Dalmeny Public School Upgrade - Flora and Fauna Assessment

Department of Education NSW

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Template 2.8.1

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Abbreviations

Abbreviation	Description
AIA	Arboricultural Impact Assessment (Laurence & Co 2025)
BAM	Biodiversity Assessment Method 2020
BC Act	NSW *Biodiversity Conservation Act 2016*
BDAR	Biodiversity Development Assessment Report
Biodiversity and Conservation SEPP	*State Environmental Planning Policy (Biodiversity and Conservation) 2021*
BOS	Biodiversity Offsets Scheme
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment, and Water
DoE	NSW Department of Education
DP	Deposited Plan
ELA	Eco Logical Australia Pty Ltd
EP&A Act	NSW *Environmental Planning and Assessment Act 1979*
EP&A Regulation	NSW *Environmental Planning and Assessment Regulations 2021*
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
FFA	Flora and Fauna Assessment
FM Act	NSW *Fisheries Management Act 1994*
GIS	Geographic Information Systems
LGA	Local Government Area
Liverpool LEP	*Liverpool Local Environmental Plan 2008*
MNES	Matters of National Environmental Significance
NSW	New South Wales
NSW DCCEEW	NSW Department of Climate Change, Energy, the Environment, and Water
PCT	Plant Type Community
PMST	Protected Matters Search Tool
REF	Review of Environmental Factors
SEPP	State Environmental Planning Policy
SEPP TI	*State Environmental Planning Policy (Transport and Infrastructure) 2021*
SIS	Species Impact Statement
SPRAT	Species Profile and Threats
SVTM	State Vegetation Type Mapping
TEC	Threatened ecological community
WM Act	NSW *Water Management Act 2000*

Executive Summary

Eco Logical Australia Pty Ltd (ELA) was engaged by RP Infrastructure on behalf of NSW Department of Education (DoE) to prepare a Flora and Fauna Assessment (FFA) report for the Dalmeny Public School at Dalmeny Drive, Prestons NSW (the 'study area'). The upgrades to Dalmeny Public School includes construction of one new classroom building and associated infrastructure, construction of a covered walkway, landscaping around the new building, demolition of part of a fence along Dalmeny Drive, earthworks and removal of planted native vegetation. Additional works are also proposed for the school including the decommission of portable classrooms are to be undertaken but will fall under a separate Planning Pathway and are not included in this report. This ecological assessment will be used to support a Review of Environmental Factors (REF) under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (SEPP TI).

This report has assessed the potential impacts of the proposed works on flora and fauna species listed under the NSW *Biodiversity Conservation Act 2016* (BC Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). ELA completed a field survey during the preparation of the Biodiversity Preliminary Review Due Diligence report (ELA 2023) for DoE. Information gathered during the preparation of the previous report was used and updated desktop assessments were completed to assess the impacts of the proposed activity. Additionally, an Arboricultural Impact Assessment and Tree Protection Specification (Laurence & Co 2025) was prepared for the study area which was reviewed to assess vegetation proposed for removal during the proposed upgrade.

The vegetation validation undertaken by ELA (2023) did not identify any remnant native vegetation occurring within the study area. All vegetation within the study area occurred as either planted native or planted exotic vegetation. No threatened fauna species have previously been recorded occurring in the study area, nor had any potential threatened fauna habitat been identified within the study area during the 2023 field assessment.

One threatened flora species was identified in the study area in the form of *Eucalyptus nicholii*. This species is listed as vulnerable under both the BC Act and EPBC Act. However, the species is commonly planted in the Sydney Basin bioregion and individuals occurring within this bioregion are not considered to conform to the threatened species status for the following reasons:

- the study area is outside of the species natural range.
- this species is not associated with the plant community types (PCTs) mapped within Sydney Basin.

Therefore, this tree is not considered a threatened entity. This tree has been identified for removal as part of the proposed works.

No other threatened flora or fauna species were identified in the study area during field surveys.

The study area contains approximately 0.48 ha of planted native vegetation and 0.04 ha of planted exotic vegetation. The impact assessment determined that the proposed activity would involve the removal

of 0.02 ha of planted native vegetation within the study area. The removal of trees will be mitigated with replanting of native trees at a ratio of 2:1 for each tree removed.

The potential impact of the proposed activity to threatened species and communities listed under the BC Act and EPBC Act was assessed by undertaking a Likelihood of Occurrence Assessment for threatened ecological communities and threatened and migratory species identified from the database search (Appendix A). No Tests of Significance under the BC Act or Assessments of Significance under the EPBC Act were required for threatened species or threatened ecological communities (TECs) due to the findings of the field survey undertaken in 2023, which identified no remnant native vegetation or potential threatened species habitat occurring within the study area.

Mitigation measures and recommendations have been provided to prevent direct or indirect impacts to planted native vegetation adjacent to the proposed works, within the study area (Section 6). Following these mitigation measures, it is unlikely the proposed activity will have a significant effect on biodiversity values.

1. Introduction

1.1. Purpose of this report

This Flora and Fauna Assessment (FFA) report has been prepared to accompany a Review of Environmental Factors (REF) prepared for the Department of Education (DoE) relating to the Dalmeny Public School Upgrade (the activity) under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and *State Environmental Planning Policy (Transport and Infrastructure) 2021* (SEPP TI).

This document has been prepared in accordance with the *Guidelines for Division 5.1 assessments – Consideration of environmental health facilities and schools, Addendum October 2024* (the Guidelines) by the Department of Planning, Housing and Infrastructure.

This report examines and takes into account the relevant environmental factors in the Guidelines and *Environmental Planning and Assessment Regulations 2021* (EP&A Regulation) under Section 170, Section 171 and Section 171A of the EP&A Regulation. Those relevant to this FFA are presented in Table 1.

The purpose of this FFA is to assess the potential impacts of the proposed work, on threatened species and ecological communities listed under the NSW *Biodiversity Conservation Act 2016* (BC Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Table 1: Summary of relevant section of the Part 5 Guidelines and EP&A Regulation.

Regulation / Guidelines Section	Requirement	Response	Report Section
171 (2) (c) the environmental impact on the ecosystems of the locality	(c1) impact on the existing and future ecosystem (flora, fauna, habitats, biodiversity, ecological integrity, biological diversity, connectivity/fragmentation, air, water including hydrology, soil) (c2) long- and short-term impact of: i. loss or harm to trees or other vegetation ii. removed canopy cover iii. landscape setting in respect of the site and streetscape iv. impacts of the above on urban heat island effect and urban and internal comfort levels on-and off-site (c3) impact from introducing new trees and vegetation species (c4) cumulative impacts on the ecosystem	Vegetation to be affected by the activity consists of planted native or planted exotic vegetation. No remnant native vegetation is proposed to be impacted. Loss of trees will be offset by replanting in a replenishment ratio of 2:1.	Whole report.
171 (2) (f) the impact on the habitat of protected animals, within the meaning of the *Biodiversity Conservation Act 2016*	(f1) impacts on listed protected fauna at and in the vicinity of the site, and their habitat.	No threatened fauna was identified during field surveys. It is considered unlikely threatened fauna would regularly utilize vegetation within the site for foraging or breeding. It is recommended prior to the removal of vegetation that a pre-clearance survey be conducted by an ecologist or suitably qualified personnel to identify whether threatened fauna are utilizing vegetation to be removed.	Section 4.1.3 Section 4.2.3 Appendix A
171 (2) (g) the endangering of a species of animal, plant or other form of life, whether living on land, in water or in the air	(g1) potential endangering of any species or vegetation (g2) protected and threatened flora, terrestrial, fauna species, populations, ecological communities and their habitats	Vegetation to be affected by the activity consists of planted native or planted exotic vegetation. No remnant native vegetation is proposed to be impacted. No threatened flora, fauna or ecological communities were identified during field surveys. It is recommended prior to the removal of vegetation that a pre-	Section 4.1.3 Section 4.2 Appendix A

Regulation / Guidelines Section	Requirement	Response	Report Section
		clearance survey be conducted by an ecologist or suitably qualified personnel to identify whether threatened fauna are utilizing vegetation to be removed.	
171 (2) (h) long-term effects on the environment	(h1) Long-term effects on: i. flood and bushfire behaviour, flooding and the flood plain, bushfire prone land ii. natural environment, flora and fauna species and their habitats iii. agricultural productivity iv. industrial land supply v. housing supply vi. climate change vii. cumulative impacts (h2) meet industry recognised building sustainability and environmental performance standards, integrate environmental design, minimise greenhouse gas emissions, minimise energy and water consumption (recycled water) and material resources, renewable energy generation and storage, fossil fuel-free, sustainable travel choices, manage, reuse, recycle and safely dispose of waste (h3) long term ecological, social and economic effects	Vegetation to be affected by the activity consists of planted native or planted exotic vegetation. Loss of trees will be offset by replanting in a replenishment ratio of 2:1. No threatened flora or fauna identified during field survey. It is recommended prior to the removal of vegetation that a pre-clearance survey be conducted by an ecologist or suitably qualified personnel to identify whether threatened fauna are utilizing vegetation to be removed.	Section 4.2.1 Section 5 Section 6

1.2. Proposed activity description

1.2.1. Overview of the proposed activity

The proposed activity for the Dalmeny Public School Upgrade (Figure 1) includes demolition works and the construction and occupation of a two-storey classroom building and associated covered walkways and landscaping (Figure 2 and Figure 3). The activity includes the following:

Demolition

- Demolish part of existing fence on Dalmeny Drive.
- Removal of vegetation.
- Earthworks.

Construction and occupation

- Two-storey classroom building (Block H).
- Covered walkways (excluding between Block G and H).
- Footpath between block G and block H.
- Landscaping (surrounding Block H).
- Fence and gate south of Block H.
- OSD tank.
- New Main Switch Board.
- Substation.
- Fire Hydrant.

The classroom building will consist of the following floor layout:

- Ground Floor Level: Comprises eight (8) general learning spaces (GLS) and two (2) learning commons spaces (LCS). Also located on the ground floor level are amenities, services, storage spaces and a lift and two stair cases to provide access to the first-floor level; and
- First Floor Level: The first-floor level will also comprise eight (8) GLS and two (2) LCS. Also located on the first-floor level are amenities, a mechanical plant room and other rooms for services.

1.2.2. Works to be undertaken under separate Planning Pathway (not part of this REF)

The following future works are to be undertaken under a separate planning pathway (as shown in Figure 4) and are not included in this FFA report. These works cannot be undertaken until the Activity (i.e. the works assessed in this report) are completed and operational. The future works include:

- Decommission and remove existing single storey portable classrooms.
- Decommission and remove existing portable amenities.
- Associated covered walkways to be demolished.
- Associated site infrastructure works.
- Shade structure over pathway between block G and H.

- Remainder of landscaping
- Removal of vegetation.
- Fencing and gate north-west of Block H.

1.3. Activity site

Dalmeny Public School (from here on referred to as the 'study area') is located at 129 Dalmeny Drive, Prestons and is legally described as Lot 312 DP 882619 (Figure 1). Dalmeny Public School is located on the southern side of Dalmeny Drive and on the northern side of Umbria Street.

The study area is approximately 4.2 ha in size and is zoned as R2 – Low Density Residential under the *Liverpool Local Environmental Plan 2008* (Liverpool LEP). The surrounding land is also zoned R2 – Low Density Residential. The closest major city is Liverpool, approximately 4.8 km to the north-east.

1.4. Background

A Biodiversity Due Diligence Preliminary Review (ELA 2023) was prepared for DoE to identify key ecological constraints and provide guidance for the final design footprint. Following the report, DoE confirmed that the upgrades will proceed as a Part 5 activity under the EP&A Act. Under a Part 5 pathway, a REF is to be prepared. Part of the REF includes undertaking a FFA for the proposed activity. This FFA has been prepared by ELA utilising the field and literature results previously detailed in the preliminary biodiversity report (ELA 2023), as well as vegetation to be removed as outlined in the Arboricultural Impact Assessment (AIA) and Tree Protection Specification (Laurence & Co 2025). This assessment has conducted an updated database and literature review (see Section 3.1).

1.5. Key definitions

The following key terms and definitions are used in this FFA:

- Proposed activity – works as described above in Section 1.2
- Study area – the entirety of Dalmeny Public School (Lot 312 DP 882619).
- Preliminary biodiversity report – refers to the Biodiversity Due Diligence Preliminary Review prepared by ELA (ELA 2023) for DoE.

Figure 1: Dalmeny Public School (the 'study area')

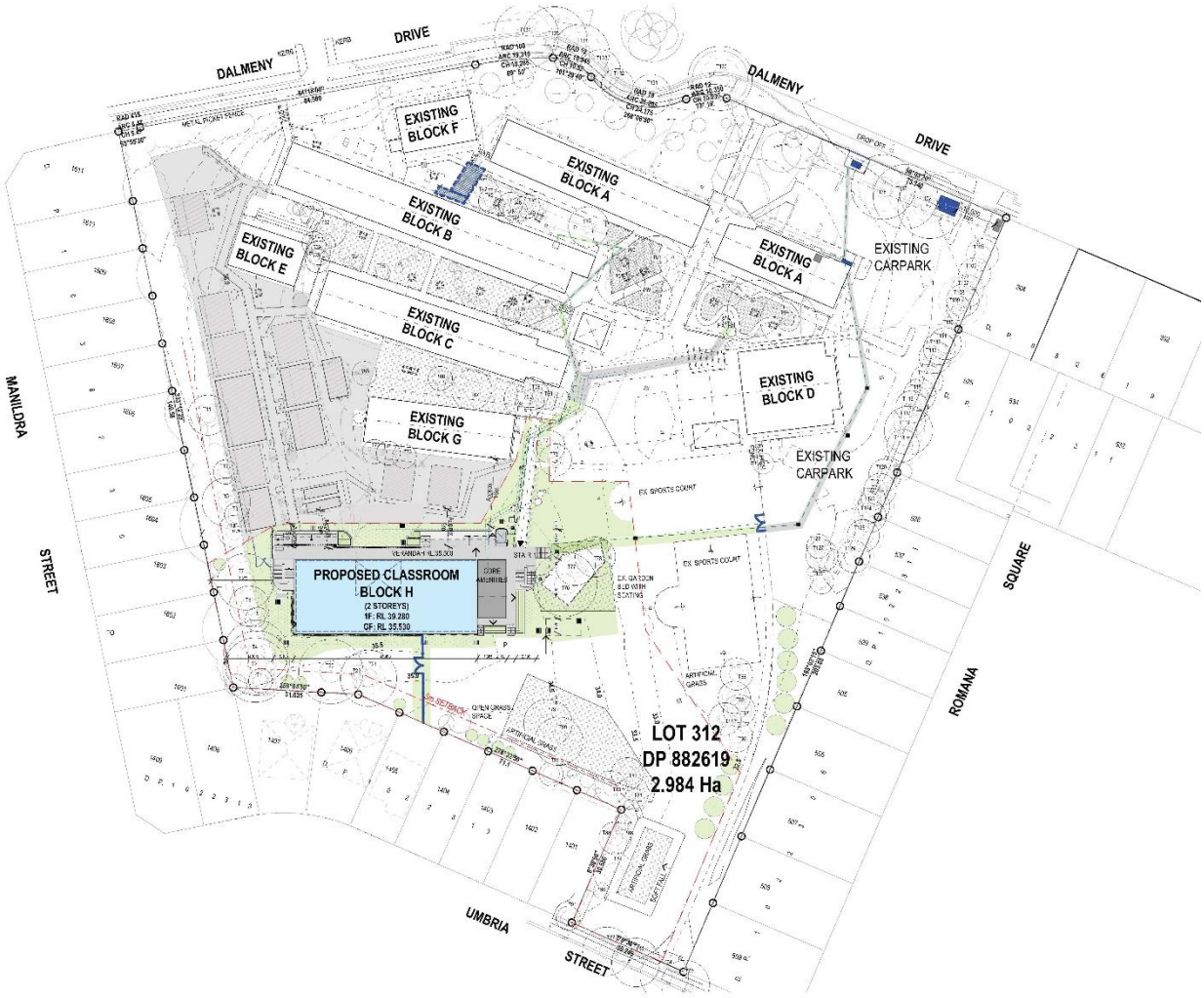

Figure 2: Proposed site plan and landscaping works (provided by RP Infrastructure)

Figure 3: Tree removal plan (provided by RP Infrastructure)

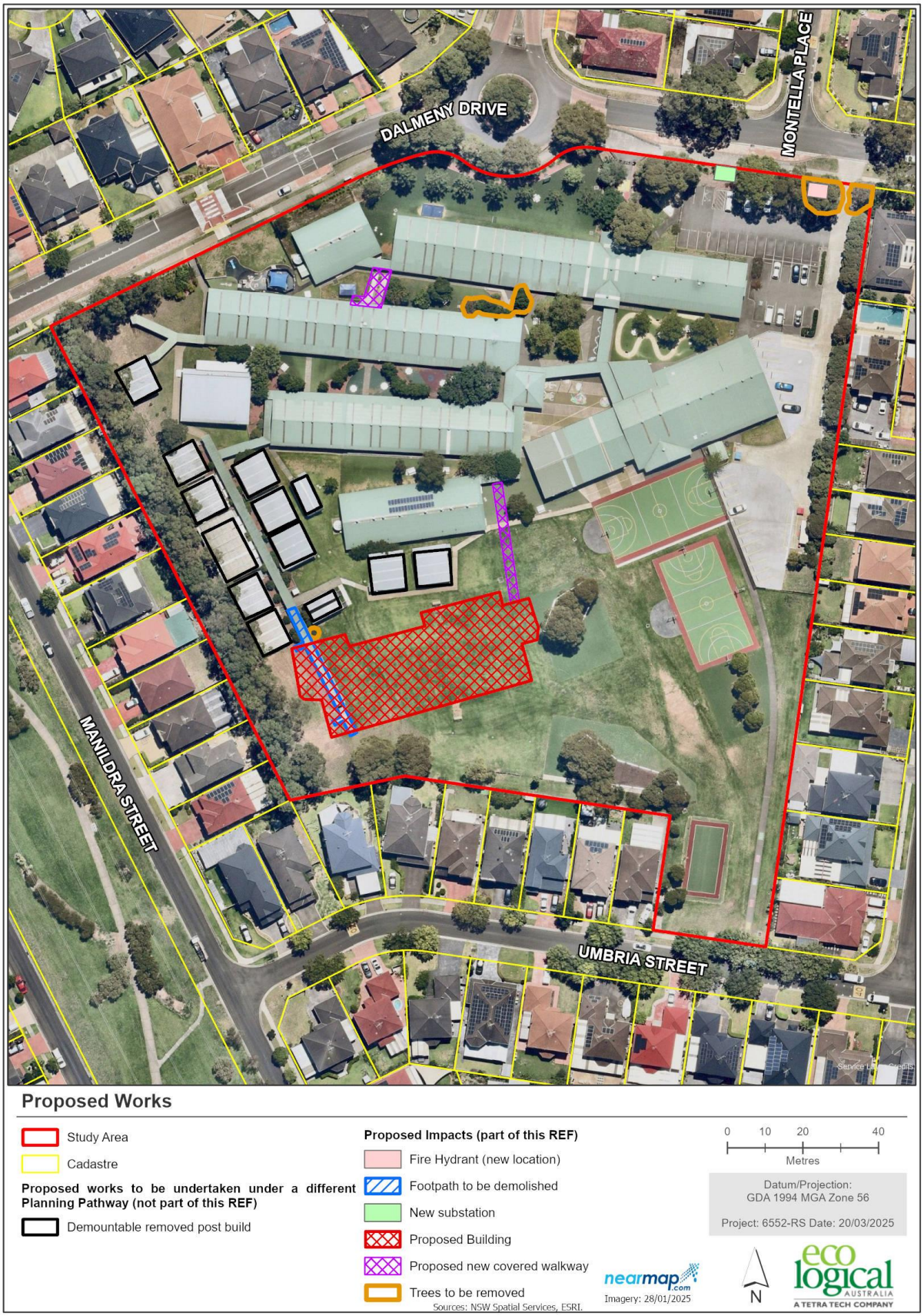

Figure 4: Proposed works for this REF and future works (not assessed under this REF)

2. Legislation

Table 2: Legislation relevant to the proposed works

Legislation	Relevance to the project	Report section
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	The Commonwealth EPBC Act aims to protect Matters of National Environmental Significance (MNES), including vegetation communities and species listed under the EPBC Act. If an activity is likely to have a significant impact on MNES, it is likely to be considered a 'Controlled Action' by the Commonwealth and requires assessment and approval by the Commonwealth to proceed. No MNES were identified within the study area. No Assessments of Significance under the EPBC Act were required for threatened species or TECs due to the findings of the Likelihood of Occurrence Assessment, after considering both the desktop review and the field survey results. As such, a referral to the Commonwealth is unlikely to be required as a part of the proposed works	Section 5.5
Environmental Planning and Assessment Act 1979 (EP&A Act)	The EP&A Act is the principal planning legislation for NSW, providing a framework for the overall environmental planning and assessment of development proposals. The EP&A Act places a duty on the determining authority to adequately address a range of environmental matters including maintenance of biodiversity and the likely impact to threatened species, populations, or ecological communities (under the BC Act – refer below). The project is being assessed under Part 5 of the EP& A Act.	Entire report
Biodiversity Conservation Act 2016 (BC Act)	Impacts to threatened species and threatened ecological communities listed under the BC Act are required to be assessed in accordance with Section 7.3 of the BC Act, known as 'Tests of Significance'. For assessments under Part 5 of the EP&A Act, the Biodiversity Offsets Scheme threshold does not apply, as specified in section 7.2 (2). Declared areas of 'outstanding biodiversity value' under section 7.2(1c) must still be considered. For a Part 5 assessment, if the conclusion of the Test of Significance is that there is potential for a significant impact on a threatened species or ecological community, then the proponent has the option of preparing a Species Impact Statement (SIS), or a Biodiversity Development Assessment Report (BDAR). This FFA has assessed the activity and determined that the proposed works are unlikely to result in a significant impact upon threatened species listed under the BC Act and therefore a SIS or BDAR is not required. The study area is not located within declared areas of outstanding biodiversity value. No Tests of Significance under the BC Act were prepared for threatened species or TECs due to the findings of the Likelihood of Occurrence Assessment, after considering both the desktop review and the field survey results.	Entire report
Fisheries Management Act 1994 (FM Act)	The FM Act governs the management of fish and their habitat in NSW. The FM Act regulates the provision of permits required in relation to the harm of protected marine vegetation (seagrass, macroalgae, mangroves and saltmarsh), dredging, reclamation or obstruction of fish passage on or adjacent to Key Fish Habitat. This includes direct or indirect impacts, whether temporary or permanent. The study area does not contain areas mapped as Key Fish Habitat. Maxwells Creek occurs approximately 215 m to the east of the study area and is mapped as Key Fish Habitat. The proposed works do not involve harm to mangroves or other	N/A

Legislation	Relevance to the project	Report section
	protected marine vegetation, dredging, reclamation or blocking of fish passage and therefore a permit under the FM Act is not required.	
NSW Biosecurity Act 2015	Under the *Biosecurity Act 2015*, priority weeds have been identified for the Greater Sydney Region and assigned strategies to contain, remove or manage. Occupiers of land (this includes owners of land) have responsibility for taking appropriate action for priority weeds on the land they occupy. The study area does not contain weeds listed under the *Biosecurity Act 2015*.	N/A
Water Management Act 2000 (WM Act)	The *Water Management Act 2000* (WM Act's) main objective is to manage NSW water in a sustainable and integrated manner that will benefit current generations, without compromising future generations' ability to meet their needs. The WM Act establishes an approval regime for activities within waterfront land, defined as the land 40 m from the highest bank of a river, lake, or estuary. The study area is not located on waterfront land. Furthermore, a Controlled Activity Approval under the WM Act is not required for the activities under Part 5 of the EP&A Act.	N/A
State and local planning instruments		
State Environmental Planning Policy (Resilience and Hazards) 2021	This SEPP applies to land in the coastal zone. The study area is not located within an area to which this SEPP applies	N/A
State Environmental Planning Policy (Biodiversity and Conservation) 2021 (Biodiversity and Conservation SEPP)	This new SEPP came into effect on 1 March 2022 and consolidates the following SEPPS of relevance to the study area: • Chapter 2 - The Vegetation in Non-Rural Areas 2017 • Chapter 4 - Koala Habitat Protection 2021 • Chapter 6 - Water Catchments. Chapter 2 of the Biodiversity and Conservation SEPP aims to protect the biodiversity values of trees and other vegetation in non-rural areas of the State, and to preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation. The City of Liverpool Local Government Area (LGA) is listed as one of the LGAs to which this SEPP applies. However, as the works are being following a Part 5 development pathway under the EP&A Act, Chapter 2 does not apply. The proposed development is located within a Local Government Area (LGA) to which the Biodiversity and Conservation SEPP applies in relation to Chapter 4 Koala Habitat Protection. However, the proposed works are considered to be permitted without consent under SEPP TI Section 3.37 (1)(a)(iii), therefore Chapter 4 does not apply. The study area is located within the Georges River Catchment in accordance with this SEPP. Chapter 6 defines developmental controls for projects that may have an effect on water quality or aquatic ecology. There are no waterbodies located within the study area, with the nearest waterbody an unnamed 2nd order Strahler stream, which is 206 m from the study area. Therefore, Chapter 6 of this SEPP does not apply to this activity.	N/A
Liverpool Local Environmental Plan 2008 (Liverpool LEP)	The study area is located on land zoned as R2 – Low Density Residential. The objective of this land zoning is: • To provide for the housing needs of the community within a low density residential environment.	Entire Report

Legislation	Relevance to the project	Report section
	• To enable other land uses that provide facilities or services to meet the day to day needs of residents. • To provide a suitable low scale residential character commensurate with a low dwelling density. • To ensure that a high level of residential amenity is achieved and maintained. The study area is not located on land mapped as "Environmentally Significant Land" under the Liverpool LEP.	

3. Methodology

3.1. Literature review and database search

A review of readily available databases pertaining to the ecology and environmental features of the entire extent of the study area and surrounding area (within a 5 km radius), was conducted to identify records of threatened species, populations and communities and their potential habitat.

An updated review of databases and vegetation mapping was conducted for this FFA and included:

- BioNet (NSW Atlas of Wildlife) database search (5 km) for threatened species, populations and ecological communities listed under the BC Act (NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) 2025a) (February 2025).
- EPBC Act Protected Matters Search Tool (PMST) for threatened and migratory species, populations and ecological communities listed under the Commonwealth EPBC Act (Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) 2025a) (February 2025).
- NSW Threatened Species Profile Database (NSW DCCEEW 2025b).
- Previous vegetation mapping under the State Vegetation Type Map (SVTM) (NSW DCCEEW 2025c).
- Plant Community Type (PCT) information under BioNet Vegetation Classification (NSW DCCEEW 2025d).
- Australian Government Species Profile and Threats (SPRAT) Database (DCCEEW 2025b).
- Relevant Geographic Information System (GIS) datasets including soils, geology and drainage (NSW DCCEEW 2025e).
- Review of relevant planning instruments, documentation, and information relating to biodiversity values (NSW DCCEEW 2025f) and potential threatened species habitat.
- Aerial photography (including Google Earth and Historical Imagery) of the study area and surrounds were also used to investigate the extent of vegetation cover and landscape features.
- Biodiversity Due Diligence Preliminary Review, prepared by ELA (2023).

Species searches from both the NSW BioNet Wildlife Atlas and EPBC PMST were combined to produce a list of threatened species, populations and communities that may occur within the study area. This list was also supplemented or amended based on local ecological knowledge of the area, including known species occurrences. A likelihood of occurrence table for threatened flora, fauna and ecological communities is given in Appendix A.

3.2. Field survey

A field survey was conducted on 6 September 2023 by ELA ecologists Alice Ridyard and Christine Gui. The site inspection was conducted to:

- Validate existing vegetation mapping (DPE 2022) and determine the condition of vegetation communities present and presence of any threatened ecological communities.
- Identify habitat features for potential threatened flora and fauna species within the study area, including hollow-bearing trees, woody debris and creek lines.

- Undertake one Biodiversity Assessment Method (BAM) plot within suitable vegetation.

The field survey validated the boundaries of the vegetation using digitalised maps. When habitat features were present, these were marked using a handheld GPS unit.

3.3. Limitations

The field survey conducted for the preliminary biodiversity report was not intended to provide an inventory of all species across the study area. Instead, it provides an overall assessment of the ecological values of the study area with emphasis on threatened species, endangered communities, and key fauna habitat features. It did not include any targeted flora and/or fauna surveys.

Handheld GPS units were used to collect survey tracks during the field survey. It is noted that these units can have errors in accuracy of up to 20 m (subject to availability of satellites on the day).

All area calculations have been based off the provided plans from the NSW Department of Education (DoE) to inform the study area boundaries.

4. Results

4.1. Data audit and literature review

4.1.1. Soils, topography and hydrology

The majority of the study area is located on South Creek soil landscapes. A small part of the north-western portion of the study area is located on Blacktown soil landscapes.

South Creek soil landscapes are characterised by floodplains, valley flats and drainage depressions on the Cumberland Plain (NSW DCCEEW 2025e). Vegetation associated with South Creek soil landscapes consists of species tolerant to periods of inundation such as *Eucalyptus amplifolia* (Cabbage Gum) and *Casuarina glauca* (Swamp Oak) (NSW DCCEEW 2025e).

Blacktown soil landscapes are characterised by gently undulating rises on Wianamatta Group shales (NSW DCCEEW 2025e). Vegetation associated with Blacktown soil landscapes includes dry sclerophyll open forest or open woodland (NSW DCCEEW 2025e).

There are no waterbodies mapped within the study area (Figure 1). Closest waterbody is an unnamed 2nd order Strahler stream approximately 206 m away (Figure 1).

4.1.2. Vegetation mapping

Previous vegetation mapping under the State Vegetation Type Map (SVTM) (NSW DCCEEW 2025c) was reviewed for vegetation occurring within the study area and surrounding land (Figure 5). The SVTM had no Plant Community Types (PCTs) mapped as occurring within the study area.

The preliminary biodiversity report (ELA 2023) identified all vegetation occurring within the study area as either planted native or exotic vegetation. No remnant vegetation or vegetation consistent with a PCTs was identified during the 2023 surveys or were considered likely to occur. A description of the planted native and exotic vegetation mapped within the study area is provided below (Section 4.2.1).

4.1.3. Threatened species

The search for threatened species using the PMST (DCCEEW 2025a) and BioNet NSW Atlas of Wildlife (NSW DCCEEW 2025a) with a 5 km buffer around the study area and the review of literature resulted in a list of 37 threatened flora species and 72 threatened or migratory fauna species, which are shown in Appendix A.

It should be noted that the result of the PMST, which has been included in Appendix A, is only a list of species based on habitat modelling. Therefore, not all species listed in Appendix A are shown on the maps in this report. BioNet database records for the study area of threatened flora and fauna are shown in Figure 6.

There are no current or historic threatened flora or fauna species BioNet records located within the study area.

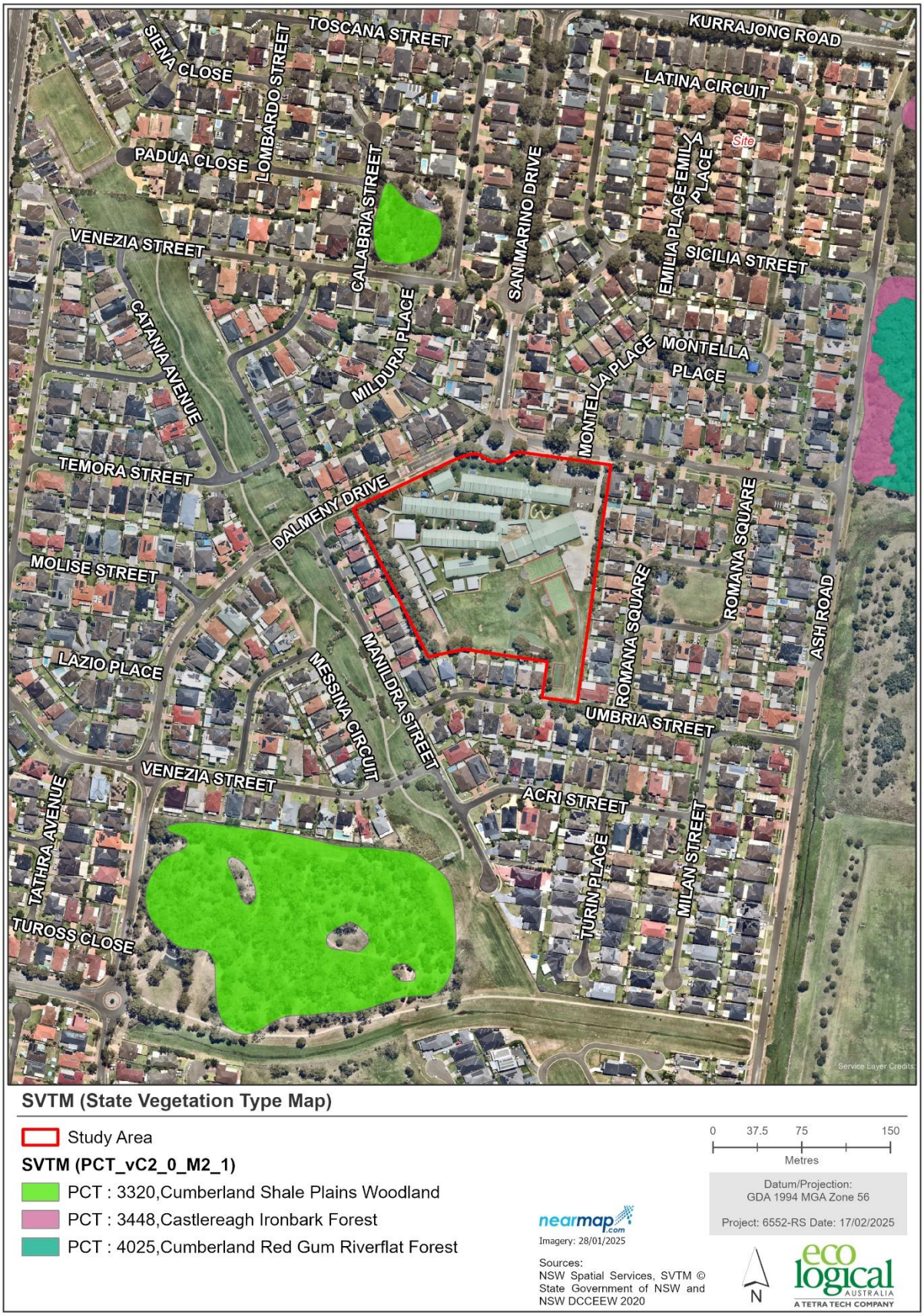

Figure 5: State Vegetation Type Mapping (NSW DCCEEW 2025c)

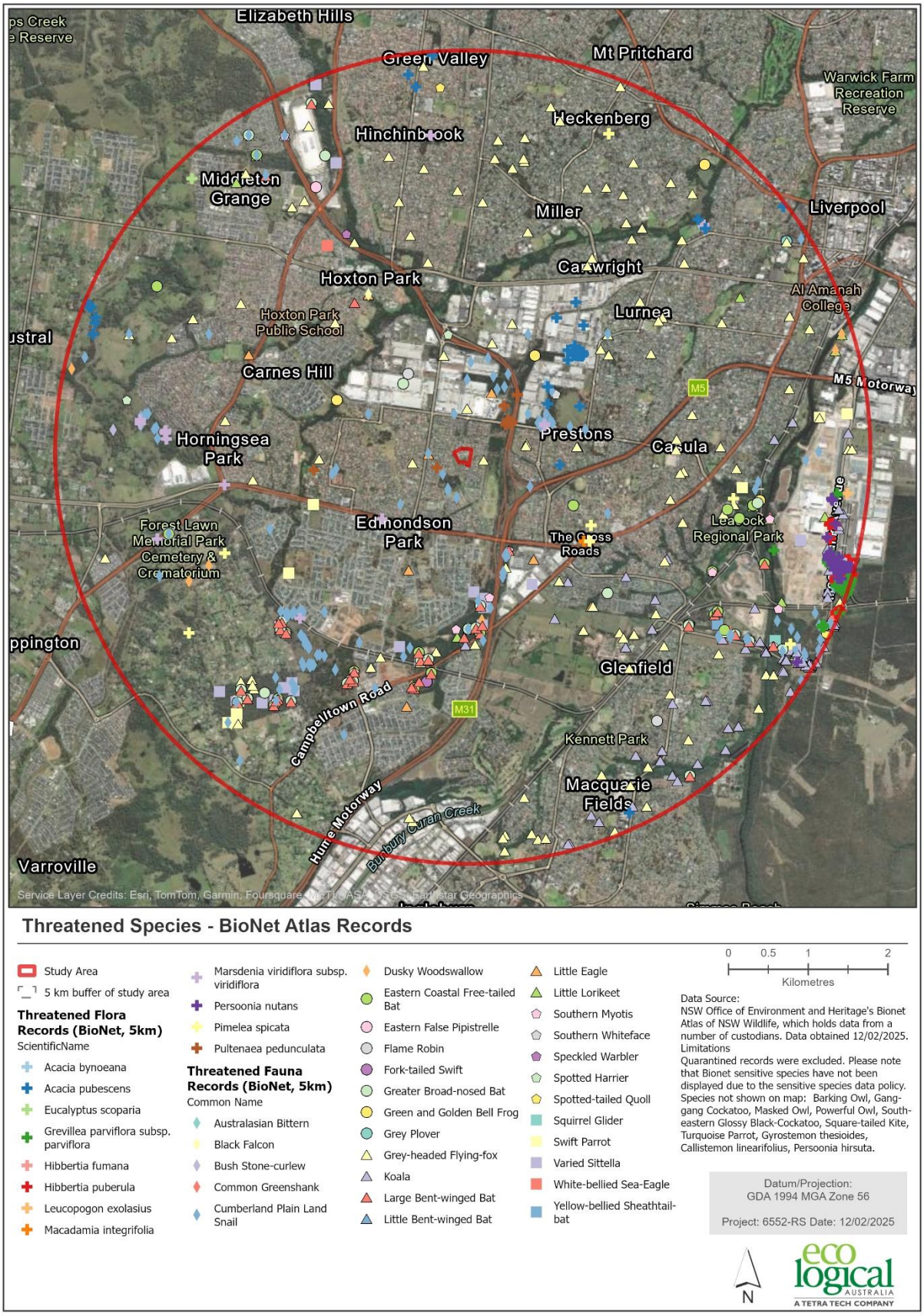

Figure 6: BioNet threatened flora and fauna species records within a 5 km radius of the study area (NSW DCCEEW 2025a)

4.2. Survey results

4.2.1. Vegetation communities

The preliminary biodiversity report (ELA 2023) recorded the vegetation within the study area as planted native and planted exotic vegetation (Figure 7).

4.2.1.1. Planted native

Approximately 0.48 ha of planted native vegetation was mapped within the study area (Figure 8). This vegetation was interspersed around the existing buildings in the northern extent of the study area, in a few patches within the playing field in the southern extent of the study area and along the border of the study area. This vegetation does not conform to a native PCT.

Commonly planted native canopy species amongst the buildings and in the playing field included *Araucaria cunninghamii* (Hoop Pine), *Corymbia maculata* (Spotted Gum), *Melaleuca linariifolia* (Flax-leaved Paperbark) and *Melaleuca decora*. There was the occasional midstorey plant, including a few rows of *Syzygium australe* (Brush Cherry). The ground layer was generally bark chips or artificial grass in modified planting areas. Occasional planted native groundcover species such as *Lomandra longifolia* (Spiny-headed Mat-rush) or exotic weed, such as *Ehrharta erecta* (Panic Veldtgrass) was recorded. This vegetation was not characteristic of any of the native PCT assemblages mapped in the surrounding area (Figure 5).

The planted native vegetation along the western border of the study area was characterised by canopy species of similar diameter and ages (most were approximately 20-30 cm) within no midstorey and a sparse ground layer. The canopy was dominated by *Eucalyptus tereticornis* (Forest Red Gum), *Eucalyptus moluccana* (Grey Box), and *Eucalyptus amplifolia* (Cabbage Gum). These canopy species are characteristic species of PCT 4025 – Cumberland Red Gum Riverflat Forest. However, it is believed that the vegetation in this area is planted, as:

- The entire study area was cleared prior to the school being constructed as shown in Figure 6.
- The trees are similar in diameter and height.
- There is no adjoining remnant vegetation.
- The soil profile has been significantly altered and there is no evidence of regeneration from the soil seed bank during field surveys.
- It does not occur within an area that contains a mosaic of planted and remnant native vegetation where the planted native vegetation is a minor component (DPE 2022b).

Therefore, the strip of vegetation along the western boundary of the study area has been identified as planted native vegetation. The ground storey was mostly leaf litter and exotic grasses, such as *Ehrharta erecta* (Panic Veldtgrass) and *Poa annua* (Winter Grass), with a scattering of native species such as *Einadia hastata* (Berry Saltbush) and *Einadia nutans* (Climbing Saltbush).

Along other areas of the study area boundary planted native species included *Corymbia maculata* and *Eucalyptus nicholii* (Narrow-leaved Black Peppermint). *Eucalyptus nicholii* is listed vulnerable under the BC Act and EPBC Act. However, according to the NSW species profile, this species is also a commonly planted specimen in urban landscapes (OEH 2020) and is not considered a threatened species outside of its natural geographic range. This is further discussed below in section 4.2.2.

4.2.1.2. Planted exotic

Approximately 0.04 ha of exotic vegetation interspersed with the buildings, and included canopy species *Cupressus* sp. (Cypress), *Platanus x hispanica 'Acerifolia'* (London Plane) and *Morus* sp. (Mulberry) (Figure 9). There was the occasional midstorey species, such as *Nandina domestica* (Sacred Bamboo). The ground layer was typically bark chips or artificial grass, with the occasional exotic such as *Cynodon dactylon* (Couch), *Trifolium repens* (White Clover) or *Taraxacum officinale* (Dandelion). This vegetation does not conform to a native vegetation community.

4.2.1.3. Exotic grasses

The remaining vegetation within the study area consisted of regularly mown groundcover of exotic grasses, such as *Cenchrus clandestinus* (Kikuyu), *Cynodon dactylon* (Couch), *Trifolium repens* (White Clover) and *Poa annua* (Winter Grass) (Figure 10). This vegetation does not conform to a native vegetation community.

Figure 7: Validated vegetation (ELA 2025)

Figure 8: Planted native vegetation in the western portion of the study area.

Figure 9: Planted exotic vegetation amongst the buildings.

Figure 10: Exotic grasses in the playing field in the southern portion of the study area.

4.2.2. Flora species

One threatened flora species, in the form of a *Eucalyptus nicholii* (Narrow-leaved Black Peppermint) was identified in the AIA occurring in the north-east corner of the study area. *Eucalyptus nicholii* is listed as vulnerable under both the BC Act and EPBC Act. It has a highly restricted geographic distribution which includes the NSW Northern Tablelands such as Namoi, NSW (DAWE 2008). Namoi is approximately 825 km north of the study area and is not within the natural distribution for this species.

According to the NSW threatened species profile (OEH 2008) this species is also a commonly planted species within the Sydney Basin bioregion. Individuals that occur within the Sydney Basin are not considered to meet the threatened species criteria for the following reasons:

- The species is outside of its naturally occurring geographical range (NSW DCCEEW 2025b and OEH 2008)
- It does not occur within natural habitat for this species i.e. grassy or sclerophyll woodlands (OEH 2008).
- The species is not associated with any the mapped PCTs occurring in the surrounding landscape (NSW DCCEEW 2025c).

Based on the above, the *E. nicholii* specimen located within the study area does not represent a threatened entity under the BC Act or EPBC Act. This tree has been identified for removal as part of the

proposed works. However, test of significance under the BC Act and assessment of significance under the EPBC Act are not required for this species.

No other threatened species were identified within the study area during field surveys.

No priority weeds or Weeds of National Significance were identified as occurring within the study area.

4.2.3. Fauna species and their habitat

Field surveys, conducted by ELA in 2023, identified a list of fauna species, presented in Appendix B. No threatened fauna species were identified during the field survey.

Canopy species identified within the planted native vegetation within the study area may provide foraging habitat for highly mobile species such as *Pteropus poliocephalus* (Grey-headed Flying-fox). Due to the limited amount of potential foraging vegetation present, these trees may only be used on occasion by highly mobile threatened species as they move across the landscape. No other potential threatened fauna habitat was identified within the study area.

5. Impact assessment

5.1. Introduction

The potential impact of the proposal to threatened species and communities listed under the BC Act and EPBC Act was assessed by undertaking an assessment of likelihood of occurrence for threatened ecological communities and threatened and migratory species identified from the database search (Appendix A).

No Tests of Significance under the BC Act or Assessment of Significance under the EPBC Act were required for threatened species or TECs after considering both the desktop review and the field survey results.

Highly mobile threatened species which are wide-ranging and dispersive may still utilise the study area on occasion for foraging. The proposed activity would not affect any habitat that is important to the survival of these species and therefore no BC Act Test of Significance or EPBC Act Significant Impact Criteria was applied.

5.2. Direct impacts

Direct impacts during the construction phase and long-term impacts post construction have been considered for this impact assessment. The proposed construction of a two-storey building featuring multiple learning spaces and associated infrastructure will have a small impact on planted native and exotic vegetation.

A summary of the potential impacts has been provided in Table 3.

Table 3: Summary of potential impacts to vegetation communities in study area

Vegetation community	Total area in study area (ha)	Direct impact (ha)
Planted native vegetation	0.48	0.02

Direct impacts are those impacts that directly affect habitat and individuals. Direct impacts considered for this assessment includes the removal of planted vegetation. The proposed activity is likely to result in the following direct impact:

- removal of planted native vegetation.

5.2.1. Removal of native vegetation

Based on the final design, the proposed activity will result in the removal of approximately 0.02 ha of planted native vegetation.

5.3. Indirect impacts

Indirect impacts may result from proposed works undertaken during the construction phase of the activity. Indirect impacts are those impacts that may affect habitat or biodiversity values indirectly and can include entities within the activity footprint or those external. The proposed activity may result in the following indirect impact:

- Sediment erosion and run-off during earthworks.

5.4. Biodiversity Conservation Act 2016

Impacts to threatened species and threatened ecological communities listed under the BC Act are required to be assessed in accordance with Section 7.3 of the BC Act, known as 'Test of Significance' (also known as a 5-part test).

For assessments under Part 5 of the EP&A Act the biodiversity offsets scheme threshold is not required to be applied, as specified in section 7.2 (2). Declared areas of 'outstanding biodiversity value' under section 7.2 (1c) must still be considered.

For a Part 5 assessment, if the conclusion of the tests of significance is that there is potential for a significant impact on a threatened species or ecological community, then the proponent has the option of preparing a Species Impact Statement (SIS), or a Biodiversity Development Assessment Report (BDAR).

The test of significance is used to determine if the activity is likely to have a significant impact on any threatened species, populations or ecological communities. If a significant impact is indicated by the test of significance, and the proponent decides to prepare a BDAR, then the proposal would trigger the Biodiversity Offsets Scheme (BOS), and a Biodiversity Assessment Method 2020 (BAM) assessment is required.

A Test of Significance under the BC Act was required for Grey-headed Flying-fox (Appendix B) due to the findings of the likelihood of occurrence assessment (Appendix A), after considering both the desktop review and the field survey results.

5.4.1. Key Threatening Processes

No Key Threatening Processes listed under the BC Act or EPBC Act are relevant to the proposed activity.

5.5. EPBC Act – Assessment of Significance

The EPBC Act establishes a process for assessing the environmental impact of activities and developments where 'Matters of National Environmental Significance' (MNES) may be affected. Under the Act any action which "has, will have, or is likely to have a significant impact on a Matter of National Environmental Significance" is defined as a "controlled action", and requires approval from the Commonwealth DCCEEW which is responsible for administering the EPBC Act.

An Assessment of Significance under the EPBC Act was required for Grey-headed Flying-fox (Appendix C) due to the findings of the likelihood of occurrence assessment (Appendix A), after considering both the desktop review and the field survey results.

6. Mitigation measures

To prevent direct and indirect impacts from the proposal on adjacent planted native vegetation within the study area, the following general mitigation measures are recommended, and additional specific controls are provided in Table 4:

- Native vegetation:
  - Tree protection fencing is established around any proposed trees to be retained within the vicinity of the proposed buildings to be constructed and / or removed.
  - Pre-clearance surveys of potential habitat (e.g. trees for nesting birds / arboreal mammals) prior to removal.
  - Supplement removal of native vegetation through planting of locally native canopy species in landscaping plans.
- Sediment and erosion control plan is required prior to removal of vegetation or on ground works.
- Soil and weed controls are required to prevent the introduction of soil pathogens or weed propagules into the study area.

6.1. Evaluation of Environmental Impacts

This FFA has assessed the impacts of the proposed activity to determine if the works are likely to have a significant impact upon biodiversity values. As previously stated, the activity is unlikely to impact upon species listed under the BC Act or EPBC Act. This FFA report has also assessed the proposed activity in relation to impacts to other biodiversity values. The activity is unlikely to have a significant impact on biodiversity values for the following reasons:

- the activity is small in nature, i.e. approximately 0.02 ha of native vegetation
- there is no remnant native vegetation occurring within the study area as shown on SVTM (Figure 5) or by results of the field validation (Figure 7)
- there is no threatened species or potential habitat for threatened species present in the study area
- the mitigation measures provided in Table 4 are sufficient to mitigate direct or indirect impacts.

Table 4: Recommendations for mitigation measures

Mitigation number / name	When is mitigation measure to be complied with	Mitigation measure	Reason for mitigation measure
1. Native vegetation	Before and during construction phase.	• Pre-works briefings are to be undertaken by staff advising contractors or workers of sensitive areas and the relevant safeguards for each. • The extent of works must be clearly pegged or marked out by a surveyor prior to vegetation removal. • Tree protection fencing is established around any proposed trees to be retained within the vicinity of the proposed buildings to be constructed and / or removed. • Pre-clearance survey is undertaken by an ecologist or similarly qualified personnel to identify any potential fauna habitat present in vegetation proposed for removal. • Supplement removal of planted native vegetation with planting of locally native canopy species in landscaping plans. Replanting of trees to be removed to occur with a proposed replenishment ratio of 2:1. Recommended tree species for replanting, based on surrounding vegetation mapped by the SVTM (Figure 5) as well as those which will supplement the removal of foraging habitat for Grey-headed Flying-fox, include *Eucalyptus fibrosa*, *E. moluccana* and *E. tereticornis*.	• Prevent accidental impacts to native vegetation proposed for retention / outside of proposed works.
2. Sediments and erosion control	Before and during construction phase.	• Avoid conducting works after or before any forecasted significant rainfall. • Soil and erosion control measures such as sediment fencing may be required prior to on-ground works. These are to be inspected regularly (weekly), and more frequently during rain periods to ensure structures are in proper working order.	• Prevent potential indirect impacts to retained vegetation or potential threatened species habitat within the study area caused by run-off.
3. Pathogens and weed propagules control	Before and during construction phase.	• Ensure all equipment and footwear is thoroughly cleaned prior to commencement of works and when entering new sites. • Wash down procedure should be established for machinery entering or exiting the site to limit weed spread or disease.	• Prevent accidental introduction of soil pathogens, fungus or weed propagules into the study area during construction.

7. Conclusion

Eco Logical Australia was commissioned by DoE c/o RP Infrastructure to prepare a Flora and Fauna Assessment (FFA) report for the Dalmeny Public School Upgrades. This assessment utilised the preliminary biodiversity report (ELA 2023) and AIA (Laurence & Co 2025) prepared for DoE and updated literature reviews to assess the impacts of the proposed the activity on biodiversity values.

No remnant native vegetation was recorded within the study area. All vegetation present within the study area was validated as either planted native or planted exotic vegetation. The impact assessment determined that the proposed activity would involve the removal of 0.02 ha of planted native vegetation within the study area.

One threatened flora species was identified to be removed in the study area in the form of *Eucalyptus nicholii*. This species is listed as vulnerable under both the BC Act and EPBC Act. However, this species is also a commonly planted landscape species in the Sydney Basin bioregion. Therefore, this individual is not considered to conform to the threatened species as the study area is outside of the species natural range and there are no PCTs within the surrounding area that the species is associated with.

No other threatened flora or fauna species were identified in the study area during field surveys.

The potential impact of the proposal to threatened species and communities listed under the BC Act and EPBC Act was assessed by undertaking a Likelihood of Occurrence Assessment for threatened ecological communities and threatened and migratory species identified from the database search. A Test of Significance under the BC Act and an Assessment of Significance under the EPBC Act were undertaken for Grey-headed Flying-fox due to the findings of the Likelihood of Occurrence Assessment (Appendix A). Both assessments concluded that the proposed activity is unlikely to result in a significant impact to Grey-headed Flying-fox.

Mitigation measures have been provided to prevent direct or indirect impacts to native planted vegetation to be retained within the study area. Following these mitigation measures, it is unlikely the proposed activity will have a significant effect on the biodiversity values. Therefore, a Biodiversity Development Assessment Report or Species Impact Statement are not required.

8. References

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Appendix A Likelihood of occurrence

The table below provides the collated results from the 5 km database searches (buffered around the study site) of the NSW Wildlife Atlas and the EPBC Protected Matters Search Tool. An assessment of likelihood of occurrence was made for threatened and migratory species identified from the database searches. Five terms for the likelihood of occurrence of species are used in this report. This assessment was based on database or other records, presence or absence of suitable habitat and features of the proposal site as presented within the results of the preliminary reports, and professional judgement. The terms for likelihood of occurrence are defined below:

- "yes" the species was or has been observed on the site
- "likely" a medium to high probability that a species uses the site
- "potential" suitable habitat for a species occurs on the site, but there is insufficient information to categorise the species as likely to occur, or unlikely to occur
- "unlikely" a very low to low probability that a species uses the site
- "no" habitat on site and in the vicinity is unsuitable for the species.

The likelihood of occurrence was only one factor among other factors, which was used to determine whether to apply the Assessment of Significance' (5-part test) and/or EPBC Significant Impact Criteria assessments to threatened species, populations, communities or migratory species.

Table 5: Likelihood of occurrence for ecological communities

BC Act name	BC Act status	EPBC Act name	EPBC Act status	Distribution and habitat	Likelihood of occurrence	Impact assessment required
Agnes Banks woodland in the Sydney Basin Bioregion	E	*Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion*	E	Dominated by *Eucalyptus parramattensis* subsp. *parramattensis, Angophora bakeri* and *E. sclerophylla*. A small tree stratum of *Melaleuca decora* is sometimes present, generally in areas with poorer drainage. It has a well-developed shrub stratum consisting of sclerophyllous species such as *Banksia spinulosa* var. *spinulosa, Melaleuca nodosa, Hakea sericea and H. dactyloides* (multi-stemmed form). The ground stratum consists of a diverse range of forbs *including Themeda australis, Entolasia stricta, Cyathochaeta diandra, Dianella revoluta* subsp. *revoluta, Stylidium graminifolium, Platysace ericoides, Laxmannia gracilis* and *Aristida warburgii*. Occurs within the local government areas of Bankstown, Blacktown, Campbelltown, Hawkesbury, Liverpool and Penrith. Mainly found in the Castlereagh area of the Cumberland Plain, with small patches occurring at Kemps Creek and Longneck Lagoon; also present around Holsworthy.	No	No, these communities were not recorded occurring within the study area.
Castlereagh Scribbly Gum Woodland in the Sydney Basin Bioregion	V					
Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E	*Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community*	E	This ecological community is associated with grey-black clay-loams and sandy loams, where the groundwater is saline or sub-saline, on waterlogged or periodically inundated flats, drainage lines, lake margins and estuarine fringes associated with coastal floodplains. Floodplains are level landform patterns on which there may be active erosion and aggradation by channelled and overbank stream flow with an average recurrence interval of 100 years or less. Swamp Oak Floodplain Forest generally occurs below 20 m (rarely above 10 m) elevation in the NSW North Coast, Sydney Basin and South East Corner	No	No, these communities were not recorded occurring within the study area.

BC Act name	BC Act status	EPBC Act name	EPBC Act status	Distribution and habitat	Likelihood of occurrence	Impact assessment required
				bioregions. The structure of the community may vary from open forests to low woodlands, scrubs or reedlands with scattered trees. Typically, these forests, woodlands, scrubs and reedlands form mosaics with other floodplain forest communities and treeless wetlands, and often they fringe treeless floodplain lagoons or wetlands with semi-permanent standing water.		
Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E	*Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland*	E	The most widespread and abundant dominant trees include *Eucalyptus robusta* (Swamp Mahogany), *Melaleuca quinquenervia* (Paperbark) and, south from Sydney, *Eucalyptus botryoides* (Bangalay) and *Eucalyptus longifolia* (Woollybutt). Known from parts of the Local Government Areas of Tweed, Byron, Lismore, Ballina, Richmond Valley, Clarence Valley, Coffs Harbour, Bellingen, Nambucca, Kempsey, Hastings, Greater Taree, Great Lakes and Port Stephens, Lake Macquarie, Wyong, Gosford, Hornsby, Pittwater, Warringah, Manly, Liverpool, Rockdale, Botany Bay, Randwick, Sutherland, Wollongong, Shellharbour, Kiama and Shoalhaven. Associated with humic clay loams and sandy loams, on waterlogged or periodically inundated alluvial flats and drainage lines associated with coastal floodplains. Generally, occurs below 20 m (though sometimes up to 50 m) elevation.	No	No, these communities were not recorded occurring within the study area.
Coastal Upland Swamps in the Sydney Basin Bioregion	E	*Coastal Upland Swamps in the Sydney Basin Bioregion*	E	May include tall open scrubs, tall, closed scrubs, closed heaths, open graminoid heaths, sedgelands and fernlands. Larger examples may include a complex of these structural forms. Endemic to NSW and confined to the Sydney Basin Bioregion. It occurs in the eastern Sydney Basin from the Somersby	No	No, these communities were not recorded occurring within the study area.

BC Act name	BC Act status	EPBC Act name	EPBC Act status	Distribution and habitat	Likelihood of occurrence	Impact assessment required
				district in the north (Somersby-Hornsby plateaux) to the Robertson district in the south (n the Woronora plateau). Occur primarily on impermeable sandstone plateaux with shallow groundwater aquifers in the headwaters and impeded drainage lines of streams, and on sandstone benches with abundant seepage moisture. Generally associated with acidic soils.		
Cooks River/Castlereagh Ironbark Forest in the Sydney Basin Bioregion	E	*Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion*	CE	Ranges from open forest to low woodland, with a canopy dominated by *Eucalyptus fibrosa* (Broad-leaved Ironbark) and *Melaleuca decora* (Paperbark). The canopy may also include other eucalypts such as *E. longifolia* (Woollybut). The dense shrubby understorey consists of *Melaleuca nodosa* (Prickly-leaved Paperbark) and *Lissanthe strigosa* (Peach Heath), with a range of 'pea' flower shrubs, such as *Dillwynia tenuifolia, Pultenaea villosa* (Hairy Bush-pea) and *Daviesia ulicifolia* (Gorse Bitter Pea). The sparse ground layer contains a range of grasses and herbs. Occurs in western Sydney, with the most extensive stands occurring in the Castlereagh and Holsworthy areas. Smaller remnants occur in the Kemps Creek area and in the eastern section of the Cumberland Plain.	No	No, these communities were not recorded occurring within the study area.
Cumberland Plain Woodland in the Sydney Basin Bioregion	CE	*Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest*	CE	The Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest typically occurs on flat to undulating or hilly terrain, at elevations up to approximately 350 metres above sea level. Some	No	No, these communities were not recorded occurring within the study area.

BC Act name	BC Act status	EPBC Act name	EPBC Act status	Distribution and habitat	Likelihood of occurrence	Impact assessment required
Shale Gravel Transition Forest in the Sydney Basin Bioregion	E			occurrences may extend onto locally steep sites at slightly higher elevations. Predominantly associated with clay soils, that are derived from Wianamatta Shale geology.		
River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E	*River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales and eastern Victoria*	CE	Found on the river flats of the coastal floodplains. Known from parts of the Local Government Areas of Port Stephens, Maitland, Singleton, Cessnock, Lake Macquarie, Wyong, Gosford, Hawkesbury, Baulkham Hills, Blacktown, Parramatta, Penrith, Blue Mountains, Fairfield, Holroyd, Liverpool, Bankstown, Wollondilly, Camden, Campbelltown, Sutherland, Wollongong, Shellharbour, Kiama, Shoalhaven, Palerang, Eurobodalla and Bega Valley. Associated with silts, clay-loams and sandy loams, on periodically inundated alluvial flats, drainage lines and river terraces associated with coastal floodplains.	No	No, these communities were not recorded occurring within the study area.
Shale Sandstone Transition Forest in the Sydney Basin Bioregion	CE	*Shale Sandstone Transition Forest of the Sydney Basin Bioregion*	CE	Occurs on areas transitional between the clay soils derived from Wianamatta Shale and the sandy soils derived from Hawkesbury Sandstone on the margins of the Cumberland Plain. Occurs or has occurred in the Bankstown, Baulkham Hills, Blue Mountains, Campbelltown, Hawkesbury, Liverpool, Parramatta, Penrith, and Wollondilly Local Government Areas (LGAs). The floristic composition of the community includes species otherwise characteristic of, or occurring in, either sandstone or shale habitats. The structure of the community is forest or woodland.	No	No, these communities were not recorded occurring within the study area.
Tableland Basalt Forest in the Sydney Basin and	E	*Upland Basalt Eucalypt Forests of the Sydney Basin Bioregion*	E	Typically occurs as an open to tall open forest with a sparse to dense layer of shrubs and vines, and a diverse understorey of native grasses, forbs, twiners	No	No, these communities were not recorded

BC Act name	BC Act status	EPBC Act name	EPBC Act status	Distribution and habitat	Likelihood of occurrence	Impact assessment required
South Eastern Highlands Bioregions				and ferns. Dominant canopy species are most often *Eucalyptus fastigata* (Brown Barrel), *E. viminalis* (Ribbon Gum) and *E. radiata* subsp. *radiata* (Narrow-leaved Peppermint). *Eucalyptus obliqua* (Messmate Stringybark), *E. elata* (River Peppermint), *E. quadrangulata* (White-topped Box) and *E. smithii* (ironbark peppermint) are also common. Generally confined to the Sydney Basin bioregion, including the Moss Vale, Ettrema, Burragorang, Sydney Cataract, and Wollemi IBRA sub-regions. However, some patches may extend into in the Kanangra and Oberon IBRA sub-regions of the South Eastern Highlands bioregion. Found on igneous rock (predominately Tertiary basalt and microsyenite). Typically occurs at elevations between 650 and 1050 m above sea level.		occurring within the study area.
Moist Shale Woodland in the Sydney Basin Bioregion	E	*Western Sydney Dry Rainforest and Moist Woodland on Shale*	CE	Typically, a low closed forest, slightly more open in the moist woodland form, with emergent trees up to 25 m high and a lower tree layer. In sheltered gullies and on lower slopes the canopy layer is typically dominated by *Melaleuca styphelioides* (prickly-leaved paperbark). Other diagnostic tree species include *Acacia implexa* (hickory wattle), *Alectryon subcinereus* (native quince), *Brachychiton populneus* (kurrajong), *Corymbia maculata* (spotted gum), *Melicope micrococca* (white euodia) and *Streblus pendulinus* (whalebone tree).	No	No, these communities were not recorded occurring within the study area.

BC Act name	BC Act status	EPBC Act name	EPBC Act status	Distribution and habitat	Likelihood of occurrence	Impact assessment required
Western Sydney Dry Rainforest in the Sydney Basin Bioregion	E			Generally, on upper slopes to undulating terrain, or at more disturbed sites, the ecological community exhibits its moist woodland form with the canopy dominated by *Eucalyptus moluccana, Eucalyptus tereticornis, Eucalyptus crebra* and/or *Corymbia maculata*. Characteristic shrub species include *Breynia oblongifolia* (false coffee bush), *Clerodendrum tomentosum* (hairy clerodendrum) and *Notelaea longifolia f. longifolia* (large mock-olive). Vines and other climber species are typically common. The ground layer is variable and generally sparse with a diverse mix of forbs, ferns and shade-tolerant grasses. Cumberland Plain Sub-region of the Sydney Basin Bioregion.		

BC ACT STATUS: CE = CRITICALLY ENDANGERED; E = ENDANGERED; EPBC ACT STATUS: CE = CRITICALLY ENDANGERED, E = ENDANGERED

Table 6: Likelihood of occurrence assessment for threatened fauna and flora species

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
Amphibians							
Heleioporus australiacus	Giant Burrowing Frog	V	V	Heath, woodland and open dry sclerophyll forest on a variety of soil types except those that are clay based. Spends more than 95% of its time in non-breeding habitat in areas up to 300 m from breeding sites. Whilst in non-breeding habitat it burrows below the soil surface or in the leaf litter. Individual frogs occupy a series of burrow sites, some of which are used repeatedly. The home ranges of both sexes appear to be non-overlapping suggesting exclusivity of non-breeding habitat. Home ranges are approximately 0.04 ha in size. When breeding, frogs will call from open spaces, under vegetation or rocks or from within burrows in the creek bank. Males show strong territoriality at breeding sites. This species breeds mainly in autumn but has been recorded calling throughout the year. Breeding habitat of this species includes soaks or pools within first or second order streams.	0	No	No, no potential breeding habitat recorded within study area. Study area does not meet conditions for non-breeding habitat. No local records.
Litoria aurea	Green and Golden Bell Frog	E1	V	Recorded from ~ 50 scattered sites within its former range in NSW, from the north coast near Brunswick Heads, south along the coast to Victoria. Records exist west to Bathurst, Tumut and the ACT region. Marshes, dams and stream-sides, particularly those containing *Typha spp.* (bullrushes) or *Eleocharis spp.* (spikerushes). Some populations occur in highly disturbed areas.	7	No	No. No marshes, dams or streams recorded in the study area containing preferred habitat or vegetation.
Aves							

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
Actitis hypoleucos	Common Sandpiper	-	M	Summer migrant. In NSW, widespread along coastline and occurs in many areas inland. Coastal wetlands and some inland wetlands, especially muddy margins, or rocky shores. Also, estuaries and deltas, lakes, pools, billabongs, reservoirs, dams and claypans, mangroves.	0	No	No, no preferred wetland habitat recorded within the study area. No local records.
Anthochaera phrygia	Regent Honeyeater	CE	CE	Inland slopes of south-east Australia, and less frequently in coastal areas. In NSW, most records are from the North-West Plains, North-West and South-West Slopes, Northern Tablelands, Central Tablelands and Southern Tablelands regions; also recorded in the Central Coast and Hunter Valley regions. Eucalypt woodland and open forest, wooded farmland and urban areas with mature eucalypts, and riparian forests of *Casuarina cunninghamiana* (River Oak).	1	Unlikely	No, limited potential foraging habitat recorded within the study area. Low number of local records.
Aphelocephala leucopsis	Southern Whiteface	V	V	Inhabits drier open forests, woodlands and shrublands with an understorey of grasses or shrubs, where it often forages on the ground in small flocks. Breeds between July to October, with inland breeding time influenced by rainfall. Builds dome nest in hollow limbs or foliage as well as man-made infrastructure such as stumps, fence posts or in sheds.	2	Unlikely	No, preferred grass understorey habitat not recorded within the study area. Low number of local records.
Apus pacificus	Fork-tailed Swift	-	M	Non-breeding visitor to Australia, arriving in October and departing in April. Occur over riparian woodland, swamps, low scrub, heathland, saltmarsh, grassland, Spinifex sandplains, open farmland and inland and coastal sand-dunes.	1	Unlikely	No, the species may potentially forage aerially above the study area. However, the species spends the majority of its life in the air. Low number of local records.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
Artamus cyanopterus cyanopterus	Dusky Woodswallow	V	-	Primarily inhabit dry, open eucalypt forests and woodlands, including mallee associations, with an open or sparse understorey of eucalypt saplings, acacias and other shrubs, and groundcover of grasses or sedges and fallen woody debris. It has also been recorded in shrublands, heathlands and very occasionally in moist forest or rainforest. Also found in farmland, usually at the edges of forest or woodland.	19	Unlikely	No, limited potential habitat recorded within the study area. Study area not adjacent to larger patches of forest or woodland.
Botaurus poiciloptilus	Australasian Bittern	E1	E	Found over most of NSW except for the far north-west. Permanent freshwater wetlands with tall, dense vegetation, particularly *Typha spp.* (bullrushes) and *Eleocharis spp.* (spikerushes).	1	No	No, preferred wetland habitat containing preferred vegetation not recorded within the study area. Low number of local records.
Burhinus grallarius	Bush Stone-curlew	E1	-	Found sporadically in coastal areas of NSW. Inhabits lowland grassy woodland and open forest with sparse ground layer and fallen timber. Forages in a range of habitats, including grasslands, woodlands, saltmarsh, paddocks, domestic gardens and playing fields. A nocturnal species.	4	Unlikely	No, limited potential habitat within the study area. Limited connectivity to bushland in surrounding area. Low number of local records.
Calidris acuminata	Sharp-tailed Sandpiper	-	V, M	Summer migrant. Widespread in most regions of NSW, especially in coastal areas, but sparse in the south-central Western Plain and east Lower Western Regions. Shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation.	0	No	No, no preferred wetland habitat recorded within the study area. No local records.
Calidris ferruginea	Curlew Sandpiper	CE	CE, M	Occurs along the entire coast of NSW, and sometimes in freshwater wetlands in the Murray-Darling Basin. Littoral and estuarine habitats, including intertidal mudflats, non-tidal swamps, lakes and lagoons on the coast and sometimes inland.	0	No	No, no preferred wetland habitat recorded within the study area. No local records.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
Calidris melanotos	Pectoral Sandpiper	-	M	Summer migrant to Australia. Widespread but scattered in NSW. East of the Great Divide, recorded from Casino and Ballina, south to Ulladulla. West of the Great Divide, widespread in the Riverina and Lower Western regions. Shallow fresh to saline wetlands, including coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands.	0	No	No, no preferred wetland habitat recorded within the study area. No local records.
Callocephalon fimbriatum	Gang-gang Cockatoo	E1	E	In NSW, distributed from the south-east coast to the Hunter region, and inland to the Central Tablelands and south-west slopes. Isolated records known from as far north as Coffs Harbour and as far west as Mudgee. Mature, tall mountain forests and woodlands with dense, shrubby understorey in summer; in winter, may occur at lower altitudes in open eucalypt forests and woodlands, occasionally in more urban areas. Critical habitat are HBTs occurring within stands of trees, dominated by Eucalypt species.	3	Unlikely	No, limited potential foraging habitat recorded within the study area. No breeding habitat recorded within the study area. Low number of local records.
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	V	V	In NSW, widespread along coast and inland to the southern tablelands and central western plains, with a small population in the Riverina. Open forest and woodlands of the coast and the Great Dividing Range where stands of she-oak occur, with the species normally relying on one or two species within a region. The species relies on HBTs as breeding habitat, with hollows most often occurring more than 8 m above ground, in branches > 30 cm in diameter and no more than 45° from vertical.	7	No	No, no potential foraging habitat recorded within the study area. No breeding habitat recorded within the study area.
Charadrius leschenaultii	Greater Sand Plover	V	M	In NSW, recorded between the northern rivers and the Illawarra, with most records coming from the Clarence and Richmond estuaries. Almost entirely restricted to	0	No	No, no preferred wetland habitat recorded within the study area. No local records.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				coastal areas in NSW, mainly on sheltered sandy, shelly or muddy beaches or estuaries with large intertidal mudflats or sandbanks.			
Chthonicola sagittata	Speckled Warbler	V	-	From south-eastern Qld, the eastern half of NSW and into Victoria, as far west as the Grampians, mostly on hills and tablelands of the Great Dividing Range and rarely on coast. Occurs in Eucalyptus-dominated communities with a grassy understorey and sparse shrub layer, often on rocky ridges or in gullies. Pairs are sedentary and occupy a home / breeding territory.	2	Unlikely	No, preferred habitat containing grassy understorey not recorded within the study area. Low number of local records.
Circus assimilis	Spotted Harrier	V	-	Found throughout the Australian mainland, except in densely forested or wooded habitats, and rarely in Tasmania. Occurs in grassy open woodland including *Acacia* and mallee remnants, inland riparian woodland, grassland and shrub steppe. It is found most commonly in native grassland, but also occurs in agricultural land, foraging over open habitats including edges of inland wetlands. Builds a stick nest in a tree and lays eggs in spring (or sometimes autumn), with young remaining in the nest for several months.	2	Unlikely	No, limited potential breeding habitat recorded within the study area. No foraging habitat recorded within the study area. Low number of local records.
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	V	V	From eastern through central NSW, west to Corowa, Wagga Wagga, Temora, Forbes, Dubbo and Inverell. Eucalypt woodlands and dry open forest. Hollows in standing dead or live trees, and tree stumps are essential for nesting. Critical habitat includes areas with relatively undisturbed grassy woodland with a native understorey containing large living and dead trees for roosting and nesting and fallen timber which provides essential foraging habitat.	0	No	No, preferred undisturbed habitat not recorded within the study area. No breeding habitat identified recorded within the study area. No local records.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
Cuculus optatus	Oriental Cuckoo	-	M	Summer migrant to Australia. Mainly seen in northern Australia, occasionally they are sighted as far south as Sydney. They are more widespread in the Top End and coastal Queensland with the odd vagrant records south to the Pilbara. Oriental Cuckoos are found in more humid habitats such as monsoon forest, wet eucalypt forest, river margins and near mangroves.	0	No	No, preferred habitat not recorded within the study area. Study area outside of species typical distribution. No local records.
Daphoenositta chrysoptera	Varied Sittella	V	-	The Varied Sittella is sedentary and inhabits most of mainland Australia except the treeless deserts and open grasslands. Distribution in NSW is nearly continuous from the coast to the far west. Inhabits eucalypt forests and woodlands, especially those containing rough-barked species and mature smooth-barked gums with dead branches, mallee and *Acacia* woodland. Builds a cup-shaped nest of plant fibres and cobwebs in an upright tree fork high in the living tree canopy and often re-uses the same fork or tree in successive years.	34	Unlikely	No, limited potential habitat within the study area. Limited connectivity to other potential habitat in the surrounding area.
Epthianura albifrons	White-fronted Chat	V	-	Occurs mostly in the southern half of the state, in damp open habitats along the coast, and near waterways in the western part of the state. Saltmarsh vegetation, open grasslands and sometimes low shrubs bordering wetland areas.	2	Unlikely	No, preferred habitat not recorded within the study area. Low number of local records.
Erythrotriorchis radiatus	Red Goshawk	E1	E	In NSW, range extends to approximately 30°S. Open woodland and forest, often along or near watercourses or wetlands. In NSW, preferred habitats include mixed subtropical rainforest, *Melaleuca* swamp forest and coastal riparian *Eucalyptus* forest.	0	No	No, suitable habitat no recorded within the study area. Study area outside of species typical distribution. No local records.
Falco hypoleucos	Grey Falcon	V	V	Arid and semi-arid zones. In NSW, found chiefly throughout the Murray-Darling Basin, with the occasional	0	No	No, suitable habitat no recorded within the study area. Study area

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				vagrant east of the Great Dividing Range. Shrubland, grassland and wooded watercourses, occasionally in open woodlands near the coast, and near wetlands.			outside of species typical distribution. No local records.
Falco subniger	Black Falcon			Sparsely distributed in NSW, occurring mostly in inland regions. Woodland, shrubland and grassland, especially riparian woodland and agricultural land. Often associated with streams or wetlands.	2	Unlikely	No, preferred habitat containing waterbodies or wetlands not within the study area. Low number of local records.
Gallinago hardwickii	Latham's Snipe	V	V, M	Migrant to east coast of Australia, extending inland west of the Great Dividing Range in NSW. Freshwater, saline or brackish wetlands up to 2000 m above sea-level; usually freshwater swamps, flooded grasslands or heathlands.	1	No	No, no preferred wetland habitat recorded within the study area. Low number of local records.
Glossopsitta pusilla	Little Lorikeet	V	-	The Little Lorikeet is distributed widely across the coastal and Great Divide regions of eastern Australia from Cape York to South Australia. NSW provides a large portion of the species' core habitat, with lorikeets found westward as far as Dubbo and Albury. Nomadic movements are common, influenced by season and food availability, although some areas retain residents for much of the year and 'locally nomadic' movements are suspected of breeding pairs. Forages primarily in the canopy of open *Eucalyptus* forest and woodland, yet also finds food in *Angophora*, *Melaleuca* and other tree species. Riparian habitats are particularly used, due to higher soil fertility and hence greater productivity. Feeds mostly on nectar and pollen, occasionally on native fruits such as mistletoe, and only rarely in orchards. Roosts in treetops, often distant from feeding areas. Nests in proximity to feeding areas, if possible, most typically selecting hollows in the limb or trunk of smooth-barked *Eucalypts*. These nest	50	Unlikely	No, marginal foraging habitat recorded within the study area. No breeding habitat recorded within the study area.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				sites are often used repeatedly for decades, suggesting that preferred sites are limited. Riparian trees often chosen, including species like *Allocasuarina*.			
Grantiella picta	Painted Honeyeater	V	V	Widely distributed in NSW, predominantly on the inland side of the Great Dividing Range but avoiding arid areas. Boree, Brigalow and Box-Gum Woodlands and Box-Ironbark Forests. Specialist feeder on the fruits of mistletoes growing on woodland eucalypts and acacias.	0	No	No, mistletoes not recorded within the study area. No local records.
Haliaeetus leucogaster	White-bellied Sea-Eagle	V	-	Freshwater swamps, rivers, lakes, reservoirs, billabongs, saltmarsh and sewage ponds and coastal waters. Terrestrial habitats include coastal dunes, tidal flats, grassland, heathland, woodland, forest and urban areas. Breeding habitat consists of mature tall open forest, open forest, tall woodland, and swamp sclerophyll forest close to foraging habitat. Nest trees are typically large emergent eucalypts and often have emergent dead branches or large dead trees nearby which are used as 'guard roosts'.	8	Unlikely	No, preferred tall forest/woodland habitat not recorded within the study area. No waterbodies recorded within the study area.
Hieraaetus morphnoides	Little Eagle	V	-	It occurs as a single population throughout NSW. Occupies open eucalypt forest, woodland, or open woodland. Sheoak or Acacia woodlands and riparian woodlands of interior NSW are also used. Nests in tall living trees within a remnant patch, where pairs build a large stick nest in winter.	22	Unlikely	No, suitable breeding habitat not recorded within the study area. Limited foraging habitat within the study area.
Hirundapus caudacutus	White-throated Needletail	V	V, M	Non-breeding visitor to Australia. All coastal regions of NSW, inland to the western slopes and inland plains of the Great Divide. Occur most often over open forest and rainforest, as well as heathland, and remnant vegetation in farmland.	1	Unlikely	No, the species may potentially forage aerially above the study area. However, the species spends the majority of its life in the air. No local records.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
Lathamus discolor	Swift Parrot	E1	CE	Migrates from Tasmania to mainland in Autumn-Winter. In NSW, the species mostly occurs on the coast and south west slopes. Box-ironbark forests and woodlands. Favoured feed trees include winter flowering species such as *Eucalyptus robusta*, *E. tereticornis*, *Corymbia maculata*, *C. gummifera*, *E. sideroxylon* and *E. albens*.	23	Unlikely	No, marginal foraging habitat recorded within the study area. Potential feed trees within the study area not proposed to be impacted by the development.
Lophoictinia isura	Square-tailed Kite	V	-	The Square-tailed Kite ranges along coastal and subcoastal areas from south-western to northern Australia, Queensland, NSW, and Victoria. In NSW, scattered records of the species throughout the state indicate that the species is a regular resident in the north, north-east and along the major west- flowing river systems. It is a summer breeding migrant to the south-east, including the NSW south coast, arriving in September, and leaving by March. Found in a variety of timbered habitats including dry woodlands and open forests. Shows a particular preference for timbered watercourses. In arid north-western NSW, has been observed in stony country with a ground cover of chenopods and grasses, open acacia scrub and patches of low open eucalypt woodland. Breeding is from July to February, with nest sites generally located along or near watercourses, in a fork or on large horizontal limbs.	5	Unlikely	No, preferred breeding habitat not recorded within the study area. Limited foraging habitat within the study area.
Melanodryas cucullata cucullata	South-eastern Hooded Robin	E1	E	Found throughout much of inland NSW, with the exception of the extreme north-west, where it is replaced by subspecies *picata.* Dry eucalypt woodland, acacia scrub and mallee with an open understorey. Rocks and fallen timber form essential foraging habitat.	0	Unlikely	No, preferred foraging habitat not recorded within the study area. No local records.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
Motacilla flava	Yellow Wagtail	-	M	Regular summer migrant to mostly coastal Australia. In NSW recorded Sydney to Newcastle, the Hawkesbury and inland in the Bogan LGA. Swamp margins, sewage ponds, saltmarshes form preferred habitat, with the species also recorded from adjacent playing fields, airfields, ploughed land, lawns.	0	Unlikely	No, preferred swamp / wet habitat not recorded within the study area. No local records.
Neophema chrysostoma	Blue-winged Parrot	V	V	Inhabits a range of habitats from coastal, sub-coastal and inland areas, right through to semi-arid zones. Favours grasslands, grassy woodlands and wetland habitats. Often found near wetlands both near the coast and in semi-arid zones. Blue-winged Parrots can also be seen in altered environments such as airfields, golf courses and paddocks.	0	Unlikely	No, marginal habitat recorded within the study area. Study area outside of the species typical distribution. No local records.
Neophema pulchella	Turquoise Parrot			Occurs along the length of NSW from the coastal plains to the western slopes of the Great Dividing Range. Eucalypt and cypress pine open forests and woodlands, ecotones between woodland and grassland, or coastal forest and heath. Prefers to feed in the shade of a tree and spends most of the day on the ground searching for the seeds or grasses and herbaceous plants, or browsing on vegetable matter. Nests in tree hollows, logs or posts, from August to December.	1	Unlikely	No, preferred foraging and breeding habitat not recorded within the study area. Low number of local records.
Ninox connivens	Barking Owl			Wide but sparse distribution in NSW, avoiding the most central arid regions. Core populations exist on the western slopes and plains and in some northeast coastal and escarpment forests. Woodland and open forest, including fragmented remnants and partly cleared farmland, wetland and riverine forest. It roosts in dense shaded foliage in large trees. Nesting occurs in hollows in large, old eucalypts, either living or dead.	2	Unlikely	No, preferred woodland/forest habitat not identified within the study area.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
Ninox strenua	Powerful Owl	V	-	The Powerful Owl is endemic to eastern and south-eastern Australia, mainly on the coastal side of the Great Dividing Range from Mackay to south-western Victoria. In NSW, it is widely distributed throughout the eastern forests from the coast inland to tablelands, with scattered records on the western slopes and plains suggesting occupancy prior to land clearing. The Powerful Owl inhabits a range of vegetation types, from woodland and open sclerophyll forest to tall open wet forest and rainforest. The Powerful Owl requires large tracts of forest or woodland habitat but can occur in fragmented landscapes as well. It roosts by day in dense vegetation comprising species such as *Syncarpia glomulifera* (Turpentine), *Allocasuarina littoralis* (Black She-oak), *Acacia melanoxylon* (Blackwood), *Angophora floribunda* (Rough-barked Apple), *Exocarpos cupressiformis* (Cherry Ballart) and a number of eucalypt species. The main prey items are medium-sized arboreal marsupials, with most prey species requiring hollows and a shrub layer, which are important habitat components for the owl. Pairs of Powerful Owls demonstrate high fidelity to a large territory, the size of which varies with habitat quality and thus prey densities. Where hollow trees and prey have been depleted, the owls need up to 4000 ha. Powerful Owls nest in large tree hollows (at least 0.5 m deep), in large eucalypts (diameter at breast height of 80-240 cm) that are at least 150 years old.	13	Unlikely	No, preferred roosting / breeding habitat not recorded within the study area. May occasionally fly over the study area on foraging forays however, unlikely to utilize for extended periods of time.
Numenius madagascariensis	Eastern Curlew	CE	CE	Summer migrant to Australia. Primarily coastal distribution in NSW, with some scattered inland records. Estuaries, bays, harbours, inlets and coastal lagoons, intertidal mudflats or sandflats, ocean beaches, coral	0	No	No, no preferred wetland habitat recorded within the study area. No local records.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				reefs, rock platforms, saltmarsh, mangroves, freshwater/brackish lakes, saltworks and sewage farms.			
Pandion cristatus	Eastern Osprey	V	M	Common around the northern NSW coast, and uncommon to rare from coast further south. Some records from inland areas. Habitat includes rocky shorelines, islands, reefs, mouths of large rivers, lagoons and lakes. Breeds from July to September with nests made high up in dead trees or in dead crowns of lives trees.	1	Unlikely	No, preferred roosting / breeding habitat not recorded within the study area. No waterbodies recorded within the study area. Low number of local records.
Petroica boodang	Scarlet Robin	V	-	The Scarlet Robin is found from south east Queensland to south east South Australia and also in Tasmania and south west Western Australia. In NSW, it occurs from the coast to the inland slopes. After breeding, some Scarlet Robins disperse to the lower valleys and plains of the tablelands and slopes. Some birds may appear as far west as the eastern edges of the inland plains in autumn and winter. The Scarlet Robin lives in dry eucalypt forests and woodlands. The understorey is usually open and grassy with few scattered shrubs. This species lives in both mature and regrowth vegetation. It occasionally occurs in mallee or wet forest communities, or in wetlands and tea-tree swamps. Scarlet Robin habitat usually contains abundant logs and fallen timber: these are important components of its habitat. This species' nest is an open cup made of plant fibres and cobwebs and is built in the fork of tree usually more than 2 metres above the ground; nests are often found in a dead branch in a live tree, or in a dead tree or shrub. Birds usually occur singly or in pairs, occasionally in small family parties; pairs stay together year-round.	7	Unlikely	No, preferred habitat containing structure features such as logs, and fallen timber not recorded within the study area.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
Petroica phoenicea	Flame Robin	V	-	The Flame Robin is endemic to south eastern Australia. In NSW, it breeds in upland tall moist eucalypt forests and woodlands, often on ridges and slopes. Prefers habitat with clearings or areas with open understoreys. The groundlayer of the breeding habitat is dominated by native grasses and the shrub layer may be either sparse or dense. In winter, birds migrate to drier more open habitats in the lowlands (i.e. valleys below the ranges, and to the western slopes and plains). Occur singly, in pairs, or in flocks of up to 40 birds or more; in the non-breeding season they will join up with other insectivorous birds in mixed feeding flocks. Nests are often near the ground and are built in sheltered sites, such as shallow cavities in trees, stumps or banks.	6	Unlikely	No, preferred breeding habitat not recorded within the study area. Marginal foraging habitat present within the study area.
Pluvialis squatarola	Pacific Golden Plover	-	M	Regular widespread summer migrant to Australia, including coastal NSW, Lord Howe and Norfolk Island. Estuaries, mudflats, saltmarshes, mangroves, rocky reefs, inland swamps, ocean shores, paddocks, sewage ponds, ploughed land, airfields, playing fields.	2	No	No, no preferred wetland habitat recorded within the study area. Low number of local records.
Pycnoptilus floccosus	Pilotbird	V	V	The pilotbird is found from the Wollemi National Park and Blue Mountains National Park in New South Wales through to the Dandenong Ranges, near Melbourne in Victoria. Its natural habitat is temperate wet sclerophyll forests and occasionally temperate rainforest, where there is dense undergrowth with abundant debris. It is sedentary and common.	0	No	No, preferred habitat containing dense undergrowth not recorded within the study area. No local records.
Rostratula australis	Australian Painted Snipe	E1	E	In NSW, many records are from the Murray-Darling Basin including the Paroo wetlands, Lake Cowal, Macquarie Marshes, Fivebough Swamp and more recently, swamps near Balldale and Wanganella. Other important locations	0	No	No, no preferred wetland habitat recorded within the study area. No local records.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				with recent records include wetlands on the Hawkesbury River and the Clarence and lower Hunter Valleys. Prefers fringes of swamps, dams, and nearby marshy areas where there is a cover of grasses, lignum, low scrub, or open timber. Nests on the ground amongst tall vegetation, such as grasses, tussocks, or reeds.			
Stagonopleura guttata	Diamond Firetail	V	V	Grassy eucalypt woodlands, open forest, mallee, Natural Temperate Grassland, secondary derived grassland, riparian areas and lightly wooded farmland. Critical habitat is areas that have not had historical clearing, and are neither fragmented or degraded.	0	Unlikely	No, marginal preferred habitat recorded within the study area. Study area appears to regularly undergoes disturbance through mowing. No local records.
Tringa nebularia	Common Greenshank	E1	E, M	Summer migrant to Australia. Recorded in most coastal regions of NSW; also, widespread west of the Great Dividing Range, especially between the Lachlan and Murray Rivers and the Darling River drainage basin, including the Macquarie Marshes, and north-west regions. Terrestrial wetlands (swamps, lakes, dams, rivers, creeks, billabongs, waterholes and inundated floodplains, claypans, saltflats, sewage farms and saltworks dams, inundated rice crops and bores) and sheltered coastal habitats (mudflats, saltmarsh, mangroves, embayment's, harbours, river estuaries, deltas, lagoons, tidal pools, rock-flats and rock platforms).	1	No	No, no preferred wetland habitat recorded within the study area. Low number of local records.
Tyto novaehollandiae	Masked Owl			Extends from the coast where it is most abundant to the western plains. Lives in dry eucalypt forests and woodlands from sea level to 1100 m. A forest owl, but often hunts along the edges of forests, including roadsides. Roosts and breeds in moist eucalypt forested gullies, using large tree hollows or sometimes caves for nesting.	1	No	No, limited foraging habitat recorded within the study area. No breeding habitat recorded within the study area. Low number of local records.

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Invertebrates							
Austrocordulia leonardi	Sydney Hawk Dragonfly	E1	E	Three locations in a small area south of Sydney, from Audley to Picton. Deep and shady riverine pools with cooler water. Larvae are found under rocks. Spends most of its life underwater as an aquatic larva, before metamorphosing and emerging from the water as an adult. Adults are thought to only live for a few weeks.	0	No	No, no waterbodies recorded within the study area. Study area outside of known distribution. No local records.
Meridolum corneovirens	Cumberland Plain	E1	-	Lives in small areas on the Cumberland Plain west of Sydney, from Richmond and Windsor south to Picton and from Liverpool west to the Hawkesbury and Nepean Rivers at the base of the Blue Mountains. Known from over 100 different locations, but not all are currently occupied, and they are usually isolated from each other as a result of land use patterns. Primarily inhabits Cumberland Plain Woodland (a critically endangered ecological community). This community is a grassy, open woodland with occasional dense patches of shrubs. It is also known from Shale Gravel Transition Forests, Castlereagh Swamp Woodlands and the margins of River-flat Eucalypt Forest, which are also listed communities. Lives under litter of bark, leaves and logs, or shelters in loose soil around grass clumps. Occasionally shelters under rubbish. Can dig several centimetres into soil to escape drought.	300	Unlikely	No, potential habitat not recorded within the study area. Limited connectivity between the study area and other areas of vegetation.
Mammals (excluding bats)							
Dasyurus maculatus maculatus (SE	Spotted-tailed Quoll	V	E	Found on the east coast of NSW, Tasmania, eastern Victoria and north-eastern Qld. Rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline. Solitary animals that	1	No	No, preferred habitat containing features used for shelter not recorded within the study area. Limited connectivity between

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
mainland population)				occur in low densities. Rely on fallen logs, boulder piles, burrows and hollows for shelter.			the study area and other areas of vegetation.
Notamacropus parma	Parma Wallaby	V	V	The species once occurred in north-eastern NSW from the Queensland boarder to the Bega area in the southeast. Their range is now confined to the coast and ranges of central and northern NSW from the Gosford district to south of the Bruxner Highway between Tenterfield and Casino. Wet sclerophyll forest with a thick, shrubby understorey and nearby grassy patches, or dry sclerophyll forests with a dense understorey.	0	No	No, preferred wet sclerophyll habitat not recorded within the study area. Outside of the species typical distribution. No local records.
Petauroides volans	Greater Glider	E1	E	Eastern Australia, from the Windsor Tableland in north Queensland through to central Victoria (Wombat State Forest). Eucalypt forests and woodlands. It is typically found in highest abundance in taller, montane, moist eucalypt forests with relatively old trees and abundant hollows. Arboreal, nocturnal species.	0	No	No, preferred old growth forest habitat not recorded within the study area. No local records.
Petaurus australis australis	Yellow-bellied Glider (south-eastern)	V	V	Along the eastern coast to the western slopes of the Great Dividing Range, from southern Qld to Victoria. Tall mature eucalypt forest generally in areas with high rainfall and nutrient rich soils. Live in small family groups in which a den tree is often shared. Arboreal, nocturnal species.	0	No	No, preferred mature forest habitat not recorded within the study area. No shelter habitat recorded within the study area.
Petaurus norfolcensis	Squirrel Glider	V	-	Mature or old growth Box, Box-Ironbark woodlands and River Red Gum forest west of the Great Dividing Range and Blackbutt-Bloodwood forest with heath understorey in coastal areas. Live in small family groups of a single adult male and one or two adult females and offspring. Require abundant tree hollows for refuge and nest sites. Diet varies seasonally and consists of *Acacia* gum, eucalypt sap, nectar, honeydew and manna, with	1	No	No, marginal foraging habitat recorded within the study area. No shelter habitat recorded within the study area. Limited connectivity between the study area and other areas of

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				invertebrates and pollen providing protein. Arboreal, nocturnal species.			vegetation. Low number of local records.
Petrogale penicillata	Brush-tailed Rock-wallaby	E1	V	In NSW they occur from the Qld border in the north to the Shoalhaven in the south, with the population in the Warrumbungle Ranges being the western limit. Rocky escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges.	0	No	No, preferred habitat not recorded within the study area. No local records.
Phascolarctos cinereus	Koala	E1	E	In NSW it mainly occurs on the central and north coasts with some populations in the west of the Great Dividing Range. There are sparse and possibly disjunct populations in the Bega District, and at several sites on the southern tablelands. Inhabits eucalypt woodlands and forests.	256	Unlikely	No, marginal foraging habitat recorded within the study area. Limited connectivity between the study area and other areas of vegetation.
Pseudomys novaehollandiae	New Holland Mouse	-	V	Fragmented distribution across eastern NSW. Known to inhabit open heathlands, woodlands and forests with a heathland understorey and vegetated sand dunes. It is a social animal, living predominantly in burrows shared with other individuals.	0	No	No, preferred heath understorey habitat not recorded within the study area. No local records.
Mammals (bats)							
Chalinolobus dwyeri	Large-eared Pied Bat	E1	E	Recorded from Rockhampton in Qld south to Ulladulla in NSW. Largest concentrations of populations occur in the sandstone escarpments of the Sydney basin and the NSW north-west slopes. Roosting habitat includes areas featuring cliffs, escarpments or rocky outcrops. Wet and dry sclerophyll forests, Cyprus Pine dominated forest, woodland, sub-alpine woodland, edges of rainforests and sandstone outcrop country.	1	Unlikely	No, roosting habitat not recorded within the study area. May occasionally fly through the study area on foraging forays however, unlikely to utilize for extended periods of time.
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V	-	The Eastern False Pipistrelle is found on the south-east coast and ranges of Australia, from southern Queensland	15	Unlikely	No, roosting habitat not recorded within the study area.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				to Victoria and Tasmania. Prefers moist habitats, with trees taller than 20 m. Generally, roosts in eucalypt hollows but has also been found under loose bark on trees or in buildings. Hunts beetles, moths, weevils and other flying insects above or just below the tree canopy. Hibernates in winter.			May occasionally fly through the study area on foraging forays however, unlikely to utilize for extended periods of time.
Micronomus norfolkensis	Eastern Coastal Free-tail Bat	V	-	The Eastern Freetail-bat is found along the east coast from south Queensland to southern NSW. Occur in dry sclerophyll forest, woodland, swamp forests and mangrove forests east of the Great Dividing Range. Roost mainly in tree hollows but will also roost under bark or in man-made structures. Usually solitary but also recorded roosting communally, probably insectivorous.	48	Unlikely	No, roosting habitat not recorded within the study area. May occasionally fly through the study area on foraging forays however, unlikely to utilize for extended periods of time.
Miniopterus australis	Little Bent-winged Bat	V	-	East coast and ranges south to Wollongong in NSW. Moist eucalypt forest, rainforest, vine thicket, wet and dry sclerophyll forest, Melaleuca swamps, dense coastal forests and banksia scrub. Roost in caves, tunnels, tree hollows, abandoned mines, stormwater drains, culverts, bridges and sometimes buildings during the day, and at night forage for small insects beneath the canopy of densely vegetated habitats.	5	Unlikely	No, roosting habitat not recorded within the study area. May occasionally fly through the study area on foraging forays however, unlikely to utilize for extended periods of time.
Miniopterus orianae oceanensis	Large Bent-winged Bat	V	-	Eastern Bent-winged Bats occur along the east and north-west coasts of Australia. Caves are the primary roosting habitat, but also use derelict mines, storm-water tunnels, buildings and other man-made structures. Form discrete populations centred on a maternity cave that is used annually in spring and summer for the birth and rearing of young. At other times of the year, populations disperse within about 300 km range of maternity caves. Hunt in	54	Unlikely	No, roosting habitat not recorded within the study area. May occasionally fly through the study area on foraging forays however, unlikely to utilize for extended periods of time.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				forested areas, catching moths and other flying insects above the tree tops.			
Myotis macropus	Southern Myotis	V	-	The Southern Myotis is found in the coastal band from the north-west of Australia, across the top-end and south to western Victoria. It is rarely found more than 100 km inland, except along major rivers. Generally roost in groups of 10 - 15 close to water in caves, mine shafts, hollow-bearing trees, storm water channels, buildings, under bridges and in dense foliage. Forage over streams and pools catching insects and small fish by raking their feet across the water surface.	43	Unlikely	No, roosting habitat not recorded within the study area. Foraging habitat not recorded within the study area.
Pteropus poliocephalus	Grey-headed Flying-fox	V	V	Along the eastern coast of Australia, from Bundaberg in Qld to Melbourne in Victoria. Subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops.	349	Potential	Yes, marginal foraging habitat recorded within the study area. Potential feed trees within the study area proposed to be impacted by the development.
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	V	-	The Yellow-bellied Sheathtail-bat is a wide-ranging species found across northern and eastern Australia. In the most southerly part of its range - most of Victoria, south-western NSW and adjacent South Australia - it is a rare visitor in late summer and autumn. There are scattered records of this species across the New England Tablelands and North West Slopes. Roosts singly or in groups of up to six, in tree hollows and buildings; in treeless areas they are known to utilise mammal burrows. When foraging for insects, flies high and fast over the forest canopy, but lower in more open country. Forages in most habitats across its very wide range, with and without trees; appears to defend an aerial territory.	7	Unlikely	No, roosting habitat not recorded within the study area. Foraging habitat not recorded within the study area.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
Scoteanax rueppellii	Greater Broad-nosed Bat	V	-	The Greater Broad-nosed Bat is found mainly in the gullies and river systems that drain the Great Dividing Range, from north-eastern Victoria to the Atherton Tableland. It extends to the coast over much of its range. In NSW it is widespread on the New England Tablelands, however, does not occur at altitudes above 500 m. Utilises a variety of habitats from woodland through to moist and dry eucalypt forest and rainforest, though it is most commonly found in tall wet forest. Although this species usually roosts in tree hollows, it has also been found in buildings. Forages after sunset, flying slowly and directly along creek and river corridors at an altitude of 3 - 6 m. Open woodland habitat and dry open forest suits the direct flight of this species as it searches for beetles and other large, slow-flying insects; this species has been known to eat other bat species. Little is known of its reproductive cycle, however a single young is born in January; prior to birth, females congregate at maternity sites located in suitable trees, where they appear to exclude males during the birth and raising of the single young.	40	Unlikely	No, roosting habitat not recorded within the study area. Foraging habitat not recorded within the study area.
Reptiles							
Aprasia parapulchella	Pink-tailed Worm-lizard	V	V	In NSW, only known from Central and Southern Tablelands and the South Western Slopes. Sloping, open woodland areas with predominantly native grassy ground layers, rocky outcrops or scattered, partially-buried rocks. Commonly found beneath small, partially-embedded rocks and appear to spend considerable time in burrows below these rocks; the burrows have been constructed by	0	No	No, preferred grassland habitat containing rock habitat features not recorded within the study area. No local records.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				and are often still inhabited by small black ants and termites.			
Hoplocephalus bungaroides	Broad-headed Snake	E1	E	Largely confined to Triassic and Permian sandstones within the coast and ranges in an area within approximately 250 km of Sydney. Dry and wet sclerophyll forests, riverine forests, coastal heath swamps, rocky outcrops, heaths, grassy woodlands. Moves from sandstone rocks to shelter in crevices or hollows in large trees nearby to escarpments in summer.	0	No	No, study area not situated close to an escarpment. No local records.
Varanus rosenbergi	Rosenberg's Goanna	V	V	In NSW, found on the Sydney Sandstone in Wollemi National Park, in the Goulburn and ACT regions and near Cooma in the south. Also recorded from the South West Slopes near Khancoban and Tooma River. Heath, open forest and woodland.	1	Unlikely	No, marginal potential habitat within the study area. Limited connectivity between the study area and other areas of vegetation. Low number of local records.
FLORA							
Acacia bynoeana	Bynoe's Wattle	E1	V	Found in central eastern NSW, from the Hunter District (Morisset) south to the Southern Highlands and west to the Blue Mountains. Heath or dry sclerophyll forest on sandy soils. Seems to prefer open, sometimes slightly disturbed sites such as trail margins, edges of roadside spoil mounds and in recently burnt patches. Associated overstorey species include Red Bloodwood, Scribbly Gum, Parramatta Red Gum, Saw Banksia and Narrow-leaved Apple.	159	Unlikely	No, the study area is mapped as occurring on shale soils (NSW DCCEEW 2025e). The species was not recorded within the study area.
Acacia pubescens	Downy Wattle	V	V	Restricted to Sydney region, most commonly observed around Bankstown-Fairfield-Rookwood and Pitt Town areas. Occurs in open woodland and forest including Coos River/Castlereagh Ironbark Forest, Shale/Gravel	362	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				Transition Forest and Cumberland Plain Woodland. Occurs on alluviums, shales and at the intergrade between shales and sandstones.			potential habitat within the study area.
Allocasuarina glareicola	-	E1	E	Primarily restricted to the Richmond (NW Cumberland Plain) district, but with an outlier population found at Voyager Point, Liverpool. Castlereagh woodland on lateritic soil. Found in open woodland with *Eucalyptus parramattensis*, *Eucalyptus fibrosa*, *Angophora bakeri*, *Eucalyptus sclerophylla* and *Melaleuca decora*.	0	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area. No local records.
Caladenia tessellata	Thick-lipped Spider-orchid	V	V	Currently known from two disjunct areas; one population near Braidwood on the Southern Tablelands and three populations in the Wyong area on the Central Coast. Occurs in grassy sclerophyll woodland on clay loam or sandy soils, or low woodland with stony soil. Single leaf regrows each year, with flowers appearing between September and November.	0	Unlikely	No, the study area is regularly disturbed. The study area is outside of the known distribution for this species. The proposed activity is avoiding potential habitat within the study area. No local records.
Callistemon linearifolius	Netted Bottle Brush	V	-	Georges River to Hawkesbury River in the Sydney area (limited to the Hornsby Plateau area), and north to the Nelson Bay area of NSW. Also, Coalcliff in the northern Illawarra. Dry sclerophyll forest.	4	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area. Low number of local records.
Cryptostylis hunteriana	Leafless Tongue-orchid	V	V	Recorded mainly on coastal and near coastal ranges north from Victoria to near Forester. Occurs in coastal heathlands, margins of coastal swamps and sedgelands, coastal forest, dry woodland, and lowland forest. Larger populations typically occur in woodland dominated by	0	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area. No local records.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				Eucalyptus sclerophyll, *E. sieberi*, *Corymbia gummifera*, and *Allocasuarina littoralis*.			
Cynanchum elegans	White-flowered Wax Plant	E1	E	Restricted to eastern NSW, from Brunswick Heads on the north coast to Gerroa in the Illawarra region, and as far west as Merriwa in the upper Hunter River valley. Dry rainforest; littoral rainforest; *Leptospermum laevigatum-Banksia integrifolia* subsp. *integrifolia* (Coastal Tea-tree–Coastal Banksia) coastal scrub; *Eucalyptus tereticornis* (Forest Red Gum) or *Corymbia maculata* (Spotted Gum) open forest and woodland; and *Melaleuca armillaris* (Bracelet Honeymyrtle) scrub.	0	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area. No local records.
Dillwynia tenuifolia	-	V	-	The core distribution is the Cumberland Plain from Windsor and Penrith east to Dean Park near Colebee. Other populations in western Sydney are recorded from Voyager Point and Kemps Creek in the Liverpool LGA, Luddenham in the Penrith LGA and South Maroota in the Baulkham Hills Shire. Disjunct localities outside the Cumberland Plain include the Bulga Mountains at Yengo in the north, and Kurrajong Heights and Woodford in the Lower Blue Mountains.	2	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area.
Diuris aequalis	Buttercup Doubletail	E1	V	Recorded in Kanangra-Boyd National Park, Gurnang State Forest, towards Wombeyan Caves, the Taralga - Goulburn area, and the ranges between Braidwood, Tarago and Bungendore. Forest, low open woodland and secondary grassland on the higher parts of the Southern and Central Tablelands.	1	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area.
Eucalyptus nicholii	Narrow-leaved Black Peppermint	V	V	New England Tablelands from Nundle to north of Tenterfield. Dry grassy woodland, on shallow soils of slopes and ridges.	1	Unlikely	No, the species is a commonly planted landscaping species. Species is not indigenous to the

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
							area. The species was not recorded within the study area.
Eucalyptus scoparia	Wallangarra White Gum	E1	V	In NSW it is known from only three locations near Tenterfield. Open eucalypt forest, woodland and heaths on well-drained granite/rhyolite hilltops, slopes and rocky outcrops, typically at high altitudes.	1	Unlikely	No, the species is a commonly planted landscaping species. Species is not indigenous to the area. The species was not recorded within the study area.
Genoplesium baueri	Bauer's Midge Orchid	E1	E	Has been recorded from locations between Nowra and Pittwater and may occur as far north as Port Stephens. Dry sclerophyll forest and moss gardens over sandstone.	0	No	No, preferred sandstone habitat not recorded within the study area. No local records.
Grevillea parviflora subsp. parviflora	Small-flower Grevillea	V	V	Sporadically distributed throughout the Sydney Basin and in the Hunter in the Cessnock-Kurri Kurri area. Also known from Putty to Wyong and Lake Macquarie. Found in heath and shrubby woodland to open forest on sandy or light clay soils usually over thin shales.	1652	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area.
Gyrostemon thesioides	-	E1	-	Within NSW, only ever recorded at three sites to the west of Sydney, near the Colo, Georges and Nepean Rivers. Hillsides and riverbanks; may be restricted to fine sandy soils.	30	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area.
Haloragis exalata subsp. *exalata*	Wingless Raspwort	V	V	Disjunct distribution in the Central Coast, South Coast and North Western Slopes botanical subdivisions of NSW. Protected and shaded damp situations in riparian habitats.	0	No	No, riparian habitat not recorded within the study area.
Hibbertia fumana		CE	-	Currently only known from a single population at Moorebank but potentially elsewhere in greater Sydney.	1117	Unlikely	No, the study area is regularly disturbed. The species was not

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				Generally found in areas of woodland with a more open understorey, in a long intergrade between Castlereagh Scribbly Gum Woodland and Castlereagh Ironbark Forest at the Moorebank Site. Has the potential to occur in similar intergrade alluvial habitats rich in sands and laterite in other parts of western Sydney. Soil texture and character described as fine sandy clay loam, grey brown in colour.			recorded within the study area. The proposed activity is avoiding potential habitat within the study area.
Hibbertia puberula		E1	-	Wollemi National Park south to Morton National Park and the south coast near Nowra. Low heath, dry sclerophyll woodland, upland swamps, on sandy soils or clay.	1065	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area.
Hibbertia sp. Bankstown		CE	CE	Known to occur in only one population, at Bankstown Airport in Sydney's southern suburbs. Heavily modified low grass/shrub association (ex Cooks River/Castlereagh Ironbark Forest) on sandy alluvium with a high silt content.	1	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area.
Leucopogon exolasius	Woronora Beard-heath	V	V	Distribution is in Upper Georges River area and in Heathcote National Park. Occurs in woodland on sandstone. Flowering occurs in August and September.	1	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area.
Macadamia integrifolia	Macadamia Nut	-	V	Not known to occur naturally in the wild in NSW; recorded from Camden Haven but it is not known if the tree was	1	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				cultivated or growing naturally. Drier subtropical rainforest.			potential habitat within the study area.
Marsdenia viridiflora subsp. *viridiflora*		E2		Razorback Range, also recorded at Prospect, Bankstown, Smithfield, Cabramatta Creek and St Marys. Vine thickets and open shale woodland.	17	No	No, preferred habitat not recorded within the study area. The species was not recorded within the study area.
Melaleuca deanei	Deane's Melaleuca	V	V	Ku-ring-gai/Berowra area, Holsworthy/Wedderburn area, Springwood (in the Blue Mountains), Wollemi National Park, Yalwal (west of Nowra) and Central Coast (Hawkesbury River) areas. Heath on sandstone.	0	No	No, the study area is mapped as occurring on shale soils (NSW DCCEEW 2025e). Heathland habitat not recorded within the study area.
Persicaria elatior	Tall Knotweed	V	V	In south-eastern NSW recorded from Mt Dromedary, Moruya State Forest near Turlinjah, the Upper Avon River catchment north of Robertson, Bermagui, and Picton Lakes. In northern NSW known from Raymond Terrace (near Newcastle) and the Grafton area (Cherry Tree and Gibberagee State Forests). Beside streams and lakes, swamp forest or disturbed areas.	0	No	No, preferred riparian habitat not recorded within study area. No local records.
Persoonia hirsuta	Hairy Geebung	E1	E	Scattered distribution around Sydney, from Singleton in the north, along the east coast to Bargo in the south and the Blue Mountains to the west. Sandy soils in dry sclerophyll open forest, woodland and heath on sandstone.	1	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area.
Persoonia nutans	Nodding Geebung	E1	E	Restricted to the Cumberland Plain in western Sydney, between Richmond in the north and Macquarie Fields in the south. Northern populations: sclerophyll forest and woodland (Agnes Banks Woodland, Castlereagh Scribbly Gum Woodland and Cooks River / Castlereagh Ironbark	534	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
				Forest) on aeolian and alluvial sediments. Southern populations: tertiary alluvium, shale sandstone transition communities and Cooks River / Castlereagh Ironbark Forest.			potential habitat within the study area.
Pimelea curviflora var. *curviflora*	-	V	V	Confined to the coastal area of the Sydney and Illawarra regions between northern Sydney and Maroota in the north-west and Croom Reserve near Albion Park in the south. Occurs in woodland, mostly on shaley/lateritic soils over sandstone and shale/sandstone transition soils on ridgetops and upper slopes.	0	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area. No local records.
Pimelea spicata	Spiked-Rice-flower	E1	E	Two disjunct areas; the Cumberland Plain (Marayong and Prospect Reservoir south to Narellan and Douglas Park) and the Illawarra (Landsdowne to Shellharbour to northern Kiama). Well-structured clay soils. *Eucalyptus moluccana* (Grey Box) communities and in areas of ironbark on the Cumberland Plain. Coast Banksia open woodland or coastal grassland in the Illawarra.	19	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area.
Pomaderris brunnea	Brown Pomaderris	E1	V	In NSW, found around the Colo, Nepean and Hawkesbury Rivers, including the Bargo area and near Camden. It also occurs near Walcha on the New England tablelands. Moist woodland or forest on clay and alluvial soils of flood plains and creek lines.	0	No	No, preferred moist / riparian habitat not recorded within the study area. No local records.
Pterostylis gibbosa	Illawarra Greenhood	E1	E	Known from a small number of populations in the Hunter region, the Illawarra region, and the Shoalhaven region. Open forest or woodland, on flat or gently sloping land with poor drainage. Only visible above the ground between late summer and spring, and only when soil moisture levels can sustain its growth.	0	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
Pterostylis saxicola	Sydney Plains Greenhood	E1	E	Restricted to western Sydney between Freemans Reach in the north and Picton in the south. Small pockets of shallow soil in depressions on sandstone rock shelves above cliff lines, adjacent to sclerophyll forest or woodland on shale/sandstone transition soils or shale soils.	41	No	No, preferred sandstone rock shelf habitat not recorded within the study area. No local records.
Pultenaea pedunculata	Matted Bush-pea	E1	-	In NSW it is represented by just three disjunct populations, in the Cumberland Plains in Sydney, the coast between Tathra and Bermagui and the Windellama area south of Goulburn. Woodland, sclerophyll forest, road batters and coastal cliffs.	12	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area.
Rhizanthella slateri	Eastern Underground Orchid	V	E	In NSW, currently known from fewer than 10 locations, including near Bulahdelah, the Watagan Mountains, the Blue Mountains, Wiseman's Ferry area, Agnes Banks and near Nowra. Sclerophyll forest in shallow to deep loams.	0	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area. No local records.
Rhodamnia rubescens	Scrub Turpentine	CE	CE	Occurs in coastal districts north from Batemans Bay in New South Wales, approximately 280 km south of Sydney, to areas inland of Bundaberg in Queensland. Populations of *R. rubescens* typically occur in coastal regions and occasionally extend inland onto escarpments up to 600 m a.s.l. in areas with rainfall of 1,000-1,600 mm. Found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest usually on volcanic and sedimentary soils.	0	No	No, rainforest habitat not recorded within the study area. No local records.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Habitat	Records within 5 km of the study area (BioNet)	Likelihood of Occurrence	Impact Assessment Required
Rhodomyrtus psidioides	Native Guava	CE	CE	Known to occur from coastal districts of NSW north from Gosford (33.43°S, 151.34° E) to Maryborough in Queensland (25.52° S, 152.70° E). Occurrence records are typically restricted to coastal and sub-coastal areas of low elevation however the species does occur up to c. 120km inland in the Hunter and Clarence River catchments and along the Border Ranges. Pioneer species found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest often near creeks and drainage lines.	0	No	No, rainforest/wet sclerophyll habitat not recorded within the study area. No local records.
Syzygium paniculatum	Magenta Lilly Pilly	E1	V	Only in NSW, in a narrow, linear coastal strip from Upper Lansdowne to Conjola State Forest. Subtropical and littoral rainforest on gravels, sands, silts and clays.	0	No	No, rainforest habitat not recorded within the study area. No local records.
Thelymitra kangaloonica	Kangaloon Sun Orchid	CE	CE	Only known to occur on the southern tablelands of NSW in the Moss Vale / Kangaloon / Fitzroy Falls area at 550-700 m above sea level. Swamps in sedgelands over grey silty grey loam soils.	0	No	No, swamp habitat not recorded within the study area. No local records.
Thesium australe	Austral Toadflax	V	V	In eastern NSW it is found in very small populations scattered along the coast, and from the Northern to Southern Tablelands. Grassland on coastal headlands or grassland and grassy woodland away from the coast.	0	Unlikely	No, the study area is regularly disturbed. The species was not recorded within the study area. The proposed activity is avoiding potential habitat within the study area. No local records.

BC ACT STATUS: CE = CRITICALLY ENDANGERED; E1 = ENDANGERED; E2 = ENDANGERED POPULATION, V=VULNERABLE; EPBC ACT STATUS: CE = CRITICALLY ENDANGERED, E = ENDANGERED, V = VULNERABLE, M = MIGRATORY

Appendix B Test of Significance (BC Act)

The 'Test of significance' (5-part test) is applied to species, populations and ecological communities listed on Schedules 1 and 2 of the BC Act and Schedules 4, 4A and 5 of the FM Act. The assessment sets out five factors, which when considered, allow proponents to undertake a qualitative analysis of the likely impacts of an action and to determine whether a significant impact is likely. All factors must be considered, and an overall conclusion made based on all factors in combination.

Tests of Significance have been undertaken for the following threatened entities:

- *Pteropus poliocephalus* (Grey-headed Flying-fox).

1.1 *Pteropus poliocephalus* (Grey-headed Flying-fox)

The Grey-headed Flying-fox is listed as vulnerable under the BC Act and has previously been recorded within 5 km of the study area (NSW DCCEEW 2025a). The description and habitat associations of this species are presented in Appendix A. The proposed action will potentially affect up to 0.02 ha of marginal foraging habitat (0.02 ha of planted native) for this species.

No known Grey-headed Flying-fox camps are present within the study area and no camps will be affected by the proposed development. Grey-headed Flying-fox present in camps within a 20 km radius of the study area may use the foraging resources available within the study area. The potential foraging habitat within the study area is marginal and would not be relied upon as a sole foraging resource for this species. The closest Nationally Important Camp is located approximately 3.7 km southeast of the study area in Milton Park, Macquarie Fields (DCCEEW 2025c).

Table 7: BC Act Test of Significance for Grey-headed Flying-fox

BC Act	Question	Response
7.3.1 a)	In the case of a threatened species: whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	An adverse impact to the Grey-headed Flying-fox includes impacts to breeding habitat or substantial loss of foraging habitat. There are no known flying fox camps within the study area (DCCEEW 2025c). The nearest camp is located at Macquarie Fields approximately 3.7 km southeast of the study area. The proposed works will result in the removal of up to approximately 0.02 ha of planted native vegetation which may provide occasional foraging habitat for the Grey-headed Flying-fox. The works will not result in impacts to breeding habitat in the form of camps or result in a substantial loss of foraging habitat for this species. It is considered unlikely that the proposed works would place a viable population of the species at risk of extinction given that the area of potential habitat is small in extent and would only be used occasionally, as part of a mosaic of foraging resources.

BC Act	Question	Response
7.3.1 b) i	In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or	Not applicable.
7.3.1 b) ii	In the case of an endangered ecological community or critically endangered ecological community: Whether the proposed development or activity is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.	Not applicable.
7.3.1 c) i	In relation to the habitat of a threatened species or ecological community: The extent to which habitat is likely to be removed or modified as a result of the proposed development or activity	Approximately 0.02 ha of planted native vegetation will be removed from a total of 0.52 ha of vegetation mapped within the study area. This will result in a minor reduction in the expanse of canopy available for foraging within the study area, accounting for only 3.8% of the total vegetation. For a highly mobile species, this impact is considered to be minor. This species will be able to continue to utilise the retained planted native vegetation within the study area as foraging habitat. As such, the extent to which the potential foraging habitat will be removed is unlikely to impact upon this species.
7.3.1 c) ii	In relation to the habitat of a threatened species or ecological community: Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity	The proposed works will involve the removal of up to approximately 0.02 ha of planted native vegetation. These consist of individual trees and shrubs scattered between buildings or on the boundary of the study area. This vegetation is already fragmented from larger patches of vegetation present within the surrounding area. The majority of planted native and planted exotic vegetation within the study area will remain. Therefore, the proposed works are unlikely to increase fragmentation. This highly mobile species would access similar vegetation within the broader landscape.
7.3.1 c) iii	In relation to the habitat of a threatened species or ecological community: The importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality.	The proposed works would remove up to approximately 0.02 ha of planted native vegetation which is considered marginal foraging habitat for Grey-headed Flying-fox. However, *Corymbia maculata* is a known important feed tree for the species during winter months, and the proposed works will result in the removal of one of these trees. The remaining *Corymbia maculata* will be retained within the study area. It is likely there will be more present within the surrounding landscape as this is a commonly planted street and garden tree used throughout the greater Sydney area. This is a highly mobile species, travelling an up to 20 km per night to forage (DCCEEW 2025b), and there is likely

BC Act	Question	Response
		an abundance of potential foraging habitat available within a 20 km radius of the study area. The small area of habitat to be impacted within the is not considered vital to the long-term survival of this species within the locality because the species is highly mobile and would be able to continue foraging in better condition vegetation within the broader landscape.
7.3.1 d)	Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).	The proposed works would not impact any declared area of outstanding biodiversity value.
7.3.1 e)	Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.	The proposed development is not part of a listed key threatening process.
Conclusion	Is there likely to be a significant impact?	The proposed works are unlikely to have a significant impact on Grey-headed Flying-fox for the following reasons: • the extent of potential foraging habitat to be impacted is minimal (up to approximately 0.02 ha) • similar habitat for the Grey-headed Flying-fox will remain within the study area and is available within proximity of the study area. • the proposed works would not result in fragmentation of habitat for the species • no breeding habitat (camps) would be impacted by the proposed works.

Appendix C Assessment of Significance (EPBC Act)

The EPBC Act establishes a process for assessing the environmental impact of activities and developments where Matters of National Environmental Significance (MNES) may be affected. Under the Act, any action which 'has, will have, or is likely to have a significant impact on a matter of MNES' is defined as a controlled action, and requires approval from the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW), which is responsible for administering the EPBC Act. The process includes undertaking an Assessment of Significance for listed threatened species and ecological communities that represent a matter of MNES that will be affected as a result of the proposed action. Significant impact guidelines that outline a number of criteria have been developed by the Commonwealth of Australia (2013), to provide assistance in conducting the Assessment of Significance and help decide whether or not a referral to the Commonwealth is required.

The following MNES has been assessed as part of this assessment:

- *Pteropus poliocephalus* (Grey-headed Flying-fox).

C1 *Pteropus poliocephalus* (Grey-headed Flying-fox)

The Grey-headed Flying-fox is listed as vulnerable under the EPBC Act and has been previously recorded within a 5 km radius of the action area (Appendix A). The proposed action will potentially affect up to 0.02 ha of marginal foraging habitat for this species in the form of planted native and planted exotic vegetation.

Grey-headed Flying-fox present in camps within a 20 km radius of the action area may use the foraging resources available within the action area (i.e. the study area). The potential foraging habitat within the action area is marginal and would not be relied upon as a sole foraging resource for this species. There are no known camps within the study area. The nearest nationally important camp to the study area is approximately 3.7 km southeast at Milton Park, Macquarie Fields (DCCEEW 2025c).

Considering that Grey-headed Flying-fox is likely to forage on the planted native vegetation within the study area on an occasional basis, a significance assessment has been undertaken in accordance with Significant impact guidelines 1.1 under the EPBC Act (CoA, 2013) (Table 8).

Table 8: EPBC Act Assessment for *Pteropus poliocephalus* (Grey-headed Flying-fox)

Criterion	Assessment
An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:	
Criterion a: lead to a long-term decrease in the size of an important population of a species	The Matters of National Environmental Significance Impact Guidelines 1.1 (CoA 2013) defines an important population as a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are: 1. Key source populations either for breeding or dispersal 2. Populations that are necessary for maintaining genetic diversity, and/or 3. Populations that are near the limit of the species range

Criterion	Assessment
	The Grey-headed Flying-fox is considered one population due to the constant exchange of genetic material between individuals and its movement between camps throughout its entire geographic range (DAWE 2021). Maternity or other roosting habitat is considered important habitat for this species. According to the National Flying-fox Monitoring Program, no Grey-headed Flying-fox camps currently occur or have ever been recorded within the action area (DAWE 2021). The nearest active Grey-headed Flying-fox camp occurs at Macquarie Park approximately 3.7 km southeast of the study area. The proposed action does not involve direct impacts to a known Grey-headed Flying-fox camp. Instead, it would potentially remove up to 0.02 ha of occasional foraging habitat for this species. The Grey-headed Flying-fox has been recorded travelling long distances (up to 40 km) on feeding forays (DAWE 2021). Given that potential foraging habitat present within the study area will be retained (0.52 ha) and the proximity of potential foraging habitat in the surrounding landscape, and no camps occur within the action area, the removal of potential foraging habitat within the action area is unlikely to lead to the long-term decrease in the size of an important population of Grey-headed Flying-fox.
Criterion b: reduce the area of occupancy of an important population	The proposed action will reduce the extent of available foraging habitat for the Grey-headed Flying-fox. Up to approximately 0.02 ha of potential foraging habitat will potentially be removed from the action area. A total of 0.52 ha of planted vegetation which may serve as foraging habitat is proposed to be retained. Additionally, the removal of canopy species will be supplemented by the replanting of native tree species with a replenishment ratio of 2:1. The study area does not contain breeding or sheltering habitat (i.e., bat camps). The Grey-headed Flying-fox is known to fly long distances (up to 40 km per night) and move between bat camps (DAWE 2021). As such, this species is likely to utilise a large extent of habitat around nearby camps, including the nationally important camp located at Macquarie Park. Due to the extent of potential habitat within the surrounding landscape of the action area, the removal of 0.02 of planted native is unlikely to significantly reduce the extent of occupancy for this species.
Criterion c: fragment an existing important population into two or more populations	The proposed action will potentially remove 0.02 ha of planted native suitable for foraging habitat for the Grey-headed Flying-fox. No camps will be affected, and other areas of foraging habitat are present in the study area. The species is highly mobile, and the proposed action will not fragment an existing important population into two or more populations. Whilst the potential foraging habitat may contribute as a 'stepping stone' for this highly mobile species to other more substantial foraging habitat sites, this function is unlikely to be significantly inhibited by the proposed action. Furthermore, this species has been recorded in urban environments and is likely to continue to forage adjacent to the action area and across the broader locality. Therefore, the proposed action is unlikely to fragment an existing important population into two or more populations.
Criterion d: adversely affect habitat critical to the survival of a species	The National Recovery Plan for the Grey-headed Flying-fox (DAWE 2021) identifies a number of myrtaceous plants, including Important winter and spring vegetation communities are those that contain *Eucalyptus tereticornis*, *E. albens, E. crebra, E. fibrosa, E. melliodora, E. paniculata, E. pilularis, E. robusta, E. seeana, E. sideroxylon, E. siderophloia, Banksia integrifolia, Castanospermum australe, Corymbia citriodora*, *C. eximia, C. maculata, Grevillea robusta, Melaleuca quinquenervia* or *Syncarpia glomulifera* as important foraging resources for the Grey-headed Flying Fox. The plan also identifies habitat which contain native species used for foraging and occur within 20 km of a nationally important camp and native or exotic species used for roosting at the site of a nationally important Grey-Headed Flying-Fox camp as critical habitat important to the survival of the species (DAWE 2021). The study area contains native species used for foraging and is within 20 km of a nationally important camp, so is considered critical

Criterion	Assessment
	habitat. No nationally important camps will be directly affected by the proposed action. The proposed action will potentially remove up to approximately 0.02 ha of suitable foraging habitat for the Grey-headed Flying-fox. However, given that this species is highly mobile (traveling up to 40 km to forage), that 0.52 ha of potential foraging habitat is to be retained within the action area, and the abundant habitat resources within the locality, it is considered unlikely that the development would adversely affect habitat critical to the survival of this species.
Criterion e: disrupt the breeding cycle of an important population	The proposed action will potentially remove up to 0.02 ha of planted native vegetation which may serve as suitable foraging habitat for the Grey-headed Flying-fox. The proposed action will not disrupt the breeding cycle of the Grey-headed Flying-fox given that no camps will be impacted by the proposed action and suitable foraging habitat is likely to be available outside of the study area.
Criterion f: modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	The proposed action would potentially remove up to approximately 0.02 ha of potential foraging habitat for the Grey-headed Flying-fox. Given the small amount of foraging habitat to be removed, that habitat is likely to be available outside of the action area and that this species is highly mobile, it is unlikely that the habitat to be removed would cause the species to decline. Further, according to the National Flying-fox Monitoring Program, no Grey-headed Flying-fox camps currently occur within the action area (DAWE 2021). The nearest active Grey-headed Flying-fox camps occur approximately 3.7 km to the southeast. No known Grey-headed Flying-fox camps for this species will be impacted by the proposed action.
Criterion g: Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	The proposed action is unlikely to result in the establishment of an invasive species that is harmful to the Grey-headed Flying-fox. The action area is an active school which already occurs in an urban environment and impacts to vegetation are minimal (0.02 ha).
Criterion h: Introduce disease that may cause the species to decline	Grey-headed Flying-fox are reservoirs for the Australian bat lyssavirus which can cause clinical disease and mortality in Grey-headed Flying-fox. The species also carries and Hendra virus, although it does not cause evident clinical disease in flying-foxes. Lyssavirus infection is higher when individuals are under stress. The proposed action is unlikely to increase the incidence of Lyssavirus, as no camps would be directly impacted.
Criterion i: Interfere substantially with the recovery of the species	The recovery plan lists objectives for the recovery of Grey-headed Flying-fox (DAWE 2021). Considering only a minimal amount of potential foraging habitat will be impacted (0.02 ha) and no camps are present within the action area, the proposed action is unlikely to interfere substantially with these objectives or the recovery of the species.
Conclusion	In consideration of the above, the proposed action is considered unlikely to have a significant impact on the Grey-headed Flying-fox as: • No camp or habitat important to the lifecycle of this species will be impacted. • The proposed works will not result in fragmentation of habitats. • The works are small in scale (up to 0.02 ha of vegetation to be removed). • Similar foraging habitat would still be available within the surrounding landscape.

Appendix D Fauna list

Scientific name	Common name	Status
Accipiter fasciatus	Brown Goshawk	Native
Acridotheres tristis	Common Myna	Exotic
Columba livia	Rock Dove	Exotic
Corvus coronoides	Australian Raven	Native
Cracticus nigrogularis	Pied Butcherbird	Native
Grallina cyanoleuca	Magpie-lark	Native
Gymnorhina tibicen	Australian Magpie	Native
Hirundo neoxena	Welcome Swallow	Native
Manorina melanocephala	Noisy Miner	Native
Sturnus vulgaris	Common Starling	Exotic
Threskiornis moluccus	Australian White Ibis	Native
Trichoglossus moluccanus	Rainbow Lorikeet	Native
Vanellus miles	Masked Lapwing	Native