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Waste Management Facility, 2-4 Hale St, Botany

Landscape Concept Design Report

Prepared for
Coombes Property Group

Reference	15146
Issue date	28/08/2025
Version	P6

CJ Arms acknowledge the Traditional Custodians of the lands, waters and skies that this project is situated on, the Dharawal and Dharug people of the Eora Nation. We pay deep respects to Elders past and present. CJ Arms commit to supporting the health and wellbeing of Country, by respecting, valuing and being guided by First Nations people

Document control

Version	Description	Prepared by	Checked by
P1	Concept Design Report	DH	BW
P2	Concept Design Report	DH	BW
P3	Concept Design Report	DH	BW
P4	Concept Design Report	DH	BW
P5	Concept Design Report	DH	BW
P6	Concept Design Report	DH	BW

Contents

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1.0 Response to Council Comments *December 2024*

COUNCIL COMMENT	RESPONSE	ADDRESSED ON PAGE:
The landscape concept plan identifies areas of the side and rear setbacks as contributing to the landscaped area. It includes these areas in the calculation of the total landscaped area on the site. However, the plans indicate these side and rear setbacks are to be entirely "compacted gravel". It is not considered that a plain compacted gravel surface satisfies the intention, functions and definition of landscaped area.	We have introduced a planting buffer along the western and northern landscaped areas. This buffer will be planted around the perimeter of the site with the area between the planting and building to be finished with a 2m wide permeable crushed granite or gravel to allow maintenance access for the fence, building and landscape.	8.0 Landscape Plan. PG 10
The final Landscape Plan should be prepared by a qualified Landscape Architect who is a member of the AILA or is eligible for membership. The Landscape Plan should meet the requirements of the Bayside DCP 2022 and the Bayside Landscaping Technical Specification.	The final Landscape Plan has been prepared by a qualified Landscape Architect who is eligible for membership to the AILA. The Landscape Plan meets the requirements of the Bayside DCP 2022 and the Bayside Landscaping Technical Specification. Lead Landscape Architect CJ Arms: Simon Taylor B.LA RMIT 1990 Senior Landscape Architect CJ Arms: Milica Milunovic B.Sc (Hons) M.LA State University of NY 2008 We have updated the two key drawings in the report for clarity: Drawing 01 (6.0 Landscape Analysis Plan will become Existing & Demolition Plan) Drawing 02 (7.0 Landscape Concept Master Plan will become Landscape Plan)	7.0 Existing and Demolition Landscape Plan. PG 9 8.0 Landscape Plan. PG 10
The proposal should identify the species of all trees on the landscape plan, including proposed removals and new plantings prior to determination. The tree replacement rate is 3:1, i.e. for each tree removed there should be three new trees planted.	The Landscape Planting Strategy and Palette identifies the species of all proposed trees. The Existing & Demolition Plan identifies all proposed removals, noting there are no existing trees onsite. To facilitate access to the development we are required to remove 5 street trees. We are proposing to install up to 15 new small to medium trees as part of the development - to achieve maximum practical canopy coverage of the carpark.	7.0 Existing and Demolition Landscape Plan. PG 9 11.0 Landscape Planting Strategy and Palette. PG 13
The Landscape Plan should incorporate and show the WSUD details as set out in the Integrated Water Management Report.	The Landscape Plan incorporates and shows the WSUD details as set out in the Integrated Water Management Report.	8.0 Landscape Plan. PG 10 9.0 WSUD Details. PG 11
The proposal does not identify any improvements to the Hale Street public domain. The determination should include a requirement for landscaping improvements to be made to the street.	Hale street public domain improvement/revegetation will be provided to the section of nature strip indicated in the Landscape Plan.	8.0 Landscape Plan. PG 10
It appears that no outdoor space for staff is provided. The Bayside DCP 2022 (6.4: C.6) requires that staff are provided with an outdoor area for recreation, being at least 16m2 in size, with a minimum dimension of 3 metres. At least 6m2 of the area should receive direct sunlight for the hours between 10am and 2pm in mid-winter and be shaded in summer. The recreation area should not be in the landscaped setbacks.	We have created a 16 sqm space (4m X 4m) to achieve this requirement in the revised architectural masterplan.	8.0 Landscape Plan. PG 10
It appears that the car park could be further landscaped. The Bayside DCP 2022 at 3.7.5 requires that at-grade carparks have generous landscaping and tree canopy planting, including:	We have proposed a reconfiguration of the carparking area to maximise canopy coverage in the carpark.	8.0 Landscape Plan. PG 10
1 Tree per 5 car spaces to achieve 50% canopy coverage at maturity to combat urban heat impacts.	There are a minimum of 3 trees (100L pots) proposed within the carpark area (15 car spaces)	8.0 Landscape Plan. PG 10
The car park should feature areas of landscaping to break up functional areas of the car park including pedestrian crossings and entry areas. Contrasting materials should be used to help define these elements visually.	The architectural masterplan and associated Landscape Plan have been updated to address these concerns.	8.0 Landscape Plan. PG 10
Tree pits should provide adequate dimensions to cater for tree roots, future tree growth and to provide adequate moisture penetration and aeration of the root zone.	Noted	
The minimum pot size for trees in the parking area is 100 litres	Noted	
Further details are set out in the Bayside Landscaping Technical Specification.	Noted	

2.0 Response to Council Comments *May 2025*

COUNCIL COMMENT	RESPONSE	ADDRESSED ON PAGE:
k) While the Landscape Concept Report has largely addressed Council's original concerns, the following matters are noted:		
i. Where the Landscape Plan identifies that it is extending existing adjacent planting, it should note that native species will be planted.	i. The Landscape Plan has been updated to indicate: Hale Street public domain improvement (revegetation with native species) to be provided to this section of the nature strip.	8.0 Landscape Plan. PG 10
ii. Phoenix canariensis (Canary Island Date palms) if present on the subject site, may be removed to reduce nesting habitat for White Ibis in the vicinity of the airport. Where removed, these trees should be replaced with a native tree.	ii Noted. The Phoenix canariensis referenced is located adjacent to, but not within, the subject site. As such, no removal or replacement planting is proposed.	
iii. For removal of trees 3, 4, 5, 7, 8, 9, 10, 11,16 offset planting will be required as per Bayside DCP 2022 Section 3.8.2.	iii. Noted. Offset planting for the removal of Trees 3, 4, 5, 7, 8, 9, 10, 11 and 16 will be provided in accordance with Bayside DCP 2022 Section 3.8.2. As this requirement applies to the removal of 9 existing trees, a total of 27 replacement trees are required under Council's 3:1 ratio. The Landscape Plan already proposes 15 new small to medium canopy trees within the site, located primarily in the car park and landscaped setbacks to maximise canopy cover while avoiding species that attract flocking birds. The remaining 12 replacement trees will be delivered as offset planting via a Deed of Agreement with Council, under which Council will undertake planting on public land on our behalf. This notation has been added to the Landscape Plan.	8.0 Landscape Plan. PG 10
iv. The Landscape Concept Design on page 8 does not address tree retention or removal of trees & vegetation present at the western and south-western site boundaries. Vegetation in this area should be considered in the same way as vegetation on other boundaries of the site.	iv. The updated Landscape Concept Design on page 8 addresses existing vegetation on the western and south-western boundaries, with tree retention and removal consistent with the updated arborist's recommendations. The updated arborist report is attached for reference.	7.0 Demolition Plan. PG 9 8.0 Landscape Plan. PG 10

3.0 Introduction

3.1 An Overview

Coombes Property Group (CPG) and KLF Group (KLF) is proposing to develop a construction and demolition (C&D) waste management facility at 2-4 Hale Street, Botany (Lot 1 DP 562374) (the project). The facility proposes to accept up to 300,000 tonnes per annum (tpa) of C&D waste. It would propose to operate as a waste transfer station undertaking receipt and basic sorting with aggregation of material for bulk transport to Luddenham advanced resource recovery facility or another approved facility within the KLF group where more advanced sorting and recycling would be undertaken.

This landscape concept design report outlines the goals, principles and approach to the landscaping strategy for this proposed development.

3.2 The Site

The site is located approximately 8 km south of Sydney's CBD and adjacent to Sydney Airport. The site is located at 2-4 Hale Street, Botany and is identified as Lot 1 in Deposited Plan (DP) 562374 in the Bayside Local Government Area (LGA). The title comprises approximately 7,439 m2.

The site is located in an industrial area with Wanless Waste Management and Botany Scrap Metal Recycling to the east and numerous industrial developments to the south such as Australian Metal Co Pty Ltd, 2k20 Automotive and ULD Transport.

Access to the site is via Hale Street along the southern border. Hale Street is a two lane bitumen sealed road which serves the industrial area of Botany and provides a link to General Holmes Drive (M1) via Foreshore Road.

The visual amenity of the site has been significantly modified by industrial development. The surrounding area has a predominantly industrial land use, adjacent to the airport, and Sir Joseph Banks Park within the Port Botany area.

The topography of the site is primarily with an elevation of approximately 2.5 metres Australian Height Datum (AHD). Mill stream is located 30 m to the northwest and a drainage easement runs along the northern boundary of the site. Above ground sewers run adjacent to the western and northeastern boundary of the site and a high pressure Jemena gas pipeline.

1

2

1. Site location in local context
2. Existing conditions

4.0 Design Vision

Whilst there often appears to be a limited opportunity for landscape in and around industrial areas they have the potential for biodiversity and unique species.

To us it is important that we consider each and every landscape on its merits, so that it doesn't just create amenity for people, but integrates water, ecology and biodiversity and is resilient and adaptable to climate change.

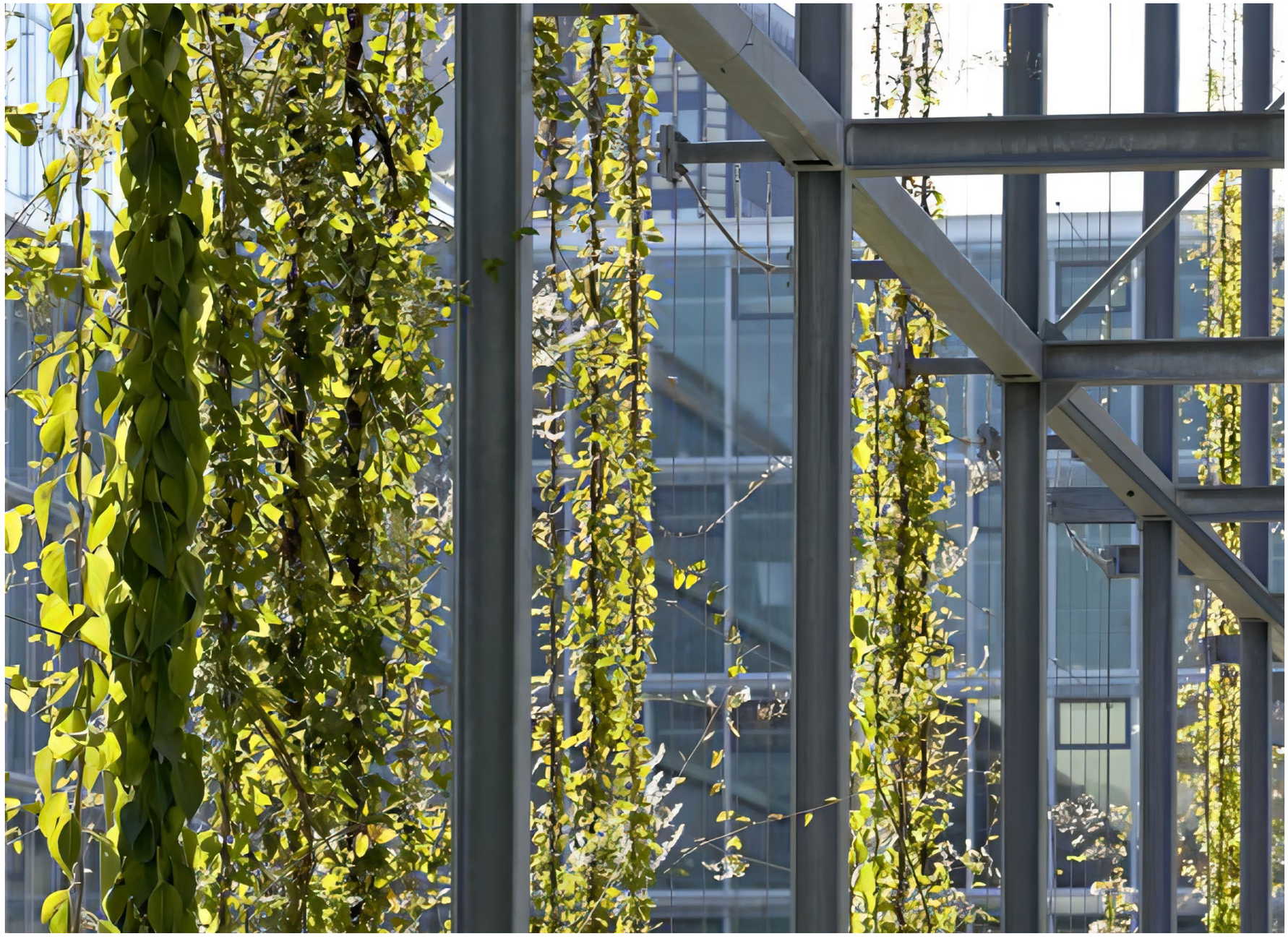
For this project we have the opportunity to use the landscape zones to create water sinks, raingardens to filter and treat water to protect the vital downstream waterway of Botany Bay. Equally, we need to consider maximising the use of harvested rainwater from the large roof to sustain and irrigate the landscape in perpetuity.

Our modelling indicates we can meet the vast majority of irrigation demand on a year-round basis with a rather modest tank. This tank has been increased in size to also offset some internal water uses in the facility such as washdown and dust suppression.

Understanding the near proximity to the Sydney Airport we must consider designing to mitigate flocking bird risk, and as such have selected species and planting palettes and configured tree and shrub spacings that do not encourage this activity.

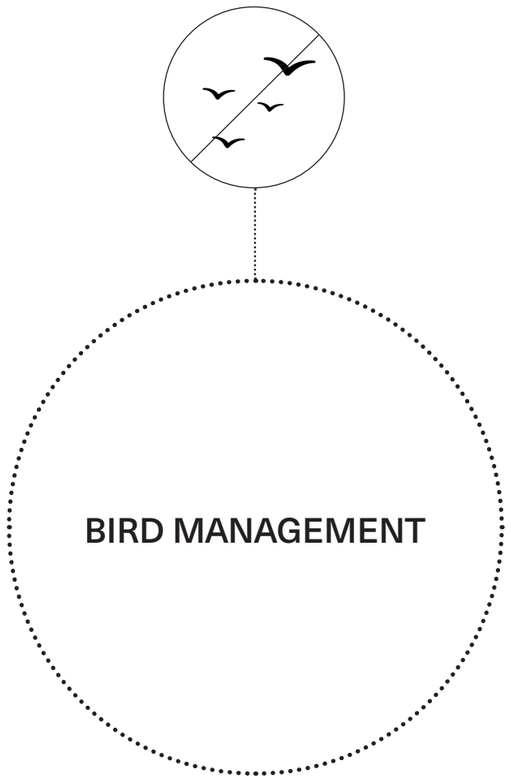
There are remaining links around the south, west and northern sides of the development where they interface with infrastructure - bridges, culverts and drains. These areas will be designed for very low maintenance and are unlikely to be accessed frequently by people.

We see these areas as opportunities not to miss, to still cater for and encourage ecology and biodiversity where possible considering the constraints and the airport requirements. The landscape we propose is configured to demonstrate our intent on delivering these elements and we are excited by the opportunity to work on them in detail during the next phase of the project.



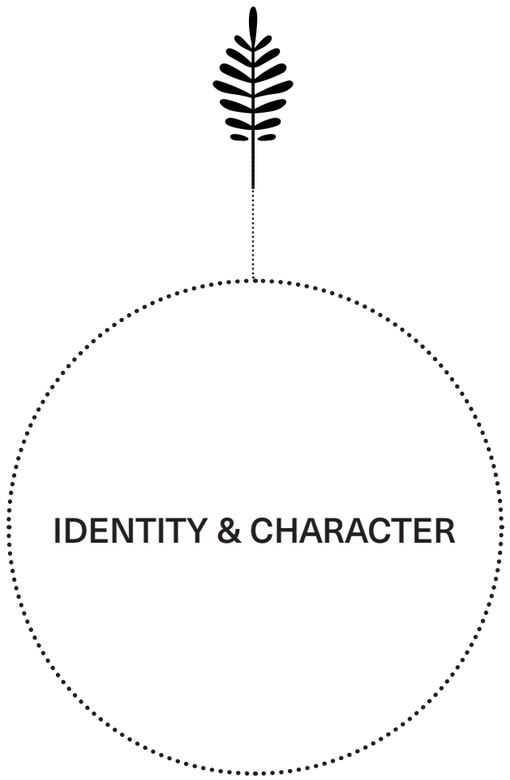
Opposite: Opportunity to grow native climbers for amenity and identity

5.0 Design Principles



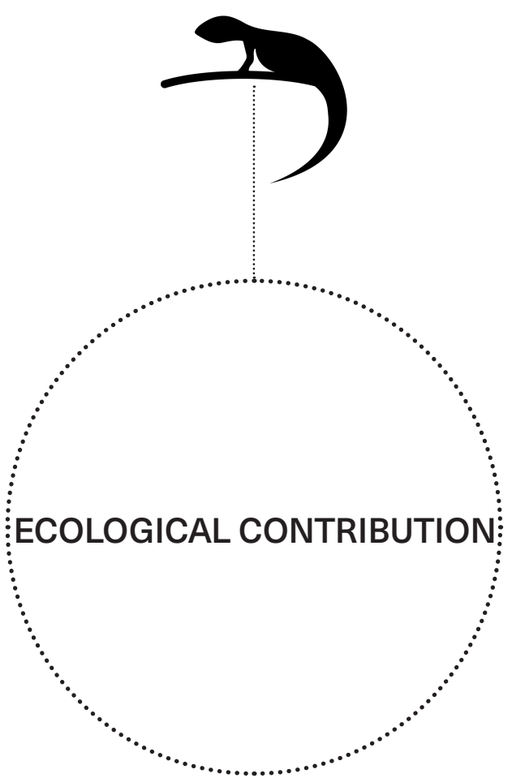
BIRD MANAGEMENT

Mitigate bird and wildlife attraction through strategic plant selection and layout



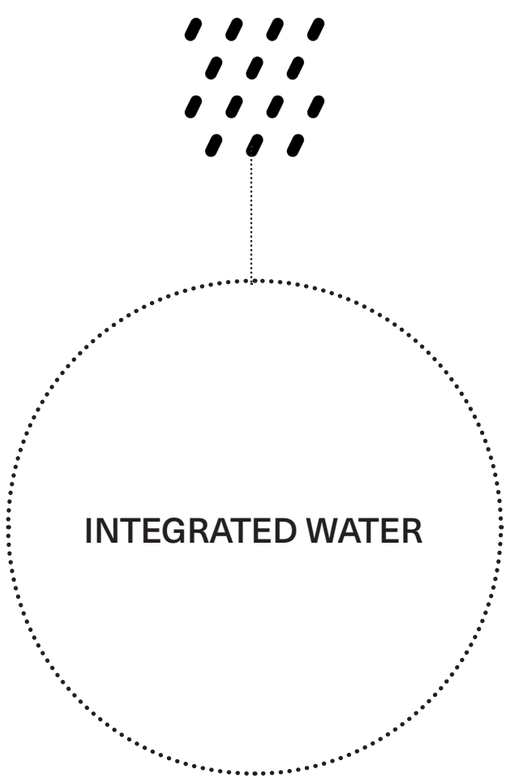
IDENTITY & CHARACTER

Integrate site-specific characteristics for authentic, iconic, and operationally responsive landscape design



ECOLOGICAL CONTRIBUTION

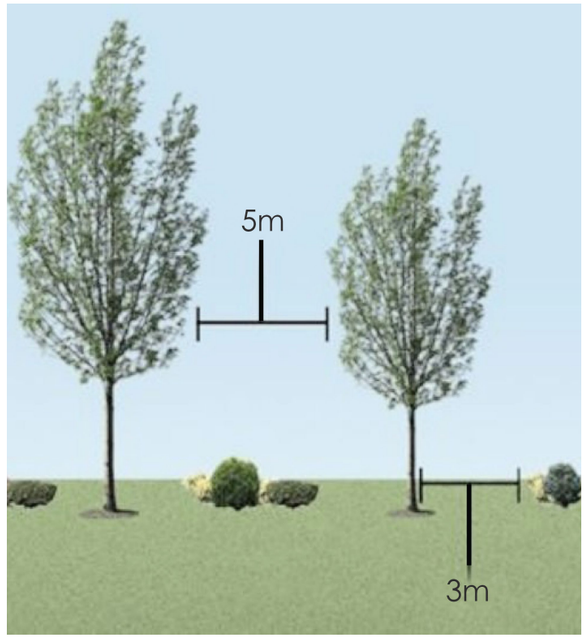
Safeguard aviation operations while creating opportunity for local ecosystems

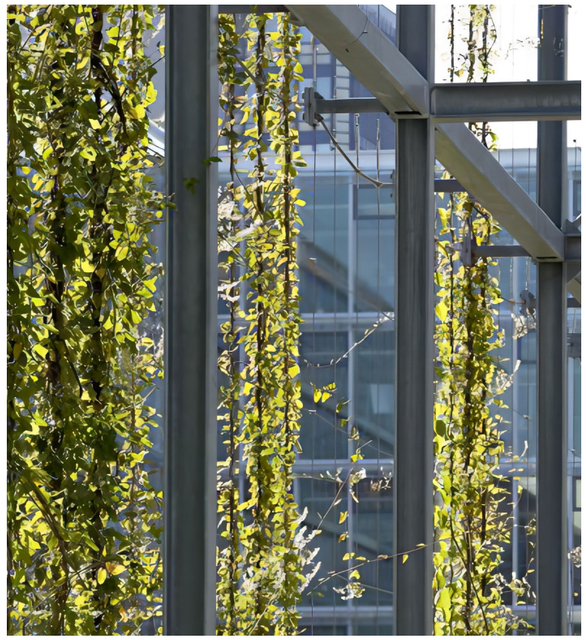


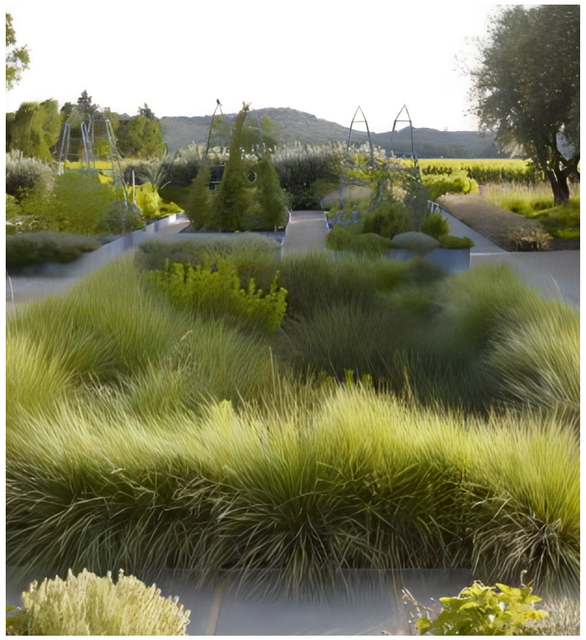
INTEGRATED WATER

Integrate sustainable water management: harnessing natural runoff and raingarden filtration for environmental health and resource conservation

6.0 Design Approach







Control Bird and Wildlife Attraction

In controlling bird and wildlife attraction, it will be vital to craft a site and planting design that minimizes their presence. We have opted for plant species with low appeal to birds and their prey. Tree planting will be arranged strategically, ensuring mature canopy structures do not overlap excessively, thus reducing bird movement between trees.

We will consider columnar tree species with vertical branching to limit nesting and perching opportunities. We will steer clear of landscape elements like totems or vertical features that could serve as perching or nesting sites. Additionally, species with abundant fruits and berries will be avoided, which may inadvertently attract more wildlife.

By implementing these measures, we will create a harmonious environment that respects nature whilst considering airport safeguarding measures.

Landscape Identity and Character

Tailoring the landscape response to the site's characteristics not only defines its identity but also ensures harmony with the local conditions. By incorporating species endemic to the area, the landscape design becomes both regionally authentic and environmentally sensitive. Furthermore, it acknowledges the needs of the airport operations, employing a language that resonates with the surroundings.

Strategic plant selection enhances the streetscape, presenting the development in an aesthetically pleasing manner while providing essential screening and buffering. Through considered landscape choices, the site becomes not just a functional space but a testament to responsible development and community integration.

Ecological Contribution

In balancing the need to mitigate bird and wildlife attraction near the airport with the desire to foster natural ecosystems, the design approach is critical. Utilising a planting palette rich in local and indigenous plant species, the design not only enhances the aesthetic appeal of the surroundings but also provides habitats for small insects and lizards.

Careful selection of vegetation minimises the potential for bird attraction while creating opportunities for biodiversity. By incorporating native flora, the design fosters a sense of place and connection to the environment while reducing the risk posed by wildlife to aircraft. This harmonious approach ensures that safety concerns are addressed without compromising the ecological integrity of the area, ultimately creating a sustainable and welcoming environment for both humans and wildlife alike.

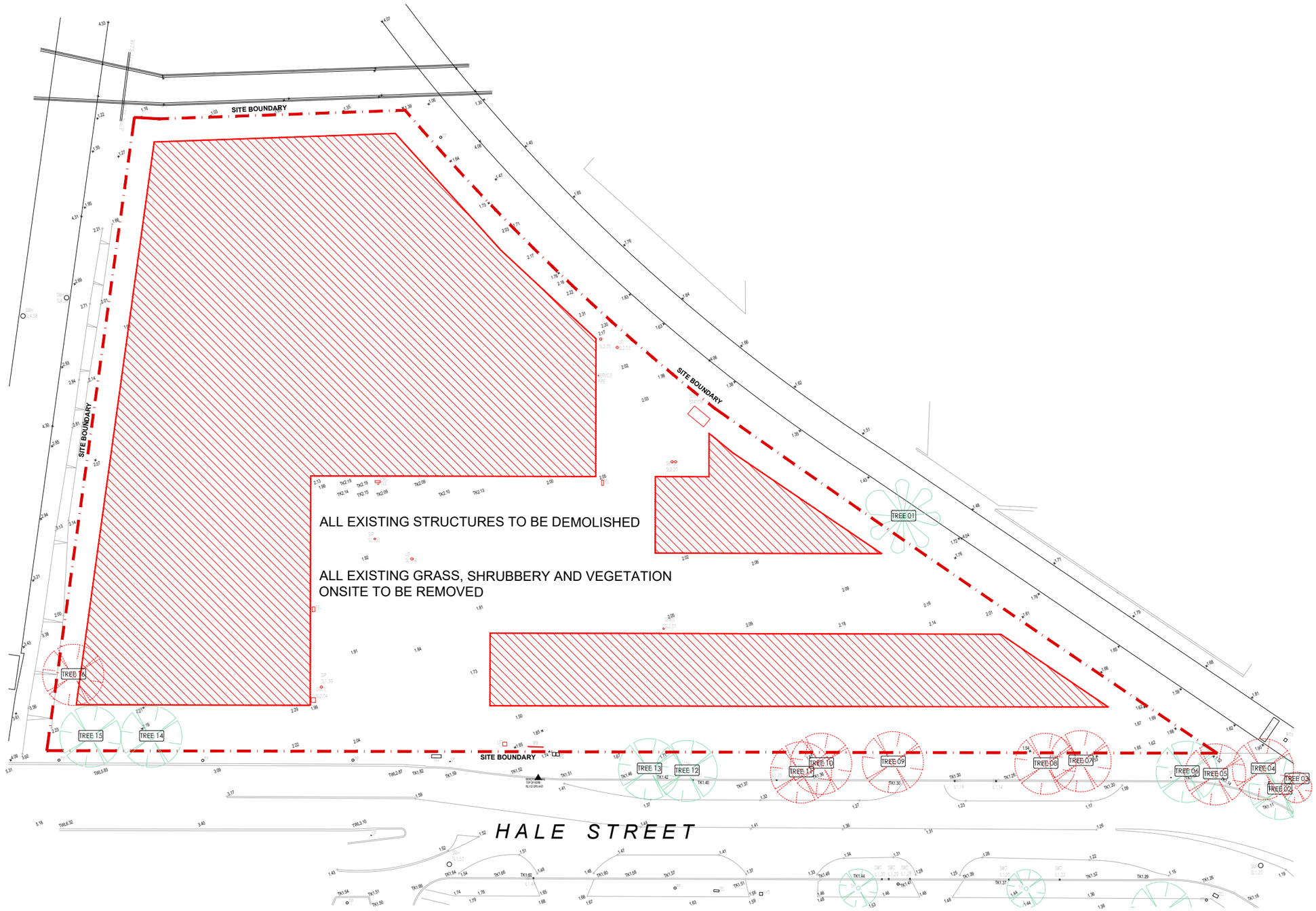
Integrated Water Strategy

The proposed development offers opportunities to incorporate natural runoff into the landscape to promote a green and healthy environment. A raingarden positioned near the site's entrance on the Southern boundary effectively filters site water.

Additionally, runoff from paved areas will be directed to garden beds for plant irrigation where feasible. The use of a raingarden in this landscape will attenuate stormwater contamination which provides a range of supplementary benefits and reduces the annual stormwater discharge. Hydrocarbons from the surfaces of the roadways and trafficable areas will go through a filtration and adsorption process at the raingarden through the microbial activity and plant roots zone before it is discharged into storm water pipes.

Reuse water can be substituted for non-potable water used onsite including toilet flushing, irrigation, wash down, dust suppression, cooling.

7.0 Existing and Demolition Landscape Plan



NOTE FOR CONTRACTORS
PRIOR TO COMMENCEMENT, THIS DRAWING MUST BE CROSSCHECKED BY COMPETENT CONTRACTORS WITH AN APPROPRIATE LEVEL OF EXPERIENCE WHO HAVE PREPARED APPROPRIATE SAFE WORK METHOD STATEMENTS (SWMS) RELATING TO THESE WORKS. THE CONTRACTOR IS RESPONSIBLE FOR THE MANAGEMENT OF ALL RISKS ASSOCIATED WITH THE CONSTRUCTION ACTIVITIES STATED ON THIS DRAWING.

THIS DRAWING SHOULD NOT BE ISSUED IN PART AND MUST BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS ENGINEERING NOTES PAGES, DATA'S AND AUTHORITY DRAWINGS AS APPROPRIATE.

PLAN BEFORE YOU DIG. BEWARE OF UNDERGROUND SERVICES. THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE ESTABLISHED BY ALL AUTHORITIES & DATA'S THAT EXISTING SERVICES ARE SHOWN.

DEMOLITION LEGEND

SITE AREA: 7439 SQM

- SITE BOUNDARY
- EXISTING BUILDING
- TO BE DEMOLISHED
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED (x9)
  - TREE 01 Casuarina glauca
  - TREE 04 Casuarina glauca
  - TREE 05 Casuarina glauca
  - TREE 07 Casuarina glauca
  - TREE 08 Casuarina glauca
  - TREE 09 Casuarina glauca
  - TREE 12 Casuarina glauca
  - TREE 13 Casuarina glauca
  - TREE 14 Olea europaea

0 1 2.5 5 7.5 10 15 20 25m
1:250

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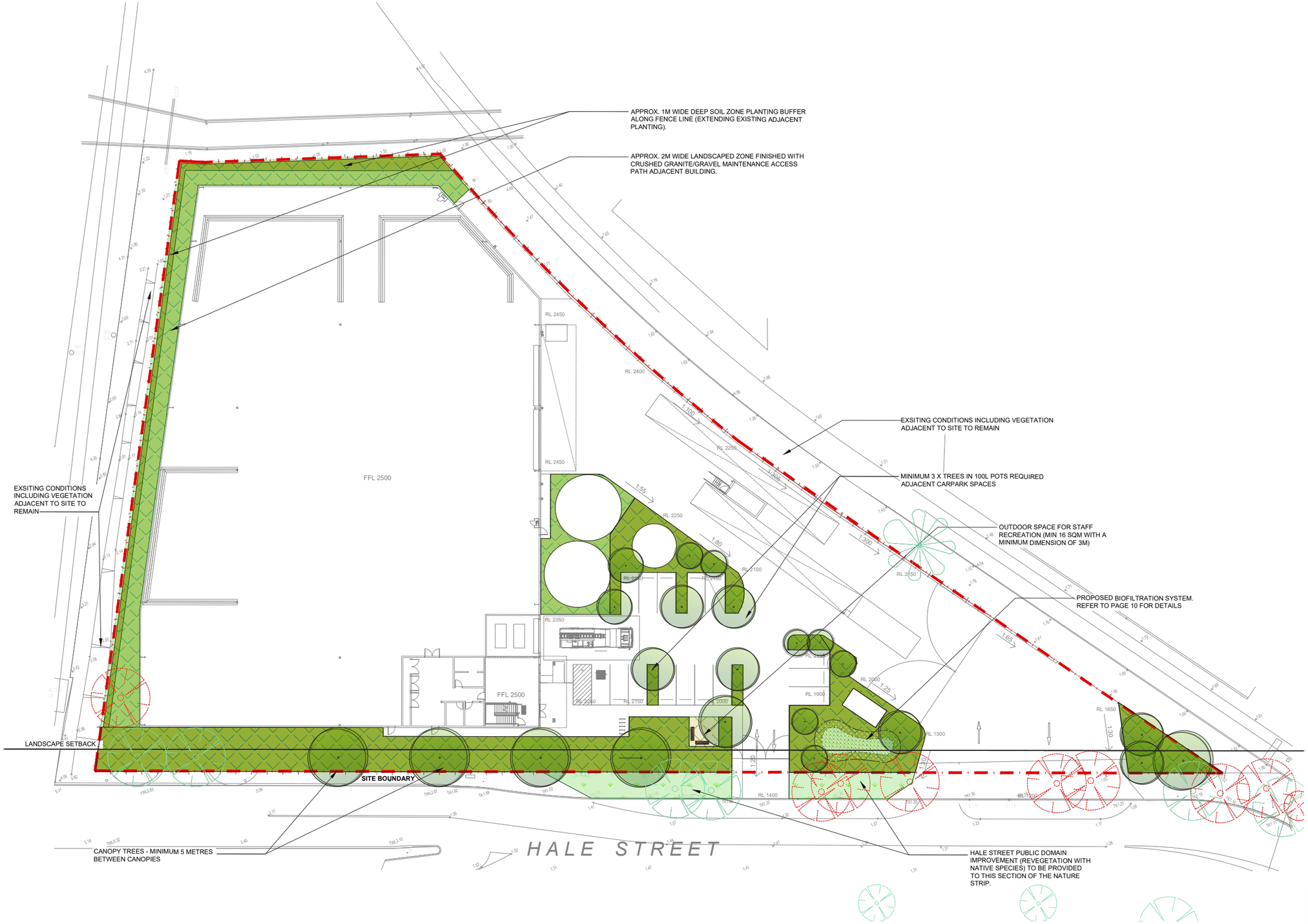
8.0 Landscape Plan



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LANDSCAPE CALCULATIONS

SITE AREA: 7439 SQM

PROPOSED LANDSCAPE AREA:

DEEP SOIL = 950 SQM OR 12.7%
TOTAL LANDSCAPE AREA = 1247 SQM OR 16.8%
LANDSCAPE SETBACK AREA = 341 SQM OR 4.6%

TOTAL LANDSCAPE AREA NOT INCLUDING SETBACK AREA = 906 SQM OR 12.2%

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED (x9)

OFFSET PLANTING FOR REMOVAL OF 9 TREES -
3:1 RATIO = 27 REPLACEMENTS
- 15 NEW TREES PROVIDED ON SITE.
- 12 TREES DELIVERED VIA DEED OF AGREEMENT WITH COUNCIL (PLANTED ON PUBLIC LAND).

PROPOSED TREE (x 15)

PROPOSED SHRUB

PROPOSED DEEP SOIL

PROPOSED LANDSCAPE ZONE

PROPOSED AMENITY ZONE

PUBLIC DOMAIN REVEGETATION WITH NATIVE SPECIES

PROPOSED RAINGARDEN

LANDSCAPE SETBACK

0 1 2.5 5 7.5 10 15 20 25m
1:250

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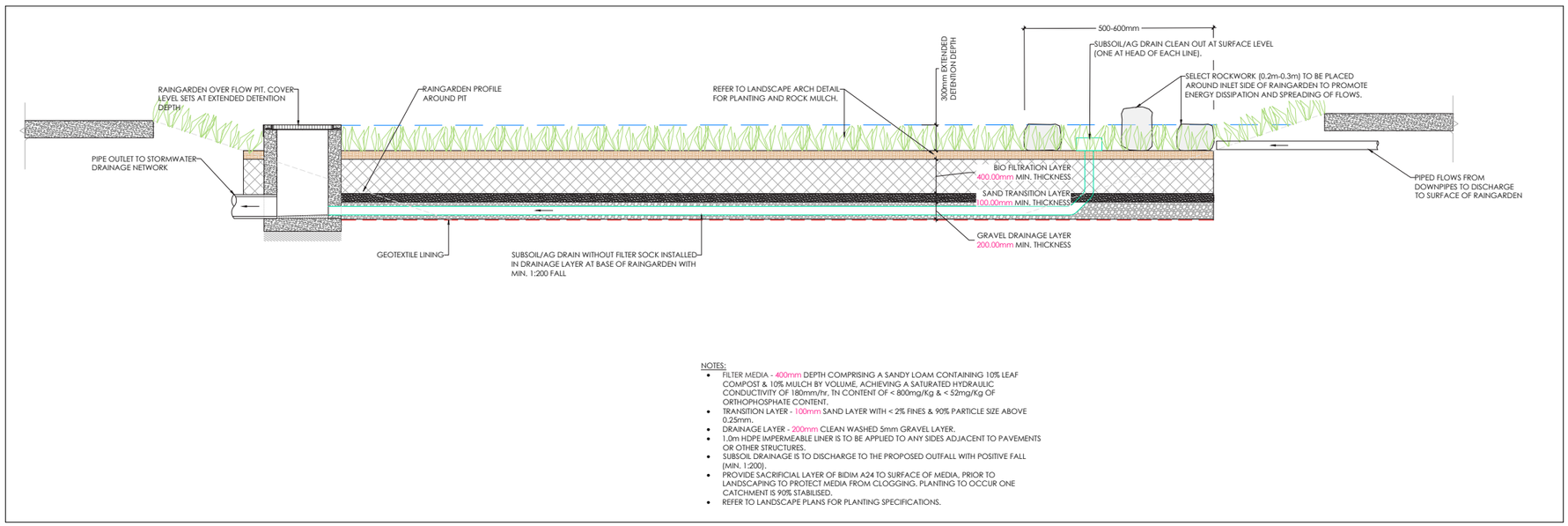
9.0 WSUD Details

A stormwater treatment train has been developed that incorporates water sensitive urban design (WSUD) techniques, including the capacity of on-site detention, measures to maximise the reuse of water, and landscape integrated treatment (raingarden). The raingarden is located at the Hale St frontage of the site and will receive rainfall runoff from the site and piped overflow from RWT.

Stormwater discharged from the new development will be treated in compliance with SEARs and local government authority requirements.

Reference image showing modest scale raingarden of hardy Indigenous plants to filter silt, nutrient & particulates before entering the storm water systems.



Raingarden Typical Section

10.0 Landscape Precedents

Low maintenance Indigenous Gardens

Low maintenance Indigenous Gardens

These gardens will add to the local ecology & habitat of non-avian fauna species.

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11.0 Landscape Planting Strategy and Palette

Bird And Wildlife Attraction Risk Mitigation Planting Strategies

The landscape design for 2-4 Hale Street will align with national and international requirements and guidance documents that set out strategies to reduce the risk of attracting birds and wildlife.

A recommended planting list has been prepared based on minimising the attraction to birds and wildlife. This list will be reviewed and further refined.

Trees

1.	*Angophora hispida*	Dwarf Apple Gum
2.	*Banksia serrata*	Saw Banksia
3.	*Banksia integrifolia*	Coastal Banksia
4.	*Callistemon citrinus*	Common Red Bottlebrush
5.	*Melaleuca quinquenervia*	Broad Leaved Paperbark
6.	*Cupaniopsis anacardioides*	Tuckeroo

Shrubs & Groundcovers

7.	*Macrozamia communis*	Burrawang
8.	*Leptospermum laevigatum*	Coast Tea Tree
9.	*Dodonaea triquetra*	Common Hop Bush
10.	*Correa alba*	White Correa
11.	*Lomandra longifolia*	Basket Grass
12.	*Ficinia nod osa*	Knotted Club-rush
13.	*Dianella congesta*	Flax Lily
14.	*Eleocharis sphacelata*	Tall Spike Rush

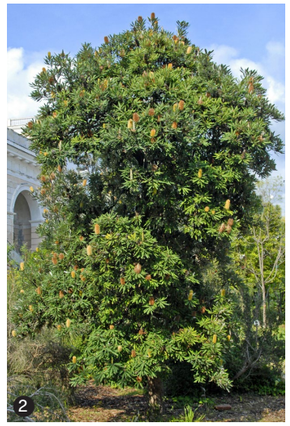
Raingarden

15.	*Juncus usitatus*	Common Rush
16.	*Gahnia filum*	Chaffy Saw-sedge

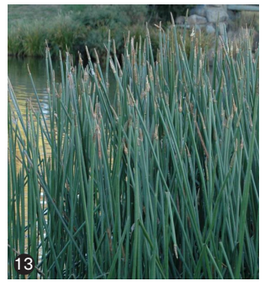
Climbers

17.	*Hardenbergia violacea*	Waraburra
18.	*Pandorea pandorana*	Wonga Wonga Vine

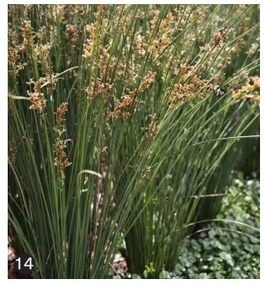
Trees



Shrubs



Raingarden



Climbers

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12.0 Landscape Maintenance and Management

The landscape response is designed to be self-sustaining. The use of indigenous plant species is such that, over time the vegetation will 'naturalise' requiring minimal maintenance, irrigation and fertilization. An appropriate maintenance regime over the initial 12-18 months will allow the vegetation to become established & ultimately thrive in this location.

The establishment period will include an appropriate eradication programme of environmental weed species that may be currently present in plant or seed form on this site.

Weed control should be mechanical and due to the proximity of wetland frog & lizard species, should absolutely exclude non-organic chemical herbicides. Rain Garden maintenance will include periodical removal of litter and probable annual/ biannual removal of silt build-up.

Objectives of the landscape and management plan

Generally, the landscape objectives for the site are:

- To provide and maintain an attractive/visually appealing and robust landscape setting to the development
- To contribute to the value of the green infrastructure on site, and helping provide links with the wider countryside
- To supplement existing trees with new tree planting to maintain the longevity of this resource and create a sense of place and different character areas within the Site
- To control invasive and undesirable species and aim to reduce cover of other non-native species to a set level
- To maintain and reinforce the landscape and ecology structure of the site
- To manage, retain and provide the opportunities to improve areas of existing ecological interest
- To increase the number and amount of native plants, improve the boundary treatments and to establish native buffer planting zones

Generally, the management objectives for the site are:

- The key objective is to improve and maintain the existing and new landscape and ecology structure in perpetuity.

Detailed maintenance specification will encompass the following:

Review Procedure

Timing and responsibility of review and method of reporting to ensure the correct communication channels are set up at the start of the project.

General Operations

The following principles will need to be established:
Working notice, reinstatement procedures, the use of any specialist firms/methods for the control of mammalian pests in line with the environmental health policy of the Local Authority and the use of rain water for irrigation means, depth required, watering times and removal of arisings as part of any operation on site. The protection of areas affected by maintenance operation and the safety of operatives and members of the general public will need to be explained in a method statement.

Semi-mature, Advanced Nursery Stock and Standard Trees

The planting, establishment, pruning and ongoing maintenance of these shrubs both generally and specifically will need to be clearly specified.

Shrub Planting

The planting, establishment, pruning and ongoing maintenance of these shrubs both generally and specifically will need to be clearly specified.

Grass and Herbaceous Planting

The planting, establishment, pruning and ongoing maintenance of the grasses will need to be clearly specified.

Grassed Areas

The planting, establishment and ongoing maintenance of grass areas and proposals for replacement will need to be clearly specified.

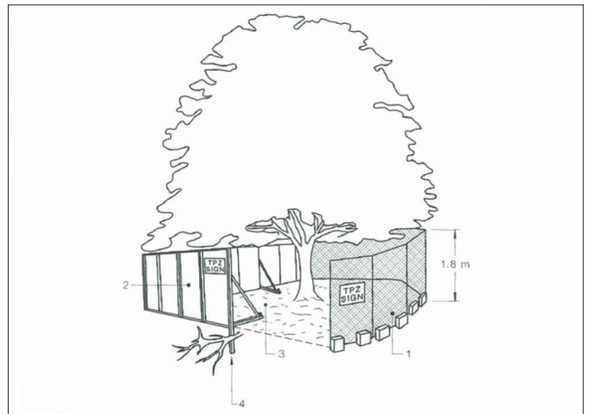
Retention of Melaleucas (South-West Corner)

Two semi-mature Melaleuca quinquenervia (Paperbarks) located in the south-western corner of the site are to be retained. The consulting arborist has confirmed that the proposed works will involve minimal ground disturbance in this area, and the development is unlikely to affect the health or stability of these trees.

As a hardy and healthy native species, the Paperbarks are considered highly suitable for retention. Protection measures in line with AS4970-2009 will be implemented during construction to safeguard their ongoing health and ensure they continue to contribute to the landscape character and ecological value of the site.

General Tree Protection

All other existing vegetation that is to be retained is also to be provided with adequate tree protection measures. Refer To AS 4970-2009: Protection of trees on development sites for further information and Part 2.3 Tree Preservation and Vegetation Management of the Bayside DCP 2022 for further Council requirements.



LEGEND:
1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
2 Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ.
3 Mulch installation across surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
4 Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

13.0 Conclusion

This report has outlined the landscaping strategy for the proposed development at 2-4 Hale Street, Botany including goals, principles, and approach. These will guide the landscape design in the project's detailed design phase. Given the site's proximity to Sydney Airport, a crucial aspect is selecting and spacing trees and plants to minimize attraction to birds and wildlife. The recommended planting list will undergo further assessment following the advice and guidelines from CASA Aviation.

CJ ARMS