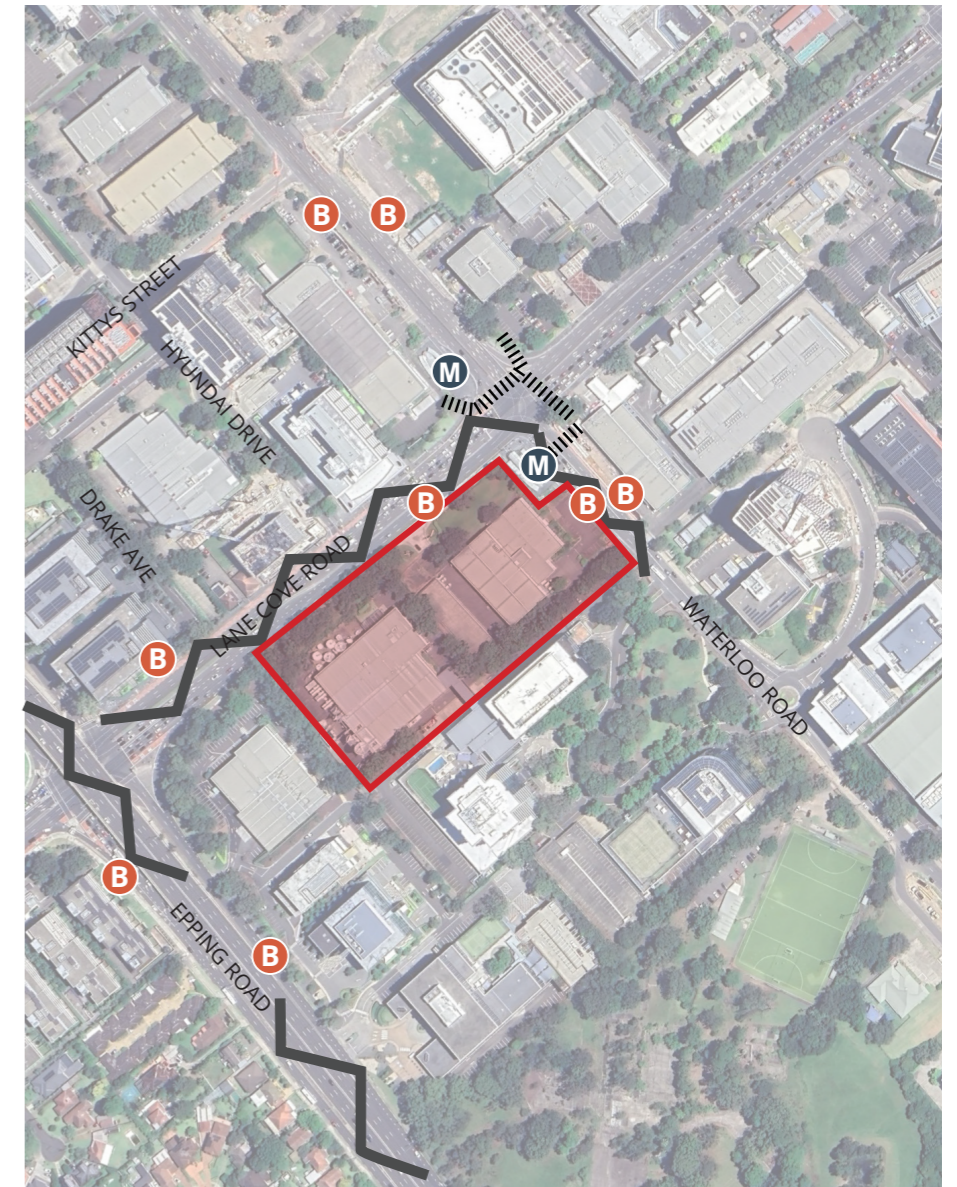


- / 5 lane interface with site
- / Moderate vehicle noise
- / Buses and Vehicles often use Road
- / No off road cycle provisions only on road
- / Pedestrian crossing points adjacent to site
- / Pedestrian and vehicle separation along footpaths limited
- / Medium level of lighting
- / Bus stop in front of site
- / Medium level of passive surveillance

Lane Cove Road



- / 8 lane motorway along site boundry
- / Loud vehicle noise and possible high pollution levels
- / Trucks, Buses and Large Vehicles often use Road
- / No off road cycle provisions only on road
- / 1 Pedestrian crossing points adjacent to site
- / Pedestrian and vehicle separation along footpaths limited

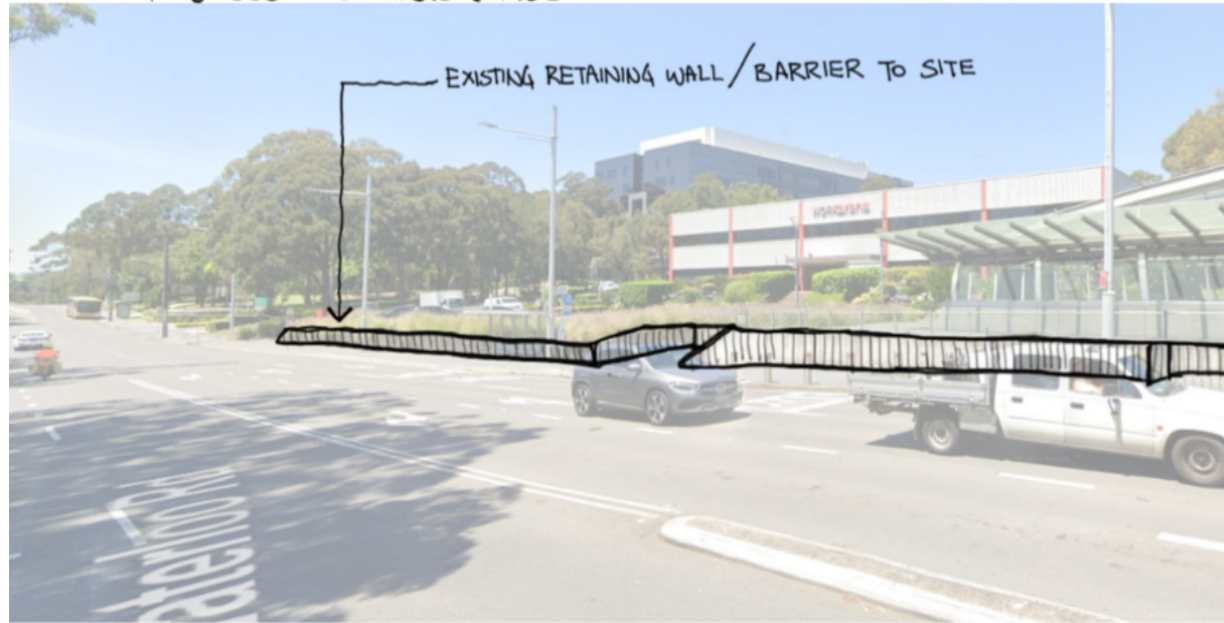


KEY

- ||||| ROAD CROSSING
- M METRO STATION
- B BUS STOP
- SITE

WATERLOO ROAD INTERFACE

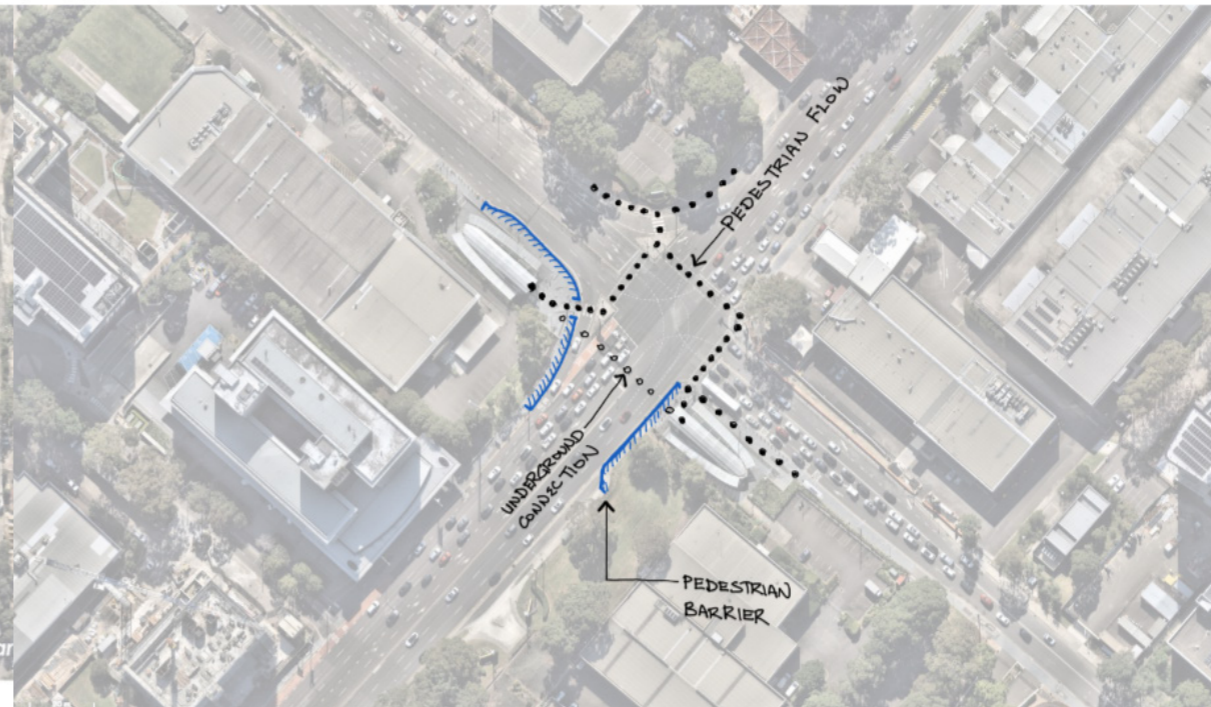
APE - WATERLOO RD INTERFACE



SECTION BTW SITE AND PEDESTRIANS

WATERLOO RD → CAR PARKS → BUILDING

PEDESTRIAN FLOW

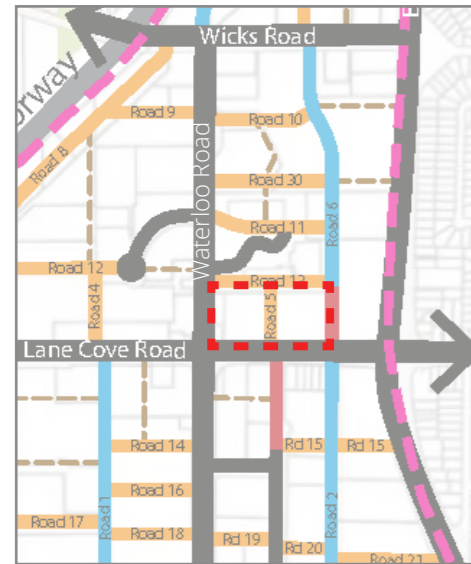


SECTION OF PEDESTRIAN INTERFACE ALONG WATERLOO RD

TWO
SITE
REQUIREMENTS

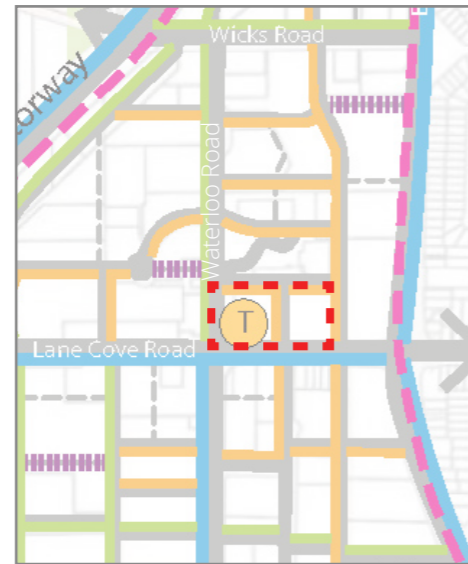
DCP OBJECTIVES

ROADS + PAVING



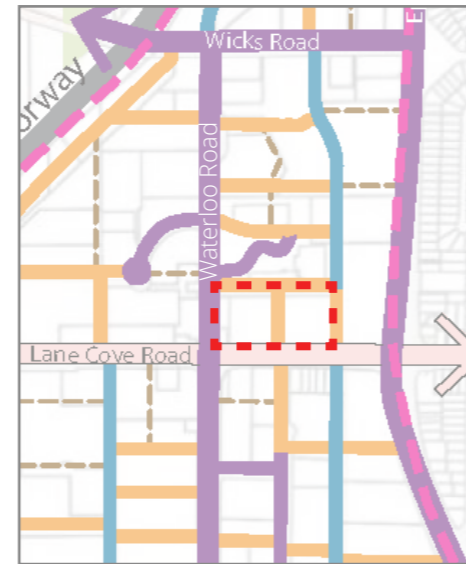
- / Lane Cove Rd = 30m = 2.4m wide granite paving with nature strip
- / Waterloo Rd = 20m = Full-width granite paving
- / Road 13 = 14.5m = Concrete with granite banding
- / Road 5 = 14.5m = Concrete with granite banding
- / Road 6 = 16m = Full-width granite paving

CYCLE NETWORK



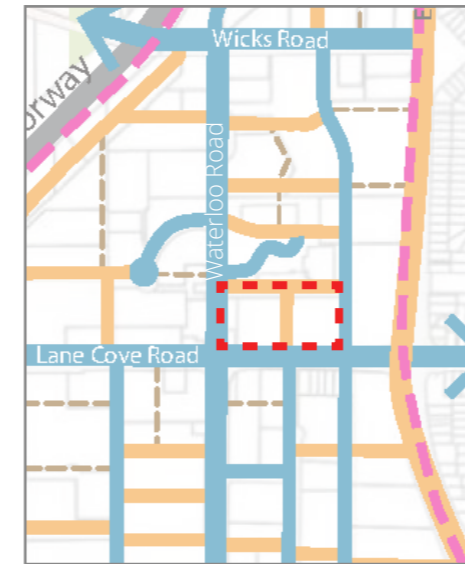
- / Lane Cove Rd = Regional route
- / Waterloo Rd = Local route
- / Road 13 = Local link
- / Road 5 = Local link
- / Road 6 = Local link

STREET TREES



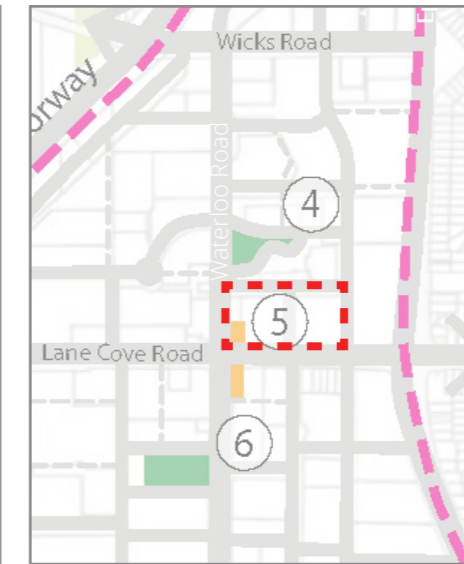
- / Lane Cove Rd = Trees within 1.5m private setback only
- / Waterloo Rd = Large smooth-barked native trees
- / Road 13 = Small native street trees in path and feature broad-canopy trees
- / Road 5 = Small native street trees in path and feature broad-canopy trees
- / Road 6 = Small native street trees in path and feature broad-canopy trees

LIGHTING



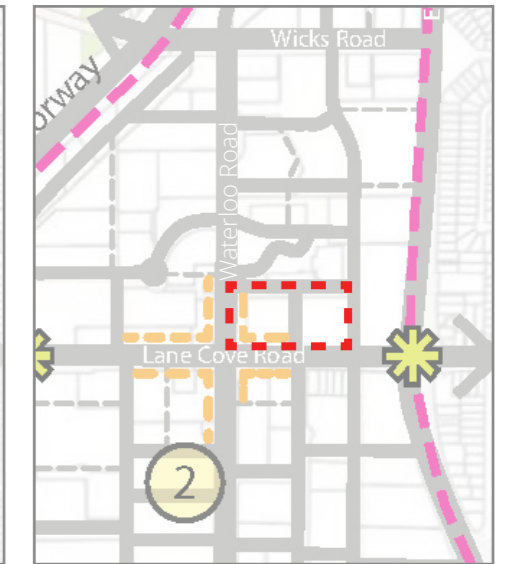
- / Lane Cove Rd = Staggered multi-function poles on both sides
- / Waterloo Rd = Staggered multi-function poles on both sides
- / Road 13 = Multi-function poles on one side
- / Road 5 = Multi-function poles on one side
- / Road 6 = Staggered multi-function poles on both sides

OPEN SPACE



- / Macquarie Park Station Urban Plaza (Corner of Lane Cove Road and Waterloo Road)

PUBLIC ART

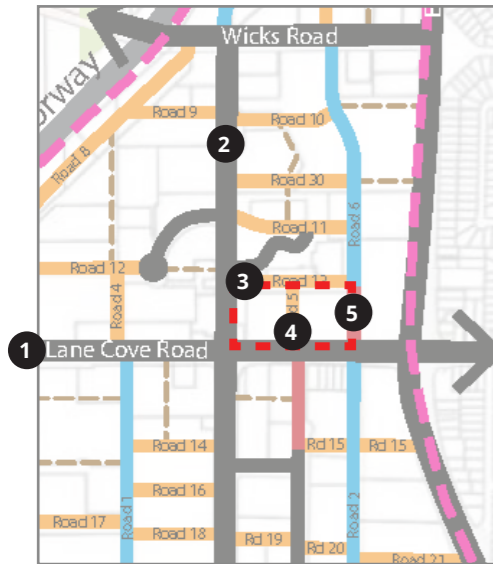


- / Intimate scale artworks at high pedestrian activity areas (Corner of Lane Cove Road and Waterloo Road)

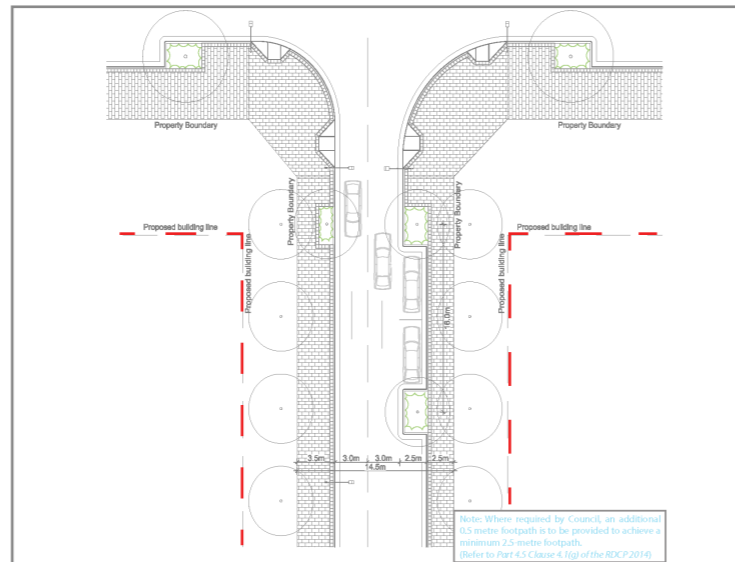
[“CITY OF RYDE PUBLIC DOMAIN MANUAL”, CITY OF RYDE, 2016]

DCP OBJECTIVES - LAYOUTS

TYPICAL LAYOUTS

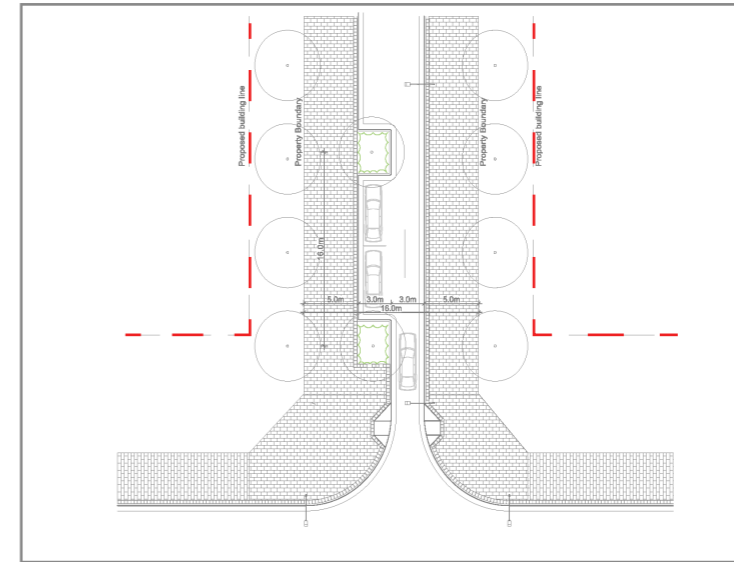


- 1/ Lane Cove Rd = 30m = 2.4m wide granite paving with nature strip
- 2/ Waterloo Rd = 20m = Full-width granite paving
- 3/ Road 13 = 14.5m = Concrete with granite banding
- 4/ Road 5 = 14.5m = Concrete with granite banding
- 5/ Road 6 = 16m = Full-width granite paving



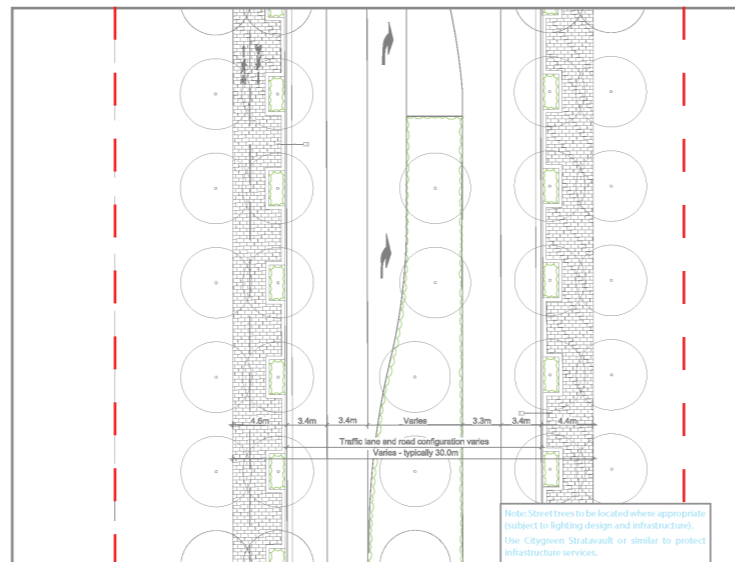
New 14.5m wide street

- / 2.5m Paved footpath on one side and 3.5m on the other;
- / Trees in 1.5m x 3m pits spaced at 8m apart;
- / Trees in 2.5m x 3m kerb blisters spaced at 16m apart;
- / 2 x Bike racks per city block close to intersections.

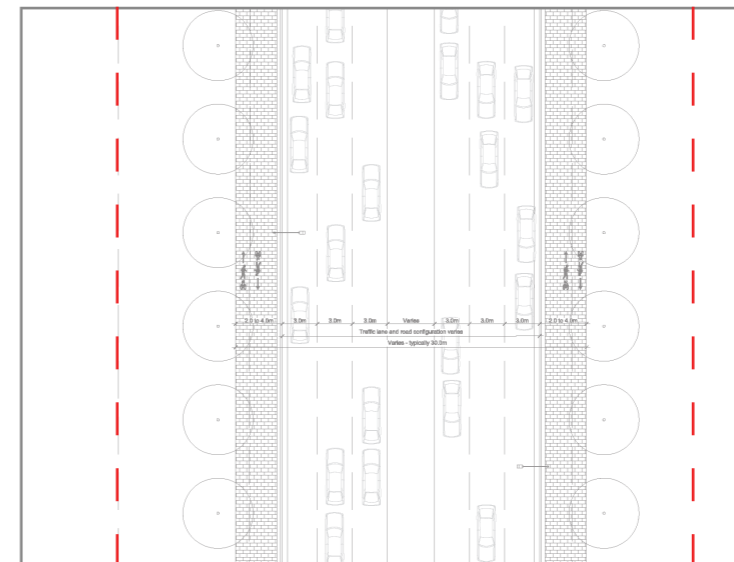


New 16m wide street

- / 2.5m Paved footpath on one side and 3.5m on the other;
- / Trees in 2.5m x 3m kerb blisters spaced at 16m apart;
- / 2 x Bike racks per city block close to intersections












Existing 20m Road (Waterloo Rd)

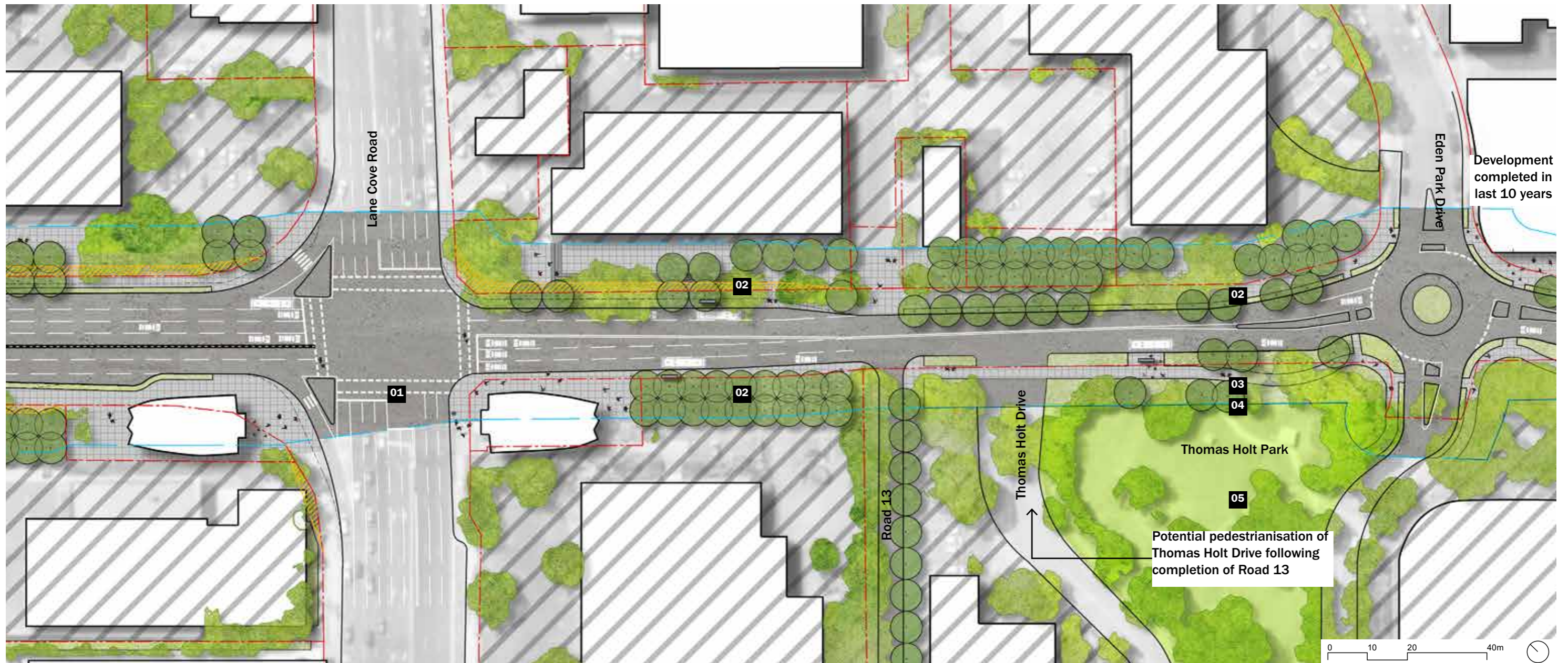


Existing 30m Road (Lane Cove Rd)

[6.0 TYPICAL LAYOUTS, "CITY OF RYDE PUBLIC DOMAIN MANUAL", CITY OF RYDE, 2016]

WATERLOO ROAD MASTERPLAN

Item	Description	Item	Description
	Lot boundary	01	New signalised crossing. Realignment of kerbs, median and carriageway to suit new traffic arrangement
	10m offset line	02	Urban upgrade with 1.5m wide planting buffer and 3m wide footpath
	BPIP land acquisition extent	03	Forest upgrade with 4.5m wide planting buffer and 3m wide meandering footpath
	Existing trees	04	Landscape terraces and stairs at Thomas Holt Park
	New trees	06	Landscape upgrades at Thomas Holt Park
	New paving		
	New understorey planting		
	Existing bus stop with paving and shelter improvements		
	Future development subject to approvals or under development under construction		



["WATERLOO ROAD MASTERPLAN", HASSELL, 2020]

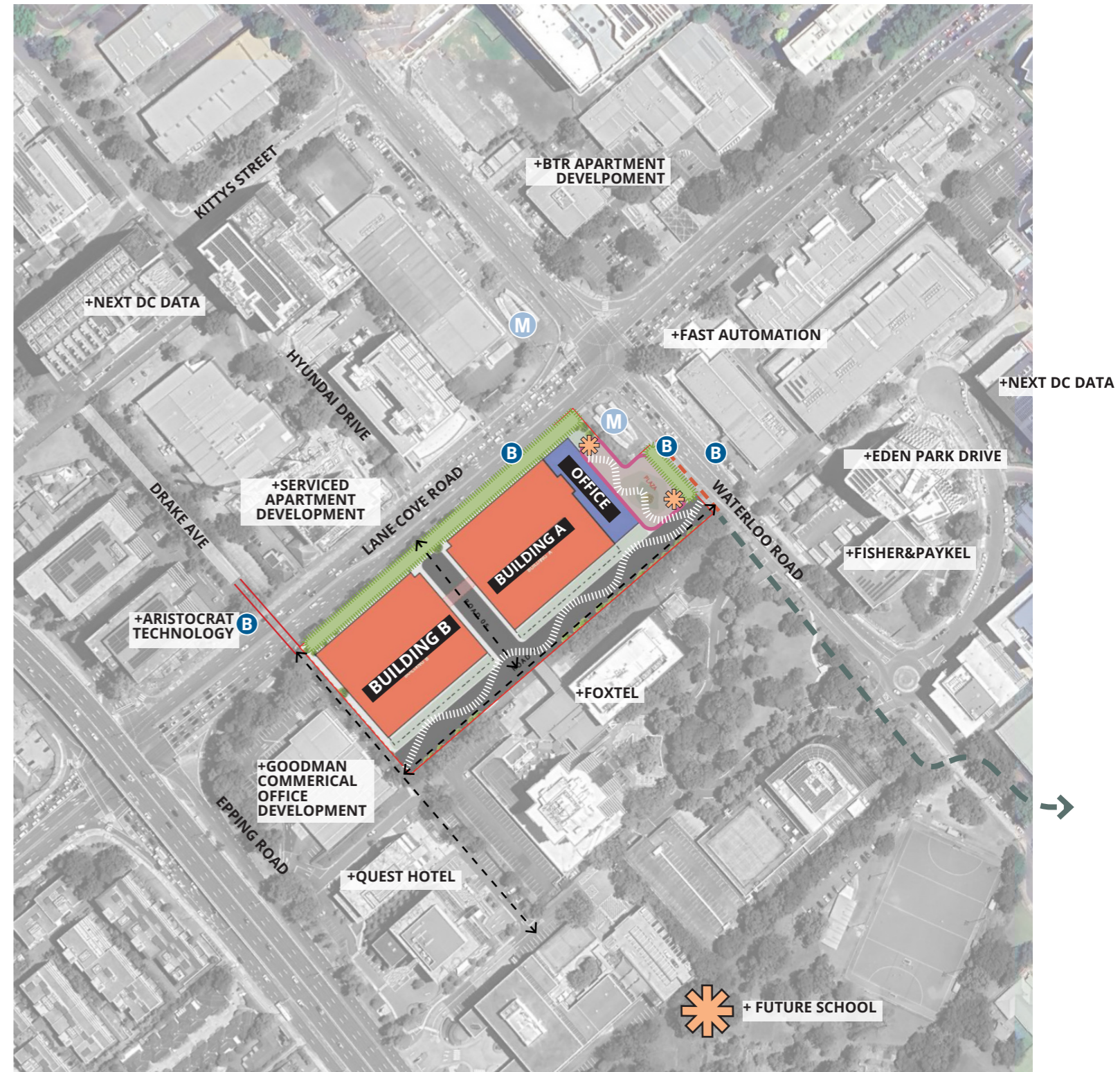
OPPORTUNITIES AND CONSTRAINTS

Opportunities

- / Connection to existing public transport
- / Introduce community culture and history narratives throughout the site with art with story telling
- / Provide a plaza amenities and experience for nearby workers and residence to utilise
- / Retain existing trees to maintain a visual buffer to Lane Cove Road
- / Improve street interface along Waterloo Road
- / Respond to possible future surrounding connections with new throughsite links
- / Improve pedestrian experience on Lane Cove Road

Constraints

- / 2 sides of the site boundaries are on major multi lane roads.
- / Very little endemic vegetation connections surrounding the immediate site.
- / Slope changes from SW to NE ends of site
- / Steep interface with level difference along Waterloo Road boundary
- / Existing level difference and retaining wall with trees along SE boundary with adjacent site
- / High security fenceing around building A and B will restrict density trees along fence line



THREE VISION

VISION - EXISTING

What are the collective visions for Macquarie Park that can help distinguish the role and purpose of NextDC Shiraz?

"The Macquarie Park Corridor is envisioned to mature into a premium location for globally competitive businesses with an **enhanced sense of identity and strong links to the university and research institutions.**"

[PAGE 9, "CITY OF RYDE PUBLIC DOMAIN MANUAL", CITY OF RYDE, 2016]

"The Waterloo Road Linear Park will transform a car dominated movement corridor into a vibrant street of community, connection and cohesion. It will provide multiple benefits for the local community and **elevate the identity of Macquarie Park as an ecologically rich and diverse CBD.**"

[PAGE 8, "ACTIVE STREETS MASTERPLAN", HASSELL, 2020]

"Macquarie Park will mature into a premium location for globally competitive businesses with strong links to the university and research institutions and an **enhanced sense of identity.**
The Corridor will be characterised by a **high-quality, welldesigned, safe and livable environment** that reflects the natural setting, with three accessible and vibrant railway station areas providing focal points.
Residential and business areas will be **better integrated and an improved lifestyle** will be forged for all those who live, work and study in the area."

['5.7 RAIL STATION PLAZAS', PAGE 35, "DEVELOPMENT CONTROL PLAN", CITY OF RYDE, 2014]

VISION - LANDSCAPE

A vibrant local plaza for urban dwellers offering a welcoming civic experience that accommodates local needs, celebrates culture, inclusivity, and practical amenity.



What makes a great Place?



COUNTRY



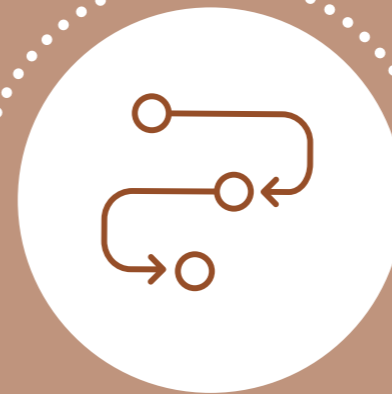
CELEBRATE TOPOGRAPHY



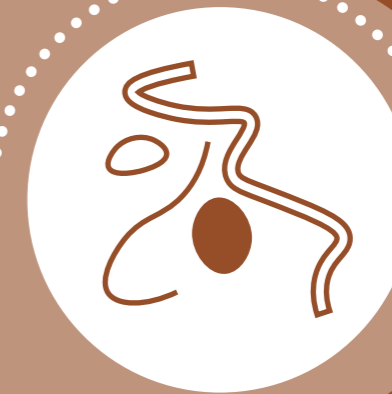
CREATE COMMUNITY



GREEN HEART



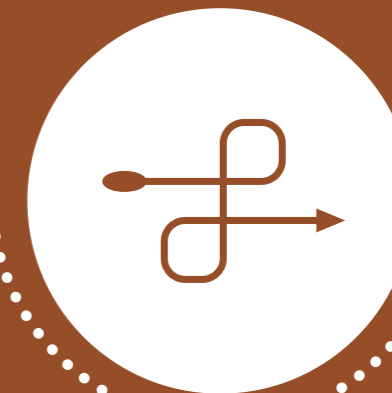
CONNECTED



PROGRAMMABLE



EQUALITY



ACTIVATION

PRINCIPLES



BUFFER THE EDGE

Landform and Vegetation

- / Waterloo Road Masterplan
- / Linear Park
- / Sydney Green Grid
- / Urban Forest



OLD WAYS NEW

Reimagining the Hardscape

- / Seamless public domain
- / Robust and durable materials
- / High-quality Cyclist interfacing
- / Lighting and signage



A PEOPLE PLACE

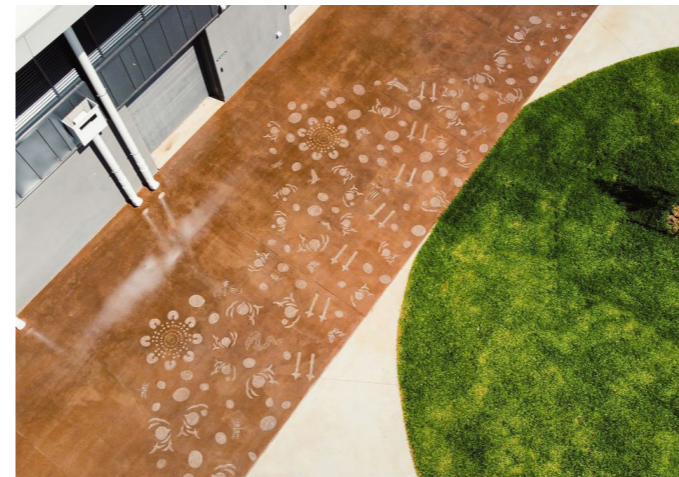
Placemaking, Activation and Community

- / Prioritising pedestrian amenity
- / Visual interest through public art
- / Improve amenity and safety
- / Equitable access

FOUR
PRECEDENTS

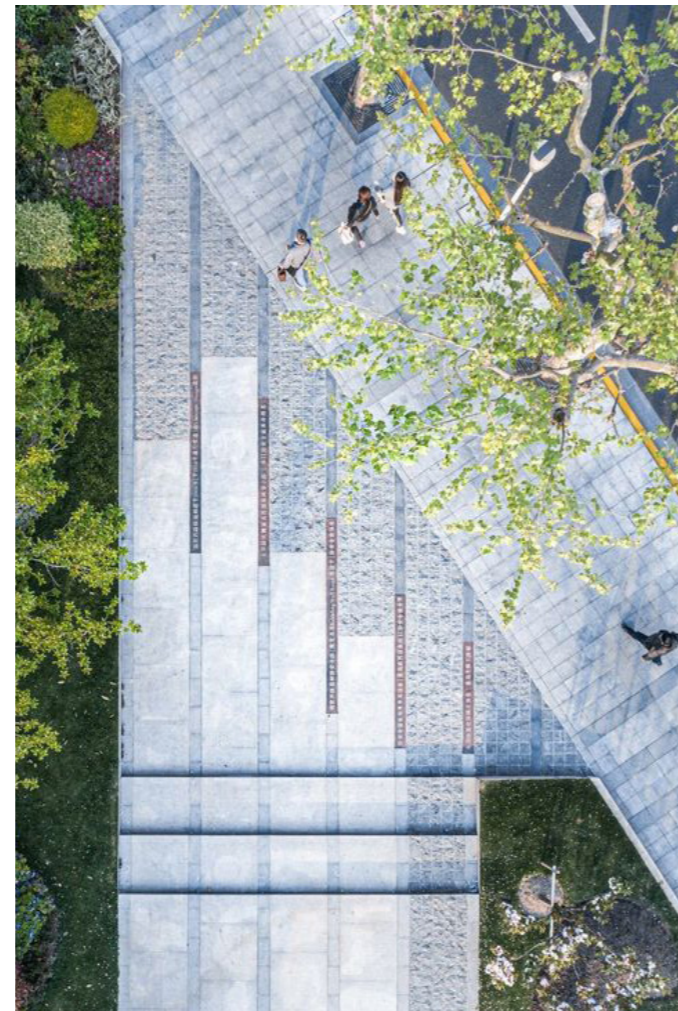
PRECEDENTS

Public Plaza



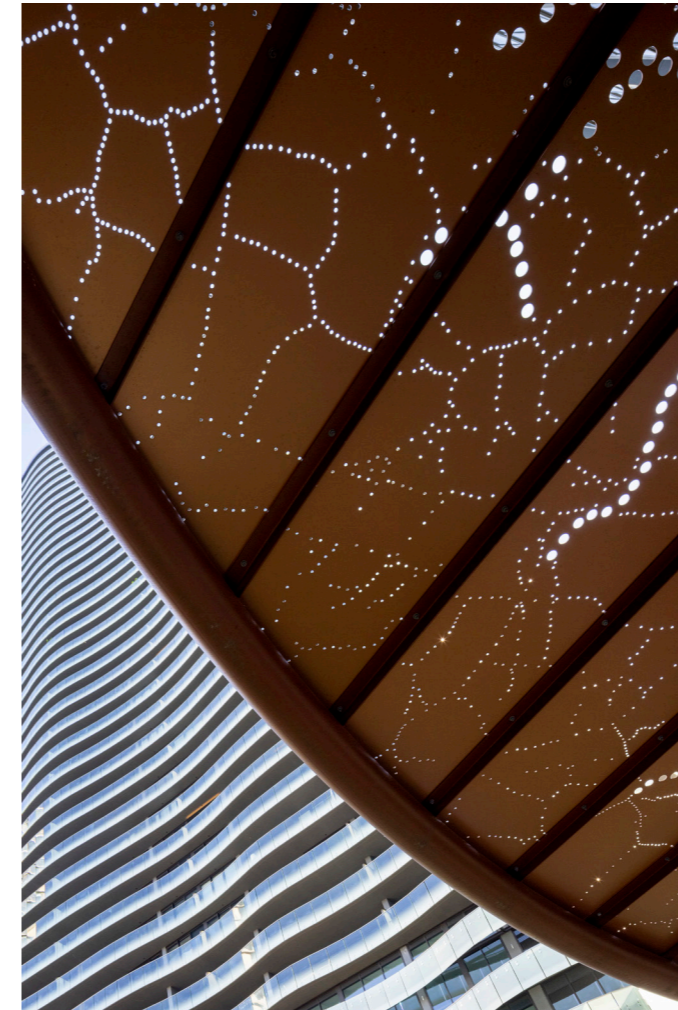
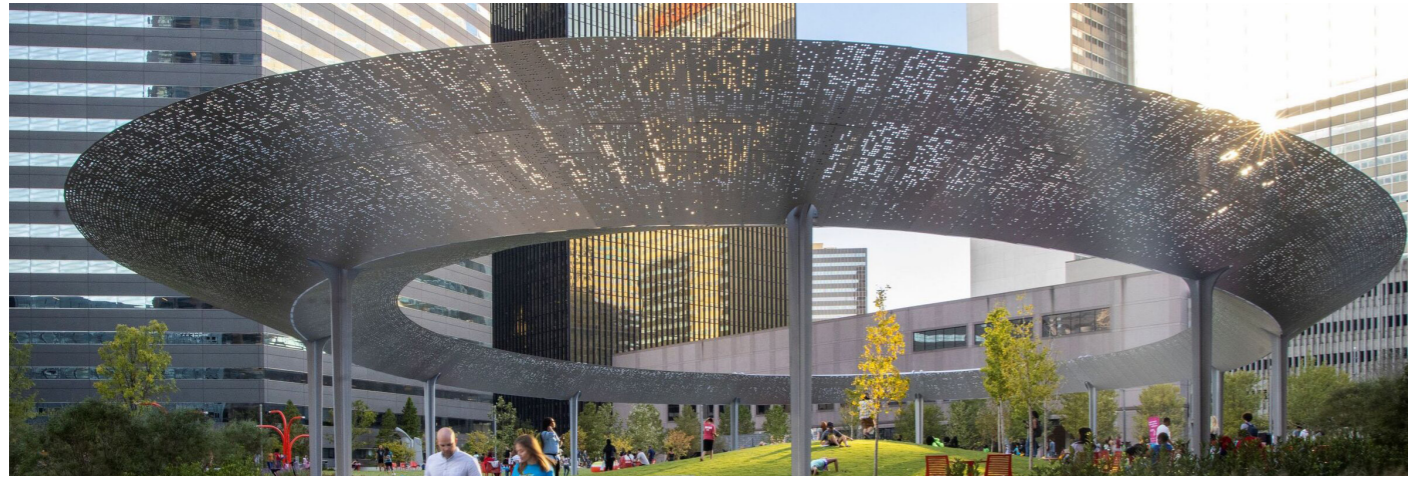
PRECEDENTS

Street Interface



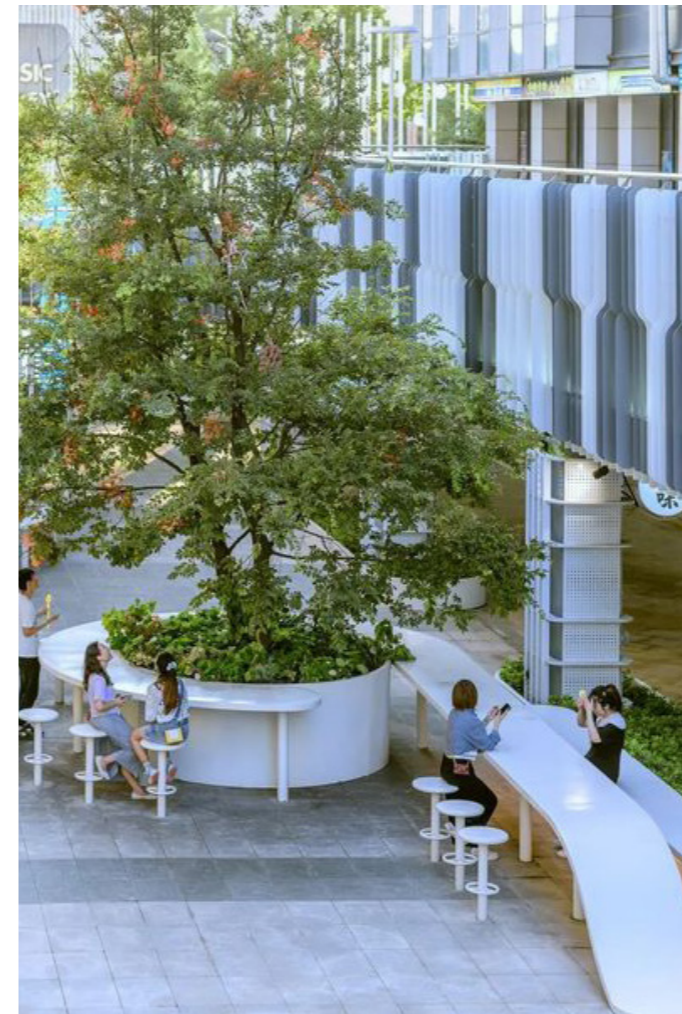
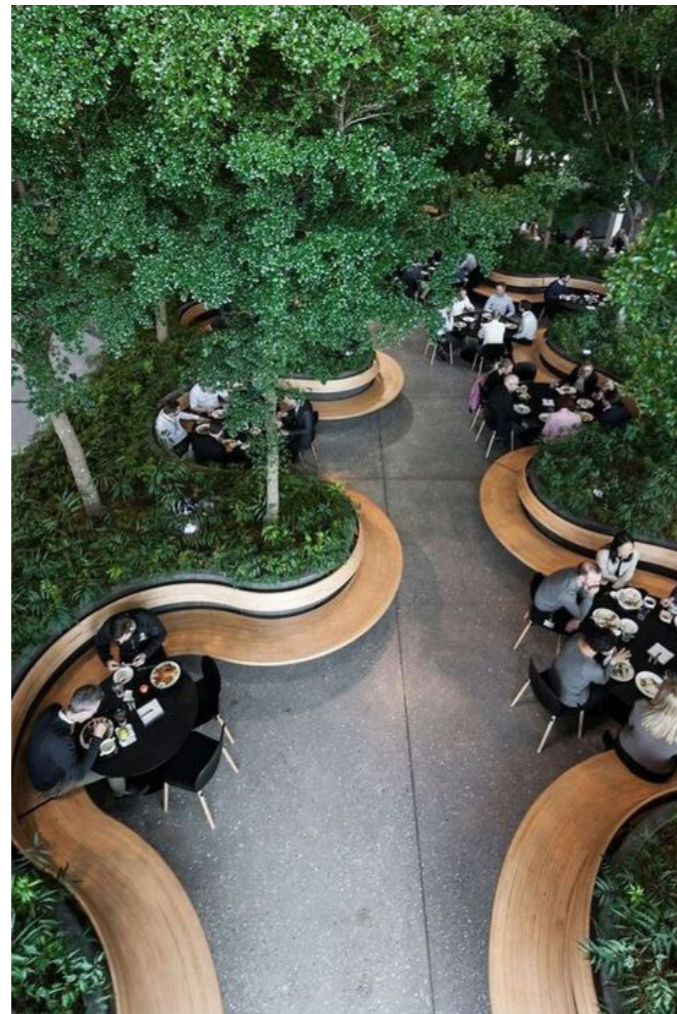
PRECEDENTS

Feature Canopies



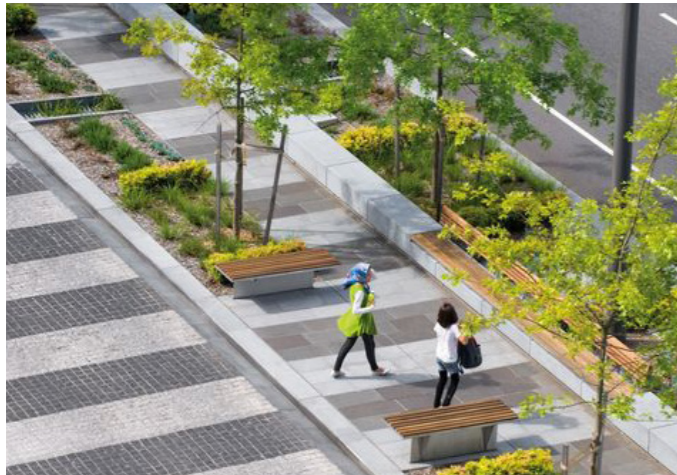
PRECEDENTS

Outdoor Meeting Rooms



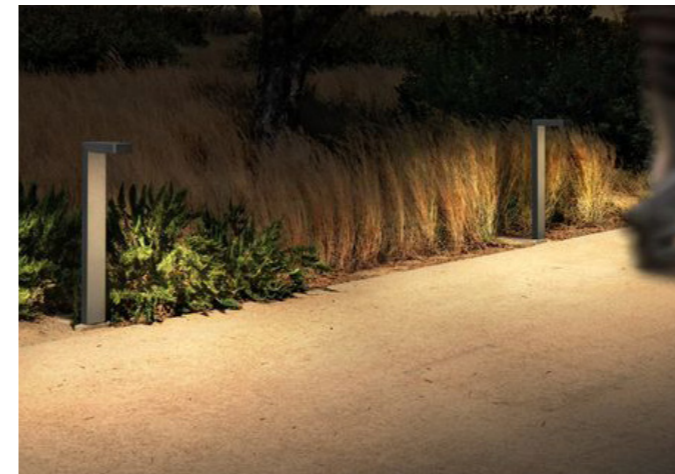
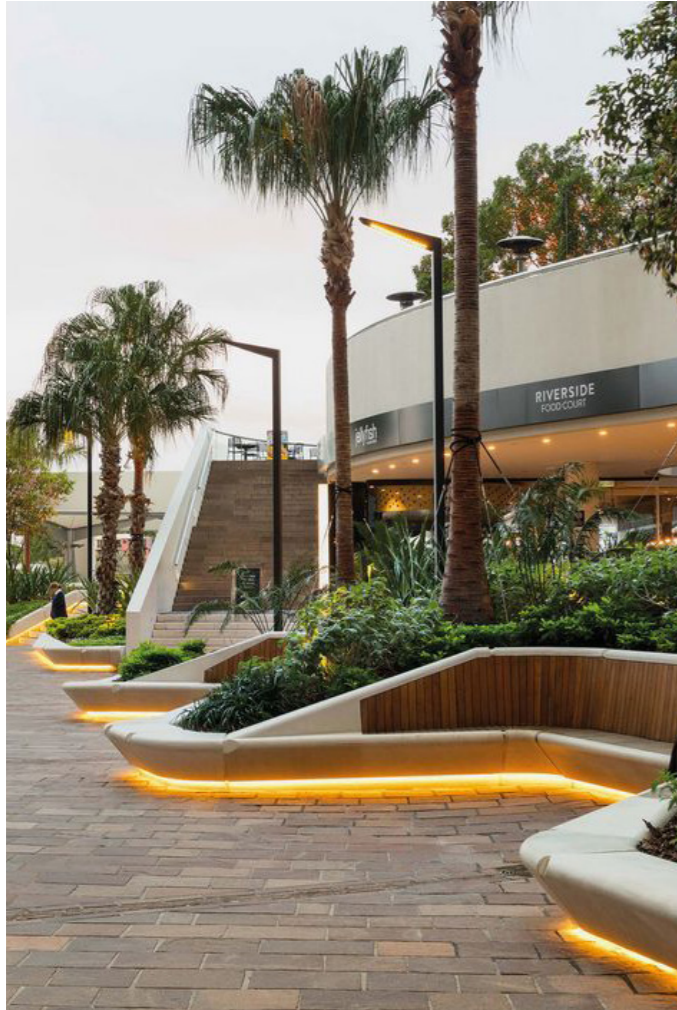
PRECEDENTS

Urban Dwell Zone to Waterloo Road



PRECEDENTS

Lighting

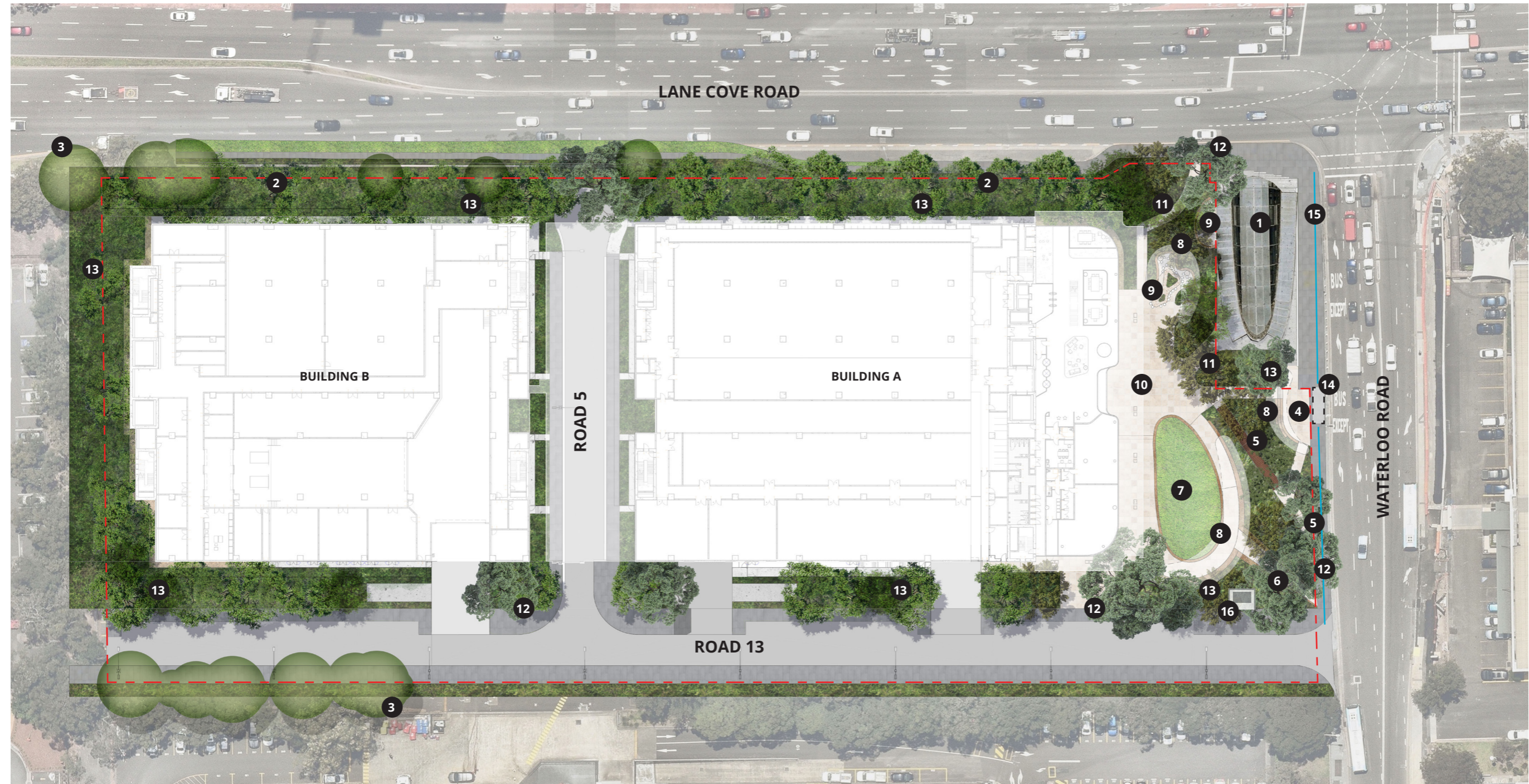


FIVE
LANDSCAPE
DESIGN

LANDSCAPE SITE MASTERPLAN

KEY

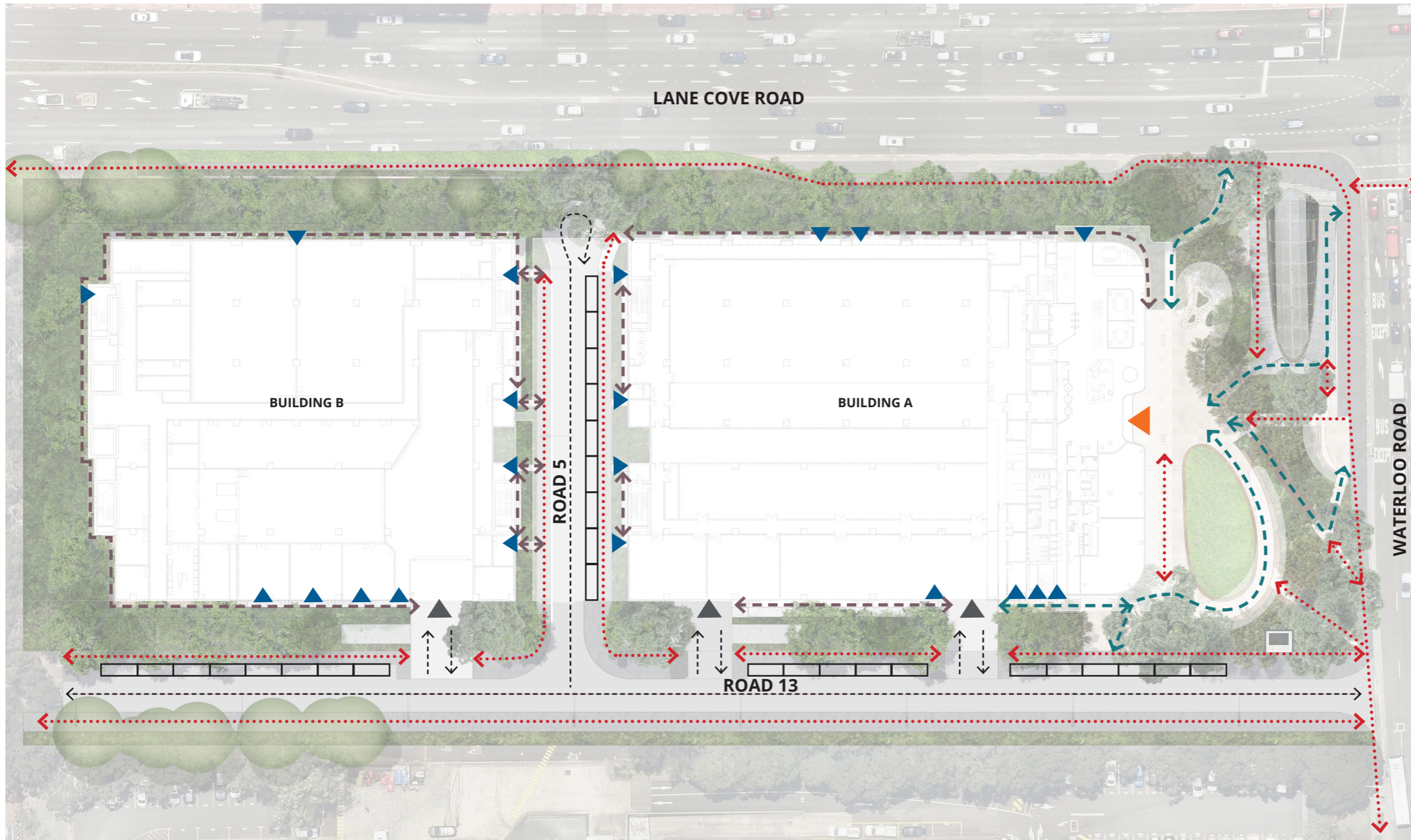
- | | | | | | | | | | |
|---|--|---|---|----|---|----|---|----|--|
| 1 | EXISTING METRO WEST STATION ENTRY | 5 | RAISED ACCESSIBLE WALKWAY ABOVE SWALE GARDEN WITH ACCESSIBLE CONNECTION TO BUS STOP | 8 | SHELTERS TO SEATING AT WATERLOO RD BUS STOP, OUTDOOR MEETING ROOMS, AND OPEN TURF FEATURE SPACE SEATING WALLS | 11 | ACCESSIBLE PATHWAYS CONNECTING TO THE METRO STATION AND MAJOR PEDESTRIAN CROSSING | 14 | COUNCIL APPROVED BUS STOP SHELTER WITH ADVERTISING |
| 2 | REINSTATED PLANTING TO LANE COVE RD | 6 | FEATURE STEPPED ENTRANCE TO PLAZA BORDERED BY FEATURE WALLS AND NATIVE PLANTING | 9 | OUTDOOR MEETING ROOMS AND GATHERING SPACES WITH LARGE FLEXIBLE TABLE AND FIXED FURNITURE | 12 | PROPOSED FEATURED TREES TO IMPORTANT INTERFACES WITH THE STREETSCAPE | 15 | SHARED PATH LINE MARKING AS PER WATERLOO RD MASTERPLAN |
| 3 | RETAINED EXISTING TREES | 7 | RAISED OPEN TURF SPACE SURROUNDED BY A FEATURE SEATING EDGE | 10 | OPEN PROGRAMMABLE PUBLIC PLAZA SPACE | 13 | NATIVE PLANTING PALETTES TO SITE PERIMETERS AND PLAZA SPACES | 16 | RELOCATED KIOSK |
| 4 | URBAN DWELL ZONE TO COMPLIMENT EXISTING WATERLOO RD BUS STOP | | | | | | | | |



LANDSCAPE SITE MASTERPLAN

Program

- KEY**
- - - - - PEDESTRIAN ACCESS
 - - - - - MAINTENANCE ACCESS
 - - - - - WHEELCHAIR ACCESS
 - - - - - VEHICLE ACCESS
 - ▶ SERVICE ACCESS
 - ▶ MAIN BUILDING ENTRY
 - ▶ CAR PARK ENTRANCE
- CAR PARKING**
 ROAD 5 = 9 SPACES
 ROAD 13 = 19 SPACES
 TOTAL NUMBER OF ON STREET PARKING SPACES = 28

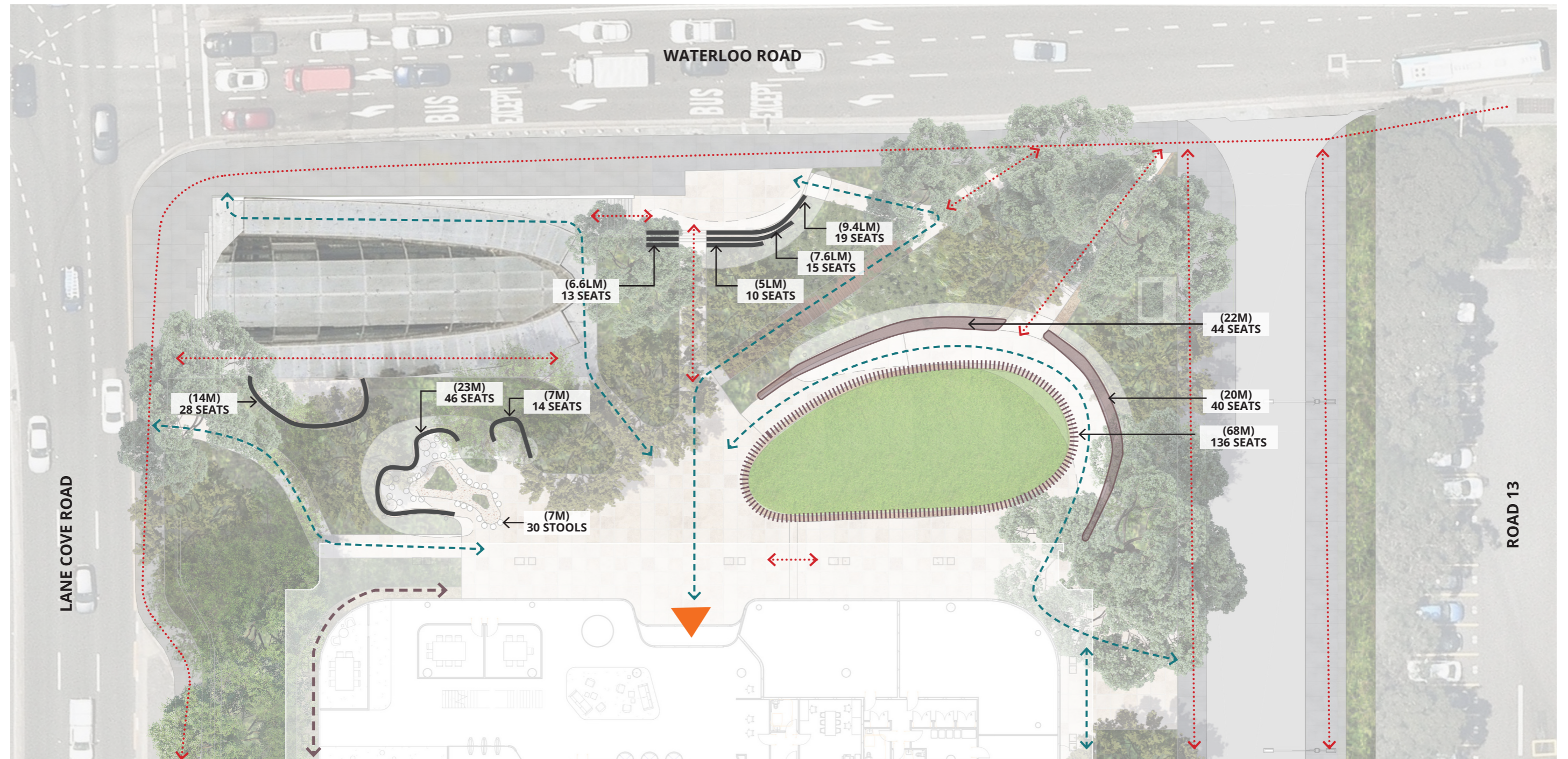


LANDSCAPE PLAZA MASTERPLAN

Program - Plaza

KEY

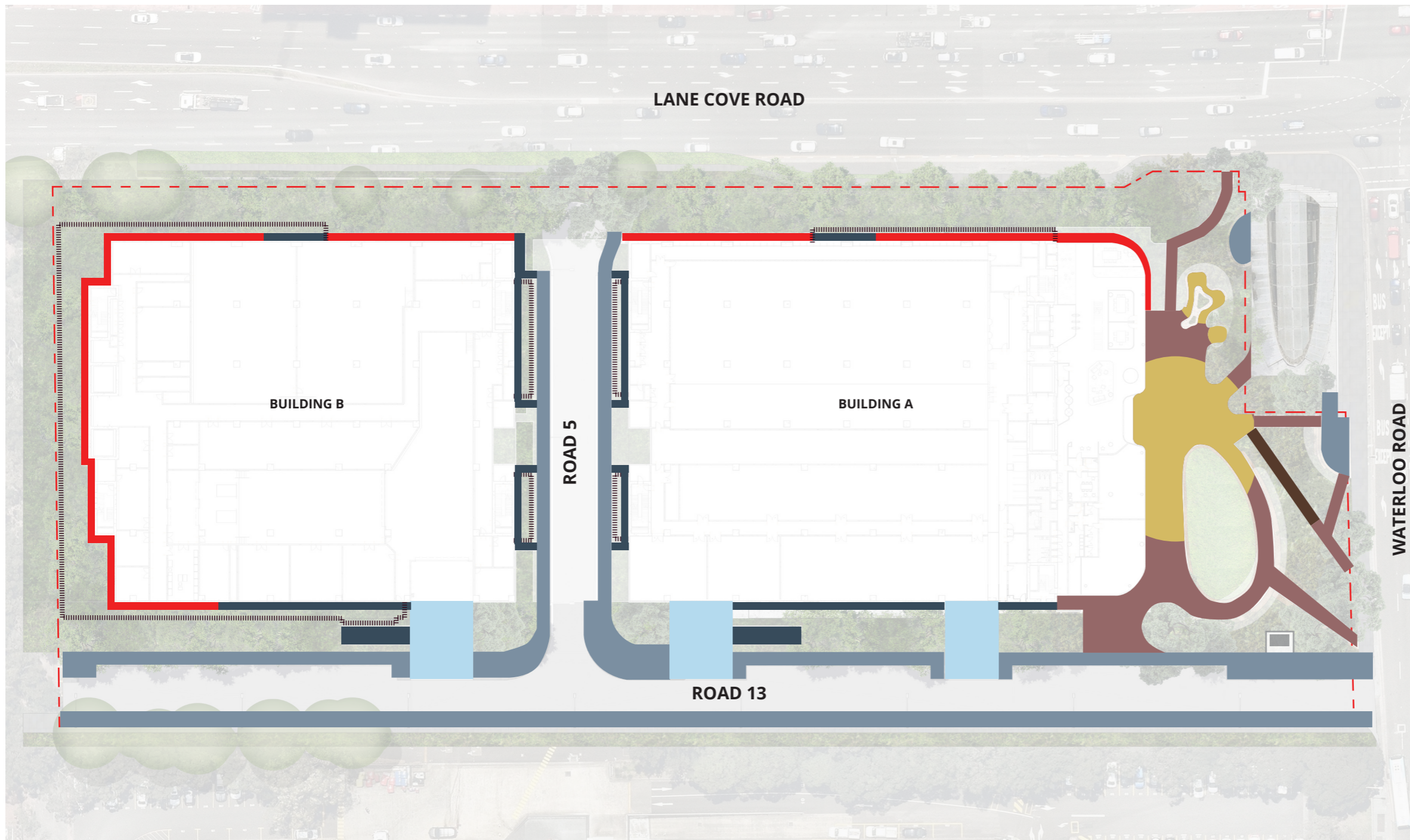
- - - > PEDESTRIAN ACCESS
- - - > MAINTENANCE ACCESS
- - - > WHEELCHAIR ACCESS
- ▶ MAIN BUILDING ENTRY



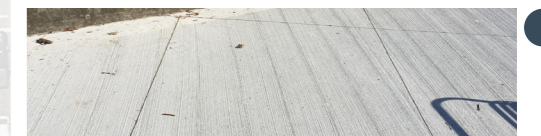
LANDSCAPE SITE MASTERPLAN

Materials Strategy

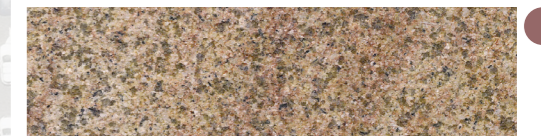
KEY	ITEM				
●	INSITU CONCRETE	●	GRAVEL	●	FEATURE PAVING
●	FULL WIDTH GRANITE PAVING	☼	SECURE FENCELINE	●	PLAZA PAVING
●	GRANITE PAVING DRIVEWAYS	●	TIMBER DECKING		



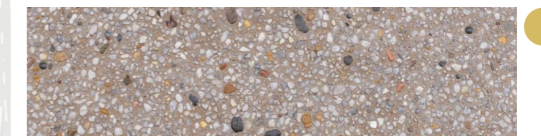
**GRANITE PAVING
BLACK - FLAME EXFOLIATED
600MMX300MMX60MM TO PATHS
150MMX100MMX60MM TO DRIVEWAYS**



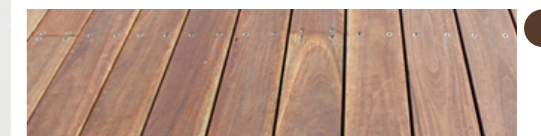
**INSITU CONCRETE
BROOM FINISH**



FEATURE PAVING



**MAIN PLAZA PAVING
HONEY JASPER GRANITE**

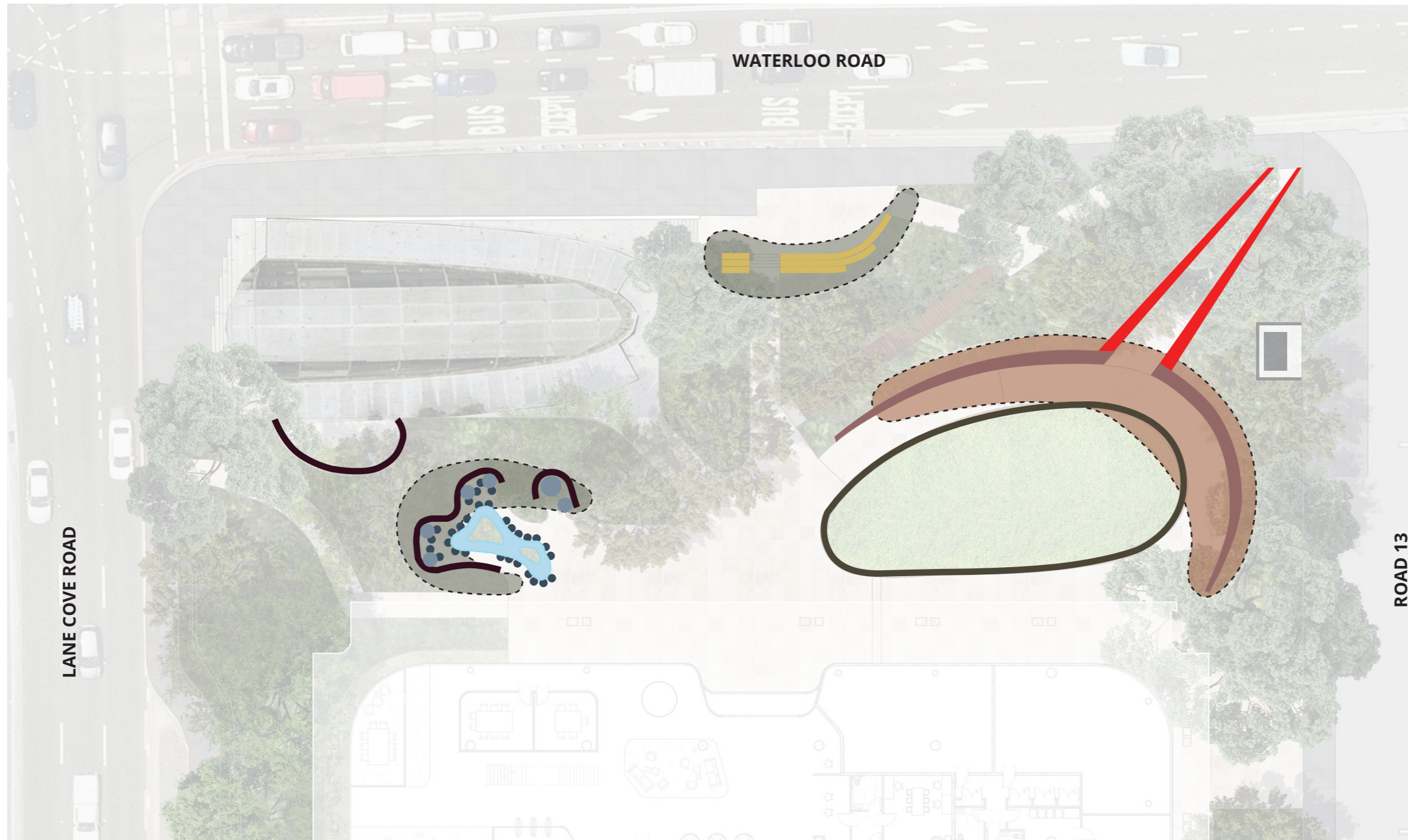


**GRANITE PAVING
BLACK - FLAME EXFOLIATED
600MMX300MMX60MM**

LANDSCAPE SITE MASTERPLAN

Materials Strategy

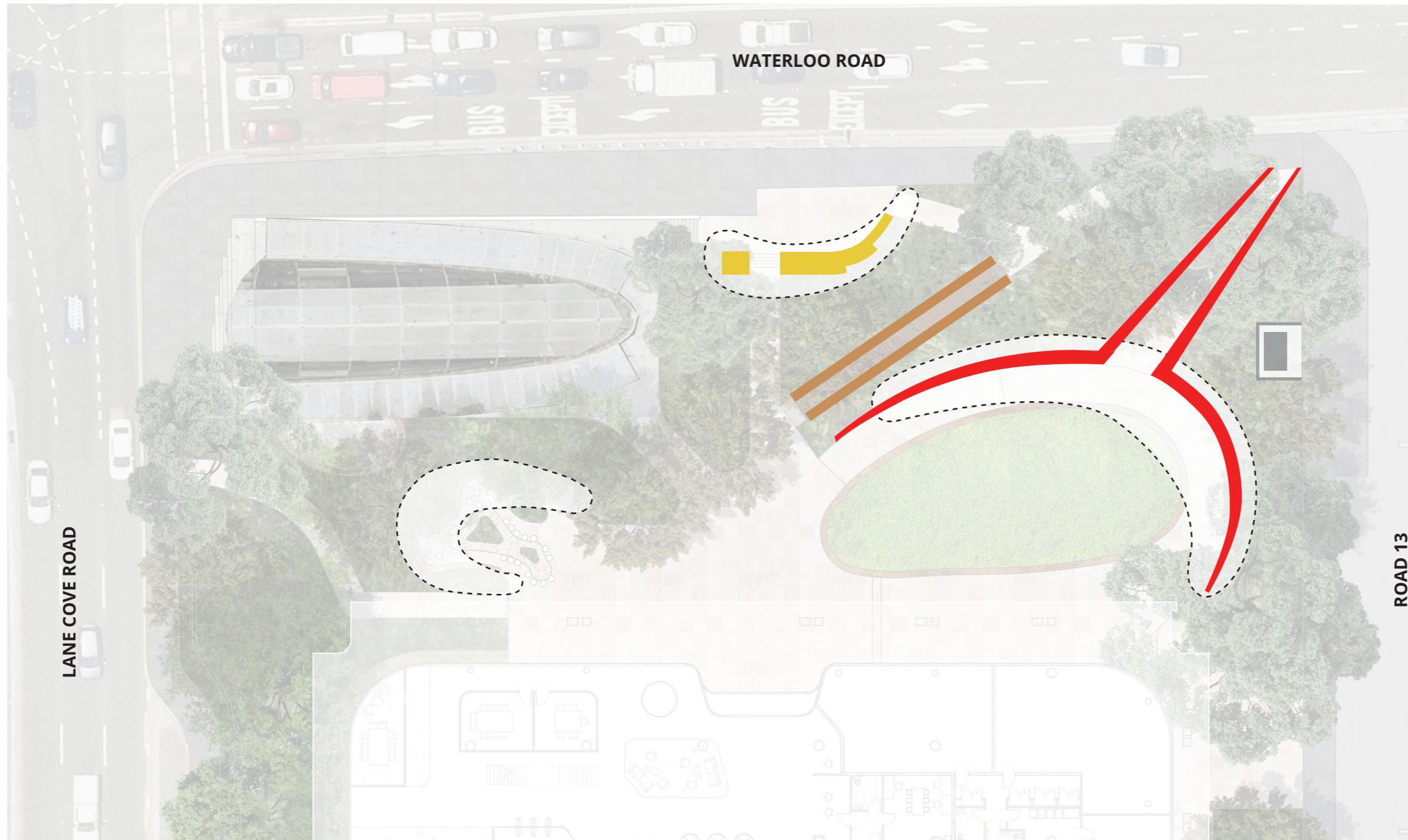
KEY	ITEM				
●	FIXED SEATING	●	FEATURE CORTEN WALL	●	SANDSTONE TERRACE SEATING
●	FIXED TABLES	●	FEATURE PLAZA SEATING	●	RAISED TURF AREA SEATING EDGE
●	FEATURE TABLE WITH PLANTING	●	FLEXIBLE BENCH SEATING	●	MEETING ROOM SHELTER WITH PLANTING
				●	FEATURE SHELTER WITH PERFORATED ALUMINIUM



LANDSCAPE SITE MASTERPLAN

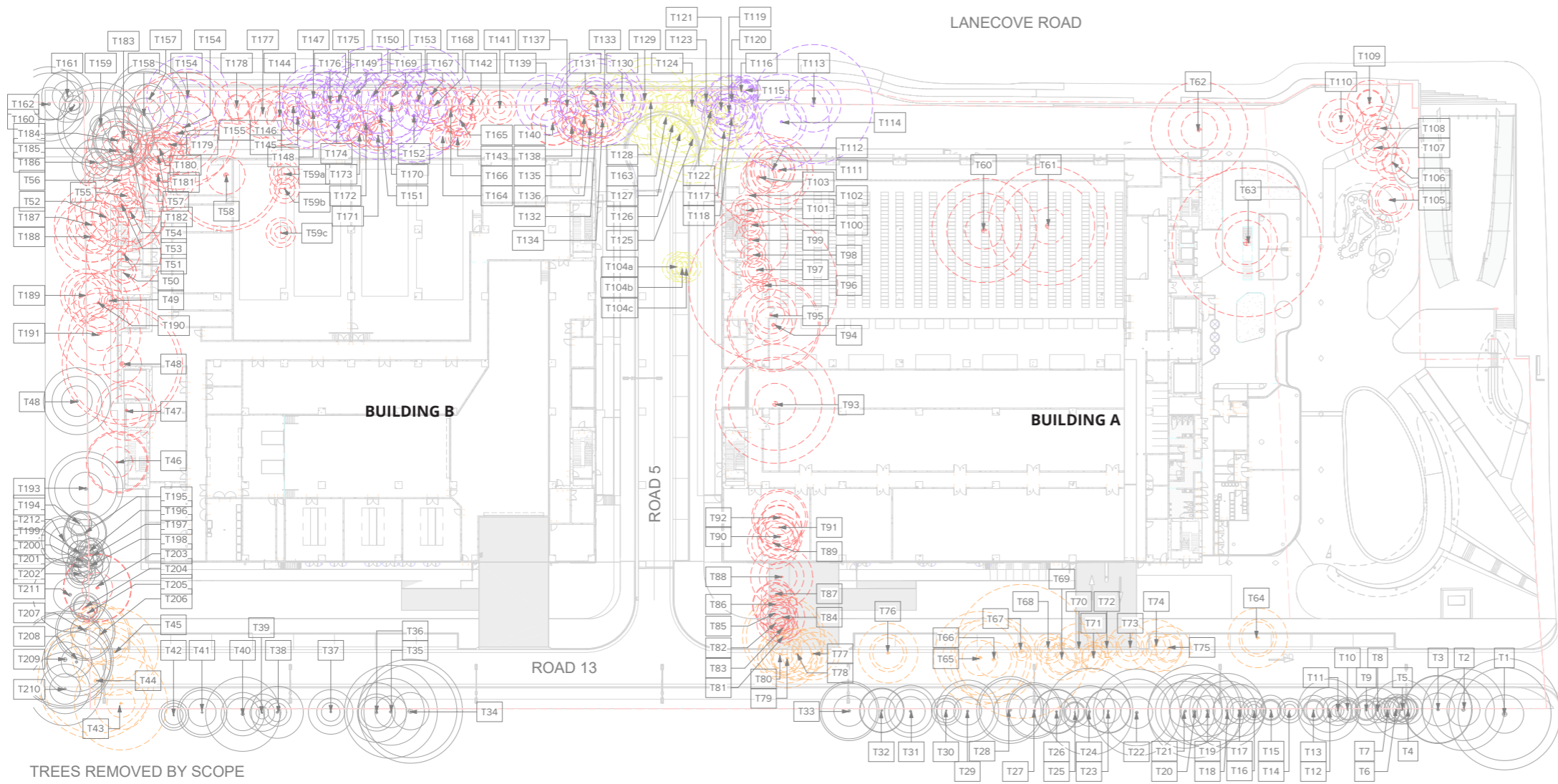
Public Art Strategy

- KEY ITEM
- ART INTEGRATED WITH WALL PROFILES
 - ARTWORK TO FACE OF TERRACING
 - ECOLOGICAL INTERPRETATION
 - UNDERSIDE OF SHELTERS



LANDSCAPE SITE MASTERPLAN

Trees Removed by Scope of Works



LANDSCAPE AREA CALCULATIONS

EXISTING SITE AREA	22381M ²
EXISTING CANOPY AREA	4762M ²
REMOVED EXISTING CANOPY	3798M ²
RETAINED CANOPY AREA	964M ²

TREES REMOVED BY SCOPE

CODE	BOTANICAL NAME	COMMON NAME	RET VALUE
T146	Eucalyptus resinifera	Red Mahogany	LT
T147	Eucalyptus resinifera	Red Mahogany	MT
T148	Angophora costata	Sydney Red Gum	MT
T149	Angophora costata	Sydney Red Gum	LT
T150	Eucalyptus sp.	Eucalyptus	LT
T151	Eucalyptus resinifera	Red Mahogany	MT
T152	Angophora costata	Sydney Red Gum	MT
T153	Eucalyptus resinifera	Red Mahogany	MT
T154	Angophora costata	Sydney Red Gum	MT
T155	Eucalyptus microcorys	Tallowwood	LT
T156	Eucalyptus microcorys	Tallowwood	MT
T157	Eucalyptus grandis	Flooded Gum	MT
T158	Eucalyptus saligna	Sydney Blue Gum	HT
T159a	Callistemon viminalis	Weeping Bottlebrush	LT
T159b	Callistemon viminalis	Weeping Bottlebrush	LT
T159c	Callistemon viminalis	Weeping Bottlebrush	LT
T160	Eucalyptus microcorys	Tallowwood	HT
T161	Eucalyptus microcorys	Tallowwood	HT
T162	Eucalyptus nicholii	Narrow leaved Black Peppermint	MT
T163	Eucalyptus globulus	Tasmanian Blue Gum	HT
T164	Allocasuarina littoralis	Black She-Oak	MT
T165	Allocasuarina littoralis	Black She-Oak	LT
T166	Allocasuarina littoralis	Black She-Oak	MT
T167	Allocasuarina littoralis	Black She-Oak	MT
T168	Allocasuarina littoralis	Black She-Oak	MT
T169	Allocasuarina littoralis	Black She-Oak	MT
T170	Allocasuarina littoralis	Black She-Oak	MT
T171	Eucalyptus saligna	Sydney Blue Gum	HT
T172	Eucalyptus saligna	Sydney Blue Gum	HT
T173	Eucalyptus saligna	Sydney Blue Gum	MT
T174	Callistemon viminalis	Weeping Bottlebrush	LT
T175	Agonis flexuosa	Willow Myrtle	LT
T176	Callistemon viminalis	Weeping Bottlebrush	LT

CODE	BOTANICAL NAME	COMMON NAME	RET VALUE
T179	Agonis flexuosa	Willow Myrtle	MT
T180	Callistemon viminalis	Weeping Bottlebrush	LT
T181	Agonis flexuosa	Willow Myrtle	LT
T182	Eriobotrya japonica	Loquat	LT
T183	Eucalyptus resinifera	Red Mahogany	LT
T184	Corymbia maculata	Spotted Gum	MT
T185	Angophora costata	Sydney Red Gum	LT
T186	Angophora costata	Sydney Red Gum	LT
T187	Eucalyptus resinifera	Red Mahogany	HT
T188	Eucalyptus microcorys	Tallowwood	MT
T189	Eucalyptus resinifera	Red Mahogany	MT
T190	Syncarpia glomulifera	Turpentine	LT
T191	Corymbia maculata	Spotted Gum	MT
T192	Callistemon viminalis	Weeping Bottlebrush	LT
T193	Eucalyptus resinifera	Red Mahogany	MT
T194	Eucalyptus resinifera	Red Mahogany	LT
T195	Callistemon viminalis	Weeping Bottlebrush	LT
T196	Angophora costata	Sydney Red Gum	LT
T197	Callistemon viminalis	Weeping Bottlebrush	LT
T198	Callistemon viminalis	Weeping Bottlebrush	LT
T199	Callistemon viminalis	Weeping Bottlebrush	LT
T200	Callistemon viminalis	Weeping Bottlebrush	LT
T201	Callistemon viminalis	Weeping Bottlebrush	LT
T202	Callistemon viminalis	Weeping Bottlebrush	LT
T203	Callistemon viminalis	Weeping Bottlebrush	LT
T204	Callistemon viminalis	Weeping Bottlebrush	LT
T205	Callistemon viminalis	Weeping Bottlebrush	LT
T206	Callistemon viminalis	Weeping Bottlebrush	LT
T207	Callistemon viminalis	Weeping Bottlebrush	LT
T208	Callistemon viminalis	Weeping Bottlebrush	LT
T209	Callistemon viminalis	Weeping Bottlebrush	LT
T210	Callistemon viminalis	Weeping Bottlebrush	LT

CODE	BOTANICAL NAME	COMMON NAME	RET VALUE
T179	Eucalyptus resinifera	Red Mahogany	LT
T180	Eucalyptus resinifera	Red Mahogany	LT
T181	Eucalyptus resinifera	Red Mahogany	HT
T182	Corymbia gummifera	Red Bloodwood	LT
T183	Eucalyptus resinifera	Red Mahogany	LT
T184	Eucalyptus resinifera	Red Mahogany	LT
T185	Eucalyptus resinifera	Red Mahogany	LT
T186	Eucalyptus resinifera	Red Mahogany	LT
T187	Eucalyptus resinifera	Red Mahogany	HT
T188	Eucalyptus eugenoides	Thin-leaved Stringybark	HT
T189	Eucalyptus microcorys	Tallowwood	MT
T190	Eucalyptus resinifera	Red Mahogany	MT
T191	Eucalyptus resinifera	Red Mahogany	HT
T192	Eucalyptus resinifera	Red Mahogany	HT
T193	Eucalyptus resinifera	Red Mahogany	HT
T194	Eucalyptus resinifera	Red Mahogany	HT
T195	Eucalyptus resinifera	Red Mahogany	HT
T196	Eucalyptus resinifera	Red Mahogany	HT
T197	Eucalyptus resinifera	Red Mahogany	HT
T198	Eucalyptus resinifera	Red Mahogany	HT
T199	Eucalyptus resinifera	Red Mahogany	HT
T200	Eucalyptus resinifera	Red Mahogany	HT
T201	Eucalyptus resinifera	Red Mahogany	HT
T202	Eucalyptus resinifera	Red Mahogany	HT
T203	Eucalyptus resinifera	Red Mahogany	HT
T204	Eucalyptus resinifera	Red Mahogany	HT
T205	N/A	Deceased	LT

CODE	BOTANICAL NAME	COMMON NAME	RET VALUE
T179	Eucalyptus resinifera	Red Mahogany	HT
T180	Eucalyptus resinifera	Red Mahogany	HT
T181	Eucalyptus resinifera	Red Mahogany	HT
T182	Eucalyptus resinifera	Red Mahogany	HT
T183	Eucalyptus resinifera	Red Mahogany	HT
T184	Eucalyptus resinifera	Red Mahogany	HT
T185	Eucalyptus resinifera	Red Mahogany	HT
T186	Eucalyptus resinifera	Red Mahogany	HT
T187	Eucalyptus resinifera	Red Mahogany	HT
T188	Eucalyptus resinifera	Red Mahogany	HT
T189	Eucalyptus resinifera	Red Mahogany	HT
T190	Eucalyptus resinifera	Red Mahogany	HT
T191	Eucalyptus resinifera	Red Mahogany	HT
T192	Eucalyptus resinifera	Red Mahogany	HT
T193	Eucalyptus resinifera	Red Mahogany	HT
T194	Eucalyptus resinifera	Red Mahogany	HT
T195	Eucalyptus resinifera	Red Mahogany	HT
T196	Eucalyptus resinifera	Red Mahogany	HT
T197	Eucalyptus resinifera	Red Mahogany	HT
T198	Eucalyptus resinifera	Red Mahogany	HT
T199	Eucalyptus resinifera	Red Mahogany	HT
T200	Eucalyptus resinifera	Red Mahogany	HT
T201	Eucalyptus resinifera	Red Mahogany	HT
T202	Eucalyptus resinifera	Red Mahogany	HT
T203	Eucalyptus resinifera	Red Mahogany	HT
T204	Eucalyptus resinifera	Red Mahogany	HT
T205	Eucalyptus resinifera	Red Mahogany	HT
T206	Eucalyptus resinifera	Red Mahogany	HT
T207	Eucalyptus resinifera	Red Mahogany	HT
T208	Eucalyptus resinifera	Red Mahogany	HT
T209	Eucalyptus resinifera	Red Mahogany	HT
T210	Eucalyptus resinifera	Red Mahogany	HT

CODE	BOTANICAL NAME	COMMON NAME	RET VALUE
T172	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T173	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T174	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T175	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T176	Eucalyptus microcorys	Tallowwood	MT
T177	Allocasuarina littoralis	Black She-Oak	MT
T178	Allocasuarina littoralis	Black She-Oak	MT
T179	Allocasuarina littoralis	Black She-Oak	MT
T180	Allocasuarina littoralis	Black She-Oak	MT
T181	Eucalyptus saligna	Sydney Blue Gum	HT
T206	Eucalyptus resinifera	Red Mahogany	MT

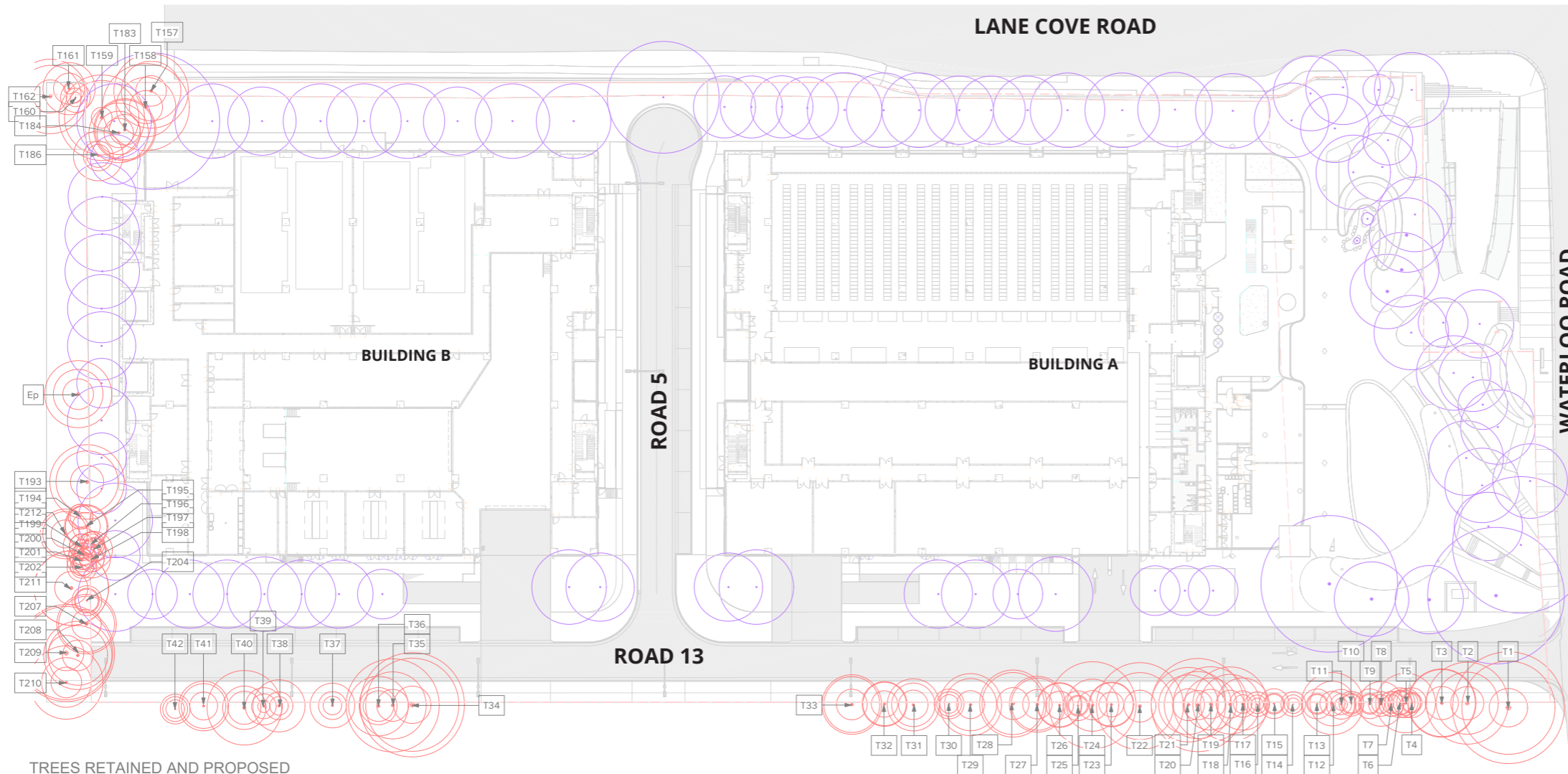
New Construction: 27
Road 5
Lane Cove Rd Widening
New Construction: 85
Lane Cove Rd Widening
New Construction: 22
Road 13

CODE	BOTANICAL NAME	COMMON NAME	RET VALUE
T146	Eucalyptus resinifera	Red Mahogany	HT
T147	Eucalyptus resinifera	Red Mahogany	HT
T148	Eucalyptus resinifera	Red Mahogany	HT
T149	Eucalyptus resinifera	Red Mahogany	HT
T150	Eucalyptus resinifera	Red Mahogany	HT
T151	Eucalyptus resinifera	Red Mahogany	HT
T152	Eucalyptus resinifera	Red Mahogany	HT
T153	Eucalyptus resinifera	Red Mahogany	HT
T154	Eucalyptus resinifera	Red Mahogany	HT
T155	Eucalyptus resinifera	Red Mahogany	HT
T156	Eucalyptus resinifera	Red Mahogany	HT
T157	Eucalyptus resinifera	Red Mahogany	HT
T158	Eucalyptus resinifera	Red Mahogany	HT
T159a	Eucalyptus resinifera	Red Mahogany	HT
T159b	Eucalyptus resinifera	Red Mahogany	HT
T159c	Eucalyptus resinifera	Red Mahogany	HT
T160	Eucalyptus resinifera	Red Mahogany	HT
T161	Eucalyptus resinifera	Red Mahogany	HT
T162	Eucalyptus resinifera	Red Mahogany	HT
T163	Eucalyptus resinifera	Red Mahogany	HT
T164	Eucalyptus resinifera	Red Mahogany	HT
T165	Eucalyptus resinifera	Red Mahogany	HT
T166	Eucalyptus resinifera	Red Mahogany	HT
T167	Eucalyptus resinifera	Red Mahogany	HT
T168	Eucalyptus resinifera	Red Mahogany	HT
T169	Eucalyptus resinifera	Red Mahogany	HT
T170	Eucalyptus resinifera	Red Mahogany	HT
T171	Eucalyptus resinifera	Red Mahogany	HT
T172	Eucalyptus resinifera	Red Mahogany	HT
T173	Eucalyptus resinifera	Red Mahogany	HT
T174	Eucalyptus resinifera	Red Mahogany	HT
T175	Eucalyptus resinifera	Red Mahogany	HT
T176	Eucalyptus resinifera	Red Mahogany	HT
T177	Eucalyptus resinifera	Red Mahogany	HT
T178	Eucalyptus resinifera	Red Mahogany	HT
T179	Eucalyptus resinifera	Red Mahogany	HT
T180	Eucalyptus resinifera	Red Mahogany	HT
T181	Eucalyptus resinifera	Red Mahogany	HT
T182	Eucalyptus resinifera	Red Mahogany	HT
T183	Eucalyptus resinifera	Red Mahogany	HT
T184	Eucalyptus resinifera	Red Mahogany	HT
T185	Eucalyptus resinifera	Red Mahogany	HT
T186	Eucalyptus resinifera	Red Mahogany	HT
T187	Eucalyptus resinifera	Red Mahogany	HT
T188	Eucalyptus resinifera	Red Mahogany	HT
T189	Eucalyptus resinifera	Red Mahogany	HT
T190	Eucalyptus resinifera	Red Mahogany	HT
T191	Eucalyptus resinifera	Red Mahogany	HT
T192	Eucalyptus resinifera	Red Mahogany	HT
T193	Eucalyptus resinifera	Red Mahogany	HT
T194	Eucalyptus resinifera	Red Mahogany	HT
T195	Eucalyptus resinifera	Red Mahogany	HT
T196	Eucalyptus resinifera	Red Mahogany	HT
T197	Eucalyptus resinifera	Red Mahogany	HT
T198	Eucalyptus resinifera	Red Mahogany	HT
T199	Eucalyptus resinifera	Red Mahogany	HT
T200	Eucalyptus resinifera	Red Mahogany	HT
T201	Eucalyptus resinifera	Red Mahogany	HT
T202	Eucalyptus resinifera	Red Mahogany	HT
T203	Eucalyptus resinifera	Red Mahogany	HT
T204	Eucalyptus resinifera	Red Mahogany	HT
T205	Eucalyptus resinifera	Red Mahogany	HT
T206	Eucalyptus resinifera	Red Mahogany	HT
T207	Eucalyptus resinifera	Red Mahogany	HT
T208	Eucalyptus resinifera	Red Mahogany	HT
T209	Eucalyptus resinifera	Red Mahogany	HT
T210	Eucalyptus resinifera	Red Mahogany	HT

CODE	BOTANICAL NAME	COMMON NAME	RET VALUE
T104a	Plumeria rubra var. acutifolia	Frangipani	LT
T104b	Plumeria rubra var. acutifolia	Frangipani	LT
T104c	Plumeria rubra var. acutifolia	Frangipani	LT
T117	Syncarpia glomulifera	Turpentine	MT
T122	Angophora costata	Sydney Red Gum	MT
T124	Angophora costata	Sydney Red Gum	MT
T125	Angophora costata	Sydney Red Gum	HT
T126	Angophora costata	Sydney Red Gum	LT
T127	Angophora costata	Sydney Red Gum	MT
T128	Eucalyptus resinifera	Red Mahogany	HT
T129	Eucalyptus resinifera	Red Mahogany	MT
T133	Eucalyptus resinifera	Red Mahogany	MT
T163	Eucalyptus resinifera	Red Mahogany	LT
T43	Angophora costata	Sydney Red Gum	LT
T44	Eucalyptus resinifera	Red Mahogany	HT
T45	Schinus molle var. anraira	Pepper Tree	LT
T46	Harpephyllum caffrum	Kaffir Plum	MT
T65	Eucalyptus microcorys	Tallowwood	MT
T66	Eucalyptus microcorys	Tallowwood	MT
T67	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T68	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T69	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T70	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T71	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T72	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T73	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T74	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T75	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T76	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T77	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T78	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T79	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T80	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T81	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T82	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T83	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T84	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T85	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T86	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T87	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T88	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T89	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T90	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T91	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T92	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T93	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T94	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T95	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T96	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T97	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T98	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T99	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T100	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T101	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T102	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T103	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T104	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T105	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T106	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T107	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T108	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T109	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T110	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T111	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T112	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T113	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T114	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T115	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T116	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T117	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T118	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T119	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T120	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T121	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T122	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T123	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T124	Melaleuca quinquenervia	Broad-leaved Paperbark	LT
T125	Melaleuca quinquenervia		

LANDSCAPE SITE MASTERPLAN

Proposed Trees and Trees Retained



EXISTING SITE AREA	22381M ²
RETAINED CANOPY AREA	964M ²
PROPOSED CANOPY AREA	5989M ²
TOTAL CANOPY AREA	6211M ²

TREES RETAINED AND PROPOSED

CODE	BOTANICAL NAME	COMMON NAME	RET VALUE
Building Works			
T183	Angophora costata	Sydney Red Gum	HT
T184	Eucalyptus resinifera	Red Mahogany	MT
T186	Angophora costata	Sydney Red Gum	LT
T192	Eucalyptus microcorys	Tallowwood	HT
T193	Eucalyptus microcorys	Tallowwood	HT
T194	Eucalyptus microcorys	Tallowwood	LT
T195	Angophora floribunda	Rough-Barked Apple	MT
T196	Angophora costata	Sydney Red Gum	LT
T197	Angophora costata	Sydney Red Gum	LT
T198	Casuarina glauca	Swamp Oak	LT
T199	Casuarina glauca	Swamp Oak	LT
T200	Casuarina glauca	Swamp Oak	LT
T201	Casuarina glauca	Swamp Oak	LT
T202	Casuarina glauca	Swamp Oak	LT
T204	Casuarina glauca	Swamp Oak	LT
T211	Angophora costata	Sydney Red Gum	HT
T212	Casuarina glauca	Swamp Oak	MT
Lane Cove Rd Widening			
T157	Angophora costata	Sydney Red Gum	MT
T158	Angophora costata	Sydney Red Gum	MT
T159	Eucalyptus resinifera	Red Mahogany	MT
T160	Angophora floribunda	Sydney Red Gum	LT
T161	Angophora floribunda	Rough-barked Apple	MT
T162	Angophora floribunda	Rough-barked Apple	HT
Road 13			
T1	Eucalyptus microcorys	Tallowwood	HT
T2	Eucalyptus microcorys	Tallowwood	MT
T3	Eucalyptus microcorys	Tallowwood	MT
T4	Allocasuarina littoralis	Tallowwood	LT
T5	Eucalyptus microcorys	Tallowwood	LT

CODE	BOTANICAL NAME	COMMON NAME	RET VALUE
T6	Allocasuarina littoralis	Black She-Oak	LT
T7	Allocasuarina littoralis	Black She-Oak	LT
T8	Eucalyptus microcorys	Tallowwood	LT
T9	Allocasuarina littoralis	Black She-Oak	MT
T10	Allocasuarina littoralis	Black She-Oak	LT
T11	Eucalyptus microcorys	Tallowwood	LT
T12	Eucalyptus saligna	Sydney Blue Gum	MT
T13	Eucalyptus microcorys	Tallowwood	LT
T14	Eucalyptus microcorys	Tallowwood	LT
T15	Allocasuarina littoralis	Black She-Oak	LT
T16	Eucalyptus microcorys	Tallowwood	LT
T17	Eucalyptus microcorys	Tallowwood	LT
T18	Eucalyptus microcorys	Tallowwood	MT
T19	Eucalyptus microcorys	Tallowwood	MT
T20	Allocasuarina littoralis	Black She-Oak	MT
T21	Eucalyptus microcorys	Tallowwood	MT
T22	Eucalyptus saligna	Sydney Blue Gum	MT
T23	Eucalyptus microcorys	Tallowwood	MT
T24	Eucalyptus microcorys	Tallowwood	MT
T25	Eucalyptus microcorys	Tallowwood	MT
T26	Eucalyptus microcorys	Tallowwood	MT
T27	Eucalyptus microcorys	Tallowwood	MT
T28	Eucalyptus microcorys	Tallowwood	MT
T29	Eucalyptus microcorys	Tallowwood	MT
T30	Eucalyptus microcorys	Tallowwood	MT
T31	Eucalyptus microcorys	Tallowwood	MT
T32	Eucalyptus microcorys	Tallowwood	MT
T33	Eucalyptus microcorys	Tallowwood	MT
T34	Eucalyptus melliodora	Yellow Box	HT
T35	Eucalyptus saligna	Sydney Blue Gum	MT
T36	Eucalyptus microcorys	Tallowwood	MT

CODE	BOTANICAL NAME	COMMON NAME	RET VALUE
T37	Eucalyptus microcorys	Tallowwood	LT
T38	Angophora costata	Sydney Red Gum	LT
T39	Eucalyptus saligna	Sydney Blue Gum	LT
T40	Eucalyptus microcorys	Tallowwood	MT
T41	Eucalyptus microcorys	Tallowwood	MT
T42	Angophora costata	Sydney Red Gum	LT
T207	Casuarina glauca	Swamp Oak	LT
T208	Eucalyptus microcorys	Tallowwood	HT
T209	Eucalyptus resinifera	Red Mahogany	HT
T210	Cinnamomum camphora	Camphor Laurel	MT

Grand total: 69

CODE	BOTANICAL NAME	COMMON NAME	MATURE SIZE	POT SIZE	QTY
Ac	Angophora costata	Smooth Apple Bark	18 x 12	45L	17
Af	Angophora floribunda	Rough-Barked Apple	10 x 8	45L	14
Cc	Cyathia cooperi	Tree Fern	6 x 3	45L	4
Cm	Coxymbia maculata	Spotted Gum	15 x 12	45L	21
Da	Diksonia australis	Soft Tree Fern	5 x 3	45L	2
EMR	Eucalyptus ficifolia	Red Flowering Gum 'Mini Red'	2.5 x 2	45L	1
Ep	Eucalyptus piperita	Sydney Peppermint	18 x 11	45L	23
Er	Eucalyptus resinifera	Red Mahogany	25 x 10	45L	4
Es	Eucalyptus saligna	Sydney Blue Gum	25 x 18	45L	1
Et	Eucalyptus tereticornis	Forest Red Gum	35 x 22	45L	4
EW	Eucalyptus ficifolia	Red Flowering Gum 'Wildfire'	6 x 4	45L	1
Up	Ulmus parvifolia	Chinese Elm	18 x 15	45L	1

Grand total: 93

■ TREES RETAINED = 69
■ TREES PROPOSED = 93
 TOTAL NUMBER OF TREES = 162

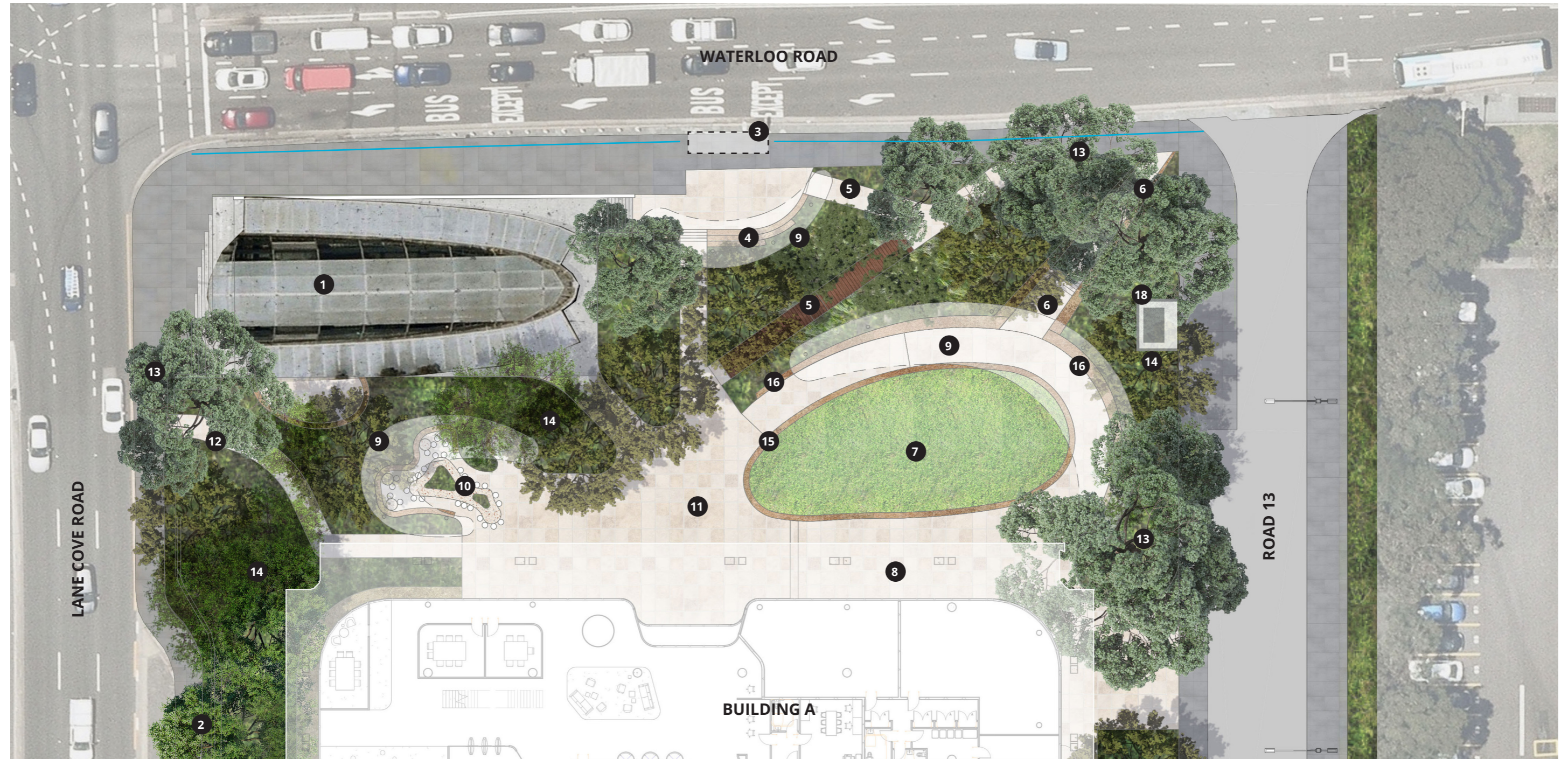
LT = LOW RETENTION VALUE
 MT = MEDIUM RETENTION VALUE
 HT = HIGH RETENTION VALUE

NOTE: REFER ARBORIST REPORT FOR FURTHER INFORMATION ON TREE CONDITIONS

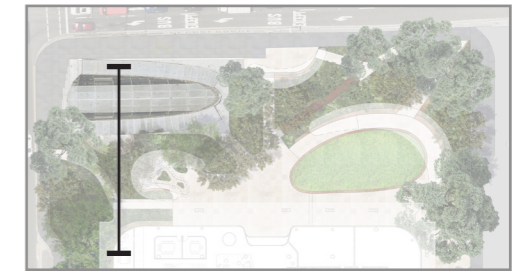
LANDSCAPE PLAZA MASTERPLAN

KEY

- | | | | | | | | | | |
|---|--|---|---|----|---|----|---|----|--|
| 1 | EXISTING METRO WEST STATION ENTRY | 5 | ACCESSIBLE PATHWAY UP TO PUBLIC PLAZA FROM BUS STOP | 9 | SHELTERS TO SEATING AT WATERLOO RD BUS STOP, OUTDOOR MEETING ROOMS, AND OPEN TURF FEATURE SPACE SEATING WALLS | 12 | ACCESSIBLE PATHWAYS CONNECTING TO THE METRO STATION AND MAJOR PEDESTRIAN CROSSING | 15 | SEATING EDGE TO TURF |
| 2 | REINSTATED PLANTING TO LANE COVE RD | 6 | FEATURE STEPPED ENTRANCE TO PLAZA BORDERED BY FEATURE WALLS AND NATIVE PLANTING | 10 | OUTDOOR MEETING ROOMS AND GATHERING SPACES WITH LARGE FLEXIBLE TABLE AND FIXED FURNITURE | 13 | PROPOSED FEATURED TREES TO IMPORTANT INTERFACES WITH THE STREETSCAPE | 16 | FEATURE SEATING WALL |
| 3 | COUNCIL APPROVED BUS STOP SHELTER WITH ADVERTISING | 7 | RAISED OPEN TURF SPACE SURROUNDED BY A FEATURE SEATING EDGE | 11 | OPEN PROGRAMMABLE PUBLIC PLAZA SPACE | 14 | NATIVE PLANTING PALETTES TO SITE PERIMETERS AND PLAZA SPACES | 17 | SHARED PATH LINE MARKING AS PER WATERLOO RD MASTERPLAN |
| 4 | NATURAL STONE SEATING TERRACES | 8 | RETAIL AND CAFE SPILLOUT | | | | | 18 | RELOCATED KIOSK |



LANDSCAPE SECTIONS



KEY

- 1 METRO WEST STATION ENTRY
- 2 PLANTED FEATURE TABLE WITH FIXED FURNITURE
- 3 NATIVE PLANTING MIX
- 4 GRAVEL PATHWAY FOR MAINTAINANCE ACCESS
- 5 CANOPY STRUCTURE WITH PLANTING OVERHEAD
- 6 ACCESSIBLE PATHWAY TO LANECOVE ROAD
- 7 BUILDING A

DETAIL PLAN A



SECTION A - METRO STATION TO MEETING ROOMS



LANDSCAPE SECTIONS

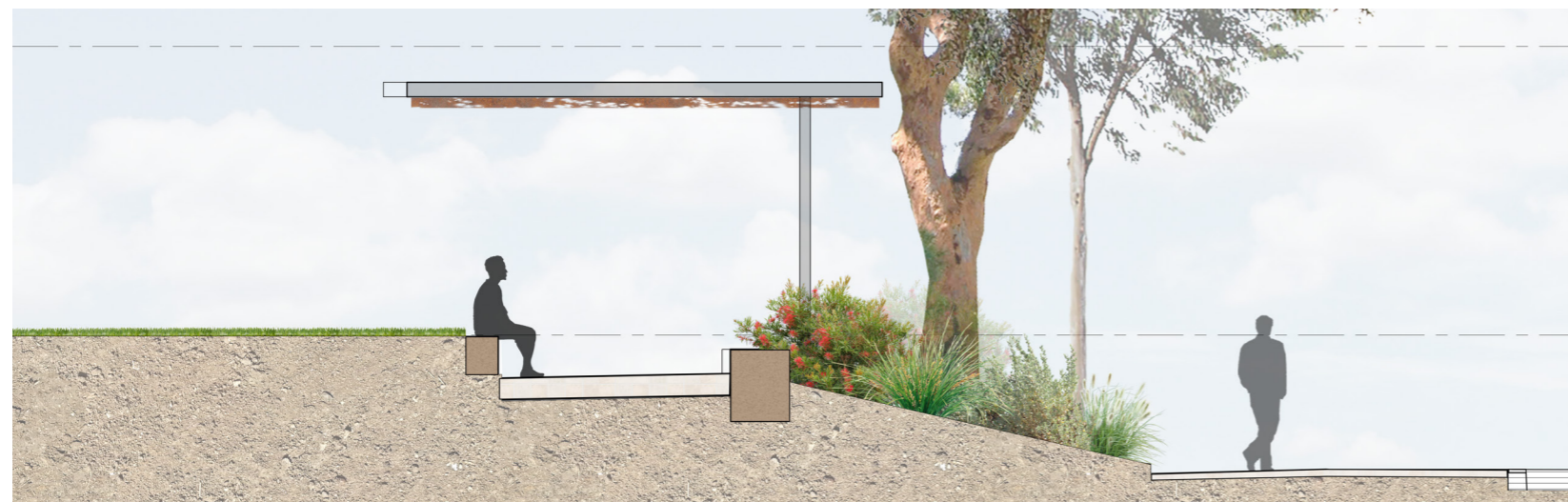


DETAIL PLAN B

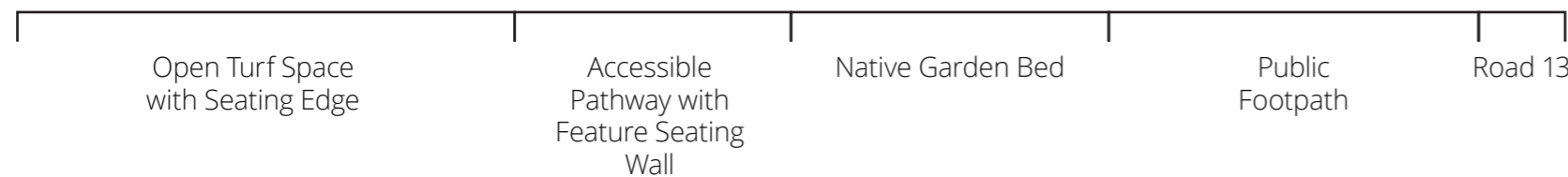


KEY

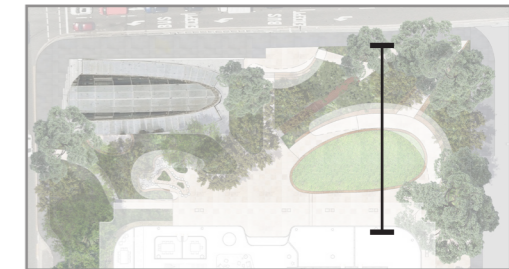
- 1 CANOPY STRUCTURE OVERHEAD WITH INTERPRETIVE ELEMENT
- 2 FEATURE SEATING WALL
- 3 RAISED TURF WITH SEATING EDGE
- 4 NATIVE PLANTING SITE PERIMETER
- 5 ROAD 13
- 6 FEATURE NATIVE TREES
- 7 ON STREET CAR PARKING
- 8 FULL WIDTH GRANITE PAVING
- 9 ACCESSIBLE PATHWAY FROM PLAZA DOWN TO ROAD 13



SECTION B - OPEN TURF SPACE TO ROAD 13



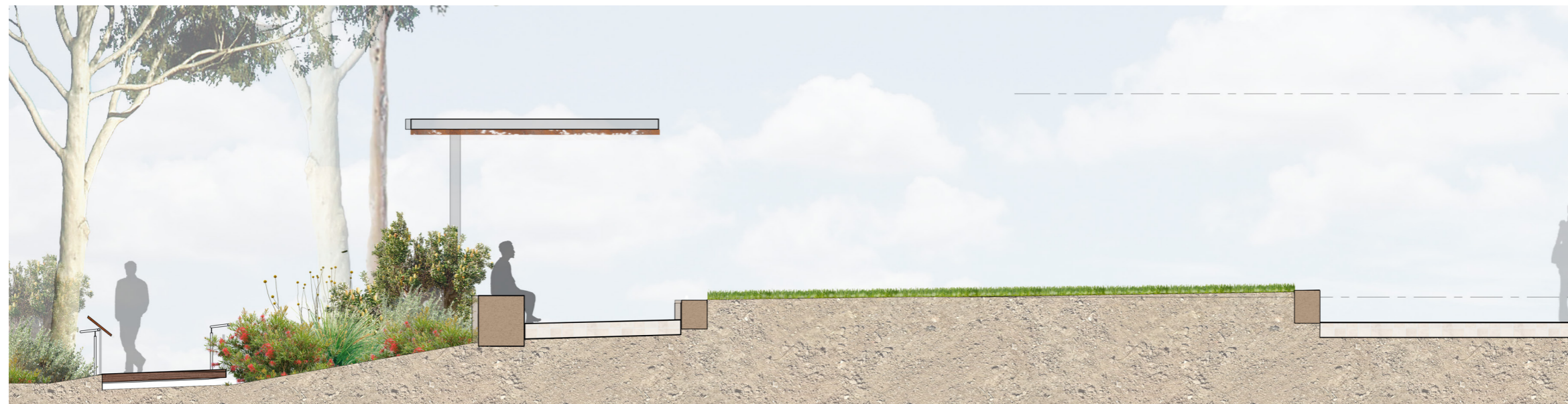
LANDSCAPE SECTIONS



KEY

- 1 RAISED TURF WITH SEATING EDGE
- 2 CANOPY STRUCTURE OVERHEAD WITH INTERPRETIVE ELEMENT
- 3 ACCESSIBLE BOARDWALK CONNECTION FROM BUSSTOP TO PLAZA
- 4 EXTENSIVE NATIVE PLANTING
- 5 RETAIL AND CAFE SPILLOUT
- 6 SWALE PLANTING AROUND BOARDWALK
- 7 FEATURE SEATING WALL
- 8 ACCESSIBLE PATHWAY FROM PLAZA THROUGH TO ROAD 13
- 9 BUILDING A
- 10 FEATURE NATIVE TREES

DETAIL PLAN C



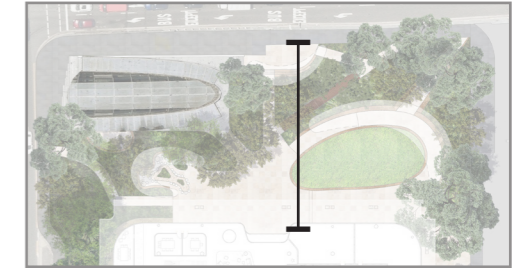
SECTION C - WATERLOO RD ACCESSIBLE RAMP TO CAFE SPILLOUT



LANDSCAPE SECTIONS



DETAIL PLAN D

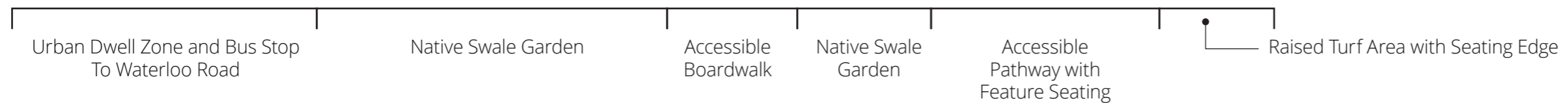


KEY

- 1 RAISED TURF WITH SEATING EDGE
- 2 CANOPY STRUCTURE OVERHEAD WITH INTEGRATED PLANTING
- 3 ACCESSIBLE BOARDWALK UP TO PUBLIC PLAZA FROM BUS STOP
- 4 EXTENSIVE NATIVE PLANTING
- 5 NATURAL STONE SEATING TERRACES
- 6 ACCESSIBLE PATHWAY FROM PLAZA THROUGH TO ROAD 13
- 7 FEATURE SEATING WALL
- 8 CANOPY STRUCTURE OVERHEAD WITH INTERPRETIVE ELEMENT
- 9 FEATURE NATIVE TREES
- 10 SWALE GARDEN BED AROUND RAISED BOARDWALK

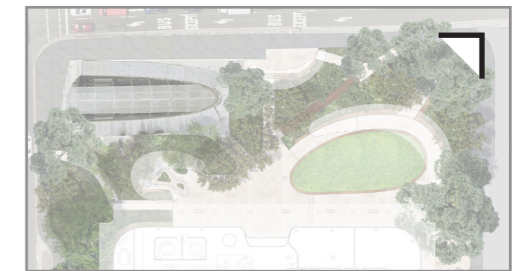


SECTION D - WATERLOO RD ACCESSIBLE RAMP TO CAFE SPILLOUT



LANDSCAPE PERSPECTIVES

Waterloo Rd

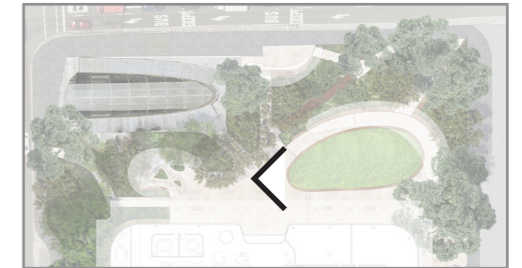


KEY

- 1 MAIN ENTRANCE TO PLAZA FROM WATERLOO ROAD WITH FEATURE WALLS TO EITHER SIDE
- 2 CANOPY STRUCTURE ABOVE WITH INTERPRETIVE ELEMENT
- 3 ADDITIONAL ACCESS TO WATERLOO ROAD AND BUS STOP
- 4 EXTENSIVE NATIVE PLANTING
- 5 FEATURE NATIVE TREES
- 6 BUILDING A

LANDSCAPE PERSPECTIVES

Open Turf Space

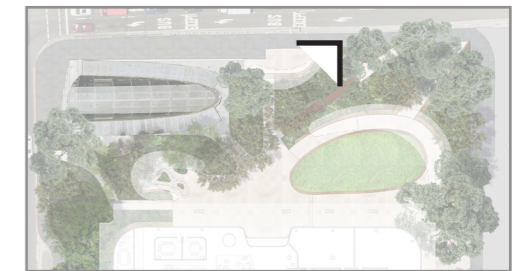


KEY

- 1 RAISED TURF WITH SEATING EDGE
- 2 CANOPY STRUCTURE ABOVE WITH INTERPRETIVE ELEMENT
- 3 ACCESSIBLE BOARDWALK UP TO PUBLIC PLAZA FROM BUS STOP
- 4 STEPPED ENTRANCE TO PLAZA
- 5 FEATURE SEATING WALL
- 6 EXTENSIVE NATIVE GARDEN
- 7 FEATURE NATIVE TREES
- 8 ACCESSIBLE PATHWAY FROM PLAZA THROUGH TO ROAD 13

LANDSCAPE PERSPECTIVES

Waterloo Rd Bus Stop

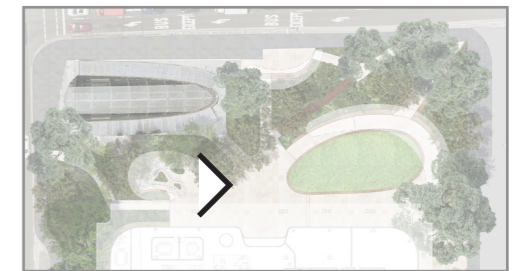


KEY

- 1 NATURAL STONE SEATING TERRACES
- 2 CANOPY STRUCTURE OVERHEAD WITH INTEGRATED PLANTING
- 3 ACCESSIBLE PATHWAY UP TO PUBLIC PLAZA FROM BUS STOP
- 4 NATIVE PLANTING MIX
- 5 EXISTING STAIR ACCESS UP TO METRO STATION ENTRY
- 6 STAIR ACCESS FROM WATERLOO ROAD BUS STOP UP TO PLAZA
- 7 FEATURE NATIVE TREES

LANDSCAPE PERSPECTIVES

Outdoor Meeting Rooms




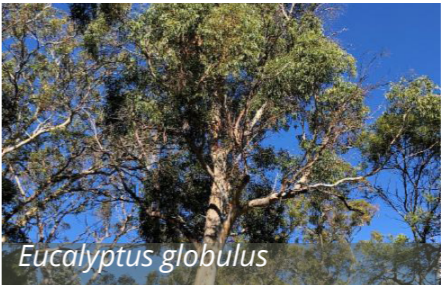





KEY

- 1 FEATURE NATIVE TREES
- 2 FEATURE FLEXIBLE TABLE WITH INTEGRATED PLANTING AND TREES
- 3 EXTENSIVE NATIVE PLANTING
- 4 CANOPY STRUCTURE OVERHEAD WITH INTEGRATED PLANTING
- 5 FIXED TABLES AND CHAIRS
- 6 FLEXIBLE SEATING WALL SURROUNDED BY NATIVE PLANTING

SIX
**PLANTING
STRATEGY**

PLANTING PALETTE

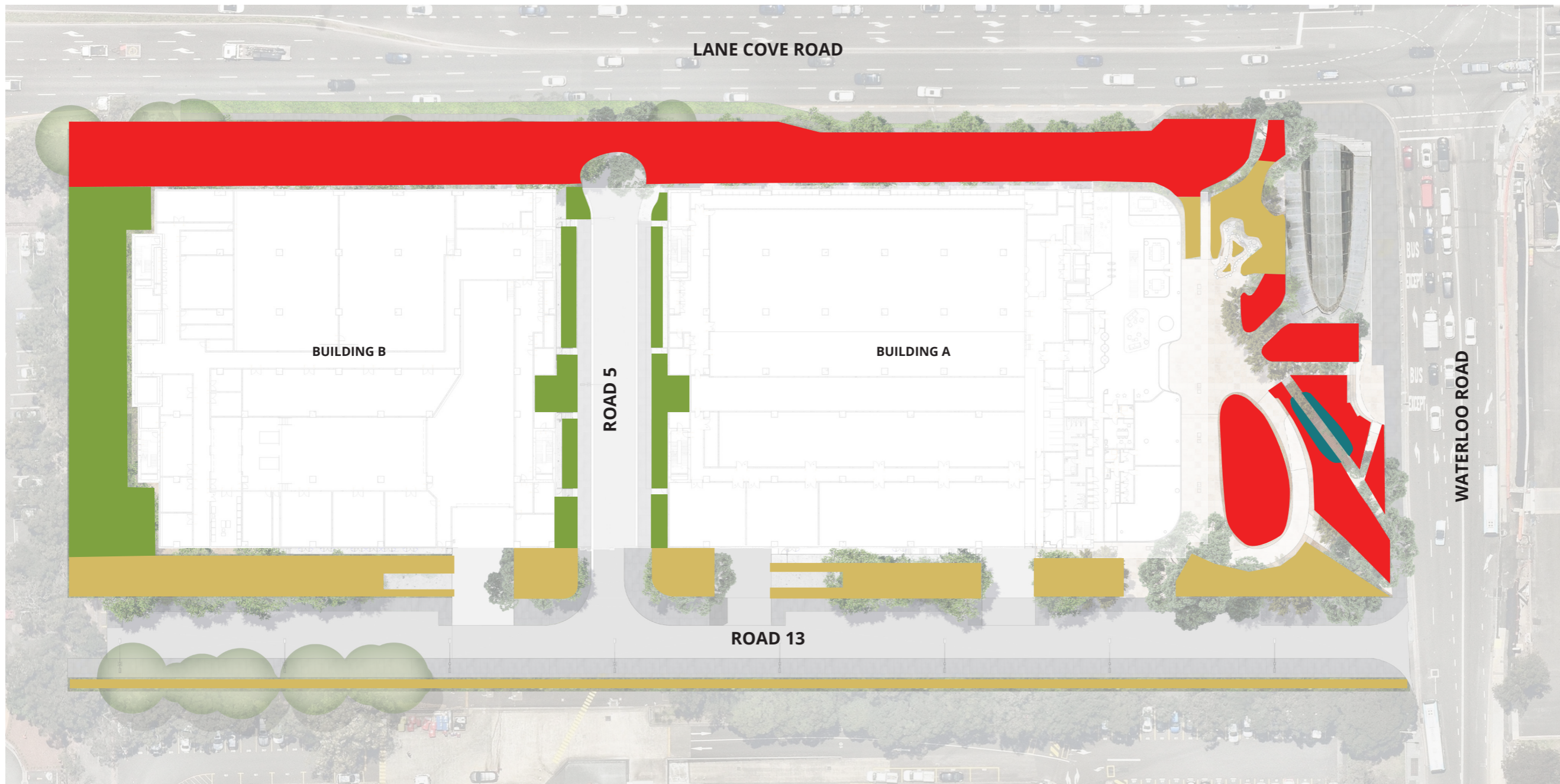
Grasses		<p>"Drought-tolerant species such as Lomandra Longifolia or Dianella cacerulea"</p>		Trees			<p>"Smooth-barked native tree species such as Sydney Red Gum, Spotted Gum, and Forest Red Gum"</p>	
								
		<p>"Endemic species to street edge"</p>						
								
Shrubs, Groundcovers and Climbers								

["City of Ryde Public Domain Manual", City of Ryde, 2016]

Landscape Site Masterplan

Planting Typologies

- KEY PLANTING PALETTE
- SHADED/SHELTERED
 - MODERATE
 - SUN/EXPOSED
 - SWALE



Planting Palette



Swale



Lomandra labill



Callistemon viminalis



Lomandra hystrix (Katie Belles)



Gahnia filum



Carex appressa

Moderate Sun



Austrodanthonia caespitosa



Themeda australis



Lomandra labill



Callistemon viminalis



Lomandra longifolia



Poa labillardieri



Callistemon viminalis



Liriope muscari



Persoonia linearis



Grevillea juniperina

Planting Palette

Full Sun



Banksia spinulosa



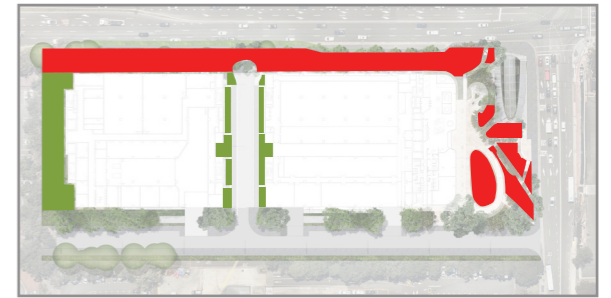
Leptospermum trinervium



Callistemon viminalis



Pennisetum 'Nafray'



Grevillea bipinnatifida



Bracteata bracteantha



Lomandra hystrix (Katie Belles)



Lomandra labill



Westringia Low Horizon



Callistemon viminalis

Shade



Dicksonia australis



Helmholtzia glaberrima



Blechnum cartilagineum



Blechnum nudum



Adiantum aethiopicum



Pratia pedunculata



Cyathea cooperi



Asplenium australasicum



Liriope muscari



Lomandra hystrix (Katie Belles)



Dichondra repens

ARCADIA