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Streamlined Biodiversity Development Assessment Report

Pymble Ladies College Secondary Innovation Precinct

20 Avon Road Pymble NSW 2073

Report prepared by Narla Environmental Pty Ltd

for Pymble Ladies College

May 2025



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environmental

Report:	Streamlined Biodiversity Development Assessment Report: Pymble Ladies College Secondary Innovation Precinct, 20 Avon Road Pymble NSW
Prepared for:	Pymble Ladies College
Prepared by:	Narla Environmental Pty Ltd
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Glossary

Acronym/ Term	Definition
Accredited Biodiversity Assessor	Individuals accredited by the NSW Department of Climate Change, Energy the Environment and Water (NDCCEEW) to apply the Biodiversity Assessment Method.
BAM	The NSW Biodiversity Assessment Method 2020
BAMC	The NSW Biodiversity Assessment Method Calculator
BC Act	New South Wales Biodiversity Conservation Act 2016
BDAR	Biodiversity Development Assessment Report
BGHF	Blue Gum High Forest in the Sydney Basin Bioregion
Biodiversity credit report	The report produced by the Credit Calculator that sets out the number and class of biodiversity credits required to offset the remaining adverse impacts on biodiversity values at a development site, or on land to be biodiversity certified.
Biodiversity offsets	Management actions that are undertaken to achieve a gain in biodiversity values on areas of land in order to compensate for losses to biodiversity from the impacts of development.
Biodiversity values	The composition, structure and function of ecosystems, including threatened species, populations and ecological communities, and their habitats.
BOS	NSW Biodiversity Offset Scheme
DA	Development Application
DCCEEW	Department of Climate Change, Energy the Environment and Water
DPE	Department of Planning and Environment (now NDCCEEW)
DPIE	NSW Department of Planning, Industry and Environment (now NDCCEEW)
Ecosystem credit	The class of biodiversity credit that relates to a vegetation type and the threatened species that are reliably predicted by that vegetation type (as a habitat surrogate).
EEC	Endangered Ecological Community
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ha	Hectares
HTE	High Threat Exotic
km	Kilometres
LALC	Local Aboriginal Land Council
LGA	Local Government Area
Locality	A 1,500m buffer area surrounding the Subject Land
m	metres
Native Vegetation	Means any of the following types of plants native to New South Wales: (a) trees (including any sapling or shrub), (b) understorey plants, (c) groundcover (being any type of herbaceous vegetation), (d) plants occurring in a wetland.
NDCCEEW	NSW Department of Climate Change, Energy the Environment and Water
OEH	Office of Environment and Heritage (now NDCCEEW)
PCT	NSW Plant Community Type
Proposal	The development, activity or action proposed
SAIL	Serious and Irreversible Impacts
SAIL entity	Species and ecological communities that are likely to be the subject of serious and irreversible impacts (SAILs)
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
Species credit	The class of biodiversity credit that relate to threatened species that cannot be reliably predicted to use an area of land based on habitat surrogates. Species that require species credits are listed in the Threatened Biodiversity Data Collection.
Subject Land	The footprint of the proposed development
Subject Property	Pymble Ladies College, 20 Avon Road, Pymble NSW

Acronym/ Term	Definition
	▪ Lot 1/DP69541 ▪ Lot 11/DP7131 ▪ Lot 12/DP7131 ▪ Lot 13/DP7131 ▪ Lot 14/DP7131 ▪ Lot 15/DP7131 ▪ Lot 16/DP7131 ▪ Lot 17/DP7131 ▪ Lot 18/DP7131 ▪ Lot 19/DP7131 ▪ Lot 20/DP7131
TEC	Threatened Ecological Community
Threatened species, populations and ecological communities	Species, populations and ecological communities specified in Schedules 1 and 2 of the BC Act 2016
VI	Vegetation Integrity
VIS Plot	Vegetation Integrity Survey Plot
VMP	Vegetation Management Plan

Executive Summary

Narla Environmental Pty Ltd ('Narla') has been commissioned by Pymble Ladies' College ('the proponent') to prepare this Streamlined Biodiversity Development Assessment Report (SBDAR) in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (SEARs) and in support of the preparation of an Environmental Impact Statement (EIS) and State Significant Development Application (SSD-79146716) to the Department of Planning, Housing and Infrastructure (DPHI).

This report has been prepared with reference to architectural plans prepared by 3XN and dated May 2025. The report accompanies a Development Application (DA) for the proposed development at Pymble Ladies College, 20 Avon Road, Pymble NSW, which comprises the following lots, hereafter referred to as the 'Subject Property':

- Lot 1/DP69541
- Lot 11/DP7131
- Lot 12/DP7131
- Lot 13/DP7131
- Lot 14/DP7131
- Lot 15/DP7131
- Lot 16/DP7131
- Lot 17/DP7131
- Lot 18/DP7131
- Lot 19/DP7131
- Lot 20/DP7131

This SBDAR is required as the proposed works impact native vegetation mapped on the NDCCEEW Biodiversity Values map. This SBDAR will assess the biodiversity impacts of the proposed development in accordance with the requirements of the Biodiversity Conservation Act 2016, Biodiversity Conservation Regulation 2017 and the BAM.

Narla has produced this report in order to assess any potential impacts associated with the SSDA and recommend appropriate measures to mitigate any potential ecological impacts in line with the requirements of the Consent Authority. The assessment has been completed in accordance with Appendix L of the BAM. This SBDAR will be prepared as a site-based 'Streamlined assessment module – small area development that requires consent' as it does not exceed the area clearing threshold for small area developments as outlined in the BAM

The proposed development involves the demolition of existing educational buildings, which will be replaced by a new educational facility, along with associated roadways and landscaping. All impacts associated with the proposed development are hereafter referred to as the 'Subject Land.'

Given the heavily vegetated nature and the limited available areas for building within the Subject Property, complete avoidance of impacts to native vegetation has been deemed unfeasible. However, to minimise biodiversity impacts, careful project siting and design has been adopted, guided by a thorough ecological constraints assessment conducted in 2023 by Narla. Future strategies will include developing a Construction Environmental Management Plan (CEMP) and the future preparation of a Vegetation Management Plan (VMP), establishing Tree Protection Zones in accordance with AS-4970, and employing industry-standard measures for managing environmental impacts such as soil, water, and pollutants. Additional efforts will encompass protective measures like erecting temporary fencing, managing stormwater runoff in line with best practices, and promoting the use of local species in landscaping to enhance the ecological integrity of the site. These plans and protections are set to be implemented across various phases, from pre-construction to post-construction, to ensure the preservation and enhancement of biodiversity values.

The proposed development is expected to impact on areas of exotic vegetation as well as select groundcovers representative of one (1) Plant Community Type (PCT): 3136: Blue Gum High Forest. The following ecosystem credits are required to be offset in order to mitigate the impacts upon biodiversity as a result of the proposed development:

- Three (3) ecosystem credits for PCT 3136.

The PCT 3136 within the Subject Land conforms to the BC Act listed, Critically Endangered Ecological Community (CEEC), Blue Gum High Forest in the Sydney Basin Bioregion (BGHF). Blue Gum High Forest is listed as an 'SAIL entity' within the BioNet Threatened Biodiversity Data Collection (NDCCEEW 2025c). Due to the potential sensitivity of this ecological community to any impact, a determination of whether or not the proposed impacts are serious and irreversible has been undertaken in accordance with Section 9.1 of the BAM (DPIE 2020a) 'Additional impact assessment provisions for ecological communities'.

1. Introduction

1.1 Overview

Narla Environmental Pty Ltd ('Narla') has been commissioned by Pymble Ladies' College ('the proponent') to prepare this Streamlined Biodiversity Development Assessment Report (SBDAR) in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (SEARs) and in support of the preparation of an Environmental Impact Statement (EIS) and State Significant Development Application (SSD-79146716) to the Department of Planning, Housing and Infrastructure (DPHI).

This report has been prepared with reference to architectural plans prepared by 3XN and dated May 2025. The report accompanies a Development Application (DA) for the proposed development at Pymble Ladies College, 20 Avon Road, Pymble NSW, which comprises the following lots, hereafter referred to as the 'Subject Property':

- Lot 1/DP69541
- Lot 11/DP7131
- Lot 12/DP7131
- Lot 13/DP7131
- Lot 14/DP7131
- Lot 15/DP7131
- Lot 16/DP7131
- Lot 17/DP7131
- Lot 18/DP7131
- Lot 19/DP7131
- Lot 20/DP7131

This SBDAR is required as the proposed works impact native vegetation mapped on the NDCCEEW Biodiversity Values map (NDCCEEW 2025a; **Figure 2**). This SBDAR will assess the biodiversity impacts of the proposed development in accordance with the requirements of the Biodiversity Conservation Act 2016, Biodiversity Conservation Regulation 2017 and the BAM (DPIE 2020a).

Narla has produced this report in order to assess any potential impacts associated with the DA and recommend appropriate measures to mitigate any potential ecological impacts in line with the requirements of the Consent Authority. The assessment has been completed in accordance with Appendix L of the BAM (DPIE 2020a).

Table 1. Project SEARS Requirements.

Project SEAR SSD 79146716	Section of report
10. Biodiversity Assess any biodiversity impacts associated with the development in accordance with the Biodiversity Conservation Act 2016 and the Biodiversity Assessment Method 2020, including the preparation of a Biodiversity Development Assessment Report (BDAR), unless a waiver is granted or the site is on biodiversity certified land. 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.	Entire Report

1.2 Assessment Method Applied

This SBDAR will be prepared as a site-based 'Streamlined assessment module – small area development that requires consent' as it does not exceed the area clearing threshold for small area developments as outlined in the BAM (DPIE 2020a; **Table 2**). As there is no minimum lot size for the Subject Property under the LEP, the actual lot size of the smallest lot impacted (0.2ha) has been used.

Table 2. Area limits for application of small area development threshold. Dark border indicates clearing threshold relevant to this report.

Minimum lot size associated with the property	Maximum area limit for application of the small area development module
Less than 1ha	≤1ha
Less than 40ha but not less than 1ha	≤2ha
Less than 1000ha but not less than 40ha	≤3ha
1000ha or more	≤5ha

1.3 The Proposed Development

The project comprises demolition of several existing buildings and the construction of the Secondary Innovation Precinct (SIP), associated landscaping and Campus Commons at the Pymble Ladies College. The SIP is a five-storey building that will consolidate STEM based learning opportunities within the College. The eventual gross floor area of the proposed development will be 10,856 m².

The proposal seeks development approval for the SIP and Campus Commons at Pymble Ladies' College. The development comprises:

- Demolition of the existing Isabel Harrison, Dorothy Knox, John Vicars and Robert Vicars Buildings.
- Tree removal.
- Excavation of the basement level.
- Construction of the new five storey SIP building of RL 146.98m and including:
 - General Learning Spaces.
 - STEM teaching spaces.
 - Senior student facilities.
 - Function spaces.
 - Food and beverage facilities.
 - Associated amenities.
 - Storage and building services.
- 1 loading space within the basement (for service vehicles) accessible from the existing rear vehicle service road.
- Minor kerb realignment of the existing access road to the east of the SIP.
- Landscaping on the outdoor terraces and surrounding the building.

The project also includes the Campus Commons, a significant garden lawn and amphitheatre connecting the SIP precinct to the rest of the campus.

All impacts associated with the proposed development are hereafter referred to as the 'Subject Land.' The Subject Land encompasses approximately 0.85 hectares and currently contains an educational building, along with associated hard and soft landscaping. It is bordered by a service road and bushland containing remnant Blue Gum High Forest to the north, with educational land uses in all other directions.

1.4 Site Location and Description

The Subject Property is situated in the suburb of Pymble in the Ku-ring-gai Local Government Area (LGA; **Figure 3**) and is also located within the boundaries of the Metropolitan Local Aboriginal Land Council (Metropolitan LALC). The Subject Property is located on 20 Avon Road, Pymble and covers an area of approximately 19.46ha.

The Subject Property accommodates the existing Pymble Ladies' College which accommodates Kindergarten to Year 12 students. Vehicular access to the College is provided via separate ingress and egress driveways on the northern and western sections of 20 Avon Road. Pedestrian access is provided through multiple gates along Avon Road. The Subject Site is located at the entrance to the College west of the oval.

The Subject Property is positioned approximately 19 kilometres north-west of the Sydney Central Business District and is roughly 200 metres from Pymble train station, which is located on the Pacific Highway and adjacent to Pymble town centre. The surrounding area is characterised by a leafy suburban environment, predominantly featuring detached residential properties set within expansive gardens and tree-lined streets. The broader locality features moderate-scale residential apartment developments, particularly closer to the railway corridor. Two-storey commercial establishments are concentrated near Pymble train station, primarily along the Pacific Highway and on the northern side of the railway line.

The surrounding land uses are as follows:

- North: Avon Road and the Pacific Highway, approximately 400 metres from the site.
- East: A mix of residential uses, including detached dwelling houses and residential flat buildings.
- South: Avondale Golf Course.
- West: Avon Road, beyond which lies a residential area composed primarily of detached dwelling houses.

1.5 Sources of Information Used

A thorough literature review was undertaken to gain an insight into the ecology and applicable legislation within the locality and the Ku-ring-gai Council LGA, including:

- Key Legislation
 - Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act 1999;
 - NSW Biodiversity Act 2016 (BC Act);
 - Environmental Planning and Assessment Act 1979 (EP&A Act).
- Relevant State and Commonwealth Databases & Datasets:
 - Biodiversity Values Map and Threshold Tool (NDCCEEW 2025a)
 - NSW BioNet. The website of the Atlas of NSW Wildlife (NDCCEEW 2025c);
 - NSW BioNet. Threatened Biodiversity Data Collection (NDCCEEW 2025d);
 - NSW BioNet. Vegetation Classification System (NDCCEEW 2025e); and
 - Six Maps Clip & Ship (NSW Government Spatial Services 2025).
- Vegetation and Soil Mapping:
 - NSW eSpade v2.2 (NDCCEEW 2025b);
 - NSW State Vegetation Type Map (DPE 2022); and
 - Soil Landscapes of the Sydney 1:100,000 Sheet (Chapman et al. 2009).
- NSW State Guidelines:
 - Biodiversity Assessment Method (DPIE 2020a);
 - Guidance to assist a decision-maker to determine a serious and irreversible impact (DPIE 2019);
 - Biodiversity Assessment Method Calculator Version 1.5.0.00 (NDCCEEW 2023f);
 - Biodiversity Offsets and Agreement Management System (BOAMS);
 - Surveying threatened plants and their habitats - NSW survey guide for the Biodiversity Assessment Method (DPIE 2020b); and

- Threatened Species Survey and Assessment: Guidelines for developments and activities. Working Draft (DEC 2004).
- Council Documents:
 - Ku-ring-gai Local Environmental Plan (LEP) 2015;
 - Ku-ring-gai Development Control Plan (DCP) 2022.

Preparation of this BDAR also involved the review of the following accompanying project documents:

- Site Plans (3XN Architects 2025; **Appendix A, Appendix B**);
- Arboricultural Impact Assessment & Tree Protection Plan (Tree Survey 2025; **Appendix C**);
- Landscape Design Report (TCL 2025; **Appendix D**)

These sources were used to gain an understanding of the natural environment and ecology of the Subject Land and its surrounds. Searches using NSW Wildlife Atlas (NDCCEEW 2025c) were conducted to identify current threatened flora and fauna records within and surrounding the Subject Land. These data were used to assist in establishing the presence or likelihood of any biodiversity values as occurring on, or adjacent the Subject Land and helped inform our Ecologist on what to look for during the site assessment.

1.6 Aim and Approach

This report has been prepared in accordance with the BAM (DPIE 2020a) and aims to:

- Describe the biodiversity values present within the Subject Land, including the extent of native vegetation, vegetation integrity and the presence of Threatened Ecological Communities (TECs);
- Determine the habitat suitability within the Subject Land for candidate threatened species;
- Prepare an impact assessment in regard to potential impacts of the proposed development on biodiversity values, including potential prescribed impacts and SALLs within the Subject Land;
- Discuss and recommend efforts to avoid and minimise impacts on biodiversity values; and
- Calculate the biodiversity credits (i.e., ecosystem credits and species credits) that measure potential impacts of the development on biodiversity values. This calculation will inform the decision maker as to the number and class of offset credits required to be purchased and retired as a result of the proposed development.

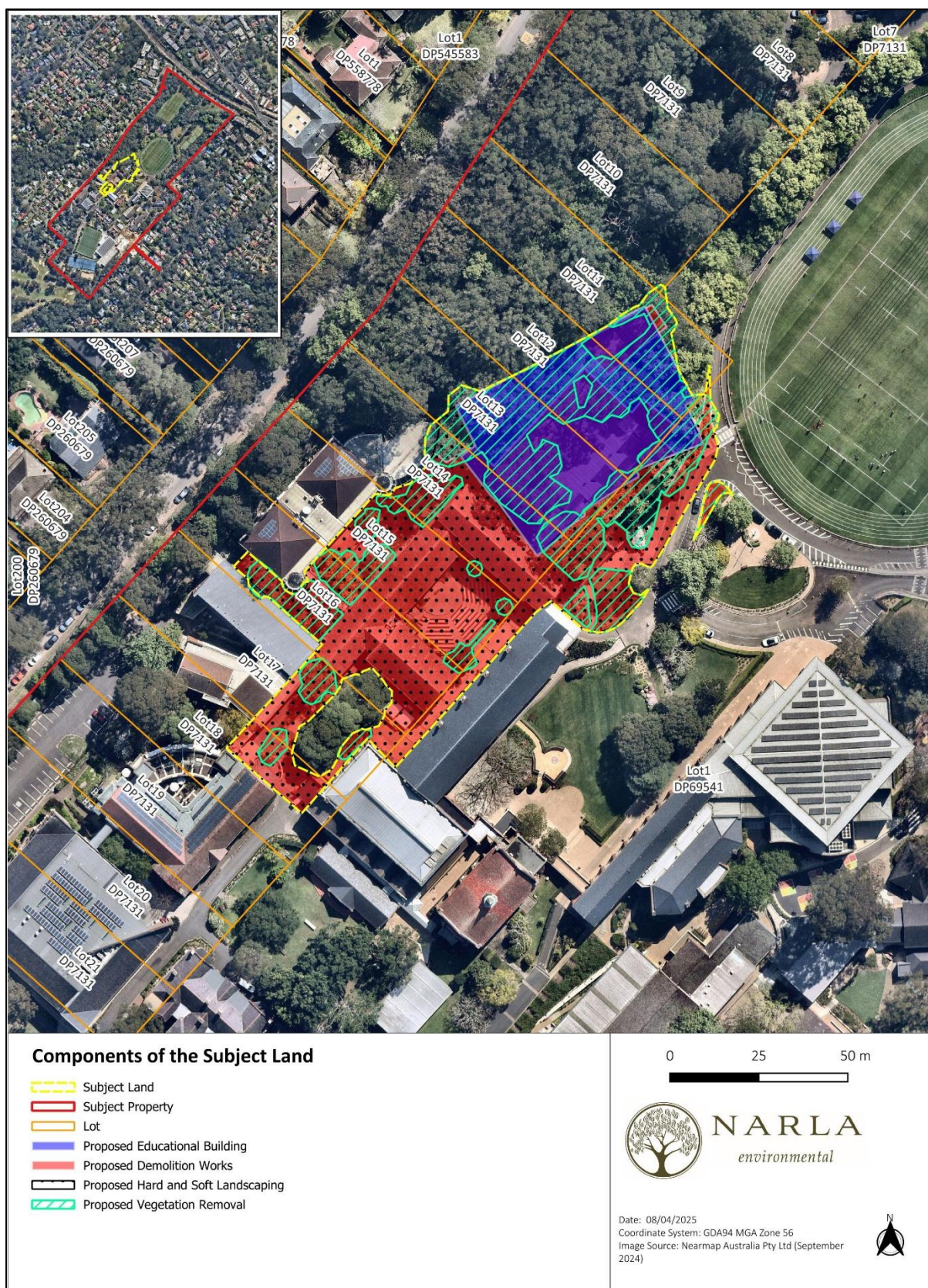


Figure 1. The components of the Subject Land.

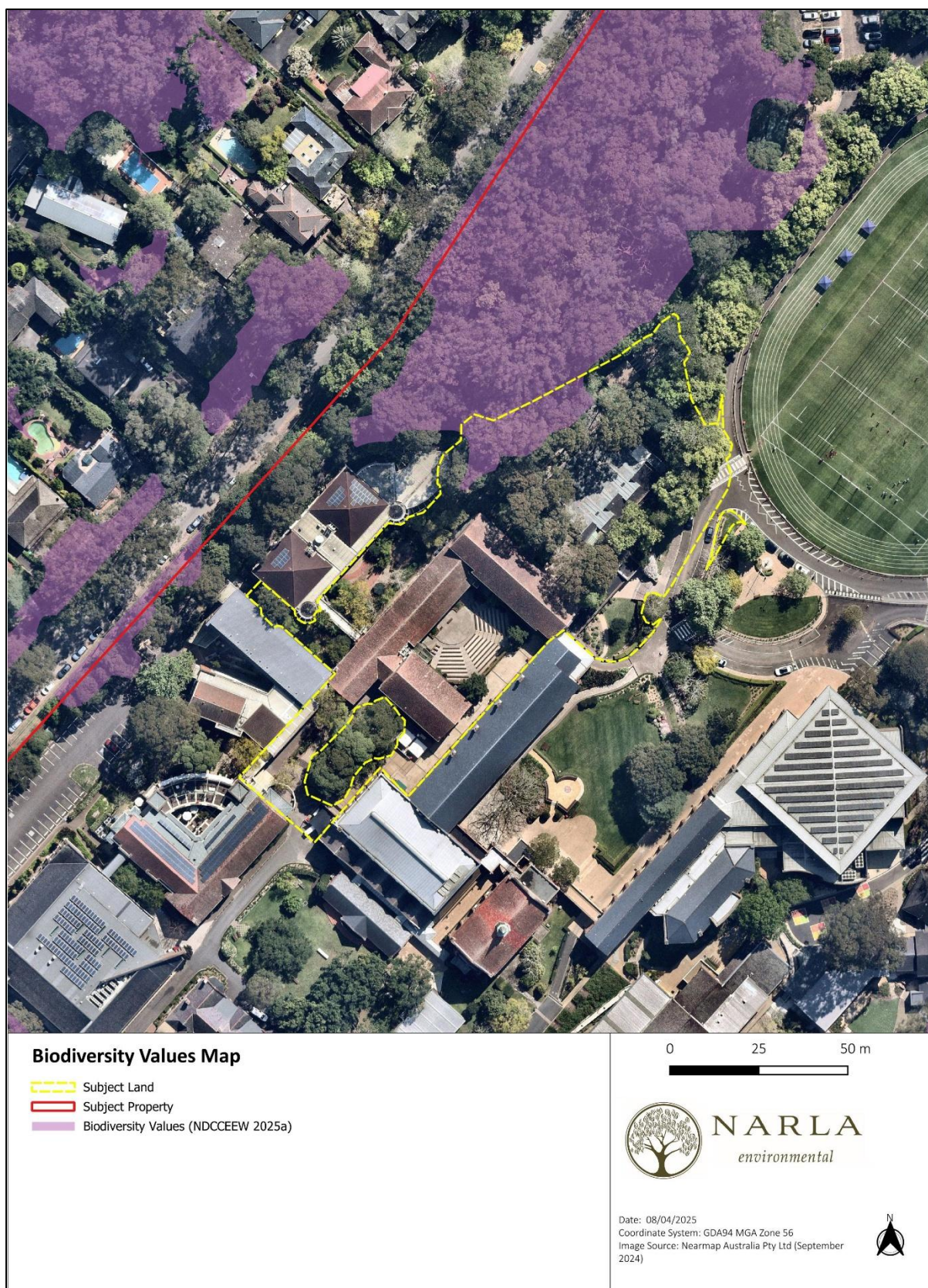


Figure 2. Biodiversity Values mapped within the Subject Land.

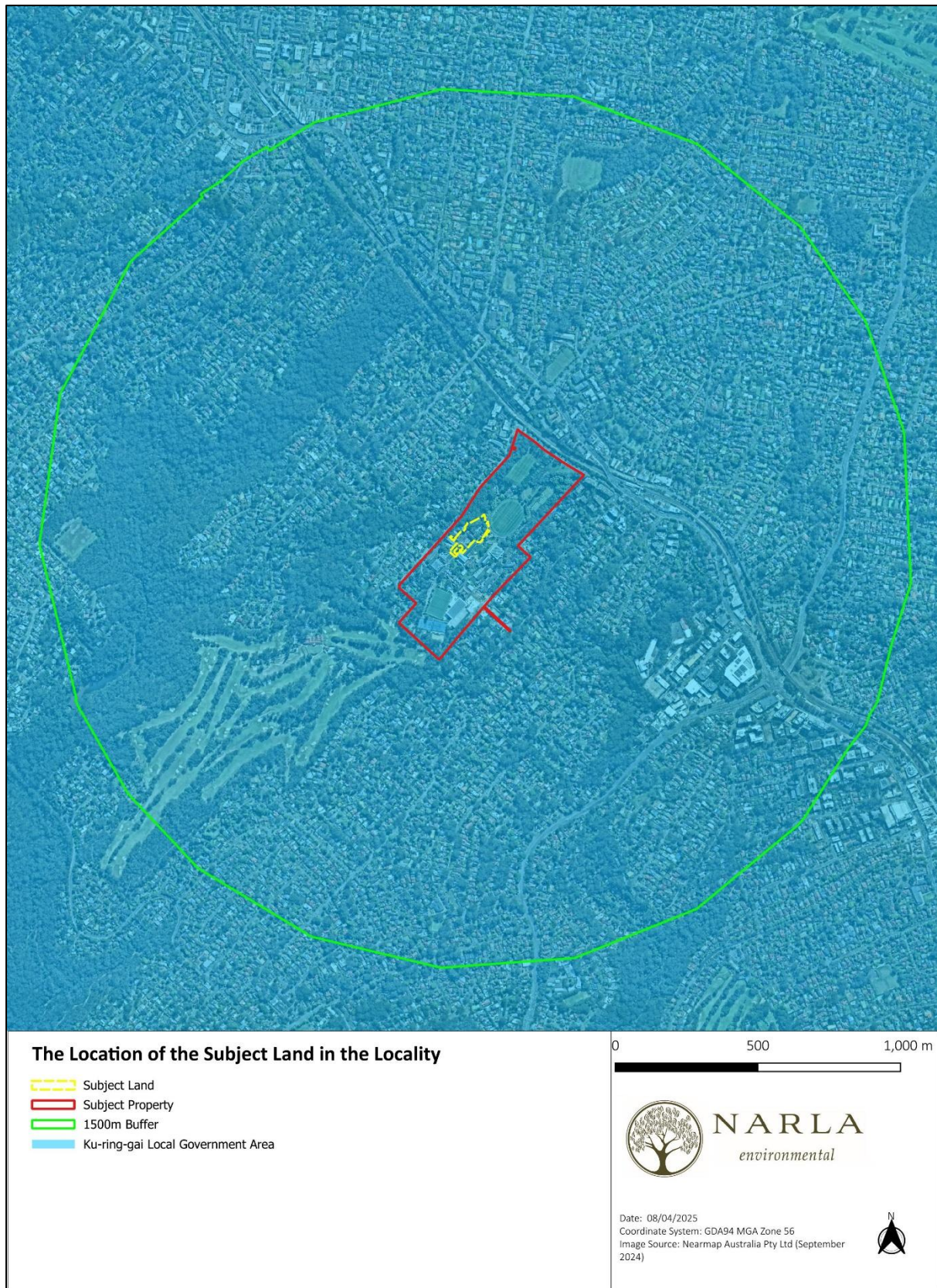


Figure 3. The location of the Subject Land within the locality.

2. Landscape

2.1 IBRA bioregion and subregion

The Subject Land occurs within the 'Cumberland' Interim Biogeographic Regionalisation for Australia 7 (IBRA7) Subregion, which is part of the 'Sydney Basin' IBRA7 Bioregion (**Figure 4**).

2.2 Mitchell Landscapes

Mitchell (2002) groups ecosystems into meso-ecosystems representing larger natural entities based on topography and geology. The naming of ecosystems and meso-ecosystems was standardised so that each name provided location information and a meaningful descriptive landscape term.

The Subject Land occurs within the 'Pennant Hills Ridges' Mitchell Landscape Ecosystem (**Figure 5**). This landscape is characterised by rolling to moderately steep hills on horizontal Triassic shales and siltstones, with general elevations ranging from 10 to 90 metres and a local relief of 60 metres. The area features deep red texture-contrast soils on narrow hillcrests. On slopes, these soils transition to red, brown, and yellow textures, becoming coarser in drainage lines. Vegetation in the area includes tall open forests dominated by species such as Sydney Blue Gum (*Eucalyptus saligna*), Turpentine (*Syncarpia glomulifera*), Blackbutt (*Eucalyptus pilularis*), White Stringybark (*Eucalyptus globoidea*), Grey Ironbark (*Eucalyptus paniculata*), Forest Oak (*Allocasuarina torulosa*), and Rough-barked Apple (*Angophora floribunda*). Rainforest elements are present in protected, moist gully heads, featuring species such as Sweet Pittosporum (*Pittosporum undulatum*), Cheese Tree (*Glochidion ferdinandi*), Sandpaper Fig (*Ficus coronata*), and Black Wattle (*Callicoma serratifolia*).

2.3 Topography, Geology and Soils

The Subject Land is located on slight north facing slope with elevation ranging between RL 124.50 at the southern corner to RL 116 at the north west corner. The Subject Land is mapped as occurring on the 'Glenorie' Soil Landscape according to the Soil Landscapes of Sydney 1:100,000 sheet (Chapman et al, 2009). This soil landscape is characterised by undulating to rolling low hills on Wianamatta Group shales. It contains Narrow ridges, hillcrests and valleys with a local relief 50–80 m, slopes 5–20% and has extensively cleared tall open-forest.

The Subject Land did not contain any areas of geological significance, such as karsts, caves, cliffs or crevices nor are any believed to occur within the broader locality (1500m buffer).

The Subject Land and locality are mapped as containing Class 5, Acid Sulfate Soils according to the Ku-ring-gai Council LEP (**Figure 6**). Acid sulfate soils are not typically found in Class 5 areas. Areas classified as Class 5 are located within 500 metres on adjacent class 1,2,3 or 4 land.

2.4 Hydrology

One (1) unmapped watercourse is located to the north west of the Subject Property. As per Ku-ring-gai Local Environmental Plan (LEP; 2015) and Ku-ring-gai Development Control Plan (KDCP; 2022), this watercourse is identified on the Riparian Lands and Watercourses Map as "Riparian Land Category 3" and "Category 3a", therefore a 10m buffer from the top of each bank has been applied (**Figure 7**). The Subject Land does not intersect this buffer.

Several mapped watercourses occur within the 1500m buffer surrounding the Subject Land, ranging from 1st to 3rd order streams (**Figure 8**).

2.5 State Environmental Planning Policy (Resilience and Hazards) 2021 – Chapter 2: Coastal Management

The Subject Land does not contain any areas identified as ‘Coastal Wetlands’ or ‘Littoral Rainforest’ as per Chapter 2 of the State Environmental Planning Policy (Resilience and Hazards) 2021, nor do any mapped areas occur within the greater locality (1500m buffer).

2.6 Native Vegetation Cover and Connectivity

Native vegetation cover and connectivity have been assessed in accordance with Sections 3.2 and 3.1.3 of the BAM (DPIE 2020a). The native vegetation cover will be used to assess the habitat suitability of the Subject Land for threatened species. Areas of connectivity will determine the extent of habitat that may facilitate the movement of threatened species across their range. A 1500m buffer around the boundary of the Subject Land was calculated to determine the extent of native vegetation and habitat connectivity. Native vegetation cover was approximately 382.37ha within the 1500m buffer circle (total area = 733.89ha) equating to approximately 52% cover and was therefore assigned to the >30–70% class.

Connectivity was evident between the Subject Land and the broader locality despite the heavily urbanised nature of the landscape, there are areas of connectivity that may facilitate the movement of threatened species were evident within the broader extents of the 1500m buffer surrounding the Subject Land (**Figure 9**).

2.7 Areas of Outstanding Biodiversity Value

No Areas of Outstanding Biodiversity Value occur on the Subject Land or surrounding area.



Figure 4. IBRA Bioregion and Subregion of the Subject Property and Subject Land, and within a 1500m buffer.

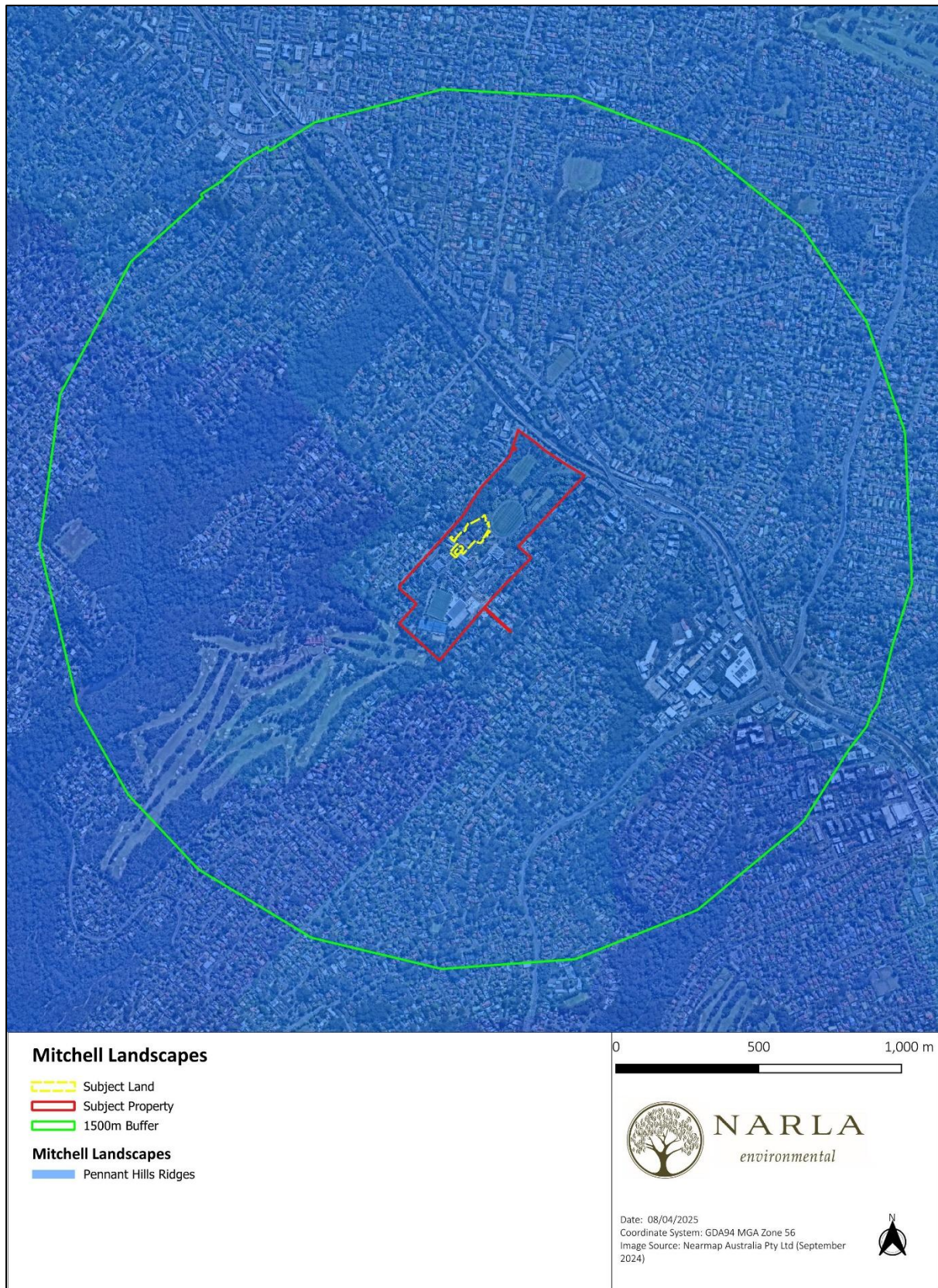


Figure 5. Mitchell Landscapes of the Subject Property and Subject Land, and within a 1500m buffer.

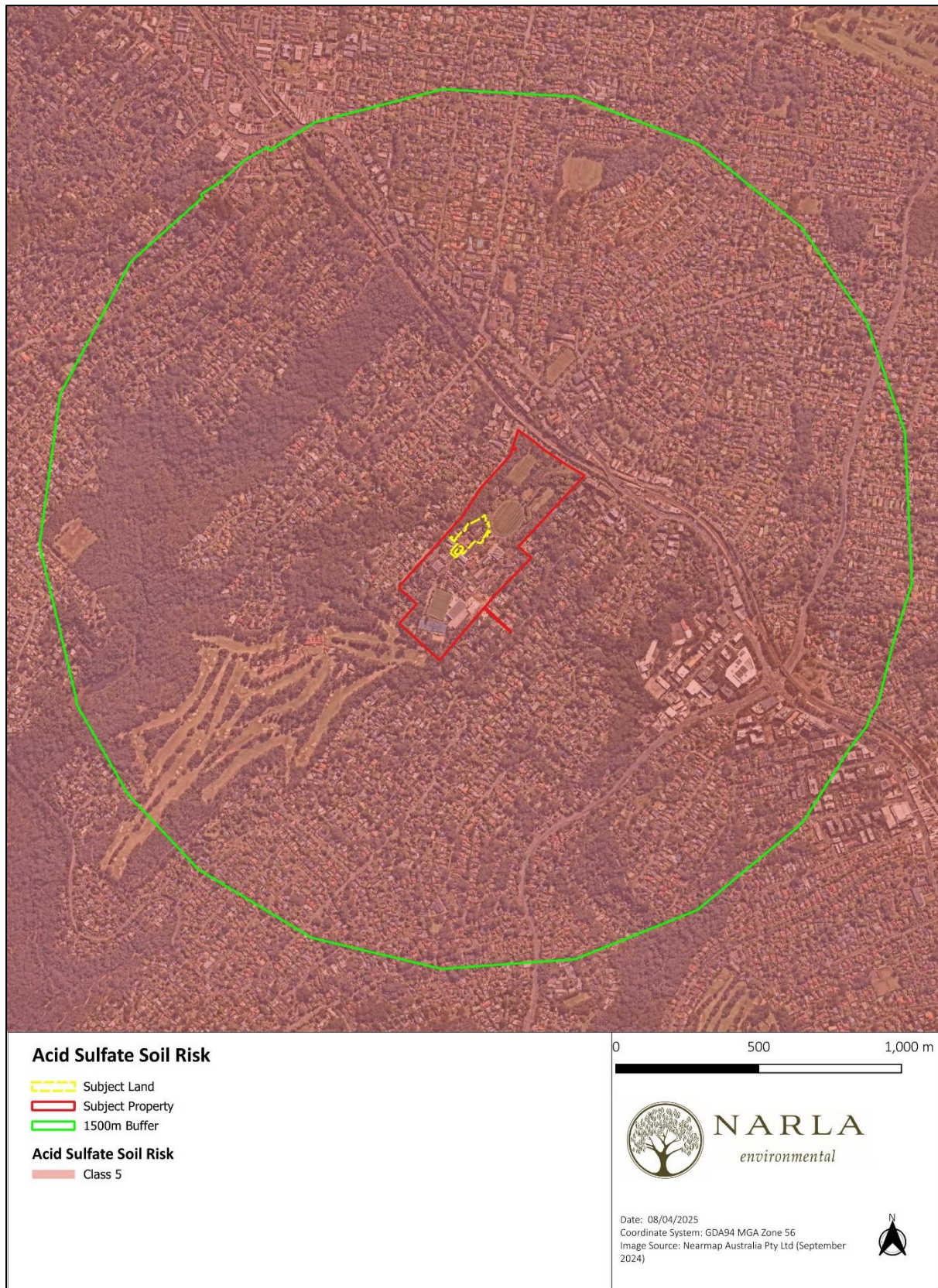


Figure 6. Acid Sulfate Soils within a 1500m buffer.

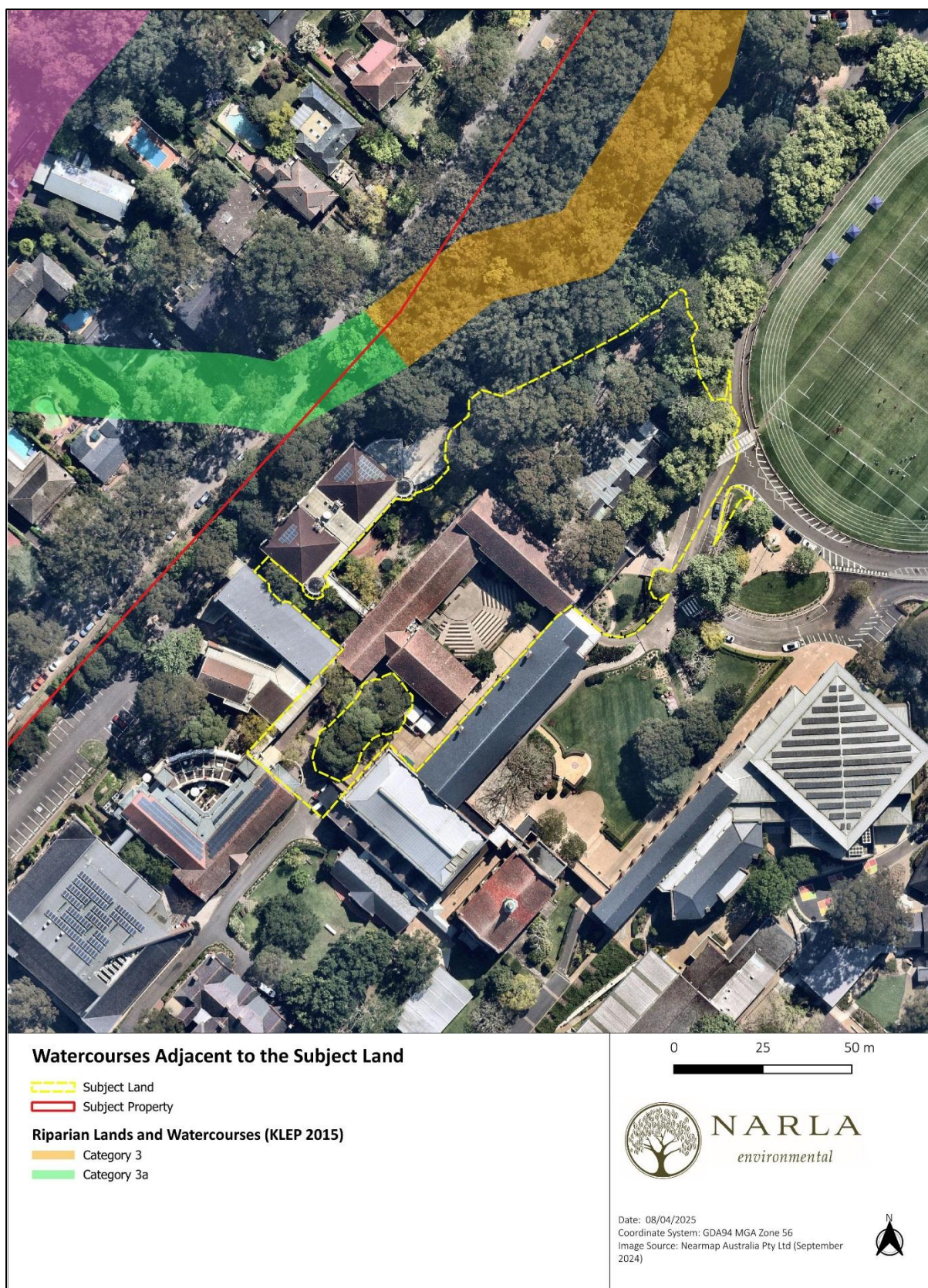


Figure 7. Watercourses and riparian buffer zones occurring within and adjacent to the Subject Land.



Figure 8. Rivers and streams (with associated riparian buffers) occurring within the 1500m buffer.

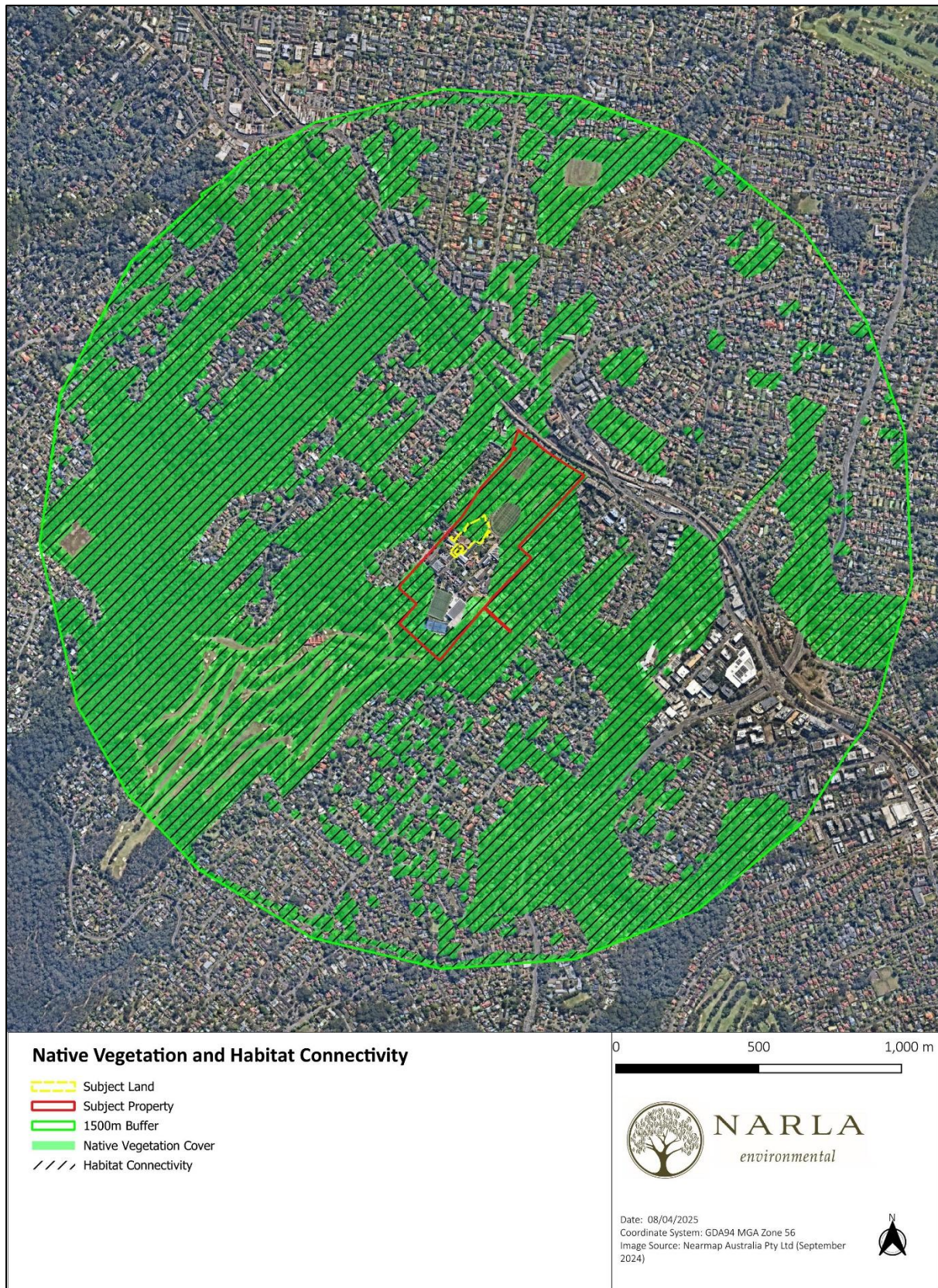


Figure 9. The extent of native vegetation and habitat connectivity occurring within the 1500m buffer.

3. Native Vegetation

3.1 Plant Community Types (PCTs) Identified within the Subject Land

3.1.1 Historically Mapped Vegetation

The Subject Land is mapped by the NSW State Vegetation Type Map (DPE 2022) as containing the following vegetation communities (**Figure 10**):

- PCT 3136: Blue Gum High Forest

3.1.2 Plant Community Type Selection Process

Field surveys conducted by experienced Narla Ecologist Brodie Miller confirmed that one (1) native vegetation community occurred within the Subject Land, in addition to areas of Exotic Landscaped Vegetation.

Plant Community Type selection for this vegetation community was undertaken using information and databases provided in the BioNet Vegetation Classification System (NDCCEEW 2025). The following selection criteria were used in the PCT Filter Tool to develop the PCT shortlist:

- IBRA Bioregion: Sydney Basin
- IBRA Subregion: Cumberland
- Dominant Species: *Eucalyptus pilularis*, *Eucalyptus saligna*, *Corymbia maculata* and *Glochidion ferdinandi*

This process delivered a selection of eleven (11) PCT's that occur within the Cumberland IBRA Subregion (and Sydney Basin Bioregion) and that contained 4 out of 4 of the observed dominant species (i.e., the highest potential of occurring within the Subject Land). The geographical distribution, geology and landscape position of each shortlisted PCT was then compared against the location, geology and landscape of the Subject Land, resulting in two (2) candidate PCTs (**Table 3**). The steps taken to justify the presence/absence of the candidate PCTs within the Subject Land are detailed in **Table 3** and **Table 4**.

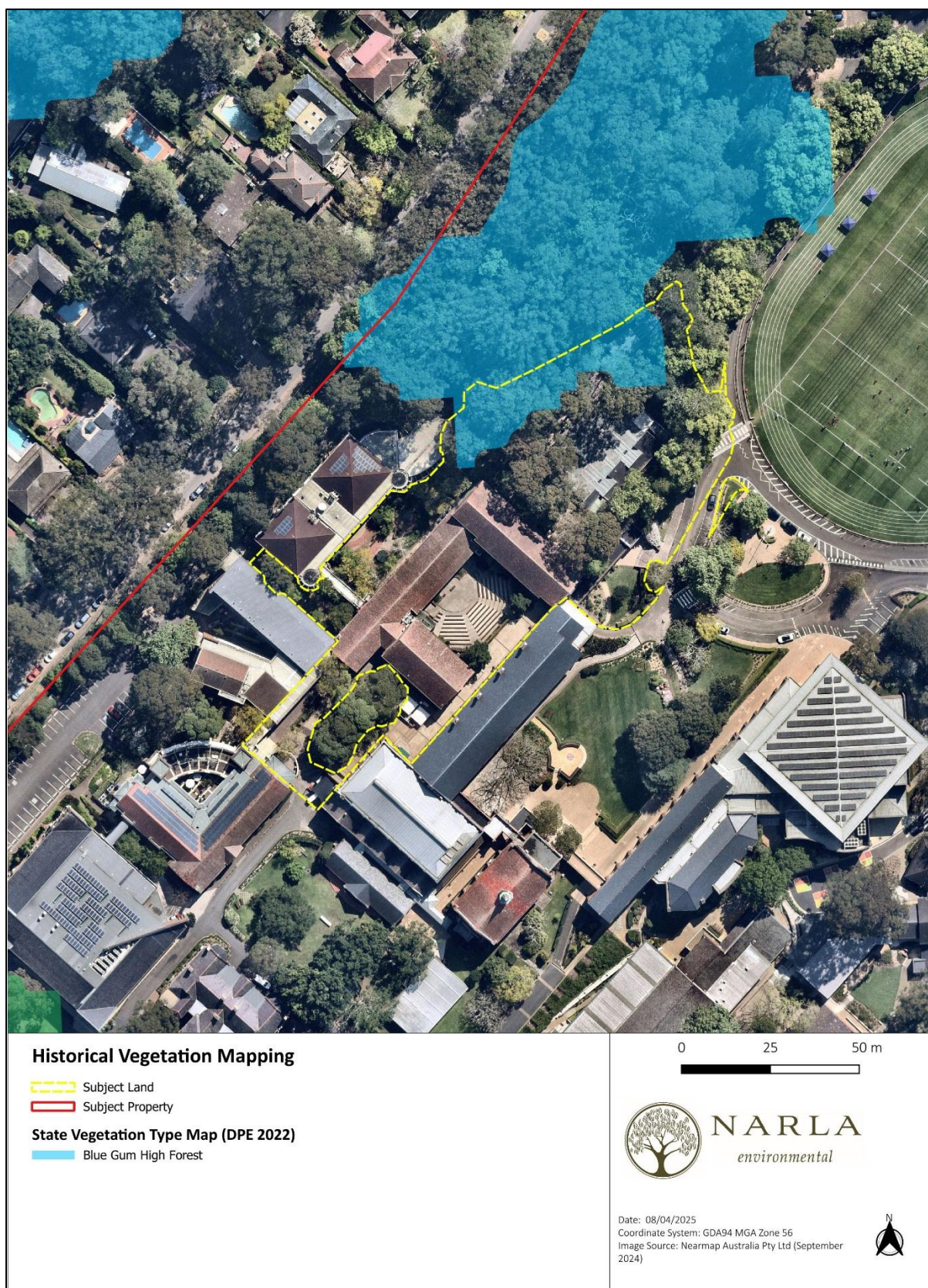


Figure 10. Historically mapped vegetation within and surrounding the Subject Land.

Table 3. Output from the PCT Filter Tool (NDCCEEW 2025e) and subsequent shortlisting of candidate PCTs. Green shading indicates the PCTs from the output that occur within the distribution and landscape position of the Subject Land.

Plant Community Type (PCT)	Subject Land within known distribution/landscape position?	No. of Matches	<i>Eucalyptus pilularis</i>	<i>Eucalyptus saligna</i>	<i>Glochidion ferdinandi</i>
3028: Illawarra Escarpment Warm Temperate Rainforest	No. This PCT occurs as a tall to very tall dense rainforest, or rarely very tall to extremely tall eucalypt open forest with rainforest sub-canopy, which occurs mainly on the Illawarra escarpment and nearby areas between Royal National Park and Nowra, Central Coast, with a limited, disjunct occurrence in gullies in the ranges near Termeil, South Coast. This PCT occurs at mid-elevations of 60-580 metres asl. It occurs in gullies or on sheltered slopes below escarpment cliffs. In the Illawarra area it occurs usually on Narrabeen sandstone, which occurs as narrow seams below the escarpment or, occasionally, more extensive areas on more gentle topography. The Subject Land does not occur within the correct distribution, geology or landscape position for the PCT.	3	✓	✓	✓
3036: South Coast Warm Temperate-Subtropical Rainforest	No. This PCT occurs as a tall to very tall dense rainforest which occurs most extensively in the Illawarra area between Royal National Park and Nowra, with disjunct and more restricted occurrences in the Clyde Mountain area near Batemans Bay and at Mount Dromedary. This PCT occurs at mid-elevations of 70-420 metres asl. The Subject Land does not occur within the correct distribution for the PCT.	3	✓	✓	✓
3039: Sydney Coastal Lilly Pilly-Palm Gallery Rainforest	No. This PCT occurs as a mid-high to very tall, dense rainforest, or occasionally sparse to mid-dense, very tall sclerophyll open forest with rainforest understorey, which occurs mainly in coastal gullies, between Seal Rocks near Forster, and Bundeena. This PCT occurs in gullies and occasionally on sheltered slopes, either in coastal locations within one kilometre of the sea or around the fringes of estuaries, or rarely on slightly more inland alluvial or estuarine flats. The Subject Land does not occur within the correct distribution or landscape position for the PCT.	3	✓	✓	✓
3040: Sydney Coastal Foreshores Gully Rainforest	No. This PCT occurs as a mid-high to tall closed rainforest with occasional sclerophyll emergent, or a tall to very tall sclerophyll open forest with a mid-high sub-canopy of mesophyllous small trees and shrubs. This PCT occurs in sandstone gullies and sheltered escarpments fringing Sydney and Central Coast salt water lakes and harbours. This PCT occurs on low-lying Hawkesbury and occasionally Narrabeen sandstones, at elevations of mainly less than 60 metres asl, within the very densely populated and urbanised parts of greater metropolitan Sydney. It is common on slopes above harbour foreshores, and less frequently lakes and	3	✓	✓	✓

Plant Community Type (PCT)	Subject Land within known distribution/landscape position?	No. of Matches	<i>Eucalyptus pilularis</i>	<i>Eucalyptus saligna</i>	<i>Glochidion ferdinandi</i>
	estuaries, with northern outliers occurring on the fringes of Lake Macquarie. The Subject Land does not occur within the geology or landscape position for the PCT.				
3136: Blue Gum High Forest	Yes. This PCT occurs as a very tall to extremely tall sclerophyll open forest with a mesophyll shrub layer and a grassy and herbaceous ground layer found on clay rich shale soils in the high rainfall districts of Sydney north shore and surrounding suburbs. This PCT occurs on a range of shale or shale-influenced substrates including gullies, ridgelines and slopes underlain by Wianamatta Group shales. It also occurs on small gully heads where downslope movement of shale soil lies above sandstone bedrock where outcrops may be present. It is found at elevations of 30-190 metres asl. This community has been extensively cleared across low slope ridgelines between Castle Hill and St Ives, with many remaining examples restricted to steeper slopes including in the suburbs of Ryde, Lane Cove and Willoughby. The Subject Land occurs within the correct distribution, geology and landscape position for the PCT.	3	✓	✓	✓
3153: Illawarra Escarpment Bangalay x Blue Gum Wet Forest	No. This PCT occurs as a very tall to extremely tall sclerophyll open forest with a sub-canopy of tall warm temperate rainforest trees, mesophyll shrubs and palms. This PCT is found on low to mid-elevation escarpment benches, slopes and gullies on the Illawarra Escarpment and hills on the Illawarra coastal plain. This PCT is associated with very high rainfall along and occasionally above, the Illawarra escarpment. It is found on deep chocolate shale soils from the Narrabeen formation south from the Hacking River and on clay rich Permian sediments, including siltstone, claystone and talus as well as Gerringong Latites south to Kangaroo Valley, Nowra and Shoalhaven. It sometimes occurs on alluvium on escarpment foothills or Monzonite at the southern-most plot at Milton. The Subject Land does not occur within the correct distribution, geology or landscape position for the PCT.	3	✓	✓	✓
3176: Sydney Enriched Sandstone Moist Forest	No. This PCT occurs as a very tall, occasionally extremely tall moist shrubby and ferny sclerophyll open forest found in enriched sandstone gullies of the Sydney coastal sandstone plateaus. This PCT is most extensively distributed within the low elevation gullies that incise the shale rich landscapes of the north shore of Sydney. However, the degree of shale influence and sheltering also sustains the persistence of the PCT in lower rainfall outliers near Campbelltown and Menai. The Subject Land does not occur within the correct distribution, geology and landscape position for the PCT.	3	✓	✓	✓

Plant Community Type (PCT)	Subject Land within known distribution/landscape position?	No. of Matches	<i>Eucalyptus pilularis</i>	<i>Eucalyptus saligna</i>	<i>Glochidion ferdinandi</i>
3258: Sydney Basin Creekflat Blue Gum-Apple Forest	No. This PCT occurs as a very tall to extremely tall open sclerophyll forest with a sparse mid-stratum of tall acacias and a ground layer of grasses and ferns found on sandy alluvial creek flats in dissected sandstone plateaus mainly in the greater Blue Mountains. This PCT is widespread throughout dry mid-elevations of Wollemi and Yengo national parks in the northern Sydney Basin, however is restricted to small and medium sized narrow creek flats and colluvial infill gullies. Stands may be discontinuous along creeks that pass through narrow pinches, bends and accumulated boulders. This community is also recorded in the hinterland plateaus of the Hawkesbury and Burragorang districts north and south-west of Sydney. The Subject Land does not occur within the correct distribution, geology and landscape position for the PCT.	3	✓	✓	✓
3262: Sydney Turpentine Ironbark Forest	Yes. This PCT occurs as a tall to very tall sclerophyll open forest with mid-stratum of mixed sclerophyll and mesophyll shrubs and a ground layer of grasses and forbs, found on shale or sheltered shale-sandstone soils mainly in the northern suburbs of Sydney and lower Blue Mountains. This PCT occurs as small remnants in mosaics of urban land use in the shale-dominated landscapes in higher rainfall zones of the Sydney Metropolitan area. The northern suburbs between Baulkham Hills and Kuring-gai include the highest number of remnants, however small areas remain in Sutherland, Heathcote, Menai, lower Blue Mountains and Oakdale plateau west of Picton. Only a small number of remnants remain on the Wianamatta Group shales of the eastern Cumberland Plain between Villawood and Bankstown. The Subject Land occurs within the correct distribution, geology and landscape position for the PCT.	3	✓	✓	✓
3592: Sydney Coastal Enriched Sandstone Forest	No. This PCT occurs as a tall to very tall shrubby sclerophyll open forest found on slightly enriched Hawkesbury Sandstone soils on sheltered slopes and occasionally crests on the Sydney coastal sandstone plateaus. This PCT is primarily distributed at elevations of less than 200 metres asl downslope of shale soils on the north shore of Sydney and Sutherland and on the Narrabeen sandstone escarpment along the Pittwater Peninsular. The Subject Land does not occur within the correct distribution, geology and landscape position for the PCT.	3	✓	✓	✓
3616: Sydney Hinterland Grey Gum Transition Forest	No. This PCT occurs as a tall to very tall shrubby sclerophyll woodland or open forest with a grassy ground cover found on enriched Hawkesbury or Mittagong sandstone ridges, thin shale caps or lenses on crests or slopes on the margins of the Cumberland Plain, western Sydney. This PCT is found at elevations of between 10-	3	✓	✓	✓

Plant Community Type (PCT)	Subject Land within known distribution/landscape position?	No. of Matches	<i>Eucalyptus pilularis</i>	<i>Eucalyptus saligna</i>	<i>Glochidion ferdinandi</i>
	500 metres asl. The highest elevations are at Yerrinbool on the southern margins of the Cumberland Plain, however it is most common below 300 metres in the lower Blue Mountains east to Glenorie and Castle Hill, north-west of Sydney and Menai to Picton in the south-west . The Subject Land does not occur within the correct distribution, geology and landscape position for the PCT.				

Table 4. PCT Selection Criteria. Green indicates the selected PCT and species that are underlined represent those identified on the Subject Property.

Candidate PCT	Characteristics (NDCCEEW 2025e)	Justification
PCT 3136: Blue Gum High Forest	A very tall to extremely tall sclerophyll open forest with a mesophyll shrub layer and a grassy and herbaceous ground layer found on clay rich shale soils in the high rainfall districts of Sydney north shore and surrounding suburbs. The tree canopy very frequently includes a high cover of <i>Eucalyptus saligna</i> , commonly with <i>Eucalyptus pilularis</i> and occasionally <i>Syncarpia glomulifera</i> . The mid-stratum is layered, with a sparse cover of small trees that very frequently includes <i>Pittosporum undulatum</i> and occasionally <i>Elaeocarpus reticulatus</i> . There is often also at least one of a suite of tall Acacia species of which <i>Acacia parramattensis</i> is most frequent and the others are rarely occurring. The lower shrub layer also includes very frequently <i>Pittosporum undulatum</i> , commonly with <i>Breynia oblongifolia</i> , <i>Polyscias sambucifolia</i> and <i>Pittosporum revolutum</i> , occasionally with <i>Leucopogon juniperinus</i> and <i>Clerodendrum tomentosum</i> . The ground layer is variable in both composition and cover. It may be ferny, grassy or herbaceous and include a diversity of small mesic climbers depending on topographic situation and disturbance history. Species very frequently include <i>Microlaena stipoides</i> , <i>Entolasia marginata</i> , <i>Oplismenus aemulus</i> , <i>Pseuderanthemum variabile</i> and <i>Pandorea pandorana</i> , commonly with <i>Dichondra repens</i> , <i>Tylophora barbata</i> and <i>Adiantum aethiopicum</i> , occasionally with <i>Calochlaena dubia</i> . This PCT occurs on a range of shale or shale-influenced substrates including gullies, ridgelines and slopes underlain by Wianamatta Group shales. It also occurs on small gully heads where downslope movement of shale soil lies above sandstone bedrock where outcrops may be present. It is found at elevations of 30-190 metres asl. This community has been extensively cleared across low slope ridgelines between Castle Hill and St Ives, with many remaining examples restricted to steeper slopes including in the suburbs of Ryde, Lane Cove and Willoughby. It grades into tall forests PCT 3262 on thinner shale soils that adjoin, or PCT 3176 downslope in sandstone gullies.	Narla have assigned this PCT to the vegetation within the Subject Land as it fits with the landscape profile and geology, and comprised the dominant diagnostic species. Furthermore, this PCT has also been historically mapped within the Subject Land.
PCT 3262: Sydney Turpentine Ironbark Forest	A tall to very tall sclerophyll open forest with mid-stratum of mixed sclerophyll and mesophyll shrubs and a ground layer of grasses and forbs, found on shale or sheltered shale-sandstone soils mainly in the northern suburbs of Sydney and lower Blue Mountains. The tree canopy very frequently includes <i>Syncarpia glomulifera</i> either as a canopy dominant or as a smaller tree or both. Other species which are localised and occasionally dominant or co-dominant occasionally include <i>Eucalyptus pilularis</i> , <i>Angophora costata</i> and <i>Eucalyptus punctata</i> , rarely with one of several species from the ironbark, stringybark or mahogany eucalypt groups of which <i>Eucalyptus paniculata</i> , <i>Eucalyptus globoidea</i> and <i>Eucalyptus resinifera</i> are the most frequent of each group. The mid-stratum is layered, with a sparse cover of small trees that includes eucalypts, occasionally <i>Acacia parramattensis</i> and	Narla have not assigned this PCT to the vegetation within the Subject Land. Although it is located within an appropriate geographic location and one of the dominant canopy species within the Subject Land, <i>Eucalyptus pilularis</i> , is associated with this PCT, the remaining dominant species within the Subject Property <i>Eucalyptus saligna</i> is not listed as a dominant species associated with this PCT. As such, this PCT was not considered best fit for the vegetation within the Subject Land.

Candidate PCT	Characteristics (NDCCEEW 2025e)	Justification
	<i>Allocasuarina torulosa</i>, rarely with <i>Allocasuarina littoralis</i>. The lower shrub layer very frequently includes <i>Pittosporum undulatum</i> and <i>Leucopogon juniperinus</i>, commonly with <i>Breynia oblongifolia</i>, <i>Polyscias sambucifolia</i>, <i>Ozothamnus diosmifolius</i> and <i>Notelaea longifolia</i>. The ground layer includes a diverse cover of grasses that very frequently includes <i>Microlaena stipoides</i> and <i>Entolasia stricta</i>, commonly with <i>Imperata cylindrica</i>, <i>Entolasia marginata</i> and <i>Themeda triandra</i>. Small forbs including <i>Lobelia purpurascens</i> are also very frequent, together with <i>Lomandra longifolia</i>. This PCT occurs as small remnants in mosaics of urban land use in the shale-dominated landscapes in higher rainfall zones of the Sydney Metropolitan area. The northern suburbs between Baulkham Hills and Ku-ring-gai include the highest number of remnants, however small areas remain in Sutherland, Heathcote, Menai, lower Blue Mountains and Oakdale plateau west of Picton. Only a small number of remnants remain on the Wianamatta Group shales of the eastern Cumberland Plain between Villawood and Bankstown. This community grades into tall moist shrub forests PCT 3136 in higher rainfall shale-rich soils on the north shore, or into PCT 3620 in sandstone environments. On the margins of the Cumberland Plain it may grade into dry forests PCTs 3321 or 3616 with increased exposure.	

3.1.3 Final PCT and Vegetation Zone Selection

The field survey confirmed that one (1) PCT was identified within the Subject Land:

- PCT 3136: Blue Gum High Forest

In addition to this PCT, there was areas of exotic vegetation within the Subject Land.

This PCT was then assigned to one (1) native vegetation zone within the Subject Land:

- Zone 1: PCT 3136 – Low Condition (Canopy).

Overall, one vegetation zone along with exotic vegetation were identified within the Subject Land that consisted of the differing vegetation types (**Figure 11**).

- Zone 1: PCT 3136 – Low Condition (Canopy);
- Exotic Vegetation.

These vegetation zones are detailed in **Table 5** and **Table 6**.

Table 5. PCT 3136 identified within the Subject Land.

PCT 3136: Blue Gum High Forest	
	
Vegetation class	North Coast Wet Sclerophyll Forests (Shrubby sub-formation)
Total area with Subject Land (approximate)	0.19ha

PCT 3136: Blue Gum High Forest	
Condition Class	Low Condition (Canopy)
Field survey effort	Due to the size constraints of the area of native vegetation contained within the Subject Land, one (1) reduced size 50m x 10m VIS plot was established in accordance with Section 3.4.1 of the BAM Operational Manual 2020, with the floristic survey comprising the entire plot (500m ²). The location chosen was however considered to be indicative of the vegetation community and condition class within the vegetation zone (Figure 11).
Description of vegetation	The vegetation within this portion of the Subject Land has historically been managed, featuring a remnant canopy over common garden plants and hardstand areas. The canopy is primarily dominated by native species, including <i>Eucalyptus saligna</i> , <i>Eucalyptus pilularis</i> , <i>Brachychiton acerifolius</i> , <i>Corymbia maculata</i> , <i>Grevillea robusta</i> , and <i>Lophostemon confertus</i> . Exotic canopy species such as <i>Cinnamomum camphora</i> , <i>Corymbia citriodora</i> , and <i>Platanus orientalis</i> are also interspersed throughout the canopy. The mid-storey contains native species like <i>Elaeocarpus reticulatus</i> , <i>Pittosporum undulatum</i> , and <i>Glochidion ferdinandi</i> . However, invasive species such as <i>Ligustrum lucidum</i> and <i>Ligustrum sinense</i> are also present. The ground layer is sparse, with native species such as <i>Eustrephus latifolius</i> and <i>Oplismenus aemulus</i> . Exotic species, particularly <i>Ehrharta erecta</i> , dominate this layer, along with common garden plants including <i>Monstera deliciosa</i> and <i>Nandina domestica</i> .
Structure of vegetation	Native canopy cover was high at 57% with native shrub cover being largely absent accounting for just 1.1% cover. Native groundcovers were similarly low, with grasses at 0.3%, forbs at 0%, ferns at 0%, and other at 5%. HTEs were in low quantities accounting for 2.6% cover. Leaf litter was moderate, averaging 66% across the zone with no fallen logs recorded. The VIS plot contained a high diversity of tree stem sizes, with tree stems recorded in five (5) DBH classes. No regenerating stems or hollow bearing trees were recorded within the VIS plot.
Associated TEC (BC Act 2016)	This vegetation conforms to the BC Act listed CEEC, Blue Gum High Forest in the Sydney Basin Bioregion (see Section 3.2.1).
Associated TEC (EPBC Act 1999)	This vegetation does not conform to the EPBC Act listed CEEC, Blue Gum High Forest in the Sydney Basin Bioregion (see Section 3.2.2).
Scientific Reference from VIS (NDCCEEW 2025e)	Connolly, D., Binns, D., Turner, K., Hager, T., Lyons, M., Magarey, E. (in prep.) A revised classification of Plant Community Types for eastern New South Wales. NSW DPIE, Parramatta;

Table 6. Exotic Vegetation identified within the Subject Land.

Exotic Vegetation	
	
Total area within the Subject Land (approximate)	0.19ha
Field Survey Effort	No VIS plots were established within this zone owing to its exotic nature.
Description of vegetation within the Subject Land	This vegetation community consisted of common planted species, present in the form of landscaping, manicured gardens, and lawn. Areas of canopy were dominated by <i>Cinnamomum camphora</i> and <i>Platanus orientalis</i> . Common mid-stratum species included <i>Monstera deliciosa</i> , <i>Morus alba</i> , <i>Strelitzia nicolai</i> , and <i>Nandina domestica</i> . Areas of turf included species such as <i>Stenotaphrum secundatum</i> , <i>Cenchrus clandestinus</i> , and <i>Poa annua</i> .
Justification of vegetation assignment	The vegetation within this zone comprised planted exotic species and non-locally occurring native species. The vegetation within the does not conform to a locally occurring PCT and was therefore classified as 'Exotic Vegetation.
Associated TEC	None.

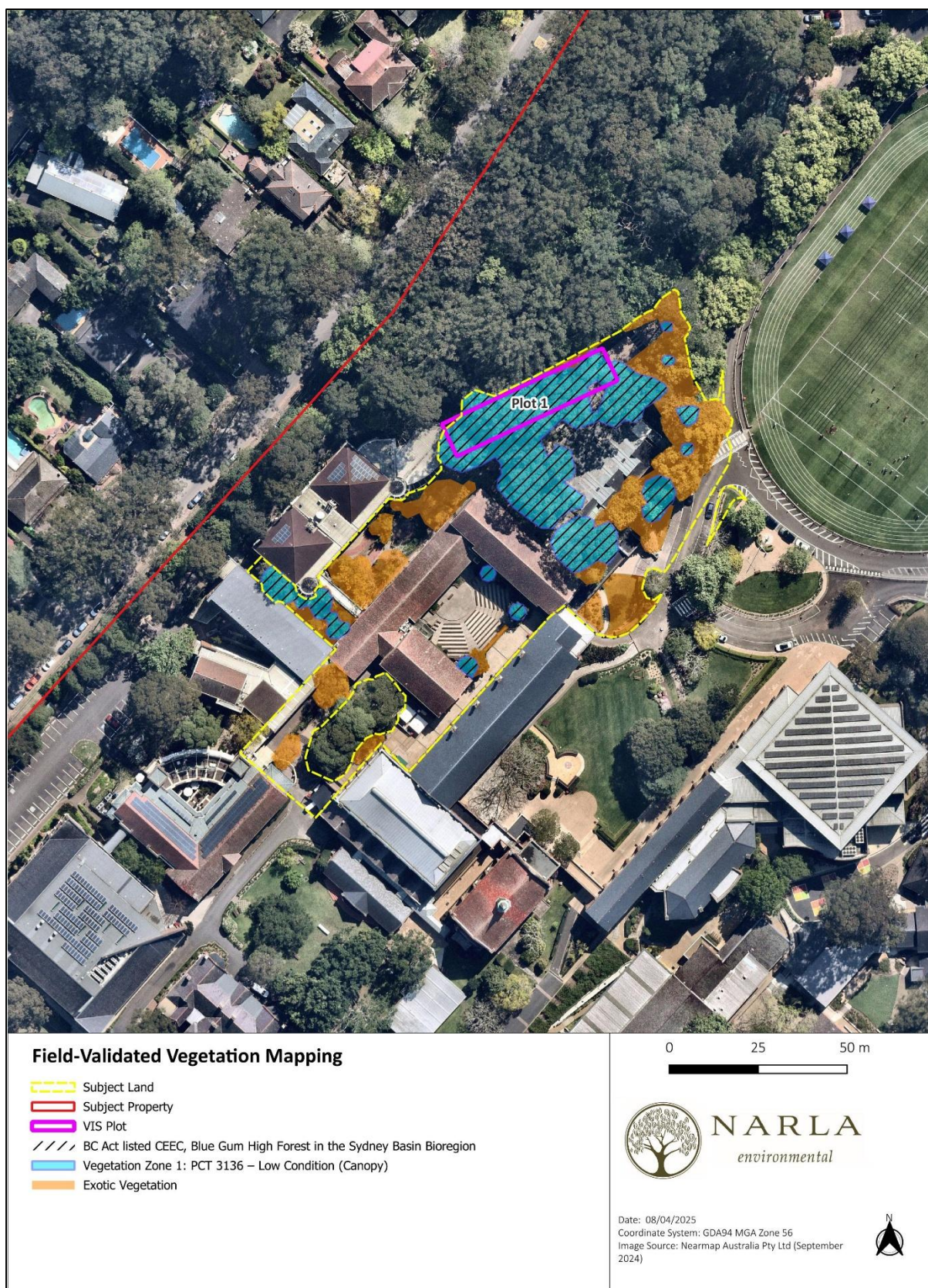


Figure 11. Narla field validated vegetation mapping and location of VIS plot.

3.2 Threatened Ecological Communities

3.2.1 Listing under the Biodiversity Conservation Act 2016: Blue Gum High Forest in the Sydney Basin Bioregion

The Blue Gum High Forest located in Vegetation Zone 1 is classified under the BC Act as a Critically Endangered Ecological Community (CEEC), specifically noted as the Blue Gum High Forest in the Sydney Basin Bioregion (BGHF). Vegetation Zone 1 is situated on shale-derived soils from the Wianamatta Group, at elevations exceeding 100 meters above sea level. Predominantly, this zone features species that are included in the final determination of the BGHF, notably *Eucalyptus saligna* (Sydney Blue Gum) and *Eucalyptus pilularis* (Blackbutt). As such, Vegetation Zone 1 conforms to the BC Act listed CEEC, Blue Gum High Forest of the Sydney Basin Bioregion (**Figure 11**).

3.2.2 Listing under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999: Blue Gum High Forest of the Sydney Basin Bioregion

The vegetation within the Subject Land mapped as Vegetation Zone 1 does not conform to the EPBC listing for Blue Gum High Forest of the Sydney Basin Bioregion. It meets the key diagnostic characteristics for the CEEC (**Table 7**) however did not meet the minimum condition thresholds required (**Table 8**).

Table 7. Key diagnostics characteristics required to meet the EPBC listing status for Blue Gum High Forest of the Sydney Basin Bioregion (Cwth. Threatened Species Scientific Committee 2005).

Key Diagnostic Characteristic	Criteria Met?
	Zone 1
Occurs in the Sydney region, typically at altitudes above 100 m on the Hornsby Plateau in the North Shore and northern suburbs of Sydney.	Yes
Predominantly found on deep soils derived from Wianamatta Shale in areas with high rainfall exceeding 1100 mm annually. Some remnants also occur on Hawkesbury Sandstone and the Mittagong Formation.	Yes
Dominated by Blackbutt (<i>Eucalyptus pilularis</i>) or Sydney Blue Gum (<i>E. saligna</i>). Smooth-barked Apple (<i>Angophora costata</i>) is frequently observed near the shale/sandstone boundary but is less common on deep shale soils.	Yes
A diverse stratum of small trees is typically present, including Sweet Pittosporum (<i>Pittosporum undulatum</i>), Blueberry Ash (<i>Elaeocarpus reticulatus</i>), and Forest Oak (<i>Allocasuarina torulosa</i>).	Yes – though occurrences are limited and incidental in nature.
Shrub species are generally mesic, such as Coffee Bush (<i>Breynia oblongifolia</i>), Rough-fruited Pittosporum (<i>Pittosporum revolutum</i>), Hairy Clerodendrum (<i>Clerodendrum tomentosum</i>), Mock Olive (<i>Notelaea longifolia</i> f. <i>longifolia</i>), Narrow-leaved Orangebark (<i>Maytenus sylvestris</i>), Elderberry Panax (<i>Polyscias sambucifolia</i> subsp. A), and Muttonwood (<i>Rapanea variabilis</i>). Sclerophyllous species, such as Narrow-leaved Geebung (<i>Persoonia linearis</i>) and Leucopogon juniperinum, are more common near the shale/sandstone boundary.	Yes – though occurrences are limited and incidental in nature.
The ground stratum is often dense and includes a mix of herb, grass, and fern species such as Maidenhair Fern (<i>Adiantum aethiopicum</i>), Bordered Panic (<i>Entolasia marginata</i>), Spiny-headed Mat-rush (<i>Lomandra longifolia</i>), Common Ground Fern (<i>Calochlaena dubia</i>), <i>Dianella caerulea</i> , Pastel Flower (<i>Pseuderanthemum variabile</i>), and <i>Oplismenus imbecillis</i> .	Yes – though occurrences are limited and incidental in nature.
Vine species frequently present include Bearded Tylophora (<i>Tylophora barbata</i>), Wombat Berry (<i>Eustrephus latifolia</i>), Australian Clematis (<i>Clematis aristata</i>), and Wonga Wonga Vine (<i>Pandorea pandorana</i>).	Yes – though occurrences are limited and incidental in nature.

Table 8. Condition thresholds for Blue Gum High Forest of the Sydney Basin Bioregion.

Thresholds	Threshold met?
	Zone 1
Remnants of the Blue Gum High Forest of the Sydney Basin Bioregion ecological community typically include components representing the characteristic native species of all structural layers. The ecological community includes occurrences with a canopy cover greater than 10% and a size greater than one hectare.	No – vegetation zone does not have components representing the characteristic native species of all structural layers.
Occurrences with less than 10% canopy cover are considered part of the Blue Gum High Forest of the Sydney Basin Bioregion ecological community if the fragments are larger than one hectare and occur in areas of native vegetation exceeding five hectares.	No – fragment is not larger than 1 hectare.
Single isolated trees or stands of trees, characteristic of the canopy of Blue Gum High Forest of the Sydney Basin Bioregion, without a native understorey are considered important as biodiversity reservoirs. However, due to having been severely modified, these areas fall outside the definition of this ecological community and therefore do not form part of this listing.	

3.3 Assessing Patch Size

A patch is defined by the BAM (DPIE 2020a) as an area of native vegetation that occurs on the Subject Land and includes native vegetation that has a gap of less than 100m from the next area of native vegetation (or $\leq 30\text{m}$ for non-woody ecosystems). A patch may extend onto adjoining land.

For each vegetation zone, the assessor must determine the patch size in hectares and assign it to one of the following classes:

- $<5\text{ha}$
- $5\text{--}<25\text{ha}$
- $25\text{--}<100\text{ha}$
- $\geq 100\text{ha}$.

The patch size class is used to assess habitat suitability on the Subject Land for threatened species. The assessor may assign more than one patch size class to the vegetation zone if both of the following apply:

- A vegetation zone comprises two or more discontinuous areas of native vegetation, and
- The areas of discontinuous native vegetation have more than one patch size class.

As areas outside of the Subject Property were not assessed as part of the scope of this assessment, the vegetation zones identified within the Subject Land were separated into the following category to allow for aerial mapping of patch size within the broader area (**Table 9; Figure 12**)

- Woody Ecosystems:
 - Zone 1: PCT 3136 – Low Condition (Canopy)

Table 9. Patch size classes that each PCT and associated vegetation zone fall into.

Plant Community Type	Vegetation Zone	Patch Size Class
PCT 3136	Zone 1	$<100\text{ha}$



Figure 12. Patch size for the native vegetation zone identified within the Subject Land.

3.4 Vegetation Integrity Survey (VIS) Plots

One (1) BAM VIS Plot was established within and surrounding the Subject Land (**Figure 11**). Due to the size constraints of the area of native vegetation contained within the Subject Land, one (1) 50m x 10m VIS plot was established, with the floristic survey comprising the entire plot (500m²). The location chosen was however indicative of the vegetation community and condition class within the vegetation zone.

Plot data gathered for each attribute used to assess the function of the Subject Land vegetation is detailed in **Appendix F**.

Vegetation Integrity (VI) Scores represented by existing vegetation within each vegetation zone is detailed in **Table 10**.

3.4.1 Determining future vegetation integrity scores

Most projects will result in complete clearing of vegetation and threatened species habitat within the operational footprint. In this scenario, the assessor must assess the proposed future value of each of the VI attributes as zero in the BAMC. However, in circumstances where partial clearing of vegetation is proposed and remaining vegetation will be maintained, the assessor may determine that the future value of the relevant VI attributes is greater than zero (DPIE 2020a).

The vegetation within this zone has been assessed as complete removal to facilitate the proposed development. Consequently, the vegetation within the Subject Land has been assigned to the following management zones (**Figure 13**):

- Management Zone 1: PCT 3136– Low Condition (Canopy) – Complete Removal

The attributes influencing future vegetation scores within each of these management zones are detailed in **Table 11**.

Owing to the exotic nature of the remaining vegetation within the Subject Land, it not been assigned to a management zone and will not require further assessment.

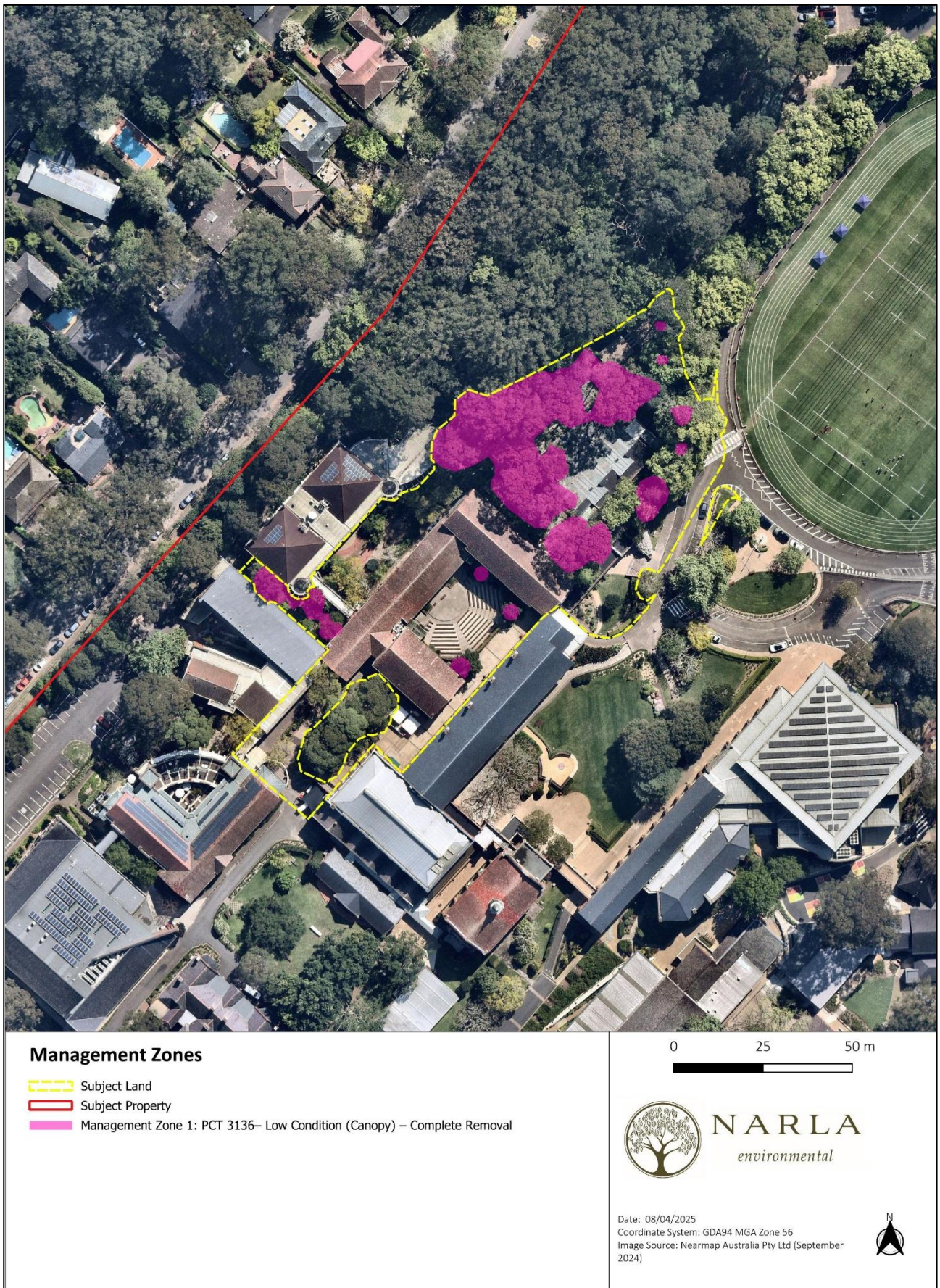


Figure 13. Management zones within the Subject Land.

Table 10. Vegetation integrity scores for each identified zone.

Vegetation Zone	Management Zone	Area (ha)	Survey Effort	Composition Condition Score	Structure Condition Score	Function Condition Score	VI Score	Future VI Score	Change in VI Score	Total VI Loss	Hollow bearing trees
PCT 3136: Blue Gum High Forest											
Zone 1: PCT 3136 – Low Condition (Canopy)	Zone 1: PCT 3136	0.19	1 x 500m ² (10m x 50m) VIS Plot	18.9	40	29.8	28.2	0	-28.2	28.2	Absent

Table 11. Management Zones within the Subject Land, and relevant vegetation attributes (composition, structure and function) affecting future VI scores.

Vegetation Zone	Management Zone	Changes in Current Vegetation Attributes	Vegetation Attributes Not Changed	Future Vegetation Scores and Justification
Zone 1: PCT 3136 – Low Condition (Canopy)	Zone 1: PCT 3136	All vegetation will be removed	NA	- All vegetation within this zone is required for removal to allow for the proposed development; and - Future composition, structure and function score is 0.

4. Threatened Species

4.1 Candidate Ecosystem Credit Species

Ecosystem credit species associated with the Subject Land are listed below in **Table 12**. No predicted by the BAM calculator as potential ecosystem credits were excluded from the assessment due to habitat constraints.

Table 12. Candidate ecosystem credits predicted to occur within the Subject Land.

Scientific Name	BC Act Status	Sensitivity to gain class	Excluded from Assessment	Reason for Exclusion from Assessment
<i>Anthochaera phrygia</i> Regent Honeyeater (Foraging)	Critically Endangered	High	No	-
<i>Artamus cyanopterus</i> Dusky Woodswallow	Vulnerable	Moderate	No	-
<i>Callocephalon fimbriatum</i> Gang-gang Cockatoo (Foraging)	Vulnerable	High	No	-
<i>Calyptorhynchus lathami</i> South-eastern Glossy Black-Cockatoo (Foraging)	Vulnerable	High	No	-
<i>Chthonicola sagittata</i> Speckled Warbler	Vulnerable	High	No	-
<i>Climacteris picumnus victoriae</i> Brown Treecreeper (eastern subspecies)	Vulnerable	High	No	-
<i>Daphoenositta chrysoptera</i> Varied Sittella	Vulnerable	Moderate	No	-
<i>Dasyurus maculatus</i> Spotted-tailed Quoll	Vulnerable	High	No	-
<i>Ephippiorhynchus asiaticus</i> Black-necked Stork	Endangered	Moderate	No	-
<i>Falsistrellus tasmaniensis</i> Eastern False Pipistrelle	Vulnerable	High	No	-
<i>Glossopsitta pusilla</i> Little Lorikeet	Vulnerable	High	No	-
<i>Grantiella picta</i> Painted Honeyeater	Vulnerable	Moderate	No	-
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Foraging)	Vulnerable	High	No	-
<i>Hirundapus caudacutus</i> White-throated Needletail	Vulnerable	High	No	-
<i>Ixobrychus flavicollis</i> Black Bittern	Vulnerable	Moderate	No	-
<i>Lathamus discolor</i> Swift Parrot (Foraging)	Endangered	Moderate	No	-
<i>Lophoictinia isura</i> Square-tailed Kite (Foraging)	Vulnerable	Moderate	No	-

Scientific Name	BC Act Status	Sensitivity to gain class	Excluded from Assessment	Reason for Exclusion from Assessment
<i>Melanodryas cucullata</i> cucullata South-eastern Hooded Robin	Vulnerable	Moderate	No	-
<i>Micronomus norfolkensis</i> Eastern Coastal Free-tailed Bat	Vulnerable	High	No	-
<i>Miniopterus australis</i> Little Bent-winged Bat (Foraging)	Vulnerable	High	No	-
<i>Miniopterus orianae</i> oceanensis Large Bent-winged Bat (Foraging)	Vulnerable	High	No	-
<i>Petaurus australis</i> Yellow-bellied Glider	Vulnerable	High	No	-
<i>Petroica phoenicea</i> Flame Robin	Vulnerable	Moderate	No	-
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox (Foraging)	Vulnerable	High	No	-
<i>Ptilinopus superbus</i> Superb Fruit Dove	Vulnerable	Moderate	No	-
<i>Saccolaimus flaviventris</i> Yellow-bellied Sheath-tail-bat	Vulnerable	High	No	-
<i>Scoteanax rueppellii</i> Greater Broad-nosed Bat	Vulnerable	High	No	-
<i>Varanus rosenbergi</i> Rosenberg's Goanna	Vulnerable	High	No	-

4.2 Candidate Species Credit Species Summary

This section provides a summary of the candidate species credit fauna and flora species for the Subject Land derived from BAMC (NDCCEW 2025f). A summary of the targeted survey effort applied to each species is provided along with the results of the survey effort, specifically whether or not the species credit needs to be offset through retiring of Biodiversity Offset Credits (Table 13; Table 14).

Table 13. Candidate Fauna Credit Species predicted to occur within the Subject Land.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Subject Land?	Biodiversity Risk Weighting	Biodiversity Offset Credits Required?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	No, the Subject Land is not included on the map of important areas for Regent Honeyeaters.	No	N/A	Very High – 3	No
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	No. The SAIL threshold for this species is potential breeding habitat and presence of breeding individuals. Potential breeding habitat is identified as land within 100m of rocky areas containing caves, overhangs, crevices, cliffs, escarpments, old mines, tunnels, culverts, or derelict concrete buildings. No such habitat constraints were present within the Subject Land; therefore, this species was excluded from the assessment. to be included in the assessment.	NA	NA	Very High – 3	No
<i>Lathamus discolor</i> Swift Parrot (Breeding)	No, the Subject Land is not included on the map of important areas for Swift Parrot.	N/A	N/A	Very High – 3	No
<i>Miniopterus australis</i> Little Bent-winged Bat (Breeding)	No. The SAIL threshold for this species is potential breeding habitat and presence of breeding individuals. This species is known to breed in caves, tunnels, mines and culverts. No such habitat constraints were present within the Subject Land; therefore, this species was excluded from the assessment.	NA	NA	Very High – 3	No
<i>Miniopterus orianae oceanensis</i> Large Bent-winged Bat (Breeding)	No. The SAIL threshold for this species is potential breeding habitat and presence of breeding individuals. This species is known to breed in caves, tunnels, mines and culverts. No such habitat constraints were present	NA	NA	Very High – 3	No

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Subject Land?	Biodiversity Risk Weighting	Biodiversity Offset Credits Required?
	within the Subject Land; therefore, this species was excluded from the assessment.				

Table 14. Candidate Flora Credit Species predicted to occur within the Subject Land.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Subject Land?	Biodiversity Risk Weighting	Biodiversity Offset Credits Required?
<i>Rhizanthella slateri</i> Eastern Australian Underground Orchid	No. The Subject Land contains highly degraded vegetation and is managed as a garden beds; therefore, this species was excluded from the assessment as it was considered unlikely to occur within the Subject Land.	NA	NA	Very High- 3	No
<i>Rhodamnia rubescens</i> Scrub Turpentine	Yes. Found in littoral, warm temperate and subtropical rainforest, and wet sclerophyll forest usually on volcanic and sedimentary soils. As the Subject Land contains a wet sclerophyll forest, this species was included within the assessment.	Yes	No	Very High – 3	No

4.3 Species Credit Surveys

A targeted survey was undertaken for all SAIL species credit species and their habitats considered likely to occur within the Subject Land (**Figure 14**). These surveys were implemented in accordance with Section 5.3 of the BAM and all relevant threatened species survey guidelines.

The targeted survey was undertaken on the following dates:

- 7th November 2023 by Narla Ecologist Jonathan Coy;
- 3rd September 2024 by Narla Ecologist Brodie Miller.

Weather conditions taken from the nearest weather station (Terrey Hills no. 066059) in the lead up and during the field survey are outlined in **Table 15**. There was limited rain and mild to moderate temperatures leading up to the site assessments. These conditions are likely to not have been conducive to the emergence of annual herbs, fungi and flowering species.

Table 15. Weather conditions taken from the nearest weather stations (Station number 066059) in the lead up and during the field survey (BOM 2024). Survey date is in bold.

Timing/activities	Date	Temperature		Rainfall (mm)
		Min	Max	
Lead up to the survey	01/11/2023	12.5	19.9	0
	02/11/2023	13.4	21	0
	03/11/2023	15.3	21.9	0
	04/11/2023	15.3	21.4	0
	05/11/2023	14.9	18.3	35.4
	06/11/2023	11.9	20.9	11.8
Site Assessment & Targeted Survey	07/11/2023	13	23	0
Lead up to the survey	27/08/2024	14.7	22.2	0
	28/08/2024	9.2	23.2	0
	29/08/2024	15	27.7	0
	30/08/2024	12.1	22.6	0
	31/08/2024	13.8	29.4	0
	01/09/2024	13.1	26.4	0
	02/09/2024	15.9	24.4	0
Site Assessment & Targeted Survey	03/09/2024	8.7	16.3	0

4.3.1 Fauna Species Credit Survey

A total of five (5) SAIL threatened fauna species were identified within the BAMC (DPIE 2021a) as having the potential to occur within the Subject Land. All five (5) species were excluded from assessment due to the following: (BAM Section 5.2.2, DPIE 2020b):

- The assessor determines that microhabitats required by a species are absent from the Subject Land (or specific vegetation zone) [(Section 5.2.3(2ai) of the BAM (DPIE 2020a)].

4.3.2 Flora and Fungi Species Credit Survey

A total of two (2) threatened flora species were identified within the BAMC (NDCCEEW 2025a) as having the potential to occur within the Subject Land. Following the site assessment, one (1) of the species were identified as not having the potential to occur within the Subject Land due to the following (BAM Section 5.2.2, DPIE 2020a):

- The assessor determines that microhabitats required by a species are absent from the Subject Land (or specific vegetation zone) [(Section 5.2.3(2ai) of the BAM (DPIE 2020a)]; or
- The assessor determines that the habitat constraints or microhabitats are degraded to the point that the species is unlikely to use the subject land (or specific vegetation zones) [(Section 5.2.3(2ai) of the BAM (DPIE 2020a)]

A targeted survey was undertaken for one (1) potentially occurring SAIL species in accordance with the 'Surveying threatened plants and their habitats – NSW survey guide for the Biodiversity Assessment Method' (DPIE 2020b; **Table 16, Figure 14**). These species were not detected within the Subject Land.

Table 16. Species credit flora and fungi species requiring targeted surveys. Targeted surveys were conducted within endorsed survey periods.

Candidate Flora and Fungi Species	Survey Period (BAMC)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<i>Rhodamnia rubescens</i> Scrub Turpentine									✓		✓	
Key	✓ = Surveyed						= NDCCEEW Endorsed Survey Period					

4.4 Species Polygons

4.4.1 Confirmed Present

No SAIL species were confirmed to be present within the Subject Land.

4.4.2 Assumed Present

No SAIL species were assumed to be present within the Subject Land.

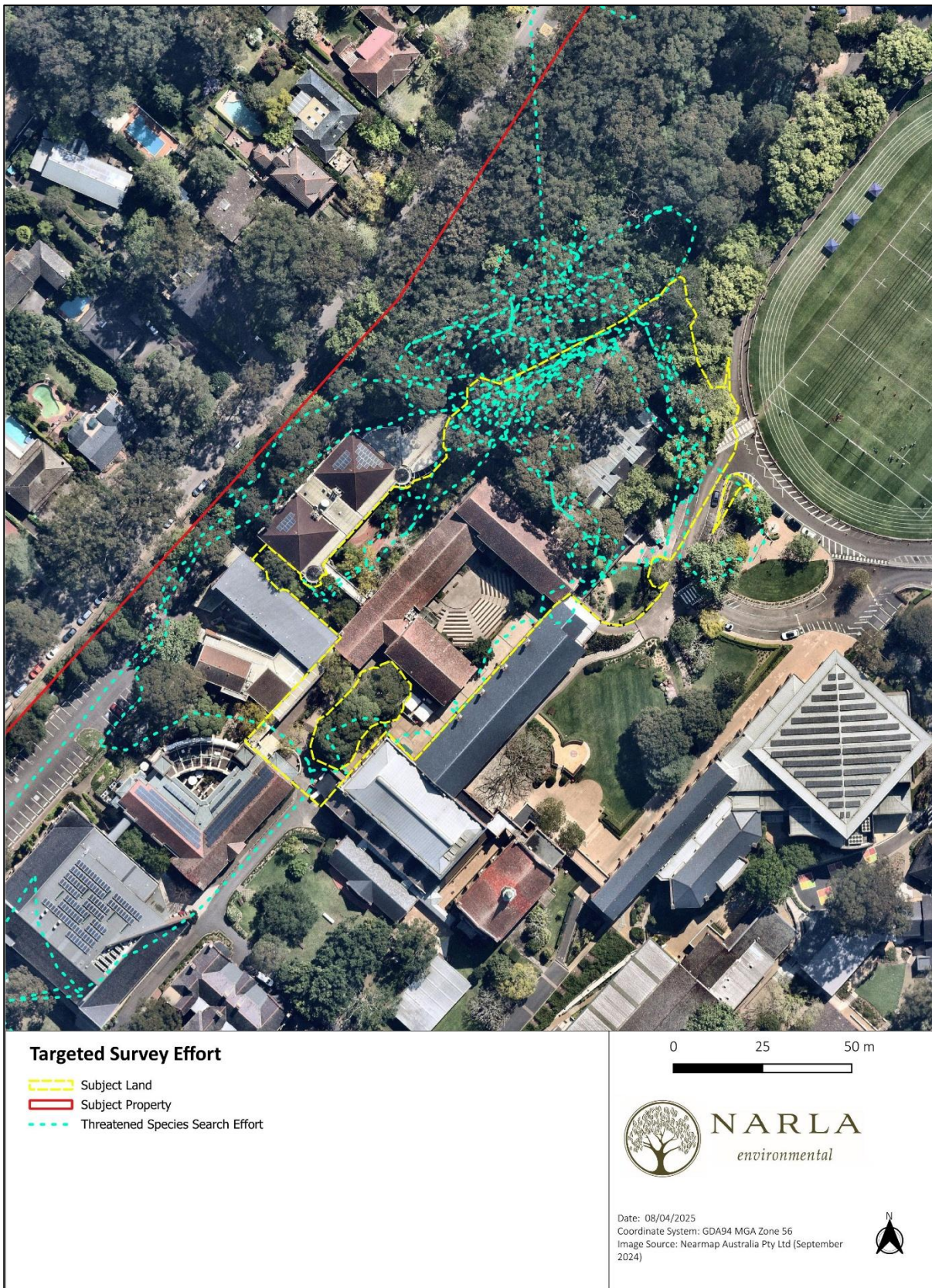


Figure 14. Targeted survey effort for species credit species within the Subject Land.

5. Prescribed Impacts

Certain projects may have impacts on biodiversity values in addition to, or instead of, impacts from clearing vegetation and/or loss of habitat. For many of these impacts, the biodiversity values may be difficult to quantify, replace or offset, making avoiding and minimising impacts critical. Prescribed biodiversity impacts require an assessment of the impacts of the proposed development on the habitat of threatened species or ecological communities. This is discussed in **Table 17**.

Table 17. Prescribed and uncertain impacts associated with the proposed development.

Will there be impacts on any of the following?	Yes/No	If Yes, Address all of the assessment questions from section 6 of the BAM
Habitat of threatened entities including: - karst, caves, crevices, cliffs, rocks and other geological features of significance, or - human-made structures, or - non-native vegetation	Yes	There are no karsts, caves, crevices, cliffs, rocks and other features of geological significance on or near the Subject Land. The Subject Land contains current school buildings. The existing school building and all structures on site are proposed to be demolished. A number of threatened microbat species may utilise the roof space for roosting and breeding, including: <i>Micronomus norfolkensis</i> (Eastern Coastal Free-tailed Bat) <i>Miniopterus australis</i> (Little Bent-winged Bat) <i>Miniopterus orianae oceanensis</i> (Large Bent-winged bat) <i>Saccolaimus flaviventris</i> (Yellow-bellied Sheath-tail-bat) Non-native vegetation was present within the Subject Land; however, it only exists in the form of common herbaceous and woody weeds and exotic grasses, the removal of which is not expected to impact any threatened species.
On areas connecting threatened species habitat, such as movement corridors	No	It is unlikely the proposed development will interrupt connectivity for any threatened species, owing to the areas of habitat connectivity that will continue to exist in vegetated areas surrounding the Subject Land.
That affect water quality, water bodies and hydrological processes that sustain threatened entities (including from subsidence or upsidence from underground mining)	No	No threatened species were identified within the Subject Land that are sustained by water bodies and hydrological processes. It is also not expected that the removal of vegetation within the Subject Land will impact upon any groundwater processes within the surrounding landscape.

Will there be impacts on any of the following?	Yes/No	If Yes, Address all of the assessment questions from section 6 of the BAM
On threatened and protected animals from turbine strikes from a wind farm	No	No wind farms are associated with the proposed development.
On threatened species or fauna that are part of a TEC from vehicle strikes.	No	Due to the highly urbanised nature of the Subject Land and locality it is highly unlikely that vehicle strikes will be an issue with the proposed development, especially considering the slow speeds required to manoeuvre the site.

6. Avoid, Minimisation and Mitigation of Impacts

6.1 Impact Mitigation and Minimisation Measures

This section details the measures to be implemented before, during and post construction to avoid and minimise the impacts of the project (Table 18).

Table 18. Table of measures to be implemented before, during and after construction to avoid and minimise the impacts of the project.

Action	Outcome	Timing	Responsibility
Project Location and Design	Given the heavily vegetated nature of the Subject Property and the limited availability of suitable areas for construction, complete avoidance of impacts to native vegetation was not feasible. However, efforts have been made to minimise biodiversity impacts through careful project siting and design. A comprehensive ecological constraints assessment was conducted by Narla in 2023 to inform the development. This assessment identified areas with lower vegetation integrity and ecosystem value, enabling the development to focus on regions dominated by exotic vegetation and existing infrastructure. During the masterplanning phase, alternative locations within the campus were assessed from a biodiversity perspective. Other potential sites were deemed unsuitable (Appendix E) due to: • Presence of existing buildings, infrastructure, and planned developments; • Greater potential for indirect biodiversity impacts due to fragmentation and edge effects; • The presence of waterways as per the Ku-ring-gai Local Environmental Plan (KLEP) mapping; • Higher-quality patches of Blue Gum High Forest (BGHF) and Sydney Turpentine Ironbark Forest (STIF), both of which are critically endangered ecological communities under the NSW Biodiversity Conservation Act 2016, and of which some areas are currently protected under a Vegetation Management Plan The selected area for the proposed development is situated at the key 'gateway' to the campus, ensuring high visibility and accessibility while minimising impacts on native vegetation.	Pre-construction phase	Proponent
Preparation of a Construction	A CEMP will be prepared before the issuance of the Construction Certificate and may be required for the construction phase. The CEMP will include industry-standard measures for managing soil,	Pre-construction phase	Proponent Project Ecologist

Action	Outcome	Timing	Responsibility
Environmental Management Plan (CEMP)	surface water, weeds, and pollutants, along with site-specific procedures. The proposed mitigation measures will include environmental safeguards for protecting neighbouring properties and nearby waterways, in accordance with relevant policies and Government guidelines. The mitigation and management measures outlined in this table will be incorporated into the CEMP for the site.		Construction Contractor
Tree Protections	Australian Standard 4970 (2009) Protection of Trees on Development Sites (AS-4970) outlines that a Tree Protection Zone (TPZ) is the principal means of protecting trees on construction sites. A TPZ is an area isolated from construction disturbance so that the tree remains viable. Minor Encroachments (less than 10% of the TPZ and outside the Structural Root Zone (SRZ)) may be acceptable if compensated within the TPZ. Major Encroachments (greater than 10% or within the SRZ) generally require root investigations by non-destructive methods or tree-sensitive construction methods. Tree protection fencing will be established around vegetation to be retained before any construction work begins.	Pre-construction phase	Proponent Arborist
Landscaping and Native Seed Collection	Any native trees or shrubs being removed for the construction works should be checked for seeds during their removal. If seeds are present, they should be collected and stored for propagation for revegetation activities outside the Subject Land but within the school grounds under a Vegetation Management Plan (VMP). The landscape plan prepared by TCL (2025) includes the incorporation of indigenous and non-indigenous plantings to offset vegetation loss and enhance ecological values. This revegetation strategy will contribute to habitat restoration, softening the impact of vegetation removal.	Construction phase; post-construction phase	Proponent Landscape Architect Project Ecologist
Preparation of a Vegetation Management Plan (VMP)	A VMP will be developed to manage retained native vegetation within the broader Subject Property. This plan will focus specifically on maintaining and enhancing the ecological integrity of the retained vegetation, particularly the BGHF. The VMP will outline specific actions to be undertaken during both the construction and post-construction phases, ensuring the preservation of vegetation and the facilitation of long-term ecological outcomes. The VMP will align with the BAM which emphasises the need to mitigate and manage impacts to native vegetation through adaptive management and monitoring strategies. This includes: - Managing edge effects and preventing habitat degradation in areas adjacent to the development site; - Implementing weed control, replanting, and habitat restoration measures to enhance the ecological values of the retained vegetation;	Construction phase; post-construction phase	Proponent Project Ecologist

Action	Outcome	Timing	Responsibility
	Promoting regeneration of native species, especially within degraded areas, to improve the structural and functional attributes of the BGHF.		
Erosion and Sedimentation	Appropriate erosion and sediment control measures must be implemented and maintained during construction to avoid indirect impacts on biodiversity values. Measures should comply with relevant industry guidelines, such as the "Blue Book" (Landcom 2004).	Construction phase	Proponent Construction Contractor
Erection of temporary fencing	Temporary fencing should be erected around retained native vegetation to prevent indirect impacts from construction activities.	Construction phase	Proponent Construction Contractor
Storage and Stockpiling (Soil and Materials)	Allocate all storage, stockpile, and laydown sites away from retained native vegetation. Avoid importing soil from outside the site to prevent the introduction of weeds and pathogens, which could indirectly impact biodiversity values.	Construction phase	Construction Contractors
Stormwater	Stormwater and runoff management during the construction and operation phases will be addressed in the CEMP. The plan will include measures to control stormwater impacts on-site and ensure compliance with best practices.	Post-construction phase	Proponent Construction Contractors/ Architect

7. Assessment of Impacts

7.1 Direct Impacts

7.1.1 Full Clearing

The proposed works will result in complete clearing to the following vegetation:

- 0.19ha of PCT 3136, which conforms to the CEEC Blue Gum High Forest in the Sydney Basin Bioregion; and
- 0.19ha of Exotic Vegetation.

7.1.2 Partial Clearing

No partial clearing will occur as a result of the proposed development.

7.2 Prescribed Impacts

As there is potential for the Subject Land to contain habitat for a number of threatened microbat species in the form of human-made structures (**Figure 15**) an assessment of this prescribed impact must be undertaken in accordance with Section 8.3 of the BAM (DPIE 2020a). This is discussed in **Table 19**.

Table 19. Prescribed and uncertain impacts associated with the proposed development.

Prescribed Impact	Nature, Extent and Duration	Threatened Species and Their Habitat Likely to be Impacted	Consequences of the Impacts on Threatened Entities
Habitat of threatened entities: human-made structures.	There is the potential that threatened microbat species use human-made structures (in particular, roof cavities) within the Subject Land for roosting and potentially breeding. The demolition of these structures has the potential to temporarily displace any occurring individuals. These species are highly mobile and there is ample suitable roosting/breeding habitat nearby. It is therefore likely that this prescribed impact will have a low impact of short duration To manage these impacts works a pre-clearing survey is to be conducted for microbats in the roof space of the building prior to demolition. If any individuals are found to be present, they are to be captured the morning of demolition works, and released at night time into surrounding bushland following demolition works.	<i>Micronomus norfolkensis</i> (Eastern Coastal Free-tailed Bat) <i>Miniopterus australis</i> (Little Bent-winged Bat) <i>Miniopterus orianae oceanensis</i> (Large Bent-winged bat) <i>Saccolaimus flaviventris</i> (Yellow-bellied Sheath-tail-bat)	While the demolition of potential roost/breeding sites may temporarily displace local populations of threatened microbats, these species are highly mobile with large areas of habitat continuing to exist in the broader locality, which would provide alternative roost/ breeding sites. As such, any impacts would be considered minor and temporary.

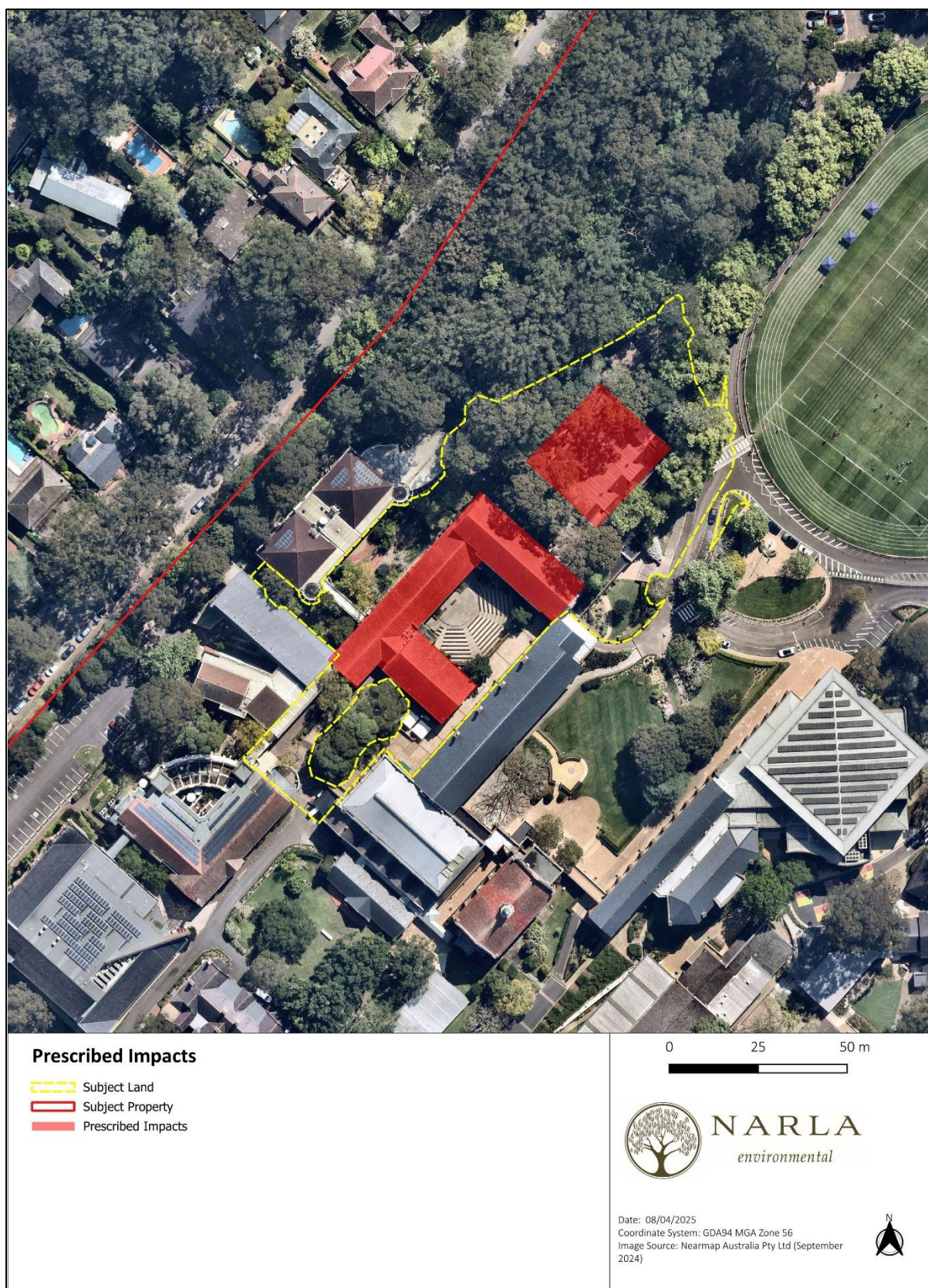


Figure 15. Prescribed impacts identified within the Subject Land.

7.3 Indirect Impacts

Indirect impacts occur when the proposal or activities relating to the construction or operation of the proposal affect native vegetation, threatened ecological communities and threatened species habitat beyond the Subject Land. Impacts may also result from changes to land-use patterns, such as an increase in vehicular access and human activity on native vegetation, threatened ecological communities and threatened species habitat. The indirect impacts of this proposed development are outlined in **Table 20**.

No indirect impact zones have been defined because no significant indirect impacts were identified.

Table 20. Indirect impacts associated with the proposed development.

Indirect Impact	Nature, Extent and Duration	TEC's/PCTs and/or Threatened Species and Their Habitat Likely to be Impacted	Consequences of the Impacts for the Bioregional Persistence of the Threatened Species, Threatened Ecological Communities and Their Habitats.
(a) inadvertent impacts on adjacent habitat or vegetation	Vegetation and habitat directly adjacent to the Subject Land has the potential to experience ongoing indirect impacts as a result of the proposed development; although given the historical use of the Subject Land this is expected to be minimal. The disturbance caused during construction may increase weed infestations within adjacent vegetation, which in turn may decrease its habitat value., however, as the vegetation adjacent to the Subject Land is already highly altered due to the urbanised landscape, this potential impact is not considered to be significant.	One (1) TEC occurs adjacent to the Subject Land – Blue Gum High Forest in the Sydney Basin Bioregion. There is also the low potential that threatened species occur in areas adjacent the Subject Land that may be inadvertently impacted by the proposed development.	While changes to vegetation condition may have a localised impact to threatened species and the TEC this is not expected to impact on their bioregional persistence. Furthermore, the mitigation measures proposed in Table 18 and the preparation of a VMP in the future will address the minimisation of inadvertent impacts from the proposed development, primarily with weed control.
(b) reduced viability of adjacent habitat due to edge effects	The proposed construction and on-going utilisation of the Subject Land, may lead to an increase in weed infiltration into adjacent habitat due to enhanced edge effects. However, as the vegetation adjacent to the Subject Land	One (1) TEC occurs adjacent to the Subject Land – Blue Gum High Forest in the Sydney Basin Bioregion. There is also the low potential that threatened	While edge effects may have a localised impact to threatened species and the TEC this is not expected to impact on their bioregional persistence.

Indirect Impact	Nature, Extent and Duration	TEC's/PCTs and/or Threatened Species and Their Habitat Likely to be Impacted	Consequences of the Impacts for the Bioregional Persistence of the Threatened Species, Threatened Ecological Communities and Their Habitats.
	is already highly altered due to the urbanised landscape, this potential impact is not considered to be significant. Additionally, due to the small nature of proposed development, it is unlikely that this will impact local species moving between areas. Any impacts are expected to be restricted to the immediate area surrounding the Subject Land to a couple of metres.	species occur in areas adjacent the Subject Land that may be impacted by edge effects leading to a reduced viability in habitat.	Furthermore, the mitigation measures proposed in Table 18 and the preparation of a VMP in the future will address the minimisation of inadvertent impacts from the proposed development, primarily with weed control.
(c) reduced viability of adjacent habitat due to noise, dust or light spill	An increase in noise is to be expected during construction and ongoing human-use. As the Subject Land is located in a suburban area, this is unlikely to impact on any species roosting adjacent to the site during the day as such noises are common within the locality. It is not expected that construction would occur throughout the night, and as such would not impact on nocturnal species that may utilise adjacent habitat, or diurnal species that roost in adjacent habitat. The construction may increase dust in adjacent habitat. Dust can impact on a plant's ability to photosynthesise and may increase plant mortality in the adjacent vegetation. It is however not expected that this would have such an impact to decrease the viability of adjacent habitat. It is expected that the utilisation of the area following construction may result in a decrease in the viability of the adjacent habitat due to increases in noise and light	One (1) TEC occurs adjacent to the Subject Land – Blue Gum High Forest in the Sydney Basin Bioregion. There is also the low potential that threatened species use habitat adjacent to the Subject Land. Threatened species may be impacted by an increase in noise and dust spill into adjacent habitats.	While the proposed works may have a small and localised impact to the TEC and threatened species, this is not expected to impact on their bioregional persistence, considering large areas of habitat connectivity allowing their movement away from impacted areas. Furthermore, the mitigation measures proposed in Table 18 will address the minimisation of inadvertent impacts from the proposed development.

Indirect Impact	Nature, Extent and Duration	TEC's/PCTs and/or Threatened Species and Their Habitat Likely to be Impacted	Consequences of the Impacts for the Bioregional Persistence of the Threatened Species, Threatened Ecological Communities and Their Habitats.
	associated with the school building. However, this is again considered to be minimal owing to the highly urbanised nature of the locality.		
(d) transport of weeds and pathogens from the site to adjacent vegetation	As previously discussed, the proposed construction may lead to an increase in weed infiltration into adjacent habitat due to enhanced edge effects. However, as the vegetation adjacent to the Subject Land is already highly altered due to the urbanised landscape, this potential impact is not considered to be significant.	One (1) TEC occurs adjacent to the Subject Land – Blue Gum High Forest in the Sydney Basin Bioregion. There is also the low potential that threatened species occur in areas adjacent the Subject Land that may be impacted by weed and pathogen transportation leading to a reduced viability in habitat.	While weeds and pathogens may have a small and localised impact to TECs and threatened species, this is not expected to impact on their bioregional persistence considering the habitat connectivity within the surrounding areas. Furthermore, the mitigation measures proposed in Table 18 will address the minimisation of inadvertent impacts from the proposed development.
(e) increased risk of starvation, exposure and loss of shade or shelter	It is highly unlikely that any threatened fauna would be exposed to increased risks from starvation, exposure, and loss of shade and shelter as a result of the proposed development. No habitat is to be removed beyond the Subject Land and owing to the highly urbanised nature of the Subject Property and locality it is considered unlikely any threatened species would be placed at risk of starvation or exposure should it decrease in quality as a result of the proposed development.	N/A	N/A

Indirect Impact	Nature, Extent and Duration	TEC's/PCTs and/or Threatened Species and Their Habitat Likely to be Impacted	Consequences of the Impacts for the Bioregional Persistence of the Threatened Species, Threatened Ecological Communities and Their Habitats.
(f) loss of breeding habitats	An increase in noise is to be expected during and post-construction. As such, there is potential for disturbance to breeding habitats directly adjacent to the Subject Land. However, as the vegetation adjacent to the Subject Land is already highly altered due to the urbanised landscape, this potential impact is not considered to be significant.	There is potential that threatened fauna species use habitat adjacent to the Subject Land for breeding. Such species may be impacted by an increase in noise into adjacent habitats, which may in turn impact on their breeding habitat.	This impact is expected to be localised and will not have an overall impact on the bioregional persistence of threatened species.
(g) trampling of threatened flora species	No threatened flora species were identified within or surrounding the Subject Land. The lack of proximal records shows no threatened flora located within or adjacent to the Subject Land. Therefore, it is not expected that trampling of threatened species will be associated with this project.	N/A	N/A
(h) inhibition of nitrogen fixation and increased soil salinity	It is unlikely that the inhibition of nitrogen fixation will affect vegetation adjacent to the Subject Land. Increased soil salinity may result due to clearing of vegetation leading to the rising of the water table. However, clearing will be limited to the Subject Land and as such is not expected to affect vegetation directly adjacent to the Subject Land.	N/A	N/A
(i) fertiliser drift	This issue is not likely to affect the vegetation within or surrounding the Subject Land. Although fertiliser may be used in weed control, no fertiliser drift is expected.	N/A	N/A

Indirect Impact	Nature, Extent and Duration	TEC's/PCTs and/or Threatened Species and Their Habitat Likely to be Impacted	Consequences of the Impacts for the Bioregional Persistence of the Threatened Species, Threatened Ecological Communities and Their Habitats.
(j) rubbish dumping	There is the possibility that rubbish dumping (including littering) in adjacent vegetation increases during construction. The dumping/littering of food resources may provide a food source for fauna. However, this may also encourage invasive species into such habitats. This impact can be mitigated by the appropriate disposal of rubbish.	There is potential that threatened fauna species use habitat adjacent to the Subject Land. Such species may be impacted by the dumping of rubbish, particularly food resources. This may result in both positive (food source) and negative impacts (increase in predators) to such species.	This impact is expected to be localised and will not have an overall impact on the bioregional persistence of the PCTs or threatened species.
(k) wood collection	This issue is not likely to affect the vegetation surrounding the Subject Land during and post-operation, particularly as the majority of vegetation surrounding the Subject Land cannot be accessed as it is private property.	N/A	N/A
(l) bush rock removal and disturbance	This issue is not likely to affect the vegetation surrounding the Subject Land. No bush rock was observed within or adjacent to the Subject Land.	N/A	N/A
(m) increase in predatory species populations	There is potential that predatory species, such as cats, already inhabit areas within and surrounding the Subject Land. There is the possibility that other indirect impacts, such as an increase in rubbish dumping, may encourage predatory species into the area.	There is potential that threatened fauna species use habitat adjacent to the Subject Land. Such species may be impacted by an increase in predatory species populations.	An increase in predatory species adjacent to the Subject Land may have widespread ramifications for any locally occurring threatened species. However, owing to the urbanised nature of the Subject Land and broader locality this risk is considered minimal.

Indirect Impact	Nature, Extent and Duration	TEC's/PCTs and/or Threatened Species and Their Habitat Likely to be Impacted	Consequences of the Impacts for the Bioregional Persistence of the Threatened Species, Threatened Ecological Communities and Their Habitats.
(n) increase in pest animal populations	There is potential that pest animal populations already inhabit areas within and surrounding the Subject Land. There is the possibility that other indirect impacts, such as an increase in rubbish dumping, may encourage an increase in pest animal populations.	There is potential that threatened fauna species use habitat adjacent to the Subject Land. Such species may be impacted by an increase in pest animal populations.	An increase in pest species adjacent to the Subject Land may have widespread ramifications for any locally occurring threatened species. However, owing to the urbanised nature of the Subject Land and broader locality this risk is considered minimal.
(o) increased risk of fire	The removal of vegetation as a result of the development is not expected to increase the bushfire risk of vegetation surrounding the Subject Land.	N/A	N/A
(p) disturbance to specialist breeding and foraging habitat, e.g., beach nesting for shorebirds.	No specialist breeding and foraging habitat was identified within or adjacent to the Subject Land. Therefore, it is not expected that the development will disturb any specialist breeding and foraging habitat.	N/A	N/A

8. Thresholds for Assessing and Offsetting

8.1 Impacts on Native Vegetation

The following native vegetation within the Subject Land is proposed to be impacted as a result of the proposed development:

- 0.19ha of PCT 3136: Blue Gum High Forest

The purchase and retirement of Biodiversity Offset Credits will be required for the 0.19ha of vegetation within Zone 1: Low Condition (Canopy), representative of PCT 3136 (**Figure 16**).

No offsets are required for areas identified as Exotic Vegetation.

8.2 Impacts on Threatened Species

No threatened species will require the purchase and retirement of Biodiversity Offset Credits.

8.3 Impacts of Threatened Ecological Communities.

The following TEC within the Subject Land is proposed to be impacted as a result of the proposal:

- 0.19 ha of Blue Gum High Forest in the Sydney Basin Bioregion (CEEC; BC Act).

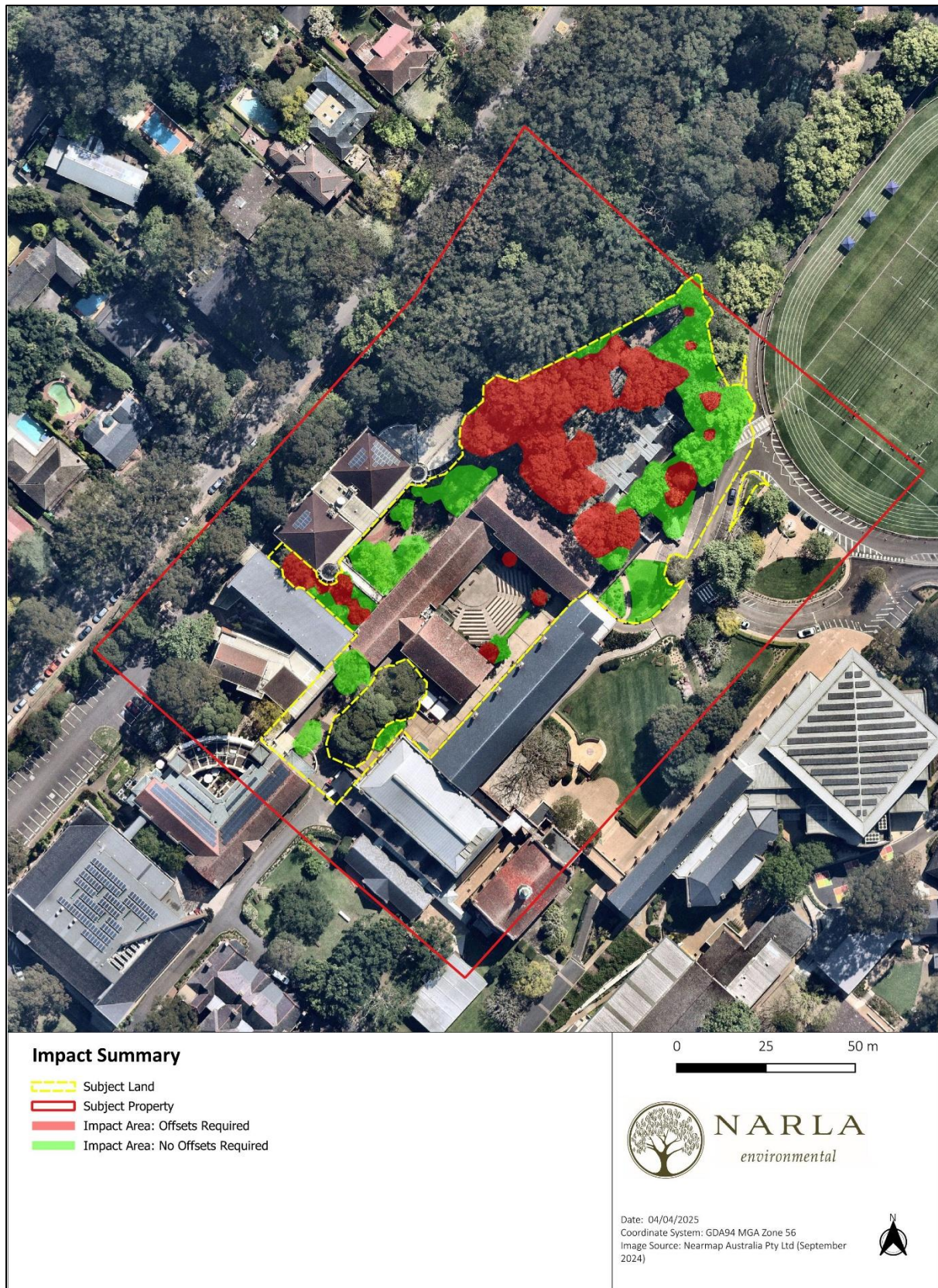


Figure 16. Impacts on native vegetation and offset requirements.

8.4 Serious and Irreversible Impacts (SAIL's)

One (1) threatened ecological community within the Subject Land has been identified as an entity at risk of an SAIL in the Threatened Biodiversity Data Collection (NDCCEEW 2025d):

- Blue Gum High Forest in the Sydney Basin Bioregion (Principle 1, 2 and 3)

8.4.1 Blue Gum High Forest in the Sydney Basin Bioregion

Due to the sensitivity of this TEC to any impact, a determination of whether or not the proposed impacts are serious and irreversible is to be undertaken in accordance with Section 9.1 of the BAM (DPIE 2020a) is required. This is outlined in **Table 21**.

Table 21. Additional impact assessment provisions for ecological communities that are associated with a serious and irreversible impact.

Serious and Irreversible Impact (SAIL) Impact assessment provisions for ecological communities: Blue Gum High Forest in the Sydney Basin Bioregion (BGHF)	
BC Act Status: Critically Endangered	
The action and measures taken to avoid the direct and indirect impact on the potential entity for a SAIL	The proposed development will impact approximately 0.19ha of BGHF. Given the heavily vegetated nature of the Subject Property and limited available areas for building, the complete avoidance of impacts to native vegetation was not feasible. Efforts were made to reduce biodiversity impacts through careful siting, such as concentrating development in areas of existing infrastructure and exotic vegetation while avoiding higher conservation value areas. An ecological constraints assessment was conducted by Narla in 2023 to guide the development. The assessment identified areas of lower vegetation integrity and ecosystem value, allowing the development to focus on regions with exotic vegetation and existing infrastructure. This strategic planning aligns with BAM requirements to minimize biodiversity impacts by selecting areas that already have lower conservation value. A VMP will be developed to manage retained native vegetation within the broader Subject Property. This plan will focus specifically on maintaining and enhancing the ecological integrity of the retained vegetation, particularly the BGHF. The VMP will outline specific actions to be undertaken during both the construction and post-construction phases, ensuring the preservation of vegetation and the facilitation of long-term ecological outcomes. The VMP will align with the BAM which emphasises the need to mitigate and manage impacts to native vegetation through adaptive management and monitoring strategies. This includes: ▪ Managing edge effects and preventing habitat degradation in areas adjacent to the development site; ▪ Implementing weed control, replanting, and habitat restoration measures to enhance the ecological values of the retained vegetation; ▪ Promoting regeneration of native species, especially within degraded areas, to improve the structural and functional attributes of the BGHF.

Serious and Irreversible Impact (SII) Impact assessment provisions for ecological communities: Blue Gum High Forest in the Sydney Basin Bioregion (BGHF)	
BC Act Status: Critically Endangered	
Current total geographic extent (ha) of the TEC in NSW	The current estimated total geographic extent of BGHF as per the State Vegetation Type Mapping in NSW is 1389.26ha (DPE 2022).
Estimated reduction in geographic extent of the TEC since 1970	No data is available for the estimated reduction in this TEC since 1970 however it is estimated that about 4.5% of its original extent remains (NSW Threatened Species Scientific Committee, 2007), which is an estimated reduction of 95.5%.
Extent of reduction in ecological function, describing the degree of environmental degradation or disruption to biotic processes such as: • Change in community structure; • Change in species composition; • Disruption of ecological processes; • Invasion and establishment of exotic species; • Degradation of habitat; and • Fragmentation of habitat	Changes in structure of BGHF have occurred as a consequence of the extensive removal of large old trees. A number of stands of BGHF have highly modified understories, in which the native woody component has been largely replaced by woody exotic species or by increased abundance of native and exotic grasses. Continued under scrubbing, frequent burning and mowing may maintain the understorey in an artificially open state and prevent recruitment of species with the community. The loss of large trees removes essential habitat for a range of tree-dependent fauna. The reduction of understorey complexity, through the reduction of native shrub cover, degrades habitat for a range of bird and mammal species. These processes contribute to a large reduction in the ecological function of the community. The influx of stormwater, which brings excessive moisture, pollutants and nutrients to the remnant forests from surrounding urban areas, is a significant ongoing threat to the ecological integrity of BGHF. This, together with the legacy of past disturbances and the abundance and dispersal of weed propagules from nearby urban areas, results in the invasion, establishment and spread of weeds. Problematic weed species in Blue Gum High Forest include the following <i>Asparagus asparagoides</i> , <i>Cinnamomum camphora</i> , <i>Lantana camara</i> , <i>Ligustrum lucidum</i> , <i>Ligustrum sinense</i> , <i>Ochna serrulata</i> , <i>Passiflora edulis</i> , <i>Passiflora subpeltata</i> , <i>Pennisetum clandestinum</i> , <i>Rubus ulmifolius</i> , <i>Senna colutioides</i> and <i>Tradescantia fluminensis</i> (NSW Threatened Species Scientific Committee, 2011). Within the Subject Land, similar degradation processes have occurred, with the removal of large trees and invasion of exotic species contributing to reduced ecological function.
Evidence of restricted geographic distribution (Principle 3) based on the TEC's geographic range in NSW: • Extent of occurrence (ha); • Area of occupancy (ha); • Number of threat-defined locations	BGHF is exclusively found within the Sydney Basin Bioregion of NSW as defined by version 7 of the IBRA. It occurs at elevations more than 100m above sea level in areas here rainfall exceeds 1050 mm per annum. The distribution of BGHF is associated with soils derived from Wianamatta Shale, though may occur in adjacent areas underlain by Hawkesbury Sandstone. The community also occurs on soils associated with localised volcanic intrusions, 'diatremes. According to the SVTM, BGHF occupies an estimated total area of 1389.26ha (DPE 2022). In line with Clause 4.21 of the Biodiversity Conservation Regulation (BC Reg.), the NSW Scientific Committee has published guidelines to interpret listing criteria for species, populations, and ecological communities under the Biodiversity Conservation Act (BC Act). Specifically, Subclause 4.10f of the BC Reg. mandates an estimation of the number of threat-defined locations that are occupied, in relation to the extent of serious and plausible threats. For the interpretation of Clause 4.10f, the Committee advises the use of thresholds

Serious and Irreversible Impact (SII) Impact assessment provisions for ecological communities: Blue Gum High Forest in the Sydney Basin Bioregion (BGHF) BC Act Status: Critically Endangered	
	established by the International Union for Conservation of Nature (IUCN). According to the IUCN Red List criteria for ecosystems, the threshold for Critically Endangered entities is defined as one location. Consequently, as BGHF is categorised as critically endangered, the criterion of one threat-defined location is applicable.
Area of TEC to be impacted by the proposal (ha)	0.19ha of vegetation confirming to BGHF will be impacted by the proposed works.
Area of TEC to be impacted by the proposal as a % of the current geographic extent in NSW (%)	Current extent is estimated at 1389.26ha (DPE 2022). The proposed development will impact less than 0.014% of the current geographic extent in NSW.
Direct/indirect impacts likely as a result of the proposal to contribute to loss of flora/fauna species characteristic of the TEC	The proposed development will result in direct impacts to approximately 0.19ha of BGHF. The BGHF within the Subject Land was found to be in low condition, with a VI score of 28.3. It is possible for the vegetation surrounding the Subject Land to be indirectly impacted by the proposal, however as discussed in Section 7 these potential impacts are not expected to be significant.
Remaining extent of isolated areas of TEC (ha)	The impacts to this TEC are restricted to the edges of a disturbed patch in a highly urbanised locality, therefore no further isolation is likely to occur as a result of the proposed development.
Average distance between remaining remnants – remnant is retained (m) vs remnant is removed.	As previously mentioned, the area of TEC to be removed is located on the edge of a disturbed patch, which is not likely to result in any further isolation of remaining areas of the TEC as it will continue, as it currently does, to exist around within the broader locality. The removal of vegetation within the Subject Land will increase the separation distance between patches by approximately 21m.
Estimated maximum dispersal distance of species associated with the TEC (km)	It is assumed that native species within the TEC have an estimated maximum dispersal distance of 100m for the exchange of genetic material, based on the definition of a “patch” of vegetation within the BAM 2020.
Other information relevant to describing the impact on connectivity and fragmentation, such as the area to perimeter ratio for remaining areas of the TEC as a result of the development	The total area to perimeter ratio of the patches BGHF in a 1500m radius from the Subject Land is currently estimated to be 10.68m² The total area perimeter ratio following the proposed development is estimated to be of the patches BGHF in a 1500m radius from the Subject Land is estimated to be 10.96m² This represents an approximate 2.62% change in the levels of fragmentation of BGHF in the 1500m radius.
Vegetation Integrity Analysis: - Composition Score; - Structure Score; - Function Score	- Composition Score: 18.9 - Structure Score: 40 - Function Score: 29.8 - Total VIS: 28.2

9. Biodiversity Offset Credit Requirements

The preferred approach to offset the residual impacts of the proposal is to purchase and retire the appropriate species credits from registered Biodiversity Stewardship Sites that comply with the trading rules of the NSW BOS in accordance with the 'like for like' report generated by the BAM calculator. If such credits are unavailable, credits would be sourced in accordance with the 'variation report' generated by the BAMC.

A payment to the Biodiversity Conservation Trust (BCT) would be considered as a contingency option if a suitable number and type of biodiversity credits cannot be secured. A quote will be required from the BCT to determine the costings of any credits to be offset through a payment to the BCT.

9.1 Offset Requirement for Ecosystem Credits

Three (3) ecosystem credits are required to offset the biodiversity impacts of the proposed development (Table 22):

Table 22. Offset requirements for Ecosystem Credits within the Subject Land.

PCT	BC Act Status	Zone	Total Area (ha)	Ecosystem Credits Required
PCT 3136: Blue Gum High Forest	Critically Endangered Ecological Community	Zone 1: Low Condition (Canopy)	0.19	3
Total Ecosystem Credits				3

9.2 Offset Requirement for Species Credits

No species credit species require offsetting as a result of the proposed development.

10. Other Relevant Legislation and Planning Policies

10.1 State Environmental Planning Policy (Biodiversity and Conservation) 2021

10.1.1 Chapter 2: Chapter 2: Vegetation in non-rural areas

This Chapter aims to protect the biodiversity values of trees and other vegetation in non-rural areas of the State and to preserve the amenity of these areas through vegetation retention.

The Chapter applies to the following non-rural areas of the State:

- Land in the following local government areas:
 - Bayside, City of Blacktown, Burwood, Camden, City of Campbelltown, Canterbury-Bankstown, Canada Bay, Cumberland, City of Fairfield, Georges River, City of Hawkesbury, Hornsby, Hunter's Hill, Georges River, Inner West, Ku-ring-gai, Lane Cove, City of Liverpool, Mosman, Newcastle, North Sydney, Northern Beaches, City of Parramatta, City of Penrith, City of Randwick, Rockdale, City of Ryde, Strathfield, Sutherland Shire, City of Sydney, The Hills Shire, Waverley, City of Willoughby, Woollahra.
- Land within the following zones under an environmental planning instrument:
 - Zone RU5 Village, Zone R1 General Residential, Zone R2 Low Density Residential, Zone R3 Medium Density Residential, Zone R4 High Density Residential, Zone R5 Large Lot Residential, Zone B1 Neighbourhood Centre, Zone B2 Local Centre, Zone B3 Commercial Core, Zone B4 Mixed Use, Zone B5 Business Development, Zone B6 Enterprise Corridor, Zone B7 Business Park, Zone B8 Metropolitan Centre, Zone E1 Local Centre, Zone E2 Commercial Centre, Zone E3 Productivity Support, Zone E4 General Industrial, Zone E5 Heavy Industrial, Zone IN1 General Industrial, Zone IN2 Light Industrial, Zone IN3 Heavy Industrial, Zone IN4 Working Waterfront, Zone MU1 Mixed Use, Zone IN4 Working Waterfront, Zone SP1 Special Activities, Zone SP2 Infrastructure, Zone SP3 Tourist, Zone SP4 Enterprise, Zone SP5 Metropolitan Centre, Zone RE1 Public Recreation, Zone RE2 Private Recreation, Zone C2 Environmental Conservation, Zone C3 Environmental Management, Zone C4 Environmental Living, Zone W3 Working Waterways or Zone W4 Working Waterfront.

This Chapter does not apply to national park estate, other conservation areas, or State forestry land as defined under section 60A(b) and (c) of the Local Land Services Act 2013, except where such land has been declared an area of outstanding biodiversity value under the Biodiversity Conservation Act 2016.

In non-rural areas to which Part 2.3 applies, vegetation clearing is prohibited without a permit issued by the relevant council. Additionally, the clearing of native vegetation exceeding the biodiversity offsets scheme threshold is prohibited without approval from the Native Vegetation Panel under Part 2.4.

Vegetation within the Subject Land requires a permit for removal. As the proposed vegetation removal is associated with a development application, the proposed development aligns with the objectives of the relevant legislation.

10.1.2 Chapter 4: Koala Habitat Protection

This Chapter aims to encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free-living population over their present range and reverse the current trend of koala population decline. As the Ku-ring-gai LGA is included in Schedule 2, this SEPP applies to the Subject Property.

This section applies to land to which this Chapter applies if the land—

- Has an area of at least 1 hectare (including adjoining land within the same ownership); and
- Does not have an approved koala plan of management applying to the land.

Before a council may grant consent to a development application for consent to carry out development on the land, the council must assess whether the development is likely to have any impact on koalas or koala habitat. If the council is satisfied that the development is likely to have low or no impact on koalas or koala habitat, the council may grant consent to the development application.

A site assessment was undertaken to determine whether the land contained core koala habitat, which is defined by the SEPP as:

- an area of land which has been assessed by a suitably qualified and experienced person as being highly suitable koala habitat and where koalas are recorded as being present at the time of assessment of the land as highly suitable koala habitat, or
- an area of land which has been assessed by a suitably qualified and experienced person as being highly suitable koala habitat and where koalas have been recorded as being present in the previous 18 years.

The Subject Property contained suitable habitat (where 15% or greater of the total number of trees are the regionally relevant species of those listed in Schedule 2 of the SEPP), no signs of koala's or koala occupancy (scats, scratch marks) were observed within the Subject Property. There are no historical Koala records within the Subject Property, and while records occur within 2.5km of the Subject Property from the last 18 years it is unlikely that the Subject Property forms core koala habitat due to the lack of records from within the Subject Property and the fragmented and urbanised nature of the habitat surrounding.

10.2 State Environmental Planning Policy (Resilience and Hazards) 2021 – Chapter 2: Coastal Management

State Environmental Planning Policy (Resilience and Hazards) 2021 – Chapter 2 Coastal Management applies to land within the coastal zone. The coastal zone means the area of land comprised of the following coastal management areas:

- the coastal wetlands and littoral rainforests area;
- the coastal vulnerability area;
- the coastal environment area; or
- the coastal use area.

As the Subject Land does not occur within any of these listed areas, this SEPP does not apply.

10.3 Ku-ring-gai Local Environmental Plan 2015 (KLEP)

10.3.1 Biodiversity Protection (Clause 6.3)

The objective of this clause is to protect, maintain and improve the diversity and condition of native vegetation and habitat, including:

- Protecting biological diversity of native fauna and flora;
- Protecting the ecological processes necessary for their continued existence;

- Encouraging the recovery of threatened species, communities, populations and their habitats; and
- Protecting, restoring and enhancing biodiversity corridors.

This clause applies to land identified as “Biodiversity” on the Terrestrial Biodiversity Map. As the Subject Land contains land mapped as “Biodiversity”, this clause applies to the proposed development. Whilst the Subject Land will impact land on the Terrestrial Biodiversity Map, the proposed development will encroach on only a small area (0.19ha), with the majority of native vegetation within the Subject Property to be retained and protected under a future VMP.

10.4 Ku-ring-gai Development Control Plan 2022 (KDCP)

10.4.1 Biodiversity Controls

Section B, Part 18 outlines the Biodiversity Controls that apply to land mapped on the Greenweb map (Part 18R.1). Lands mapped as ‘areas of biodiversity significance’ within the KDCP (2022), are broken down into four categories:

- Core Biodiversity Lands;
- Support for Core Biodiversity Lands;
- Landscape Remnant;
- Biodiversity Corridors and Buffer Areas.

In addition to these, an additional category - ‘Canopy Remnant’ is also included within the DCP for the role these Canopy Remnant play in supporting ecological processes and other values.

The objectives and controls in this Part apply to development activities or works that will have an impact on areas identified as ‘areas of biodiversity significance’ in the KDCP Greenweb mapping. Whilst the Subject Land is mapped as ‘Support for core biodiversity lands’, the proposed development will encroach on only a small area (0.19ha), with the majority of native vegetation within the Subject Property to be retained and protected under a future VMP. The development has been carefully planned to avoid more sensitive biodiversity areas and minimize its footprint on the mapped ‘Support for Core Biodiversity Lands’.

The following must be implemented when impacting on ‘Support for core biodiversity lands’:

- Avoid locating development on areas identified as Support for Core Biodiversity Lands on the Greenweb map.
- Where work impacts on land within Support for Core Biodiversity Lands, stabilisation and or rehabilitation with indigenous vegetation will be required to mitigate impacts.
- Vegetation retention and rehabilitation must be designed to enhance and link existing vegetation and habitat within the site and within adjacent sites, Biodiversity Corridors and riparian lands.
- Where land within an allotment is identified as Support for Core Biodiversity Lands, works must be consistent with a management plan (e.g. vegetation management plan). Where no plan exists, Council may require preparation of a plan. This plan must be prepared by a suitably qualified person and must identify ongoing initiatives to preserve, protect and promote the environmental values of the land.
- Planting within land identified as Support for Core Biodiversity Lands is to consist of:
 - 100% locally native tree and understorey species within Core Riparian Zones;
 - Not less than 70% locally native tree species and 30% locally native understorey species for all other areas;
 - Species that reflect the relevant vegetation communities within the area; and
 - A mix of groundcover shrubs and trees and is to exclude monocultures.

11. Conclusion

Narla Environmental Pty Ltd ('Narla') has undertaken a Streamlined Biodiversity Development Assessment Report (SBDAR) to assess the biodiversity impacts of the proposed development at Pymble Ladies' College. This assessment has been conducted in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (SEARs), the Biodiversity Conservation Act 2016, the Biodiversity Conservation Regulation 2017, and the Biodiversity Assessment Method (BAM).

The proposed development involves the demolition of existing educational buildings and the construction of a new facility, along with associated roadways and landscaping. The Subject Property contains mapped native vegetation, including the Critically Endangered Ecological Community (CEEC) Blue Gum High Forest (PCT 3136), as listed under the Biodiversity Conservation Act 2016. While the development has been designed to minimise, biodiversity impacts through strategic siting and ecological constraints assessments, complete avoidance of native vegetation clearing has not been feasible.

As a result, the proposed development will require the offset of three (3) ecosystem credits for PCT 3136 to mitigate biodiversity impacts. Additionally, mitigation measures, including the implementation of a Construction Environmental Management Plan (CEMP) and a Vegetation Management Plan (VMP), have been recommended. Other protective measures will include the establishment of Tree Protection Zones in accordance with AS 4970, temporary fencing, stormwater management, and the use of local native species in landscaping. These measures will be implemented throughout all project phases to support the protection and enhancement of biodiversity values.

12. References

- 3XN Architects (2025) Site Plans: Pymble Ladies College Secondary Innovation Precinct.
- Aboriginal Land Council (2025) Land Council Interactive Map <https://alc.org.au/land-council-map/>
- Australian Bureau of Meteorology (BOM) (2024) Sydney, New South Wales. Daily Weather Observations <http://www.bom.gov.au/climate/dwo/IDCJDW2154.latest.shtml>
- Australian Government Department of the Environment and Energy (2018) Interim Biogeographic Regionalisation for Australia (IBRA), Version 7 (Subregions)
- Australian Standard 4970 (2009) Protection of Trees on Development Sites
- Biodiversity Conservation Act (2016) <https://legislation.nsw.gov.au/#/view/act/2016/63/full>
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13. Appendices

Appendix A. Proposed Site Plans (3XN Architects 2025).

Appendix B. Proposed Demolition Plans (3XN Architects, 2025)

Appendix C. Tree Protection Plan (Tree Survey, 2025).

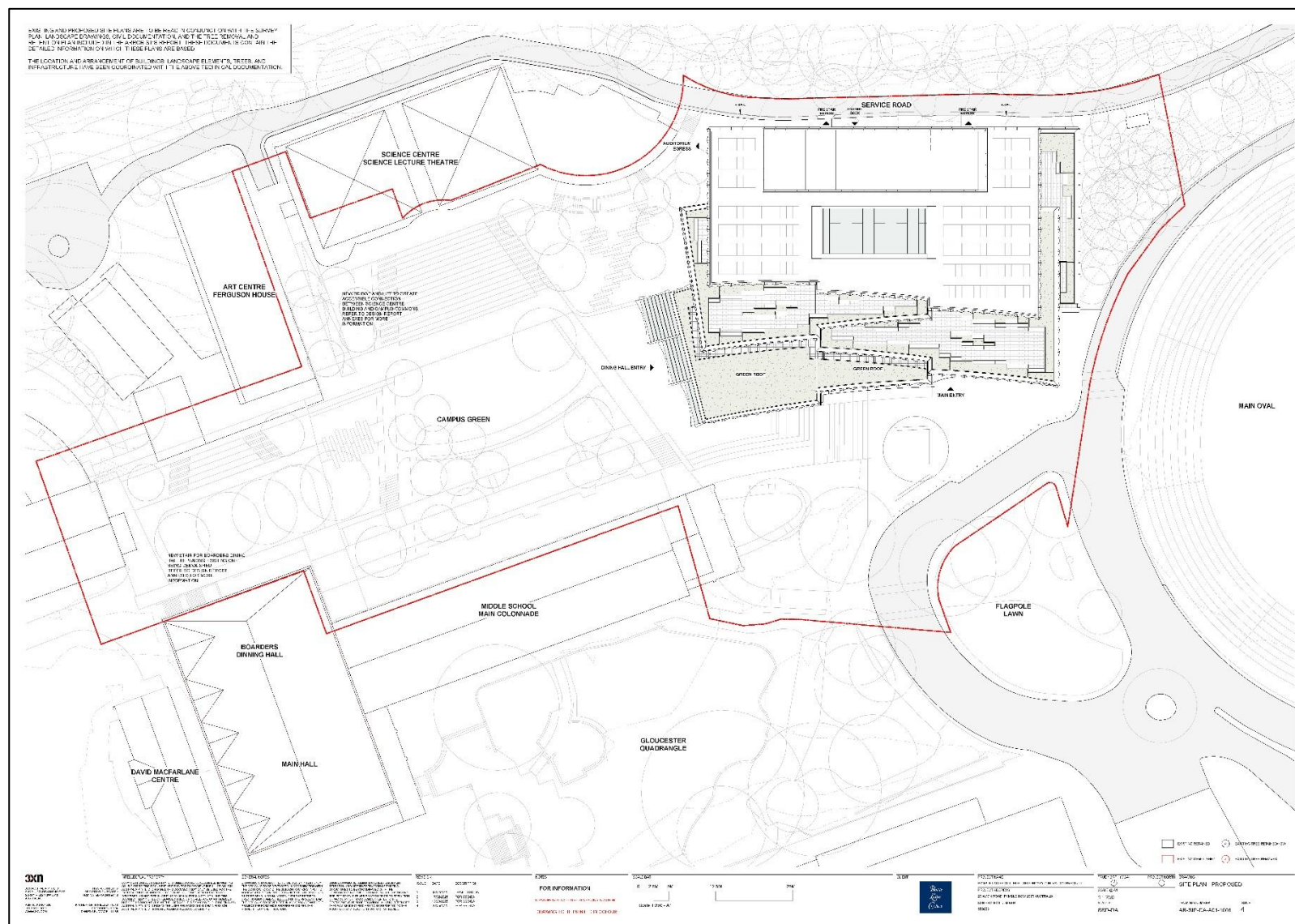
Appendix D. Landscape Plans (TCL, 2025)

Appendix E. Project Location and Design Considerations

Appendix F. BAM Site- Field Survey Forma (copied directly from Electronic Data Sheet).

Appendix G. BAMC Generated Biodiversity Credit Report.

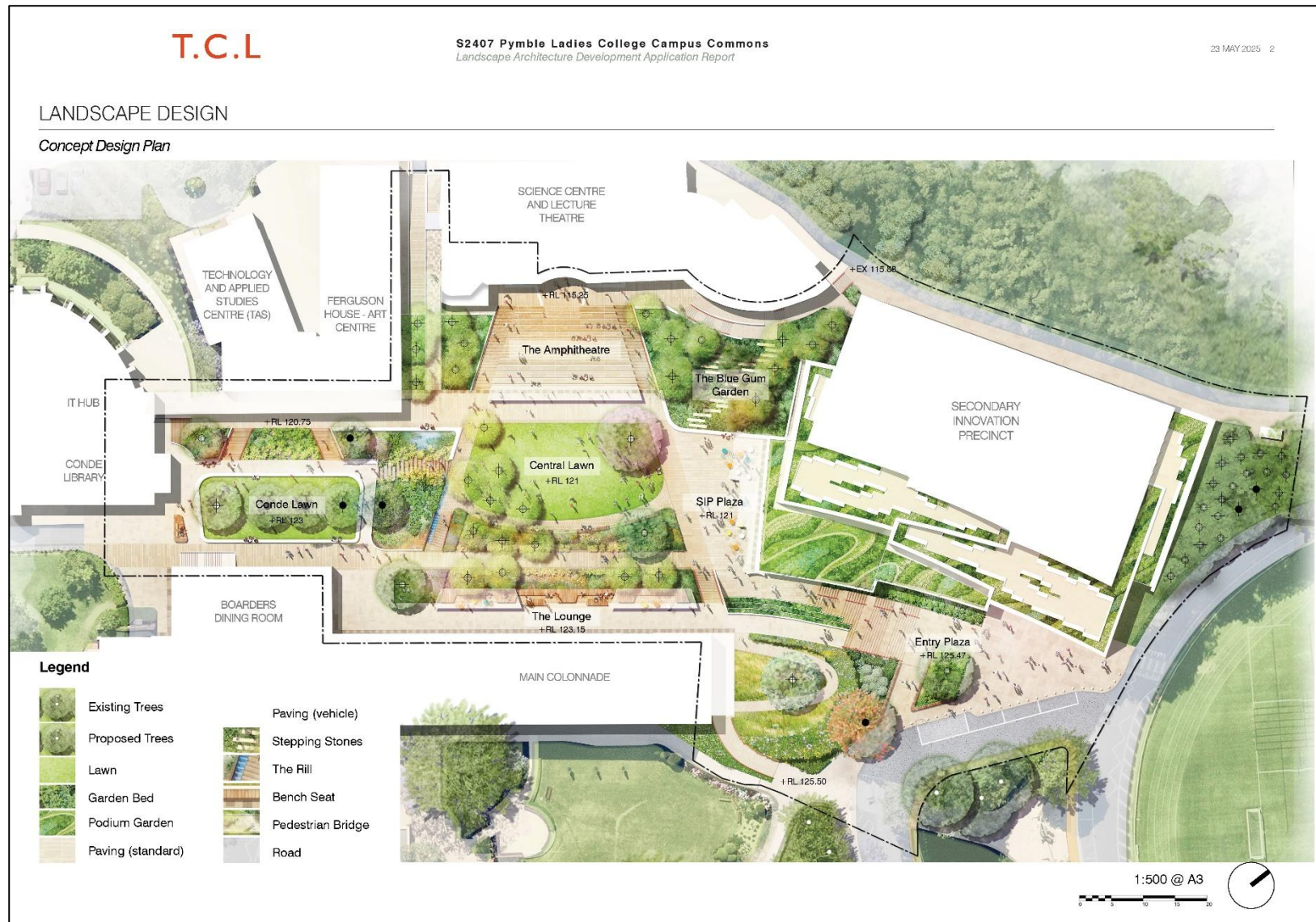
Appendix A. Proposed Site Plans (3XN Architects 2025).



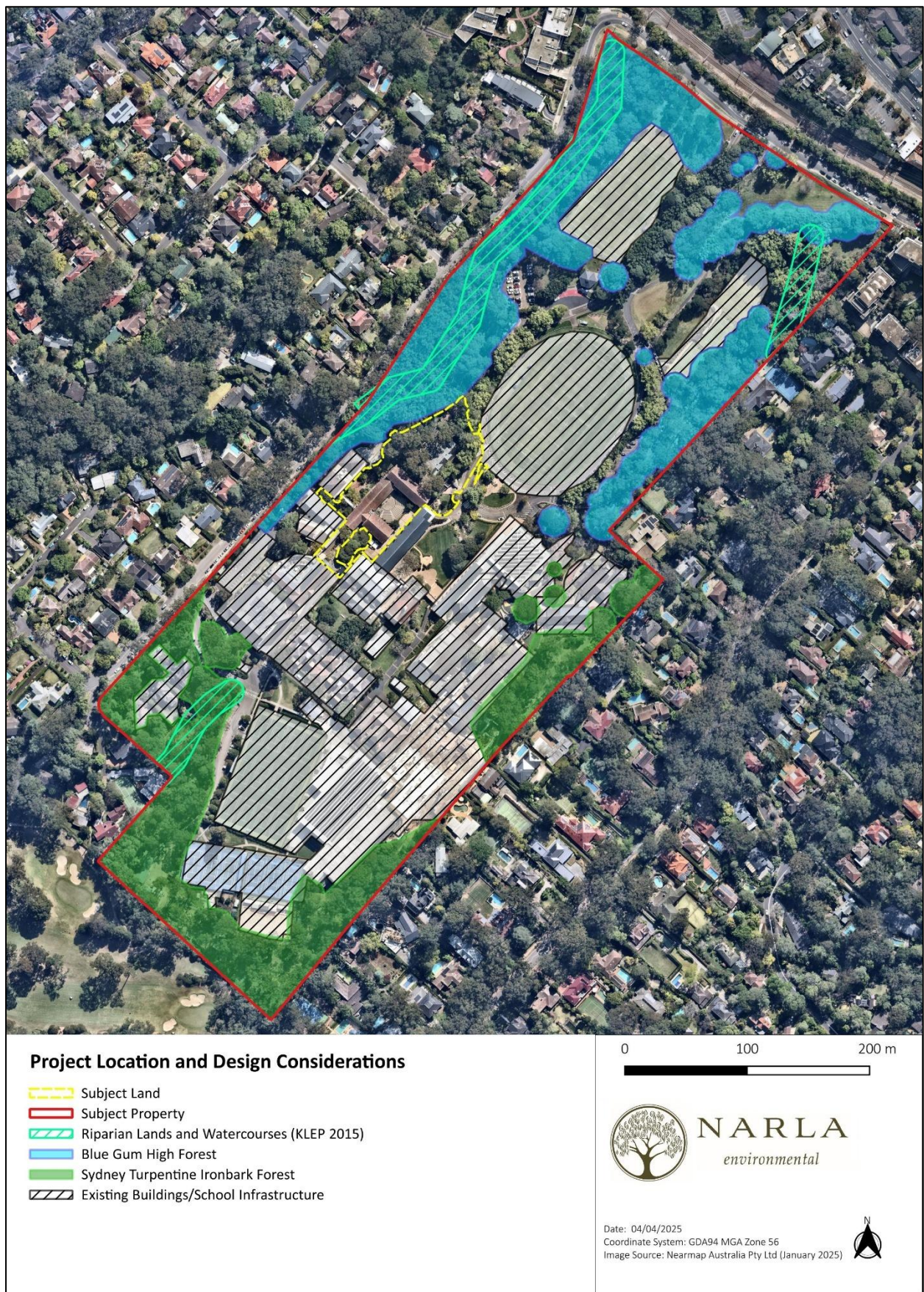
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Appendix D. Landscape Plans (TCL, 2025)



Appendix E. Project Location and Design Considerations



Appendix F. BAM Site- Field Survey Form (copied directly from Electronic Data Sheet).

BAM Site – Field Survey Form					
Date:	03.09.24	Plot ID:	1	Photo #:	n/a
Zone:	56	Plot Dimensions:	50x10m	Easting:	327362
Datum:	GDA94	Middle bearing from 0m:	233	Northing:	6264474
PCT:	PCT 3136 – Low Condition (Canopy)				
Growth Form	Scientific Name	Cover	Abundance		
HTE	<i>Ochna serrulata</i>	0.2	3		
HTE	<i>Ehrharta erecta</i>	0.1	50		
HTE	<i>Cinnamomum camphora</i>	0.3	5		
Grass & grasslike (GG)	<i>Lomandra longifolia</i>	0.2	15		
Other (OG)	<i>Cordyline stricta</i>	4	15		
Shrub (SG)	<i>Homalanthus populifolius</i>	0.1	2		
Grass & grasslike (GG)	<i>Oplismenus aemulus</i>	0.1	25		
Tree (TG)	<i>Grevillea robusta</i>	5	4		
Tree (TG)	<i>Corymbia maculata</i>	15	6		
Tree (TG)	<i>Brachychiton acerifolius</i>	2	1		
Tree (TG)	<i>Eucalyptus saligna</i>	15	5		
Exotic	<i>Monstera deliciosa</i>	15	25		
HTE	<i>Ligustrum lucidum</i>	2	25		
Tree (TG)	<i>Eucalyptus pilularis</i>	10	2		
Shrub (SG)	<i>Pittosporum undulatum</i>	1	2		
Other (OG)	<i>Doryanthes excelsa</i>	1	1		
Tree (TG)	<i>Glochidion ferdinandi</i>	5	2		
	# Tree Stems Count	# Hollow Bearing Trees			
80+cm	absent	absent			
50-79cm	2	absent			
30-49cm	present	absent			
20-29cm	present	absent			
10-19cm	present	absent			
5-9cm	present	absent			
<5cm	absent	absent			
Length of Logs (m)	0				
BAM Attribute (1x1m)	Litter Cover (%)				
1 (5m)	90				
2 (15m)	70				
3 (25m)	80				
4 (35m)	60				
5 (45m)	30				

Average	66	
Growth Form	Composition Data	Structure Data
	(Count of Native Cover)	(Sum of Cover)
Tree	6	52
Shrub	2	1.1
Grass	2	0.3
Forb	0	0
Fern	0	0
Other	2	5
High Threat Exotics	4	2.6



BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00051696/BAAS21009/24/00051697	SBDAR Pymble Ladies College Secondary Innovation Precinct	28/10/2024
Assessor Name	Assessor Number	BAM Data version *
Christopher Moore	BAAS21009	Current classification (live - default) (80)
Proponent Names	Report Created	BAM Case Status
Greg Hastie	30/05/2025	Finalised
Assessment Revision	BOS entry trigger	Assessment Type
1	BOS Threshold: Biodiversity Values Map	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.	
30/05/2025		

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Blue Gum High Forest in the Sydney Basin Bioregion	Critically Endangered Ecological Community	3136-Blue Gum High Forest
Species		
Nil		

Assessment Id	Proposal Name	Page 1 of 3
00051696/BAAS21009/24/00051697	SBDAR Pymble Ladies College Secondary Innovation Precinct	



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

No Changes

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
3136-Blue Gum High Forest	Blue Gum High Forest in the Sydney Basin Bioregion	0.2	0	3	3

Assessment Id

00051696/BAA521009/24/00051697

Proposal Name

SBDAR Pymble Ladies College Secondary Innovation Precinct

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BAM Biodiversity Credit Report (Like for like)

3136-Blue Gum High Forest	Like-for-like credit retirement options					
	Name of offset trading group	Trading group	Zone	HBT	Credits	IBRA region
	Blue Gum High Forest in the Sydney Basin Bioregion This includes PCT's: 3136	-	3136_Low	No	3	Cumberland, Burragorang, Pittwater, Sydney Cataract, Wollemi and Yengo. 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

Assessment Id

00051696/BAAS21009/24/00051697

Proposal Name

SBDAR Pymble Ladies College Secondary Innovation Precinct

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BAM Biodiversity Credit Report (Like for like)

Assessment Id

00051696/BAA\$21009/24/00051697

Proposal Name

SBDAR Pymble Ladies College Secondary Innovation Precinct

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