Biodiversity Development Assessment Report

Indigenous Centre of Excellence

SSD-64916225

Western Sydney University, Parramatta South Campus

171 Victoria Road, Parramatta, NSW 2150

10 December 2025

Land Eco Consulting Pty Ltd
www.landeco.com.au

ABN 48 636 918 404

Document Control

Version	Document Name	Issue Date
Draft 1.0	Biodiversity Development Assessment Report Indigenous Centre of Excellence Western Sydney University, Parramatta South Campus 171 Victoria Road, Parramatta, NSW 2150	28/06/2024
Draft 1.1	Biodiversity Development Assessment Report Indigenous Centre of Excellence Western Sydney University, Parramatta South Campus 171 Victoria Road, Parramatta, NSW 2150	11/07/2024
Final 1.0	Biodiversity Development Assessment Report Indigenous Centre of Excellence Western Sydney University, Parramatta South Campus 171 Victoria Road, Parramatta, NSW 2150	26/07/2024
Draft 2.0	Biodiversity Development Assessment Report Indigenous Centre of Excellence Western Sydney University, Parramatta South Campus 171 Victoria Road, Parramatta, NSW 2150	05/06/2025
Final 2.0	Biodiversity Development Assessment Report Indigenous Centre of Excellence Western Sydney University, Parramatta South Campus 171 Victoria Road, Parramatta, NSW 2150	18/8/2025
Draft 2.1	Biodiversity Development Assessment Report Indigenous Centre of Excellence Western Sydney University, Parramatta South Campus 171 Victoria Road, Parramatta, NSW 2150	4/12/2025
Final 2.1	Biodiversity Development Assessment Report Indigenous Centre of Excellence Western Sydney University, Parramatta South Campus 171 Victoria Road, Parramatta, NSW 2150	10/12/2025

Executive Summary

Land Eco Consulting (Land Eco) was commissioned by Western Sydney University ('the proponent') to prepare this Biodiversity Development Assessment Report (BDAR) for the proposed State Significant Development (under assessment as SSD-64916225) of an Indigenous Centre of Excellence and two (2) novel temporary carparks at Western Sydney University, 171 Victoria Road, Parramatta, NSW 2150, (Lot 100 & 101/-/DP816829) (the 'Subject Property').

The Applicant seeks development consent for the construction of a new state-of-the-art Indigenous Centre of Excellence as a new tertiary education facility on campus and the construction of two (2) associated temporary carparks. The Indigenous Centre of Excellence project is funded by the NSW Government's Western Sydney Infrastructure Grants Program in association with Western Sydney University. The new Indigenous Centre of Excellence will be an important asset for both the University and local community alike, providing a space for the commitment to advancing Indigenous education, leadership, and reconciliation. The Indigenous Centre of Excellence will stand as a symbol of recognition of Indigenous land and the University's relationship with Indigenous communities. The Indigenous Centre of Excellence will represent a celebration of tens of thousands of years of Indigenous knowledges and histories, a legacy that the University is honoured to nurture and promote through further education opportunities for students and communities. The extent of this development is referred to as the 'Subject Land' (**Figure 1**).

The Western Sydney University South Parramatta Campus is located within the City of Parramatta Local Government Area (LGA). The site comprises two (2) allotments, which is legally described as Lot 100 in DP 816829 and part Lot 101 in DP 816829. The project site comprises the P1 Car Park in the northern portion of the wider site campus and consists of the grassed area to the south and southwest of the P1 Car Park. The project site is approximately 20,035m^2 in area and is irregular in shape. It currently comprises of a hardstand area that accommodates approximately 284 car parking spaces and a grassed open space adjoining the Oval to the south. There is an existing single storey Central Energy Plant to the west of the development area which serves the wider campus; it remains outside of the scope of this SSDA.

The site is strategically positioned to the northern boundary of the Western Sydney University (University) South Parramatta Campus, fronting Victoria Road (the A40). The wider campus comprises a significant landholding size of approximately 20ha containing a series of buildings of differing heights and massing forms which are used for educational purposes. The buildings contained within the wider campus site are dissected by a series of open, at grade car parks, internal roads, pathways, and landscaped areas. The Campus sits to the north of the Parramatta River.

The site is located approximately 3km east of the Parramatta CBD, which is an area undergoing a process of significant transformation. It is also located approximately 500m to the Parramatta Light Rail Corridor, with the construction of new Yallamundi Light Rail now completed and awaiting operation by TfNSW.

The Subject Land also includes areas designated for the construction of two (2) temporary carparks (hereafter referred to as proposed carpark sites). These carparks aim to replace the loss of 'P1 Carpark' and provide a total of 287 car spaces for use by Western Sydney University staff and students. In total the proposed carparks site (including the carpark to the east and west) is approximately 0.82 ha (**Figure 3**).

The proposed development is a State Significant Development (SSD-64916225) pursuant to Part 4, Division 4.7, Section 4.36(2) of the *Environmental Planning and Assessment Act 1979* (EP&A). The proponent has commissioned this BDAR to accompany the proposal in accordance with the Planning Secretary's Environmental Assessment Requirements (SEARs) for the proposed development and address the requirements of the NSW Biodiversity Offset Scheme (BOS). The proposed development requires the submission of a streamlined 'Planted Native Vegetation' BDAR as stipulated under the *NSW Biodiversity Conservation Act 2016* and in accordance with the Biodiversity Assessment Method (BAM). The BDAR is required to be undertaken by an accredited assessor to assess the impacts of the proposal.

Historical imagery indicates that the Subject Land has been historically cleared and now consists of a bitumen carpark and managed lawn/ garden beds, with the exception of one (1) mature *Melaleuca decora* which currently existing with C1 Carpark. This remnant *Melaleuca decora* is proposed for retention. The remainder of the trees within the Subject Land appear to have been historically planted for functional and aesthetic purposes (**Figure 5; Figure 6**). Pursuant of Appendix D of the BAM, these trees have been excluded from offset estimates, though have been considered for their potential to provide threatened species habitat and mitigation measures have been proposed where appropriate. In accordance with Appendix D of the BAM, no ecosystem credits or species credits are required to offset the proposed impacts, and as such, there is no assessment for the development in the BAM calculator (OEH 2024a).

The proposed development has been designed to avoid and minimise impacts on biodiversity values in keeping with the purposeful use of the Subject Land and its position within the City of Parramatta. This has been accomplished by siting the development on historically cleared land which now exists as a bitumen carpark or as managed lawns and garden beds within a disturbed locality. The understorey vegetation of the Subject Land is exotic dominant. The development of the ICOE has been designed to enable the retention of the remnant *Melaleuca decora* (Tree Survey 2024) (JCB Architects 2025).

No plant community types (PCT) occur within the Subject Land, as the vegetation consisted of a mixed assemblage of planted native and exotic trees over an exotic dominant understorey layer. The soil profile has been historically modified leaving low potential for regeneration of native vegetation.

A total of zero (0) Ecosystem Credits must be retired to offset the biodiversity impacts of the proposed development (**Table 1**).

No threatened species have been recorded on the Subject Land.

A total of zero (0) Species Credits are required to be retired to offset the biodiversity impacts of the proposal.

Direct impacts will be limited to the removal of 1.51 ha of planted exotic/ornamental native trees and an exotic dominant understorey vegetation layer. Minor indirect impacts may influence adjoining habitat in vegetation proposed for retention; however these are not considered likely to cause an adverse impact beyond the status quo. No Serious and Irreversible Impact (SAII) entities are considered likely to be impacted as a result of the proposed development.

In addition to offsetting, the *Biodiversity Conservation Act 2016* and its regulations requires that an applicant takes all reasonable effort to avoid and minimise potential impacts of the proposal on local biodiversity values. A series of mitigation and management measures have been identified, which are to be implemented as part of any construction environmental management plan produced for the site. These include measures to:

- Ensure all contractors employed to work within the Subject Land are suitably qualified, experienced and informed of the sensitive ecological features and potentially occurring threatened species;
- Assign a Project Ecologist to conduct and oversee all ecological compliance requirements associated with conducting a proposed development in line with all relevant state and commonwealth legislation and guidelines;
- Have an ecologist present during the clearing of threatened species habitat required for the proposed activity;
- Incorporate locally indigenous flora species in soft landscaping associated with the development;
- Implement vertebrate pest control during construction and operation of the development;
- Implement all relevant biological hygiene protocols and requirements as per NSW Government guidelines;
- Implement ongoing management of priority weeds according to statutory requirements; and
- Implement appropriate sound barriers, vegetation protection fencing, stockpiling and sediment control during construction.

The proponent is not required to retire biodiversity offset credits to meet their obligations to offset the residual impacts of the SSD.

The total number of Ecosystem Credits is presented (**Table 1**) and the total number of Species Credits is presented (**Table 2**).

Table 1. Impacts that require an offset - ecosystem credits

Vegetation zone	PCT	TEC/EC	Impact area (ha)	Number of ecosystem credits required
N/A	N/A	N/A	0	0

Table 2. Impacts that require an offset - species credits

Common name	Scientific name	Loss of habitat (ha) or individuals	Number of species credits required
N/A	N/A	0	0

Contents

Figures

Tables

Glossary

Acronym/ Term	Definition
BAM	New South Wales Biodiversity Assessment Method
BC Act	New South Wales Biodiversity Conservation Act 2016
BDAR	Biodiversity Development Assessment Report
BOS	New South Wales Biodiversity Offset Scheme
BOSET	New South Wales Biodiversity Offset Scheme Entry Tool
CEEC	Critically Endangered Ecological Community
DA	Development Application pursuant to section 4 of the NSW Environmental Planning and Assessment Act 1979
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DCP	Development Control Plan
Development	The use of land, and the subdivision of land, and the carrying out of a work, and the demolition of a building or work, and the erection of a building, and any other act, matter or thing referred to in section 26 that is controlled by an environmental planning instrument but does not include any development of a class or description prescribed by the regulations for the purposes of this definition (Environmental Planning and Assessment Act 1979).
EEC	Endangered Ecological Community
EP&A Act	NSW Environmental Planning and Assessment Act 1979
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
ha	Hectares
ICOE	Indigenous Centre of Excellence
km	Kilometre
KTP	Key Threatening Process (as listed in the BC Act)
LEP	Local Environment Plan
LGA	Local Government Area
Locality	The area within a 10km radius of the Subject Land. The same meaning when describing a local population of a species or local occurrence of an ecological community.
m	Metres
mm	Millimetres
NPWS	NSW National Parks and Wildlife Services
NSW	New South Wales
OEH	Office of Environment and Heritage (now the Department of Planning Industry and Environment)
Proposal	The development, activity or action proposed.
ROTAP	Rare or Threatened Australian Plants
SEPP	State Environmental Planning Policy
SSD	State Significant Development
Subject Land	Maximum extent of the proposed development within the Subject Property
Subject Property	171 Victoria Road Parramatta NSW 2150 (100/-/DP816829)
Threatened species, populations and ecological communities	Species, populations and ecological communities specified in Schedules 1, 1A and 2 and *threatened species, population or ecological community* means a species, population or ecological community specified in any of those Schedules.
WSU	Western Sydney University

Declarations

i. Certification under clause 6.15 Biodiversity Conservation Act 2016

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

Signature: 

Date: 10/12/2025

BAM Assessor Accreditation no: #BAAS18059

This BDAR has been prepared to meet the requirements of BAM 2020.

ii. Details and experience of author/s and contributors

Authors and Contributors

Name	BAM Assessor Accreditation no.	Position/Role	Tasks Performed	Relevant Qualifications
Kurtis Lindsay	#BAAS18059	Principal Ecologist	Document Review Flora Identification Project Management	*BSc (Hons)*
Semonn Oleksyn		Senior Project Manager Ecologist	Document Review	*BAdvSci* *MRes*
Serene White		Project Officer Ecologist	BAM VIS Plot Survey	*BSc (Hons)* *MRes*
Theo Kemp		Ecologist	BAM VIS Plot Survey	*BBioCons*
Chantelle de Kock		Ecologist	BAM VIS Plot Survey	*BSc (Hons)*
Juliette Hennessy		Ecologist	Report Compilation	*BSc (Hons)*

Stage 1: Biodiversity Assessment

1. Introduction

1.1 Proposed Development

1.1.1 Development Overview

Land Eco Consulting (Land Eco) was commissioned by Western Sydney University (WSU) ('the proponent') to prepare this Biodiversity Development Assessment Report (BDAR) for the proposed State Significant Development (under assessment as SSD-64916225) of an Indigenous Centre of Excellence and two (2) associated temporary carparks at Western Sydney University Rydalmere/Parramatta South campus, Parramatta, NSW 2116. This development is proposed within the WSU Campus at 171 Victoria Rd Parramatta 2150 (Lot 100 & 101/-/DP816829) (the 'Subject Property').

The Applicant seeks development consent for the construction of a new state-of-the-art Indigenous Centre of Excellence as a new tertiary education facility on campus. The Indigenous Centre of Excellence project is funded by the NSW Government's Western Sydney Infrastructure Grants Program in association with Western Sydney University. The new Indigenous Centre of Excellence will be an important asset for both the University and local community alike, providing a space for the commitment to advancing Indigenous education, leadership, and reconciliation. The Indigenous Centre of Excellence will stand as a symbol of recognition of Indigenous land and the University's relationship with Indigenous communities. The Indigenous Centre of Excellence will represent a celebration of tens of thousands of years of Indigenous knowledges and histories, a legacy that the University is honoured to nurture and promote through further education opportunities for students and communities.

Through the Indigenous Centre of Excellence, the University will aim to drive positive change, increase Indigenous participation in higher education, and contribute to the preservation and sharing of Indigenous cultures.

This State Significant Development Application (SSDA) specifically seeks detailed approval for the following works:

- Site preparation including demolition of the existing car park, tree removal and installation of inground utility infrastructure services.
- Construction of a three-storey Indigenous Centre of Excellence encompassing:
    - Ground level facilities, including but not limited to; a dedicated arrival area, outdoor amphitheatre, multipurpose court and theatre, and gallery. Associated workspaces, teaching spaces, meeting areas, lounge areas and other amenities are to be provided throughout the ground floor.
    - First floor level comprising meeting space and dedicated educational facilities including learning areas and teaching spaces.
    - Second floor level comprising offices, and collaboration spaces.
    - Roof level plant and services.
- Construction of internal driveway and car parking spaces areas, including:
    - 13 with hardstand area spaces adjacent to the new dedicated arrival zone for the proposed ICoE development
    - 106 temporary replacement P1 spaces proposed in new western car park to the west of Bridge Street, adjacent to the existing oval
    - 181 temporary replacement P1 spaces proposed in new eastern car park on the southern side of Fifth Street
    - Associated land remediation, civil and electrical works.
- Landscaping works to provide outdoor educational and recreational spaces.

This report responds to the SSD-64916225 Secretary's Environmental Assessment Requirement (SEARs) which was issued by the Department of Planning, Housing and Infrastructure on 21 November 2023.

The extent of the development is referred to as the 'Subject Land'. The Subject Land is approximately 2.02 ha in total (**Figure 1**) (**Figure 2**).

The portion of the Subject Land designated for the construction of the Indigenous Centre of Excellence (ICOE) is currently known as 'P1 Car Park' and is located in the northern section of the broader site campus This portion of the Subject Land is broadly rectangular in shape and is approximately 1.2 ha. It is hereafter referred to as the proposed ICOE. The proposed ICOE plans to retain seven (7) trees and remove fifty-two (52) trees within this portion of Subject Land (Tree Survey 2024) (**Figure 3).** The majority of these trees have been historically planted for functional and aesthetic purposes (**Figure 5; Figure 6 ; Plate 1; Plate 3**).

The Subject Land also includes areas designated for the construction of two (2) temporary carparks (hereafter referred to as proposed carpark sites). These two proposed carparks aim to replace the loss of 'P1 Carpark' and provide a total of 287 car spaces for use by Western Sydney University staff and students. In total the proposed carpark sites are approximately 0.82 ha (**Figure 3**). The proposed carpark portions of the development propose to retain fifty-five (55) trees and remove three (3) trees (Tree Survey 2025). The majority of these trees have been historically planted for functional and aesthetic purposes (**Figure 5; Figure 6; Plate 1; Plate 3**).

Approximately 1.51 ha of vegetation (planted ornamental trees and exotic dominant groundcover vegetation) are proposed for removal for the development. The curtilage of the proposed ICOE building will include landscaping to integrate the new facility into the surrounding open space of the campus.

The proposed development is a State Significant Development (SSD-64916225) pursuant to Part 4, Division 4.7, Section 4.36(2) of the *Environmental Planning and Assessment Act 1979* (EP&A). The proponent has commissioned this BDAR to accompany the proposal in accordance with the State Environmental Requirements (SEARs) for the proposed development and address the requirements of the NSW Biodiversity Offset Scheme (BOS). The proposed development requires the submission of a BDAR as stipulated under the *NSW Biodiversity Conservation Act 2016* and in accordance with the Biodiversity Assessment Method (BAM). The BDAR is required to be undertaken by an accredited assessor to assess the impacts of the proposal.

Land Eco have produced this report to assess any potential impacts associated with the proposed development and recommend appropriate measures to mitigate any potential ecological impacts in line with the requirements of the Consent Authority, the NSW Planning Secretary.

1.1.2 Location and Proposed development of Subject Land

The Western Sydney University South Parramatta Campus is located within the City of Parramatta Local Government Area (LGA).

The site comprises two (2) allotments, which is legally described as Lot 100 in DP 816829 and part Lot 101 in DP 816829. The project site comprises the P1 Car Park in the northern portion of the wider site campus and consists of the grassed area to the south and southwest of the P1 Car Park. The project site is approximately 20,035m2 in area and is irregular in shape. It currently comprises of a hardstand area that accommodates approximately 284 car parking spaces and a grassed open space adjoining the Oval to the south. There is an existing single storey Central Energy Plant to the west of the development area which serves the wider campus; it remains outside of the scope of this SSDA.

The site is strategically positioned to the northern boundary of the Western Sydney University (University) South Parramatta Campus, fronting Victoria Road (the A40). The wider campus comprises a significant landholding size of approximately 20ha containing a series of buildings of differing heights and massing forms which are used for educational purposes. The buildings contained within the wider campus site are dissected by a series of open, at grade car parks, internal roads, pathways, and landscaped areas. The Campus sits to the north of the Parramatta River.

The site is located approximately 3km east of the Parramatta CBD, which is an area undergoing a process of significant transformation. It is also located approximately 500m to the Parramatta Light Rail Corridor, with the construction of new Yallamundi Light Rail now completed and awaiting operation by TfNSW.

The site location is identified in **Figure 1**.

1.1.3 Project History

The SSDA was lodged with the NSW Department of Planning, Housing, and Infrastructure (DPHI) in August 2024. The SSDA sought development consent for the construction of a new four (4) storey tertiary educational facility comprising 5,543.3m^2 of Gross Floor Area (GFA) to accommodate the new Indigenous Centre of Excellence. The SSDA was publicly exhibited by the DPHI from 20 August 2024 until 26 September 2024, with the subsequent request for response to submissions issued on 1 October 2024. Additional matters were raised by DPHI on 16 July 2025 and by Heritage NSW on 28 July 2025.

An Amendment Report and supporting documentation in response to the matters raised by DPHI, Heritage NSW and other agencies, was submitted on 27 August 2025 in accordance with the *Environmental Planning and Assessment Regulation 2021* for WSU Indigenous Centre of Excellence (SSD-64916225).

On 13 October 2025, DPHI provided written correspondence outlining that all agency responses had been received apart from Crown Lands and the Conservation Programs, Heritage and Regulation branch of the NSW Department of Climate Change, Energy, Environment and Water. Notwithstanding, it was requested that a formal submissions report be prepared in response.

Following, the formal written correspondence from DPHI, ongoing liaison has occurred with DPHI and the relevant agencies to respond to the site constraints and matters relayed within the submissions received. The current proposal has been amended accordingly and results in a three (3) storey building, accommodating a site area of approximately 20,035m^2. The particulars of the project have been expanded upon throughout this BDAR.

1.1.3.1 Proposed Indigenous Centre of Excellence (ICOE)

The ICOE is designated for construction on the existing carpark 'P1' of WSU Campus. The existing site is predominately a bitumen carpark surrounded by managed lawns, planted ornamental trees and footpaths. The Central Energy Plant, to the west of the existing carpark, is excluded from the Subject Land as no works are proposed in this area. It covers approximately 0.07 ha (774m) and is labelled 'Structure to be Retained' in **Figure 1.** The area proposed for the construction of the ICOE, which excludes this Central Energy Plant, is approximately 1.2 ha and is bordered by four roads/streets: Victoria Road (North), Railway Street (East), Fifth Street (South) and Bridge Street (West).

The 3-storey tall ICOE building/centre will accommodate a library, an Elders lounge, Indigenous research and student facilities, internal and external gathering spaces, theatre, internal basketball court, theatre, exhibition galleries, teaching facilities and an Indigenous discovery space among other infrastructure. The development also proposes to widen the current access route within the Subject Land (from the bridge over Victoria Rd) and extend it to provide access to a proposed loading bay within the proposed building/centre. A portion of the retaining wall along this access road will be retained and a section of this wall will be removed. 13 parking spaces adjacent to the arrival zone of the proposed ICOE development are also proposed to be constructed at the south-western portion of the Subject Land. The development will be landscaped with entirely indigenous plants and includes an artificial wetland habitat at the south-eastern portion of the Subject Land (Jila 2024).

The proposed ICOE will retain seven (7) trees (JCB Architects 2025) (**Figure 3)** including *Eucalyptus microcorys* and *Waterhousea floribunda* all of which occur adjacent Victoria Road with the exception of one (1) *Melaleuca decora* which occurs within the carpark itself. The *Melaleuca decora* is a mature specimen considered of 'high importance for retention' by Tree Survey (2024). It is an old tree that was present even in historical imagery from 1943 (**Figure 6**). In this portion of the Subject Land, fifty-two (52) trees (*Prunus sp., Ficus hillii* and *Auranticarpa rhombifolia)* are proposed to be removed. These trees occur on the eastern, southern and western portions of the existing carpark (**Figure 12**).

1.1.3.2 Proposed Carparks

Two (2) temporary ground storey carparks related to the construction of the ICOE are also proposed within the WSU Campus. The existing site consists of managed lawns and several planted ornamental trees and footpaths (**Figure 1**). These proposed carparks involve the following:

- 106 temporary car spaces are proposed to the west of Bridge Street, adjacent to the existing oval
- 181 temporary car spaces are proposed on the southern side of Fifth Street
- Associated land remediation, civil and electrical works.

These carparks aim to compensate for the loss of 'P1 Carpark' and will provide 287 car spaces for use by Western Sydney University staff and students. In total the proposed carparks site (including the carpark to the east and west) is approximately 0.82 ha and proposes the retention of 55 trees and the removal of three (3) trees (**Figure 3**) (Tree Survey 2025).

1.1.3.3 Summary

In summary, 1.51 vegetation will be removed from the Subject Land as a result of the proposed development. This includes:

- 0.22 ha of planted native canopy trees
- 1.28 ha of exotic dominant understorey vegetation and
- 0.01 ha of exotic canopy trees

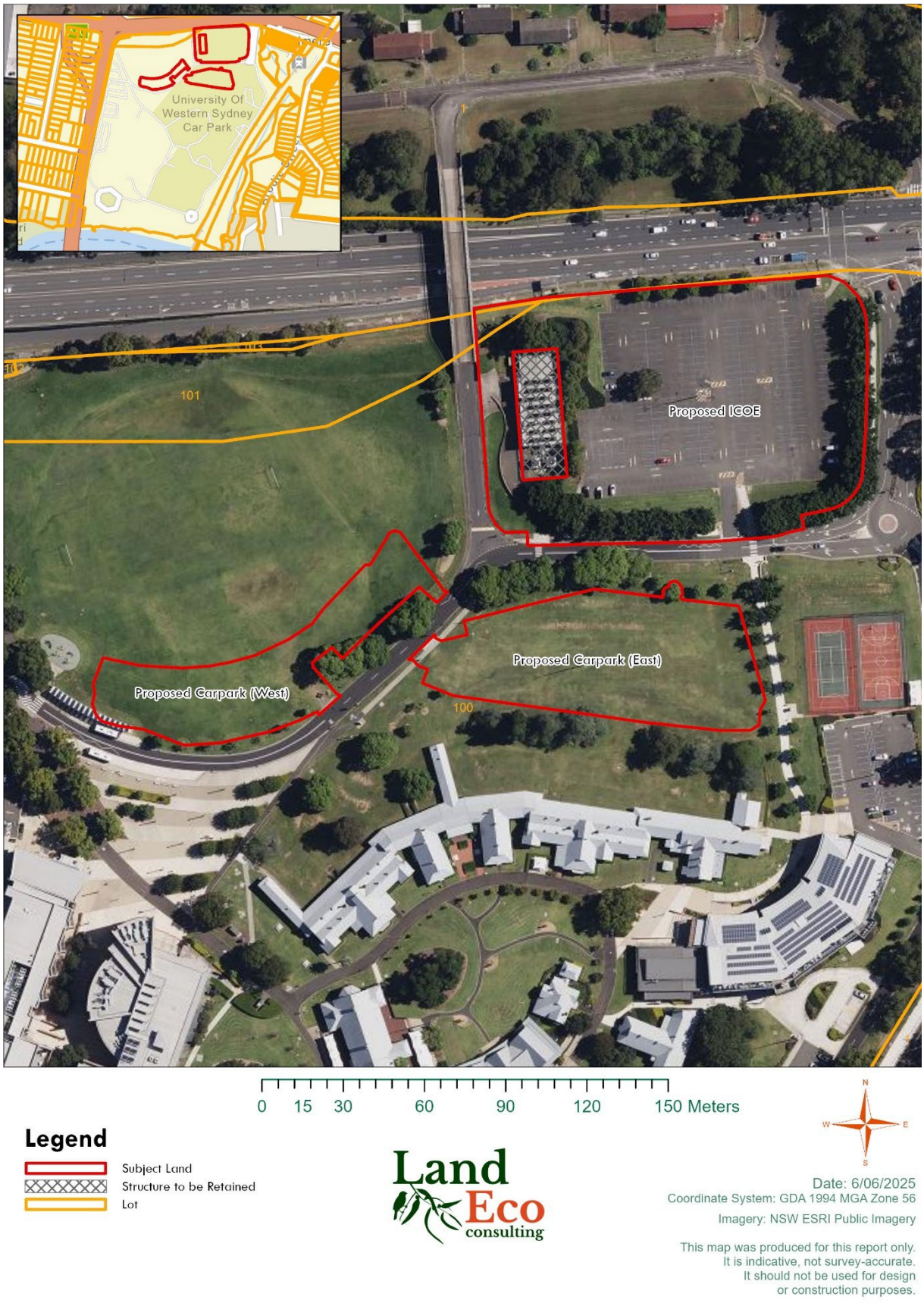

Figure 1. Aerial Imagery of the Subject Land

1.1.4 Other documentation

Other documentation relevant to biodiversity to be submitted with the proposed development include:

For the proposed ICOE:

- Indigenous Centre of Excellence SSDA Drawings (JCB Architects 2025)
- Arboricultural Impact Assessment & Tree Protection Plan - Indigenous Centre of Excellence Western Sydney University (Tree Survey 2024)
- Landscape Plans (Jila 2024)

For the proposed temporary Carparks

- Arboricultural Impact Assessment & Tree Protection Plan - Western Sydney University Parramatta South Campus Relocation of Car Park P1 (Tree Survey 2025)
- Design Plans - WSU Carpark Relocation Project (TTW 2025)

1.2 Biodiversity Offset Scheme Entry

The proposed development is a State Significant Development (SSD-64916225) pursuant to Part 4, Division 4.7, Section 4.36(2) of the Environmental Planning and Assessment Act 1979 (EP&A). The proponent has commissioned this BDAR to accompany the proposal and address the requirements of the NSW Biodiversity Offset Scheme (BOS). The proposed development requires the submission of a BDAR as stipulated under the NSW Biodiversity Conservation Act 2016 and in accordance with the Biodiversity Assessment Method (BAM). The BDAR is required to be undertaken by an accredited assessor to assess the impacts of the proposal.

1.2.1 State Significant Development

In accordance with section 7.9(a) of the BC Act, an application for development consent under Part 4 Division 4.7 of the EP&A Act for a State Significant Development (SSD) is to be accompanied by a BDAR unless the Planning Agency Head and the Environment Agency Head determines that the proposed development is not likely to have any significant impact on biodiversity values.

The environmental impact statement (EIS) that accompanies any such application is to include the biodiversity assessment required by the environmental assessment requirements of the Planning Agency Head under the EP&A Act. This BDAR will form an appendix to the EIS prepared by Ethos Urban.

This BDAR has been prepared in response to the Planning Secretary's Environmental Assessment Requirements (SEARs) (**Table 3**).

Table 3. Planning Secretary's Environmental Assessment Requirements relevant to this report

Item	SEARs Requirement	How has this been Addressed
11	• 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.	This report has assessed the biodiversity impacts associated with the development in accordance with the *Biodiversity Conservation Act 2016* and the Biodiversity Assessment Method 2020. No biodiversity certified land is present within the Subject Property.

1.2.2 Area Clearing Threshold

The BC Act and its regulations stipulate the native vegetation clearing 'area threshold' values that determine whether a development is required to be assessed in accordance with the 'Biodiversity Offset Scheme' (BOS). Minimum entry thresholds for native vegetation clearing depend on the minimum lot size (shown in the Lot Size Maps made under the relevant Local Environmental Plan [LEP]), or actual lot size (where there is no minimum lot size provided for the relevant land under the LEP). The term 'vegetation clearing' includes all lopping, felling, slashing, or mowing of native trees, shrubs, or groundcover for the purpose of construction, landscaping, excavation or bushfire Asset Protection Zone (APZ) works.

Developments that trigger the BOS will require a 'Biodiversity Development Assessment Report' (BDAR) (this report) that addresses the Biodiversity Assessment Method and the retiring of Biodiversity Offset Credits.

There is no minimum lot size assigned by The City of Parramatta Council to the Subject Property (NSW DCCEEW 2025a). The actual lot size of the Subject Property is approximately 21.20 ha. This means the 'native vegetation clearing threshold' trigger for this BOS is 0.5 ha or more (**Table 3**). Approximately 0.22 ha of native vegetation is being removed (i.e. planted native vegetation) for the proposed development, the threshold is not exceeded and is therefore, not a trigger for the BOS.

Table 4. Biodiversity Offset Scheme Entry Thresholds

Minimum lot size associated with the property	Threshold for clearing, above which the BAM and offsets scheme apply
Less than 1 ha	0.25 ha or more
1 ha to less than 40 ha	**0.5 ha or more**
40 ha to less than 1000 ha	1 ha or more
1000 ha or more	2 ha or more

1.2.3 Biodiversity Value Mapping

At the time of preparing this report, the Subject Land contained no land mapped as a 'Biodiversity Value'. The closest purple mapped land occurs approximately 120 m north-east of the Subject Land along Vinyard Creek (**Figure 4**) (NSW DCCEEW 2025b). No native vegetation will be removed from purple mapped land therefore, this not a trigger for the BOS.

1.3 Excluded Impacts

1.3.1 Native Vegetation Regulatory Map

The entirety of the Subject Property is mapped as 'Land excluded from the LLS Act' by the Native Vegetation Regulatory Map (NSW NVRM 2024). Therefore, *Chapter 2 Vegetation in non-rural areas of the State Environmental Planning Policy (Biodiversity and Conservation) 2021* applies to this development.

1.4 Matters of National Environmental Significance

No matters of National Environmental Significance (MNES) were found to occur within the Subject Land.

Commonwealth listed threatened species that are MNES have potential to occur in the Subject Land on occasion. Impact to habitat is limited to the clearing of approximately 1.51 ha of degraded vegetation in an urban matrix. MNES that have the potential to occur within the Subject Land include nomadic fauna such as Grey-headed Flying-fox (*Pteropus poliocephalus*), and Swift Parrot (*Lathamus discolor*) and Large-eared Pied Bat (*Chalinolobus dwyeri*) that may forage or fly over the Subject Land in search of food on occasion. These species are highly unlikely to regularly utilise or rely heavily on the Subject Land owing to its small area and its position within a hostile urban matrix. As such, no further assessment under the EPBC Act is deemed necessary.

1.5 Information Sources

A detailed list of all sources utilised in the preparation of this BDAR is presented in the 'References' (**Section 14**) of this report.

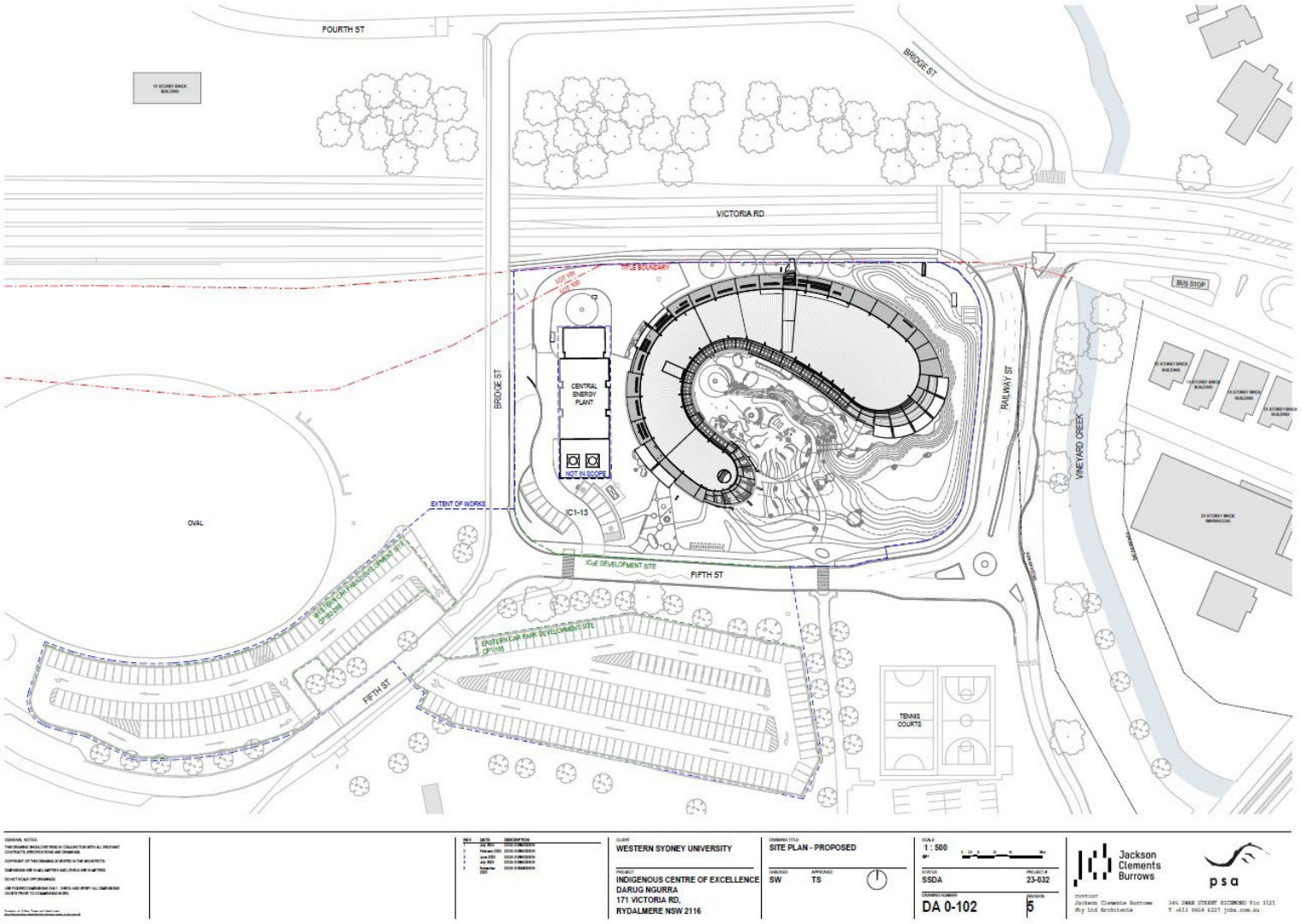

Figure 2. Proposed Site Plan for Proposed ICOE (JCB Architects 2025)

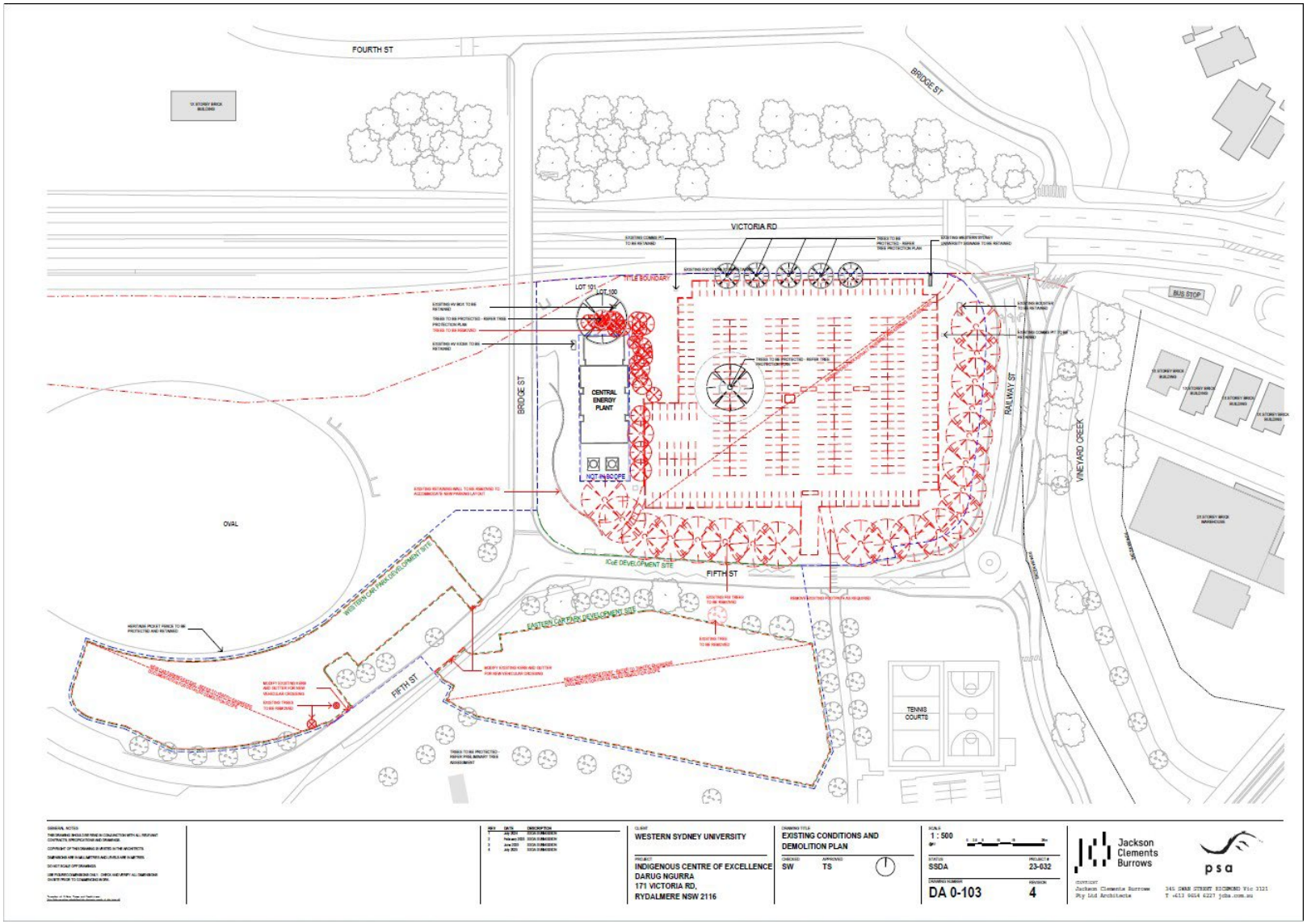

Figure 3. Existing Conditions and Demolition Plan (JCB Architects 2025) - The red circles indicate trees proposed for removal (Tree Survey 2024; 2025)

Figure 4. The Subject Land in relation to mapped Biodiversity Values (NSW DCCEEW 2025b) and a nearby mapped watercourse (Vineyard Creek)

2. Planted Native Vegetation

Proposed Temporary Carpark

All the vegetation existing within the proposed carpark sites has been historically cleared (**Figure 12**). The vegetation within this portion of the Subject Land now consists of exotic dominant managed lawn and three planted trees (one of which is an exotic species (i.e. *Jacaranda mimosifolia*) and two of which are native species (i.e. *Brachychiton acerifolius*) (Tree Surveys 2025). These trees appear to have been planted relatively recently, as historical imagery from 2009 shows no evidence of their presence (Google Earth 2009) (**Figure 5**). These trees were likely planted for functional or aesthetic purposes. A limited number of native groundcover species were recorded by ecologists e.g. *Digitaria didactyla, Cynodon dactylon and Portulaca oleracea* within BAM Plots conducted in this portion of the Subject Land, however, as detailed in **Section 3** this grassland vegetation did not meet the criteria to be considered a native entity.

Proposed Indigenous Centre of Excellence (ICOE)

The proposed ICOE site has been historically cleared except for one tree, a mature *Melaleuca decora*. The vegetation within the proposed ICOE site has since become dominated by an exotic understorey layer and an assemblage of planted non-indigenous native trees (*Auranticarpa rhombifolia, Ficus hillii, Waterhousea floribunda* and *Eucalyptus microcorys*) and non-native shrubs and trees (e.g. *Prunus sp.*). The historical imagery depicted in **Figure 6** historical imagery (NSW Historical imagery 2024) from 1970 shows that the proposed ICOE site has been entirely cleared with only two trees remaining within this portion of the Subject Land. By 2009/2010 the carpark construction had been completed and only one tree was retained. A row of *Waterhousea floribunda* had been planted along the northern street frontage and the vegetation surrounding the Central Energy plant had also since been planted. These were likely planted for functional and aesthetic purposes. The locally indigenous native, *Melaleuca decora* situated near the centre of the existing carpark is the only remnant and non-planted tree within the Subject Land (**Figure 12**). This tree will be retained and not cleared.

No plant community type (PCT) can be attributed to the Subject Land, due to the limited diagnostic characteristics available from the vegetation within the Subject Lands. The vegetation entirely consists of a mixed assemblage of planted native and exotic trees over an exotic-dominant understorey (lawn and ornamental shrubs). The Subject Land is routinely managed as a garden and lawn, leaving low potential for regeneration of native vegetation.

The Subject Land contains planted native vegetation that:

- Does not occur within an area that contains a mosaic of planted and remnant native vegetation and which can be reasonably assigned to a PCT known to occur in the same IBRA subregion as the proposal, and
- was not planted for the purpose of environmental rehabilitation or restoration under an existing conservation obligation listed in BAM Section 11.9(2.), and the primary objective was not to replace or regenerate a plant community type or a threatened plant species population or its habitat, and
- was not planted for the purpose of providing threatened species habitat under one of the following:
    a. a species recovery project
    b. Saving our Species project
    c. other types of government funded restoration project
    d. condition of consent for a development approval that required those species to be planted or translocated for the purpose of providing threatened species habitat
    e. legal obligation as part of a condition or ruling of court. This includes regulatory directed or ordered remedial plantings (e.g. Remediation Order for clearing without consent issued under the BC Act or the Native Vegetation Act)
    f. ecological rehabilitation to re-establish a PCT or TEC that was, or is carried out under a mine operations plan,
    g. approved vegetation management plan (e.g. as required as part of a Controlled Activity Approval for works on waterfront land under the NSW Water Management Act 2000).
- was not planted for revegetation, environmental rehabilitation or restoration, and
- was planted for functional and aesthetic purposes.

The one *Melaleuca decora* situated near the centre of the existing carpark is the only remnant and non-planted tree within the Subject Land. This tree is proposed for retention and is not considered likely to be impacted by the proposed development with the implementation of protection mechanisms in Tree Surveys (2024) Tree Protection Plan.

As the native vegetation was planted for functional and aesthetic purposes surrounding the existing facilities within the Subject Land, it meets subsection D.1 (5.i.) of the decision tree in Appendix D of the BAM. This was determined based on the mixed assemblage of native and exotic tree species planted in rows along road/street frontages i.e. along Fifth Street (**Plate 1**) and surrounding the existing carpark (**Plate 3**).

3. Non- Native Vegetation

The vegetation within the Subject Land, excluding the planted native canopy trees discussed in **Section 2**, consists primarily of managed manicured lawns as shown in **Plate 1** or as dense screening tree, shrub and understorey vegetation around the Central Energy Plant shown partly in **Plate 2**.

A BAM plot was conducted within this dense screening vegetation surrounding the Central Energy Plant. As demonstrated in **Appendix 2**, the understorey vegetation within the BAM Plot was determined to be exotic dominant. The trees within this zone mainly comprised of *Prunus sp.,* an environmental weed in NSW. *Auranticarpa rhombifolia* and *Eucalyptus microcorys* were also recorded in this zone. These are non-indigenous native species. As such, the grassland and dense screening understorey vegetation surrounding the Central Energy Plant is categorised as 'Exotic Dominant Vegetation' and is shown in **Figure 12**. Land Eco ecologists also opportunistically assessed the grassland vegetation surrounding the existing carpark. This lawn consisted primarily of *Stenotaphrum secundatum*, a widely cultivated exotic species that is often used as a lawn grass. Ecologists found the grassland vegetation consisted of <15% native species. The grassland was therefore categorised as exotic dominant vegetation.

Land Eco ecologists also conducted two BAM VIS Plots within the grassland habitat within the proposed carpark sites. Ecologists found that the grassland vegetation consisted of <15% native species (Plot 1: 0.3%; Plot 2: 3%; Plot 3:11%) (**Appendix 2**) (NSW DCCEEW 2024b). The grassland within the Subject Land has been under management as a manicured lawn and likely has been managed as such for many years. The grassland was therefore categorised as exotic dominant vegetation.

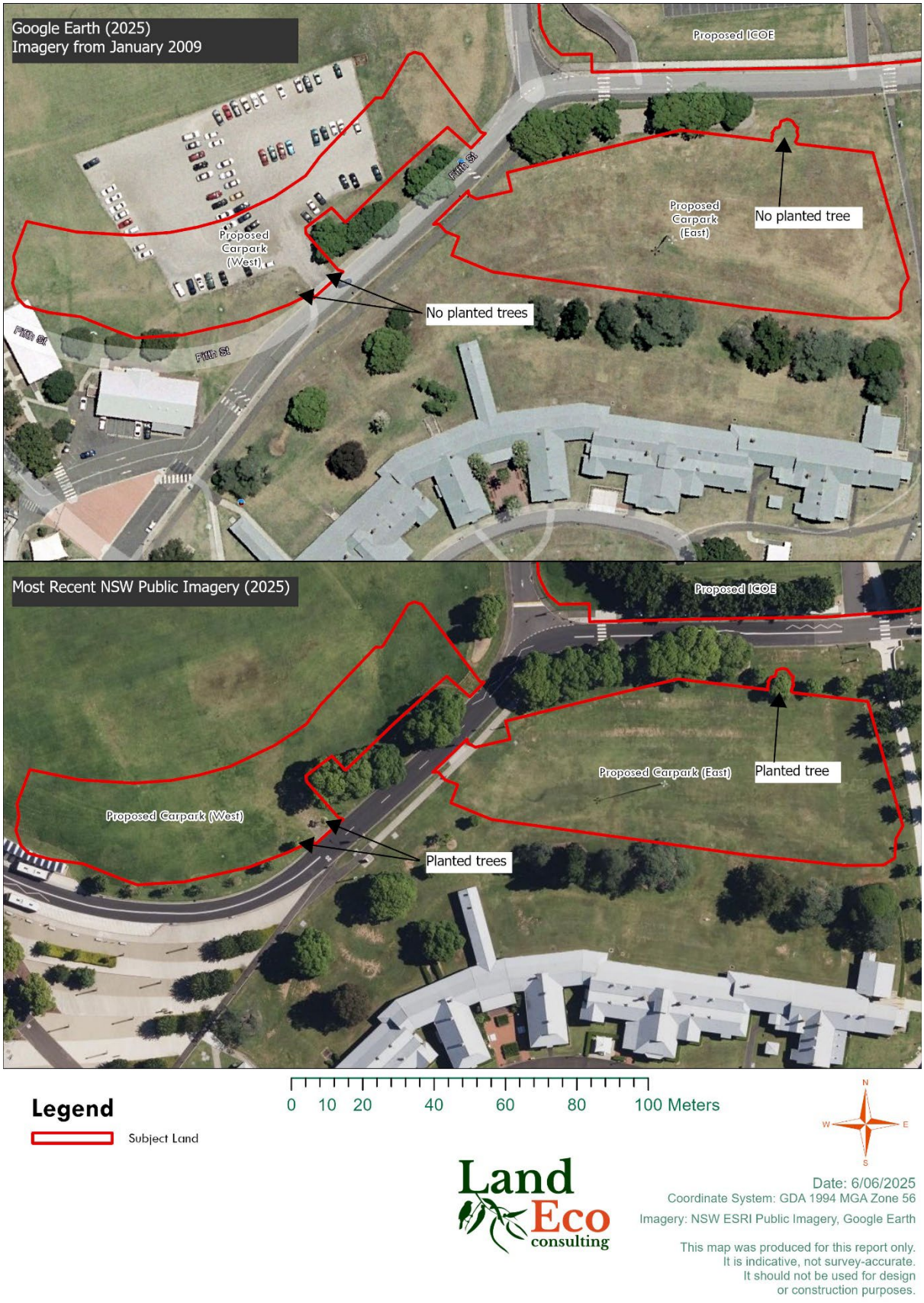

Figure 5. Historical Imagery of Proposed Carpark Sites Demonstrating the Planted Trees Proposed for Removal (Google Earth 2009)

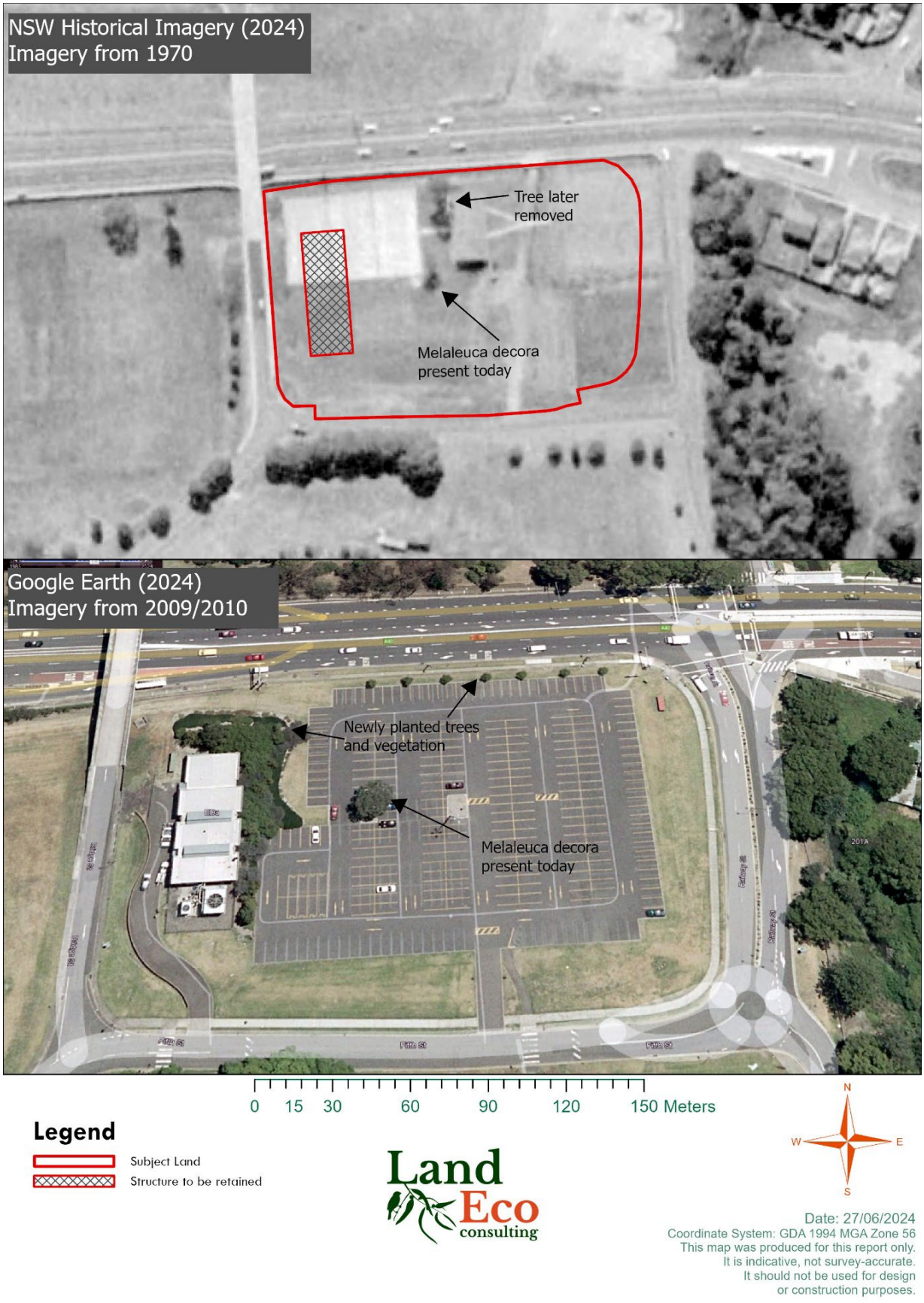

Figure 6. Historical imagery of the proposed ICOE site (Top) Image from 1970 showing that only two trees are present after a clearing event. (Bottom) Image from 2009/2010 shows newly planted vegetation and the one tree which has been retained (a Melaleuca decora)

4. Method

4.1 Site Context Methods

4.1.1 Landscape Features

The proposed ICOE site consists predominantly of bitumen carpark with managed lawns, trees and footpaths along the peripheries.

The proposed carpark sites consist of managed lawns and several planted ornamental trees and footpaths.

Vineyard Creek, a tributary of the Parramatta River, flows parallel to the eastern boundary of the Subject Land.

This section details the landscape features and associated habitat values in and around the Subject Land. A table is provided which details the Landscape Features as required by the BAM (**Table 5**).

4.2 Native vegetation, threatened ecological communities and vegetation integrity methods

4.2.1 Existing Information

A review of the following mapping resource was undertaken relevant to the Subject Land:

- The Native Vegetation of the Sydney Metropolitan Area (OEH 2016b)
- NSW State Vegetation Type Map (SVTM) (NSW DCCEEW 2024a)

These resources mapped no vegetation communities within the Subject Land.

The Native Vegetation of the Sydney Metropolitan Area mapped the following vegetation communities surrounding the Subject Land (OEH 2016b) (**Figure 11**).

- Coastal Flats Swamp Mahony Forest
- Estuarine Mangrove Forest
- Sydney Turpentine-Ironbark Forest
- Urban Exotic/ Native
- Weeds and Exotic

SVTM also mapped the following vegetation communities adjacent (east) to the Subject Land (NSW DCCEEW 2024b).

- PCT 4006: Northern Paperbark-Swamp Mahogany Saw-sedge Forest
- PCT 3176: Sydney Enriched Sandstone Moist Forest

4.2.2 Mapping Native Vegetation Extent

Land Eco mapped the native vegetation extent within the Subject Land by:

- Viewing recent aerial imagery (NSW Public Imagery and Google Earth 2025) for differences in texture that would suggest different vegetation zones; followed by;

- conducting a ground-based meandering transect, identifying native vegetation and marking the extent using a Garmin 65S hand-held GPS.

4.2.3 Plot-based Vegetation Survey

Three representative BAM VIS plot was allocated to the vegetation within the Subject Land using GIS to capture a representative sample of the vegetation proposed for removal.

On the 6th of June 2024 and on the 3rd of June 2025, two Ecologists visited the Subject Land and sampled three BAM VIS plots in accordance with the method outlined in **Section 4.2.4**. The full species name, percentage cover, and estimate of abundance all native and exotic vascular plant species was recorded.

4.2.4 Vegetation Integrity Survey

Two irregular and one regular BAM VIS plots were allocated to the vegetation within the Subject Land using GIS to capture a representative sample of the vegetation proposed for removal. The BAM VIS plots were located to provide a representative assessment of vegetation integrity. These survey plots were established around the longest patch of continuous vegetation that was representative of the vegetation within the Subject Land. The location of the BAM VIS Plots is illustrated in **Figure 12.** One BAM plot was conducted in the vegetation surrounding the Central Energy Plant within the proposed ICOE site. The remaining two BAM Plots were conducted within both the grassland and tree habitat of the proposed carpark sites (one in the east and one to west). The survey plots were established as follows:

- one 400 m^2 plot to assess all the composition and structure attributes
- one 1000 m^2 plot, to assess the function attributes (number of large trees, stem size classes, tree regeneration and length of logs)
- five 1 m^2 subplots, to assess average litter cover (and other optional ground cover components) for the plot.

The presence of hollow-bearing trees, vegetation composition, vegetation structure, and vegetation function were all assessed according to the protocol outlined in Section 4.3.4 of the BAM (NSW DPIE 2020a).

4.3 Threatened Flora Survey Methods

4.3.1 Review of Existing Information

Land Eco reviewed any existing information on native vegetation relevant to the Subject Land and land within the 1500 m buffer area. This includes:

- individual species records that are held in the NSW Wildlife Atlas BioNet (NSW DCCEEW 2025c);
- existing maps of native vegetation in the area such as those held by the Department, or a local government authority;
- information from publicly accessible ecological reports, soil surveys or previous native vegetation surveys that is relevant to the Subject Land (where available).

4.3.2 Habitat Constraints Assessment

Land Eco compiled a detailed summary of potential microhabitats for threatened flora species as well as habitat constraints present on the Subject Land. Where relevant, habitat features were mapped and photographed.

4.4 Threatened Fauna Survey Methods

4.4.1 Review of Existing Information

Land Eco reviewed any existing information on threatened fauna relevant to the Subject Land and land within the 1500 m buffer area. This includes:

- survey data or individual species records that are held in NSW Wildlife Atlas BioNet (NSW DCCEEW 2025c);
- information in ecological reports, soil surveys or previous fauna surveys that is relevant to the Subject Land (where available).

4.4.2 Habitat Constraints Assessment

The Land Eco Consulting Ecologists compiled a detailed summary of potential microhabitats for threatened fauna species as well as habitat constraints present on the Subject Land, including both Species Credit and Ecosystem Credit threatened fauna species.

4.5 Weather Conditions

The weather for the BAM VIS plot survey on the 6th of May 2024 was overcast and cool with a light breeze and scattered showers, and the weather during the surveys on the 3rd of May 2025 was sunny with a light breeze (**Table 4**). The weather conditions in the lead up to and during all surveys were suitable for the surveys undertaken.

Table 5. Environmental conditions during and leading up to the biodiversity survey (BOM 2024; 2025). Monthly averages are shown in bold.

Survey undertaken (e.g. method / targeted species)	Date	Time	Temperature (°C) (min. & max.)	Wind (light, mod…)	Rainfall (mm)
N/A	**May 2024**	**N/A**	**6.8 – 23.5**	**N/A**	**114.0 (total)**
Site Assessment BAM VIS Plot 1 Survey (conducted in proposed ICOE site)	06/06/2024	11.05-14:55	11.0 – 16.2	Light	6.4
N/A	**May 2025**	**N/A**	**8.2 – 25.5**	**N/A**	**197.2 (total)**
Site Assessment BAM VIS Plot 2-3 Survey (conducted in proposed carparks site)	03/06/2025	13:26 – 16:45	9.0 – 18.2	Light	0

5. Site Context

5.1 Assessment Area

The Assessment Area includes a 1500 m buffer zone surrounding the Subject Land.

5.2 Landscape Features

Landscape features identified within the Subject Land and assessment are detailed and presented in **Table 5**. A discussion of relevant landscape features is provided below.

5.2.1 IBRA Bioregions and Subregions

In accordance with BAM Subsection 3.1.3(2) the Subject Land has been mapped to IBRA Bioregion and Subregion. The Subject Land occurs within the 'Sydney Basin' Interim Biogeographic Regionalisation for Australia ver. 7 (IBRA) bioregion, and 'Cumberland' IBRA subregion (DEE 2016; **Figure 7**).

5.2.2 Rivers, Streams, Estuaries and Wetlands

This subsection details wetlands, rivers and streams classified according to stream order (as described in BAM Appendix E and Subsection 3.1.3(3.)).

There are no mapped watercourses within the Subject Land. Vineyard Creek, a second-order tributary of Parramatta Creek, is located approximately 34m east of the closest point of the Subject Land. As such, the proposed development is on waterfront land (though outside of the Vegetated Riparian Zone) and will require approval from the NSW Natural Resources Access Regulator. The Parramatta River occurs approximately 415 m south of the Subject Land (**Figure 8**).

5.2.3 Habitat Connectivity

In accordance with connectivity of different areas of habitat (as described in BAM Subsection 3.1.3(5–6)) the assessor must identify the connectivity of different areas of habitat that may facilitate the movement of threatened species across their range and identify these on the Location Map (**Figure 10**).

Significant biodiversity links are those that connect different areas of habitat, facilitating movement of threatened species across their distribution. The presence of significant biodiversity links on a site contributes to the biodiversity value of that subject land at the landscape scale. Connectivity can be identified at different scales depending on the target species and can include recognised biodiversity corridors in a plan approved by NSW DCCEEW (e.g. priority investment areas), a local corridor identified by a local council, flyways for migratory species or a riparian buffer of a stream, wetland or estuary.

Land Eco has identified routes of habitat connectivity within the Assessment Area and has classified them into two categories:

- Minor Habitat Corridor – a local-scale habitat connection consisting of a narrow or disturbed vegetation corridor (i.e. canopy connectivity); and
- Major Habitat Corridor – a locally significant habitat corridor consisting of remnant vegetation, reserves, densely vegetation riparian corridors or wetlands.

Owing to the location of the Subject Property within a hostile urban matrix, it is considered that the vegetation within and surrounding the Subject Land only serves as a stepping stone for urban-adapted fauna, forming part of minor habitat corridors. These habitat corridors are unlikely to be regularly frequented by sensitive or threatened fauna due their disjointed, disturbed nature. Minor and major habitat corridors occur within the 1500 m buffer area (**Figure 10**). The vegetation along Vineyard Creek (adjacent to the Subject Land) however likely serves as a major habitat corridor for fauna. The proposed development is not likely to have an adverse impact upon this habitat and as such this habitat corridor is unlikely to be affected by the development.

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

In accordance with BAM Subsections 3.1.3(7.) and 3.1.3(12.) the assessor must detail karst, caves, crevices, cliffs, rocks and other geological features of significance and for vegetation clearing proposals, soil hazard features.

No karsts, caves, crevices or cliffs were identified within the Subject Land or in close proximity. This was determined as a result of a comprehensive site-based assessment.

5.2.5 Areas of Outstanding Biodiversity Value

No areas of Outstanding Biodiversity Value occur within the Subject Land or Assessment Area.

5.2.6 Mitchell Landscapes

NSW Landscapes Mapping: Background and Methodology (Mitchell 2002; OEH 2016a) 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 over the 'Ashfield Plains' Mitchell Landscape (**Figure 9**).

5.2.6.1 Landscape Ecosystem: Ashfield Plains

Undulating hills and valleys on horizontal Triassic shale and siltstone, occasional quartz sandstones especially near the margin of the Port Jackson landscape. General elevation 0 to 45m, local relief <20m. Coastal extension of the Cumberland Plain landscape. Red and brown texture-contrast soils on crests grading to yellow harsh texture-contrast soils in valleys. Open forest of broad-leaved ironbark (*Eucalyptus fibrosa* ssp. *fibrosa*), grey box (*Eucalyptus moluccana*), with tea-tree (*Leptospermum* sp.) along creeks and forests of turpentine (*Syncarpis glomulifera*), red mahogany (*Eucalyptus resinifera*), grey gum (*Eucalyptus punctata*), Sydney blue gum (*Eucalyptus saligna*) and blackbutt (*Eucalyptus pilularis*) with a grassy understorey of kangaroo grass (*Themeda triandra*) on moister sites (Mitchell 2002; OEH 2016a).

Table 6. Summary of Landscape features identified within the Subject Land and surrounding 1500 m buffer.

Landscape Feature	Identification of Landscape Feature on Site
Rivers and Streams (classified according to stream order)	There are no mapped watercourses within the Subject Land. Vineyard Creek, a second-order tributary of Parramatta Creek, is located approximately 34m east of the closest point of the Subject Land. The Parramatta River occurs approximately 415 m south of the Subject Land (**Figure 8**).
Wetlands (within, adjacent to and downstream of site)	No watercourses or aquatic habitat features occur within the Subject Land. The Subject Land is mapped within the 'Coastal Use Areas Map' as per the State Environmental Planning Policy (Coastal Management) 2018. The Subject Land is not located within any mapped Littoral Rainforest, Coastal Wetlands as per the State Environmental Planning Policy (Coastal Management) 2018. Coastal Wetlands are mapped occurring approximately 100m from the Subject Land, however, no impacts to this habitat are expected to occur as a consequence of the proposed development.
Connectivity features	Owing to the location of the Subject Property within a hostile urban matrix, it is considered that the vegetation within the Subject Land only serves as a stepping stone for urban-adapted fauna and as such, forms part of minor habitat corridor (**Figure 10**). This minor habitat corridor is unlikely to be frequented by sensitive or threatened fauna. Minor and major habitat corridors occur within the 1500 m buffer area (**Figure 10**). The vegetation along Vineyard Creek adjacent to the Subject Land, is likely to serve as part of a major habitat corridor for fauna. The proposed development is not likely to impact upon this habitat and as such this major habitat corridor is unlikely to affected by the development.
Areas of geological significance and soil hazard features	There are no areas of geological significance within the Subject Land.

5.2.7 Additional Landscape Features Identified

No additional landscape features are identified in the Subject Land for the proposed development.

5.2.8 Soil Hazard Features

The proposed development does not require approval from the Native Vegetation Panel under Part 5A of the LLS Act or Chapter 2 of the Biodiversity and Conservation SEPP as is mapped as 'Category 1 – Exempt Land', therefore the soil hazard features are not relevant to this development.

5.3 Native Vegetation Cover

This proposed only used the streamlined assessment module for planted native vegetation (Appendix D), and as such, does not require an assessment of the percent of native vegetation cover (**Table 6**).

Table 7. Native vegetation cover in the Assessment Area

Assessment area (ha)	N/A
Total area of native vegetation cover (ha)	N/A
Percentage of native vegetation cover	N/A
Class (0-10, >10-30, >30-70 or >70%)	N/A

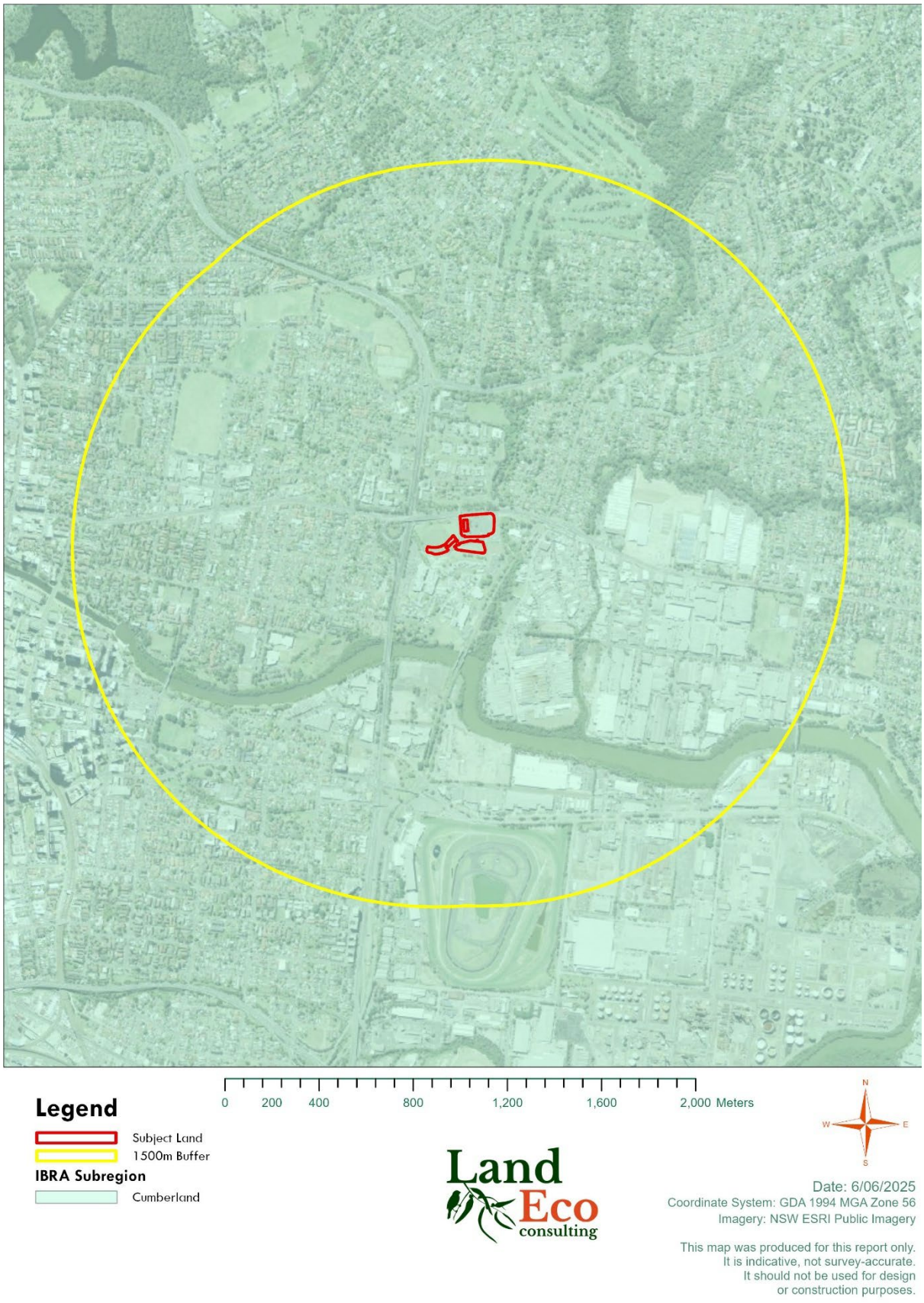

Figure 7. The Subject Land lies entirely within the Cumberland IBRA 7 Subregion of the Sydney Basin IBRA7 Bioregion

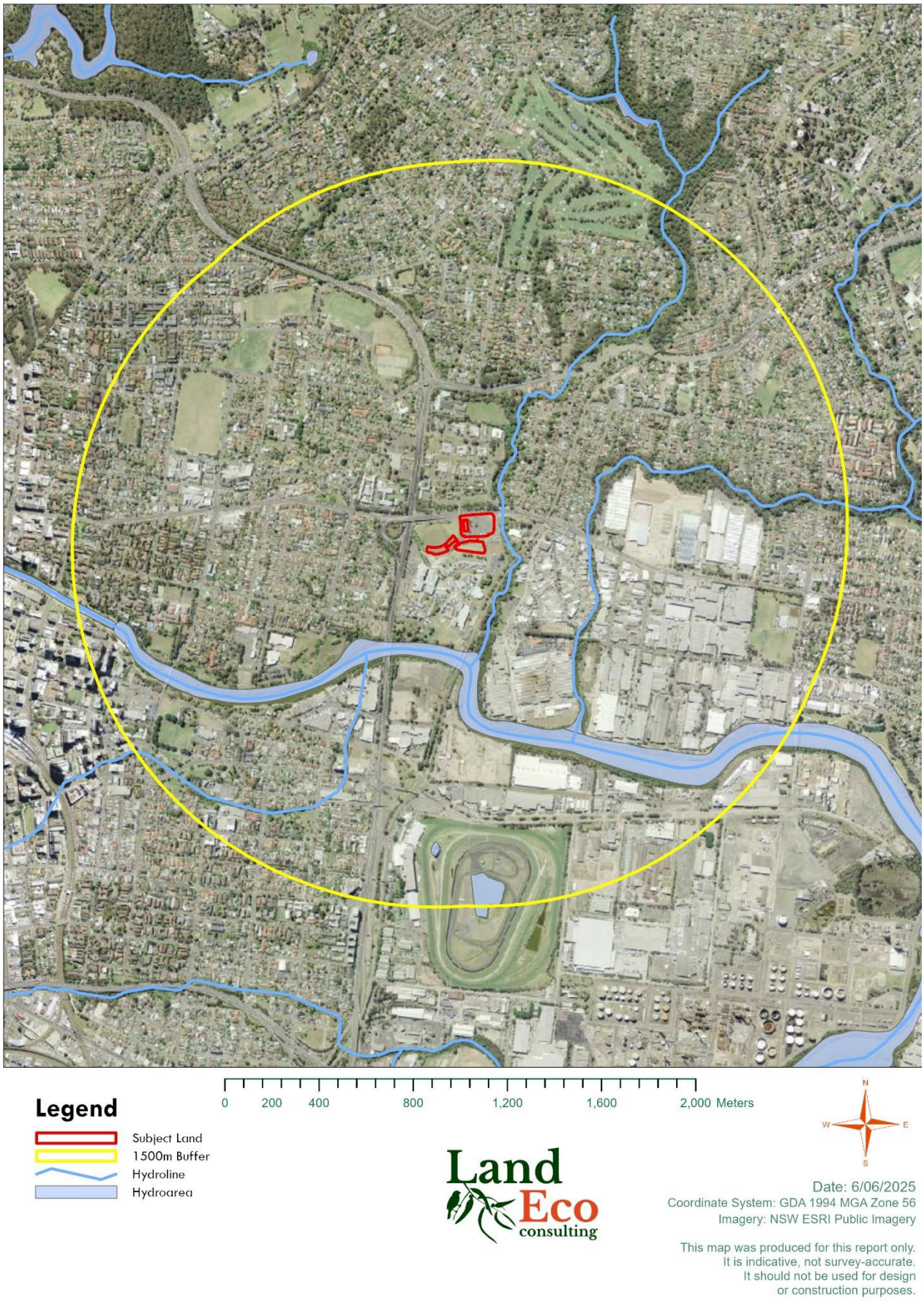

Figure 8. Watercourses (streams and waterbodies) within the vicinity of the Subject Land

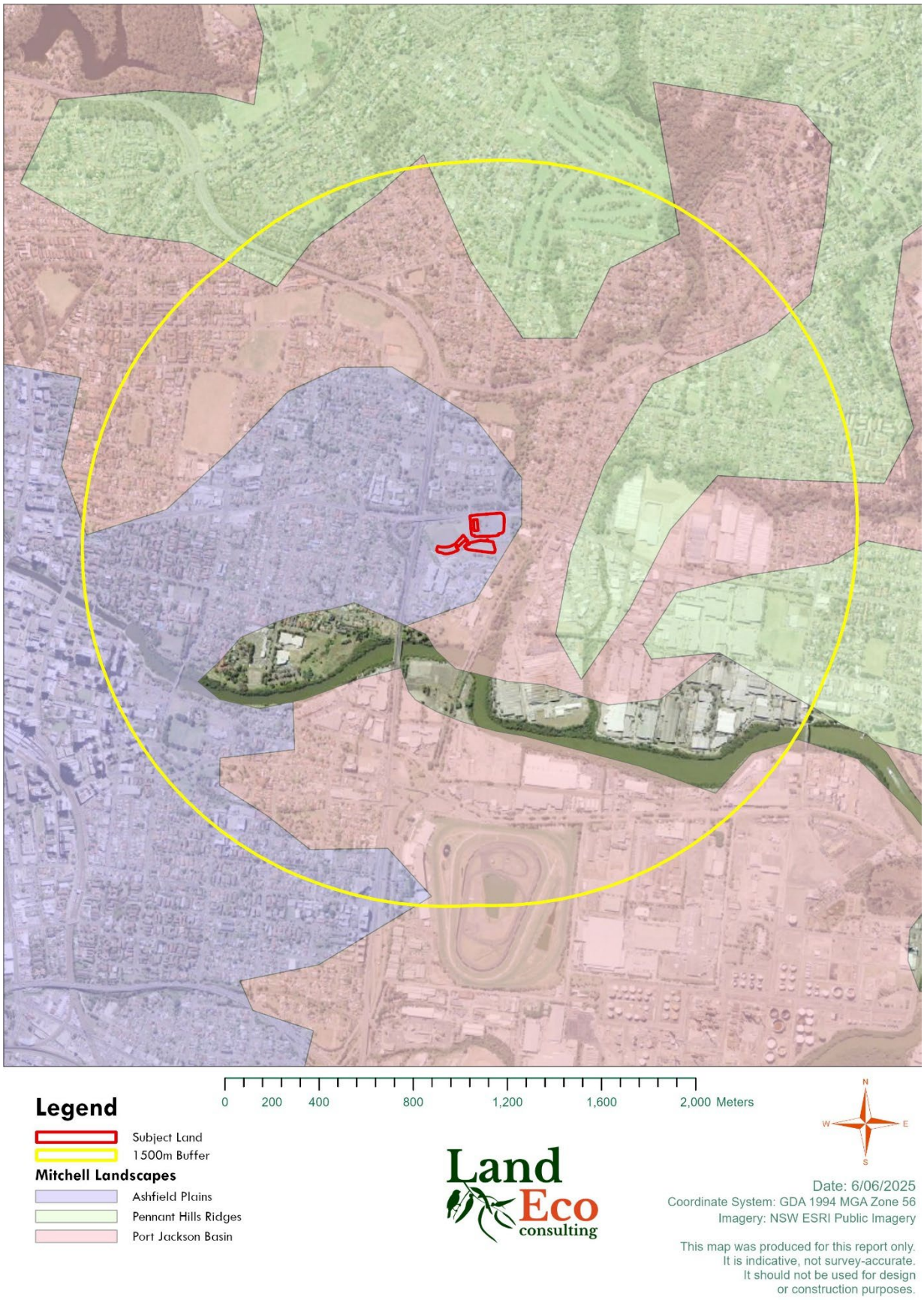

Figure 9. The Mitchell Landscapes that comprise the Subject Land and the surrounding assessment area

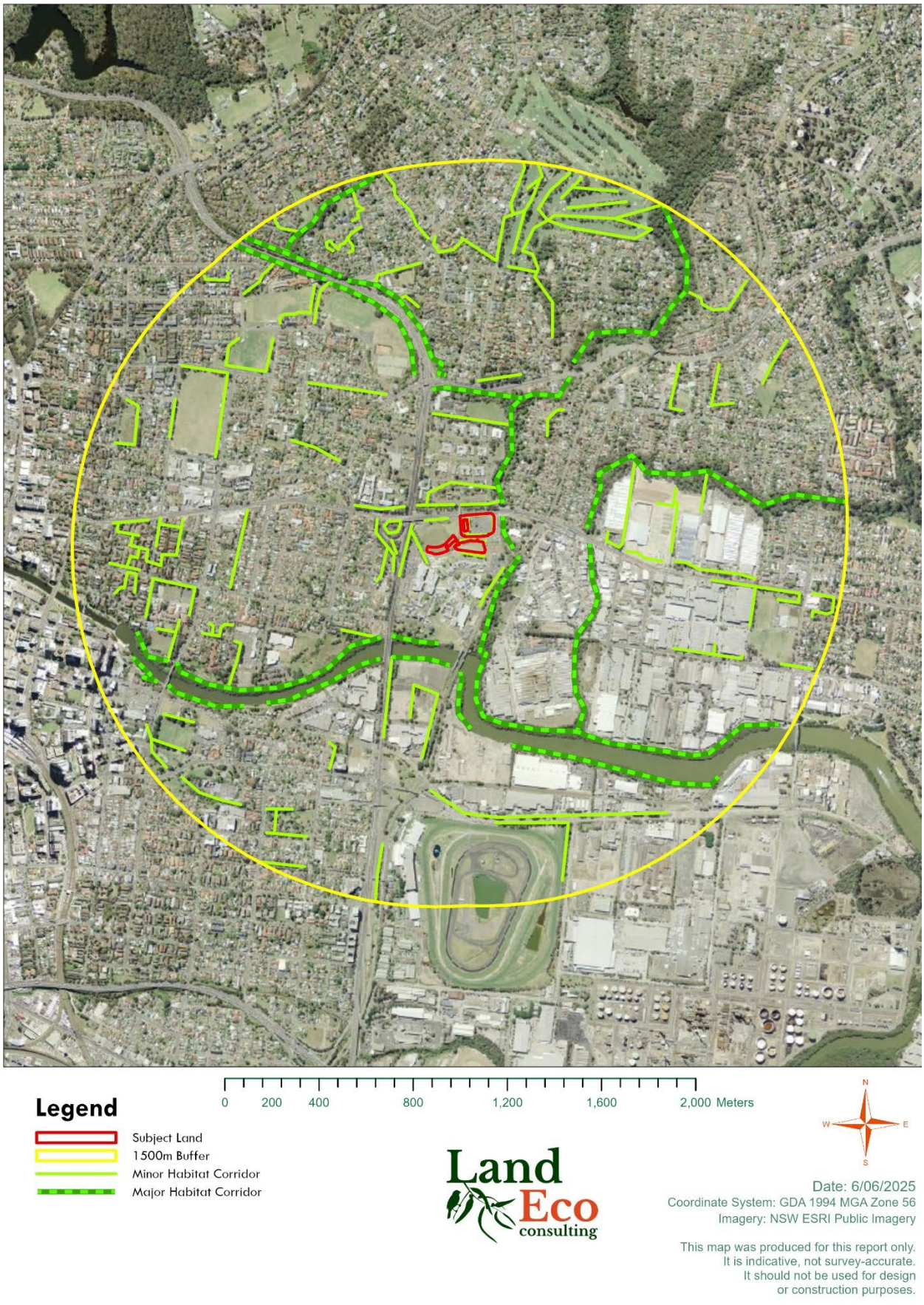

Figure 10. Habitat Connectivity within and surrounding the Subject Land

Figure 11. Historically Mapped Vegetation in the vicinity of the Subject Land (OEH 2016b)

Figure 12. Field validated vegetation mapping within the Subject Land and BAM Plot

Plate 1. Exotic Dominant Managed Lawn – View from Fifth Street of Proposed (western) Carpark (Google Earth 2025).

Plate 2. High vehicle usage within existing CARPARK P1 (Google Earth 2025).

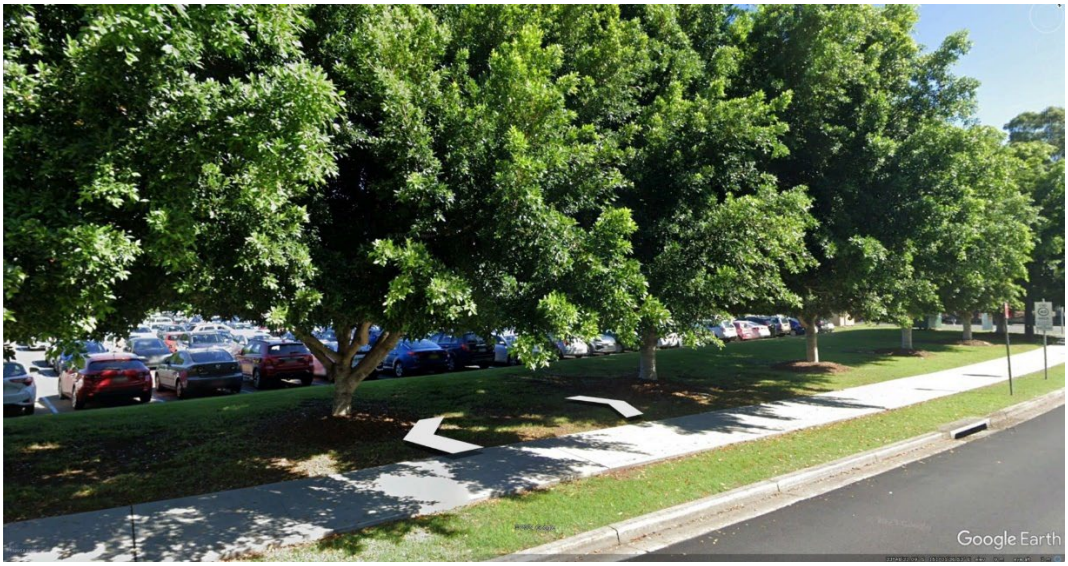

Plate 3. View of Subject Land from Railway Street of planted *Ficus hillii* in rows along road/street frontages (Google Earth 2025).

6. Habitat Suitability for Threatened Species

6.1 Threatened Species Habitat

Land Eco conducted a desktop assessment of the threatened flora and fauna species recorded within the 10 km locality of the Subject Land using NSW Wildlife Atlas Data (BioNet) (NSW DCCEEW 2025c). Land Eco then conducted a site-based habitat assessment to identify habitat features and species that may utilise them.

No evidence of threatened species credit species was identified during the site-based assessment. The vegetation within the Subject Land is highly degraded and occurs within a dense urban matrix surrounded by roads, railways and buildings and shares poor connectivity with remnant vegetation. Disturbance from high vehicle and pedestrian usage further reduces the habitat potential within the Subject Land (**Plate 2**). Woody debris and dense leaf litter is largely absent from the Subject Land.

Species recorded on site during site assessments by Land Eco Ecologists are detailed in **Appendix 1.**

Locally common, highly mobile threatened fauna species such as Grey-headed Flying Fox (*Pteropus poliocephalus*) and ecosystem credit microbats may occasionally forage in and around the canopies of planted trees within and surrounding the Subject Land. The Subject Land is considered only suitable habitat for common, urban-adapted fauna.

7. Identifying Prescribed Impacts

This chapter of the report details the type and extent of impacts to biodiversity that will occur as a result of the proposed development (**Table 7**). Prescribed additional biodiversity impacts (prescribed impacts) must be assessed as part of the BOS, as per clause 6.1 of the BC Regulation. Such prescribed impacts (including direct and indirect impacts) are impacts:

a. on the habitat of threatened entities including:

i. karst, caves, crevices, cliffs, rocks and other geological features of significance, or

ii. human-made structures, or

iii. non-native vegetation

b. on areas connecting threatened species habitat, such as movement corridors

c. that affect water quality, water bodies and hydrological processes that sustain threatened entities (including from subsidence or upsidence from underground mining)

d. on threatened and protected animals from turbine strikes from a wind farm

e. on threatened species or fauna that are part of a TEC from vehicle strikes.

If relevant, these features must be identified on a map.

Table 8. Prescribed impacts identified

Feature	Present	Description of feature characteristics and location	Threatened entities that use, are likely to use, or are part of the habitat feature.	Describe how these features provide habitat for, or are used by, each threatened entity
Karst, caves, crevices, cliffs, rocks or other geological features of significance	☐Yes / ☒No	N/A	N/A	N/A

Feature	Present	Description of feature characteristics and location	Threatened entities that use, are likely to use, or are part of the habitat feature.	Describe how these features provide habitat for, or are used by, each threatened entity
Human-made structures	☒Yes / ☐No	There are no structures within the Subject Land however there are structures adjacent to the Subject Land.	Threatened microbat species	The proposed development may indirectly impact upon potentially roosting microbats, however these impacts are mostly temporary associated with construction and/or unlikely to be adversely exacerbated beyond current levels associated with the existing carpark and surrounding roads.
Non-native vegetation	☒Yes / ☐No	The Subject Land contains several weed species	Urban Adapted, Mobile Threatened Species	The weed-infested vegetation offers potential foraging habitat to a small range of threatened species.
Habitat connectivity	☒Yes / ☐No	The Subject Land is not considered as containing substantial habitat connectivity. It occurs in a dense urban matrix and may only be used as a stepping stone for urban-adapted mobile fauna, particularly birds and possums.	Urban Adapted, Mobile Threatened Species	Urban adapted, mobile threatened species may occasionally utilise the Subject Land as a stepping stone while foraging.
Waterbodies, water quality and hydrological processes	☐Yes / ☒No	N/A	N/A	N/A
Wind turbine strikes (wind farm development only)	☐Yes / ☒No	N/A	N/A	N/A
Vehicle strikes	☒Yes / ☐No	Low speed-limit driveways and roads are part of the proposed development.	No threatened entities are likely to be significantly impacted by the risk vehicle strikes. The Subject Land occurs in an area adjacent to busy roads, where vehicles are highly prevalent.	N/A

Stage 2: Impact Assessment (Biodiversity Values and Prescribed Impacts)

This section of the BDAR details impacts associated with the SSD, and highlights efforts the applicant has taken, or will take, to ensure the SSD avoids and minimises the impacts as much as feasible.

8. Avoid and Minimise Impacts

8.1 Avoid and Minimise Direct and Indirect Impacts

8.1.1 Project Location

The Subject Land occurs within the precinct of Rydalmere, in the City of Paramatta Local Government Area (LGA). The proposed development has been located within a dense urban matrix and is surrounded by existing urban infrastructure such as education, public use and transport facilities as well as busy roads. The long-term viability of the vegetation within the Subject Land is low, with native vegetation regeneration sparse across the Subject Land and on-going effects from surrounding land uses (educational precincts, roads, footpaths and public use facilities). The Subject Land is suitably located adjacent to existing developments on predominantly historically cleared land of which a portion currently functions a carpark for WSU. By doing so, the proposal avoids the need to clear remnant vegetation of conservation value.

8.1.2 Project Design

The proposed ICOE development site has been designed to retain seven (7) trees including the remnant *Melaleuca decora* (Tree Survey 2024) (JCB Architects 2025). Although this remnant tree falls within the development footprint, the building design has been adapted to ensure its retention (**Figure 2**). This tree likely provides various habitat resources to fauna particularly during flowering events (e.g. foraging and sheltering). It is an old tree that was present in historical imagery from 1943 (**Figure 6**).

The proposed temporary carpark sites has been designed to retain 55 trees. Where the development encroaches upon a tree's Tree Protection Zone (TPZ), works will be carried out under the supervision of an arborist (Tree Survey 2024; 2025).

All tree proposed for removal for the development are either exotic species or species which has been planted for ornamental purposes.

The Indigenous Centre of Excellence is proposed to be located on Darug land. This project works closely with Indigenous elders, community members, and stakeholders to ensure that the Indigenous Centre reflects the principles of Darug people and reflects the current and historic vegetation in the locality. Inspiration for the planting schedule for the proposed ICOE has been taken from recent surveys of Vineyard Creek's vegetation and on 'original' ecological communities found across the Parramatta River catchment (Jila 2024).

8.2 Avoid and Minimise Prescribed Impacts

8.2.1 Project Location

Impacts from the clearing of native vegetation and threatened species habitat have been avoided or minimised by locating the proposal in areas detailed in **Table 8**.

The proposed development will influence the following: habitat connectivity, non-native vegetation and the risk of vehicle strikes across the Subject Property, however, none of these influences are considered likely to have a significant impact on any threatened entity.

Table 9. Measures to locate the proposal to avoid or minimise direct and indirect impacts on native vegetation, threatened species, threatened ecological communities and their habitat

How has the proposal has been located in areas lacking biodiversity values?	The Subject Land occurs in the precinct of Rydalmere, in the City of Paramatta LGA. The proposed development has been located on predominantly historically cleared land of which a portion currently functions a carpark for WSU. One remnant tree is located within the development footprint of the ICOE however this tree has been incorporated into the design of the building and is proposed for retention (**Figure 2**). The remainder of the vegetation within the Subject Land is limited to planted natives and exotic trees planted for aesthetic value and an exotic dominant understorey vegetation. The layout of the proposed temporary carparks has been developed to facilitate the retention of 55 trees is prominently situated on exotic dominant managed lawn. As such, the long-term viability of the vegetation within the Subject Land is low. The Subject Land is suitably located adjacent to existing urban infrastructure (educational precincts, railways, busy roads and public use facilities). The proposed development avoids the need to clear remnant vegetation of high conservation value.
How has the proposal has been located in areas where the native vegetation or threatened species habitat is in the poorest condition (i.e. areas that have a low vegetation integrity score)?	The canopy trees proposed for removal within the Subject Land consist of trees planted for aesthetic value, while the understorey vegetation is a sparse cover of predominantly exotic shrubs and ground cover. The vegetation within the Subject Land is in poor condition and does not provide substantial habitat that would be relied heavily upon by any threatened species. The Subject Land also contains several high threat exotic weeds.
How does the proposal avoid habitat for species with a high biodiversity risk weighting or land mapped on the important habitat map, or native vegetation that is a TEC or a highly cleared PCT.	The development has been located on an area with minimal habitat value, as it is situated on land consisting primarily of bitumen car park, exotic-dominated understorey vegetation, or ornamental plantings of native and exotic tree species. The proposal will not impact upon land mapped on the important habitat map (OEH 2024a). No PCT was assigned to the vegetation within the Subject Land due to limited diagnostic characterises of the Subject Lands vegetation. i.e. the canopy trees proposed for removal are all relatively recently planted, and the understorey vegetation is exotic dominant. No TEC or 'a highly cleared PCT' will be impacted by the proposed development.
Has the proposal been located outside of the buffer area around breeding habitat features such as nest trees or caves?	No hollow-bearing trees, nest trees, wetlands or other important breeding habitat features were located within the Subject Land or on adjacent land and therefore will not be disturbed by the proposed development.
Has the proposal sought alternative:	
• **modes or technologies that would avoid or minimise impacts on biodiversity values**	Existing modes and technologies in the Subject Land such as service systems, sewage and stormwater systems, light poles and CCTV will either be retained, moved or modified during the development of the proposed temporary carparks. This will increase vegetation retention by using existing above and underground structures and limiting the need to conduct earthworks (TTW 2025)
• **routes that would avoid or minimise impacts on biodiversity values**	The proposed driveways, connecting the Fifth Street to the proposed ICOE and carparks has been strategically positioned to reduce the overall area of hardstand and built form, there by maximising space available for vegetation retention (**Figure 2**; **Figure 3**).
• **locations that would avoid or minimise impacts on biodiversity values**	The Subject Land is adjacent to existing urban developments and is suitable for the proposed development. The development has been designed around the biodiversity values within the Subject Land, namely the remnant *Melaleuca decora* (Tree Survey 2024) (JCB Architects 2025).
• **sites within a property on which the proposal is located that would avoid or minimise impacts on biodiversity values.**	The proposal is located within the WSU Campus (Subject Property). The Subject Land covers a portion of the Subject Property (to the north) some of which is currently being used as a carpark for the campus while the remainer is primarily landscaped exotic dominant lawn. The Subject Land is located adjacent to Vineyard Creek, a second-order tributary of the Parramatta River. Given the nature of the proposed development, the topography of the Subject Land, and the presence of Railway Street between the creek and the development site, it is unlikely that the aquatic habitat of the creek will be impacted. The Subject Land is not situated in an environmentally sensitive area, or on land mapped as containing Terrestrial Biodiversity (NSW DCCEEW 2025a) or land mapped as containing Biodiversity Values (NSW DCCEEW 2025b).
Detail the site constraints that have contributed to selecting this location	
• **bushfire protection requirements, including clearing for asset protection zones**	The Subject Land is not located on bushfire prone land (NSW DCCEEW 2025a).

• **flood planning levels**	The Subject Land has land mapped as 'High, Medium and Low' risk on the Flood Risk Spatial Mapping (City of Parramatta 2025). Practically the proposed ICOE site and the proposed temporary carpark to the west of the Subject Property are at 'High Risk'. The relevant Flood Risk Management Policies will require implementation.
• **servicing constraints.**	The development has been located adjacent to existing urban development along Victoria Road, Fifth Street and Railway Street and the associated services.

8.2.2 Project Design

This BDAR documents the reasonable measures taken by the proponent to avoid or minimise clearing of native vegetation and threatened species habitat during proposal design, including placement of temporary and permanent ancillary construction and maintenance facilities (**Table 9**).

Table 10. Design the proposal to avoid or minimise direct and indirect impacts on native vegetation, threatened species, threatened ecological communities and their habitat

Efforts to reduce the proposal's clearing footprint by minimising the number and type of facilities	The proposed development is located within the WSU Campus. The proposed development has been located on predominantly historically cleared land of which a portion currently functions a carpark for WSU. A remnant *Melaleuca decora* (Tree Survey 2024) currently stands within the existing car park. However, the proposed ICOE building—planned for this location—has been designed to accommodate and retain this tree (**Figure 2**) (JCB Architects 2025). The canopy trees proposed for removal are all relatively recently planted, and the understorey vegetation proposed for removal is exotic dominant. No remnant vegetation is proposed for removal. The layout of the proposed temporary carparks has been developed to facilitate the retention of 55 trees (Tree Survey 2025) and has been prominently situated on exotic dominant managed lawn. The proposed driveways, connecting the Fifth Street to the proposed ICOE and carparks has been strategically positioned to reduce the overall area of hardstand and built form, there by maximising space available for vegetation retention. For example, by utilising existing road networks, the proposed ICOE will retain six (6) planted native trees adjacent Victoria Road (Tree Survey 2024) (JCB Architects 2025). Parking spots in the proposed temporary carpark development will be constructed using an 'Atlantis Turf Cell' system (TTW 2025). This system allows for turf/lawn to be laid across the top of the parking spot whilst also allowing high levels of vehicle traffic. The turf system will act to replace lawn removed for the development and reduce the loss of habitat by replacing it.
Efforts to locate ancillary facilities in areas that have no biodiversity values	The development also includes the construction of two temporary carparks in addition to the proposed ICOE Building. These carparks aim to replace the loss of 'P1 Carpark' (which is proposed to be replaced by the ICOE building). The layout of the proposed carparks has been developed to facilitate the retention of 55 trees (Tree Survey 2025) and has been prominently situated on exotic dominant managed lawn. Three trees are proposed for removal, to facilitate these carparks. These include one exotic species, and two native species planted relatively recently for aesthetic purposes (**Figure 12**). No remnant vegetation is proposed for removal for the proposed development, including the associated carparks. The Subject Land is not situated in an environmentally sensitive area, or on land mapped as containing Terrestrial Biodiversity (NSW DCCEEW 2025a) or land mapped as containing Biodiversity Values (NSW DCCEEW 2025b).
Efforts to locate ancillary facilities in areas where the native vegetation or threatened species habitat is in the poorest condition (i.e. areas with the lowest vegetation integrity scores)	It is considered that threatened species are highly unlikely to utilise the Subject Land owing to its degraded state and occurrence in a dense urban matrix. All the canopy trees proposed for removal were planted relatively recently for aesthetic purposes. Additionally, the understorey vegetation within the Subject Land is exotic dominant, as such all the vegetation proposed to be impacted for the development offers minimal biodiversity values.
Efforts to locate ancillary facilities in areas that avoid habitat for species and vegetation that has a high threat status (e.g. an endangered ecological community (EEC) or critically endangered ecological community (CEEC) or is an entity at risk of a serious and irreversible impact (SAII)	It is considered that threatened species are highly unlikely to utilise the Subject Land owing to its degraded state and occurrence in a dense urban matrix. The development will not impact upon an endangered ecological community (EEC), a critically endangered ecological community (CEEC) or on an entity at risk of a serious and irreversible impact (SAII).

Actions and activities that provide for rehabilitation, ecological restoration and/or ongoing maintenance of retained areas of native vegetation, threatened species, threatened ecological communities and their habitat on the subject land.	The proposed ICOE site will be landscaped with entirely Indigenous plants and aims to create a wetland habitat (Jila 2024). Inspiration for the planting schedule has been taken from recent surveys of Vineyard Creek's vegetation and on 'original' ecological communities found across the Parramatta River catchment (Jila 2024).

9. Impact Assessment

9.1 Direct Impacts

In accordance with section 8 of the BAM, the assessor must determine the direct impacts on threatened entities and their habitat. The BDAR or BCAR must include an assessment of the impacts of the proposal on threatened entities and their habitat and describe the direct impacts of the proposal on native vegetation, TECs and threatened species habitat.

9.1.1 Residual Direct Impacts

While all effort has been taken to avoid and minimise impacts, residual impacts will occur as a result of the development. A summary of the residual impacts upon PCTs and threatened species is presented (**Table 10**). These impacts are unlikely to have an adverse impact on any threatened species.

Table 11. Summary of residual direct impacts

Direct impact (Describe the impact on PCT/TEC/EC or threatened species and their habitat)	**BC Act status**	**EPBC Act status**	**SAII entity**	**Project phase/timing of impact** (e.g. construction, operation, rehabilitation)	**Extent** (ha, number of individuals)
Planted Native Vegetation	-	-	No	Construction, Operation	0.22 ha
Foraging habitat of mobile, urban adapted threatened fauna	Ranging from Vulnerable to Critically Endangered	Ranging from Vulnerable to Critically Endangered.	No	Construction, Operation	1.51 ha of vegetation (planted native and exotic canopy vegetation and exotic dominant understorey vegetation (provide potential foraging habitat).

9.1.2 Change in Vegetation Integrity Scores

The change in VIS from the proposed development across all vegetation zones is presented (**Table 11**). No VIS has been calculated as all of the vegetation proposed for removal is being assessed under Appendix D of the BAM. Example VIS were calculated using the mapped PCT 4006: Northern Paperbark-Swamp Mahogany Saw-sedge Forest in the area and resulted in scores of less than 6.1 (Plot 1 – 4; Plot 2 – 1.7; Plot 3 – 6.1), demonstrating that the area is indeed exotic dominated and was appropriately addressed in Appendix D of the BAM.

Table 12. Impacts to vegetation integrity

Vegetation zone	**PCT ID**	**Management zone**	**Area (ha)**	**Before development**				**After development**				**Change**
				Composition	Structure	Function	VI score	Composition	Structure	Function	VI score	Change in VI score
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

9.2 Indirect Impacts

A detailed summary of residual indirect impacts to threatened entities is provided in **Table 12.**

Table 13. Summary of residual indirect impacts

Indirect impact (Describe impact, e.g. transport of weeds and pathogens form the site to adjacent vegetation)	Impacted entities (PCT/threatened entity and their habitats and where relevant, EPBC Act listing)	Extent (ha or zone reference)	Frequency	Duration (long-term/ short-term/ medium-term)	Project phase/ timing of impact (e.g. construction, operation, rehabilitation)	Likelihood and consequences
(a) inadvertent impacts on adjacent habitat or vegetation	Mobile Ecosystem Credit Species	Vegetation and habitat adjacent to the Subject Land	During Construction and Ongoing	Long-term	Construction, Operation	In the unlikely event adjacent vegetation is cleared on accident, it is unlikely that this would cause significant impacts to threatened ecological communities or threatened species. The locality is already highly developed, and as such, the impact is unlikely to be significant. The proposed development has the potential to result in soil disturbance impacting adjacent vegetation and waterways including increased stormwater runoff and soil sedimentation, however erosion and sedimentation controls will adequately mitigate these impacts.
(b) reduced viability of adjacent habitat due to edge effects	Mobile Ecosystem Credit Species	Vegetation and habitat adjacent to the Subject Land	During Construction and Ongoing	Long-term	Construction, Operation	The Subject Land and adjacent habitat is already impacted due to edge effects from existing surrounding urban land uses including weed infestation, pedestrian impact, gross pollutants and litter. While the proposed development has the potential to exacerbate these impacts, this is unlikely to substantially reduce the viability of adjacent habitat beyond its current condition.
(c) reduced viability of adjacent habitat due to noise, dust or light spill	Mobile Ecosystem Credit Species	Vegetation and habitat adjacent to the Subject Land	During Construction and Ongoing	Long-term	Construction, Operation	The proposed development may result in the increase of noise, dust or light spill associated with the construction activities and operation of the development. However, the adjacent habitat is already impacted in these ways by the current surrounding urban land uses and roads. The proposed development is

Indirect impact (Describe impact, e.g. transport of weeds and pathogens form the site to adjacent vegetation)	Impacted entities (PCT/threatened entity and their habitats and where relevant, EPBC Act listing)	Extent (ha or zone reference)	Frequency	Duration (long-term/ short-term/ medium-term)	Project phase/ timing of impact (e.g. construction, operation, rehabilitation)	Likelihood and consequences
						unlikely to exacerbate this reality beyond the current condition.
(d) transport of weeds and pathogens from the site to adjacent vegetation	-	Vegetation and habitat adjacent to the Subject Land	During Construction	Short-term	Construction	The proposed development will result in soil disturbance on the Subject Land which may result in the propagation and spread of weed propagules from the soil bank to parts of the adjacent vegetation. The Subject Land and adjacent vegetation already contain several weed species. There is the potential for the construction vehicles to transport novel weeds onto the Subject Land and surrounds however this is unlikely to exacerbate this reality beyond the current condition.
(e) increased risk of starvation, exposure and loss of shade or shelter	Mobile Ecosystem Credit Species	Vegetation and habitat adjacent to the Subject Land	During Construction and Operation	Short-term, Possible long-term	Construction, Operation	The proposed development will remove habitat within the Subject Land. However, the increased risk of starvation, exposure, and loss of shade shelter is unlikely to be a significant impact at a species level, as the habitat within the Subject Land is not considered to be highly suitable and therefore is unlikely to be relied upon by threatened or protected fauna. The Subject Land occurs within a dense urban matrix that does not support habitat for mobile threatened or protected fauna. More suitable habitat within the locality occurs along Vineyard Creek adjacent to the Subject Land.
(f) disturbance to breeding habitats	N/A	N/A	N/A	N/A	N/A	N/A
(g) trampling of threatened flora species	N/A	N/A	N/A	N/A	N/A	N/A
(h) inhibition of nitrogen fixation and increased soil salinity	N/A	Vegetation and habitat adjacent to the Subject Land	During Construction and Operation	Long-term	Construction, Operation	The Subject Land currently exists as bitumen carpark or as managed lawn within an already degraded locality, it is therefore unlikely that the proposed development will inhibit nitrogen fixation beyond its current condition.

Indirect impact (Describe impact, e.g. transport of weeds and pathogens form the site to adjacent vegetation)	Impacted entities (PCT/threatened entity and their habitats and where relevant, EPBC Act listing)	Extent (ha or zone reference)	Frequency	Duration (long-term/ short-term/ medium-term)	Project phase/ timing of impact (e.g. construction, operation, rehabilitation)	Likelihood and consequences
(i) fertiliser drift	N/A	Vegetation and habitat adjacent to the Subject Land	During Construction and Operation	Long-term	Construction, Operation	As the proposed ICOE plans to landscape using entirely native species for the proposed ICOE development (Jila 2024), the use of fertiliser is not expected to increase beyond current garden maintenance activities. The potential for fertiliser drift associated with the proposed development is therefore not expected to exacerbate this reality beyond the current condition.
(j) rubbish dumping	Mobile ecosystem Credit species	Vegetation and habitat adjacent to the Subject Land	During Construction and Operation	Short-term, Possible long-term	Construction, Operation	The construction and operation of the building/centre development may increase anthropogenic litter, however regular Council collections and rubbish management systems of WSU and their maintenance staff will service the facility, limiting its impact.
(k) bush rock removal and disturbance	N/A	N/A	N/A	N/A	N/A	N/A
(l) increase in predatory species populations	Mobile Ecosystem Credit Species	Subject Property	Ongoing	Long-term	Construction, Operation	It is likely that predatory animals occur in high densities already as the locality is disturbed and situated in an urban environment. The proposed development is unlikely to exacerbate this reality beyond the current condition.
(m) increase in pest animal populations	Mobile Ecosystem Credit Species	Subject Property	Ongoing	Long-term	Construction, Operation	It is likely that pest animals occur in high densities already as the locality is disturbed and situated in an urban environment. The proposed development is unlikely to exacerbate this reality beyond the current condition.
(n) increased risk of fire	Mobile Ecosystem Credit Species	Subject Property	During Construction and Operation	Long-term	Construction, Operation	The risk of fire/ the spread of fire is relatively low within this urban environment due to the sparse vegetative cover. The proposed development is unlikely to change the

Indirect impact (Describe impact, e.g. transport of weeds and pathogens form the site to adjacent vegetation)	Impacted entities (PCT/threatened entity and their habitats and where relevant, EPBC Act listing)	Extent (ha or zone reference)	Frequency	Duration (long-term/ short-term/ medium-term)	Project phase/ timing of impact (e.g. construction, operation, rehabilitation)	Likelihood and consequences
						risk of fire in the Subject Land beyond its current condition.
(o) disturbance to specialist breeding and foraging habitat, e.g. beach nesting for shorebirds.	N/A	N/A	N/A	N/A	N/A	No specialist habitat occurs within the Subject Land.

9.3 Prescribed Impacts

This section of the report addresses impact mitigation measures for prescribed impacts.

9.3.1 Karst, caves, crevices, cliffs, rocks or other geological features of significance

Not Applicable

9.3.2 Human-made structures

The Subject Land is adjacent to human-made structures detailed in **Table 13**

Table 14. Residual prescribed impacts - impacts to human-made structures

Nature	Threatened fauna or flora protected fauna that are at risk	SAII entities at risk	Likelihood	Extent	Duration	Consequences
Works are proposed to take place around the Central Energy Plant located within the Subject Land	Ecosystem credit microbats	-	Low	This structure will be retained post-development	During construction and post-construction	The proposed development may indirectly impact upon potentially roosting microbats, however these impacts are unlikely to be adversely exacerbated beyond current levels associated with the existing carpark and surrounding roads.

9.3.3 Non-native vegetation

The Subject Land contains some non-native vegetation detailed in **Table 14.**

Table 15. Residual prescribed impacts – impacts to non-native vegetation

Nature	Threatened fauna or flora protected fauna that are at risk	SAII entities at risk	Likelihood	Extent	Duration	Consequences
The Subject Land is infill planted with exotic and non-indigenous native trees and has an exotic dominate understorey vegetation which contains several weed species.	Mobile Ecosystem Credit Species	-	High	1.51 ha of infill planted native/ exotic canopy and exotic dominate understorey vegetation occurs within the Subject Land	Construction and Operation	The proposed development will remove a large portion of this vegetation, which may provide occasional foraging habitat to a small range of mobile ecosystem credit species. This impact is unlikely to be significant for any of these species.

9.3.4 Habitat connectivity

The Subject Land contains habitat connectivity that will be impacted by the proposed development as detailed in **Table 15.**

Table 16. Residual prescribed impacts – impacts to habitat connectivity

Nature	Threatened fauna or flora protected fauna that are at risk	SAII entities at risk	Likelihood	Extent	Duration	Consequences
The mixed native/exotic canopy trees within the Subject Land may act as a stepping-stone for fauna moving across the landscape.	Mobile Ecosystem Credit Species	-	High	Vegetation removal will moderately disrupt this connectivity, however disjunct flyway corridors will remain in a similar manner in the landscape post-development.	This impact will be permanent.	The removal of habitat from the Subject Land will remove habitat that may be used as a stepping stone for highly mobile, urban-adapted fauna as they navigate the locality. The habitat within the locality is already fragmented and not likely to be important to threatened species owing to its situation within a dense urban matrix. As such, the proposed development is unlikely to have a significant impact on habitat connectivity at the landscape level. Additionally based on the proposed landscape plans (Jila 2024), landscape corridors may be re-established post-development within the ICOE development site.

9.3.5 Waterbodies, water quality and hydrological processes

Not Applicable.

9.3.6 Wind turbine strikes

Not applicable.

9.3.7 Vehicle strikes

The proposed development will result in residual prescribed impacts from vehicle strikes (**Table 16**).

Table 17. Residual prescribed impacts - vehicle strikes

Threatened fauna or protected fauna that are part of a TEC that are at risk of vehicle strike	SAII entity	Likelihood	Estimated vehicle strike rates	Consequences
Mobile ecosystem credit fauna	No	Low	Nil	Motor vehicles are highly prevalent in the locality along the bordering roads. The proposed ICOE development will include low speed driveways with a small number of parking spaces. The proposed temporary carpark development will include 287 parking spaces which will increase the number of parking spaces from the current P1 carpark. A portion of the Subject Land is already currently used as a high traffic carpark (**Plate 2**), and vehicle usage is expected to increase post-development. While an increase in vehicle traffic is anticipated, the impact on threatened species is expected to be minimal, given the already high volume of traffic in the urbanised locality.

9.4 Mitigating residual impacts – management measures and implementation

The implementation of the recommended mitigation measures outlined in **Table 17** in accordance with the protocol outlined in **Table 18** will minimise the residual impacts of the proposed development.

Table 18. Summary of proposed mitigation and management measures for residual impacts (direct, indirect and prescribed)

Requirement	Mitigation measure
Assigning a Project Ecologist	Prior to construction, a qualified and experienced Ecologist (>3 years of experience) with a minimum tertiary degree in science, conservation, biology, ecology, natural resource management, environmental science or environmental management will be engaged. The Ecologist must be licensed with a current Department of Primary Industries Animal Research Authority permit and New South Wales Scientific License issued under the BC Act. The Ecologist must be a member of the NSW Ecological Consultants Association.
Tree Protection Zones	All trees to be retained must be protected in accordance with *Australian Standard - Protection of Trees on Development Sites (AS-4970-2009)*, which outlines that a Tree Protection Zone (TPZ) is the principal means of protecting trees on development sites. It is an area isolated from construction disturbance so that the tree remains viable. Works will be avoided within the TPZ of any trees located outside of the development site that require retention. This includes trees on neighbouring properties. TPZ will be protected as per instructions of the Tree Protection Plan (Tree Survey 2024; 2025). Tree protection fencing will be installed prior to site establishment and remain intact until the completion of works as per Tree Protection Plan (Tree Survey 2024; 2025).
Clearing of Vegetation and Fauna Habitat	Project Ecologist to undertake a pre-clearing survey of the Subject Land, identifying any threatened species and/or nests. All felling of native trees should be supervised by an Ecologist who will be available on site to capture, treat/relocate any displaced fauna. If any threatened species are identified, the Project Ecologist must be consulted to determine the best course of action, including potential translocations.
Erosion and Sedimentation	Appropriate erosion and sediment control will be erected and maintained during construction. At minimum such measures will comply with the relevant industry guidelines such as 'the Blue Book' (Landcom 2004).
Storage and Stockpiling	Locate the construction site compound as well as all construction storage, stockpile and laydown areas within the project disturbance area i.e. away from any native vegetation that is planned to be retained. Ensure any soil imported from outside the site, if required, is free of weeds.
Management of Light, Noise and Dust from Construction	Appropriate light, noise and dust suppression methods must be implemented to reduce their impact on surrounding flora and fauna. Construction works should be limited to daylight hours.
Threatened Fauna Reintroduction	Explore with the 'Saving our Species Program' (OEH 2024b) the feasibility / opportunity to reintroduce a population of the Green and Golden Bell Frog (*Litoria aurea*) into the proposed wetland habitat (Jila 2024) post development. Sydney Olympic Park in the locality contains a large population of this threatened species. Information on creating suitable habitat such as 'Raised ponds' can be found at 'Protecting and restoring green and golden bell frog habitat' (NSW DECC N/A).
Atlantis Turf Cell System	Parking spots in the proposed temporary carpark development will include an 'Atlantis Turf Cell' system (TTW 2025). This system allows for turf/lawn to be laid across the top of the parking spot whilst also allowing high levels of vehicle traffic. It is recommended that the turf be comprised of a native lawn species such as *Cynodon dactylon* (Couch Grass) *Zoysia Macrantha* (Nara Grass) or *Digitaria didactyla* (Queensland Blue Couch). If these turf species are not compatible with the system, the measure will still reduce the loss of habitat by replacing the lawn habitat with another lawn.

Table 19. Implementation of the mitigation and management measures

Measure/action	Monitoring and evaluation strategy (Data, frequency, timing and reporting)	Performance criteria (linked to monitoring and evaluation strategy)	Adaptive management threshold (trigger for adaptive management plan/actions)	Adaptive management response (when triggered)
Assigning a Project Ecologist	Project Ecologist to be engaged by proponent prior to construction. Ecologist to conduct a pre-clearing survey for any sensitive fauna, breeding fauna, or threatened species in the Subject Land. No less than 48 hours prior to clearing commencing. Project Ecologist to supervise all vegetation clearing.	Assigned Project Ecologist to prepare an '*Ecologist Pre-clearing Report*' to detail findings of the pre-clearing survey and results of clearing supervision.	If tree hollows, or nesting, sensitive, or threatened fauna or flora is found, the Ecologist will prepare a strategy to maximise likelihood of safe relocation.	Relocate sensitive fauna or threatened entity. If any tree hollow is found in a tree proposed for removal, instruct an Arborist to carefully remove the hollow sections of the tree and prepare excised hollows for re-install within the Subject Land or Subject Property.
Tree Protection	Project Arborist (Qualified Consulting Arborist) to be engaged by proponent prior to construction and be present prior and during excavation works (Tree Survey 2024; 2025). Tree Protection Zone (TPZ) fencing to be installed around any trees on adjacent landholdings which may be impacted by the proposed excavation or construction.	Project Arborist to supervise the installation of TPZ fencing. Arborist to provide letter with photographic evidence to confirm appropriate controls have been installed.	If any excavation works that occur within the 'drip zones' or structural root zones of trees that are to be retained on a neighbour's property.	Stop works immediately. Qualified Consulting Arborist must be present to supervise any excavation works and provide advice to ensure such works do not harm trees on adjacent properties.
Clearing of Vegetation and Fauna Habitat	Project Ecologist to supervise all vegetation clearing.	Assigned Project Ecologist to prepare an '*Ecologist Post-clearing Report*' to detail findings of the clearing works.	N/A	N/A
Erosion and Sedimentation	Appropriate Erosion and Sedimentation Controls informed by the Blue Book (Landcom 2004) to be included in a Construction Environmental Management Plan (CEMP) commissioned by the proponent prior to construction.	Minimum industry standards enforced prior to and during earthworks, clearing and construction.	If controls are not properly installed or fail.	Engage Earthworks Contractor, Civil or Environmental Engineer to install appropriate controls within 24 hours of the breach.
Storage and Stockpiling	All storage and stockpiling of construction resources must be in appropriate laydown areas away from the dripline of trees that will be retained.	No inadvertent impacts to habitat or vegetation.	Inadvertent impacts occur to adjacent vegetation as a result of improper management of construction materials.	Review controls and implement new measures. Remediate the vegetation impacted by the inadvertent impact under the guidance of the Project Ecologist.
Management of Light, Noise and Dust from Construction	Restrict construction to daylight hours. Manage dust, erosion and runoff in accordance with the provisions of 'The Blue Book' (Landcom 2004). Limit the unnecessary use of flood lighting.	Control measures implemented.	Control measures ineffective, resulting in disturbance to protected flora or fauna, or disturbance to nearby landholders.	Review controls and implement new measures under guidance of Construction Contractor to adequately mitigate impacts.
Threatened Fauna Reintroduction	Explore with the 'Saving our Species Program' (OEH 2024b) the feasibility / opportunity to reintroduce a population of the Green	N/A	N/A	N/A

Measure/action	Monitoring and evaluation strategy (Data, frequency, timing and reporting)	Performance criteria (linked to monitoring and evaluation strategy)	Adaptive management threshold (trigger for adaptive management plan/actions)	Adaptive management response (when triggered)
	and Golden Bell Frog (*Litoria aurea*) into the proposed wetland habitat (Jila 2024) post development. Sydney Olympic Park in the locality contains a large population of this threatened species. Information on creating suitable habitat such as 'Raised ponds' can be found 'Protecting and restoring green and golden bell frog habitat' (NSW DECC N/A).			

9.5 Adaptive management strategy for uncertain impacts

If during the construction of the proposed development, the Project Ecologist finds that a species listed under the EPBC Act or a species at risk of an SAII has the potential to be significantly impacted, works must cease until the Project Ecologist advises on a suitable approach. This may require a referral to the Commonwealth to determine whether the proposed development will need formal assessment and approval under the EPBC Act.

10. Serious and Irreversible Impacts

10.1 Assessment for serious and irreversible impacts on biodiversity values

No entities are considered to have a significant risk of SAII from the proposed development in accordance with the 'Guidance to assist a decision-maker to determine a serious and irreversible impact' (NSW DPIE 2019) (**Table 19**).

Table 20. Entities at risk of SAII

Common name	Scientific name	Reason for inclusion in assessment
N/A	N/A	N/A

11. Impact Summary

11.1 Determine an offset requirement for impacts

11.1.1 Impacts on Native Vegetation and Threatened Ecological Communities

Impacts to native vegetation as a result of the proposed development that do not require offsetting are detailed in **Table 20.**

Table 21. Impacts that do not require offset - ecosystem credits

Vegetation zone	PCT name	TEC	Impact area (ha)	Entity at risk of an SAII?	Current VI score
N/A	N/A	N/A	N/A	N/A	N/A

Impacts to native vegetation as a result of the proposed development that do require offsetting are detailed in **Table 21.**

Table 22. Impacts that require an offset - ecosystem credits

Vegetation zone	PCT name	TEC	Impact area (ha)	Current VI score	Future VI score	Change in VI score	Biodiversity risk weighting	Number of ecosystem credits required
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
							Total credits	N/A

11.1.2 Impacts on Threatened Species and their Habitat (Species Credits)

Impacts to threatened species as a result of the proposed development that require offsetting are detailed in **Table 22**

Table 23. Impacts that require an offset - species credits

Common name	Scientific name	BC Act status	EPBC Act status	Loss of habitat (ha) or individuals	Biodiversity risk weighting	Number of species credits required
N/A	N/A	N/A	N/A	N/A	N/A	N/A
					Total credits	N/A

11.2 Indirect and prescribed impacts

Proposed offsets for the residual indirect and prescribed impacts as a result of the proposed development are summarised in **Table 23.** The proposed development will not result in residual indirect or prescribed impacts requiring offsetting.

Table 24. Summary of proposed offsets for residual indirect and prescribed impacts

Residual indirect or prescribed impact (identified after mitigation)	Proposed offset (additional biodiversity credit requirement and/or other conservation measures)
N/A	N/A

11.3 Impacts that do not need further assessment

Impacts that do not need further assessment for ecosystem credits are detailed in **Table 24.**

Table 25. Impacts that do not need further assessment for ecosystem credits

Impact	Location within Subject Land	Justification why no further assessment is required
Removal of 0.22 ha of Planted Native Canopy Trees	The vegetation within the 'Planted Native Canopy- proposed for removal' zone within the Subject Land shown in **Figure 12.**	This vegetation was determined to be planted native vegetation which pursuant of Appendix D of the BAM, does not require ecosystem credits to be offset.
Removal of 1.28 ha of Exotic Dominant Understorey Vegetation	The 'Exotic Dominant Understorey vegetation- proposed for removal' zone within the Subject Land shown in **Figure 12.**	This vegetation was determined to be exotic dominant vegetation which does not require ecosystem credits to be offset.
Removal of 0.01 ha of Planted Exotic Trees	'Exotic Tree Canopy - proposed for removal' zone within the Subject Land shown in **Figure 12.**	This vegetation is exotic which does not require ecosystem credits to be offset.

12. Biodiversity Credit Report

12.1 Ecosystem credits

In accordance with section 9.2.1 of the BAM (DPIE 2020a) the assessor must determine an offset for all impacts of proposals on PCTs that are associated with a vegetation zone that has a vegetation integrity score of:

a. ≥15, where the PCT is representative of an EEC or a CEEC

b. ≥17, where the PCT is associated with threatened species habitat (as represented by ecosystem credits) or represents a vulnerable ecological community

c. ≥20, where the PCT does not represent a TEC and is not associated with threatened species habitat.

The ecosystem credits requiring retirement for the proposed development are summarised in **Table 25**.

Table 26. Ecosystem credits class and matching credit profile

Credits to Retire	Attributes shared with matching credits						
	PCT name	PCT vegetation class	PCT vegetation formation	Associated TEC or EC	Offset trading group (BAM Section 10.2, Tables 4 & 5)	Hollow bearing trees present?	IBRA subregion (in which proposal is located)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

12.2 Species credits

In accordance with section 9.2.2 of the BAM (DPIE 2020a):

1. The assessor must determine an offset for the impacts of proposals on the habitat of threatened species assessed for ecosystem credits and associated with a PCT in a vegetation zone with a vegetation integrity score of ≥17.

2. The assessor must determine an offset for the impacts of proposals on threatened species that require species credits, identified in accordance with Chapter 5 of the BAM (DPIE 2020a).

3. The method for determining offset requirements for impacts on threatened species and threatened species habitat is described in Chapter 10 of the BAM (DPIE 2020a).

4. An offset requirement can be proposed for a prescribed impact in accordance with Section 8.6 of the BAM (DPIE 2020a).

The species credits requiring retirement for the proposed development are summarised in (**Table 26**).

Table 27. Species credit class and matching credit profile

Credits to Retire	Attributes shared with matching credits				
	Name of threatened species	Kingdom	BC Act status	EPBC Act status	IBRA region
N/A	N/A	N/A	N/A	N/A	N/A

13. Other Relevant Legislation, Plans & Policies Requiring Address

13.1 Parramatta Local Environmental Plan 2023

This section details Environmental Controls relevant to the terrestrial biodiversity associated with the Subject Land and surrounds (**Table 27**).

Table 28. Environmental controls relevant to the terrestrial biodiversity associated with the Subject Land and surrounds.

Local Environmental Plan Reference	Application	Suitable Action
Part 2.1 Land use zones	The Subject Land is zoned 'SP2 – Infrastructure'. The purpose of the zone on the Land Zoning Map is 'Educational Establishment'.	The proposed development is ancillary to the purpose of the zone and is permitted with consent from City of Parramatta Council.
Part 3.3 Environmentally sensitive areas excluded	The Subject Land is not situated in an environmentally sensitive area as defined by the clause.	The proposed development is permitted with consent from City of Parramatta Council.
Part 6.2 Earthworks	The proposed development will require earthworks.	The proposed development will be managed to mitigate potential detrimental effects on existing drainage patterns and soil stability of the locality. This includes appropriate management of runoff and erosion in accordance with the provisions of 'The Blue Book' (Landcom 2004).
Part 6.3 Biodiversity	There is no land mapped 'Biodiversity' within the Subject Land. (NSW DCCEEW 2025a). "Biodiversity' has been mapped adjacent to the Subject Property, along Parramatta River and Vineyard Creek/Schaffer Park.	While the Subject Land is not mapped as containing 'Biodiversity', measures to avoid, minimise or mitigate adverse biodiversity impacts have still be implemented (Tree Survey 2024; 2024) (Jila 2024). Seven (7) trees within the Subject Land will be retained for the proposed ICOE development, including one mature *Melaleuca decora* which is considered of 'high importance for retention' (Tree Survey 2024). Fifty-five (55) trees will be retained for the proposed temporary carpark development (Tree Survey 2025). Landscaping for the proposed ICOE will utilise 100% native species of local provenance (Jila 2024). Impacts to mapped 'Biodiversity' adjacent to the Subject Land are not likely to occur with the implementation of control measure discussed in **Section 9.4**. As such no impacts to Land mapped as 'Biodiversity' are expected to occur as a result of the proposed development.
Part 6.5 Stormwater Management	The construction and use of the proposed development may impact urban stormwater systems.	Guidelines to mitigate any impacts on stormwater systems have been developed and are to be adhered to throughout construction (TTW 2025).

13.2 Parramatta Development Control Plan 2023

This section details Development Controls relevant to the terrestrial biodiversity within the Subject Land and surrounds (**Table 28**).

Table 29. Development controls relevant to the terrestrial biodiversity within the Subject Land and surrounds

Development Control Plan Reference	Application	Suitable Action
Part 2.7 Open Space and Landscape	The proposed development will require landscaping.	The seven (7) native trees for the proposed ICOE development and the fifty-five (55) trees for the proposed temporary carpark development to be retained have been incorporated into the design of the proposed development and will be protected during construction (Tree Survey 2024; Tree Survey 2025). Landscaping for the proposed ICOE development will utilise 100% native species of local provenance (Jila 2024). The fifty-two (52) historically planted trees proposed for removal for the ICOE development will be replaced with native species as per Jila (2024) landscape plan. These trees will be planted at the front and rear of the property as per clause 2.7. Landscaping for the proposed ICOE has been designed to integrate the new development with the existing nearby landscapes (Jila 2024). Inspiration for the planting schedule has been taken from recent surveys of Vineyard Creek's vegetation and on 'original' ecological communities found across the Parramatta River catchment (Jila 2024).
Part 4.5 Educational Establishments	The proposed development will require landscaping and traffic, parking and access.	'*Site planning must be sensitive to the streetscape character and views*'. '*Educational establishments are to be designed and landscaped in a manner that enhances the quality and visual amenity of the streetscape*'. Six (6) trees have been retained along the street frontage of Victoria Road to maintain a screening function (JCB Architects 2025). Landscaping for the proposed ICOE development (Jila 2024) has been designed to incorporate locally occurring flora species and be representative of locally occurring vegetative communities. '*Edges of the site will be densely planted in some areas - for screening infrastructure or road noise, and more open where views are important. There is opportunity to develop a specific seed mix with local specialists and seed suppliers that can establish as an understorey layer*' (Jila 2024). Guidelines have been established for the proposed carpark development which adhere to controls regarding line marking and signage in parking areas (TTW 2025). These guidelines will be adhered to throughout development.
Part 5.2.1 Control of Soil Erosion and Sedimentation	The proposed development will require earthworks.	The proposed development has been designed in order to minimise site disturbance, including impacts on the soil landscape. This includes appropriate management of runoff and erosion in accordance with the provisions of 'The Blue Book' (Landcom 2004).

Development Control Plan Reference	Application	Suitable Action
Part 5.3.1 Biodiversity	The proposed development requires the removal of native trees and vegetation.	In total the development proposes to remove/ impact upon 1.51 ha of vegetation. This includes the removal of planted native and exotic trees, and the removal of exotic dominate understorey vegetation. These trees are mostly non-indigenous native planted trees. No important breeding habitat for any species at Risk of Serious and Irreversible Impacts (SAII) will be impacted by the proposed development. The removal of trees and vegetation will be conducted in accordance with Part 5.3.4 of this DCP. The development has been sited and designed to retain a large number of existing trees. This includes one locally indigenous remnant tree, (*Melaleuca decora*). All retained trees will be protected during excavation works in accordance with Tree Survey (2024; 2025). Landscaping around the proposed ICOE will utilise 100% native species of local provenance (Jila 2024). Landscaping for the proposed ICOE development has been designed to integrate the proposed development with existing nearby landscapes (Jila 2024). Inspiration for the planting schedule has been taken from recent surveys of Vineyard Creek's vegetation and on 'original' ecological communities found across the Parramatta River catchment (Jila 2024).
Part 5.3.2 Waterways and Riparian Zone	No watercourses or Riparian zones occur within the Subject Land.	While the proposed development does not encroach upon any waterways, best practice stormwater management will be implemented during construction, with specified stormwater guidelines for the proposed carpark development (TTW 2025). '*Opportunities for fauna habitat are to be considered in the design of any waterway protection measures. Watercourses should be linked with other areas of indigenous vegetation, wildlife corridors and/or natural or visually important site features*'. The development proposes to create a wetland habitat within the Subject Land. Landscaping around the proposed ICOE has been designed to integrate the proposed development with existing nearby landscapes (Jila 2024). Inspiration for the planting schedule has been taken from recent surveys of Vineyard Creek's vegetation and on 'original' ecological communities found across the Parramatta River catchment (Jila 2024).
Part 5.3.4 Tree and Vegetation Protection	The proposed development requires the removal of prescribed trees as described in Parramatta LEP (2023)	In total the development proposes to remove/ impact upon 1.51 ha of vegetation. This includes the removal of planted native and exotic trees, and the removal of exotic dominate understorey vegetation. These trees are mostly non-indigenous native planted trees. The development has been sited and designed to retain a large number of existing trees. This includes one locally indigenous remnant tree, (*Melaleuca decora*). All retained trees will be protected during excavation works in accordance with Tree Survey (2024; 2025). '*Where a tree is approved to be removed, Council will seek the replanting of a suitable canopy replacement tree or trees in a suitable location on the site. Any replacement trees will need to be grown to maturity and replaced if the planting fails to survive and thrive*'. The fifty-two (52) historically planted (non-indigenous native and exotic) trees from the proposed ICOE development will be replaced with native species as per Jila (2024) landscape plan.

13.3 Commonwealth Environment Protection and Biodiversity Conservation Act 1999

No matters of National Environmental Significance were found to occur within the Subject Land.

Commonwealth listed threatened species that are MNES have potential to occur in the Subject Land on occasion. Impact to habitat is limited to the clearing of approximately 1.51 ha of degraded vegetation in an urban matrix. MNES that have the potential to occur within the Subject Land include nomadic fauna such as Grey-headed Flying-fox, Swift Parrot and Large-eared Pied Bat that may forage or fly over the Subject Land in search of food on occasion. These species are highly unlikely to regularly utilise or rely heavily on the Subject Land owing to its small area and its position within a hostile urban matrix. As such, no further assessment under the EPBC Act is deemed necessary.

13.4 State Environmental Planning Policy (Biodiversity and Conservation) 2021

13.4.1 Chapter 4: Koala Habitat Protection

The Subject Land is located within a Local Government Area that is not listed in Schedule 2 of Chapter 4: Koala Habitat Protection. No documented feed tree species are present within the Subject Land (OEH 2018). A review of NSW Wildlife Atlas data (BioNet) (NSW DCCEEW 2025c) revealed two koala records within the 10 km locality. No koala was recorded during site visitation and no koalas have been recorded as being present in the previous 18 years within the Subject Property or within 5km radius of the Subject Land. The Subject Land is therefore not considered Core Koala Habitat.

13.5 State Environmental Planning Policy (Coastal Management) 2018

The State Environmental Planning Policy (Coastal Management) 2018 applies to land within the 'Coastal Environment Area' and aims to promote an integrated and co-ordinated approach to land use planning in the coastal zone in a manner consistent with the objectives of the *Coastal Management Act 2016*.

The Subject land is located within the mapped 'Coastal Environment Area' and within the mapped 'Coastal Use Area'. The development will therefore need to comply with the provisions of the SEPP (SEPP Coastal Management 2018).

The Subject Land is not located within any mapped Littoral Rainforest, Coastal Wetlands. Coastal Wetlands are mapped occurring approximately 100m from the Subject Land, however, no impacts to this habitat are expected to occur as a consequence of the proposed development.

13.6 Fisheries Management Act 1994

The Subject Land is not within mapped 'Key Fish Habitat' (KFH) (DPI 2025). The nearest mapped 'Key Fish Habitat' is located approximately over 200m south of the Subject Land. The proposed development is not an activity requiring a permit under the Fisheries Management Act 1994.

14. References

Australian Bureau of Meteorology (BOM) (2024) Parramatta 2024 Daily Weather Observations http://www.bom.gov.au/climate/dwo/202406/html/IDCJDW2107.202406.shtml [accessed 14/06/2024]

Australian Bureau of Meteorology (BOM) (2025) Parramatta 2025 Daily Weather Observations http://www.bom.gov.au/climate/dwo/202506/html/IDCJDW2107.202506.shtml [accessed 05/07/2025]

Australian Standard 4970 (2009) Protection of Trees on Development Sites

City of Parramatta (2025) FloodSmart Parramatta. https://www.cityofparramatta.nsw.gov.au/environment/floodsmart-parramatta/know-your-flood-risk [accessed 06/06/2025]

Commonwealth of Australia Department of Environment & Energy (DEE) (2016) Interim Biogeographic Regionalisation for Australia (IBRA), Version 7 (Subregions). Department of the Environment and Energy.

Google Earth (2025) Google Earth Pro. Satellite Imagery [accessed 06/06/2025]

Google Earth (2009) Google Earth Pro. Historical Satellite Imagery from 2009 [accessed 06/06/2025]

JCB Architects (2025). Jackson Clements Burrows. Project Indigenous Centre of Excellence. Victoria Rd, Rydalmere NSW 2116. Project no. 23-032. November 2025

Jila (2024). Jane Irwin Landscape Architecture. Project- Indigenous Centre of Excellence. Address- Western Sydney University, Parramatta South Campus

Landcom (2004) Managing Urban Stormwater: Soils and Construction 'The Blue Book', Volume 1, Fourth Edition, New South Wales Government, ISBN 0-9752030-3-7

Mitchell, P.B. (2002) NSW Ecosystems Study: Background and Methodology

NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) (2024a) NSW State Vegetation Type Map https://datasets.seed.nsw.gov.au/dataset/nsw-state-vegetation-type-map [accessed 05/06/2025]

NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) (2024b) Reviewing area clearing threshold results from the BMAT tool

NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) (2025a) Planning Portal ePlanning Spatial Viewer https://www.planningportal.nsw.gov.au/ [accessed 05/06/2025]

NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) (2025b) Biodiversity Values Map and Threshold Tool https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=BOSETMap [accessed 05/06/2025]

NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) (2025c) NSW BioNet. The website of the Atlas of NSW Wildlife http://www.bionet.nsw.gov.au/ [accessed 05/06/2025]

NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) (2025d) Threatened biodiversity profile search https://www.environment.nsw.gov.au/threatenedspeciesapp/[accessed 05/06/2025]

NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) (2025e) eSpade NSW Soil and Land Information https://www.environment.nsw.gov.au/eSpade2WebApp# [accessed 05/06/2025]

NSW Department of Environment and Climate Change ((NSW DECC N/A). Protecting and restoring green and golden bell frog habitat. Sydney Metropolitan Catchment Management. https://www.sydneyolympicpark.nsw.gov.au/sites/default/files/2024-02/Protecting-and-restoring-Green-and-Golden-Bell-Frog-habitat.pdf

NSW Department of Environment and Conservation (DEC) (2004) Threatened Species Survey and Assessment: Guidelines for developments and activities (working draft), Department of Environmental Conservation, New South Wales Department of Environment and Conservation, Hurstville, NSW.

NSW Department of Primary Industries (DPI) (2025) Key Fish Habitat maps https://www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/key-fish-habitat-maps [accessed 06/6/2025]

NSW Department of Planning Industry and Environment (DPIE) (2019) Guidance to assist a decisionmaker to determine a serious and irreversible impact

NSW Department of Planning Industry and Environment (DPIE) (2020) Biodiversity Assessment Method. Published October 2020.

NSW Government (2021) State Environmental Planning Policy (Biodiversity and Conservation) 2021 (https://legislation.nsw.gov.au/view/pdf/asmade/epi-2021-722#:~:text=This%20Policy%20is%20State%20Environmental,(Biodiversity%20and%20Conservation)%202021.&text=This%20Policy%20commences%20on%201,on%20the%20NSW%20legislation%20website.&text=In%20this%20Policy%E2%80%94%20the%20Act,Planning%20and%20Assessment%20Act%201979.) [accessed 22/05/2024]

NSW Government Spatial Services (2025) Six Maps https://maps.six.nsw.gov.au/clipnship.html [accessed 05/06/2025]

NSW Historical Imagery (2024). Aerial and Satellite Imagery- Spatial Services. https://trade.maps.arcgis.com/apps/webappviewer/index.html?id=07b967fd0bdc4b0099fc5be45b6d1392

NSW Office of Environment & Heritage (OEH) (2016a) NSW (Mitchell) Landscapes - version 3.1 Office of Environment and Heritage.

NSW Office of Environment & Heritage (OEH) (2016b) The Native Vegetation of the Sydney Metropolitan Area - Version 3.1 (OEH, 2016) VIS_ID 4489

NSW Office of Environment & Heritage (OEH) (2018) A review of koala tree use across New South Wales

NSW Office of Environment & Heritage (OEH) (2024a) Biodiversity Assessment Method (BAM) Calculator.

NSW Office of Environment & Heritage (OEH) (2025b). Saving our Species program. https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/saving-our-species-program

NSW Transitional NVR map (NSW NVRM) (2024) Transitional native vegetation regulatory map viewer https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=NVRMap [accessed 17/06/2024]

Parramatta Development Control Plan (DCP) (2023). https://www.cityofparramatta.nsw.gov.au/development/planning/development-control-plans [accessed 26/06/2024]

Parramatta Local Environmental Plan (LEP 2023). https://legislation.nsw.gov.au/view/html/inforce/current/epi-2023-0117#sec.3.3 [accessed 26/06/2024]

PlantNET (2020) The NSW Plant Information Network System. Royal Botanic Gardens and Domain Trust, Sydney. http://plantnet.rbgsyd.nsw.gov.au [accessed 14/04/2024]

Tree Survey (2024). Arboricultural Impact Assessment (AIA) & Tree Protection Plan (TPP) Prepared for: Indigenous Centre of Excellence- Western Sydney University

Tree Survey (2025). Arboricultural Impact Assessment (AIA) & Tree Protection Plan (TPP) Western Sydney University Parramatta South Campus Relocation of Car Park P1. Prepared for: Western Sydney University

TTW (2025). Taylor Thompson Whitting. WSU – Carpark Relocation Project. Project no. 234338

15. Appendices

Appendix 1. Vertebrate Fauna recorded in Subject Land by Land Eco Consulting

Appendix 2. BAM VIS Field Survey Forms (copied from electronic data sheet)

Appendix 1. Vertebrate Fauna recorded in Subject Land by Land Eco Consulting during Site Visitations in June 2024 and 2025

Class	Scientific Name	Common Name	NSW Biodiversity Conservation Act 2016 Status
Aves	*Acridotheres tristis*	Common Myna	-
Aves	*Anthochaera chrysoptera*	Little Wattlebird	Protected
Aves	*Cacatua galerita*	Sulphur-crested Cockatoo	Protected
Aves	*Cacatua sanguinea*	Little Corella	Protected
Aves	*Columba livia domestica*	Feral Pigeon	-
Aves	*Dacelo novaeguineae*	Laughing Kookaburra	Protected
Aves	*Eolophus roseicapilla*	Galah	Protected
Aves	*Falco cenchroides*	Nankeen Kestrel	Protected
Aves	*Glossopsitta concinna*	Musk Lorikeet	Protected
Aves	*Grallina cyanoleuca*	Magpie-Lark	Protected
Aves	*Hirundo neoxena*	Welcome Swallow	Protected
Aves	*Manorina melanocephala*	Noisy Miner	Protected
Aves	*Ocyphaps lophotes*	Crested Pigeon	Protected
Aves	*Platycercus eximius*	Eastern Rosella	Protected
Aves	*Strepera graculina*	Pied Currawong	Protected
Aves	*Threskiornis moluccus*	Australian White Ibis	Protected
Aves	*Trichoglossus moluccanus*	Rainbow Lorikeet	Protected
Aves	*Vanellus miles*	Masked Lapwing	Protected

Appendix 2. BAM VIS Field Survey Forms (copied from electronic data sheet)

BAM Site - Field Survey Form

Date:	**06/06/24**	**Plot ID:**	**1**	**Photo #:**	
Zone:	**56H**	**Plot Dimensions:**	**20x50**	**Easting:**	317304
Datum:	**GDA2020**	**Middle Bearing (o) at 0m:**	79	**Northing:**	6257231
PCT:		**Condition Class**	Mixed Native Exotic	**Ecologists:**	Theo, Chantelle

Counts apply when the **number of tree stems** within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30…, 100, 200, 300…). For a **multi-stemmed tree**, only the largest living stem is included in the count/estimate. **Tree stems must be living.**

Growth Form	Scientific Name	Cover	Abundance
HTW	*Ochna serrulata*	15	N/A
Non-native	*Celtis spp.*	20.1	N/A
Non-native	*Sida rhombifolia*	50	N/A
Forb (FG)	*Commelina cyanea*	5	6
Non-native	*Solanum nigrum*	30	N/A
Grass & grasslike (GG)	*Cyperus gracilis*	0.1	2
HTW	*Passiflora suberosa*	0.1	3
Non-native	*Jacaranda mimosifolia*	0.2	20
HTW	*Lantana camara*	0.1	2
HTW	*Cestrum parqui*	0.1	6
Non-native	*Medicago polymorpha*	0.1	2
Non-native	*Soliva sessilis*	0.1	1
Non-native	*Rhamnus alaternus*	0.1	1
Grass & grasslike (GG)	*Cynodon dactylon*	0.1	2
Non-native	*Nothoscordum x borbonicum*	0.2	2
HTW	*Ehrharta erecta*	0.1	15
HTW	*Bidens pilosa*	0.1	10
Non-native	*Sonchus oleraceus*	85	N/A
Non-native	*Oxalis corniculata*	0.1	3
Non-native	*Euphorbia maculata*	0.1	10

DBH	# Tree Stems Count
80+cm	0
50-79cm	1
30-49cm	3
20-29cm	4
10-19cm	9
5-9cm	2
<5cm	1

Number of Hollow-bearing Trees
0
0
0
0
0
0
0

For **hollows**, count only the presence of a stem containing hollows. For a **multi-stemmed tree**, only the largest stem is included in the count/estimate. **Stems may be dead and may be shrubs.**

Length of Logs (m)	
	0

(≥10 cm diameter, >50 cm in length)

BAM Attribute (1 x 1m plots)	Litter Cover (%)
1	100
2	100
3	100
4	100
5	100
Average (#no./5)	**100**

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Non-native	*Euphorbia peplus*	0.1	10			
HTW	*Stenotaphrum secundatum*	0.1	1			
Non-native	*Taraxcum officinale*	0.2	20			
HTW	*Araujia sericifera*	0.1	20	**Growth Form**	**Composition Data**	**Structure Data**
HTW	*Ochna serrulata*	0.1	3			
Non-native	*Sida rhombifolia*	0.2	30	**Tree**	**0**	**0**
Forb (FG)	*Commelina cyanea*	0.1	1	**Shrub**	**0**	**0**
Non-native	*Solanum nigrum*	0.1	2	**Grass**	**2**	**0.2**
				Forb	**1**	**0.1**
				Fern	**0**	**0**
				Other	**0**	**0**
				H.T.E	**8**	**1**
				Cover: 0.1, 0.2, 0.3, …, 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); Note: 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m		
				Abundance: 1, 2, 3, …, 10, 20, 30, … 100, 200, …, 1000, …		

BAM Site - Field Survey Form

Date:	**03/06/2025**	**Plot ID:**	**2**	**Photo #:**	1
Zone:	**56H**	**Plot Dimensions:**	**20x50**	**Easting:**	317161
Datum:	**GDA 2020**	**Middle Bearing (o) at 0m:**	98	**Northing:**	6257100
PCT:		**Condition Class**	Grassland	**Ecologists:**	Serene, Blake

Counts apply when the **number of tree stems** within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30…, 100, 200, 300…). For a **multi-stemmed tree,** only the largest living stem is included in the count/estimate. **Tree stems must be living.**

Growth Form	Scientific Name	Cover	Abundance
HTW	*Cenchrus clandestinum*	55	N/A
Grass & grasslike (GG)	*Digitaria didactyla*	3	N/A
Non-native	*Medicago polymorpha*	0.2	10
HTW	*Stenotaphrum secundatum*	30	N/A
Non-native	*Oxalis corniculata*	1.5	20
Non-native	*Eleusine indica*	0.3	10

DBH	# Tree Stems Count
80+cm	0
50-79cm	0
30-49cm	0
20-29cm	0
10-19cm	0
5-9cm	0
<5cm	0

Number of Hollow-bearing Trees

For **hollows,** count only the presence of a stem containing hollows. For a **multi-stemmed tree,** only the largest stem is included in the count/estimate. **Stems may be dead and may be shrubs.**

Length of Logs (m)	0

(≥10 cm diameter, >50 cm in length)

BAM Attribute (1 x 1m plots)	Litter Cover (%)
1	9
2	30
3	22
4	15
5	5
Average (#no./5)	**16.2**

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

				Growth Form	Composition Data	Structure Data
				Tree	0	0
				Shrub	0	0
				Grass	1	3
				Forb	0	0
				Fern	0	0
				Other	0	0
				H.T.W	2	85
				Cover: 0.1, 0.2, 0.3, …, 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); Note: 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m		
				Abundance: 1, 2, 3, …, 10, 20, 30, … 100, 200, …, 1000, …		

BAM Site - Field Survey Form

Date:	**03/06/2025**	**Plot ID:**	**3**	**Photo #:**	2
Zone:	**56H**	**Plot Dimensions:**	**Irregular**	**Easting:**	317181
Datum:	**GDA 2020**	**Middle Bearing (o) at 0m:**	N/A	**Northing:**	6257080
PCT:		**Condition Class**	Trees	**Ecologists:**	Serene, Blake

Counts apply when the **number of tree stems** within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30…, 100, 200, 300…). For a **multi-stemmed tree**, only the largest living stem is included in the count/estimate. **Tree stems must be living.**

Growth Form	Scientific Name	Cover	Abundance
Tree (Planted Ornamental)	*Brachychiton acerifolius*	4	4
Non-native	*Medicago polymorpha*	0.2	10
HTW	*Cenchrus clandestinum*	30	N/A
Non-native	*Oxalis corniculata*	0.2	9
Non-native	*Eleusine indica*	0.2	7
Non-native	*Soliva sessilis*	0.3	10
Tree (TG)	*Lophostemon confertus*	0.2	1
Non-native	*Lepidium didymum*	0.1	3
Non-native	*Gamochaeta pennsylvanica*	0.2	10
Forb (FG)	*Portulaca oleracea*	0.1	3
Non-native	*Euphorbia thymifolia*	0.1	
Non-native	*Jacaranda mimosifolia*	15	4
Non-native	*Taraxacum officianle*	0.3	5
Forb (FG)	*Crassula sieberiana*	0.2	4
Non-native	*Richardia brasiliensis*	0.2	20
Grass & grasslike (GG)	*Cynodon dactylon*	0.4	N/A
Non-native	*Conzya bonariensis*	0.1	2
HTW	*Cinnamomum camphora*	0.2	1
Non-native	*Solanum sisymbriifolium*	0.1	1
Non-native	*Vicia lathyroides*	0.1	1
Non-native	*Sonchus oleraceus*	0.2	4
Non-native	*Cedrus sp*	3	1

DBH	# Tree Stems Count
80+cm	1
50-79cm	1
30-49cm	1
20-29cm	2
10-19cm	2
5-9cm	0
<5cm	0
Length of Logs (m)	0
(≥10 cm diameter, >50 cm in length)	
BAM Attribute (1 x 1m plots)	**Litter Cover (%)**
1	8
2	50
3	20
4	100
5	5
Average (#no./5)	**36.6**

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Number of Hollow-bearing Trees

For **hollows**, count only the presence of a stem containing hollows. For a **multi-stemmed tree**, only the largest stem is included in the count/estimate. **Stems may be dead and may be shrubs.**

Tree (TG)	*Podocarpus elatus*	5	1			
Non-native	*Solanum mauritianum*	0.1	1	**Growth Form**	**Composition Data**	**Structure Data**
HTW	*Asparagus aethiopicus*	0.1	4			
Non-native	*Lantana viburnoides*	0.1	1	**Tree**	**0**	**0**
Non-native	*Eragrostis tenufolia*	0.1	N/A	**Shrub**	**0**	**0**
Grass & grasslike (GG)	*Digitaria didactyla*	7	N/A	**Grass**	**2**	**7.4**
Non-native	*Malva parviflora*	0.2	6	**Forb**	**2**	**0.3**
				Fern	**0**	**0**
				Other	**0**	**0**
				H.T.W	**3**	**30.3**
				Cover: 0.1, 0.2, 0.3, …, 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); Note: 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m		
				Abundance: 1, 2, 3, …, 10, 20, 30, … 100, 200, …, 1000, …		

Land Eco consulting

www.landeco.com.au