URBIS

520 GARDENERS ROAD, ALEXANDRIA SSDA

LANDSCAPE DESIGN REPORT

PREPARED FOR

CHARTER HALL

SEPTEMBER 2022

ACKNOWLEDGEMENT TO COUNTRY

Urbis acknowledges the traditional country of the Gadigal people. We recognise and respect their cultural heritage, beliefs and continuing relationship with the land, and that they are the proud survivors of more than two hundred years of dispossession.

We reiterate our commitment to addressing disadvantages and attaining justice for Aboriginal and Torres Strait Islander peoples of this community.

ISSUE AUTHORISATION

Document Title: 520 GARDENERS ROAD, ALEXANDRIA
Landscape Design Report
Document No.: Urbis LA_001
Project Code: P0032153
Prepared for: Charter Hall
Date: 17th November 2022
Prepared: Shuyi Gong
Reviewed: Phil James

Rev	Date	Purpose	Prepared	Reviewed
01	26.11.21	Draft SSDA Issue	PJ/SO	PJ
02	03.12.21	SSDA Issue	PJ/SO	PJ
03	17.03.22	SSDA Revision	RF/SO	PJ
04	13.07.22	SSDA Revision	RF/SO	PJ
05	09.08.22	SSDA Revision	SO	PJ
06	06.10.22	Ammended For SSDA	SO	PJ
07	17.11.22	Ammended For SSDA	SG	PJ

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Title: Connecting Land
Artists: Tarisse King and Sarita King
Clan: Gurindji

Connecting Land is an expression of the beauty of the Australia Landscape. People's connection to the country and the lessons that caring for the land can teach us. Respect for the lands of Australia and creating a positive impact for people is at the centre of shaping great Australian cities and communities

CONTENTS

EXECUTIVE SUMMARY

This Landscape Design Report has been prepared by Urbis on behalf of the Charter Hall. It supports a State Significant Development Application 520 Gardeners Rd, Alexandria.

The purpose of this landscape report is to demonstrate the landscape design intent for the subject site. The landscape design responds to two key components: incorporating the required deep soil and tree canopy cover areas and offering a biophilic response to office and dining spaces.

Feature boundary planting will increase tree canopy cover along Gardeners Road and Bourke Road, creating a new green setting for the site. Additional tree canopy is provided on the upper-level podium to the carpark and courtyard areas, and together achieve the required 15% tree canopy cover, as detailed in 9.1 Tree canopy Cover.

The perimeter of the site achieves the required 15% deep soil area through a combination of permeable paving and landscape areas, that constitutes the majority of the public facing boundary, as detailed in 9.2 deep soil area.

A Biophilic approach will provide workers and visitor with access to green and inclusive open spaces across the development that provide a place to stop, rest and recharge from the everyday work demands. On the ground level adjacent to the entry and Café off Campbell Road Bridge, outdoor dining and a north facing garden has been provided, with trees, garden beds and a green wall in which seating is nestled into.

On level 2 there is a small, covered viewing deck adjacent to the northern lifts (and office space directly below) that looks out onto a rich biodiversity green roof. The main landscape space on level 2 is a courtyard and key entry point from the carpark. The space offers multiple seating opportunities from small groups to individual areas that are set in a green and lush landscape offering plenty of shade cover.

RESPONSE TO SEARS

The landscape design report is required by the Secretary's Environmental Assessment Requirements (SEARs). This table identifies the SEARs and relevant reference within this report.

SEARs Item	Response Location
Provide a detailed site-wide landscape plan, that: • Identifies the number and location of trees to be removed and retained, and how opportunities to retain significant trees have been explored and/or informs the plan. • Details the proposed site planting, including location, number and species of plantings, heights of trees at maturity and proposed canopy coverage. • Demonstrates how the proposed development would: o contribute to long term landscape setting in respect of the site and streetscape. o mitigate the urban heat island effect and ensure appropriate comfort levels on-site. o contribute to the objective of increased urban tree canopy cover. o maximise opportunities for green infrastructure, consistent with Greener Places.	Section 1.0 Landscape Design Section 7.0 Site Access & Circulation Section 9.0 Landscape Planting Strategy Section 10.0 Fencing Strategy Section 14.0 Planting Schedule Section 15.0 Indicative Plant Species

A

LANDSCAPE DESIGN CONCEPTS

1.0 INTRODUCTION

THE PROPOSAL

Charter Hall are seeking to establish a state of the art multi-storey industrial development located at 520 Gardeners Road

The Proposal

Construction of a two-storey warehouse and distribution centre comprising 21,952 m² of warehouse and distribution GFA with 5,557 m² ancillary office space, landscaping at ground and second floor levels, bicycle and car parking.

The proposal comprises the redevelopment of the site as summarised below:

– Construction, fit out and operation of a two-storey warehouse and distribution centre comprising approximately 27,509 m² GFA including:

– 21,952 m² of warehouse and distribution GFA; and

– 5,557 m² GFA ancillary office space.

– Provision of 64 bicycle parking spaces at ground floor level and 144 car parking spaces at second floor level.

– Approximately 3,578 m² of hard and soft landscaping at ground level and an additional 2,234m² of soft landscaping at second floor level.

– Replacement of the existing vehicular access from Bourke Road with two new access driveways from Bourke Road.

– Earthworks and upgrades to existing on-site infrastructure.

– Provision of internal vehicle access route and loading docks.

– Building identification signage.

– Operation 24 hours per day seven days per week.

SITE DESCRIPTION

Site Context

Located at the edge of Alexandria distribution zone, the site has 2 frontages - Gardeners Road to the south and Bourke to the west.

The site is surrounded by a range of diverse land use. In the immediate context, Gardeners Road frontage has mixed land use of high density residential buildings, Offices , retail and industrial buildings. Bourke Road connects the site to local centres and Mascot trains station. East of the site is connecting to general industrial area that consists standalone warehouses as well as industrial units which provides space for small businesses.

Topography

The site is relatively flat given that it is a large developed site, having a gentle slope of about 0.2m difference between the highest and the lowest points falling towards the corner of Bourke and Gardeners Road

Existing Trees

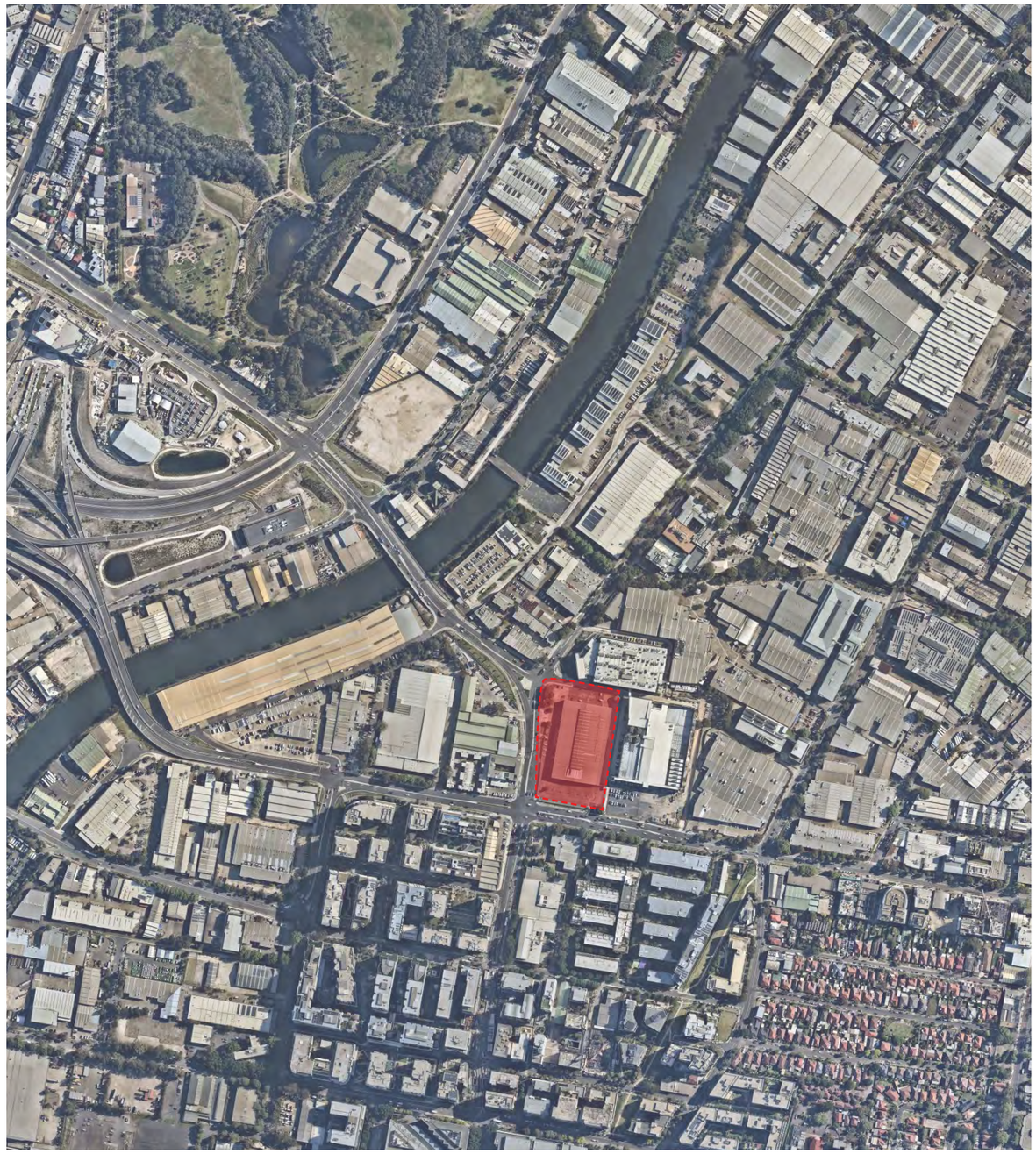
The site has 2 small clusters of trees to the north west and south east corners of the site

Street Frontages

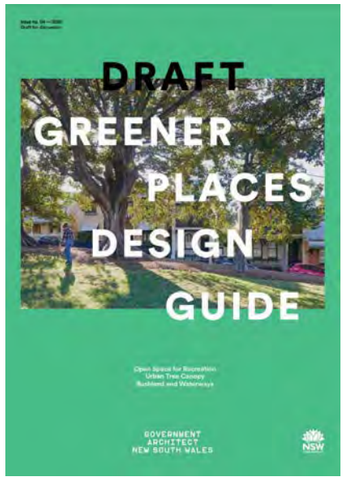
The site has two street frontages: Frontage on Gardeners Road to the south and a frontage on Bourke Road to the west.

Easements

The site has and electrical easement along Bourke Road and an stormwater easement that wraps the outer boundary of the site



2.0 RELEVANT POLICIES AND GUIDELINES



DRAFT GREENER PLACES DESIGN GUIDE

In June 2020, the Government Architect New South Wales (GANSW) released the *Draft Greener Places Design Guide* to provide information on how to design, plan, and implement green infrastructure in urban areas throughout NSW. The draft guide provides strategies, performance criteria and recommendations to assist planning authorities, and design and development communities to deliver green infrastructure.

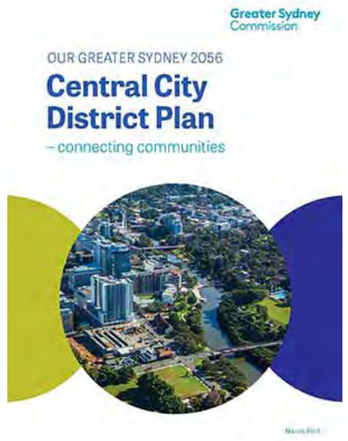
The Greener Places design guide explains green infrastructure, why we need it and the benefits of providing it. The major components that make up the green infrastructure network fall into three categories:

1. **Open space for recreations: green infrastructure for people**
2. **Urban tree canopy: green infrastructure for climate adaptation and resilience**
3. **Bushland and waterways: green infrastructure for habitat and ecological health.**

URBAN GREEN COVER IN NSW - TECHNICAL GUIDELINES

In 2015, the Government of NSW and Office of Environment and Heritage released the *Urban Green Cover in NSW Technical Guidelines* articulate practical advice, best practice and guidelines to increase the resilience of NSW settlements and communities to climate change, specifically to increase temperatures in urban settings.

The technical guidelines offer built environment professionals working in state and local government and the private sector practical information and typical details to encourage best practice applications of green cover, so as to minimise urban heat impacts across NSW.



DRAFT GREENER PLACES DESIGN GUIDE

Improving sustainability will involve incorporating natural landscape features into the urban environment; protecting and managing natural systems; cooling the urban environment; innovative and efficient use and re-use of energy, water and waste resources; and building the resilience of communities to natural and urban hazards, shocks and stresses.

Greater Sydney Commission (GSC); Planning Priority C16 - Increasing urban tree canopy cover and delivering Green Grid connections. This proposes recognising an optimal urban tree canopy coverage target for Greater Sydney that will vary by land use. No formal targets are set specifically for commercial and industrial land uses (recent projects of this nature are typically achieving 15-25%)

DRAFT GREENER PLACES DESIGN GUIDE

Any Environmental Impact Statement (EIS) must meet the minimum form and content requirements as prescribed by Schedule 2 of the Environmental Planning and Assessment

Regulation 2000 (EP&A Regulation) and the State Significant Development Guidelines

Planning Secretary's Environmental Assessment requirements Warehouses and Distribution centres, development details

3. Design Quality

5. Visual Impact

7. Trees and Landscaping

9. Biodiversity

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3.0 LANDSCAPE DESIGN VISION

To create a series of vibrant and inclusive landscapes that foster a greater connection to nature whilst mitigating for Urban Heat Island effect and water cycle.

We have developed an integrated landscape design response which will:

- Provide multiple connections with the natural environment;
- Respond to the architectural scheme by ensuring seamless transitions to external spaces;
- Enrich the experience of uses through accessible landscapes;
- Maximise tree planting opportunities
- Provide for deep soil requirement

4.0 LANDSCAPE DESIGN PRINCIPLES

PUBLIC DOMAIN

- Unifying site
- Connecting to the wider streetscape
- Biodiversity benefits
- Vibrant frontage to building

COMMERCIAL

- Clear arrivals
- Open + welcoming entrances
- Vernacular treatments
- Open & flexible with clear way finding

FOOD & BEVERAGE

- Provision of high quality facilities
- A visually rich landscape of defined character
- Supporting a vibrant employment dinning experience
- Courtyard provides flexible spaces with movable furniture that can be adapted to different size groups;
- Covered outdoor spaces integrated with the built form;

BIOPHILIA

- Provide multiple opportunities to connect to nature;
- Improved sustainability and ecology response to mitigate Urban Heat and enhance building cooling;
- Increased Natural Green Canopy;
- Green roofs to improve the thermal properties of the building envelope and provide shared landscape amenity for adjacent buildings

5.0 LANDSCAPE DESIGN

In recognising and reflecting this setting, the landscape design seeks to integrate the site into its landscape context with simple design responses that recognise the industrial nature of the land-use and will:

- Enhance pedestrian and cycle amenity
- Offer an improved streetscape condition
- Draw on the native species for increase biodiversity gain
- Provide landscape amenity directly adjacent to office space

STRATEGY

The strategy addresses all of these documents and seeks to strike the best practical balance between them, based on the stated Objectives below.

OBJECTIVES

The core objectives for the Tree Planting Strategy are to:

- Connect the site to its broader landscape context both ecologically and visually
- Provide shade for site users and visitors
- Mitigate Heat Island impacts through optimised urban tree canopy cover particularly focussed on shading roads and other heat sink areas
- Offer amenity to all those working at, visiting or passing by.

CONSTRAINTS AND OPPORTUNITIES

A range of constraints and opportunities arise in seeking to meet the above Goals and Objectives, including some conflicts in reconciling those Objectives with the Planning requirements and goals mentioned above.

Planning and Land Use Context

- a significant built form footprint, with the principal tree planting opportunities necessarily centred on the streets and boundaries
- Existing and relocated easements which will require an offset and additional protection
- There is a number of existing trees on site adjacent to Bourke Road which will be retained and which will assist in heat island mitigation impacts.

Design Context

- Regular movements of large trucks on the streets and to entry/exit points, truck heights may be up to 4.5 metres. Tree canopy adjoining driveways will need to address this constraint
- Sightlines at street junctions and driveway entries and exits must not be obscured by tree trunks
- Trees in confined conditions will be provided sufficient soil for healthy tree growth but cannot replicate the root soil extent of a natural setting; hence mature heights and canopy widths may be less than typically published for each species (see Plant Schedule for estimated sizes for this site).

Tree Species Performance

- Using tree species that are native and can be placed in an urbanised environment
- Larger trees will typically have a large canopy spread, but given the need to accommodate large trucks on site, suitable large species will need to be carefully located and have larger clear trunk heights at maturity to avoid damage to trucks and trees.

DESIGN PROPOSAL

To address the above constraints and opportunities the design strategy illustrated includes:

- A balance of locally native trees and other Australian natives to optimise ecological values and heat island impact mitigation
- A combination of large and small tree species has been proposed. Larger species give structure and smaller species are provided to reduce impact around driveways where needed.
- Use of smaller tree species (of moderately fast growth and relatively dense canopies) to be provided on podium and placed at relatively close centres to achieve early heat mitigation
- By incorporating trees of different heights, the shadows cast during morning and afternoon are different lengths thereby spreading out the ‘footprint’ of shade.
- Gardens and courtyards will provide visual and habitable landscape amenity for better connection to nature and a place for rest and retreat.
- Integrated landscape, planting and Water Sensitive Urban Design (WSUD) principles will be incorporated to enhance amenity and landscape performance, including large areas of permeable paving

6.0 ARBORICULTURAL ASSESSMENT

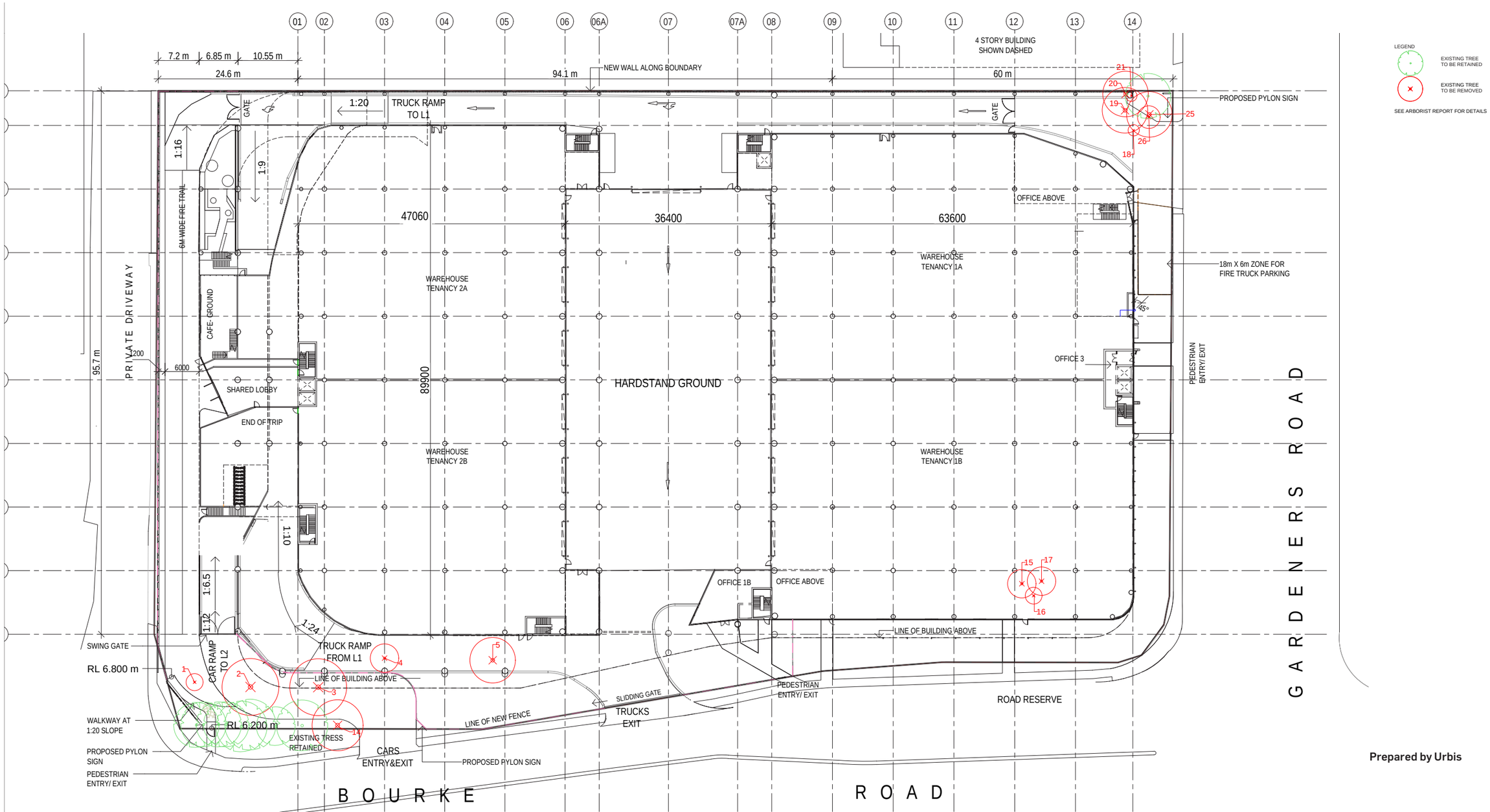
Bradshaw Consulting Arborists undertook a Visual Tree Assessment1 (VTA) and determined the impact of the proposed works on the trees, and where appropriate, recommended the use of sensitive construction methods and tree protection methods to minimise adverse impacts.

Twenty six (26) trees, located within the site boundary, were assessed using the Visual Tree Assessment 2 (VTA) criteria and notes. These trees were planted approximately in 1980 and while endemic to the area, are not remnant. Four species are represented with Melaleuca quinquenervia (Broad leafed Paperbark) being the dominant species on site.

These early-mature Broad leafed Paperbark are located on the Bourke Road, and are mostly retained.

The plans show that Trees 1, 2, 3, 4, 5, 14, 15, 16, 17, 18, 19, 20, 21, 25 and 26 will need to be removed to accommodate the proposed building footprint.

Refer to Arboricultural Impact Assessment for additional detail.

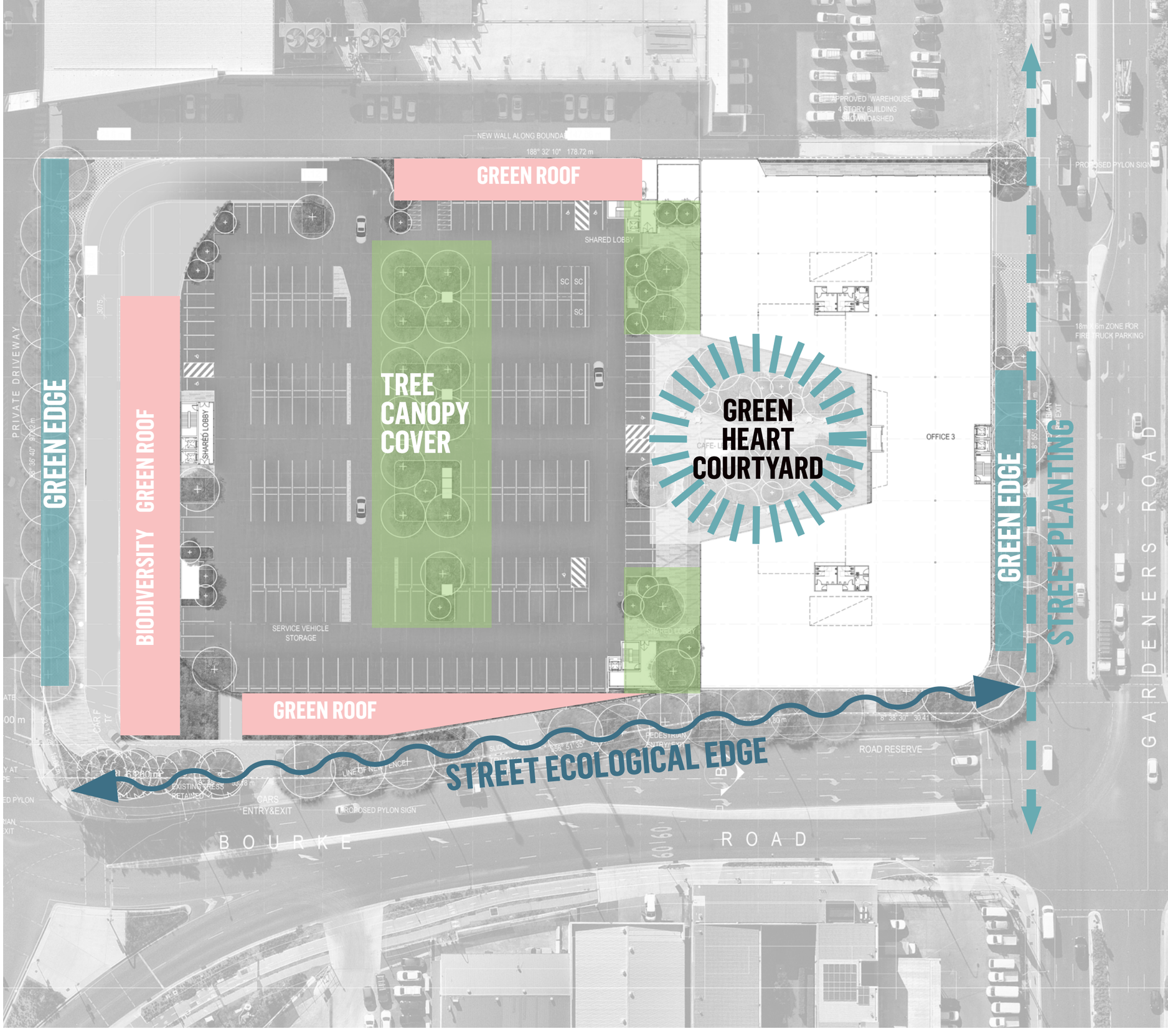


7.0 LANDSCAPE OPPORTUNITIES

ENVIRONMENT AND ECOLOGY

The landscape design responds to the local context and provides:

- Multiple opportunities to connect and engage with nature;
- Improved sustainability and ecology response to mitigate Urban Heat and enhance building cooling;
- Increased Natural Green Canopy;
- Green roofs and arbours to improve the thermal properties of the building envelope and provide shared landscape amenity for adjacent buildings;



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SITE ACCESS AND CIRCULATION

The building along the street front creates a strong geometry and organisational framework for access and circulation throughout the site.

VEHICLE ARRIVAL AND ENTRIES

The planting and tree layout will provide for an established gateway and clear entry/exist sightline.

STREETSCAPE DESIGN

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

Key components of the streetscape will include:

- **Existing pedestrian footpath and street crossings**
- **Large and small street trees of native / indigenous species**
- **6m set back.**

PRIVATE ROAD BOUNDARY

The existing retaining wall to private road boundary will be retained with the addition of a hob wall and fence for safety measures for vehicle access.

LEGEND:

- Staircase Access
- Lift Access
- ① Pedestrian Access via Campbell Road
- ② Pedestrian Access via Bourke Road
- ③ Pedestrian Access via Gardeners Road

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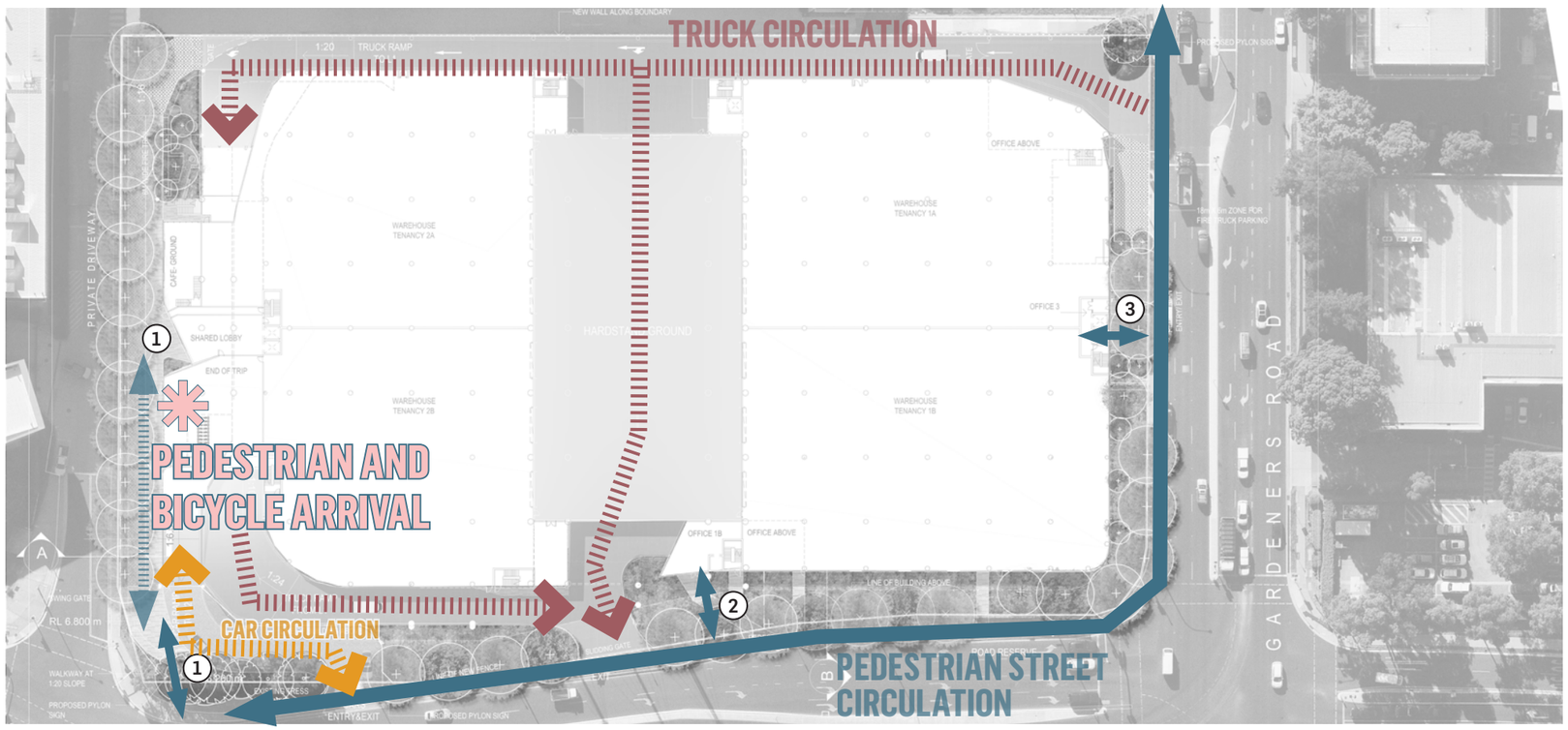
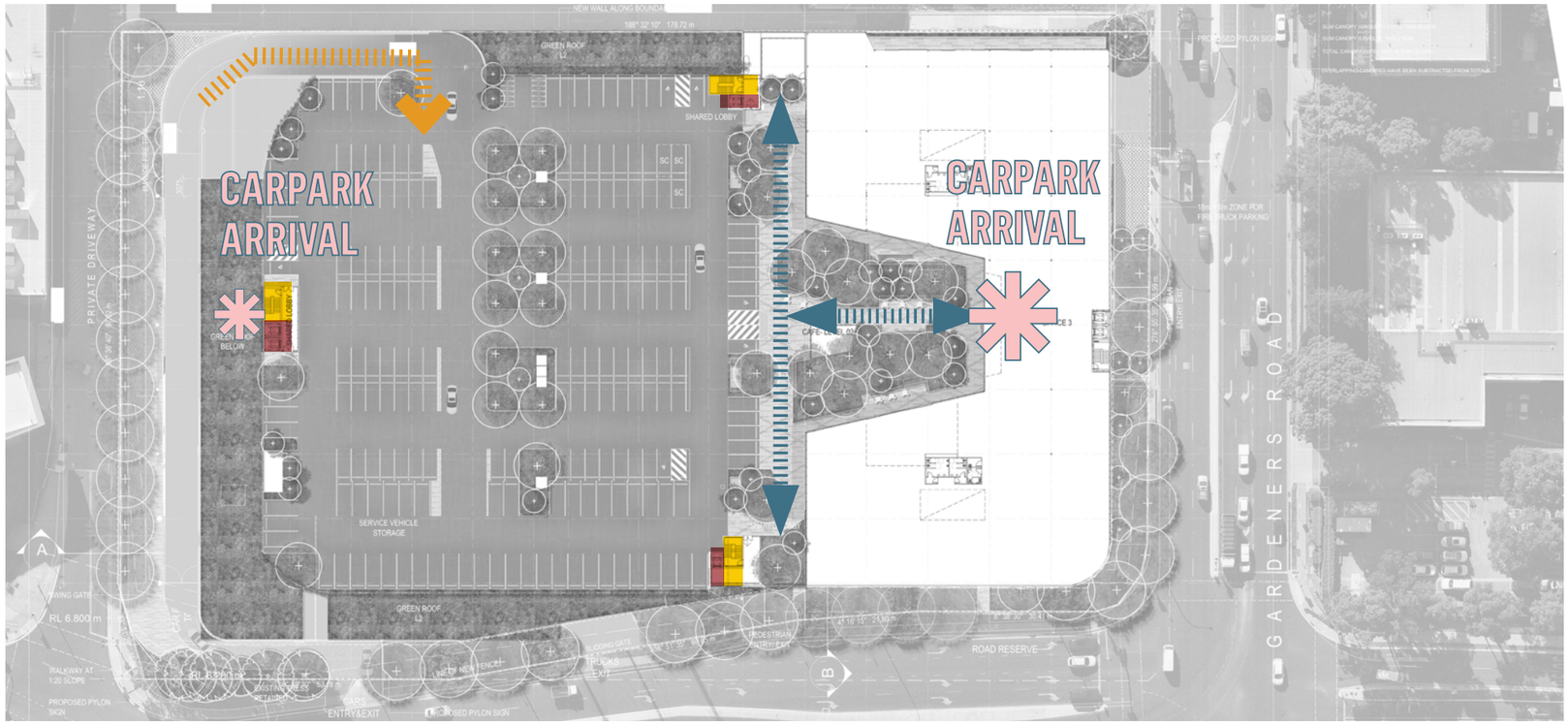


GROUND LEVEL



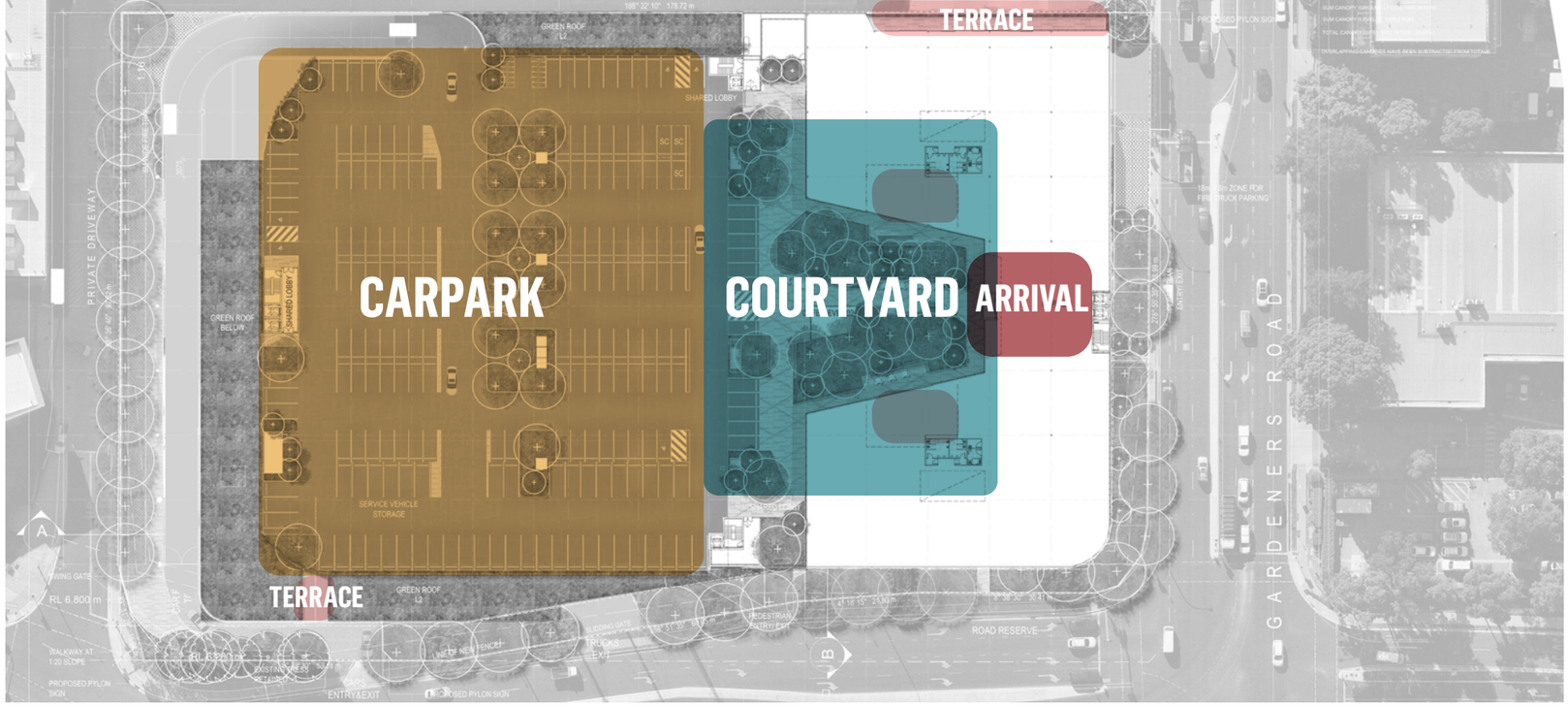
LEVEL 2

PROGRAMS AND DESTINATIONS

The landscape design provides opportunities for rest and retreat in a range of landscape typologies including:

- Covered terraces;
- Covered outdoor spaces integrated within the built form (Winter Gardens);
- Communal dinning - small to large groups;
- Informal outdoor seating nodes integrated within the landscape setting

GROUND LEVEL



LEVEL 2

NOT TO SCALE

GATHERING SPACES

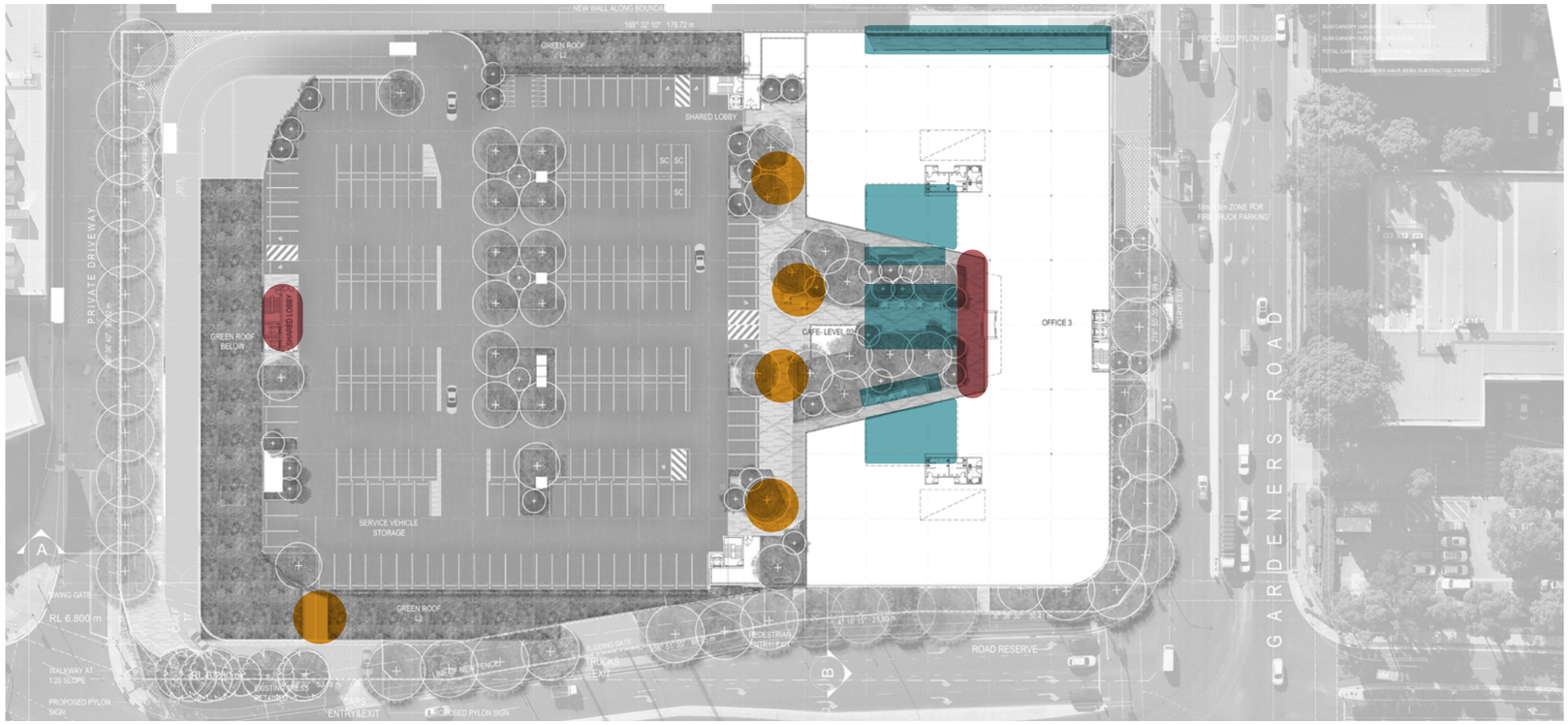
The landscape design provides opportunities for a variety of gathering spaces at different sizes and scales. These spaces cater for a wide range of uses including formal and informal gathering and social zones and learning areas.

LEGEND:

- Covered Arrival
- Medium Flexible Gathering - Learning, and Social Spaces
- Small Scale Gathering / Meeting Places

NOT TO SCALE

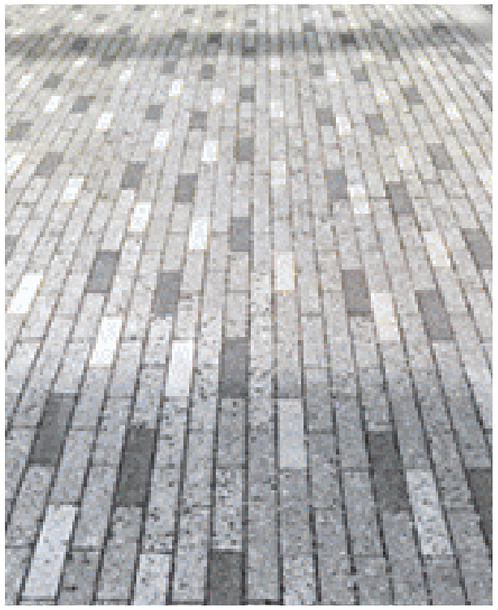
GROUND LEVEL

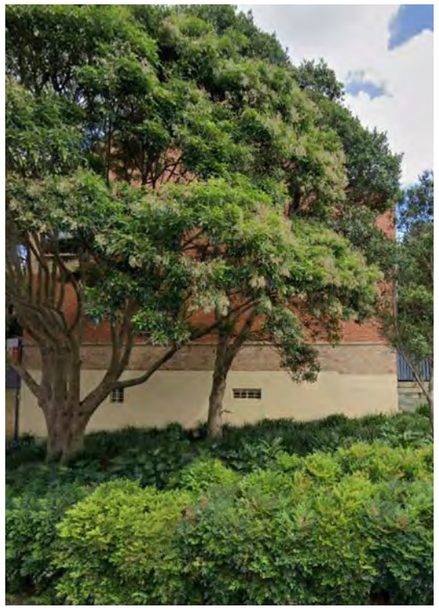


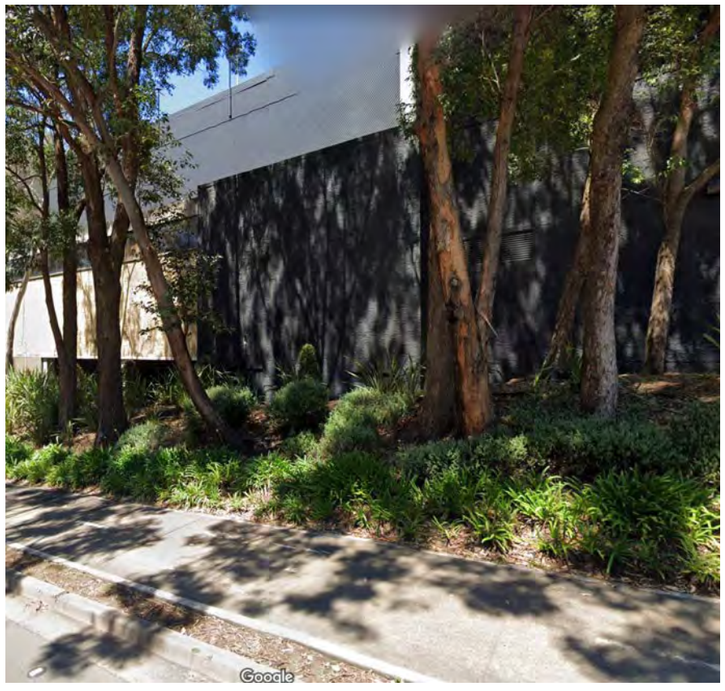
LEVEL 2

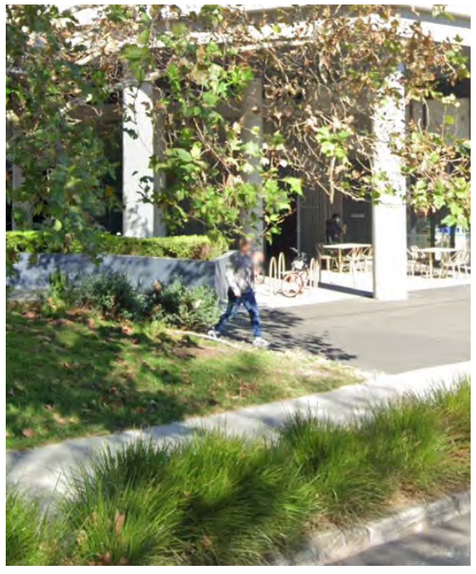
8.0 PRECEDENT IMAGERY

STREETSCAPE / BOUNDARY

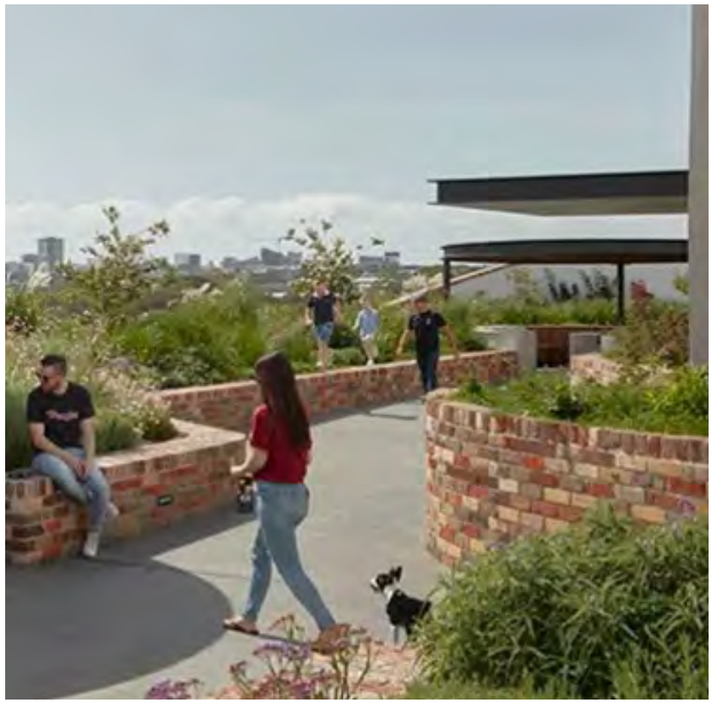








COURTYARD / GARDEN



CARPARK

BIODIVERSITY GREEN ROOF

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9.0 PLANTING STRATEGY

The Planting Strategy identifies the following 6 typologies:

- Streetscape planting
- Cafe courtyard planting
- Retained trees
- Courtyard
- Green Roof
- Carpark planting

STREET TREES

Street trees have been located within the 6m setback to the boundary. Large tree species, with a maximum mature height of 20m have been selected for most of the street planting taking advantage of the deep soil areas. Further consideration with offsets from driveways will ensure minimal impacts on large vehicle access to the site. Refer to the Tree Planting Design Strategy section for more information.

MAINTENANCE AND PLANT HEALTH

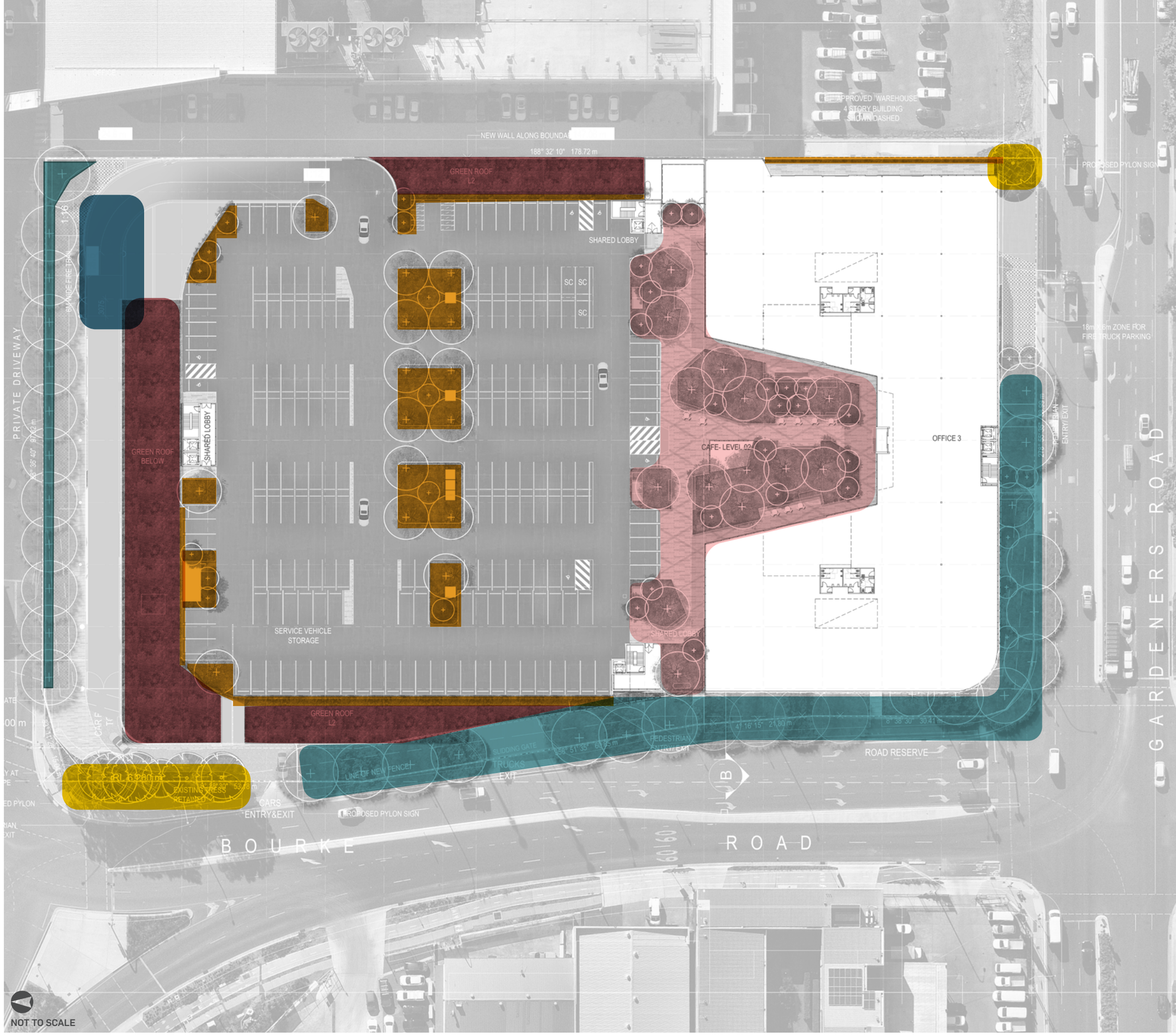
All plant species, path surfaces and the likes have been chosen and of generally low maintenance suitable for the nature of the site.

Please refer to Part B Planting Design, 11. Plant Schedule for proposed plants to each of the typologies

LEGEND:

- GR LV - Streetscape Planting
- GR LV - Cafe Courtyard planting
- GR LV - Retained Trees
- LV 2 Courtyard
- LV 2 Green Roof
- LV 2 Carpark Planting

GR LV = Ground Level / LV 1 = Level 1 /LV 2 = Level 2



9.1 TREE CANOPY COVER

Within the site boundary the landscape design proposes a total of 102 new trees, offering a total green canopy cover of approximately 15%. The inclusion of architectural arbours and shade canopies increases this canopy cover to a total of 20%. An additional 5% Level 2 Winter gardens is proposed by the architects.

The tree canopy cover is has been recalculated to ensure the DCP requirement is met. 25 additional meduim trees to L2 carpark are proposed to the marked area.

Landscape calculations

Existing site area = 18,988m²

Tree Canopy Cover required = 15% of site area 2,848m²

Tree Canopy at Ground = 1,994m² (10.5%) (area of tree canopy outside of site boundary = 1200m² (6.1%) and removed from calculation) (Including existing tree canopy = 237.4m²)

Tree Canopy at Level 2 = 1775m² (9.3%)

***Total tree canopy across site** = 3,770m² (20%)*

LEGEND:

- Large Tree Species
- Medium Tree Species
- Small Tree Species
- Retained Trees

NOT TO SCALE

9.2 DEEP SOIL AREA

Deep soil requirement are identified and confirmed below:

Landscape calculations

Existing site area = 18,988m²

Deep soil area required = 15% of site area 2,848.2m²

Landscape area at Ground = 1,568m² (8.3%)

Permeable surface area at Ground = 1280m² (6.7%)

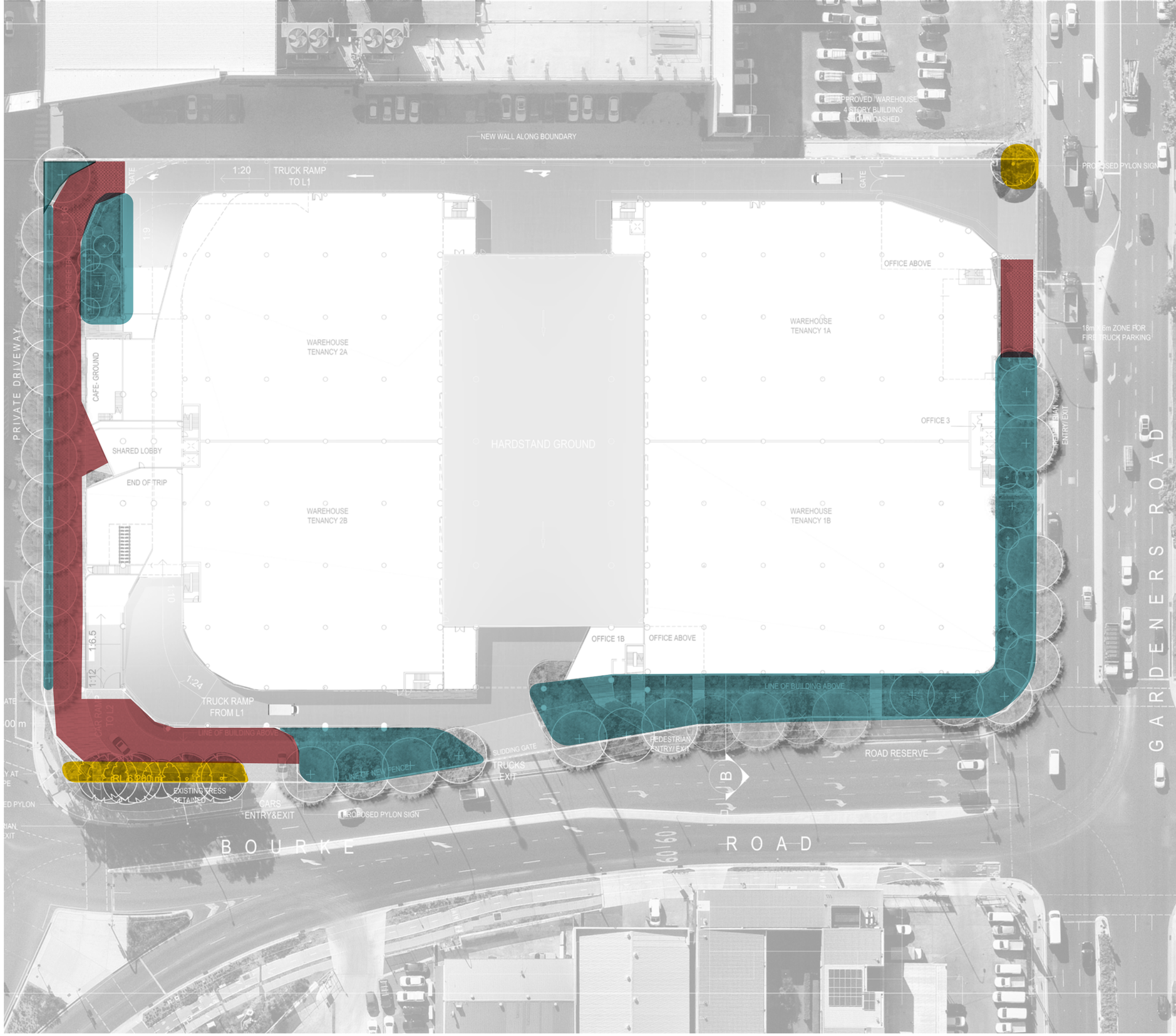
(including footpath areas at Ground)

Total deep soil area within site (@50% inclusion of permeable paving) = 2,268m² (11.7%)

Total deep soil area within site (@100% inclusion of permeable paving) = 2,848m² (15.0%)

LEGEND:

- Landscape deep soil area
- Permeable surface deep soil area
- Existing deep soil area



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10.0 FENCING STRATEGY

The fencing strategy is set to foster permeability of the physical environment to encourage movement and connections into the development. This includes visual connections from the street.

The overarching principles are:

- Minimise the visual impact of fences/barriers on the streets;
- Ensure an open and transparent design response and
- Be unobtrusive

Generally vertical bar railings, powder coated black with planting is preferred.

Low Visual Impact will be achieved by:

- Eliminating fencing where possible (using the building as the secure line;
- Using planting & landform in conjunction with fencing to reduce visibility of fencing;
- Integrate planting with set back fencing where possible,

LEGEND:

- 2.1m High Fixed Boundary Fence
- 1.1m High Fixed Bollards
- Building As Boundary
- Sliding Gates
- Fire Access Gates
- Driveway Gate

NOT TO SCALE

INDICATIVE FENCING

2.1m High fixed palisade fence set back 1.5m to allow planting next to footpath

Sliding Gates and entry fencing

11.0
LANDSCAPE CONCEPT DESIGN SITE PLAN

GROUND FLOOR

LEGEND:

1. Bourke Road (North) Pedestrian Access
2. Bourke Road Pedestrian Access
3. Gardeners Road Pedestrian Access
4. Bicycle Stands / Parking
5. Ecological Planting
6. Verge Planting
7. Planter bed to entry
8. Cafe Garden ground floor
9. Indicative Street Tree Planting
10. Retained Street Trees
11. Permeable Paving

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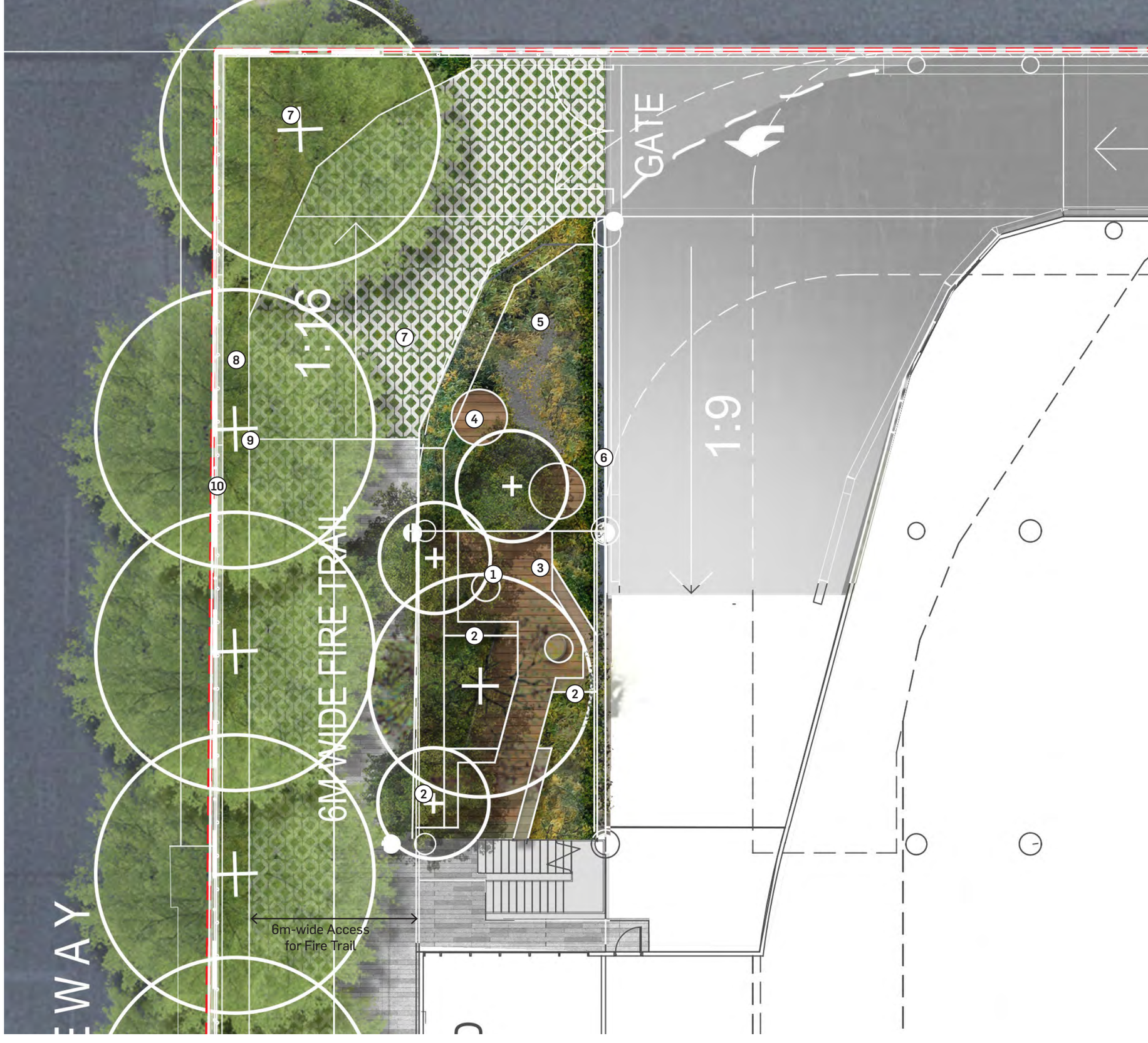
0 5 10 15 20 25

11.1 LANDSCAPE CONCEPT DESIGN DETAIL PLAN

GROUND FLOOR CENTRAL COURTYARD DETAIL

LEGEND:

1. Moveable Furniture / Seating Elements
2. Raised Planter and Seating nook
3. Decking
4. Individual seating pod
5. Native Garden
6. Green wall, Climbers
7. Grasscrete
8. Planted verge
9. Large tree planting
10. Bollards along boundary



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12.0 LANDSCAPE SECTIONS

SECTION A:

PRIVATE ROAD TO NORTH

LEGEND:

1. Permeable Paving over structural soil
2. Grasscrete over structural soil / Strata-vaults
3. Existing footpath
4. 1.1m bollards to retaining wall

SECTION B:
BOURKE ROAD

Proposed tree planting is outside the right of access 5m wide access corridor and are located a minimum 2.5m from the cable (Refer to additional detailed section on LA-105 outlining condition)

LEGEND:

1. Ecological Edge Planting
2. Large Street Trees
3. Root protection Barrier to services
4. Existing footpath

SECTION C:
GARDENERS ROAD

LEGEND:

1. Ecological Edge Planting
2. Large Street Trees
3. Root protection Barrier to services
4. Existing footpath

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13.0
LANDSCAPE CONCEPT DESIGN LEVEL 2

LEGEND:

1. Biodiversity Green Roof (200mm soil depth and 100mm Hydrocell) - Refer to drawing DA-105, and viewing deck
2. Raised Planters
3. Cascading planting
4. Raised Planter with integrated seating
5. Cafe and courtyard
6. Green Roof (100mm soil depth and 60mm Hydrocell) - - Refer to drawing DA - 105

1:500 @ A3

0 5 10 15 20 25

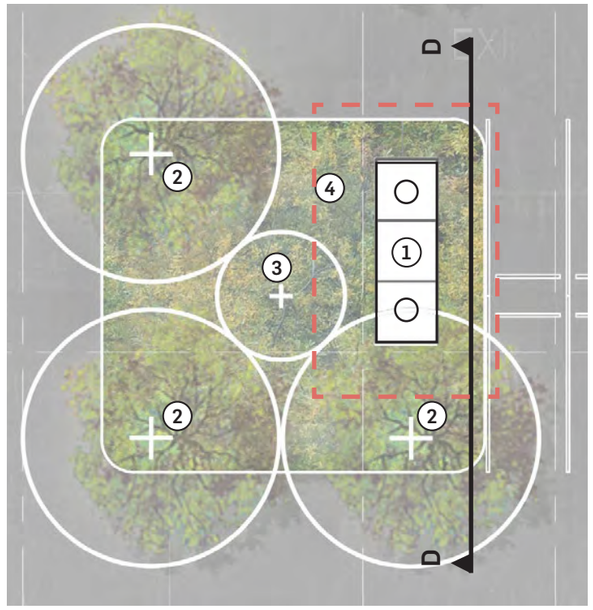
131 LANDSCAPE DETAIL PLAN

LEVEL 2
RAISED PLANTER DETAIL

LEGEND:

1. Exhaust tower
2. Medium canopy tree
3. Small canopy tree
4. Raised planting bed

2m (min) tree placement offset for maintenance access to exhaust tower



1:250 @ A3

0 2.5 5 7.5 10 12.5

SECTION D:

RAISED PLANTER (L2)

LEGEND:

1. 1500 x 1500 x 3000 (H) exhaust shafts. Exhaust expelled up - refer to Architect's drawing for details
2. Raised Planting Bed
3. Planter Wall - NOTE All planter walls in Carpark to be min. 1000mm Refer to Detail 1 on DA-105 drawing
4. Carpark

Parking

Raised Planter

13.2 LANDSCAPE DETAIL PLAN

LEVEL 2 COURTYARD DETAIL

LEGEND:

1. Small unit paving with pattern
2. Cafe
3. Raised planting beds and bench seating
4. Biodiversity / sensory planting
5. Lounge Seating bench
6. Long communal table
7. Planter access steps
8. Moveable Furniture / Seating Elements
9. 4 No. Individual timber seating stumps to be located under tree canopy, on bark mulch, adjacent to maintenance access steps

1:250 @ A3

0 2.5 5 7.5 10 12.5

SECTION E:
COURTYARD (L2)

LEGEND:

1. Long Table and Seating
2. Raised Planting Bed
3. Planter Wall - NOTE All planter walls in courtyard to be min. 800mm Refer to Detail 2 on DA-105 drawing
4. Moveable Furniture

Walkway Main Walkway Walkway

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B PLANTING DESIGN

14.0 INDICATIVE PLANT SCHEDULE

Planting selection for the site has been chosen to be sensitive of local ecosystems, with a majority of species being chosen from within local communities that have a proven performance in this particular environmental conditions and functional requirements.

In locations where plants/trees are adjacent to service easements, precautions will be taken to offset a minimum 2.5m between the high voltage cables and tree planting, and new and existing services will be prepared and wrapped in a root protection barrier membrane to protect from potential impacts. Existing services will require a work methodology that identifies hand digging and wrapping to ensure no disturbance.

In order to ensure the health and longevity of street trees, the majority of planting is from dry woodland and coastal systems that are drought tolerant and low maintenance along the street frontages.

Tree selection will also look to significantly increase canopy cover with native pollinators that could provide cooling and habitat responding to the Urban Heat Island (UHI) effect.

STREETSCAPE

Street Trees			
Botanic name ***Common name***	***Mature HxW(m)***	***Pot***	***/m²***
Corymbia maculata Spotted Gum	30 x 10	400L	
Corymbia eximia Yellow Bloodwood	10 x 7	400L	
Lophostemon confertus Brush Box	15 x 10	400L	
Medium Trees			
Melaleuca ericifolia Swamp Paperbark	9 x 5	400L	
Callistemon salignus Willow Bottlebrush	8 x 8	400L	
Small Trees			
Acacia longifolia Golden Wattle	6 x 4	100L	
Melaleuca decora White Feather Myrtle	6 x 4	45L	
Border Planting			
Kunzea ambigua White Kunzea	3 x 2	300mm	1
Grevillea 'Moonlight'	2 x 2	300mm	1
Rhagodia 'Aussie Flatbush' Creeping Saltbush	0.5 x 1	300mm	2
Westringia 'Zena' Coastal Rosemary	0.6 x 0.9	300mm	4
Poa 'Eskadale' Tussock Grass	0.5 x 0.5	200mm	4
Pennisetum alopecuroides Fountain Grass	0.6 x 0.5	300mm	4
Correa alba White Correa	1 x 1.5	200mm	2
Actinotus helianthi Flannel Flower	0.5 x 0.5	140mm	4
Hibbertia 'Little Rocker' Hairy Guinea Flower	0.5 x 1.2	140mm	8
Grevillea 'Gold Cluster'	0.3 x 0.8	140mm	8
Chrysocephalum apiculatum Yellow Buttons	0.3 x 0.5	200mm	4
Myoporum parvifolium Creeping Myoporum	0.3 x 1.5	140mm	8

ACCENT AND COURTYARDS

Hedging			
Botanic name ***Common name***	***Mature HxW(m)***	***Pot***	***/m²***
Melaleuca 'Claret Tops' Honey Myrtle	1.2 x 1	200mm	2
Groundcovers			
Blechnum indicum Silver Lady Fern	0.9 x 1.2	300mm	2
Crinum pedunculatum Swamp Lily	1.5 x 1	300mm	2
Dianella caerulea Flax Lily	0.4 x 0.4	200mm	4
Hardenbergia violacea Purple Coral Pea	0.5 x 2	200mm	4
Ficinia nodosa Knobby Club Rush	0.4 x 0.4	200mm	4
Viola banksii Native Violet	0.1 x 0.3	140mm	12
Climber			
Ficus Pumila Climbing fig	3 x 0.2	140mm	8

BIODIVERSITY GREEN ROOF

Green Roof			
Botanic name ***Common name***	***Mature HxW(m)***	***Pot***	***/m²***
Carpobrutus glaucescens Pigface	0.3 x 1.5	200mm	4
Dichondra repens Kidney Weed	0.1 x 0.4	140mm	12
Goodenia hederacea Forest Goodenia	0.2 x 0.8	200mm	8
Kennedia rubicunda Dusky Coral Pea	0.2x 1	140mm	8
Myoporum parvifolium Creeping Myoporum	0.3 x 1.5	140 mm	8
Oxalis exilis Yellow Sorrel	0.1 x 0.3	100mm	12
Pratia purpurascens Purplish Pratia	0.1 x 0.5	140mm	12
Viola banksii Native Violet	0.1 x 0.3	140mm	12

LEVEL 2 CARPARK AND CASCADE

Medium Trees			
Melaleuca ericifolia Swamp Paperbark	9 x 5	400L	
Callistemon salignus Willow Bottlebrush	8 x 8	400L	
Cupaniopsis anacardioides Tuckeroo	10 x 5	400L	
Elaeocarpus reticulatus Blueberry Ash	8 x 3	400L	
Small Trees			
Acacia longifolia Golden Wattle	6 x 4	100L	
Melaleuca decora White Feather Myrtle	6 x 4	100L	
Groundcovers			
Pennisetum alopecuroides Fountain Grass	0.6 x 0.5	300mm	4
Correa alba White Correa	1 x 1.5	200mm	2
Pratia purpurascens Purple Pratia	0.2 x 0.5	200mm	8
Myoporum parvifolium Creeping Myoporum	0.3 x 1.5	140mm	8
Actinotus helianthi Flannel Flower	0.5 x 0.5	140mm	4
Chrysocephalum apiculatum Yellow Buttons	0.3 x 0.5	200mm	4
Westringia 'Zena' Coastal Rosemary	0.6 x 0.9	300mm	4
Dichondra agrentea Silver Falls	0.1 x 0.5	140mm	8

GRASSCRETE (FIRE ACCESS)

Grasses			
Microlaena stipoides Weeping grass	300mm	Seed	6 g/ sq m

15.0 INDICATIVE PLANT SPECIES

TREES


Corymbia maculata


Calistemon salignus


Corymbia eximia


Melaleuca ericifolia


Lophostemon confertus

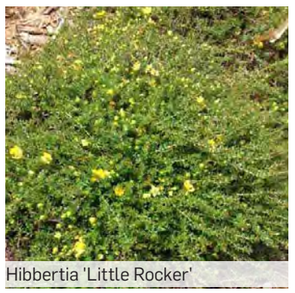

Melaleuca decora


Acacia longifolia

STREETSCAPE BORDER


Kunzea ambigua


Poa 'Eskadale'


Hibbertia 'Little Rocker'


Grevillea 'Moonlight'


Pennisetum alopecuroides


Grevillea 'Gold Cluster'


Rhagodia 'Aussie Flatbush'


Correa alba


Chrysocephalum apiculatum


Westringia 'Zena'


Actinotus helianthi


Myoporum pavifolium

ACCENT AND SHADE PLANTING


Melaleuca 'Claret Tops'


Crinum pedunculatum


Ficinia nodosa


Ficus pumila


Dianella caerulea


Viola banksii


Hardenbergia violacea


Blechnum 'Silver Lady'

LEVEL 2 AND CASCADE


Pennisetum alopecuroides


Actinotus helianthi


Correa alba


Chrysocephalum apiculatum


Pratia 'Blue Star Creeper'


Westringia 'Zena'


Myoporum pavifolium


Dichondra 'Silver Falls'

BIODIVERSITY GREEN ROOF


Carpobrutus glaucescens

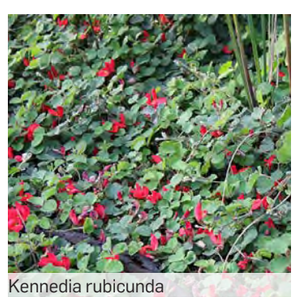

Myoporum parvifolium

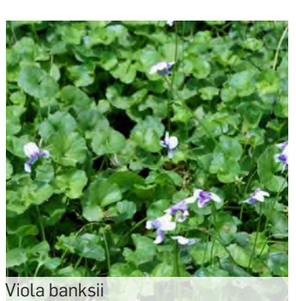

Dichondra repens


Oxalis exilis

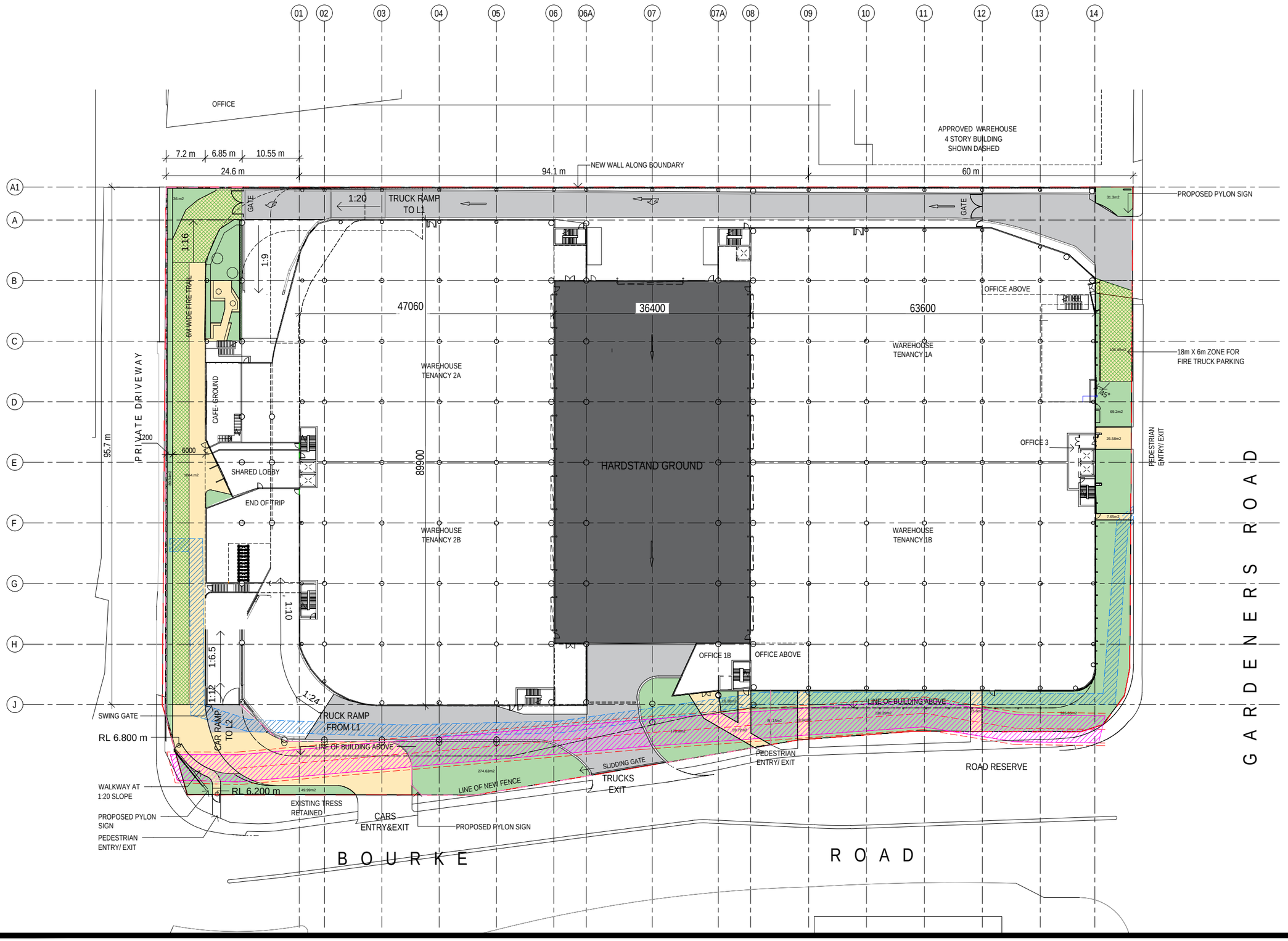

Goodenia hederacea


Pratia purpurascens


Kennedia rubicunda


Viola banksii

C LANDSCAPE PLANS



LEGEND

- PERMEABLE SEMI-PLANTED SURFACE
  @50% = 1.5% of total area / @100% = 3% of total area
- PERMEABLE PAVING TREATMENT
  @50% = 1.8% of total area / @100% = 3.7% of total area
- PERMEABLE SOFTSCAPE
  8.3%
- NON-PERMEABLE HARDSTAND
- NON-PERMEABLE ROAD SURFACE
- BOUNDARY LINE

TOTAL DEEP SOIL
@500% PERMEABLE PAVING UNDER WHICH STRUCTURAL SOIL AND STRATA-VULT LIE:
11.7%

TOTAL DEEP SOIL
@100% PERMEABLE PAVING UNDER WHICH STRUCTURAL SOIL AND STRATA-VULT LIE:
15.0%

520 GARDENERS ROAD, ALEXANDRIA

DEEP SOIL AREA

URBIS
Angel Place, Level 8, 123 Pitt Street | Sydney NSW 2000 Australia | +61 2 8233 9900 | URBIS Pty Ltd | ABN 50 105 256 228

REV	DESCRIPTION	DWN	CHK	DATE
B	Ammended For SSDA	SO	PJ	30.09.22
A	Issued For SSDA	SO	PJ	10.12.21

CLIENT
CHARTER HALL
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1:250 @ A0
1:500 @ A2
2.5 5 7.5 10 12.5 m

PROJECT NO. P0032153
DATE 30.09.22
DRAWING NO. LA-102
REVISION B

LEGEND

- EXISTING TREE TO BE RETAINED
- EXISTING TREE TO BE REMOVED
- TREE AT 10 YEARS
  - SMALL TREE 12.5 SQM
  - MEDIUM TREE 50 SQM
  - LARGE TREE 78.5 SQM
- TREE AT MATURITY
- PROPOSED STORMWATER EASEMENT (3M)
- ELECTRICAL EASEMENT (2.5M OFFSET FOR TREE CLEARANCE)

RETAINED CANOPY: 237.46 SQM

ADDITIONAL CANOPY (NOT UNDERNEATH STRUCTURE): 1757.5 SQM

SUM CANOPY (GROUND LEVEL): 1994.96 SQM

REFER TO LEVEL 2 CANOPY FOR FURTHER CALCULATIONS

OVERLAPPING CANOPIES HAVE BEEN SUBTRACTED FROM TOTALS

URBIS

520 GARDENERS ROAD, ALEXANDRIA

GROUND LEVEL CANOPY COVER

Angel Place, Level 8, 123 Pitt Street | Sydney NSW 2000 Australia | +61 2 8233 9900 | URBIS Pty Ltd | ABN 50 105 256 228

REV	DESCRIPTION	DWN	CHK	DATE
C	Ammended For SSDA	SO	PJ	30.09.22
B	Issued for Information	SO	PJ	15.07.22
A	Issued For SSDA	SO	PJ	10.12.21

CLIENT

CHARTER HALL

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1:250 @ A0
1:500 @ A2

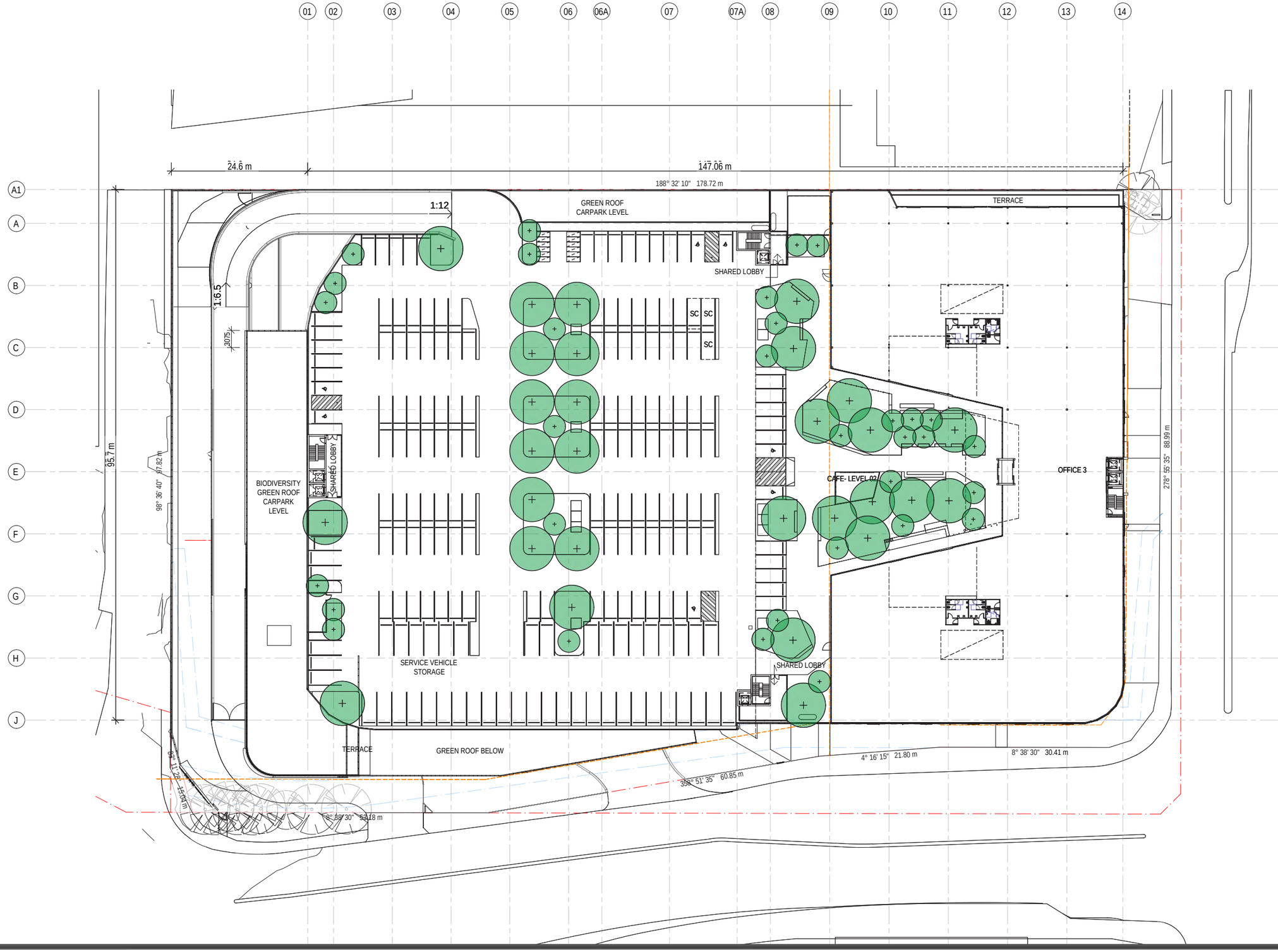
2.5 5 7.5 10 12.5 m

PROJECT NO. P0032153

DATE 30.09.22

DRAWING NO. DA-103

REVISION C



LEGEND

TREE AT 10 YEARS

SMALL TREE
12.5 SQM

MEDIUM TREE
50 SQM

SUM CANOPY (GROUND LEVEL): 1994.96 SQM

SUM CANOPY (LEVEL 2): 1775.2 SQM

TOTAL CANOPY (SITE): 3770.16 SQM (20%)

OVERLAPPING CANOPIES HAVE BEEN SUBTRACTED FROM TOTALS

URBIS

520 GARDENERS ROAD, ALEXANDRIA

LEVEL 2 CANOPY PLAN

Angel Place, Level 8, 123 Pitt Street | Sydney NSW 2000 Australia | +61 2 8233 9900 | URBIS Pty Ltd | ABN 50 105 256 228

REV	DESCRIPTION	DWN	CHK	DATE
B	Ammended For SSDA	SO	PJ	30.09.22
A	Issue for SSDA	SO	PJ	10.12.21

CLIENT
CHARTER HALL
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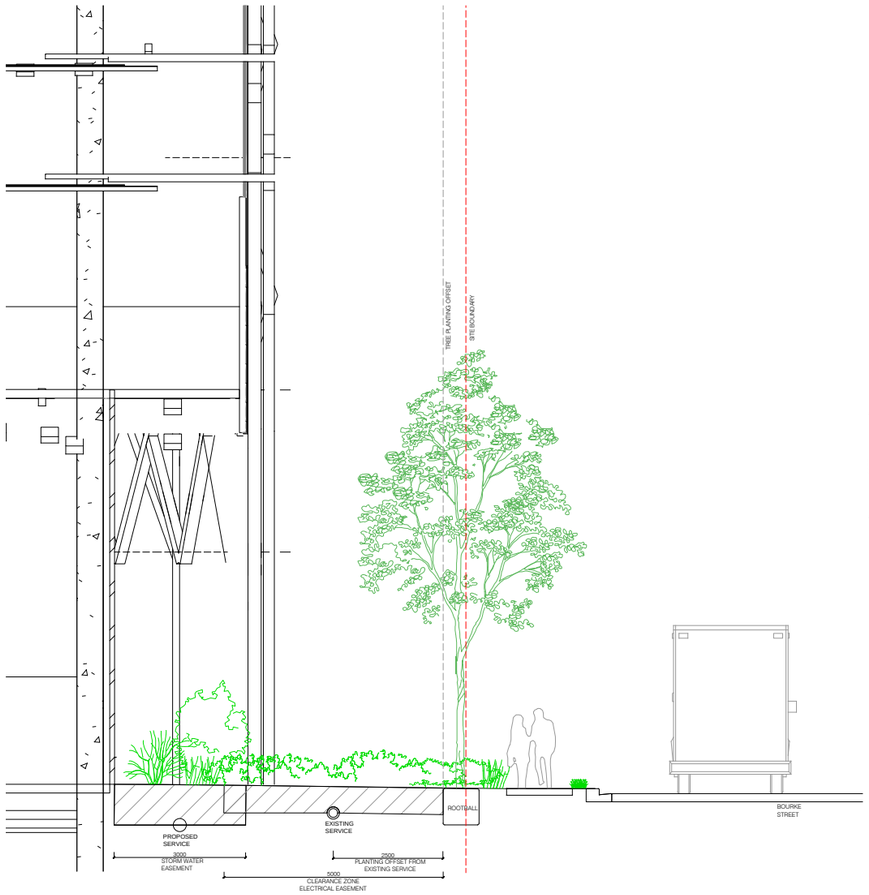
1:250 @ A0
1:500 @ A2
2.5 5 7.5 10 12.5 m

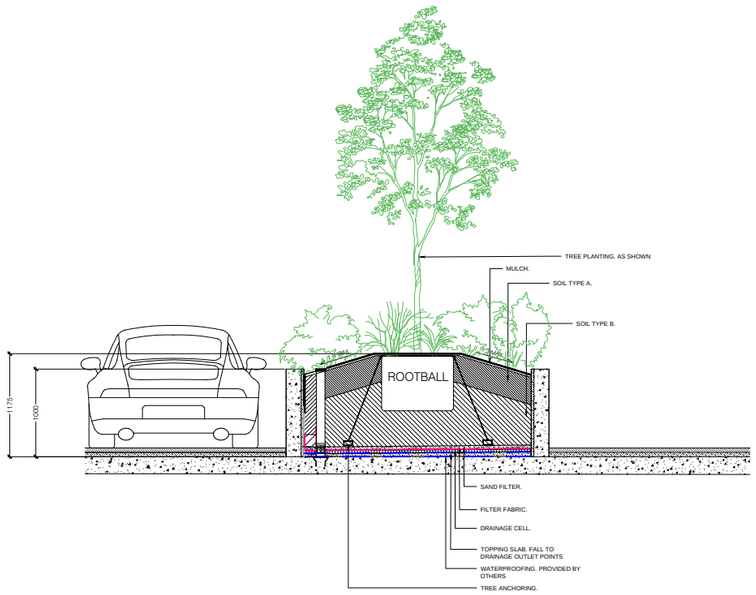
PROJECT NO. P0032153
DATE 30.09.22
DRAWING NO. LA-104
REVISION B



B SECTION B - DETAIL

DETAIL

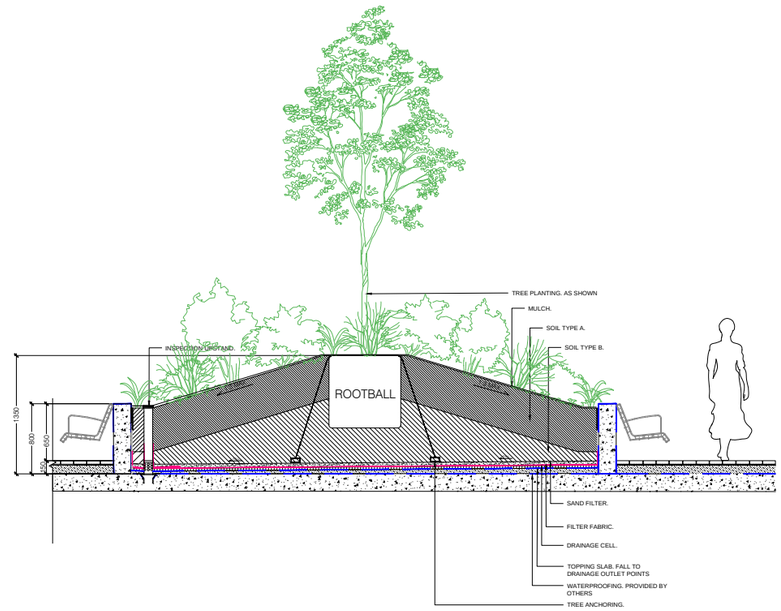
1:50 @ A0



1 L2 CARPARK RAISED PLANTER

DETAIL

1:25 @ A0



2 L2 COURTYARD RAISED PLANTER

DETAIL

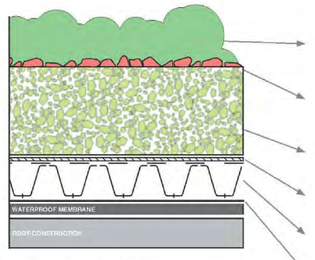
1:25 @ A0

Saturated Weight Guide- Intensive Podiums & Planter Boxes - 245mm to 945mm

(09.18)

Fytogreen Australia's lightweight roof garden system works to the following depth and saturated weight guidelines.

Saturated Bulk Density is 1150kg/m3



Hydrocell40 Podium Mix
Used with in VIC and SA
(Saturated Bulk Density 1150kg/m3)
- **40% Hydrocell Flakes**
- **30% Washed Sand**
- **20% Scoria**
- **10% Composted Pine Bark by volume**

Hydrocell40 Podium Mix
Used with in NSW and QLD
(Saturated Bulk Density 980kg/m3)
- **40% Hydrocell Flakes**
- **35% Clinker Ash**
- **15% Composted Organic Matter**
- **10% Sand**

PLANTS	Turf	Shrubs	Bushes	Small Trees Small trees with flat root system	Trees Large trees upto 12 metres
LAYER 5 Soil Mix	100mm depth 115kg psm	200mm depth 230kg psm	300mm depth 345kg psm	500mm depth 570kg psm	800mm depth 920kg psm
LAYER 4 Hydrocell Hardfoam	RG-30 Sheet, 60mm or 100mm thick. Saturated Weight Allowance of 55kg/m2 (51kg Water & 4kg Hardfoam) / 100mm layers				
LAYER 3 Geo-textile Membrane	Various types such as Bidim A14G. Thickness 2mm - Weight Negligible				
LAYER 2 Drainage Layer	Allow 20mm for Atlantis Flo-Cell				
LAYER 1 Vapour Layer	LDPE plastic is laid as extra protection above the waterproof roof. Thickness 0.02mm - Weight Negligible				

Total Depth	245mm	345mm	445mm	645mm	945mm
Total Weight	170kg/psm	285kg/psm	400kg/psm	625kg/psm	975kg/psm
Estimated Water	84 litres	117 litres	150 litres	216 litres	315 litres

Biodiversity Green Roof (200mm soil depth and 100mm Hydrocell) - Refer to drawing LA-104

Green Roof (100mm soil depth and 60mm Hydrocell) - - Refer to drawing LA-104

3 GREEN ROOF TYPICAL DETAIL - PER MANUFACTURER SPECIFICATIONS

DETAIL

NTS

PLOT STYLE: URBIS_AU.CTB
PAGE SETUP: ----
PLOTTED BY: SAMANTHA O'CONNOR
PLOT DATE: 15.07.2022
PATH: \\filer02b.urbis.local\EFS\National Design\04 PROJECTS\P0032153\P0032153 520 Gardeners Road Alexandria\08_Design Live\3.02_CAD\Layouts\LA_105.dwg

URBIS

520 GARDENERS ROAD, ALEXANDRIA

DETAILS

Angel Place, Level 8, 123 Pitt Street | Sydney NSW 2000 Australia | +61 2 8233 9900 | URBIS Pty Ltd | ABN 50 105 256 228

DATA SOURCE
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PROJECTION
.

REV	DESCRIPTION	DWN	CHK	DATE
A	DETAILS	RF	PJ	15.07.22

CLIENT
CHARTER HALL
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SET DRAWING SCALE

PROJECT NO. P0032153
DATE 15.07.22
DRAWING NO. DA-105
REVISION A

URBIS

URBIS.COM.AU