



Biodiversity Development Assessment Report (Small Area)

**State Significant Development Application
(SSD-91496958)
159-167 Darley Street West, Mona Vale**

The Trustee for DREP1 Mona Vale Sub Trust

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SYDNEY NSW 2000

Prepared by:

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SLR Project No.: 610.032665.00001

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v0.3	29 October 2025	Jacqueline Britton	Trevor Meers	Draft
v0.4	14 November 2025	Jacqueline Britton	Trevor Meers	Final

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with The Trustee for DREP1 Mona Vale Sub Trust (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.



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Appendices

Appendix A	Vegetation Survey Data
Appendix B	Credit Reports
Appendix C	Concept Designs



SHORTENED FORMS

Short Form	Long Form
Assessment Area	Area of land within 1500m buffer around the outer boundary of the Subject Land
BAM	Biodiversity Assessment Method
BAM-C	Biodiversity Assessment Method Calculator
BC Act	<i>Biodiversity Conservation Act 2016</i> (NSW)
BC Regulation	Biodiversity Conservation Regulation 2017 (NSW)
BC SEPP	State Environmental Planning Policy (Biodiversity and Conservation) 2021
BCT	Biodiversity Conservation Trust
BDAR	Biodiversity Development Assessment Report
BOAMS	Biodiversity Offsets and Agreement Management System (BOAMS)
BOS	Biodiversity Offsets Scheme
BV Map	Biodiversity Values Map
the Client	The Trustee for DREP1 Mona Vale Sub Trust
Council	Northern Beaches Council
DA	Development Application
DBH	Diameter at Breast Height
DCCEEW (Cth)	Commonwealth Department of Climate Change, Energy, the Environment and Water
DCCEEW (NSW)	New South Wales Department of Climate Change, Energy, the Environment and Water
DPE	Former Department of Planning and Environment
EEC	Endangered Ecological Community
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cwlth)
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> (NSW)
GIS	Geographic Information System
GPS	Global Positioning System
ha	Hectares
Hollow-bearing tree (s) (HBT)	In accordance with the BAM (DPIE, 2020a), this refers to a living or dead tree that has at least one hollow. A tree is considered to contain a hollow if: (a) the entrance can be seen; (b) the entrance width is at least 5cm; (c) the hollow appears to have depth (i.e. solid wood cannot be seen beyond the entrance); and (d) the hollow is at least 1m above the ground. Trees must be examined from all angles.
HTW (s)	High Threat Weed (s)
IBRA	Interim Biogeographic Regionalisation for Australia
IHM	Important Habitat Map
LEP	<i>Pittwater Local Environmental Plan 2014</i>
LGA	Northern Beaches Local Government Area



Short Form	Long Form
MNES	Matters of National Environmental Significance
NSW	New South Wales
OEHS	Former NSW Office of Environment and Heritage
PCT	Plant Community Type
PWSGF	Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion
the Project	The proposed development at 159-167 Darley Street, Mona Vale subject to this BDAR
SAIL	Serious and irreversible impact
SEARs	Secretary's Environmental Assessment Requirements
SSD	State-Significant Development
SSDA	State-Significant Development Application
Study Area	159-167 Darley Street, Mona Vale
Subject Land	The complete extent of works including both construction and operational footprint
TBDC	Threatened Biodiversity Data Collection
TEC	Threatened Ecological Community
VI	Vegetation Integrity
VMP	Vegetation Management Plan
WoNS	Weeds of National Significance



DECLARATIONS

i. Certification under clause 6.15 Biodiversity Conservation Act 2016

I certify that this report has been prepared based on the requirements of, and information provided under, the Biodiversity Assessment Method and clause 6.15 of the Biodiversity Conservation Act 2016 (BC Act).

Name: Jacqueline Britton



Signature:

Date: 14/11/2025

BAM Assessor Accreditation no: BAAS21003

This BDAR has been prepared to meet the requirements of BAM 2020. **Appendix A** provides an assessment of compliance with the minimum information requirements outlined in BAM Appendix L.

ii. Details and experience of author/s and contributors

Table DC1: Authors and contributors

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Name	BAM Assessor Accreditation No.	Position/Role	Tasks Performed	Relevant Qualifications
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iii. Conflict of interest

I declare that I have considered the circumstances and there is no actual, perceived or potential conflict of interest. This declaration has been made in the interests of full disclosure to the decision-maker. Full disclosure has also been provided to the client.

Name: Jacqueline Britton



Signature:

Date: 14/11/2025

BAM Assessor Accreditation no: BAAS21003



STAGE 1: BIODIVERSITY ASSESSMENT

1.0 Introduction

1.1 Background

This Biodiversity Development Assessment Report (BDAR), prepared by SLR Consulting Pty Ltd (SLR), is submitted to the Department of Planning, Housing and Infrastructure (DPHI) on behalf of The Trustee for DREP1 Mona Vale Sub Trust (the Applicant) in support of a State Significant Development Application (SSDA), identified as SSD-91496958, for in-fill affordable housing at 159-167 Darley Street West, Mona Vale (the 'Study Area') (Figure 1).

The site is located at 159-167 Darley Street West, Mona Vale within the Northern Beaches Council Local Government Area (LGA). It is legally described as Lots 1-5 of DP11109 and owned by Darleydev Pty Ltd.

We understand that the proposal is to be assessed as a State-Significant Development and that this BDAR will form part of the documentation to support an application for Development Consent under Division Part 4.7 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

The project will involve site preparation works, including demolition, bulk excavation, removal of existing structures, and clearing of trees and vegetation. It will also include the construction of three (3) x six-storey residential flat buildings comprising a total of 82 apartments, one to three levels of basement parking and associated landscaping.

1.2 Biodiversity Assessment Method

1.2.1 Project SEARS – Biodiversity Offset Scheme Entry

The proposal is a State Significant Development (SSD) and therefore a Biodiversity Development Assessment Report (BDAR) is required by virtue of the Secretary's Environmental Assessment Requirements (SEARs). The SEARs for the EIS (Application SSD-91496958, issued 22/08/2025) require the preparation of a BDAR. Specifically, this report has been prepared to respond to the SEARs requirement outlined in Table 1 below.

Table 1 SEARs That Relate to Biodiversity

Item	Description of Requirement	Section Reference
Biodiversity	- Unless a waiver has been granted, provide a Biodiversity Development Assessment Report (BDAR) that assesses any biodiversity impacts associated with the development in accordance with the <i>Biodiversity Conservation Act 2016</i> and the <i>Biodiversity Assessment Method 2020</i>. OR - If the development is on biodiversity certified land, provide information to identify the site (using associated mapping) and demonstrate the proposed development is consistent with the relevant biodiversity measure conferred by the biodiversity certification.	Biodiversity Development Assessment Report or BDAR Waiver



In some instances, the requirement for a BDAR can be waived by the Secretary where it can be demonstrated that the proposed development is unlikely to have a significant impact on biodiversity values. In the case of the current SSD application, the BOS applies as the Subject Land contains native vegetation, some of which is likely to be impacted directly or indirectly by the proposal, and therefore a BDAR waiver request is not suitable.

This BDAR has been prepared in accordance with the 2020 version of the Biodiversity Assessment Method (BAM) (DPIE 2020).

1.2.2 Streamlined Assessment Modules (Small Area and Planted Native Vegetation)

Under the BAM, the Streamlined Assessment Module – small area development can be applied to a project if it involves the clearing of native vegetation below a certain area depending on the minimum lot size of the subject lot, or the entire area of the lot, if no minimum lot size is provided in *Pittwater Local Environmental Plan 2014*. Table 2 lists the maximum area of native vegetation that can be cleared for a given minimum lot size for a project to be eligible for the Streamlined Assessment Module – small area development.

Table 2: Maximum Area Clearing Limits for Application into the Small Area Development Module

Minimum lot size	Maximum area clearing limit
Less than 1 ha	≤1 ha
Less than 40 ha but not less than 1 ha	≤2 ha
Less than 1000 ha but not less than 40 ha	≤3 ha
1000 ha or more	≤4 ha

The minimum lot size associated with the Study Area under the Pittwater Local Environmental Plan 2014 is 700 m². Given the project requires the clearing of <1 ha of native vegetation, the small area development module can be applied. Therefore, this BDAR has therefore been prepared in accordance with Appendix C of the BAM.

Some areas of the Subject Land contain planted native vegetation. These areas will be assessed under the Streamlined Assessment Module - Planted Native Vegetation (Appendix D of the BAM).

1.3 Purpose

The purpose of this BDAR is to document the findings of an assessment undertaken for the project in accordance with Stage 1 (Biodiversity Assessment) and Stage 2 (Impact Assessment) of the BAM. Specifically, the objectives of this BDAR are to:

- Identify the landscape features and site context (native vegetation cover) within the Subject Land and Assessment Area;
- Assess native vegetation extent, plant community types (PCTs), threatened ecological communities (TECs) and vegetation integrity (site condition) within the Subject Land;
- Assess habitat suitability for threatened species that can be predicted by habitat surrogates (ecosystem credits) and for threatened species that cannot be predicted by habitat surrogates (species credit species);



- Identify potential prescribed biodiversity impacts on threatened species;
- Describe measures to avoid and minimise impacts on biodiversity values and prescribed biodiversity impacts during project planning;
- Describe impacts to biodiversity values and prescribed biodiversity impacts and the measures to mitigate and manage such impacts;
- Identify the thresholds for the assessment and offsetting of impacts, including:
 - Impact assessment of potential entities of serious and irreversible impacts (SAIL);
 - Impacts for which an offset is required;
 - Impacts for which no further assessment is required; and
- Describe the application of the no net loss standard, including the calculation of the offset requirement.

1.4 Project Description

1.4.1 Location

The Project is located within the suburb of Mona Vale, New South Wales, approximately 24 km north of the Sydney Central Business District (CBD). The areas directly impacted by biodiversity, specifically vegetation removal, are hereafter referred to as the 'Subject Land'.

The Study Area encompasses approximately 0.63 ha and is located within the Northern Beaches Local Government Area (LGA). It comprises five lots: Lots 1-5 of DP111109, zoned R3 – Medium Density Residential. The Study Area is situated at the end of a no-through road, west of Pittwater Road, and is bordered by residential properties to the south and west. This section of Darley Street West is predominantly developed by two-storey apartment buildings featuring basement car parks, as well as two-storey townhouses. Darley Street West separates the Study Area from Bayview Golf Club to the north. Additionally, the Study Area is within one km of a substantial tract of bushland, which exhibits limited connectivity to vegetation within Ku-ring-gai National Park.

A site map and location map have been prepared in accordance with the BAM and are presented in Figure 1 and Figure 2, respectively. The Subject Land and Study Area are shown on these figures.

1.4.2 Project Overview

The Project will include the design and construction of a new residential flat development comprising:

- Site preparation works including demolition, excavation and tree removal;
- Construction of three (3) x 6-storey residential flat buildings, comprising:
 - 82 apartments, including:
 - ~ 72 market apartments;
 - ~ 10 affordable apartments (10.5% of GFA);
 - Separate residential lobbies; and
 - Communal open space.
- Construction of 1-3 storeys of basement parking, comprising:



- 164 car parking spaces, including:
 - ~ 156 residential spaces;
 - ~ Eight (8) accessible residential spaces;
- 27 bicycle parking spaces;
- Two (2) motorcycle parking spaces; and
- Waste and storage facilities.
- Associated landscaping works, including the relocation of two (2) palms, revegetation and additional plantings, as well as the installation of crushed sandstone pathways and a lounge seating platform.

The layout of the project is shown in Figure 3.

An Asset Protection Zone (APZ) is not required for this development.

1.4.3 Identification of the Development Site Footprint

The layout of the Project is shown in Figure 3. The development site footprint comprises 0.44 ha of land directly impacted by the Project and is referred to within this BDAR as the 'Subject Land'. All temporary/ancillary construction facilities and infrastructure will be contained within the operational footprint, or in additional paved and gravel areas, and areas where native vegetation is not present currently. Therefore, for the purposes of this assessment, the Subject Land comprises both the construction footprint and the operational footprint of the Project.

1.4.4 General Description of the Subject Land

The land comprises five suburban residential lots with four existing dwellings with associated driveways, and smaller structures such as garden sheds and a swimming pool.

The Subject Land slopes diagonally from the southeastern corner, which is approximately 19 m above sea level (ASL), down to the northwestern corner at approximately 10 m ASL.

An existing overland flow path traverses through the rear of the site; however, no mapped watercourses are present.

Vegetation across the Subject Land is varied and includes a combination of exotic vegetation, such as garden beds and plantings along boundaries; exotic grasslands, including mown lawn areas and overgrown open areas; planted native vegetation that do not conform to a Plant Community Type (PCT); and degraded native vegetation (where only the native canopy remains). The remnant native vegetation has been identified as conforming to PCT 3234 – Hunter Coast Lowland Spotted Gum Moist Forest.

Historical imagery analysis indicates that the Subject Land was predominately cleared prior to 1955. The native vegetation in the central and southern extent of the Subject Land appears to be regrowth, whilst the remaining vegetation appears to have been planted following 1955. Historical aerial imagery from 1951 covering the Study Area is shown in Figure 4.

The Subject Land is mapped as occurring on the Erina (9130er) soil landscape (DCCEEW (NSW) 2025a). Erina soil is characterised by undulating to rolling rises and low hills on fine-grained sandstones and claystones of the Narrabeen Group. Local relief to 60 m, slopes <20 %. Rounded narrow crests with moderately inclined slopes. Extensively cleared tall open-forest (wet sclerophyll forest) with open-heathland in exposed areas.



1.5 Information Sources

1.5.1 Databases

A number of databases were utilised during the preparation of this BDAR, including:

- Bionet Atlas of NSW Wildlife (DCCEEW (NSW) 2025b);
- DCCEEW (NSW) BioNet Vegetation Classification database (DCCEEW (NSW) 2025c);
- DCCEEW (NSW) Threatened Biodiversity Data Collection (TBDC) (DCCEEW (NSW) 2025d);
- Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW (Cwth)) Species Profile and Threat Database (DCCEEW (Cwth) 2025);
- The DPE eSPADE version 2.2 web portal (EHG 2025a);
- DCCEEW Directory of Important Wetlands in Australia (C'wth DCCEEW 2025); and
- DCCEEW Protected Matters Search Tool (DCCEEW 2025).

1.5.2 Literature

This BDAR has utilised the results and/or spatial data from the following documents:

- DPE NSW State Vegetation Type Map(EHG 2025b).

Other sources of information have been referenced throughout this BDAR.

1.5.3 Aerial Imagery

The aerial imagery utilised in this BDAR is sourced from NearMap and is dated from 12 March 2024. Additional aerial images available on NearMap and SixMaps (NSW Government Spatial Services 2025) were also consulted.



2.0 Methodology

2.1 Landscape Features

2.2 Review of Existing Data

Existing information on biodiversity values within the Subject Land and assessment area was reviewed, which included, but was not limited to:

- Species data that is held in the BioNet Atlas (DCCEEWS (NSW), 2025b);
- Vegetation mapping contained within the NSW State Vegetation Type Map (EHG 2025b); and
- Preliminary Ecological Assessment prepared for Intrec, 159-167 Darley Street West, Mona Vale (Cumberland Ecology Pty Limited 2021).

This existing information was considered and included, where appropriate, into survey design, vegetation mapping and reporting.

This BDAR has also utilised the results and/or spatial data from the following documents produced by the consultant team:

- Architectural drawings prepared for 159-167 Darley St – Project No. 2435, Revision A, dated 5 November 2025 (PBD Architects 2025);
- Arborist Impact Assessment for 159-167 Darley Street West, Mona Vale, Rev B, dated 13 November 2025 (Tree Wise Men Australia Pty Ltd 2025); and
- Landscape Plans for 159-167 Darley Street West, Mona Vale, Revision C, dated 7 November 2025 (Arcadia Landscape Architecture 2025).

2.2.1 Landscape Features

Landscape features requiring consideration were initially determined via desktop assessment, including review of aerial photographs in NearMap and contour intervals and labelled features on the topographic maps layer of SIX Maps (NSW Government Spatial Services 2024b). Field surveys undertaken on the 24 February 2021 and 12 September 2024 sought to verify the following landscape features:

- Rivers, streams and estuaries;
- Karsts, caves, crevices, cliffs and areas of geological significance; and
- NSW BioNet Landscapes.

Field surveys verified no changes were required to mapped landscape features.

2.2.2 Native Vegetation Survey

The native vegetation cover within the assessment area was determined through the use of existing vegetation mapping data, review of recent aerial imagery, and field surveys within the Subject Land. The existing vegetation mapping data utilised was the NSW State Vegetation Type Map (EHG 2025b).

The polygons of native vegetation within this dataset were revised following review of aerial imagery from NearMap dated 12 March 2024 where polygons were shown not to completely include vegetation in a patch or where polygons were present over cleared land.



Amendments were also made within the Subject Land following field surveys undertaken on 24 February 2021 and 12 September 2024 (see Section 2.3.1).

2.3 Native Vegetation Survey

2.3.1 Vegetation Mapping

Broad scale vegetation mapping has previously been undertaken across the Subject Land and Study Area by (EHG 2025b). Mapping was reviewed and then ground-truthed to examine and verify the condition and extent of plant communities present. Mapping of vegetation was undertaken by stratifying onsite vegetation based on previous mapping, and patterns visible on aerial imagery. SLR conducted additional vegetation surveys on 24 February 2021 and 12 September 2024 to verify and update the vegetation extent and PCT mapping. The vegetation within the Subject Land was ground-truthed to examine and verify the mapping of the condition and extent of the different plant communities. Mapping of plant communities within the Subject Land was undertaken by random meander surveys through patches of vegetation, noting key characteristics of areas in similar broad condition states such as similar tree cover, shrub cover, ground cover, weediness, or combinations of these. Vegetation within the Subject Land was assessed as native vegetation for the purpose of this assessment if it contained any native vegetation.

Mark-ups of plant community boundaries was made on a recent aerial photograph using an android tablet with a Global Positioning System (GPS) chip using the ArcGIS Field Maps app. Notes, waypoints, and photographs documenting vegetation condition were collected using the ArcGIS Survey 123 app. The resultant information was synthesised using GIS to create a spatial database that was used to interpret and interpolate the data to produce a vegetation map of the Subject Land and Study Area.

2.3.2 Plot based Vegetation Surveys and Vegetation Integrity Assessment

A plot-based vegetation survey and vegetation integrity assessment was undertaken concurrently within the Subject Land and adjoining area in accordance with the BAM (hereafter referred to as 'BAM plots'). BAM plots were undertaken in accordance with Section 4.2.1 and Section 4.3.2 of the BAM.

A single BAM plot (P1) was undertaken within the Subject Land on 12 September 2024, and its location is shown in Figure 5.

The BAM plot required the establishment of a 20 x 50 m plot with an internal 20 x 20 m plot. Data on the BAM attributes: composition, structure and function, was collected within each of the plots:

- Composition for each growth form group by counting the number of native plant species recorded for each growth form group within a 20 x 20 m floristic plot;
- Structure of each growth form group as the sum of all the individual projected foliage cover estimates of all native plant species recorded within each growth form group within a 20 x 20 m floristic plot;
- Assessment of function attributes within a 20 x 50 m plot, including:
 - Count of number of large trees;
 - Tree stem size classes, measured as 'diameter at breast height over bark' (DBH);
 - Regeneration based on the presence of living trees with stems <5 cm DBH;
 - The total length of fallen logs over 10 cm in diameter;



- Assessment of litter cover within five 1 x 1 m plots evenly spread within the 20 x 50 m plot; and
- Cover of 'High Threat Exotic' weed species within a 20 x 20 m floristic plot; and
- Number of trees with hollows that are visible from the ground within the 20 x 50 m plot.

Table 3 summarises the plot requirements based on the size and number of vegetation zones in the Subject Land. As shown in this table, the minimum number of plots has been completed for the vegetation zone identified within the Subject Land.

Table 3: Vegetation Integrity Plots

Vegetation Zone	PCT	Condition Name	Area (ha)	Minimum Number of Plots Required	Number of Completed Plots	Plot Name
1	3234	Degraded	~0.08	1	1	P1

2.4 Threatened Species Survey

2.4.1 Threatened Flora

2.4.1.1 Habitat Constraints

Desktop assessments and field surveys within the Subject Land included assessment of habitat constraints and microhabitats for predicted species credit flora species. This included desktop assessment of proximity of the Subject Land and Study Area to features such as cliffs in accordance with Section 5.2 of the BAM. Five (5) of the nine (9) threatened flora species were subsequently removed from consideration on the basis of degradation of microhabitats or absence of required microhabitats (See Section 5.3).

2.4.1.2 Targeted Threatened Flora Species Surveys

Targeted threatened flora surveys were undertaken within the Subject Land for four (4) species credit species that were assessed as candidate species credit species for further assessment (see Section 5.3). The locations of the targeted flora species surveys are shown in Figure 5.

Species credit species that were assessed as candidate species credit species for further assessment during targeted surveys are:

- *Melaleuca deanei* (Deane's Paperbark);
- *Persoonia hirsuta* (Hairy Geebung);
- *Rhodamnia rubescens* (Scrub Turpentine); and
- *Rhodomyrtus psidioides* (Native Guava).

Further details of the targeted flora survey methodology utilised in the Subject Land are provided below in Table 4.



Table 4: Targeted Threatened Flora Species Survey Methods

Scientific Name	Common Name	Recommended Survey Period	Dates of Survey	Survey Method
<i>Melaleuca deanei</i>	Deane's Paperbark	Year-round	12 September 2024	Plot-based survey, random meander, parallel transects
<i>Persoonia hirsuta</i>	Hairy Geebung	Year-round	12 September 2024	Plot-based survey, random meander, parallel transects
<i>Rhodamnia rubescens</i>	Scrub Turpentine	Year-round	12 September 2024	Plot-based survey, random meander, parallel transects
<i>Rhodomyrtus psidioides</i>	Native Guava	Year-round	12 September 2024	Plot-based survey, random meander, parallel transects

Based on the nature of the Subject Land, with vegetation having a highly modified and degraded understorey, it is highly unlikely threatened flora species would be present within the Subject Land due to the absence or degradation of suitable microhabitats. Nonetheless, threatened flora surveys were undertaken within the site, through the completion of random meander surveys within native vegetation as per *Surveying threatened plants and their habitats: NSW survey guide for the Biodiversity Assessment Method* (NSW Government 2020), and plot-based surveys. The entirety of the Study Area was traversed in accordance with the maximum width for parallel field traverses to identify all species (trees, shrubs, herbs and forbs, etc.) in open vegetation. However, transects spacings were frequently closer. The locations of the targeted flora species surveys are shown on Figure 5. These surveys were undertaken on 12 September 2024. No plant species were located during the survey that were unknown to the botanist undertaking the surveys, due to the botanist having extensive experience with similar habitats on the Northern Beaches of Sydney.

The locations of the random meander survey within the Subject Land are shown in Figure 5.

Species credit flora species determined as not requiring further assessment due to habitat constraints or degradation of available habitat include *Eucalyptus scoparia* (Wallangarra White Gum), *Genoplesium baueri* (Bauer's Midge Orchid), *Grevillea caleyi* (Caley's Grevillea), *Microtis angusii* (Angus's Onion Orchid), and *Rhizanthella slateri* (Eastern Australian Underground Orchid).

2.4.2 Threatened Fauna

2.4.2.1 Habitat Constraints Assessment

Desktop assessments and field surveys within the Subject Land and Study Area included assessment of habitat constraints and microhabitats for predicted species credit fauna



species. This included desktop assessment of proximity of the Subject Land and Study Area to features such as cliffs, caves and wetlands and field inspection of microhabitats including leaf litter, stick nests, crevices, important food trees, hollowing-bearing trees and riparian vegetation. A fauna habitat assessment was conducted by an ecologist on 24 February 2021 and 12 September 2024 (Figure 6).

This desktop assessment resulted in the removal of nine threatened species from consideration as a species credit species, as per the justifications provided in Section 5.3.2.

2.4.2.2 Threatened Fauna Species Surveys

No threatened fauna species have been assessed as candidate species credit species for further assessment (see Section 5.3). As the project is being assessed under the BAM Streamlined Assessment Module – small area development, candidate species credit species that are not at risk of an SAIL and are not incidentally recorded within the Subject Land do not require further assessment.

Species credit fauna species determined to not require further assessment due to absence of habitat constraints or not being located on an important area map include the Regent Honeyeater (*Anthochaera phrygia*), Large-eared Pied Bat (*Chalinolobus dwyeri*), Leatherback Turtle (*Dermochelys coriacea*), Swift Parrot (*Lathamus discolor*), Little Bent-winged Bat (*Miniopterus australis*), Large Bent-winged Bat (*Miniopterus orianae oceanensis*), Eastern Curlew (*Numenius madagascariensis*), Sooty Owl (*Tyto tenebricosa*) and the Eastern Cave Bat (*Vespadelus troughtoni*).

2.5 Weather Conditions

Weather conditions during the field survey were appropriate for BAM plots and detection of target species credit species. A summary of weather conditions in the locality leading up to and during the field surveys is provided in Table 5. Rainfall and temperature data was sourced from BOM Weather Station 66059 - Terrey Hills AWS for temperature and BOM Weather Station 066141 – Mona Vale Golf Club for rainfall (Bureau of Meteorology 2025).

Table 5: Weather Conditions During Field Survey

Date	Temperature Minimum (°C)	Temperature Maximum (°C)	Rainfall (mm)
Proceeding Months*			
November 2020	15.3	25	68.4
December 2020	16.6	24	176.4
January 2021	17.4	25.3	101.4
July 2024	8.0	15.9	123.6
August 2024	11.1	19.6	68.4
September 2024	11.7	21.8	70.2
During Surveys			
24 February 2021	15.1	21.1	18.6
12 September 2024	15.2	18.8	0

* For preceding months values, temperatures are provided as a mean value, and rainfall is provided as a total for the month.



3.0 Landscape Features

3.1 Assessment Area

The Subject Land is approximately 0.44 ha in area and is shown in Figure 1. As the Project is being assessed as a site-based Project, the assessment area comprises the area of land within a 1,500 m buffer around the outer boundary of the Subject Land. The assessment area is approximately 750.28 ha in area and is shown in Figure 2.

3.2 Landscape Features

Landscape features identified within the Subject Land and assessment area are outlined below. The extent of these features within the Subject Land is shown in Figure 1 and the extent within the assessment area is shown in Figure 2.

3.2.1 IBRA Bioregions and IBRA Subregions

The Subject Land and assessment area occur within the Sydney Basin IBRA bioregion and within the Pittwater IBRA subregion.

3.2.2 Rivers, Streams, Estuaries and Wetlands

The Subject Land and assessment area occur within the Cahill Creek sub catchment of the Mona Vale - Bayview Catchment Creek catchment.

An existing overland flow path traverses through the rear of the site; however, no hydrolines are mapped by the NSW DCCEE on land within the Assessment Area (Figure 2).

3.2.3 Important Wetlands

No important wetlands listed in the Directory of Important Wetlands in Australia are present in the Subject Land or assessment area.

3.2.4 Habitat Connectivity

The Subject Land occurs for the most part in a highly developed urban environment, although there is some connectivity to patches of vegetation within the Bayview Golf Course which is located directly north of Darley Street West and just beyond a small area of residential development to the east of the Subject Land.

Within the broader landscape, patches of vegetation within the Golf Course connect to larger, undeveloped vegetation corridors that extend westward within the suburbs of Bayview and Ingleside. To the south and east of the Subject Land, the landscape is characterised by a mix of suburban and industrial development, and main arterial roads such as Pittwater Road and Barrenjoey Road, interspersed with small, fragmented patches of remnant/regrowth and planted native and exotic trees that function as stepping-stone habitat for highly mobile fauna species as a local habitat corridor.

3.2.5 Karst, Caves, Crevices, Cliffs, Rocks or Other Geological Features of Significance

No karsts, caves, crevices, cliffs or areas of geological significance have been identified within the assessment area based on searches of available aerial imagery from NearMap, or topographic data/contour intervals available from SixMaps (NSW Government Spatial Services 2024b).



3.2.6 Areas of Outstanding Biodiversity Value

No Areas of Outstanding Biodiversity Value have been mapped within the Subject Land or assessment area.

3.2.7 NSW (Mitchell) landscape

The Subject Land occurs within the 'Sydney – Newcastle Barriers and Beaches' BioNet NSW (Mitchell) Landscape (Department of Environment 2002).

Sydney – Newcastle Barriers and Beaches is described as *quaternary coastal sediments on long recurved quartz sand beaches between rocky headlands backed by sand dunes and intermittently closed and open lagoons. Includes areas of more extensive high dunes often located on top of the headlands. General elevation 0 to 30m, local relief 10m. Cliff top dunes may be found as high as 90m above sea level. Distinct zonation of vegetation and increasing soil development from the beach to the inland dunes* (Department of Environment 2002).

3.2.8 Soil Hazard Features

Soil hazard features have not been identified as the Project does not comprise a vegetation clearing proposal requiring approval under Part 5A of the *NSW Local Land Services Act 2013* (LLS Act), or a permit under *NSW State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017*.

3.3 Native Vegetation Cover

The native vegetation cover was determined through the use of GIS to map native vegetation cover within the Subject Land and Assessment Area. This assessment utilised the detailed vegetation mapping prepared by SLR in conjunction with the NSW State Vegetation Type Map (EHG 2025b). The native vegetation cover within the assessment area is shown in Figure 2. The assessment area is approximately 750.28 ha, of which approximately 133.70 ha comprises native vegetation cover, which represents 17.82% of the assessment area. Therefore, the native vegetation cover value is assigned to the cover class of >10-30%.

The remaining land within the assessment area comprises cleared land, and exotic vegetation. No significant differences between the aerial photographs used in this assessment and the native vegetation cover shown in Figure 2 have been identified; however, some adjustments to PCT polygons were undertaken to include vegetated areas that were identified outside mapped polygons, or where polygons included developed/cleared areas.



4.0 Native Vegetation

4.1 Native Vegetation Extent

The Subject Land has been subject to detailed surveys by SLR (formerly Cumberland Ecology) for the purpose of this BDAR. The native vegetation extent within the Subject Land was determined through a combination of aerial photograph interpretation and field surveys. The extent of native vegetation is shown in Figure 2 and occupies approximately 0.13 ha, which represents 29% of the Subject Land. 62.5% this vegetation comprises non-indigenous native species, likely planted with the remainder assigned to a Plant Community Type (PCT).

The remainder of the Subject Land comprises exotic vegetation (0.12 ha), exotic dominated grassland (0.04 ha), and existing developed/cleared land (0.16 ha). Exotic vegetation, exotic dominated grassland, and existing developed land/cleared land are not included in the native vegetation extent and do not require further assessment, in accordance with Section 4.1.2 of the BAM.

No additional differences between the aerial photographs used in this assessment and the native vegetation cover shown in Figure 7 have been identified.

4.2 Plant Community Types

4.2.1 Overview

Identification of the PCTs occurring within the Subject Land and Study Area was guided by desktop review of State Vegetation Type Map (SVTM) (EHG 2025b), other mapping schemes, and the results of the surveys undertaken by SLR.

The data collected during surveys of the Subject Land and Study Area was analysed in conjunction with a review of the PCTs held within the BioNet Vegetation Classification database (EHG 2025a). In selecting PCTs, consideration was given to the following:

- Location, with occurrence within the Pittwater IBRA subregion;
- Vegetation formation;
- Landscape position; and
- Floristics, including upper, mid and ground strata species.

The analysis determined that the native vegetation within the Subject Land is regrowth aligned with one PCT held within the BioNet Vegetation Classification database (EHG 2025c).

Table 6 provides a summary of the PCTs identified within the Subject Land, whilst the distribution of PCTs is shown in Figure 8. Details of the vegetation within the Subject Land are outlined below, including justification for PCT selection.

Table 6: Plant Community Types and other vegetation within the Subject Land

Vegetation Community	PCT	BC Act	EPBC Act	Area within Subject Land (ha)
Hunter Coast Lowland Spotted Gum Moist Forest	3234	EEC	-	~0.08
Planted Native Vegetation	-	-	-	0.05



Vegetation Community	PCT	BC Act	EPBC Act	Area within Subject Land (ha)
Exotic Vegetation	-	-	-	0.12
Exotic Dominated Grassland	-	-	-	0.04
Cleared Land	-	-	-	0.16
			Total area	0.44

Key: EEC = Endangered Ecological Community

4.2.2 PCT 3234 Hunter Coast Lowland Spotted Gum Moist Forest

Vegetation Formation: Wet Sclerophyll Forests (Grassy sub-formation)

Statewide Class: Northern Hinterland Wet Sclerophyll Forests

Percent Cleared: 27.64%

4.2.2.1 General Description

PCT 3234 consists of a tall to very tall sclerophyll open forest with a mid-stratum of mesophyll shrubs and a ground layer of grasses, graminoids and small climbers, found on sheltered Permo-Triassic sandstone escarpments and hills along the coastal lowlands between Pittwater and the Karuah River, central and lower North Coast.

The tree canopy commonly includes a high cover of *Corymbia maculata* (Spotted Gum), occasionally with *Eucalyptus paniculata* (Grey Ironbark) and *Eucalyptus umbra* (Broad-leaved White Mahogany) or another related species from the mahogany group of eucalypts. One or all of these species may be replaced or accompanied by a range of other species, occasionally including *Angophora costata* (Sydney Red Gum), rarely *Syncarpia glomulifera* (Turpentine) or *Corymbia gummifera* (Red Bloodwood).

The mid-stratum is layered with a sparse cover of smaller trees that commonly includes *Allocasuarina torulosa* (Forest Oak), eucalypt species, *Pittosporum undulatum* (Sweet Pittosporum) or *Glochidion ferdinandi* (Cheese Tree), and rarely *Allocasuarina littoralis* (Black She-Oak). Occasionally a sparse cover of *Livistona australis* (Cabbage Tree Palm) may be present, though more frequently it is recorded in the lower shrub layer. Other members of the lower shrub layer very frequently include *Breynia oblongifolia* (Coffee Bush), commonly with *Notelaea longifolia* (Large Mock-olive), and occasionally *Pittosporum undulatum* (Sweet Pittosporum), *Pittosporum revolutum* (Wild Yellow Jasmine), and *Myrsine variabilis* (Muttonwood).

The ground layer has a high diversity of mesic climbers with *Eustrephus latifolius* (Wombat Berry) and *Pandorea pandorana* subsp. *pandorana* (Wonga Wonga Vine) almost always present. Grasses very frequently include *Imperata cylindrica* (Blady Grass) and *Entolasia stricta* (Wiry Panic) and occasionally *Oplismenus imbecillis* (Creeping Beard Grass), while the fern *Pteridium esculentum* (Common Bracken) is very frequent. The graminoids *Dianella caerulea* (Blue Flax-lily) and *Lomandra longifolia* (Spiny-headed Mat-rush) are almost always present.

This PCT is common on low-lying Narrabeen sandstone escarpments and hills between Pittwater and the lower Central Coast between Wagstaff, Bouddi and Wamberal. From there, its distribution northwards is interrupted until Lake Macquarie, where it is more commonly associated with Permian sediments in similar low-lying coastal landscapes north to Newcastle. This community grades into dry shrub grass forests, PCT 3437 on adjoining



exposed aspects in the coastal low elevation landscapes and is replaced by PCT 3230 on coarser Narrabeen sandstone soils or in lower rainfall zones.

This PCT occupies a patch of vegetation across the rear yards of the five parcels of land, along with several smaller patches distributed throughout the Study Area. Within the Subject Land, there is one condition zone of PCT 3234 (Figure 9), which is in degraded condition. In this area, the PCT is represented by scattered trees of varying maturity occurring over an exotic-dominated, highly degraded, and actively managed urban understorey.

4.2.2.2 Zones

i. CT 3234 Degraded

This condition zone is the only condition zone within the Subject Land and consists of PCT 3234 with a native canopy. This community occurs throughout the Study Area as scattered trees of varying maturity occurring over an exotic dominated, highly degraded and managed urban understorey. The Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion (PWSGF) canopy within the Study Area is dominated by *Eucalyptus paniculata* (Grey Ironbark), *Corymbia maculata* (Spotted Gum) and *Eucalyptus punctata* (Grey Gum) with single occurrences of *Corymbia gummifera* (Red Bloodwood) and *Eucalyptus pilularis* (Blackbutt). *Livistona australis* (Cabbage Tree Palm) individuals of varying maturity are also scattered throughout the Subject Land.

Due to the degraded nature of the understorey, the native shrub layer is very sparse with occasional instances of a number of native species characteristic to the PWSGF community including *Glochidion ferdinandi* (Cheese tree) and *Pittosporum undulatum* (Sweet Pittosporum).

The ground layer is mostly dominated by a maintained cover of exotic grasses such as *Stenotaphrum secundatum* (Buffalo Grass) and to a lesser extent *Ehrharta erecta* (Panic Veldtgrass). Scattered natives *Hydrocotyle laxiflora* (Stinking Pennywort), and *Oplismenus aemulus* (Australian basket Grass) also occur throughout the site. *Commelina cyanea* (native Commelina) is also present throughout the site, along with occurrences of the native creeping herb *Dichondra repens* (Kidney Weed) circling the base of canopy trees and scattered beneath exotic mowed grasses across the site. This vegetation community is shown below in Photograph 1 and Photograph 2.



Photograph 1: PCT 3234 Hunter Coast Lowland Spotted Gum Moist Forest - Degraded



Photograph 2: PCT 3234 Hunter Coast Lowland Spotted Gum Moist Forest - Degraded



4.2.2.3 PCT Justification

Justification for selection of PCT 3234 is detailed in Table 7 below.

Table 7: PCT 3234 Selection Justification

Search Term / Filter	Selection / Discussion
Non-PCT Filter Tool Methods	
Likely PCT matches from SVTM (pre-clearing) in site-specific mapping or located nearby	PCT shortlist of six PCTs: 3581, 3230, 4006, 4028, 3546, 3234
PCT Filter Tool	
IBRA Bioregion	Sydney Basin
IBRA Subregion	Pittwater
Upper stratum	<i>Corymbia gummifera</i> (Red Bloodwood), <i>Corymbia maculata</i> (Spotted Gum), <i>Eucalyptus paniculata</i> (Grey Ironbark), <i>Eucalyptus punctata</i> (Grey Gum), <i>Glochidion ferdinandi</i> (Cheese Tree), <i>Livistona australis</i> (Cabbage-Tree Palm), and <i>Pittosporum undulatum</i> (Sweet Pittosporum)
Shrub	<i>Banksia integrifolia</i> (Coast Banksia)
Ground	<i>Oplismenus aemulus</i> (Australian Basket Grass), <i>Microlaena stipoides</i> var. <i>stipoides</i> (Weeping Grass), <i>Pratia purpurascens</i> (Whiteroot), and <i>Viola banksii</i> , <i>Cissus hypoglauca</i> (Native Grape)
Shortlist	Highest matches shortlist of eleven PCTs: 3581, 3230, 3234, 3039, 3040, 3437, 3592, 3594, 3242, 3250, and 4044
Discarded PCTs	- PCT 4006 was discarded as it occurs on low-lying coastal alluvial swamps, depressions, and back-barrier sand flats. - PCT 4028 was discarded as it typically features <i>Casuarina glauca</i>, <i>Machaerina juncea</i>, and <i>Juncus kraussii</i> subsp. <i>australiensis</i>, and is found on the edges of tidal estuarine and creek flats. - PCT 3546 was discarded as it is found in the littoral zone on coastal dunes and, less commonly, headlands. - PCTs 3039 and 3040 were discarded as they represent rainforest communities. - PCT 4044 was discarded as it is a forested wetland classified as a Coastal Floodplain Wetland. - PCT 3250 was discarded as the IBRA subregion does not include Pittwater. - PCT 3581 was discarded as it typically occurs on enriched sedimentary hills and rises on the coastal plains between Gosford and Wallis Lake. Its canopy is dominated by <i>Angophora costata</i>, with frequent presence of <i>Corymbia gummifera</i> and <i>Eucalyptus piperita</i>. - PCT 3230 was discarded as it is commonly associated with <i>Angophora floribunda</i> and <i>Syncarpia glomulifera</i>, neither of which were recorded on the Subject Land and is located on coarser Narrabeen soils.



Search Term / Filter	Selection / Discussion
	- PCT 3437 matches the majority of the floristic characteristics of the vegetation within the Subject Land, as well as the geology and location. PCT 3437 however is a drier community, than the selected PCT 3234, occurring in more exposed locations, and although the Subject Land is degraded, there are some remaining vegetation elements associated with damper and more sheltered locations which favour selection of PCT 3234. <i>Livistona australis</i> is relatively common in PCT 3234, occurring in 42% of reference plots for the PCT detailed in the BioNet Vegetation Classification database, and only 4% of plots for PCT 3437. <i>Cissus hypoglauca</i> is also relatively common in PCT 3234, occurring in 34% of reference plots, however, has never been recorded in PCT 3437. - PCT 3592 was discarded as its canopy is frequently dominated by <i>Angophora costata</i>, which was not recorded on the Subject Land. - PCT 3594 was discarded as it occurs along foreshores of major waterways and coastal escarpments. The canopy is typically dominated by <i>Angophora costata</i>, occasionally with <i>Eucalyptus botryoides</i>, neither of which were recorded on the Subject Land. - PCT 3242 was discarded as it occurs on sheltered slopes of coastal hills and ranges between Gosford and Taree, in the Hunter and Lower North Coasts.
Selected PCT	PCT 3234 was selected as it is found on sheltered Permo-Triassic sandstone escarpments and hills along the coastal lowlands. Upon review of soil landscape mapping, the Subject Land was identified to occur within the "Erina" soil landscape, which is a Narrabeen group soil landscape characterised by fine-grained sandstones and shales on undulating low hills (Chapman, Murphy et al. 2005). The community is described as commonly having a tree canopy that includes a high cover of <i>Corymbia maculata</i>, occasionally with <i>Eucalyptus paniculata</i>, both of which are present within the Subject Land, with <i>Eucalyptus paniculata</i> comprising the majority of the remnant trees. These species may be replaced or accompanied by a range of other species, occasionally including <i>Corymbia gummifera</i>, which is also present within the Subject Land, along with <i>Eucalyptus punctata</i>, which is noted in the BioNET Vegetation Classification database as occurring within 25% of the reference plots assigned to the PCT. The mid-stratum is described as layered with a sparse cover of smaller trees that commonly includes <i>Pittosporum undulatum</i> or <i>Glochidion ferdinandi</i>, which were recorded within the Subject Land, along with <i>Livistona australis</i>, described as being present occasionally with a sparse cover. Additional persisting native species within the understorey and ground layer of the Subject Land consistent with the PCT include the vine <i>Cissus hypoglauca</i> and grass <i>Oplismenus aemulus</i>. Additionally, of the 19 criteria entered into the PCT Filter Tool, 15 of the criteria matched PCT 3234. No other PCTs recorded a higher number of matches.



4.2.3 Alignment with Threatened Ecological Communities

This section provides commentary as to whether the locally native scattered trees within the Subject Land are consistent with the Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion (PWSGF) BC Act listing. PWSGF is listed as Endangered under the BC Act and is not listed on the EPBC Act.

i. Location

The final determination for PWSGF states the following:

“The ecological community has been recorded from the local government areas of Pittwater and Gosford, within the Sydney Basin Bioregion, and may occur elsewhere in the Bioregion.”

The Subject Land occurs within the former extent of the Pittwater LGA which is consistent with the final determination for PWSGF.

ii. Floristics

A majority of the locally native scattered trees within the Subject Land are listed as characteristic species of PWSGF including *Corymbia gummifera* (Red Bloodwood), *Corymbia maculata* (Spotted Gum), *Eucalyptus paniculata* (Grey Ironbark), *Livistona australis* (Cabbage-Tree Palm), *Glochidion ferdinandi* (Cheese Tree) and *Pittosporum undulatum* (Sweet Pittosporum). Whilst the native understorey of the Subject Land is absent or highly degraded, some scattered characteristic species are present, such as *Cissus hypoglauca* (Native Grape) and *Pratia purpurascens* (White Root).

The final determination for PWSGF states the following:

“The structure of Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion was originally open-forest however, it now exists outside of reserves as woodland or remnant trees with few large stands remaining. Remnant trees may have particular ecological and genetic significance and may be important sources of propagation material for use in rehabilitation projects.”

Subsequently, the locally native, scattered trees comprising characteristic species of PWSGF are considered to conform to the TEC, despite the lack of an intact understorey.

iii. Soils

The final determination for PWSGF (Environment and Heritage 2013) states the following:

“Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion is known to occur on shale-derived soils from Narrabeen series geology (Bell & Stables 2012). The ecological community has been recorded from the local government areas of Pittwater and Gosford, within the Sydney Basin Bioregion, and may occur elsewhere in the Bioregion.”

Upon review of soil landscape mapping, the Subject Land was identified to occur within the Erina soil landscape which is a Narrabeen group soil landscape characterised by fine-grained sandstones and shales on undulating low hills (Chapman et al. 2005). The soil landscape mapped across the Subject Land is consistent with that described in the PWSGF final determination. Furthermore, mapped occurrences of PWSGF within 1 km of the Subject Land also occur on the Erina soil landscape.

iv. Conclusion

As described above, the scattered locally native trees within the Subject Land are consistent with the final determination for PWSGF and as such are considered to comprise the TEC. The location of the TEC within the Subject Land is consistent with the distribution of PCT 3234 Hunter Coast Lowland Spotted Gum Moist Forest, as shown in Figure 9.



4.3 Non-PCT Vegetation

4.3.1 Planted Native Vegetation

The upper canopy of this community is dominated by likely planted, non-indigenous natives that do not conform to PCT 3234, including single individuals of *Eucalyptus saligna* (Sydney Blue Gum), and *Eucalyptus bicostata* (Southern Blue Gum). Other non-indigenous natives such as *Macadamia tetraphylla* (Rough-shelled Queensland Nut), *Macadamia integrifolia* (Bush Nut), *Brachychiton acerifolius* (Flame Tree), *Callistemon citrinus* (Crimson Bottlebrush), *Callistemon salignus* (Willow Bottlebrush) and *Melaleuca styphelioides* (Prickly-leaved Paperbark) also contribute to this vegetation community.

An example of this vegetation community is seen below in Photograph 4.

Photograph 3: Planted Native vegetation (background) within the Subject Land



The BAM includes a streamlined assessment module for “planted native vegetation”. This module simplifies the assessment of impacts on planted native vegetation within a development site. The decision-making key outlined in Section D.1 of Appendix D of the BAM provides a framework to determine whether the streamlined assessment module for planted native vegetation can be applied to a site.

An assessment against the decision-making key in Appendix D of the BAM was undertaken and it was determined that areas mapped as Planted Native Vegetation in the Subject Land (refer to Figure 8) did not need to be assigned to a PCT. Table 8 provides an assessment against the decision-making key for the Subject Land.



Table 8: Decision-Making Key to Determine the Application of the Streamlined Assessment Module for Planted Native Vegetation

Decision-Making Key	Response
1. Does the planted native vegetation occur within an area that contains a mosaic of planted and remnant native vegetation and which can be reasonably assigned to a PCT known to occur in the same IBRA subregion as the proposal?	No – the planted native vegetation does not form a mosaic with remnant native vegetation. Areas that do form a mosaic with native species have been included in PCT 3234 Section 4.2.2 and Section 4.2.3. The areas of Planted Native Vegetation within the Subject Land are separated from areas of the PCT, and have an exotic dominated ground layer
2. Is the planted native vegetation: a. planted for the purpose of environmental rehabilitation or restoration under an existing conservation obligation listed in BAM Section 11.9(2), and b. the primary objective was to replace or regenerate a plant community type or a threatened plant species population or its habitat?	No – the Planted Native Vegetation has not been (a). planted for the purposes of environmental rehabilitation or restoration, or (b) to replace or regenerate a PCT or threatened species population or habitat. Plantings are predominately a mix of species which would not have historically been indigenous to the suburb, and plantings do not occur in association with any attempts at revegetation of the shrub or ground layer, they occur over exotic dominated grassland.
3. Is the planted/translocated native vegetation individuals of a threatened species or other native species planted/translocated for the purpose of providing threatened species habitat under one of the following: a. a species recovery project b. Saving our Species project c. other types of government funded restoration project d. condition of consent for a development approval that required those species to be planted or translocated for the purpose of providing threatened species habitat e. legal obligation as part of a condition or ruling of court. This includes regulatory directed or ordered remedial plantings (e.g. Remediation Order for clearing without consent issued under the BC Act or the Native Vegetation Act) f. ecological rehabilitation to re-establish a PCT or TEC that was, or is carried out under a mine operations plan, or g. approved vegetation management plan (e.g. as required as part of a Controlled Activity Approval for works on waterfront land under the NSW Water Management Act 2000)?	No – the Planted Native Vegetation has not been planted to provide habitat for threatened species under any of options a-g, and does not comprise individuals of any translocated threatened species.
4. Was the planted native vegetation (including individuals of a threatened flora species) undertaken voluntarily for revegetation, environmental rehabilitation or restoration without a legal obligation to secure or provide for management of the native vegetation?	No – planted native vegetation was not undertaken for the purposes of revegetation, rehabilitation or restoration.
5. Is the native vegetation (including individuals of a threatened flora species) planted for functional,	Yes – native species have been planted for aesthetic/horticultural purposes as part of the



Decision-Making Key	Response
<i>aesthetic, horticultural or plantation forestry purposes? This includes examples such as: windbreaks in agricultural landscapes, roadside plantings (including street trees, median strips, roadside batters), landscaping in parks, gardens and sport fields/complexes, macadamia plantations or teatree farms?</i>	landscaping for the current dwellings. Planted Native Vegetation has been considered for use by threatened species within Chapter 5 of this BDAR.
<i>6. Is the planted native vegetation a species listed as a widely cultivated native species on a list approved by the Secretary of the Department (or an officer authorised by the Secretary)?</i>	Yes – some vegetation is on this list. <i>Cynodon dactylon</i> is present within mown and unmown grassland areas (it is considered exotic in this BDAR as per the Flora of Australia). Other species recorded within the Subject Land are widely cultivated native species. These species are <i>Eucalyptus saligna</i> (Blue Gum), and <i>Eucalyptus bicostata</i> (Southern Blue Gum). Other non-indigenous natives are <i>Macadamia tetraphylla</i> (Rough-shelled Queensland Nut), <i>Macadamia integrifolia</i> (Bush Nut), <i>Brachychiton acerifolius</i> (Flame tree), <i>Callistemon citrinus</i> , <i>Callistemon saligna</i> and <i>Melaleuca styphelioides</i> .

4.3.2 Exotic Vegetation

Exotic vegetation occurs across the Subject Land in the form of a diverse array of planted Exotic Trees and shrubs in garden beds and along boundaries. The most numerous canopy species in this community is *Jacaranda mimosa* (Jacaranda), which occurs throughout, with scattered planted individual *Syagrus romanzoffiana* (Cocos Island Palm), *Cinnamomum camphora* (Camphor Laurel), as well as *Ligustrum lucidum* (Large-Leaved Privet) and *Hymenosporum flavum* (Frangipani).

The ground cover within the garden beds is composed of a wide range of domesticated plants; the most populous being *Agapanthus praecox* (African Lily), Fishbone Fern (*Nephrolepis cordifolia*), *Dietes iridioides* (African Iris) and *Hedera helix* (English Ivy). This vegetation is shown in Photograph 4.



Photograph 4: Exotic Vegetation within the Subject Land



4.3.3 Exotic Dominated Grassland

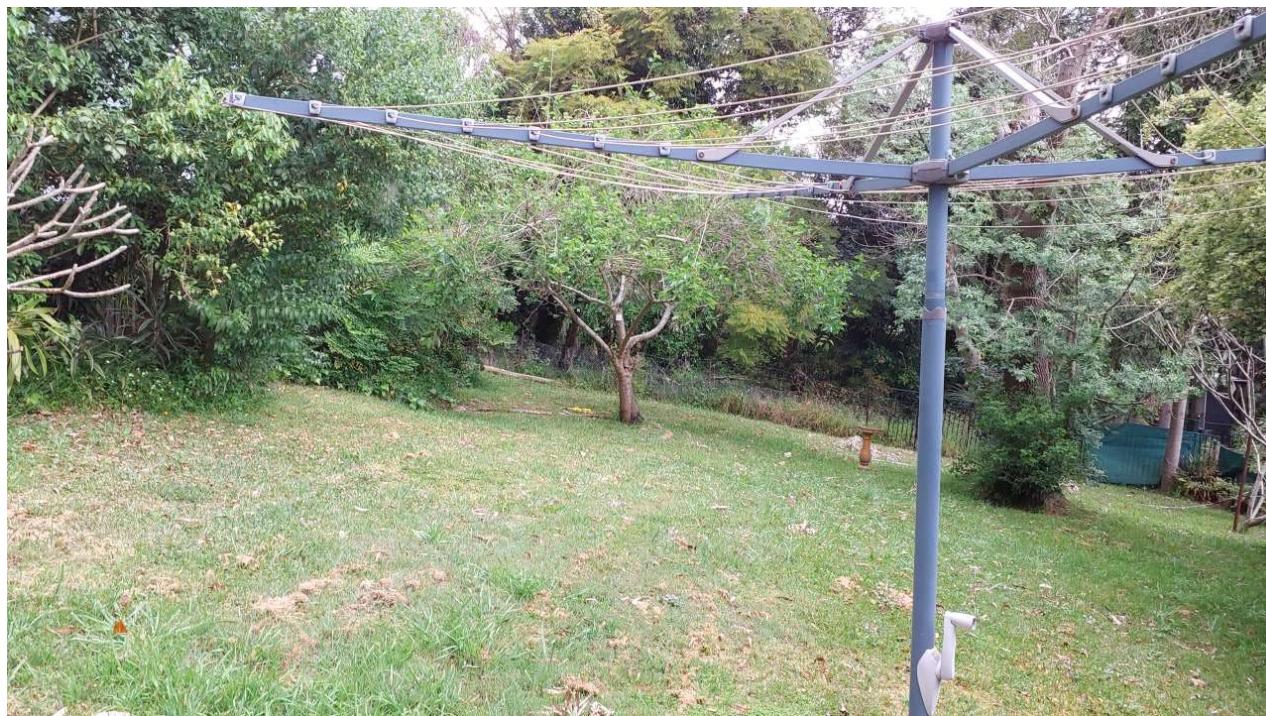
This vegetation occurs within the Subject Land as mowed lawn areas and overgrown open areas.

The ground layer in the lawn areas are mostly dominated by the exotic lawn grasses *Stenotaphrum secundatum* (Buffalo Grass) and *Cenchrus clandestinus* (Kikuyu Grass), with a scattered sublayer of the natives *Oplismenus aemulus* (Australian Basket Grass). A number of forbs also occur across the exotic grassland including *Taraxacum officinale* (Dandelion), *Hypochaeris radicata* (Catsear), *Sida rhombifolia* (Paddy's Lucerne) and *Bidens pilosa* (Cobblers Pegs).

An example of this vegetation is seen below in Photograph 5.



Photograph 5: Exotic Dominated Grassland within the Subject Land



4.4 Exotic Species

As indicated by the results of the field surveys, the vegetation in the Subject Land is degraded and dominated by exotic species overall.

Of the exotic species recorded from the Subject Land, 19 species are listed as High Threat Exotic species under the BAM (Table 9), with 13 of them considered not manageable. High Threat Exotic species are defined in the BAM as vascular plants not native to Australia that if not controlled will invade and outcompete native plant species.

Two (2) species recorded within the Subject Land are classified as State Priority weeds under the Greater Sydney Regional Strategic Weed Management Plan 2023-2027 (LLS: Greater Sydney 2022). These species are *Anredera cordifolia* and *Rubus fruticosus*, both of which are also listed as a Weeds of National Significance (WoNS).

Table 9: Weeds listed as High Threat Exotics

Scientific Name	Common Name	Manageable
<i>Anredera cordifolia</i>	Madeira Vine	No
<i>Asparagus plumosus</i>	Climbing Asparagus Fern	No
<i>Bidens pilosa</i>	Cobbler's Pegs	No
<i>Canna indica</i>	Tous-les-mois Arrowroot	No
<i>Chlorophytum comosum</i>	Spider Plant	Yes
<i>Cinnamomum camphora</i>	Camphor Laurel	Yes
<i>Cyperus eragrostis</i>	Umbrella Sedge	No
<i>Ehrharta erecta</i>	Panic Veldtgrass	No
<i>Hedera helix</i>	English Ivy	No



Scientific Name	Common Name	Manageable
<i>Hypoestes phyllostachya</i>		Yes
<i>Ligustrum lucidum</i>	Large-leaved Privet	No
<i>Ligustrum sinense</i>	Small-leaved Privet	No
<i>Ochna serrulata</i>	Mickey Mouse Plant	No
<i>Phoenix canariensis</i>	Canary Island Date Palm	Yes
<i>Rubus fruticosus</i>	Blackberry complex	No
<i>Rumex sagittatus</i>	Rambling Dock	No
<i>Senna pendula</i>		Yes
<i>Stenotaphrum secundatum</i>	Buffalo Grass	Yes
<i>Tradescantia fluminensis</i>	Trad	No

4.5 Threatened Flora Species

The Study Area contains a number of planted *Macadamia tetraphylla* (Rough Shelled Bush Nut) and *Macadamia integrifolia* (Macadamia Nut). *Macadamia tetraphylla* is endemic to areas north of the Clarence River in the Richmond and Tweed Valleys and is listed as Vulnerable under the BC Act and EPBC Act and is commonly planted for its edible nuts. Similarly, *M. integrifolia* is native to Queensland and is commonly planted for its edible nuts. It is listed as endangered under the EPBC Act only. These species are not endemic to the Greater Sydney Region, and as the individuals have been planted within a garden context, they are not considered to be natural components of the landscape. Therefore, this species has not been considered further within this assessment.

A total of 20 threatened flora species are known to occur within 5 km of the Subject Land according to the BioNet Atlas of Australia (DCCEE (NSW) 2025e). No other records of threatened flora species exist within the Study Area and no threatened flora species were identified on the Study Area during surveys. Two (2) species were identified as having the potential to occur, *Rhodamnia rubescens* (Scrub Turpentine) and *Syzygium paniculatum* (Magenta Lilly Pilly), but were not detected during surveys. *Rhodamnia rubescens* is listed as Critically Endangered under the BC Act and *Syzygium paniculatum* is listed as Endangered under the BC Act and as Vulnerable under the EPBC Act.

Rhodamnia rubescens has been recorded 48 times within the locality and *Syzygium paniculatum* has been recorded 19 times within the locality. The vast majority of these records are located within larger tracts of native dominated vegetation located approximately 1 km or further from the Study Area. This vegetation will remain and continue to provide habitat for the threatened species with potential to occur in the Study Area. Consequently, the likely future development is not expected to have a significant impact on threatened flora species, and they have not been considered further within this assessment.

4.6 Threatened ecological communities

The entire occurrence of PCT 3234 identified within the Subject Land has been assessed as being associated with a TEC under the BC Act only. No other vegetation within the Subject Land conforms to a TEC under the BC Act and/or EPBC Act. Table 10 summarises the TECs identified within the Subject Land and their distribution is shown in Figure 9.



Table 10: Threatened Ecological Communities within the Subject Land

TEC name	BC Act status	EPBC Act status	Associated vegetation zones within the Subject Land	Area within Subject Land (ha)
Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion	EEC	Does not conform to listing	3234 – Hunter Coast Lowland Spotted Gum Moist Forest	~0.08

4.7 Vegetation Integrity Assessment

The native vegetation identified within the Subject Land was assigned to a single vegetation zone based on PCT and broad condition states. Patch sizes were determined in accordance with Subsection 4.3.2 of the BAM. Patch size is defined as an area of intact native vegetation that occurs on the development site and includes native vegetation that has a gap of less than 100 m to the next area of moderate to good condition native vegetation. The extent of the vegetation zones and associated patch size class within the Subject Land are shown in Figure 10. The vegetation zone was divided into two (2) management zones: one area for full clearance, and another where the canopy will be retained with only the understorey removed to accommodate landscaping works.

The vegetation zones were assessed using survey BAM plots (see Section 2.3.2) to determine the vegetation integrity score. BAM plot data utilised within the BAM-C to determine the vegetation integrity score is provided in Appendix B. The vegetation integrity assessment utilised the benchmark data held within the BAM-C (as derived from the BioNet Vegetation Classification). Therefore, this assessment did not utilise local benchmarks.

A summary of BAM plot data utilised within the BAM Calculator (BAM-C) to determine the vegetation integrity score is provided in Appendix A. As per the BAM Stage 2 Operation Manual (page 4), electronic copies of raw data and spatial datasets have been uploaded into the Biodiversity Offsets and Agreement Management System (BOAMS) and submitted as part of the BAM-C.

Vegetation zones, management zones, patch sizes and VI scores for the Subject Land are summarised in Table 11.

Table 11: Vegetation Integrity Scores

Vegetation Zone	PCT #	Condition Name	Area (ha)	Patch Size Class	Vegetation Integrity Score	Hollow Bearing Trees Present?
1	3234	Degraded	MZ1 = 0.07 MZ2 = 0.004 Total = ~0.08	>100	38.7 (Composition = 36.6, Structure = 41.7, Function = 37.8)	Yes



5.0 Threatened Species

5.1 Identifying Threatened Species for Assessment

The BAM-C generates a list of threatened species requiring assessment utilising a number of variables. The following criteria have been utilised to predict the threatened species requiring further assessment:

- IBRA subregion: Pittwater;
- Associated PCT: 3234;
- Percent native vegetation cover in the Assessment Area: 17.82%;
- Patch size: ≥100 ha; and
- Credit type: Ecosystem and/or species.

Based on the above variables, the BAM-C generated a list of ecosystem credit species and species credit species. Furthermore, a search was undertaken on the NSW Department of Planning and Environment BioNet Atlas to identify additional species credit flora and fauna species at risk of an SAI previously recorded within a 5km radius of the Subject Land. Nine (9) additional species at risk of an SAI have been recorded within 5km and were added to the assessment. Additionally, no non-SAI entities have previously been recorded within the Subject Land, and none were incidentally located during surveys. Ecosystem credit species and species credit species are assessed further in Section 5.2 and Section 5.3, respectively.

5.2 Ecosystem credit species

5.2.1 Overview

A total of 26 ecosystem credit species are predicted, including some dual credit species which are considered as ecosystem credit species for their foraging habitat. Table 12 lists the predicted ecosystem credit species for the Subject Land, and whether they have been retained within the assessment following consideration of habitat constraints, geographic limitations, vagrancy and quality of microhabitats. One ecosystem species has been removed from further assessment as the Subject Land does not contain the necessary habitat constraints.

Table 12: Predicted Ecosystem Credit Species

Scientific name	Common Name	Listing status		Sensitivity to Gain Class	Retained in Assessment?
		BC Act	EPBC Act		
<i>Anthochaera phrygia</i>	Regent Honeyeater (Foraging)	CE	CE	High	Yes
<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	V	-	Moderate	Yes
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo (Foraging)	E	E	Moderate	Yes
<i>Calyptorhynchus lathami lathami</i>	South-eastern Glossy Black-Cockatoo (Foraging)	V	V	High	Yes



Scientific name	Common Name	Listing status		Sensitivity to Gain Class	Retained in Assessment?
		BC Act	EPBC Act		
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (eastern subspecies)	V	V	High	Yes
<i>Daphoenositta chrysoptera</i>	Varied Sittella	V	-	Moderate	Yes
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V	E	High	Yes
<i>Glossopsitta pusilla</i>	Little Lorikeet	V	-	High	Yes
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle (Foraging)	V	-	High	Yes
<i>Hieraaetus morphnoides</i>	Little Eagle (Foraging)	V	-	Moderate	Yes
<i>Hirundapus caudacutus</i>	White-throated Needletail	V	V	High	Yes
<i>Ixobrychus flavicollis</i>	Black Bittern	V	-	Moderate	No
<i>Lathamus discolor</i>	Swift Parrot (Foraging)	E	CE	Moderate	Yes
<i>Lophoictinia isura</i>	Square-tailed Kite (Foraging)	V	-	Moderate	Yes
<i>Melithreptus gularis gularis</i>	Black-chinned Honeyeater (eastern subspecies)	V	-	Moderate	Yes
<i>Micronomus norfolkensis</i>	Eastern Coastal Free-tailed Bat	V	-	High	Yes
<i>Miniopterus australis</i>	Little Bent-winged Bat (Foraging)	V	-	High	Yes
<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat (Foraging)	V	-	High	Yes
<i>Pandion cristatus</i>	Eastern Osprey (Foraging)	V	-	Moderate	Yes
<i>Petroica boodang</i>	Scarlet Robin	V	-	Moderate	Yes
<i>Petroica phoenicea</i>	Flame Robin	V	-	Moderate	Yes
<i>Pseudomys novaehollandiae</i>	New Holland Mouse	-	V	High	Yes
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox (Foraging)	V	V	High	Yes
<i>Ptilinopus superbus</i>	Superb Fruit-Dove	V	-	Moderate	Yes
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	V	-	High	Yes
<i>Varanus rosenbergi</i>	Rosenberg's Goanna	V	-	High	Yes

Key : V = Vulnerable, E = Endangered, CE = Critically Endangered

5.2.2 Justification for Removal of Predicted Ecosystem Credit Species

5.2.2.1 Black Bittern

One ecosystem credit species was removed from further assessment within the BAM-C. The species was removed due to an absence of habitat constraints. This species was *Ixobrychus*



flavicollis (Black Bittern). The species was removed because it requires land with permanent water and dense vegetation, within 40 m of freshwater or estuarine wetlands. The Subject Land and immediate surrounds do not contain any permanent waterbodies and therefore suitable habitat does not occur.

5.3 Species Credit Species

5.3.1 Overview

A total of nine (9) species credit species, including three (3) flora species and six (6) fauna species, are considered candidate species. As the Project is being assessed under the Streamlined Assessment Module – small area development, candidate species credit species that are not at risk of an SAI and are not incidentally recorded on the Subject Land do not require further assessment. As such, species credit species identified from the BioNet Atlas search which are not at risk of an SAI do not require further assessment. Nine (9) additional species at risk of an SAI have been recorded within 5 km and were added to the assessment. No threatened species that are not at risk of an SAI were added due to incidental recording during fieldwork.

Table 13 lists the predicted species credit species for PCT 3234 within the Subject Land, and whether they have been retained within the assessment following consideration of habitat constraints, geographic limitations, vagrancy and quality of microhabitats. Justification is provided below this table for species that have been removed from the assessment in accordance with Steps 1-3 of Section 5.2 of the BAM.

Four (4) threatened flora species were assessed as candidate species credit species requiring further assessment.



Table 13: Candidate Species Credit Species

Scientific name	Common Name	Listing status		Records in the Locality	SAIL Species	Origin	Sensitivity to Gain Class	Retained in Assessment?
		BC Act	EPBC Act					
Flora								
<i>Eucalyptus scoparia</i>	Wallangarra White Gum	E	V	6	Yes	BioNet record	High	No
<i>Genoplesium baueri</i>	Bauer's Midge Orchid	E	E	1	Yes	BioNet record	Very High	No
<i>Grevillea caleyi</i>	Caley's Grevillea	CE	CE	243	Yes	BioNet record	High	No
<i>Melaleuca deanei</i>	Deane's Paperbark	V	V	1	Yes	BioNet record	Very High	Yes
<i>Microtis angusii</i>	Angus's Onion Orchid	E	E	73	Yes	BioNet record	Moderate	No
<i>Persoonia hirsuta</i>	Hairy Geebung	E	E	1	Yes	BioNet record	High	Yes
<i>Rhizanthella slateri</i>	Eastern Australian Underground Orchid	V	E	0	Yes	BAM-C	High	No
<i>Rhodamnia rubescens</i>	Scrub Turpentine	CE	CE	48	Yes	BAM-C	Very High	Yes
<i>Rhodomyrtus psidioides</i>	Native Guava	CE	CE	0	Yes	BAM-C	Very High	Yes
Fauna								
<i>Anthochaera phrygia</i>	Regent Honeyeater (Breeding)	CE	CE	36	Yes	BAM-C	High	No
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	E	E	15	Yes	BAM-C	Very High	No
<i>Dermochelys coriacea</i>	Leatherback Turtle	E	E	6	Yes	BioNet record	High	No
<i>Lathamus discolor</i>	Swift Parrot (Breeding)	E	CE	19	Yes	BAM-C	Moderate	No
<i>Miniopterus australis</i>	Little Bent-winged Bat (Breeding)	V	-	51	Yes	BAM-C	Very High	No
<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat (Breeding)	V	-	87	Yes	BAM-C	Very High	No
<i>Numenius madagascariensis</i>	Eastern Curlew (Breeding)	-	CE	1	Yes	BioNet record	High	No
<i>Tyto tenebricosa</i>	Sooty Owl	V	-	1	Yes	BioNet record	Very High	No



Scientific name	Common Name	Listing status		Records in the Locality	SAIL Species	Origin	Sensitivity to Gain Class	Retained in Assessment?
		BC Act	EPBC Act					
<i>Vespadelus troughtoni</i>	Eastern Cave Bat	V	-	3	Yes	BAM-C	Very High	No

Key: V = Vulnerable, E = Endangered, CE = Critically Endangered, SAIL = Serious and Irreversible Impact



5.3.2 Justification for Removal of Candidate Species

5.3.2.1 Flora

***Eucalyptus scoparia* (Wallangarra White Gum)**

Eucalyptus scoparia (Wallangarra White Gum) has been removed from the assessment due to habitat constraints, as the Subject Land is not located within 100m of cliffs or rocky areas.

***Genoplesium baueri* (Bauer's Midge Orchid)**

Genoplesium baueri (Bauer's Midge Orchid) has been removed from further assessment due to the absence or degradation of suitable microhabitats on the Subject Land. The area of PCT 3234 within the Subject Land is considered too degraded to support the species.

The species was initially added to the assessment based on a single BioNet Atlas record located within 5 km of the Subject Land. This record dates from 1964 and was recorded at North Narrabeen, approximately 3 km south of the Subject Land (DCCEEW (NSW) 2025e).

Genoplesium baueri is not known to be associated with the vegetation formation and class of PCT 3234 (Office of Environment & Heritage, no date).

Given the lack of recent BioNet records within 5 km of the Subject Land, in combination with the likely highly specific microhabitats required for occurrence of the species, it is considered the Subject Land is highly likely to lack the microhabitats required to support the species. As such, the species was removed from further assessment.

***Grevillea caleyi* (Caley's Grevillea)**

Grevillea caleyi (Caley's Grevillea) has been removed from the assessment due to habitat constraints, as the Subject Land is not located on laterite soils or within 100m of ridgetops.

***Microtis angusii* (Angus's Onion Orchid)**

Microtis angusii (Angus's Onion Orchid) was added to the assessment from a BioNet Atlas record occurring within 5 km of the Subject Land. It has been removed from the assessment due to habitat constraints, due to soil type and the highly urbanised nature of the Subject Land. It is currently only known from a population in Ingleside (NSW Department of Climate Change 2010).

The population occurs on soils that have been modified but were originally those of the restricted ridgetop lateritic soils in the Duffys Forest, Terrey Hills, Ingleside and Belrose areas. These soils support a specific vegetation type distinct from that occurring on the surrounding Hawkesbury Sandstone soils (DCCEEW (NSW) 2025a)

The Subject Land, however, occurs on a different soil type, the Narrabeen Group sandstones and shales (DCCEEW (NSW) 2025a), and therefore does not support the soil conditions or associated vegetation community known to support *Microtis angusii* (DCCEEW (NSW), 2025d).

***Rhizanthella slateri* (Eastern Australian Underground Orchid)**

Rhizanthella slateri (Eastern Australian Underground Orchid) has been removed due to degradation of microhabitats/absence of microhabitats from the Subject Land. PCT 3234 within the Subject Land is considered too degraded to support the predominantly underground species. The habitat requirements for the species are poorly known, beyond it has been located in eucalypt forests, but the species has previously only been recorded from



fewer than 10 locations, and the Subject Land is not one of the locations (NSW Scientific Committee 2004, DCCEE (NSW) 2025b). The species is generally only known to occur in small numbers at the known locations and therefore is likely to have highly specific habitat requirements, and is potentially inhibited in distribution by its mycorrhizal symbiont.

Rhizanthella slateri does not produce chlorophyll, and is therefore unable to produce energy, and relies on a mycorrhizal relationship (Mursidawati 2004).

The genus is known to have highly specific relationship with particular fungal symbionts, and a Western Australian species, *Rhizanthella gardneri*, considered to be a sister species to *Rhizanthella slateri* is known to require a relationship with a particular fungi, which has a dual symbiotic relationship particularly with *Melaleuca uncinata*. As such, it requires the *Melaleuca* sp., and the particular individual *Melaleuca* sp. plant to have roots inoculated with the symbiont (Mursidawati 2004, Thorogood et al. 2019). A study by Bougoure et al. (2009) indicates *Rhizanthella slateri* is likely to have a relationship with the same species of fungus as *Rhizanthella slateri*, and as *Melaleuca uncinata* is not present across all of the range of *Rhizanthella slateri*, may require the presence of a different *Melaleuca* sp. or other myrtaceous species in NSW. Habitat for *Rhizanthella slateri*, while mostly unknown, has been described as having a deep layer of abundant leaf litter, in shaded forests, likely due to the species requiring high moisture levels to occur, with soil moisture sheltered during the warmer months (Bougoure 2008). Due to the lack of BioNet records within 5 km of the Subject Land, in combination with the likely highly specific microhabitats required for occurrence of the species, it is considered the Subject Land is highly likely to lack the microhabitats required to support the species. As such, the species was removed from further assessment.

5.3.2.2 Fauna

Regent Honeyeater (Breeding)

The Regent Honeyeater (*Anthochaera phrygia*) has been removed from the assessment due to habitat constraints as the Subject Land is not located within an area on the Important Habitat Map (IHM) for the species and therefore there is no suitable breeding habitat within the Subject Land.

Large-eared Pied Bat

The Large-eared Pied Bat (*Chalinolobus dwyeri*) has been removed from the assessment as the habitat constraints for the species are absent from the Subject Land. The TBDC lists the following habitat constraint for the species: *Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels*. None of these habitat features, or records held within BioNet (in 10 km radius of the Subject Land), apply to the Subject Land. Some cliffs are present within 2 km of the Subject Land, but the TBDC (reference) states that potential SAI habitat is breeding habitat for the species, which is limited to PCTs within 100m of rocky areas containing caves, or overhangs or crevices, cliffs or escarpments, or old mines, tunnels, culverts, derelict concrete buildings. The Subject Land is not within 100 m of any of these habitat features, and as such this species has been removed from the assessment. There are 19 BioNet records for the species within 10 km of the Subject Land, with the closest record being approximately 2 km to the west of the Subject Land. For these reasons, microhabitats for the species as an SAI candidate entity are considered to be absent from the Subject Land.



Leatherback Turtle

The Leatherback Turtle (*Dermochelys coriacea*) has been removed from the assessment as the Subject Land is not located within or nearby elevated sand dunes above the watertable and high tide.

Swift Parrot (Breeding)

The Swift Parrot (*Lathamus discolor*) has been removed from the assessment as the Subject Land is not located within an area on the IHM for the species.

Little Bent-winged Bat (Breeding)

The Little Bent-winged Bat (*Miniopterus australis*) has been removed from the assessment as the habitat constraints for the species are absent from the Subject Land. The TBDC lists the following habitat constraint for the species: *Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records in BioNet with microhabitat code 'IC – in cave'; observation type code 'E nest-roost'; with numbers of individuals >500; or from the scientific literature*. None of these habitat features, or records held within BioNet, are present within the Subject Land.

The Little Bent-winged Bat (*Miniopterus australis*) has been removed from the assessment as the habitat constraint for the species is absent from the Subject Land. The TBDC lists the following habitat constraint for the species: *Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records in BioNet with microhabitat code 'IC – in cave'; observation type code 'E nest-roost'; with numbers of individuals >500; or from the scientific literature* (DCCEEWS (NSW) 2025e). A review of aerial photography and SixMaps does not identify any cliffs within two kms of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or old mines or tunnels within 2 km of the Subject Land.

Large Bent-winged Bat (Breeding)

The Large Bent-winged Bat (*Miniopterus orianae oceanensis*) has been removed from the assessment as the habitat constraints for the species are absent from the Subject Land. The TBDC lists the following habitat constraint for the species: *Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records in BioNet with microhabitat code 'IC – in cave'; observation type code 'E nest-roost'; with numbers of individuals >500; or from the scientific literature*. None of these habitat features, or records held within BioNet, are present within the Subject Land.

Eastern Curlew

The Eastern Curlew (*Numenius madagascariensis*) has been removed from the assessment as the Subject Land is not located within an area on the Migratory Shorebird Important Areas map.

Sooty Owl

The Sooty Owl (*Tyto tenebricosa*) was initially included in the assessment based on a single BioNet Atlas record within 5 km of the Subject Land. However, it has since been excluded from the assessment as the habitat constraints are absent from the Subject Land - i.e. caves, cliffs including cliff lines and ledges, escarpments including cliff lines and ledges, and hollow bearing trees that is a living or dead tree with a hollow >20 cm diameter that occurs >4 m above the ground.



A single vertical hollow approximately 20 cm in length was observed during the field survey; however, the entrance was less than 10 cm wide and is not suitable for nesting by Sooty Owls. No signs of use by the species were detected during the field survey (e.g. faecal pellets or whitewash). This hollow occurs in a planted non-indigenous native tree, a *Eucalyptus globulus* subsp. *globulus* (Tree 37, as identified in the Arboricultural Report), which has a recorded diameter at breast height (DBH) of 84 cm with a height of 23 m (Tree Wise Men Australia Pty Ltd, 2024). The tree is located on the street frontage of Darley Street West.

Sooty Owls typically nest in large hollows more than 30 cm wide in big, mature trees (NSW Scientific Committee, 2008). The Department of Environment (2006) states that they nest in hollows greater than 40 cm wide and occur in trees with a DBH of at least 120 cm. Additionally, Sooty Owls prefer to nest, roost, and forage in undisturbed moist forested gullies (Department of Environment, 2006; NSW Scientific Committee, 2008).

Based on the absence of suitable habitat and lack of evidence of occupation, this species was removed from further assessment.

Eastern Cave Bat

The Eastern Cave Bat (*Vespadelus troughtoni*) has been removed from the assessment as the habitat constraints are absent from the Subject Land - i.e. rocky areas, caves, overhangs crevices, cliffs and escarpments, or old mines or tunnels, old buildings and sheds known or suspected to be used for breeding are absent, and do not occur within 100 m of the Subject Land.

5.3.3 Presence of Candidate Species Credit Species

5.3.3.1 Surveys

Four (4) threatened flora species were assessed as candidate species requiring further assessment (i.e. retained in assessment as per Table 13). Targeted threatened flora surveys were undertaken within the Subject Land as described in Section 2.4. Table 4 summarises the targeted species, survey dates and survey methods.

5.3.3.2 Expert Report

This assessment has not utilised any expert reports.

5.3.3.3 Candidate Species Occurrence

No species credit species were recorded within the Subject Land during precautionary surveys.



6.0 Prescribed Impacts

Prescribed impacts are identified in Clause 6.1 of the *Biodiversity Conservation Regulation 2017* (BC Regulation). Prescribed impacts are those that are additional to the clearing of native vegetation and associated habitat. These include:

- Development on the habitat of threatened species or ecological communities associated with:
 - karst, caves, crevices, cliffs, rock outcrops and other geological features of significance;
 - human-made structures; and
 - non-native vegetation.
- Development on areas connecting threatened species habitat, such as movement corridors;
- Development on water quality, water bodies and hydrological processes that sustain threatened species and TECs (including from subsidence or “upsidence” from underground mining);
- Wind turbine strikes on threatened and protected animals; and
- Vehicle strikes on threatened species or on animals that are part of a TEC.

An assessment of the relevance of these prescribed impacts to the project is provided in Table 14. The location of prescribed impacts is shown in Figure 11.

Table 14: Prescribed Impacts Identified

Prescribed Impact	Present	Relevance to the Project	Associated Threatened Entities
Karst, caves, crevices, cliffs, rocks or other geological features of significance	No	Not relevant. Features are not present within the Subject Land.	N/A
Human-made structures	Yes	Relevant. A number of structures are present within the Subject Land which will be removed for the project. These include dwellings and other smaller structures such as garden sheds. Entry points were not located for any of the buildings with significant roof cavities; however buildings and structures may still contain some roosting areas for species, including threatened birds and bats, and arboreal mammals, and there may be some shelter areas underneath for additional species such as reptiles and mammals.	Threatened microbats
Non-native vegetation	Yes	Relevant. Non-native vegetation occurring within the Subject Land is in the form of exotic vegetation and exotic grassland. This vegetation may provide some low-value foraging habitat for native fauna	Ecosystem credit fauna species which may utilise the habitat as part of a larger foraging range



Prescribed Impact	Present	Relevance to the Project	Associated Threatened Entities
		species, including threatened birds and bats, which may utilise the habitat as part of a larger foraging range. Impacts to non-native vegetation would occur during the construction phase of the project and result in a long-term impact, however landscape plantings for the Project will provide replacement of these features.	and as stepping-stone habitat
Habitat connectivity	Yes	The Subject Land occurs for the most part in a highly developed urban environment, although there is some connectivity to patches of vegetation within the Bayview Golf Course which is located directly north of Darley Street West and just beyond a small area of residential development to the east of the Subject Land. Within the broader landscape, patches of vegetation within the Golf Course connect to larger, bushland corridors that extend westward within the suburbs of Bayview and Ingleside. To the south and east of the Subject Land, the landscape is characterised by a mix of suburban and industrial development, and main arterial roads such as Pittwater Road and Barrenjoey Road, interspersed with small, fragmented patches of remnant/regrowth and planted native and exotic trees that function as stepping-stone habitat for highly mobile fauna species as a local habitat corridor. Minor long-term, direct impacts to habitat connectivity may occur as a result of the project. This is mostly from the removal of a small amount of canopy and shrub vegetation that act as a stepping-stone corridor mostly from the south-west to the north. A large amount of vegetation within the Study Area is being retained to retain a large amount of habitat connectivity.	Ecosystem credit fauna species which may utilise the habitat as part of a larger foraging range and as stepping-stone habitat.
Waterbodies, water quality and hydrological processes	No	Not relevant. The Study Area and Subject Land do not contain any mapped watercourses. There is an existing overland flow that will not be modified or impacted.	N/A
Wind turbine strikes (wind farm development only)	No	Not relevant. Project does not comprise a wind farm development.	N/A
Vehicle strikes	Yes	Relevant. The Subject Land currently comprises four dwellings with associated driveways. The proposed Project involves	Threatened birds and microbats



Prescribed Impact	Present	Relevance to the Project	Associated Threatened Entities
		the construction of a new entranceway and basement carparking to accommodate 82 residential apartments, which will result in increased occupancy and vehicle movements. This change may elevate the risk of vehicle strikes to fauna. While this may elevate the potential risk of vehicle strikes to fauna, vehicle speeds within the site and surrounding area are generally low. Consequently, any increase in risk is expected to be minimal	



STAGE 2: IMPACT ASSESSMENT (BIODIVERSITY VALUES AND PRESCRIBED IMPACTS)

7.0 Avoid and Minimise Impacts

This section includes demonstration of efforts to avoid and minimise impacts on biodiversity values identified within the Subject Land, which includes assessment of direct, indirect and prescribed impacts. Any mentioning of the development footprint within this chapter is synonymous with the Subject Land.

Details of the avoidance minimisation measures adopted for the Project are outlined in Section 7.1 and Sections 7.2.

7.1 Avoid and Minimise Direct and Indirect Impacts on Native Vegetation and Habitat

Section 7.1.1 of the BAM states that knowledge of biodiversity values should inform the decision-making process relating to the location of a project. Measures to avoid or minimise impacts from clearing native vegetation and threatened species habitat can include locating the project in areas lacking or with low biodiversity values, avoiding areas mapped on the important habitat map, or avoiding native vegetation that is a TEC. A discussion of the considerations, measures and constraints relevant to avoidance are discussed in the sections below.

7.1.1 Project Location

The location of the direct construction footprint of the Project has been located within the Subject Land in areas to allow for the construction and operational requirements of the project while minimising impacts to biodiversity values. In determining the location of the development footprint, the project has sought to avoid and minimise direct and indirect impacts on native vegetation and habitat by:

- Locating the construction footprint to require complete clearing mostly outside the areas containing the highest quality areas of native vegetation and habitat values within the Study Area and where necessary locating in native vegetation zones of PCT 3234; and
- Locating the development footprint in areas of lower ecological value, including exotic vegetation, planted native vegetation, and already developed land.

A Pre-Lodgement Meeting was held with Northern Beaches Council on 28 October 2025. Council's Tree and Biodiversity Officers advised that they were comfortable that the project has been designed and sited to avoid impacts on trees.

7.1.1.1 Considerations

In selecting the project's final development footprint, the following matters were considered in accordance with the BAM:

- a) *Knowledge of biodiversity values should inform decisions about the location of the proposal.*

The field survey undertaken by SLR as part of this BDAR has contributed valuable insights into the biodiversity values present within the Study Area. The assessment of native vegetation and threatened species habitat played a key role in informing the selection of the development footprint.



The area containing the highest biodiversity value is the remnant forest canopy with a degraded understorey, identified as the Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion (PWSGF), listed as an Endangered Ecological Community under the NSW *Biodiversity Conservation Act 2016* (BC Act). This community is represented by PCT 3234 – Hunter Coast Lowland Spotted Gum Moist Forest in a degraded condition state (VI score = 38.7).

To minimise ecological impacts, the project has been designed to avoid and retain as much of this threatened ecological community (TEC) as possible. As a result, approximately 0.08 ha (50%) of the PWSGF within the Study Area will be retained.

The proposed development footprint has been strategically located in areas already subject to disturbance, including existing dwellings, sheds, and cleared land. The development footprint is dominated by planted native vegetation, exotic vegetation, and exotic-dominated grasslands, all of which are considered to have lower biodiversity values and are not associated with any listed TECs.

In summary, SLR's ecological assessment has directly informed the project design, ensuring that high-value biodiversity areas are avoided where possible and that impacts are confined to areas of lower ecological significance.

b) Selecting a final proposal location may be iterative process.

As a result of amending plans to protect biodiversity values, when other development constraints were taken into account, the proposed design presented in this BDAR is the preferred design for the Project, which results in the highest retention of biodiversity values within the Study Area.

As previously discussed, multiple site locations were evaluated during the concept design phase of the Project. The final selected location was chosen to minimize environmental impact, particularly concerning the Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion (PWSGF) endangered ecological community within the Study Area. This included avoiding the central and rear portions of the Study Area, which contain PCT 3234 – Hunter Coast Lowland Spotted Gum Moist Forest.

Alternative design options would have required the removal of a greater extent of PCT 3234, thereby increasing the Project's ecological footprint. In contrast, the current design limits impacts to 0.08 ha of the 0.16 ha of the Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion (PWSGF) present in the Study Area, retaining a substantial portion of this sensitive habitat.

Incorporating biodiversity protection into the planning process, alongside other development constraints, has led to the adoption of this design as the preferred option, ensuring the highest possible retention of biodiversity values within the Study Area.

Previous design options are shown in Appendix C.

c) Impacts from clearing native vegetation and threatened species habitat can be avoided or minimised by locating the proposal in areas lacking biodiversity.

As described in previous chapters of this BDAR, the Subject Land includes an area of approximately 0.08 ha of Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion (PWSGF) EEC. The remainder of the Subject Land comprises a mix of planted native vegetation, exotic woody vegetation and exotic dominated grassland that is considered to be of lower biodiversity value, as well as already developed and cleared land that is considered to lack biodiversity values.

When considering the requirements associated with Project, there is little prospect of completely avoiding impacts to PCT 3234.



The current location of the Project avoids larger areas of PCT 3234 which would have been required under an earlier design. The majority of areas of PCT 3234 within the Subject Land will be avoided.

As discussed above, the larger area PCT 3234 will be retained with the design of the Project subject to this BDAR, versus other designs, taking into account constraints of the site.

- Locating the majority of the clearing areas outside of areas comprising TECs;
 - Prioritising tree retention based on the following hierarchy:
 - Native trees associated with PCT 3234;
 - Planted native trees native to the Sydney region;
 - Planted native trees that are not native to the Sydney region (E.g. *Lophostemon confertus*);
 - Australian native trees that are not native to NSW (E.g. *Corymbia citriodora*).
 - Exotic trees.
 - Locating the majority of the clearing areas outside of the area of greatest habitat value along the boundary of the conservation area;
 - Locating the impact footprints in cleared areas or areas previously subject to disturbance; and
 - Locating the clearing areas to avoid direct impacts to habitat features, most notably the hollow-bearing trees.
- d) *Impacts from clearing native vegetation and threatened species habitat can be avoided or minimised by locating the proposal in areas where the native vegetation or threatened species habitat is in the poorest condition (i.e. areas that have a low vegetation integrity score).*

As discussed above, the proposal has been designed to avoid and retain as much of the PWSGF threatened ecological community (TEC) as possible.

The development footprint has been strategically located in areas already subject to disturbance, including existing dwellings, sheds, and cleared land. The development footprint mostly impacts vegetation that is planted native vegetation, exotic vegetation, and exotic-dominated grasslands, all of which are considered to have lower biodiversity values and are not associated with any listed TECs.

The development footprint has been sited to significantly avoid the largest patch of PCT 3234 which occurs to the rear of the site.

- e) *Impacts from clearing native vegetation and threatened species habitat can be avoided or minimised by locating the proposal in areas that avoid habitat for species with a high biodiversity risk weighting or land mapped on the important habitat map, or native vegetation that is a TEC or a highly cleared PCT.*

No threatened species were recorded within the Study Area during field surveys, and no land mapped on the important habitat map occurs on the Study Area.

As mentioned above, the development footprint has been strategically sited to minimise impacts to PCT 3234 which is located to the rear of the site. The development has instead been directed toward areas with lower biodiversity value, including previously cleared land, planted native vegetation, exotic vegetation, and exotic-dominated grasslands.



- f) *Impacts from clearing native vegetation and threatened species habitat can be avoided or minimised by locating the proposal in areas outside the buffer area around breeding habitat features such as nest trees or caves.*

No breeding habitat for species credit species have been identified within the Subject Land.

7.2 Avoid and Minimise Prescribed Impacts

The following prescribed impacts have been identified for the project:

- Non-native vegetation;
- Human-made structures;
- Habitat connectivity;
- Waterbodies, water quality and hydrological processes; and
- Vehicle strikes.

7.3 Summary

Table 15 summarises the measures to avoid and minimise impacts.



Table 15: Summary of Options Considered for the Project to Avoid and Minimise Impacts on Biodiversity

Action	Adopted (Yes/No/In part)	Justification	Timing (if adopted)	Responsibility (if adopted)	Outcome (if adopted)
Incorporation of suitable technologies and design configurations to minimise overall development site footprint	Yes	Building C is designed to be suspended above the overland flood path, an area where no trees are present and where revegetation potential is limited due to flood planning requirements. This design approach enables a reduction in Building B's footprint, thereby retaining a greater extent of PCT 3234 located at the rear of the site than was previously proposed.	Design	Architect	Smaller footprint
Implementation of a suite of mitigation measures	Yes	Mitigation measures have been identified to minimise impacts of the project on retained vegetation and habitat within the Study Area.	Prior to further construction works	Land Owner/Contractor	Reduced risk of injury/mortality of native fauna
Design amendments to various elements of the project design	Yes	Low impact landscape treatments are proposed, including the retention of current ground levels, an elevated seating and lounging platform, and crushed sandstone pathways. The extent of private gardens has been reduced, and no pools or other high-impact communal facilities are proposed. The Building B footprint has been reduced to retain areas of PCT 3234 vegetation and designed around the existing sewer alignment, which is to remain in its current position to minimise the impacts associated with realignment. Stormwater infrastructure has been designed to ensure no adverse environmental impacts.	Design	Architect	Avoidance of TEC.
'Do-nothing' option to avoid all impacts on biodiversity	No	The do-nothing option is not considered a viable or reasonable alternative given the zoning, land use planning objectives, and the need to provide residential growth in the region. As such, the design has been refined	N/A	N/A	N/A



Action	Adopted (Yes/No/In part)	Justification	Timing (if adopted)	Responsibility (if adopted)	Outcome (if adopted)
		to minimise biodiversity impacts to the greatest extent practicable.			
Consideration of alternative sites and layouts within the Proposed Development Footprint	Yes	Alternative concept designs were considered. See Appendix C for concept designs.	Design	Architect	Avoidance of TEC.



8.0 Assessment of Impacts

8.1 Direct Impacts

8.1.1 Native Vegetation Removal and Modification

The direct impact resulting from the proposed development is the loss of vegetation and associated habitat within the Subject Land, including the removal of fifty-nine (59) trees. Of these, thirty-eight (38) are classified as Exempt Tree Species under the *Pittwater 21 Development Control Plan (DCP)* (Tree Wise Men Australia Pty Ltd, 2025). Seven (7) of the trees are characteristic species of PCT 3234, eleven (11) are planted natives or non-indigenous native species, and three (3) are exotic species. Details of the individual trees are provided in the Arboricultural Impact Assessment (Tree Wise Men Australia Pty Ltd, 2025).

Two (2) habitat features in the form of tree hollows will also be impacted by the proposed clearing:

- An approximate 20 cm vertical hollow in a *Eucalyptus globulus* (Tasmanian Blue Gum) - Tree 27; and
- A 15 cm hollow in a *Eucalyptus pilularis* (Blackbutt) - Tree 17.

These trees are identified in the Arboricultural Impact Assessment (Tree Wise Men Australia Pty Ltd, 2025).

There will be no direct impacts to any species credit species.

The one (1) vegetation zone within the Subject Land has been divided into two (2) management zones. Management Zone 1 involves the complete removal of native vegetation. Management Zone 2 will involve understorey disturbance, with the canopy retained and only the mid-storey and groundcover layers disturbed to accommodate landscaping works, including crushed sandstone pathways and a lounge seating platform.

Table 16 identifies the extent of impacts to vegetation within the Subject Land. The extent of direct impacts to vegetation is anticipated to be restricted to the Subject Land and no direct impacts on adjoining areas of vegetation located outside of the Subject Land are considered likely to occur.

Table 16: Extent of Vegetation Impacts within the Subject Land

Vegetation Zone	PCT #	PCT Condition Class	Subject Land Removed (MZ1) (ha)	Subject Land Understorey Disturbance (MZ2) (ha)
1	3234	Degraded	0.07	0.004
-	-	Planted Native Vegetation	0.05	0.00
-	-	Exotic Vegetation	0.12	0.00
-	-	Exotic Dominated Grassland	0.04	0.00
-	-	Cleared Land	0.16	0.00
Total			0.44	0.004

Table Key: MZ = Management Zone



8.1.2 Change in Vegetation Integrity Scores

Table 17 details the current and future Vegetation Integrity (VI) scores, as well as the changes in VI scores, for the vegetation zone and management zones. The direct impacts of the project involve two (2) management zones, as follows:

- **Management Zone 1 (MZ1) – Full clearing:** All structural layers of vegetation (canopy, mid-storey, and groundcover) are proposed to be removed.
- **Management Zone 2 (MZ2) – Understorey disturbance:** The canopy will be retained, with only the mid-storey and groundcover removed to accommodate landscaping, including crushed sandstone pathways and a lounge seating platform.

For MZ1, the future vegetation integrity scores have been reduced to 0. For MZ2, the future vegetation integrity scores have been modified as follows:

- Future composition scores: Canopy retained with mid-storey and groundcover reduced to 0.
- Future structural scores: Canopy retained with mid-storey and groundcover reduced to 0.
- Future functional scores: Canopy retained with mid-storey and groundcover reduced to 0.

Table 17: Change in VI Score within the Subject Land

PCT#	Vegetation Zone	Management Zone	Area (ha)	Current VI Score	Future VI Score	Change in VI Score	Total VI Loss
3234	Degraded	MZ1 Full clearing	0.07	38.7	0	-38.7	-36.3
		MZ2 Understorey disturbance	0.004	38.7	19.2	-19.4	

8.1.3 Threatened Species

No species credit species will be impacted by the project.

8.2 Indirect impacts

Table 18 outlines the indirect impacts to native vegetation and habitat. The indirect impacts of the project are not considered likely to be significant and are likely to be able to be managed appropriately. Mitigation measures to be implemented to manage the indirect impacts of the project identified in Table 18 are presented in Section 8.4.



Table 18: Summary of Residual Indirect Impacts

Indirect impact	Nature	Extent	Duration	Threatened Entities Likely Affected	Consequences
Inadvertent impacts on adjacent habitat or vegetation	Impact possible. Construction and operational activities may result in inadvertent impacts on retained vegetation in the Study Area and other areas adjacent to the Subject Land.	Retained vegetation within the Study Area and adjacent areas to the Subject Land	Short term (during construction) and potential long term	PCT 3234	Reduced condition of retained PCT 3234 areas and potential loss of ecosystem credit species and species credit species habitat.
Reduced viability of adjacent habitat due to edge effects	Impact possible. Construction and operational activities may increase edge effects on retained vegetation in the Study Area and areas adjacent to the Subject Land.	Retained vegetation within the Study Area and adjacent areas to the Subject Land	Short term (during construction) and long term	PCT 3234 and ecosystem credit species and species credit species	Further reduced condition of the retained areas of PCT 3234 as well as other retained vegetation in the Study Area, and vegetation adjacent to the Subject Land elsewhere.
Reduced viability of adjacent habitat due to noise, dust or light spill	Impact possible. The construction activities associated with the project are likely to increase the noise, dust and light above current levels within and immediately adjacent the Subject Land. Some impacts such as noise or light may persist during the operational phase, through an increase of residents of the site.	Retained vegetation within the Study Area and adjoining areas of the Subject Land	Short term (during construction) and potential long term	Ecosystem credit species and species credit species	Short term disruption of fauna habitat usage during construction, with potential for ongoing occupation impacts.
Transport of weeds and pathogens from the site to adjacent vegetation	Impact possible. Several high threat exotic weeds are known to occur within the Subject Land and may be inadvertently spread to surrounding vegetation.	Retained vegetation within the Study Area, and vegetation within areas of the Subject Land	High risk during initial construction phase of the project. Potential long-term threat associated with increased human activity.	PCT 3234 and ecosystem credit species and species credit species	Further reduced condition of the retained areas PCT 3234, and other retained vegetation in the Study Area and other adjoining areas of the Subject Land.



Indirect impact	Nature	Extent	Duration	Threatened Entities Likely Affected	Consequences
Increased risk of starvation, exposure and loss of shade or shelter	Potential. There will be a loss of native vegetation within the Subject Land that may provide shelter and food opportunities to fauna species.	Retained native vegetation in the Subject Land and Study Area	Long term due to loss of vegetation within the Subject Land	Ecosystem Credit Species and species credit species	Reduced condition of habitat provided by retained vegetation as native species cover is removed.
Loss of breeding habitats	Impact possible. The Subject Land contains two (2) hollows (approximately 15 cm and 20 cm).	-	Long term	Ecosystem Credit Species	Minor consequences due to loss of hollows for hollow dependent ecosystem credit species. Hollows are not suitable for Forest Owls.
Trampling of threatened flora species	Impact unlikely. No threatened flora species have been recorded within Subject Land, despite thorough survey.	-	-	-	-
Inhibition of nitrogen fixation and increased soil salinity	Impact unlikely. The project is not considered to result in the inhibition of nitrogen fixation and increased soil salinity.	-	-	-	-
Fertiliser drift	Potential for impact, due to use of lawn and garden fertilisers within landscaped areas following completion of Project, which may be slightly elevated versus the current use within the Subject Land.	Likely limited to areas within or adjacent to fertiliser application.	Potential long term	PCT 3234	Consequences are likely to be minimal but may facilitate altered soil chemistry and a risk of weed invasion in retained PCT 3234.
Rubbish dumping	Impact unlikely to be increased as a result of the Project.	-	-	-	-
Wood collection	Impact unlikely to occur, considering the urban nature of the project.	-	-	-	-
Bush rock removal and disturbance	Impact unlikely. No bush rock has been identified within the	-	-	-	-



Indirect impact	Nature	Extent	Duration	Threatened Entities Likely Affected	Consequences
	Subject Land, therefore the project is not considered to result in this indirect impact.				
Increase in predatory species populations	Impact unlikely. The Project is unlikely to substantially alter the Subject Land and surrounding areas from the present condition in providing habitat or resources for predatory species populations.	-	-	-	-
Increase in pest animal populations	Impact unlikely. The Project is unlikely to substantially alter the Subject Land and surrounding areas from the present condition in providing habitat or resources for predatory species populations.	-	-	-	-
Increased risk of fire	Impact unlikely. The project is unlikely to increase the currently low risk of fire.	-	-	-	-
Disturbance to specialist breeding and foraging habitat	Impact possible. Fauna breeding and foraging habitat is likely to occur in adjacent vegetation and may be disturbed by the construction activities and ongoing residential flat usage.	Retained native vegetation in the Subject Land and Study Area	Potential long-term	Ecosystem credit species and species credit species	Short term disruption of fauna habitat usage during construction and potential long-term disruption due to increased noise associated with residential units.



8.3 Prescribed Impacts

The project has been assessed as potentially resulting in five prescribed impacts (see Chapter 6). An assessment of these prescribed impacts is provided below in accordance with Section 8.3 of the BAM. Additionally, Figure 11 shows the location of the relevant prescribed impacts within the Study Area.

8.3.1 Human-Made Structures

8.3.1.1 Nature

A number of human-made structures are present within the Subject Land which have been removed. These comprise four single and double storey dwellings and other smaller structures such as carport garden sheds, decking, external garages and an inground pool. Entry points were not located for any of the buildings with significant roof cavities; however buildings and structures may still contain some roosting areas for species, including threatened birds and bats, and arboreal mammals, and there may be some shelter areas underneath for additional species such as reptiles and mammals.

8.3.1.2 Extent

The project will remove four single and double storey dwellings and other smaller structures such as carport garden sheds, decking, external garages and an inground pool.

8.3.1.3 Duration

Impacts to human-made structures will occur during the demolition and construction phase of the project. The removal of the human-made structures is permanent, although new structures are to be constructed on site.

8.3.1.4 Threatened Entities Affected

Ecosystem and species credit species. Buildings may contain some roosting areas for species, including threatened birds and bats, and arboreal mammals, and there may be some shelter areas underneath structures for additional species such as reptiles and mammals.

8.3.1.5 Consequences

The project will result in the permanent removal of all structures. The removal of these structures is not considered to have significantly impact upon potentially affected threatened entities as the habitat is likely to be sub-par, and new structures will be constructed within the Subject Land.

8.3.2 Non-Native Vegetation

8.3.2.1 Nature

As the development design has been focused on avoiding areas of native vegetation and locating the development within areas cleared or existing non-native/ exotic vegetation, areas of non-native vegetation will be removed as a result of the Project. This vegetation consists of a diverse array of planted exotic trees and shrubs located in garden beds and along property boundaries. The ground cover in these areas includes a wide range of domesticated ornamental species. In addition, non-native vegetation is present as exotic-dominated grassland, including maintained lawn areas and overgrown open spaces.



8.3.2.2 Extent

The project requires the clearing of 0.12 ha of exotic vegetation and 0.04 ha of exotic dominated grassland.

8.3.2.3 Duration

The removal of non-native vegetation represents a long-term impact; however, landscaping will be implemented around the development to improve visual amenity and support ecological function through the use of appropriate native species.

8.3.2.4 Threatened Entities Affected

Ecosystem credit species, such as bats and birds, may forage within the exotic vegetation present on the Subject Land. There is also some potential for the Grey-headed Flying Fox to utilise the flowers of exotic shrubs proposed for removal. Areas of Exotic Dominated Grassland are unlikely to provide high-quality foraging habitat for grass seed-feeding species, as these areas are regularly mown and grasses are unlikely to set seed frequently. However, they may occasionally offer limited foraging opportunities.

8.3.2.5 Consequences

The project will result in the removal of 0.31 ha of non-native vegetation. Although considered as areas of low ecological integrity, the clearing of non-native vegetation has the potential to reduce foraging habitat for some fauna species. The reduction of this area of non-native vegetation is not considered to significantly impact upon potentially affected threatened entities as other areas of suitable habitat, in the form of native vegetation, will be retained within the Study Area and the wider assessment area.

8.3.3 Habitat Connectivity

8.3.3.1 Nature

The Subject Land occurs for the most part in a highly developed urban environment, although there is some connectivity to patches of vegetation within the Bayview Golf Course which is located directly north of Darley Street West and just beyond a small area of residential development to the east of the Subject Land. Within the broader landscape, patches of vegetation within the Golf Course connect to larger, undeveloped vegetation corridors that extend westward within the suburbs of Bayview and Ingleside. To the south and east of the Subject Land, the landscape is characterised by a mix of suburban and industrial development, and main arterial roads such as Pittwater Road and Barrenjoey Road, interspersed with small, fragmented patches of remnant/regrowth and planted native and exotic trees that function as stepping-stone habitat for highly mobile fauna species as a local habitat corridor.

8.3.3.2 Extent

Habitat connectivity has been reduced by the project by the removal of 0.13 ha of native vegetation, 0.12 ha of exotic vegetation and 0.04 ha of exotic dominated grassland.

8.3.3.3 Duration

Impacts to habitat connectivity will occur during the demolition and construction phase of the project and the removal of vegetation will be permanent.



8.3.3.4 Threatened Entities Affected

Ecosystem credit and species credit fauna species which may utilise the habitat as part of a larger foraging range and as stepping-stone habitat will most likely be affected by this impact.

8.3.3.5 Consequences

The project may have resulted in a slight reduction in use of the habitat corridor by certain fauna species for a short period during construction, and some others potentially in the long term.

8.3.4 Vehicle Strike

8.3.4.1 Nature

The construction of the access road to access the underground parking of the proposed residential units may result in an increase in the number of vehicles accessing the Subject Land and thereby increase the risk of fauna vehicle strike.

8.3.4.2 Extent

The risk of vehicle strike will be greatest on the access from West Darley Street.

8.3.4.3 Duration

The impacts of vehicle strike will occur during the construction and may occur during the operational phases of the project with the additional traffic utilising the residential units in the long term.

8.3.4.4 Threatened Entities Affected

Ecosystem credit fauna species, including threatened birds and microbats.

8.3.4.5 Consequences

The proposed Project involves the construction of a new entranceway and basement carparking to accommodate 82 residential apartments, which will result in increased occupancy and vehicle movements. This change may elevate the risk of vehicle strikes to fauna.

While this may elevate the potential risk of vehicle strikes to fauna, vehicle speeds within the site and surrounding area are generally low. Consequently, any increase in risk is expected to be minimal.

8.4 Mitigation of Impacts to Native Vegetation and Habitat

This section presents a range of mitigation measures that have been developed for the project to mitigate the impacts to native vegetation and habitat that are unable to be avoided, as well as areas of native vegetation that will be avoided. These include measures to be undertaken before and during construction to limit the impact of the project. In accordance with the BAM Operational Manual, Stage 2, the measures adhere to SMART (Specific, Measurable, Achievable, Realistic, Timebound) principles.

The mitigation measures specified in this section are considered to be appropriate to mitigate the unavoidable impacts of the project, and if they are implemented as specified here, it will be considered that they have been successful, and no further verification of their



success is required. They include a range of measures to be undertaken before, during, and after construction to limit the impact of the project. Each mitigation measure is discussed in detail below, and a summary is provided in Table 19.

8.4.1 Vegetation Management Plan

A Vegetation Management Plan (VMP) is to be prepared for the project and will need to be approved prior to the issue of a Construction Certificate. The VMP will specify measures that will be implemented to protect and enhance the Pittwater and Wagstaffe Spotted Gum Forest TEC located in the Study Area.

The VMP will specify that the retained area of the Pittwater and Wagstaffe Spotted Gum Forest TEC will be revegetated with native species characteristic of that community. Additionally, further retained areas currently mapped as exotic vegetation or cleared land will be revegetated using species typical of the Pittwater and Wagstaffe Spotted Gum Forest TEC.

A detailed species list will be developed, with procurement of native plantings sourced from local nurseries. The VMP will also include weed control measures as detailed in Section 8.4.9. Monitoring and reporting requirements will also be specified within the VMP.

8.4.2 Hollow Salvage & Replacement

Two (2) hollow bearing trees have been identified within the Subject Land: Tree 17 and 37, as identified in the Arboricultural Impact Assessment (Tree Wise Men Australia Pty Ltd, 2025).

Any hollow-bearing trees removed as part of the development will be salvaged for reuse in rehabilitation areas within nearby retained vegetation on the site. This approach ensures that key habitat resources are retained and utilised within the rehabilitation area, where appropriate.

Prior to clearing, suitable salvage items will be identified, recorded, flagged with fluorescent marking tape, and marked with a large (>1 m) "S" using spray paint on two sides of the tree and given a unique identifying code for tracking and reuse. Hollow-bearing trees will be assessed for salvage suitability based on their structural integrity, number and size of hollows. Trees will be favoured if single stemmed to ensure that they remain intact during felling.

In addition to hollow-bearing trees, other trees and fallen logs without hollows may also be collected for retention, including those identified by ecologists during the pre-clearing survey. Furthermore, all identified hollows, along with any additional hollows recorded during pre-clearing surveys, will be replaced at a 2:1 ratio. Nest boxes will be installed to match the size and type of the hollows removed and will be placed within retained vegetation in the Study Area.

8.4.3 Delineation of Clearing Limits

The limits of clearing will be marked either by high visibility tape on trees or metal/wooden pickets, fencing or an equivalent boundary marker that will be installed prior to clearing. To avoid unnecessary or inadvertent vegetation and habitat removal or impacts on fauna, disturbance must be restricted to the delineated area and no stockpiling of equipment, machinery, soil or vegetation will occur beyond this boundary.



8.4.4 Pre-clearance Surveys

To minimise impacts to fauna species during construction, pre-clearance surveys will be conducted in all areas of vegetation that are required to be cleared. Pre-clearing surveys will be undertaken within one week of clearing activities by a qualified ecologist.

Habitat features to be identified include, but are not limited to:

- Hollow-bearing trees;
- Hollow-bearing logs;
- Native bee nests; and
- Nests within tree canopy or shrubs.

Such features have the potential to contain native species. All habitat features will be identified, recorded and flagged with fluorescent marking tape and trees will have an “H” spray painted with marking paint on two sides of the tree.

8.4.5 Clearing Protocols

Clearing of vegetation is to be undertaken using a two-stage clearing process as follows:

Stage 1: Clearing will commence following the identification of potential habitat features by a qualified ecologist. If found, hollow-bearing trees marked during pre-clearing will not be cleared during the first stage; however, all vegetation around these trees will be cleared to enable isolation of the feature. Other habitat features, such as hollow-bearing logs, can be removed during Stage 1 done under supervision by a qualified ecologist. Identified hollow-bearing trees will be left at a minimum overnight after Stage 1 clearing to allow resident fauna to voluntarily move from the area.

Stage 2: After hollow-bearing trees have been left overnight, the trees will be cleared in a manner to minimise impacts to fauna. This includes shaking the hollow-bearing trees with machinery, slowly pushing over the tree and inspection of hollows by an ecologist for the presence of fauna following felling of the tree.

Provisions will be made to protect any native fauna during clearing and demolition activities by the following means:

- All staff working on the vegetation clearing will be briefed about the possible fauna present and should avoid injuring any present;
- Animals disturbed or dislodged during the clearance but not injured will be assisted to move to adjacent bushland or other specified locations; and
- If animals are injured during the vegetation clearance, appropriate steps will be taken to humanely treat the animal (either taken to the nearest veterinary clinic for treatment, or if the animal is unlikely to survive, it will be humanely euthanized).

Provision of a report following the completion of clearing works will be provided detailing the total number and species of individuals recorded and details of their release/health.

8.4.6 Sediment Control Measures

The project may result in erosion and transport of sediments as a result of soil disturbance during construction. In order to prevent this impact, construction activities will be undertaken in accordance with “The Blue Book” (Landcom 2004). These include implementation of the following measures:

- Installation of sediment control fences;



- Covering soil stockpiles; and
- Avoiding soil disturbance prior to heavy rainfall.

8.4.7 Tree Protection Measures

As outlined in the Arboricultural Impact Assessment prepared by Tree Wise Men(2025); several tree protection measures are proposed to be implemented to avoid inadvertent impacts to trees that are marked for retention. These measures include the implementation of tree protection fencing, suitable tree protection zones, and temporary ground and root protection where relevant. Further details on tree protection measures are outlined in the Arboricultural Impact Assessment.

8.4.8 Tree relocation

Two (2) *Livistona australis* (Cabbage Tree Palms) - Trees 18 and 45 as identified in the Arboricultural Impact Assessment Report (Tree Wise Men Australia Pty Ltd 2025), proposed for clearing, are to be relocated within the development's landscaping. These palms will be appropriately stored during construction and replanted as part of the final landscaping works.

8.4.9 Weed Management

In order to minimise the spread of weeds throughout the Subject Land and adjoining areas, appropriate weed control activities will be undertaken prior to vegetation clearing in accordance with the Greater Sydney Local Land Services Area and is subject to the *Greater Sydney Regional Strategic Weed Management Plan 2023 – 2027* (LLS: Greater Sydney 2022) under the NSW *Biosecurity Act 2015*.

The *Biosecurity Act 2015* and regulations provide specific legal requirements for state level priority weeds and high risk activities, as provided in the Appendices of the *Greater Sydney Regional Strategic Weed Management Plan 2023 – 2027* (LLS: Greater Sydney 2022). In order to comply with the objectives of the Greater Sydney Regional Strategic Weed Management Plan, it is recommended the following measures be implemented as part of weed management for the Subject Land.

i. Prevention

Appropriate construction site hygiene measures will be implemented to prevent entry of new weeds to the area such as the cleaning of equipment prior to entering the Subject Land.

ii. Eradication

Initial weed management will be carried out within the Subject Land according to best-practice methods under the direction of a suitably qualified bush regenerator. The targeted species will be those listed under Appendices 1 and 2 of the *Greater Sydney Regional Strategic Weed Management Plan 2023 – 2027* (LLS: Greater Sydney 2022). Initial weed treatment will include eliminating woody species and targeting large dominant infestations of exotic herbs. This may be achieved via a combination of manual weed removal and herbicide use.

Best-practice bush regeneration should undertake measures to avoid adverse impacts to retained vegetation within the Subject Land, including not over clearing (remove only targeted species), employment of minimal disturbance techniques to avoid soil and surrounding vegetation disturbance, and replacement of disturbed mulch/leaf-litter.

iii. Containment

Follow-up monitoring and maintenance should be undertaken in the Subject Land following vegetation clearing activities, to contain any re-emergence of weed species.



8.4.10 Landscaping and Planting Species

Native species consistent with the local Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion (PWSGF) TEC are proposed to be planted throughout revegetation works to be undertaken under the Vegetation Management Plan for the Project as well as landscaping plantings of the project to include species characteristic of PWSGF.

Landscape planting details are included in the Landscape Report (Arcadia Landscape Architecture 2025).



Table 19: Summary of Mitigation Measures for Impacts to Native Vegetation

Mitigation Measure	Proposed Techniques	Timing	Frequency	Responsibility	Risk and Consequences of Residual Impacts
Vegetation Management Plan	VMP prepared to provide guidelines for the current area of the Pittwater and Wagstaffe Spotted Gum Forest TEC to be revegetated with native species characteristic of that community. Additionally, further areas of the Study Area will be revegetated using species typical of the Pittwater and Wagstaffe Spotted Gum Forest TEC.	Pre/post construction	Throughout construction and operational periods	Contractor	Degradation of TEC and loss of associated habitat
Hollow salvage and replacement	Salvage hollow-bearing trees for reuse in rehabilitation area. Replace any removed hollows with similar size nestbox at 2:1 ratio.	Prior to Construction	Once and ongoing maintenance for nest boxes	Contractor / Project Ecologist	Loss of threatened species habitat
Delineation of clearing limits	Clearing limits marked either by high visibility tape on trees of metal/wooden pickets, fencing or an equivalent boundary marker. Disturbance, including stockpiling, restricted to clearing limits.	Construction	Once	Contractor	Unnecessary damage to retained trees, or part of the TEC in adjoining vegetation
Pre-clearance surveys	Pre-clearance surveys will be conducted in all areas of vegetation that are required to be cleared. Pre-clearing surveys will be undertaken within one week of clearing.	Construction	Once	Contractor / Project Ecologist	Increased and unnecessary mortality of native fauna



Mitigation Measure	Proposed Techniques	Timing	Frequency	Responsibility	Risk and Consequences of Residual Impacts
	Habitat features will be marked during the pre-clearing survey.				
Clearing Protocols (staging of clearing)	Vegetation clearing will be conducted using a two-stage clearing process. Animals disturbed or dislodged during the clearance but not injured will be assisted to move to adjacent bushland or other specified locations. If animals are injured during the vegetation clearance, appropriate steps will be taken to humanely treat the animal (either taken to the nearest veterinary clinic for treatment, or if the animal is unlikely to survive, it will be humanely euthanised)	Construction	Once	Contractor / Project Ecologist	Increased and unnecessary mortality of native fauna
Sediment control measures	Construction activities will be undertaken in accordance with "The Blue Book" (Landcom 2004). These include implementation of the following measures: • Installation of sediment control fences; • Covering soil stockpiles; and • Avoiding soil disturbance prior to heavy rainfall	Construction	Throughout construction period	Contractor	Sedimentation into retained and adjoining vegetation and waterways
Tree Protection Measures	Implementation of tree protection measures in accordance with the	Construction	Prior to construction and vegetation clearing	Project arborist	Unnecessary damage to retained trees in the



Mitigation Measure	Proposed Techniques	Timing	Frequency	Responsibility	Risk and Consequences of Residual Impacts
	Arboricultural Impact Assessment.				Subject Land and Study Area
Tree relocation	Relocation of two (2) <i>Livistona australis</i> (Cabbage Tree Palms) (Trees 18 & 45) within the development's landscaping. Trees are to be appropriately stored during development until they can be replanted at the landscaping phase.	Construction	Prior to construction and vegetation clearing	Project arborist	Despite best relocating practice, tree survival cannot be guaranteed
Weed Management	Appropriate weed control activities will be undertaken in accordance with the Greater Sydney Regional Strategic Weed Management Plan 2023 – 2027 (LLS: Greater Sydney 2022) and the Overall Project's VMP.	Construction	Following additional vegetation clearance	Bush regenerator / Contractor	Spread of weeds throughout the wider Study Area and surrounding land
Landscaping	Landscaping within the Subject Land to focus on the use of native flora species in accordance with the landscape plan (Arcadia Landscape Architecture 2025). Species selected will reflect those of the Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion TEC to replace locally occurring species of this community that will be impacted by the development.	Operation	Post Construction	Contractor / Landscaper	Reduction in available habitat and biodiversity



8.5 Mitigation Measures for Prescribed Impacts

The following mitigation measures, described in Section 8.4, are relevant to prescribed impacts:

- Vegetation Management Plan
- Hollow salvage and replacement
- Delineation of clearing limits
- Pre-clearance surveys
- Clearing Protocols (staging of clearing)
- Sediment control measures
- Tree Protection Measures
- Tree relocation
- Weed Management
- Landscaping

8.6 Adaptive Management for Uncertain Impacts

The project is considered unlikely to result in any uncertain impacts that require adaptive management.

8.7 Use of Biodiversity Credits to Mitigate or Offset Indirect or Prescribed Impacts

The project does not propose to use additional biodiversity credits to mitigate or offset indirect or prescribed impacts as the impacts are not considered to be significant when the proposed management strategies for these impacts are taken into consideration.



9.0 Threshold of Assessment

9.1 Introduction

The assessment thresholds that must be considered include the following:

- Impacts on an entity that is at risk of a serious and irreversible impact;
- Impacts for which the assessor is required to determine an offset requirement;
- Impacts for which the assessor is not required to determine an offset requirement; and
- Impacts that do not require further assessment by the assessor.

The following sections outline these assessment thresholds and their relevance to the project.

9.2 Impacts on Serious and Irreversible Impact Entities

No candidate SAI entities have been considered as relevant to the project. As such, Section 9.1.1 of the BAM is not required to be addressed.

9.3 Impacts that Require an Offset

9.3.1 Native Vegetation

In accordance with the BAM, the Project requires offsets for the clearing of native vegetation as one of the following criteria is met:

- VI score ≥ 15 , where the PCT is representative of an EEC or a CEEC;
- VI score ≥ 17 , where the PCT is associated with threatened species habitat (as represented by ecosystem credits) or represents a vulnerable ecological community; or
- VI score ≥ 20 , where the PCT does not represent a TEC and is not associated with threatened species habitat.

The PCTs and vegetation zones requiring offsets are documented in Table 20. These areas are mapped in Figure 12.

Table 20: Summary of Impacts to Native Vegetation Requiring an Offset

Vegetation Zone	PCT	Condition Name	MZ	Area (ha)	Patch Size Class	VI Score	VI Loss	Credits
1	3234	Degraded	MZ1	0.07	>100	38.7	-36.3	1
			MZ2	0.004	>100	38.7		

Note: VI = Vegetation Integrity

9.3.2 Threatened Species

No species credit species habitat requires offsetting.



9.4 Impacts That Do Not Require an Offset

In accordance with the BAM, no offsets are required for impacts on 0.05 ha of Planted Native Vegetation (Figure 12), as these were not assigned to a PCT as per Appendix D of the BAM. Impacts that do not require an offset are summarised in Table 21.

Table 21: Impacts that Do Not Require Offset

Vegetation zone	PCT	PCT Name	Subject Land (ha)	VI Loss	Credits Required
-	-	Planted Native Vegetation	0.05	-	0

Note: BRW = Biodiversity Risk Weighting

9.5 Impacts That Do Not Require Further Assessment

All areas identified as 'Exotic Vegetation', 'Exotic Dominated Grassland' and 'Cleared Land' that occur within the Subject Land do not require further assessment. These areas comprise approximately 0.31 ha, as shown on Figure 12.

9.6 Application of the No Net Loss Standard

The BAM sets a standard that will result in no net loss of biodiversity values where the impacts on biodiversity values are avoided, minimised and mitigation, and all residual impacts are offset by retirement of the required number of biodiversity credits.

The ecosystem credit requirement for the project is summarised in Table 22, whilst the 'like for like' offsetting options for the ecosystem credits are provided in Table 23. No species credit requirement are required for the project. A credit summary report from the BAMC has been included in Appendix C.

The credit offset liability is proposed to be satisfied through purchase of biodiversity credits or payment into the Biodiversity Conservation Fund.

Table 22: Summary of Ecosystem Credit Liability

PCT	PCT Name	TEC	Area (ha)	HBT Cr	Credits Required
3234	Hunter Coast Lowland Spotted Gum Moist Forest	Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion	~0.08	1	1

Note: HBT = Hollow Bearing Tree

Table 23: Like for like Offsetting Option

Trading Group	HBT	Credits	In the below IBRA Subregions
Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion This includes PCT's: 3234, 3437	Yes	1	Pittwater, Cumberland, Sydney Cataract, Wyong and Yengo. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Note: HBT = Hollow Bearing Tree



10.0 Conclusion

The proposed development involves the demolition of existing structures, removal of vegetation and construction of residential apartments. The project is defined as a State Significant Development (SSD) and the SEARs require preparation of a BDAR. Accordingly, this BDAR was prepared by SLR to examine the impacts of the project on the biodiversity values of the Subject Land. The project qualifies for streamlined assessment under the small areas module according to the Biodiversity Assessment Method (BAM) and has been prepared in accordance with Appendix C of the BAM.

The primary impact of the project is the removal of vegetation and associated threatened species habitat during construction. A total of 0.44 ha of land will be directly impacted, which includes approximately 0.08 ha of PCT 3234 Hunter Coast Lowland Spotted Gum Moist Forest and 0.05 ha of Planted Native Vegetation that is not assigned to a PCT. The occurrence of PCT 3234 represents an example of Pittwater Wagstaffe Spotted Gum Forest (PWSGF), which is a threatened ecological community (TEC) under the BC Act. The remaining areas of the Subject Land comprise approximately 0.12 ha of Exotic Vegetation, 0.04 ha of Exotic Dominated Grassland and 0.16 ha of Cleared Land.

No threatened species were recorded within the Study Area, and the Subject Land was not identified as being habitat for any of the SAIL species identified in the BAM-C.

As the Project includes the removal of areas of native vegetation, offsets are required in the form of ecosystem credits in accordance with the BAM. The removal of approximately 0.08 ha of PCT 3234 requires a total of one (1) ecosystem credit to offset the loss of this vegetation and achieve a no net loss standard.

As no threatened species were recorded in the Subject Land, no species credits are required to be offset for the Project.

Measures to avoid and minimise impacts to the biodiversity values of the Subject Land have been implemented during development of the SDDA plans and include consideration of the Project location and design, which have resulted in a reduction of the impacts on native vegetation compared to earlier iterations of the Project design.

Other potential impacts on biodiversity values include:

- indirect impacts, including inadvertent impacts on adjacent habitat and reduced viability of adjacent habitat due to noise, dust or light spill, and loss of breeding habitats due to removal of two (2) tree hollows; and
- prescribed impacts, such as impacts to habitat within human-made structures, non-native vegetation, vehicle strikes, and impacts on habitat connectivity.

A suite of mitigation measures will be implemented for the project, including hollow salvage and replacement, delineation of clearing limits, pre-clearance surveys, clearing protocols, sedimentation controls, tree protection, tree relocation, a Vegetation Management Plan and landscaping with species representative of the PWSGF TEC.

The project is considered to be consistent with the No Net Loss standard as impacts to biodiversity values will be mitigated where possible, and all residual impacts are to be offset by retirement of the required number of biodiversity credits. As such, the project is not considered to result in unacceptable direct, indirect or prescribed impacts on biodiversity.



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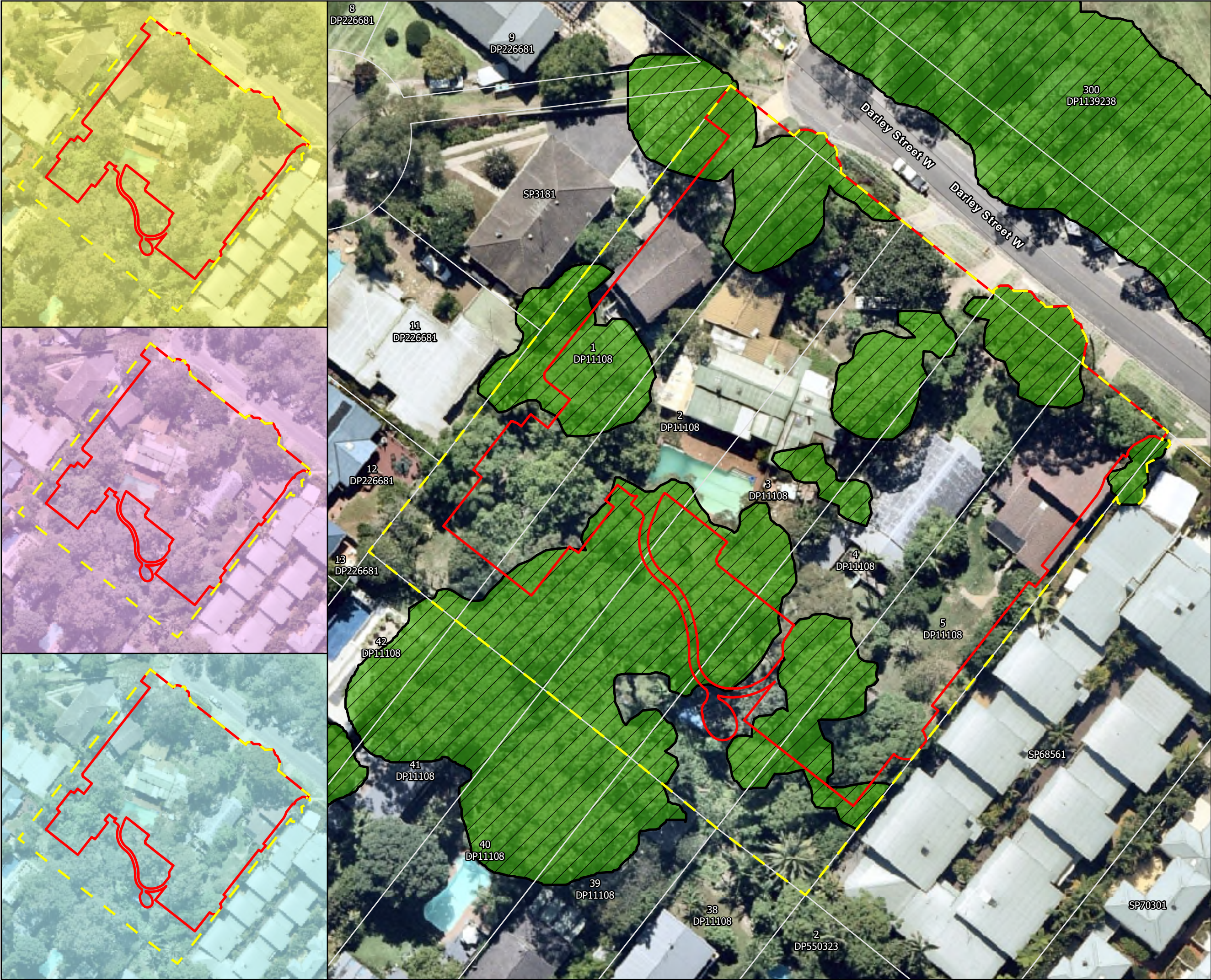
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159-167 DARLEY STREET WEST
MONA VALE

SITE MAP

FIGURE 1

- LEGEND**
- Subject Land
 - Study Area
 - Cadastral
 - Native Vegetation Cover
 - Patch Size: >100 ha
 - IBRA Region**
 - Sydney Basin
 - IBRA Subregion**
 - Pittwater
 - NSW (Mitchell) Landscapes**
 - Sydney - Newcastle Barriers and Beaches

Nearmap Pty Ltd, Image, Dated: 12/3/2025
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Interim Biogeographic Regionalisation for Australia (IBRA),
Version 7 (Regions, Subregions)
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Scale: 1:475 at A3
Project Number: 610.032665.00006
Date Drawn: 14-Nov-2025
Drawn by: JL





159-167 DARLEY STREET WEST
MONA VALE

LOCATION MAP

FIGURE 2

- LEGEND**
- Subject Land
 - Study Area
 - Assessment Area
 - Native Vegetation Cover
 - Patch Size: >100 ha
 - Riparian Buffer
 - Wetland
- Watercourses**
- 1st Order Stream
 - 2nd Order Stream
 - 3rd Order Stream
- IBRA Region**
- Sydney Basin
- IBRA Subregion**
- Pittwater
- NSW (Mitchell) Landscapes**
- Belrose Coastal Slopes
 - Sydney - Newcastle Barriers and Beaches

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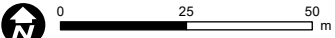
159-167 DARLEY STREET WEST
MONA VALE

HISTORICAL AERIAL
PHOTOGRAPHY (1951) OF THE
SUBJECT LAND

FIGURE 4

- LEGEND**
- Subject Land
 - Study Area

Image Source: NSW Spatial Services Dated: 1951
Sixmaps Clip and Ship, NSW Spatial Services
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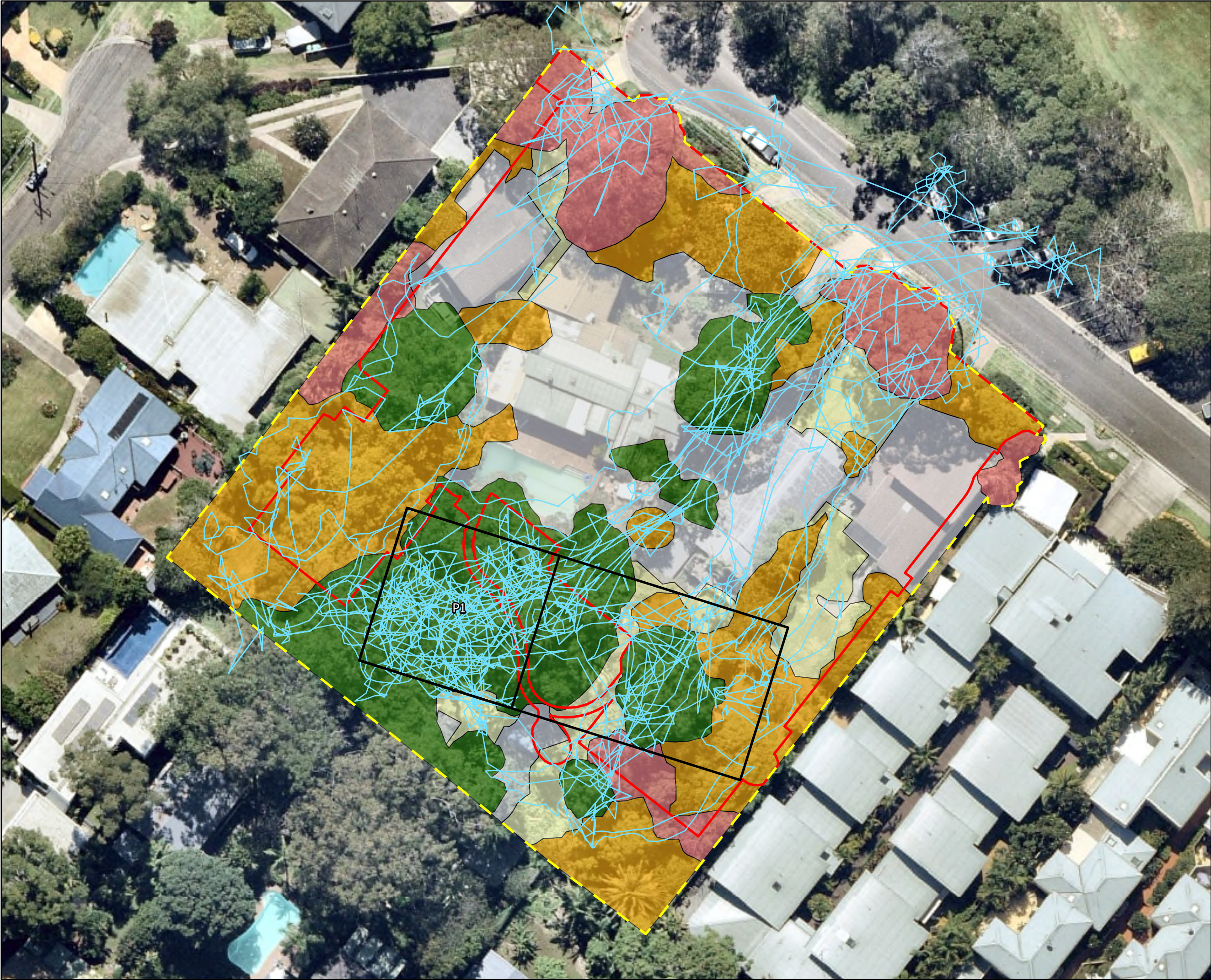
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Drawn by: JL





159-167 DARLEY STREET WEST
MONA VALE

FLORA SURVEY LOCATIONS

FIGURE 5

- LEGEND**
- Subject Land
 - Study Area
 - BAM Plot
 - Parallel Traverse and Random Meander
- Plant Community Type**
- PCT 3234: Hunter Coast Lowland Spotted Gum Moist Forest
- Other Vegetation Types**
- Planted Native Vegetation
 - Exotic Vegetation
 - Exotic Dominated Grassland
 - Cleared Land

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159-167 DARLEY STREET WEST
MONA VALE

FAUNA SURVEY LOCATIONS

FIGURE 6

LEGEND

Subject Land

Study Area

Habitat Item

● Large Hollow (>20cm)

● Arboreal Termite Nest

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Scale: 1:433 at A3

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159-167 DARLEY STREET WEST
MONA VALE

NATIVE VEGETATION EXTENT

FIGURE 7

- LEGEND**
- Subject Land
 - Study Area
 - Vegetation Extent**
 - Native Vegetation
 - Exotic Vegetation
 - Cleared Land

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159-167 DARLEY STREET WEST
MONA VALE

PLANT COMMUNITY TYPES

FIGURE 8

LEGEND

Subject Land

Study Area

Plant Community Type

PCT 3234: Hunter Coast

Lowland Spotted Gum Moist Forest

Other Vegetation Types

Planted Native Vegetation

Exotic Vegetation

Exotic Dominated Grassland

Cleared Land

Nearmap Pty Ltd, Image, Dated: 12/3/2024
Sixmaps Clip and Ship, NSW Spatial Services
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Coordinate System: GDA 1994 MGA Zone 56

Scale: 1:433 at A3

Project Number: 610.032665.00006

Date Drawn: 14-Nov-2025

Drawn by: JL





159-167 DARLEY STREET WEST
MONA VALE

THREATENED ECOLOGICAL
COMMUNITIES

FIGURE 9

- LEGEND**
- Subject Land
 - Study Area
 - Threatened Ecological Community**
 - Hunter Coast Lowland Spotted Gum Moist Forest

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	0	5	10	m
Coordinate System:	GDA 1994 MGA Zone 56			
Scale:	1:433 at A3			
Project Number:	610.032665.00006			
Date Drawn:	14-Nov-2025			
Drawn by:	JL			





159-167 DARLEY STREET WEST
MONA VALE

VEGETATION ZONE

FIGURE 10

- LEGEND**
- Subject Land
 - Study Area
 - Management Zone**
 - MZ1 – Full Clearing
 - MZ2 – Understorey Disturbance
 - Vegetation Zone**
 - Zone 1: PCT 3234

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0 5 10 m
Coordinate System: GDA 1994 MGA Zone 56
Scale: 1:433 at A3
Project Number: 610.032665.00006
Date Drawn: 14-Nov-2025
Drawn by: JL





159-167 DARLEY STREET WEST
MONA VALE

PRESCRIBED IMPACTS

FIGURE 11

- LEGEND**
- Subject Land
 - Study Area
 - Prescribed Impact**
 - Non-native Vegetation
 - Vehicle Strike
 - Human-made Structures
 - Habitat Connectivity

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	0	5	10	m
Coordinate System:	GDA 1994 MGA Zone 56			
Scale:	1:433 at A3			
Project Number:	610.032665.00006			
Date Drawn:	14-Nov-2025			
Drawn by:	JL			





159-167 DARLEY STREET WEST
MONA VALE

THRESHOLDS FOR ASSESSMENT

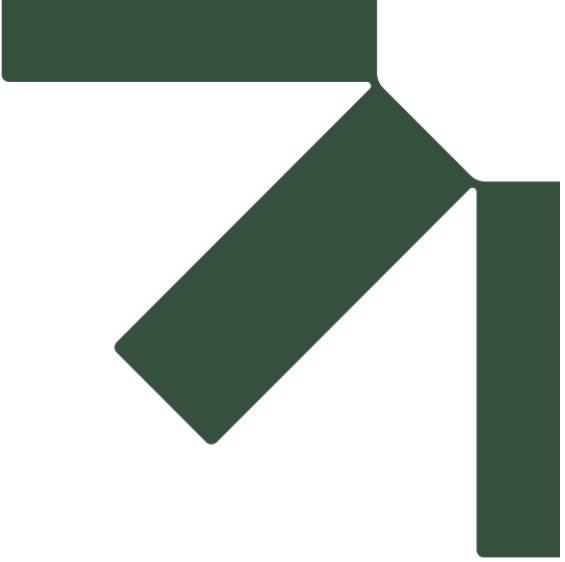
FIGURE 12

- LEGEND**
- Subject Land
 - Study Area
 - Areas Requiring an Offset**
 - PCT 3234: Hunter Coast
 - Lowland Spotted Gum Moist Forest
 - Areas Not Requiring an Offset**
 - Planted Native Vegetation
 - Areas Not Requiring Further Assessment**
 - Exotic Vegetation
 - Exotic Dominated Grassland
 - Cleared Land

Nearmap Pty Ltd, Image. Dated: 12/3/2024
Sixmaps Clip and Ship, NSW Spatial Services
DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

0 5 10 m
Coordinate System: GDA 1994 MGA Zone 56
Scale: 1:433 at A3
Project Number: 610.032665.00006
Date Drawn: 14-Nov-2025
Drawn by: JL





Appendix A Vegetation Survey Data

Biodiversity Development Assessment Report (Small Area)

**State Significant Development Application (SSD-91496958)
159-167 Darley Street West, Mona Vale**

The Trustee for DREP1 Mona Vale Sub Trust

SLR Project No.: 610.032665.00001

14 November 2025

Table A-1: Vegetation Survey and Data – Plot Info

Plot	PCT	Area	Patch size	Condition class	Zone	Easting	Northing	Bearing	Plot-based vegetation surveys	Vegetation integrity surveys
1	3234_Degraded	0.24	>100	Degraded	56	342313	6273007	123	☒ Yes ☐ No	☒ Yes ☐ No

Table A-2: Vegetation Survey and Data – Composition

Plot	Tree	Shrub	Grass	Forb	Fern	Other
1	3	0	4	8	0	3

Table A-3: Vegetation Survey and Data – Structure

Plot	Tree	Shrub	Grass	Forb	Fern	Other
1	40.5	0	12.6	1.3	0.0	0.5

Table A-4: Vegetation Survey and Data – Function

Plot	Large Trees	Hollows trees	Litter cover	Length of fallen logs	Tree stem 5-9	Tree stem 10-19	Tree stem 20-29	Tree stem 30-49	Tree stem 50-79	Tree regen	High threat exotics
1	8	2	13	3	0	0	0	0	1	0	91.8



Table A-5: Vegetation survey and data – Flora species: Plot 1 and random meander survey

Family	Scientific Name	Exotic	Common Name	HTW Manageable Yes/No	BAM Growth Form Group	Plot 1 Plot Cover	Plot 1 Abundance
Acanthaceae	<i>Hypoestes phyllostachya</i>	*		Yes			
Acanthaceae	<i>Ruellia squarrosa</i>	*				0.2	30
Amaryllidaceae	<i>Clivia miniata</i>	*				0.2	3
Amaryllidaceae	<i>Crinum pedunculatum</i>		Swamp Lily		Forb (FG)	0.2	5
Anthericaceae	<i>Chlorophytum comosum</i>	*	Spider Plant	Yes			
Apiaceae	<i>Cyclospermum leptophyllum</i>	*	Slender Celery			0.1	10
Apiaceae	<i>Hydrocotyle laxiflora</i>		Stinking Pennywort		Forb (FG)	0.1	4
Apocynaceae	<i>Nerium oleander</i>	*	Oleander				
Araceae	<i>Monstera deliciosa</i>	*	Fruit Salad Plant			2.0	5
Araceae	<i>Syngonium podophyllum</i>	*	Arrowhead vine			0.2	5
Araliaceae	<i>Hedera helix</i>	*	English Ivy	No			
Arecaceae	<i>Archontophoenix cunninghamiana</i>		Bangalow Palm		Other (OG)		
Arecaceae	<i>Livistona australis</i>		Cabbage Tree Palm		Other (OG)		
Arecaceae	<i>Phoenix canariensis</i>	*	Canary Island Date Palm	Yes			
Asparagaceae	<i>Asparagus plumosus</i>	*	Climbing Asparagus Fern	No			
Asparagaceae	<i>Dracaena trifasciata</i>	*	Mother-In-Laws Tongue				
Asteliaceae	<i>Cordyline australis</i>	*	Cabbage Tree				
Asteraceae	<i>Bidens pilosa</i>	*	Cobbler's Pegs	No		0.2	30
Asteraceae	<i>Cirsium vulgare</i>	*	Spear Thistle			0.2	5
Asteraceae	<i>Conyza sumatrensis</i>	*	Tall fleabane				



Family	Scientific Name	Exotic	Common Name	HTW Manageable Yes/No	BAM Growth Form Group	Plot 1 Plot Cover	Plot 1 Abundance
Asteraceae	<i>Cotula australis</i>		Common Cotula		Forb (FG)		
Asteraceae	<i>Erigeron karvinskianus</i>	*	Bony-tip Fleabane				
Asteraceae	<i>Galinsoga parviflora</i>	*	Potato Weed			0.5	50
Asteraceae	<i>Gamochaeta americana</i>	*	Purple Cudweed				
Asteraceae	<i>Hypochaeris radicata</i>	*	Catsear			0.1	10
Asteraceae	<i>Roldana petasitis</i>	*					
Asteraceae	<i>Soliva sessilis</i>	*	Bindyi				
Asteraceae	<i>Sonchus asper</i>	*	Prickly Sowthistle			0.1	3
Asteraceae	<i>Taraxacum officinale</i>	*	Dandelion			0.1	5
Basellaceae	<i>Anredera cordifolia</i>	*	Madeira Vine	No		2.0	100
Bignoniaceae	<i>Jacaranda mimosifolia</i>	*	Jacaranda				
Bromeliaceae	<i>Aechmea gamosepala</i>	*					
Campanulaceae	<i>Lobelia purpurascens</i>		Whiteroot		Forb (FG)	0.1	20
Cannaceae	<i>Canna indica</i>	*	Tous-les-mois Arrowroot	No		0.3	10
Caprifoliaceae	<i>Abelia chinensis</i>	*					
Caryophyllaceae	<i>Cerastium glomeratum</i>	*	Mouse-ear Chickweed				
Commelinaceae	<i>Callisia fragrans</i>	*	Inch Plant				
Commelinaceae	<i>Callisia repens</i>	*				2.0	200
Commelinaceae	<i>Commelina cyanea</i>		Native Commelina		Forb (FG)	0.1	5
Commelinaceae	<i>Tradescantia fluminensis</i>	*	Trad	No		5.0	500
Commelinaceae	<i>Tradescantia pallida</i>	*	Purple Queen				



Family	Scientific Name	Exotic	Common Name	HTW Manageable Yes/No	BAM Growth Form Group	Plot 1 Plot Cover	Plot 1 Abundance
Convolvulaceae	<i>Dichondra repens</i>		Kidney Weed		Forb (FG)	0.1	40
Crassulaceae	<i>Bryophyllum pinnatum</i>	*	Resurrection Plant				
Cupressaceae	<i>Cupressus</i> sp.	*					
Cycadaceae	<i>Cycas revoluta</i>	*					
Cyperaceae	<i>Cyperus eragrostis</i>	*	Umbrella Sedge	No		0.5	50
Cyperaceae	<i>Cyperus gracilis</i>		Slender Flat-sedge		Grass & grasslike (GG)	0.5	300
Davalliaceae	<i>Nephrolepis cordifolia</i>		Fishbone Fern		Fern (EG)		
Euphorbiaceae	<i>Euphorbia peplus</i>	*	Petty Spurge			0.1	5
Euphorbiaceae	<i>Euphorbia pulcherrima</i>	*	Poinsettia				
Euphorbiaceae	<i>Homalanthus populifolius</i>				Shrub (SG)		
Fabaceae (Caesalpinioideae)	<i>Senna pendula</i>	*		Yes		0.2	2
Fabaceae (Faboideae)	<i>Glycine microphylla</i>		Small-leaf Glycine		Other (OG)	0.2	50
Fabaceae (Faboideae)	<i>Medicago polymorpha</i>	*	Burr Medic				
Fabaceae (Faboideae)	<i>Wisteria sinensis</i>	*	Chinese wisteria				
Geraniaceae	<i>Geranium homeanum</i>				Forb (FG)	0.5	30
Hamamelidaceae	<i>Liquidambar styraciflua</i>	*	Sweetgum				
Iridaceae	<i>Dietes iridioides</i>	*	African Iris				
Lauraceae	<i>Cinnamomum camphora</i>	*	Camphor Laurel	Yes		3.0	2
Liliaceae	<i>Aspidistra elatior</i>	*					
Magnoliaceae	<i>Magnolia grandiflora</i>	*	Southern Magnolia				



Family	Scientific Name	Exotic	Common Name	HTW Manageable Yes/No	BAM Growth Form Group	Plot 1 Plot Cover	Plot 1 Abundance
Malaceae	<i>Spiraea cantoniensis</i>	*	Reeves' meadowsweet				
Malvaceae	<i>Abutilon grandifolium</i>	*				0.3	1
Malvaceae	<i>Brachychiton acerifolius</i>		Illawarra Flame Tree		Tree (TG)		
Malvaceae	<i>Modiola caroliniana</i>	*	Red-flowered Mallow				
Malvaceae	<i>Sida rhombifolia</i>	*	Paddy's Lucerne			0.2	50
Moraceae	<i>Ficus benjamina</i>	*	Weeping Fig				
Moraceae	<i>Ficus coronata</i>		Creek Sandpaper Fig		Shrub (SG)		
Moraceae	<i>Ficus pumila</i>	*	Creeping Fig				
Moraceae	<i>Morus alba</i>	*	White Mulberry			2.0	2
Musaceae	<i>Musa acuminata</i>	*	Edible banana			2.0	10
Myrtaceae	<i>Callistemon viminalis</i>		Weeping Bottlebrush		Tree (TG)		
Myrtaceae	<i>Corymbia citriodora</i>	*	Lemon-scented Gum				
Myrtaceae	<i>Corymbia gummifera</i>		Red Bloodwood		Tree (TG)		
Myrtaceae	<i>Corymbia maculata</i>		Spotted Gum		Tree (TG)		
Myrtaceae	<i>Eucalyptus globulus</i>		Tasmanian Blue Gum		Tree (TG)		
Myrtaceae	<i>Eucalyptus paniculata</i>		Grey Ironbark		Tree (TG)	30.0	4
Myrtaceae	<i>Eucalyptus pilularis</i>		Blackbutt		Tree (TG)		
Myrtaceae	<i>Eucalyptus punctata</i>		Grey Gum		Tree (TG)	10.0	1
Myrtaceae	<i>Lophostemon confertus</i>		Brush Box		Tree (TG)		
Myrtaceae	<i>Melaleuca armillaris</i>		Bracelet Honey-myrtle		Shrub (SG)		
Myrtaceae	<i>Melaleuca quinquenervia</i>		Broad-leaved Paperbark		Tree (TG)		



Family	Scientific Name	Exotic	Common Name	HTW Manageable Yes/No	BAM Growth Form Group	Plot 1 Plot Cover	Plot 1 Abundance
Myrtaceae	<i>Melaleuca styphelioides</i>		Prickly-leaved Tea Tree		Shrub (SG)		
Myrtaceae	<i>Syzygium australe</i>		Brush Cherry		Shrub (SG)		
Nandinaceae	<i>Nandina domestica</i>	*	Japanese Sacred Bamboo			0.1	1
Ochnaceae	<i>Ochna serrulata</i>	*	Mickey Mouse Plant	No		0.2	1
Oleaceae	<i>Fraxinus</i> sp.	*					
Oleaceae	<i>Jasminum polyanthum</i>	*	White Jasmine				
Oleaceae	<i>Ligustrum lucidum</i>	*	Large-leaved Privet	No		0.2	1
Oleaceae	<i>Ligustrum sinense</i>	*	Small-leaved Privet	No			
Oxalidaceae	<i>Oxalis corniculata</i>	*	Creeping Oxalis				
Oxalidaceae	<i>Oxalis latifolia</i>	*				0.1	3
Passifloraceae	<i>Passiflora caerulea</i>	*	Blue Passionflower				
Passifloraceae	<i>Passiflora edulis</i>	*	Common Passionfruit			0.5	2
Phyllanthaceae	<i>Glochidion ferdinandi</i>		Cheese Tree		Tree (TG)	0.5	3
Phyllanthaceae	<i>Phyllanthus tenellus</i>	*	Hen and Chicken				
Pittosporaceae	<i>Pittosporum undulatum</i>		Sweet Pittosporum		Shrub (SG)		
Pittosporaceae	<i>Hymenosporum flavum</i>	*	Frangipani				
Poaceae	<i>Bromus catharticus</i>	*	Prairie Grass			10.0	1,000
Poaceae	<i>Cenchrus clandestinus</i>	*	Kikuyu Grass				
Poaceae	<i>Cynodon dactylon</i> var. <i>dactylon</i>		Common Couch		Grass & grasslike (GG)	2.0	200
Poaceae	<i>Ehrharta erecta</i>	*	Panic Veldtgrass	No		10.0	1,000



Family	Scientific Name	Exotic	Common Name	HTW Manageable Yes/No	BAM Growth Form Group	Plot 1 Plot Cover	Plot 1 Abundance
Poaceae	<i>Microlaena stipoides</i> var. <i>stipoides</i>		Weeping Grass		Grass & grasslike (GG)	10.0	1,000
Poaceae	<i>Oplismenus aemulus</i>		Australian Basket Grass		Grass & grasslike (GG)	0.1	5
Poaceae	<i>Poa annua</i>	*	Winter Grass				
Poaceae	<i>Setaria palmifolia</i>	*	Palm Grass				
Poaceae	<i>Sporobolus africanus</i>	*	Parramatta Grass				
Poaceae	<i>Stenotaphrum secundatum</i>	*	Buffalo Grass	Yes		70.0	7,000
Polygonaceae	<i>Rumex sagittata</i>	*	Rambling Dock	No		0.2	28
Polygonaceae	<i>Rumex brownii</i>		Swamp Dock		Forb (FG)	0.1	2
Primulaceae	<i>Lysimachia arvensis</i>	*	Scarlet Pimpernel				
Proteaceae	<i>Banksia integrifolia</i>		Coast Banksia		Tree (TG)		
Proteaceae	<i>Grevillea robusta</i>		Silky Oak		Tree (TG)		
Proteaceae	<i>Macadamia tetraphylla</i>		Rough-shelled Bush Nut		Tree (TG)		
Pteridaceae	<i>Pteris vittata</i>		Chinese Brake		Fern (EG)		
Rhamnaceae	<i>Alphitonia excelsa</i>		Red Ash		Tree (TG)		
Rosaceae	<i>Potentilla indica</i>	*	Indian Strawberry				
Rosaceae	<i>Rosa canina</i>	*	Dog Rose			0.2	1
Rosaceae	<i>Rubus fruticosus</i>	*	Blackberry complex	No			
Rubiaceae	<i>Gardenia</i> sp.	*					
Solanaceae	<i>Cestrum elegans</i>	*				1.0	2



Family	Scientific Name	Exotic	Common Name	HTW Manageable Yes/No	BAM Growth Form Group	Plot 1 Plot Cover	Plot 1 Abundance
Solanaceae	<i>Cestrum nocturnum</i>	*	Lady-of-the-night				
Solanaceae	<i>Solandra maxima</i>	*	Cup of Gold Vine			3.0	1
Solanaceae	<i>Solanum americanum</i>	*	Glossy Nightshade			0.2	5
Solanaceae	<i>Solanum mauritianum</i>	*	Wild Tobacco Bush			0.1	1
Solanaceae	<i>Solanum nigrum</i>	*	Black-berry Nightshade			0.1	1
Strelitziaceae	<i>Strelitzia reginae</i>	*					
Theaceae	<i>Camellia</i> sp.	*					
Urticaceae	<i>Parietaria judaica</i>	*	Pellitory			1.0	50
Verbenaceae	<i>Verbena quadrangularis</i>	*				0.2	1
Violaceae	<i>Viola banksii</i>				Forb (FG)	0.1	30
Violaceae	<i>Viola odorata</i>	*	Sweet Violet				
Vitaceae	<i>Cayratia clematidea</i>		Native Grape		Other (OG)	0.1	3
Vitaceae	<i>Cissus hypoglauca</i>		Giant Water Vine		Other (OG)	0.2	1
Vitaceae	<i>Vitis vinifera</i>	*	Grape Vine			1.0	1
Zingiberaceae	<i>Hedychium gardnerianum</i>	*	Ginger Lily				

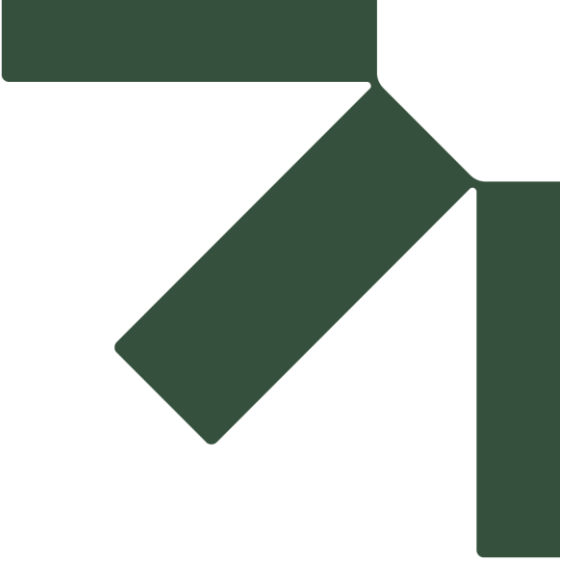


Photograph 6: Plot 1 Start - 12 September 2024



Photograph 7: Plot 1 End - 12 September 2024





Appendix B Credit Reports

Biodiversity Development Assessment Report (Small Area)

**State Significant Development Application (SSD-91496958)
159-167 Darley Street West, Mona Vale**

The Trustee for DREP1 Mona Vale Sub Trust

SLR Project No.: 610.032665.00001

14 November 2025

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00056224/BAAS21003/25/00061971	Residential with in-fill affordable housing - 159-167 Darley Street West Mona Vale	05/08/2025
Assessor Name	Report Created	BAM Data version *
Jacqueline Britton	14/11/2025	Current classification (live - default) (82)
Assessor Number	BAM Case Status	Date Finalised
BAAS21003	Finalised	14/11/2025
Assessment Revision	BOS entry trigger	Assessment Type
0	Test of significance	Part 4 Developments (Small Area)

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat

Zone	Vegetation zone name	TEC name	Current Vegetation integrity score	Change in Vegetation integrity (loss / gain)	Area (ha)	Sensitivity to loss (Justification)	Species sensitivity to gain class	BC Act Listing status	EPBC Act listing status	Biodiversity risk weighting	Potential SAI	Ecosystem credits
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BAM Credit Summary Report

Hunter Coast Lowland Spotted Gum Moist Forest

1	3234_Degraded	Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion	38.7	36.3	0.08	Geographic Distribution	High Sensitivity to Gain	Endangered Ecological Community	Not Listed	2.00	True	1
											Subtotal	1
											Total	1

Species credits for threatened species

Vegetation zone name	Habitat condition (Vegetation Integrity)	Change in habitat condition	Area (ha)/Count (no. individuals)	Sensitivity to loss (Justification)	Sensitivity to gain (Justification)	BC Act Listing status	EPBC Act listing status	Potential SAI	Species credits
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BAM Predicted Species Report

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00056224/BAAS21003/25/00061971	Residential with in-fill affordable housing - 159-167 Darley Street West Mona Vale	05/08/2025
Assessor Name	Report Created	BAM Data version *
Jacqueline Britton	14/11/2025	Current classification (live - default) (82)
Assessor Number	Assessment Type	BAM Case Status
BAAS21003	Part 4 Developments (Small Area)	Finalised
Assessment Revision	BOS entry trigger	Date Finalised
0	Test of significance	14/11/2025

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Threatened species reliably predicted to utilise the site. No surveys are required for these species. Ecosystem credits apply to these species.

Common Name	Scientific Name	Vegetation Types(s)
Black-chinned Honeyeater (eastern subspecies)	Melithreptus gularis gularis	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Brown Treecreeper (eastern subspecies)	Climacteris picumnus victoriae	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Dusky Woodswallow	Artamus cyanopterus cyanopterus	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Eastern Coastal Free-tailed Bat	Micronomus norfolkensis	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Eastern Osprey	Pandion cristatus	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Flame Robin	Petroica phoenicea	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Gang-gang Cockatoo	Callocephalon fimbriatum	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Grey-headed Flying-fox	Pteropus poliocephalus	3234-Hunter Coast Lowland Spotted Gum Moist Forest

BAM Predicted Species Report

Large Bent-winged Bat	<i>Miniopterus orianae oceanensis</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Little Bent-winged Bat	<i>Miniopterus australis</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Little Eagle	<i>Hieraaetus morphnoides</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Little Lorikeet	<i>Glossopsitta pusilla</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
New Holland Mouse	<i>Pseudomys novaehollandiae</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Regent Honeyeater	<i>Anthochaera phrygia</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Rosenberg's Goanna	<i>Varanus rosenbergi</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Scarlet Robin	<i>Petroica boodang</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
South-eastern Glossy Black-Cockatoo	<i>Calyptorhynchus lathami lathami</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Spotted-tailed Quoll	<i>Dasyurus maculatus</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Square-tailed Kite	<i>Lophoictinia isura</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Superb Fruit-Dove	<i>Ptilinopus superbus</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Swift Parrot	<i>Lathamus discolor</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Varied Sittella	<i>Daphoenositta chrysoptera</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
White-throated Needletail	<i>Hirundapus caudacutus</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Yellow-bellied Sheath-tail-bat	<i>Saccolaimus flaviventris</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest

Threatened species Manually Added

None added

Threatened species assessed as not within the vegetation zone(s) for the PCT(s)

Common Name	Scientific Name	Plant Community Type(s)
Black Bittern	<i>Ixobrychus flavicollis</i>	3234-Hunter Coast Lowland Spotted Gum Moist Forest

Threatened species assessed as not within the vegetation zone(s) for the PCT(s)

Refer to BAR for detailed justification

BAM Predicted Species Report

Common Name	Scientific Name	Justification in the BAM-C
Black Bittern	<i>Ixobrychus flavicollis</i>	Habitat constraints

BAM Candidate Species Report

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00056224/BAAS21003/25/00061971	Residential with in-fill affordable housing - 159-167 Darley Street West Mona Vale	05/08/2025
Assessor Name	Report Created	BAM Data version *
Jacqueline Britton	14/11/2025	Current classification (live - default) (82)
Assessor Number	Assessment Type	BAM Case Status
BAAS21003	Part 4 Developments (Small Area)	Finalised
Assessment Revision	BOS entry trigger	Date Finalised
0	Test of significance	14/11/2025

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

List of Species Requiring Survey

Name	Presence	Survey Months
<i>Melaleuca deanei</i> Deane's Paperbark	No (surveyed)	☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☒ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
<i>Persoonia hirsuta</i> Hairy Geebung	No (surveyed)	☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☒ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?

BAM Candidate Species Report

<i>Rhodamnia rubescens</i> Scrub Turpentine	No (surveyed)	☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☒ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?
<i>Rhodomyrtus psidioides</i> Native Guava	No (surveyed)	☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☒ Sep ☐ Oct ☐ Nov ☐ Dec ☐ Survey month outside the specified months?

Threatened species Manually Added

Common Name	Scientific Name
Leatherback Turtle	Dermochelys coriacea
Wallangarra White Gum	Eucalyptus scoparia
Bauer's Midge Orchid	Genoplesium baueri
Caley's Grevillea	Grevillea caleyi
Deane's Paperbark	Melaleuca deanei
Angus's Onion Orchid	Microtis angusii
Eastern Curlew	Numenius madagascariensis
Hairy Geebung	Persoonia hirsuta
Sooty Owl	Tyto tenebricosa

Threatened species assessed as not on site

Refer to BAR for detailed justification

Common name	Scientific name	Justification in the BAM-C
Angus's Onion Orchid	Microtis angusii	Refer to BAR
Bauer's Midge Orchid	Genoplesium baueri	Refer to BAR
Caley's Grevillea	Grevillea caleyi	Habitat constraints
Eastern Australian Underground Orchid	Rhizanthella slateri	Refer to BAR
Eastern Cave Bat	Vespadelus troughtoni	Habitat constraints
Eastern Curlew	Numenius madagascariensis	Habitat constraints

BAM Candidate Species Report

Large Bent-winged Bat	<i>Miniopterus orianae oceanensis</i>	Habitat constraints
Large-eared Pied Bat	<i>Chalinolobus dwyeri</i>	Refer to BAR
Leatherback Turtle	<i>Dermochelys coriacea</i>	Habitat constraints
Little Bent-winged Bat	<i>Miniopterus australis</i>	Habitat constraints
Regent Honeyeater	<i>Anthochaera phrygia</i>	Habitat constraints
Sooty Owl	<i>Tyto tenebricosa</i>	Habitat constraints
Swift Parrot	<i>Lathamus discolor</i>	Habitat constraints
Wallangarra White Gum	<i>Eucalyptus scoparia</i>	Habitat constraints

BAM Vegetation Zones Report

Proposal Details

Assessment Id	Assessment name	BAM data last updated *
00056224/BAAS21003/25/00061971	Residential with in-fill affordable housing - 159-167 Darley Street West Mona Vale	05/08/2025
Assessor Name	Report Created	BAM Data version *
Jacqueline Britton	14/11/2025	Current classification (live - default) (82)
Assessor Number	Assessment Type	BAM Case Status
BAAS21003	Part 4 Developments (Small Area)	Finalised
Assessment Revision	BOS entry trigger	Date Finalised
0	Test of significance	14/11/2025

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Vegetation Zones

#	Name	PCT	Condition	Area	Minimum number of plots	Management zones
1	3234_Degraded	3234-Hunter Coast Lowland Spotted Gum Moist Forest	Degraded	0.08	1	MZ1 (0.07 ha) MZ2 (0.01 ha)



BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00056224/BAAS21003/25/00061971	Residential with in-fill affordable housing - 159-167 Darley Street West Mona Vale	05/08/2025
Assessor Name	Assessor Number	BAM Data version *
Jacqueline Britton	BAAS21003	Current classification (live - default) (82)
Proponent Names	Report Created	BAM Case Status
	14/11/2025	Finalised
Assessment Revision	BOS entry trigger	Assessment Type
0	Test of significance	Part 4 Developments (Small Area)
Date Finalised	* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.	
14/11/2025		

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion	Endangered Ecological Community	3234-Hunter Coast Lowland Spotted Gum Moist Forest
Species		
Nil		



BAM Biodiversity Credit Report (Like for like)

Additional Information for Approval

PCT Outside Ibra Added

None added

PCTs With Customized Benchmarks

PCT

No Changes

Predicted Threatened Species Not On Site

Name

Ixobrychus flavicollis / Black Bittern

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
3234-Hunter Coast Lowland Spotted Gum Moist Forest	Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion	0.1	1	0	1



BAM Biodiversity Credit Report (Like for like)

3234-Hunter Coast Lowland Spotted Gum Moist Forest

Like-for-like credit retirement options

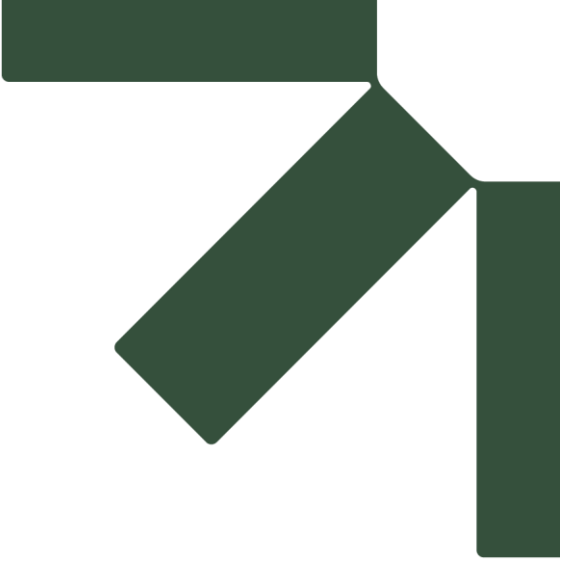
Name of offset trading group	Trading group	Zone	HBT	Credits	IBRA region
Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion This includes PCT's: 3234, 3437	-	3234_Degraded	Yes	1	Pittwater, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species Credit Summary

No Species Credit Data

Credit Retirement Options

Like-for-like credit retirement options



Appendix C Concept Designs

Biodiversity Development Assessment Report (Small Area)

**State Significant Development Application (SSD-91496958)
159-167 Darley Street West, Mona Vale**

The Trustee for DREP1 Mona Vale Sub Trust

SLR Project No.: 610.032665.00001

14 November 2025

ARCHITECTURAL DRAWINGS

OPTION 1 - 50% Landscape Coverage Scheme
48 UNITS

- TREES TO BE RETAINED
- TREES TO BE REMOVED

UNIT MIX

2 Bed	18	38%
3 Bed	30	62%
Total	48	100%

FSR

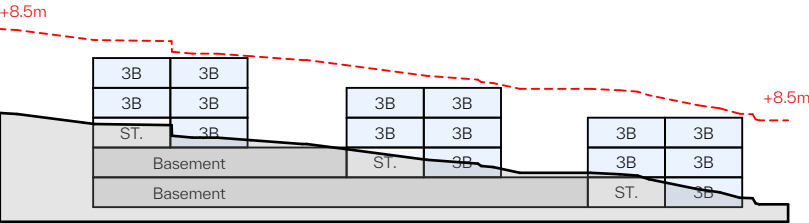
Site Area	6122m ²
Approx. GFA	6017m ²
Approx. FSR	0.98:1

LANDSCAPE

Required	50% of site area: 3061 m ²
Proposed	Approx. 3093 m ²



SECTION



ARCHITECTURAL DRAWINGS

OPTION 2 - Planning Proposal Scheme
43 UNITS

- TREES TO BE RETAINED
- TREES TO BE REMOVED

UNIT MIX

2 Bed	18	42%
3 Bed	25	58%
Total	43	100%

FSR

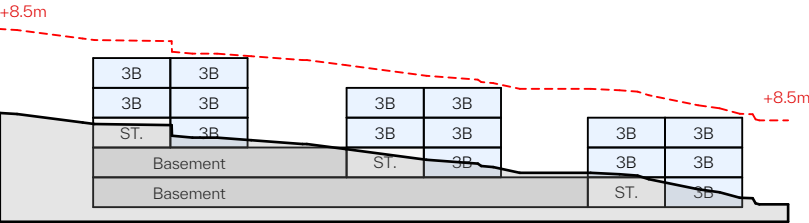
Site Area	6122m ²
Approx. GFA	5857m ²
Approx. FSR	0.95:1

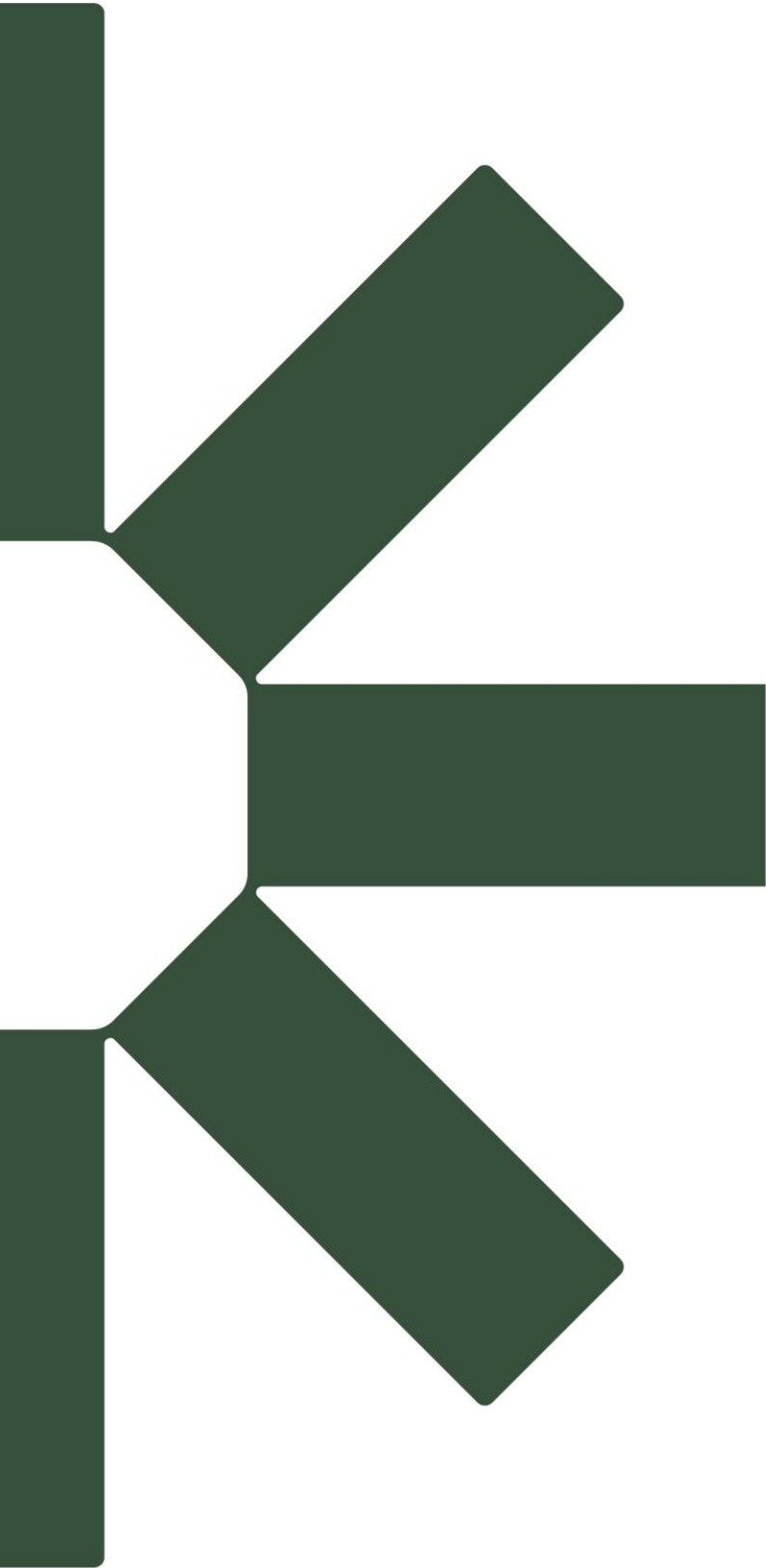
LANDSCAPE

Required	50% of site area: 3061 m ²
Proposed	Approx. 3254 m ²



SECTION





Making Sustainability Happen