Flora and Fauna Assessment

Wentworth Avenue Upgrade
Toongabbie, NSW

Prepared for: Cumberland Council c/- Hutchinson Weller
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East Coast Ecology

Document Control

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GLOSSARY

Abbreviation	Definition
amsl	Above mean sea level
BAM	Biodiversity Assessment Method 2020
BC Act	*Biodiversity Conservation Act 2016* (NSW)
BDAR	Biodiversity Development Assessment Report
BOM	Bureau of Meteorology
CEEC	Critically Endangered Ecological Community
DBH	Diameter at Breast Height
DCCEEW	Department of Climate Change, the Environment and Water
DPE	Department of Planning and Environment (formerly DPIE)
DPI	Department of Primary Industries
DPIE	Department of Planning, Industry and Environment (now DPE)
ECE	East Coast Ecology
EP&A Act	*Environmental Planning & Assessment Act 1979* (NSW)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
FFA	Flora and Fauna Assessment
FM Act	*Fisheries Management Act 1994*
ha	Hectares
km	Kilometres
LGA	Local Government Area
Locality	The same meaning when describing a local population of a species or local occurrence of an ecological community.
m	metres
mm	millimetres
MNES	Matters of National Environmental Significance
NSW	New South Wales
PCT	Plant Community Type
SEPP	State Environmental Planning Policy
SIS	Species Impact Statement
Subject Land	The land depicted in **Figure 1.**
TEC	Threatened Ecological Community
Transport	Transport for NSW

1. INTRODUCTION

1.1 The Proposed Activity

Cumberland City Council propose to upgrade the Toongabbie precinct road network, specifically along Wentworth Avenue, located in Toongabbie, NSW. The proposal aims to widen the existing road for ease of use, which will include the following scope:

- Road widening on Wentworth Avenue to allow an additional southbound lane on Wentworth Avenue at its intersection with Cornelia Road and The Portico
- Construction new retaining wall stretching approximately 120m adjacent to the northbound carriageway on Wentworth Avenue
- Inclusion of a rigid safety barrier along the newly installed retaining wall
- Installation of a crash barrier (or similar) on the northwestern verge of the intersection of Wentworth Avenue and Cornelia Road
- Mill and re-sheeting, line marking and signage changes within the road corridor to accommodate the new road layout, and
- Utility readjustments to the existing structure both above and below ground.

The Wentworth Avenue Upgrade Design (ERM, 2025) can be reviewed in **Appendix A**.

1.2 The Subject Land

The area assessed within this report, as detailed in the Wentworth Avenue Upgrade Design (ERM, 2025), is referred to as the 'Subject Land'. The Subject Land covers an area of approximately 0.19ha extending approximately 137m from Cornelia Road to the Toongabbie Bridge.

The location of the Subject Land is depicted in **Figure 1**.

1.3 Scope of Assessment

The overarching objective of this assessment was to evaluate the ecological values that occur within the Subject Land and identify how the proposed activity satisfies the relevant planning framework. This report discerns the likelihood of occurrence of any threatened entities (i.e. ecological communities and species) listed under the *Biodiversity Conservation Act 2016* (NSW) (BC Act) and the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). The full scope of the assessment included:

- Background research to determine the likelihood for NSW and/ or Commonwealth threatened biota to occur within the Subject Land during any point of their lifecycle
- Assess any potential impacts to species and/ or communities listed under the BC Act and EPBC Act
- Establishing the likelihood of occurrence of migratory species and threatened ecological communities (TEC) as listed under the BC Act and/ or the EPBC Act
- Identifying and mapping the distribution of vegetation communities within the Subject Land
- Recording presence and the extent of any known or potential fauna habitat features such as nests, dreys, caves, crevices, culverts, pools, soaks, flowering trees, fruiting trees or hollow-bearing trees and provide recommendations for on-going management of these habitat features and any fauna present

- Determining potential ecological impacts or risks that may result due to the proposed works, and
- Recommendation of any controls or additional actions to be taken to protect or improve environmental outcomes of the activity.

To facilitate the proposal, removal of native vegetation will be required. As such, East Coast Ecology Pty Ltd (ECE) was commissioned by Cumberland Council c/- Hutchinson Weller to prepare a Flora and Fauna Assessment (FFA) to assess the impacts associated with the proposed activity.

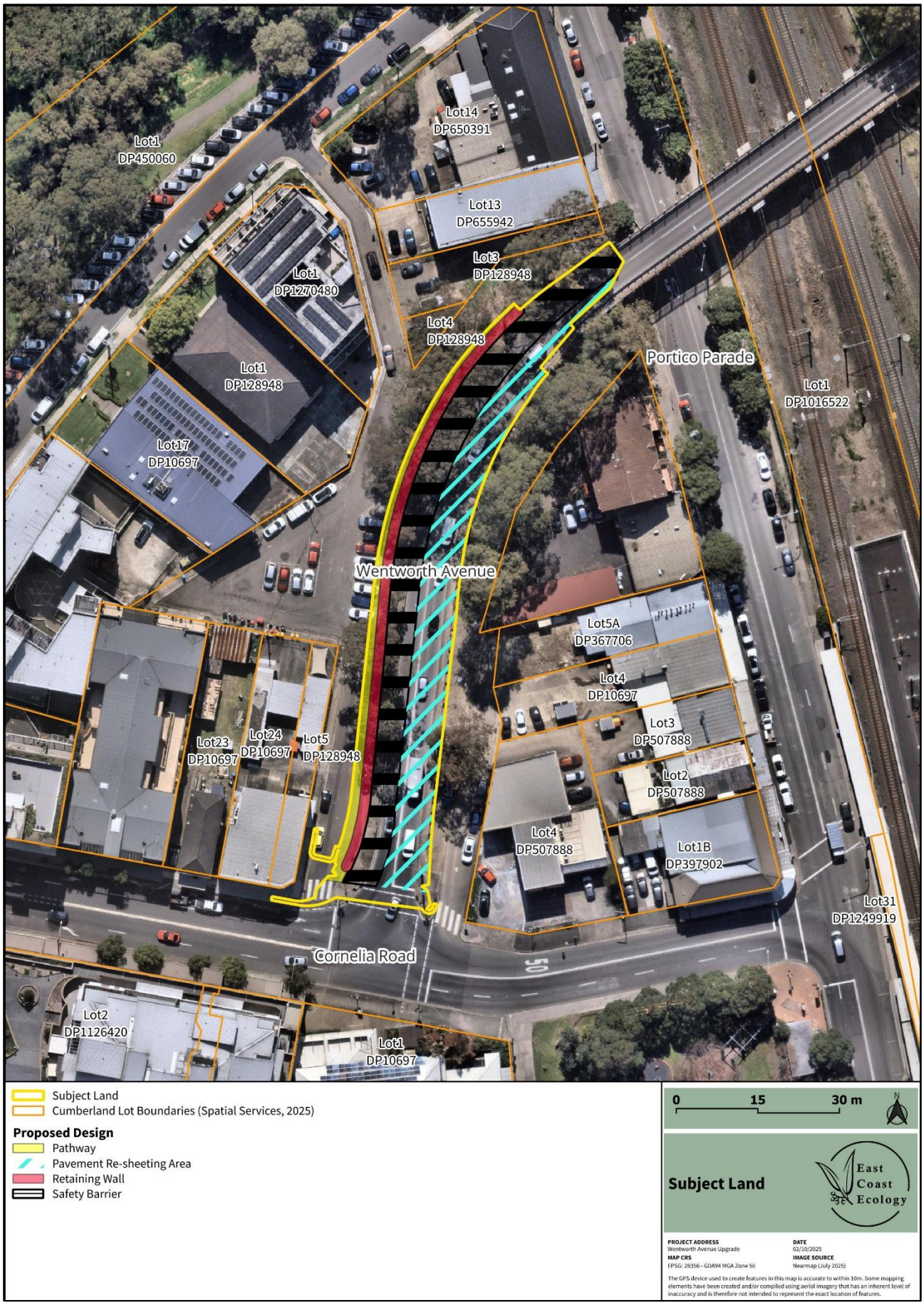

Figure 1. The location of the Subject Land.

1.4 Legislative Context

1.4.1 *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)

Under the EPBC Act, a proponent must not take an action if that action will have, or is likely to have, a significant impact on matters protected under the EPBC Act, referred to as MNES. The EPBC Act identifies eight MNES:

- World Heritage properties
- National Heritage places
- Wetlands of international importance (those listed under the Ramsar Convention)
- Listed threatened species and communities
- Migratory species listed under international agreements
- Great Barrier Reef Marine Park
- Commonwealth marine areas
- Nuclear actions

The PMST identified the following as potentially occurring within the Subject Land (or the area):

- 8 Threatened Ecological Communities
- 61 Threatened Species
- 13 Migratory Species

No MNES are likely to be significantly impacted by the proposed activity.

1.4.2 *Environmental Planning and Assessment Act 1979*

The *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act) establishes the system of environmental planning and assessment in NSW. The proposed activity is being assessed under Division 5.1 of the EP&A Act via a Review of Environment Factors (REF). This report provides input into the REF and environmental impact assessment process by providing assessment specific to matters of biodiversity.

1.4.3 *Biodiversity Conservation Act 2016*

The BC Act (NSW) seeks to conserve biological diversity and promote ecologically sustainable development, to prevent extinction and promote recovery of threatened species, populations and ecological communities and to protect areas of outstanding biodiversity value.

Several BC Act listed threatened species have the potential to occur within, or utilise, the Subject Land. The BC Act requires that the significance of the impact on threatened species, populations and threatened ecological communities is assessed using the test listed in Section 7.3 of the BC Act. Where a significant impact is likely to occur, a Species Impact Statement (SIS) must be prepared in accordance with the Environment Agency Head's requirements, or a Biodiversity Development Assessment Report (BDAR) must be prepared by an accredited assessor in accordance with the Biodiversity Assessment Method (BAM) (DPE, 2020a). The proposed activity will not result in a 'significant impact' on any threatened entities and therefore the Biodiversity Offset Scheme is not triggered (**Appendix C** & **Appendix D**). As such, an SIS or a BDAR is not required. The Subject Land is not located within any Areas of Outstanding Biodiversity Value.

1.4.4 Biosecurity Act 2015

The *Biosecurity Act 2015* (NSW) provides a framework for the prevention, elimination and minimisation of biosecurity risks posed by an activity as a matter of biosecurity. As defined in Part 3, section 23 of this Act, any non-conformance by an individual is defined as guilty of an offence.

One priority weed for the Greater Sydney Region was identified within the Subject Land:

- *Senecio madagascariensis* (Fireweed)

Priority weeds must be managed in accordance with the *Biosecurity Act 2015* (NSW). Suitable mitigation measures (**Section 7.2**) have been provided to appropriately manage weeds within the impact areas in accordance with the *Biosecurity Act 2015*.

1.4.5 Water Management Act 2000

The main objective of the *Water Management Act 2000* (NSW) (WM Act) is to manage NSW water in a sustainable and integrated manner that will benefit today's generations without compromising future generations' ability to meet their needs. Section 91E of the Act establishes an approval regime for controlled activities within waterfront land. However, clause 41 of the Water Management (General) Regulation 2018 provides an exemption for public authorities in relation to all controlled activities on waterfront land. Therefore, approval under the WM Act is not required.

1.4.6 Fisheries Management Act 1994

The *Fisheries Management Act 1994* (NSW) (FM Act) aims to conserve, develop and share the fishery resources of NSW for the benefit of present and future generations including conserving fish stocks and key fish habitats and promoting ecologically sustainable development. No Key Fish Habitat (KFH) was identified within the Subject Land. The closest area of KFH occurs approximately 900m north of the Subject Land in Blacktown Creek. The proposed activity however does not require works within the watercourse, nor will any protected marine vegetation be impacted. As such, there are no legislative requirements or notifications required under this Act.

1.4.7 State Environmental Planning Policy (Biodiversity and Conservation) 2021

On 1st of March 2022, the State Environmental Planning Policy (Biodiversity Conservation) 2021 (Biodiversity Conservation SEPP) came into effect, consolidating and repealing several former State Environmental Planning Policies (SEPPs) and Regional Environmental Plans (REPs) relating to biodiversity in NSW. Specifically, Chapters 3 and 4 of the Biodiversity Conservation SEPP incorporate the Koala SEPP 2020 and Koala SEPP 2021, respectively.

Chapter 4 of the Biodiversity Conservation SEPP applies to the Cumberland City LGA, however, as the proposal does not require development consent in accordance with the State Environmental Planning Policy (Transport and Infrastructure) 2021, the Biodiversity Conservation SEPP does not apply to the proposal. Regardless, this document has been considered when assessing potential impacts on koalas and koala habitat.

1.4.8 State Environmental Planning Policy (Resilience and Hazards) 2021

The State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) commenced on the 1st of March 2022 and replaces the following former SEPPs:

- State Environmental Planning Policy (Coastal Management) 2018
- State Environmental Planning Policy 33 – Hazardous and Offensive Development, and
- State Environmental Planning Policy 55 – Remediation of Land.

Chapter 2 (Coastal management) of the State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) aims to manage development in the coastal zone in a manner consistent with the objectives of the *Coastal Management Act 2016*, including the management objectives for each coastal management area.

The Subject Land is not situated within the 'coastal zone' as defined in Section 2.4 of the SEPP, and therefore this SEPP does not apply.

2. METHODOLOGY

2.1 Background Research

A thorough literature review of local information relevant to the Subject Land was undertaken. Searches using NSW Wildlife Atlas (BioNet) (NSW DCCEEW, 2025a) and the Commonwealth Protected Matters Search Tool (PMST) (DCCEEW, 2025) were conducted to identify all current threatened flora and fauna, as well as migratory fauna records, within a 5km radius of the Subject Land. These data were used to assist in establishing the presence or likelihood of any ecological values as occurring on or adjacent to the Subject Land and helped inform our ecologists on what to look for during the site assessment.

Soil landscape and geological mapping, as well as existing vegetation mapping, were examined to assist in determining whether any threatened flora or ecological communities could be present. The following technical resources were comprised in the preparation of this report:

- State and Commonwealth datasets:
  - EPBC Protected Matters Search Tool (DCCEEW, 2025)
  - NSW BioNet. The website of the Atlas of NSW Wildlife (NSW DCCEEW, 2025a)
  - NSW BioNet. Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b)
  - NSW BioNet. Vegetation Classification System (NSW DCCEEW, 2025c)
  - NSW Government Spatial Services: Search and Discovery - Historical, Aerial and Satellite Imagery (Spatial Services, 2025a)
  - NSW Government Spatial Services: Six Maps Clip & Ship (Spatial Services, 2025b)
- Vegetation and soil mapping:
  - The NSW State Vegetation Type Map (NSW DCCEEW, 2025d)
  - eSPADE v2.2.0 (NSW DCCEEW, 2025f)
- NSW State guidelines:
  - Biodiversity Assessment Method (DPE, 2020)
  - Surveying threatened plants and their habitats - NSW survey guide for the Biodiversity Assessment Method (DPE, 2020a)
- Project Specific Documentation:
  - Wentworth Avenue Upgrade Design (ERM, 2025) (**Appendix A**)

Species from the BioNet online search was used produce a list of threatened species, populations and communities that are likely to occur within the Subject Land (**Table 6** & **Table 7**).

2.2 Permits and Licences

The biodiversity assessment was conducted under the terms of ECE's Scientific Licence issued by the NSW Department of Planning and Environment (SL102667). Fauna survey was conducted under approval RVF22/2367 from the NSW Animal Care and Ethics Committee.

2.3 Native Vegetation, Threatened Ecological Communities and Vegetation Integrity Methods

2.3.1 Existing Information

A review of the State Vegetation Type Map (NSW DCCEEW, 2025d) was used to assist in the identification of Plant Community Types (PCTs) within and surrounding the Subject Land. The PCT of 'best-fit' was determined based on the floristic descriptions within the Vegetation Classification System database (NSW DCCEEW, 2025c).

2.3.2 Mapping Native Vegetation Extent

The extent of native vegetation within the Subject Land was determined through a field assessment with the aid of a GPS-enabled tablet.

2.4 Threatened Flora Survey Methods

2.4.1 Review of Existing Information

Threatened flora with potential to occur within the Subject Land and immediate surrounds were identified following review of BioNet and the PMST. Soil mapping (NSW DCCEEW, 2025e) and topography (Google Earth) were also used to provide further context on habitat constraints for threatened flora.

2.4.2 Field Surveys

To determine whether any threatened flora or their habitats were present, a survey was undertaken using parallel field traverses in accordance with the 'Surveying threatened plants and their habitats - NSW survey guide for the Biodiversity Assessment Method' (NSW DCCEEW, 2020b).

2.5 Threatened Fauna Survey Methods

2.5.1 Review of Existing Information

Threatened fauna with potential to occur within the Subject Land and immediate surrounds were identified following review of BioNet and the PMST. Soil mapping (NSW DCCEEW, 2025e) and topography (Google Earth) were also used to provide further context on habitat constraints for threatened fauna.

2.5.2 Habitat Constraints

A field survey was undertaken to identify any habitat constraints (e.g. waterbodies, rocky areas, tree hollows), including microhabitat, present within the Subject Land and immediate surrounds. Potential habitat constraints within the broader area (500m buffer) were assessed using Google Earth, historical aerial imagery (Spatial Services, 2025a), soil landscape mapping (NSW DCCEEW, 2025e) and recent vegetation mapping (NSW DCCEEW, 2025d).

2.5.3 Field Surveys

No targeted surveys for fauna were undertaken. To determine whether any threatened fauna species were present, targeted habitat surveys were undertaken using parallel field traverses.

2.6 Weather Conditions

The Survey was undertaken on the 8th of September 2025, within and immediately surrounding the Subject Land. Weather conditions recorded at the nearest weather station (Parramatta (station 066124)) in the lead up and during the field survey are outlined in **Table 1** (BOM, 2025).

Table 1. Weather conditions taken from the nearest weather stations (Station number 066124) in the lead up and during the field survey (BOM, 2025).

Timing/activities	Date	Day	Temperature		Rainfall (mm)
			Min	Max	
Lead up to the survey	01/09/2025	Monday	5.5	20	0
	02/09/2025	Tuesday	8.5	20.5	0
	03/09/2025	Wednesday	7.5	22	0
	04/09/2025	Thursday	9.8	23.5	0
	05/09/2025	Friday	8	18.6	0
	06/09/2025	Saturday	9	21	0
	07/09/2025	Sunday	8.8	26	0
Site Assessment & Habitat Survey	08/09/2025	Monday	15.2	28	0

2.7 Limitations

Not all flora and fauna species could be directly surveyed for during the site assessment. These species include nocturnal fauna and cryptic flora with flowering times outside of the survey period. The presence of nocturnal and cryptic species was assessed based on habitat constraints and historical records.

3. SITE CONTEXT

3.1 Landscape Features

3.1.1 IBRA Bioregion and subregion

The Subject Land is situated within the Cumberland City Council Local Government Area (LGA) and is located within the suburb of Toongabbie. The Subject Land occurs within the 'Cumberland' Biogeographic Regionalisation for Australia (IBRA) Subregion, within the Sydney Basin IBRA Bioregion (**Figure 2**).

3.1.2 Rivers, streams, estuaries and wetlands

No mapped watercourses or their riparian buffers occur within the Subject Land. One first order watercourse, Pendle Creek, and one second order watercourse, Girraween Creek, are located within 500m of the Subject Land (**Figure 2**).

3.1.3 Topography, Geology and Soils

The elevation within the Subject Land grades from approximately 30m above sea level (asl) in the southern extent to approximately 34m asl in the northern extent. The Subject Land is situated within the South Creek Soil Landscapes (NSW DCCEEW, 2025e). The South Creek Soil Landscape is characterised by floodplains, valley flats and drainage depressions of the Cumberland Plain channels on Wianamatta Group shales and Hawkesbury Sandstone.

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

The Subject Land did not contain areas of geological significance (karsts, caves, cliffs and crevices). The Subject Land, or surrounding area (500m buffer), was not mapped as occurring on acid sulfate soils nor mapped as having risk/ probability of exhibiting occurrence of acid sulfate soils.

3.1.5 Areas of Outstanding Biodiversity Value

No Areas of Outstanding Biodiversity Value (AOBV) occur within the Subject Land.

3.1.6 NSW (Mitchell) Landscapes

Mitchell Landscapes (Mitchell, 2002) groups ecosystems into meso-ecosystems representing larger natural entities based on topography and geology. The naming of ecosystems and meso-ecosystems was standardised so that each name provided location information and a meaningful descriptive landscape term. The Subject Land occurs within the 'Cumberland Plain' Mitchell Landscape Ecosystem.

3.1.6.1 Cumberland Plain

Low rolling hills and valleys in a rain shadow area between the Blue Mountains and the coast on horizontal Triassic shales and lithic sandstones forming a down-warped block on the coastal side of the Lapstone monocline. Intruded by a small number of volcanic vents and partly covered by Tertiary river gravels and sands (Hawkesbury-Nepean Terrace Gravels landscape). Quaternary alluvium along the mains streams. General elevation 30 to 120m, local relief 50m. and sometimes affected by salt in tributary valley floors.

Pedal uniform red to brown clays on volcanic hills. Red and brown texture-contrast soils on crests grading to yellow harsh texture-contrast soils in valleys. Woodlands and open forest of Grey Box (*Eucalyptus moluccana*), Forest Red Gum (*Eucalyptus tereticornis*), Narrow-leaved Ironbark (*Eucalyptus crebra*), Thin-leaved Stringybark (*Eucalyptus eugenioides*), Cabbage Gum (*Eucalyptus amplifolia*) and Broad-leaved Apple (*Angophora subvelutina*). Grassy to shrubby understorey often dominated by Australian Boxthorn (*Bursaria spinosa*), poorly drained valley floors, often salt affected with Swamp Oak (*Casuarina glauca*) and Paperbark (*Melaleuca sp.*).

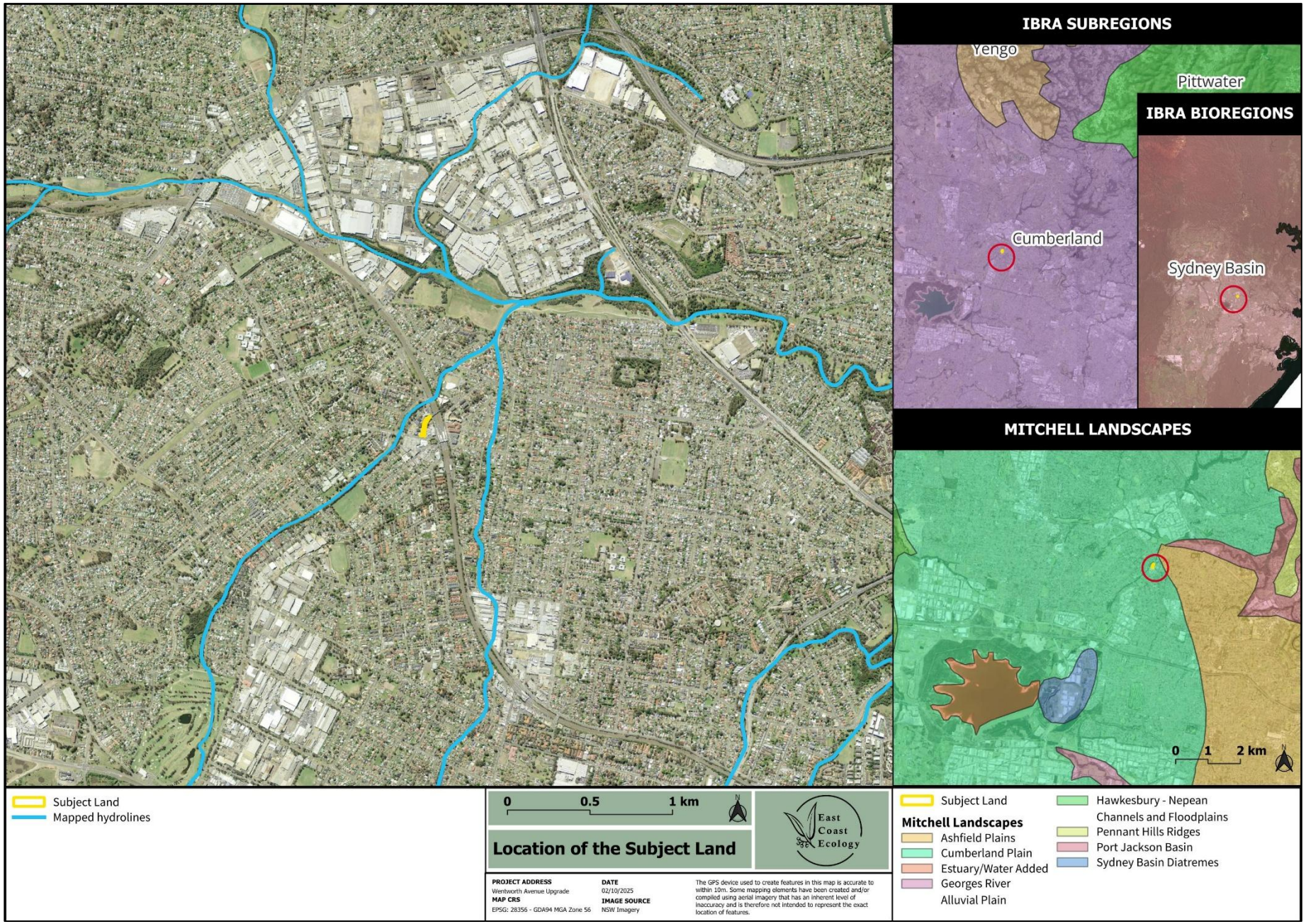

Figure 2. Context of the Subject Land in the broader locality.

4. RESULTS: NATIVE VEGETATION

4.1 Plant Community Types

4.1.1 Historically Mapped Vegetation

The State Vegetation Type Map (NSW DCCEEW, 2025d) indicated the presence of two Plant Community Types (PCT) within and surrounding the Subject Land:

- PCT 3320: Cumberland Shale Plains Woodland, and
- PCT 4025: Cumberland Red Gum Riverflat Forest.

Of these, the following PCT's are associated with the below threatened ecological communities (TEC):

- PCT 3320:
  - BC Act Listed; Cumberland Plain Woodland in the Sydney Basin Bioregion (Critically Endangered)
  - BC Act Listed; Shale Gravel Transition Forest in the Sydney Basin Bioregion (Endangered)
  - EPBC Act Listed; Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest (Critically Endangered)
- PCT 4025:
  - BC Act Listed; Elderslie Banksia Scrub Forest (Critically Endangered)
  - BC Act Listed; River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions (Endangered)
  - EPBC Act Listed; Elderslie Banksia Scrub Forest in the Sydney Basin Bioregion (Critically Endangered), and
  - EPBC Act Listed; River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria (Critically Endangered).

The State Vegetation Type Map is presented in **Figure 3**.

4.1.2 Field-validated Vegetation

Site assessment by ECE determined the presence of one PCT within the Subject Land:

- PCT 3320: Cumberland Shale Plains Woodland

Vegetation within the Subject Land has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 2**. A detailed description of the PCT is provided in the following subsections. One novel vegetation type was also allocated to vegetation within the Subject Land that could not be reasonably assigned to a PCT:

- Urban Native/ Exotic.

Table 2. PCT identified within the Subject Land.

PCT ID	PCT Scientific Name	Area within the Subject Land (ha)
3320	Cumberland Shale Plains Woodland	0.21ha
	Total Area	**0.21ha**

4.1.3 Justification for the PCT Selection

PCT selection for native vegetation was undertaken using information and databases provided in the BioNet Vegetation Classification System (NSW DCCEEW, 2025c). The following selection criteria were used in the PCT Filter Tool to develop a PCT shortlist:

- IBRA Bioregion: Sydney Basin
- IBRA Subregion: Cumberland
- LGA: Cumberland
- Vegetation Formation: Coastal Valley Grassy Woodlands
- Dominant species: *Eucalyptus tereticornis* & *Eucalyptus moluccana*

This process delivered one PCT that met all the selection criteria, further detailed in **Table 3** and displayed in **Figure 4**.

Figure 3. NSW State Vegetation Type Map within and surrounding the Subject Land.

Table 3. Description of vegetation identified within the Subject Land, that will be impacted by the activity.

PCT 3320: Cumberland Shale Plains Woodland	
	
Vegetation Formation	Coastal Valley Grassy Woodlands
Extent within Subject Land (approximate)	0.21ha (worst case)
Description of the Vegetation within the Subject Land	
The vegetation within the Subject Land was generally in poor condition with both the mid and ground stratum completely absent. The canopy layer was dominated by both *Eucalyptus tereticornis* and *Eucalyptus moluccana* at the time of the assessment. Historical imagery dictates that the Subject Land has undergone historical clearing prior to 1965 (Spatial Services, 2025b), likely planted as roadside vegetation in 1975.	

PCT 3320: Cumberland Shale Plains Woodland	
Description of PCT 3320 in BioNet	
A tall sclerophyll open forest or woodland with a sparse mid-stratum of soft-leaved shrubs and small trees with a grassy ground cover on the undulating Wianamatta Group shale plains of western Sydney. The canopy very frequently includes *Eucalyptus tereticornis* and *Eucalyptus moluccana*, with ironbarks (*Eucalyptus crebra and Eucalyptus fibrosa*) occasionally present and sometimes prominent in localised areas. The sparse shrub to small tree layer very frequently includes *Bursaria spinosa* and one or more species of Acacia, of which *Acacia parramattensis*, *Acacia decurrens* and *Acacia falcata* are the most frequent and abundant. Presence of these Acacia species helps to distinguish this PCT from the related PCT 3319 on rises of the southern Cumberland Plain which typically includes *Acacia implexa*. The mid-dense ground layer typically includes grasses, forbs, twiners and hardy small ferns. *Microlaena stipoides* is almost always present and *Themeda triandra*, *Dichondra repens*, *Brunoniella australis*, *Cheilanthes sieberi subsp. sieberi*, *Desmodium varians*, *Aristida vagans* and *Glycine tabacina* are very frequent. This is the most widespread PCT on the Cumberland Plain, occupying much of the plain between Bankstown and the Hawkesbury and Nepean rivers. It typically occurs in a warm, moist climate below 120 metres asl however can occur up to 200 metres asl on the undulating terrain between Douglas Park and Campbelltown to the east of the Nepean River. A northern outlier occurs near Maroota on a small remnant on a narrow shale ridge. While widespread on the main part of the plain, this PCT primarily occurs in small, often disturbed patches within a rural or urban matrix. In the hilly country to the west of the Nepean River, this PCT is replaced by PCT 3319. On thinner shales above sandstone around the periphery of the Cumberland Plain, it grades into PCT 3321. Ironbarks are very frequent and *Eucalyptus punctata* is common in the canopy of PCT 3321, and *Eucalyptus moluccana* and *Eucalyptus tereticornis* are both rare.	
Groundwater Dependent Ecosystems (GDE)	Assessment of the potential for the Subject Land to support groundwater dependent ecosystems was carried out using the Commonwealth's Bureau of Meteorology Groundwater Dependent Ecosystems Atlas (BOM, 2025a). This PCT is unlikely to be associated with any Groundwater Dependent Ecosystems.
BC Act 2016 Status	BC Act Listed; Cumberland Plain Woodland in the Sydney Basin Bioregion (Critically Endangered)
EPBC Act 1999 Status	Not Listed – does not meet condition thresholds.

Table 4. Description of vegetation identified within the Subject Land, that will be impacted by the activity.

Urban Native/ Exotic	
	
Vegetation Formation	-
Extent within Subject Land (approximate)	0.06ha
Description of the Vegetation to be identified within and surrounding the Subject Land	
Vegetation within and surrounding the Subject Land exists in a disturbed state due to historical clearing prior to 1965 (Spatial Services, 2025b) and the urban context of the area. The canopy layer was comprised of very few *Eucalyptus microcorys* and a stand of *Casuarina glauca* in the north-western corner of the Subject Land. The lower stratum layers were dominated by common ornamental species including *Lomandra longifolia*, *Lactuca serriola*, *Malva parviflora*, *Verbana littoralis*, *Solanum americanum*, *Lepidium didymium*, *Plantago lancelota, Sonchus oleraceus, Cardiospermum grandiflorum* and *Araujia sericifera*. Priority weed; *Senecio madagascariensis* was also ubiquitous throughout the Subject Land.	
BC Act 2016 Status	Not listed.
EPBC Act 1999 Status	Not listed.

4.2 Threatened Ecological Communities

The vegetation within and surrounding the Subject Land, characteristic of PCT 3320, is associated with the following BC Act listed TEC:

- BC Act listed; Cumberland Plain Woodland in the Sydney Basin Bioregion (Critically Endangered)

The extent of the CEEC is provided in **Figure 4**.

4.2.1 Listing under the *Biodiversity Conservation Act 2016* – Cumberland Plain Woodland in the Sydney Basin Bioregion - critically endangered ecological community listing

The NSW Scientific Committee (2009) has determined that the critically endangered ecological community, Cumberland Plain Woodland in the Sydney Basin, is associated with:

- Clay soils derived from Wianamatta Group geology, or more rarely alluvial substrates, on the Cumberland Plain, a rain shadow area to the west of Sydney's Central Business District, and
- an upper-storey that is usually dominated by *Eucalyptus moluccana* (Grey Box) and *E. tereticornis* (Forest Red Gum), often with *E. crebra* (Grey Ironbark), *E. eugenioides* (Narrow-leaved Stringybark), *Corymbia maculata* (Spotted Gum) or other less frequently occurring eucalypts, including *Angophora floribunda*, *A. subvelutina* (Broad-leaved Apple), *E. amplifolia* (Cabbage Gum) and *E. fibrosa* (Broad-leaved Ironbark).

The vegetation within the Subject Land is co-dominated by *Eucalyptus tereticornis* and *Eucalyptus moluccana* and occurs on Wianamatta Group shales, therefore it has been determined to form a part of the critically endangered ecological community.

4.2.2 Listing under the *Biodiversity Conservation Act 2016* – Shale Gravel Transition Forest in the Sydney Basin Bioregion - endangered ecological community listing

The vegetation within the Subject Land was determined to not meet the conditions thresholds of the BC Act Listed TEC; Shale Gravel Transition Forest in the Sydney Basin Bioregion on the basis that the Subject Land does not occur in areas where shallow deposits of tertiary alluvium overlie shale soils are present, nor is it typically found in the Cumberland LGA (Scientific Committee, 2011). No further assessment is required.

4.2.3 Listing under the *Environmental Protection and Biodiversity Conservation Act 1999* – Cumberland Plain Shale Woodlands and Shale Gravel Transition Forest ecological community – critically endangered ecological community

Due to the lack of native species within the understorey (<30%), the patch of vegetation within the Subject Land was not consistent with the EPBC condition criteria for the nationally-listed ecological community, Cumberland Plain Shale Woodlands and Shale Gravel Transition Forest ecological community (**Table 5**). No further assessment is required.

Table 5. Condition thresholds for patches of Cumberland Plain Shale Woodlands and Shale Gravel Transition Forest ecological community (Threatened Species Scientific Committee, 2009).

Category and rationale	Thresholds
A. Core thresholds that apply under most circumstances: patches with an understorey dominated by natives and a minimum size that is functional and consistent with the minimum mapping unit size applied in NSW.	Minimum patch[3] size is ≥0.5ha; **AND** ≥50% of the perennial understorey vegetation cover[4] is made up of native species.
OR	
B. Larger patches which are inherently valuable due to their rarity.	The patch size is ≥5ha; **AND** ≥30% of the perennial understorey vegetation cover is made up of native species.
OR	
C. Patches with connectivity to other large native vegetation remnants in the landscape.	The patch size is ≥0.5 ha; **AND** ≥30% of the perennial understorey vegetation cover is made up of native species; **AND** The patch is contiguous[5] with a native vegetation remnant (any native vegetation where cover in each layer present is dominated by native species) that is ≥5ha in area.
OR	
D. Patches that have large mature trees or trees with hollows (habitat) that are very scarce on the Cumberland Plain.	The patch size is ≥0.5 ha in size; **AND** ≥30% of the perennial understorey vegetation cover is made up of native species; **AND** The patch has at least one tree with hollows per hectare or at least one large tree (≥80 cm dbh) per hectare from the upper tree layer species outlined in the Description and Appendix A.

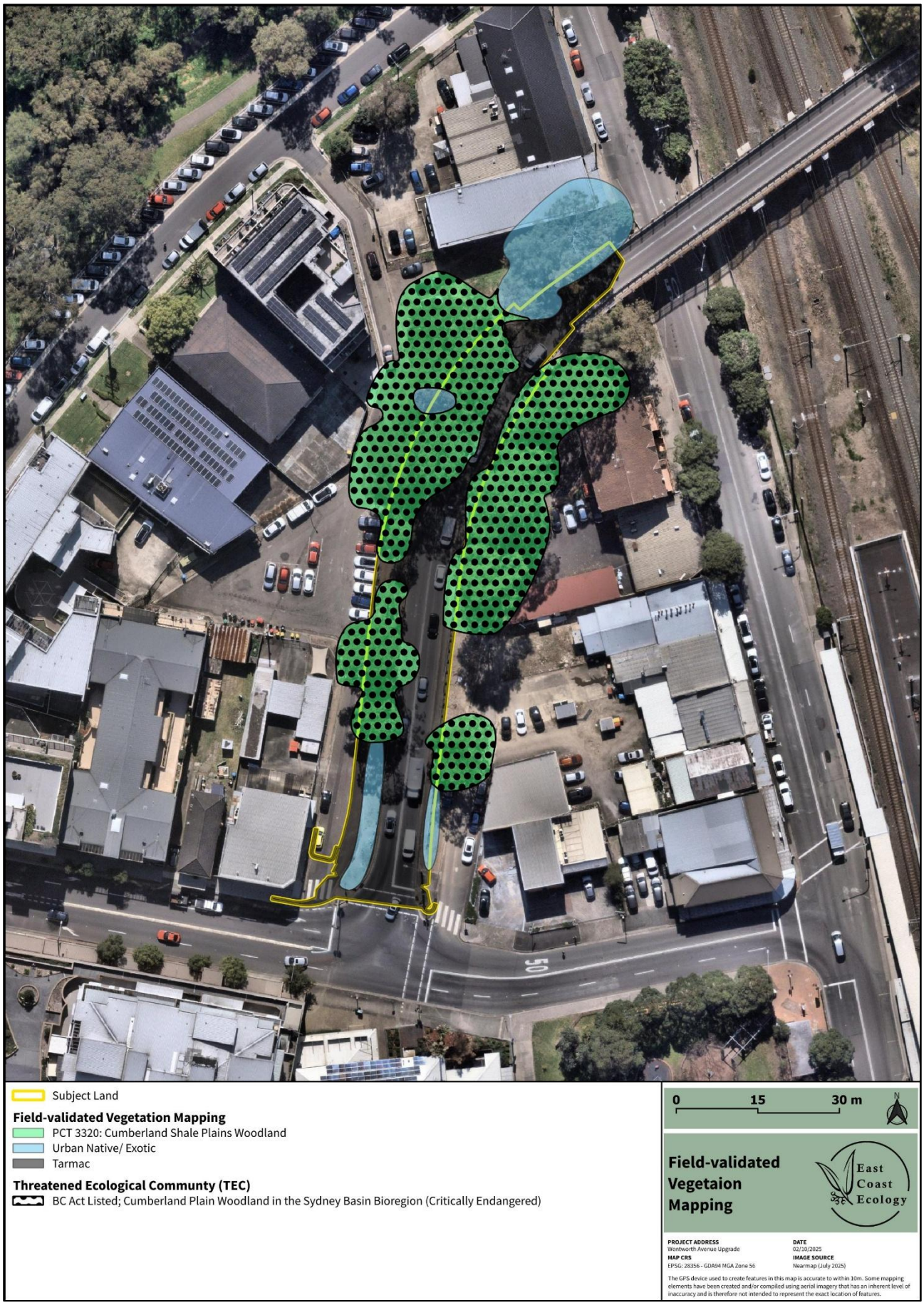

Figure 4. Field-validated vegetation communities within the Subject Land.

5. RESULTS: THREATENED SPECIES

5.1 Threatened Flora

Database searches revealed 14 threatened flora have been recorded within a ~5km radius of the Subject Land (**Table 6**).

Table 6. Threatened flora with potential to occur within the Subject Land.

Scientific Name	Common Name	BC Act	EPBC Act	Records within 5km
Acacia pubescens	Downy Wattle	V	V	5
Epacris purpurascens var. purpurascens	-	V	-	8
Eucalyptus nicholii	Narrow-leaved Black Peppermint	V	V	14
Eucalyptus scoparia	Wallangarra White Gum	E	V	3
Grevillea juniperina subsp. juniperina	Juniper-leaved Grevillea	V	-	5
Isotoma fluviatilis subsp. fluviatilis	-	-	X	1
Macadamia integrifolia	Macadamia Nut	-	V	3
Macadamia tetraphylla	Rough-shelled Bush Nut	V	V	1
Pimelea curviflora var. curviflora	-	V	V	8
Pimelea spicata	Spiked Rice-flower	E	E	207
Pomaderris prunifolia	P. prunifolia in the Parramatta, Auburn, Strathfield and Bankstown Local Government Areas	EP	-	2
Pterostylis saxicola	Sydney Plains Greenhood	E	E	2
Pultenaea parviflora	-	E	V	8
Syzygium paniculatum	Magenta Lilly Pilly	V	V	8

V – Vulnerable; E – Endangered; EP – Endangered Population; CE – Critically Endangered; X – Extinct

No threatened flora species were identified within the Subject Land. Based on habitat constraints and targeted surveys, no threatened flora species were considered likely to occur within the Subject Land. It is

not expected that the proposed activity would pose a significant impact to a nearby viable local population, on the basis that all mitigation measures proposed in this report are adhered to (**Section 7.2**). Further assessment is provided in Threatened Fauna

Database searches revealed 42 threatened fauna have been recorded within a ~5km radius of the Subject Land (**Table 7**).

Table 7. Threatened fauna with potential to occur within the Subject Land.

Scientific Name	Common Name	BC Act	EPBC Act	Records within 5km
Anthochaera phrygia	Regent Honeyeater	E	CE	1
Artamus cyanopterus cyanopterus	Dusky Woodswallow	V	-	37
Botaurus poiciloptilus	Australasian Bittern	E	E	1
Burhinus grallarius	Bush Stone-curlew	E	-	1
Callocephalon fimbriatum	Gang-gang Cockatoo	E	E	1
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	V	V	4
Chalinolobus dwyeri	Large-eared Pied Bat	E	E	2
Circus assimilis	Spotted Harrier	V	-	3
Daphoenositta chrysoptera	Varied Sittella	V	-	55
Dasyurus maculatus	Spotted-tailed Quoll	V	E	2
Falco subniger	Black Falcon	V	-	2
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V	-	22
Haliaeetus leucogaster	White-bellied Sea-Eagle	V	-	25
Hieraaetus morphnoides	Little Eagle	V	-	8
Hirundapus caudacutus	White-throated Needletail	V	V	95
Lathamus discolor	Swift Parrot	E	CE	47
Litoria aurea	Green and Golden Bell Frog	E	V	2
Lophoictinia isura	Square-tailed Kite	V	-	9

Scientific Name	Common Name	BC Act	EPBC Act	Records within 5km
Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	V	-	1
Meridolum corneovirens	Cumberland Plain Land Snail	E	-	17
Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	V	-	29
Miniopterus australis	Little Bent-winged Bat	V	-	24
Miniopterus orianae oceanensis	Large Bent-winged Bat	V	-	66
Myotis macropus	Southern Myotis	V	-	11
Neophema pulchella	Turquoise Parrot	V	-	2
Ninox connivens	Barking Owl	V	-	5
Ninox strenua	Powerful Owl	V	-	171
Oxyura australis	Blue-billed Duck	V	-	1
Parvipsitta pusilla	Little Lorikeet	V	-	28
Petroica boodang	Scarlet Robin	V	-	2
Phascolarctos cinereus	Koala	E	E	5
Pluvialis squatarola	Grey Plover	V	V	2
Polytelis swainsonii	Superb Parrot	V	V	1
Pommerhelix duralensis	Dural Land Snail	E	E	6
Pteropus poliocephalus	Grey-headed Flying-fox	V	V	793
Ptilinopus superbus	Superb Fruit-Dove	V	-	1
Rostratula australis	Australian Painted Snipe	E	E	1
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	V	-	4
Scoteanax rueppellii	Greater Broad-nosed Bat	V	-	11
Stagonopleura guttata	Diamond Firetail	V	V	1
Tyto novaehollandiae	Masked Owl	V	-	1
Tyto tenebricosa	Sooty Owl	V	-	1

V – Vulnerable; E – Endangered; EP – Endangered Population; CE – Critically Endangered.

No threatened fauna species were identified within the Subject Land, however this does not rule out the potential for threatened species to still exist within the Subject Land, particularly given no targeted surveys were undertaken.

Given the large areas of potential habitat in the surrounding locality and urban context of the area, it was determined that the proposed activity is not likely to significantly impact directly or indirectly upon any threatened fauna. Further justification is provided in **Appendix C** of this report. Details of threatened fauna habitat recorded within the Subject Land are provided in **Table 8**.

Table 8. Fauna habitat values identified within the Subject Land.

Habitat component	Subject Land
Coarse woody debris	Absent.
Rock outcrops and bush rock	Absent.
Caves, crevices and overhangs	Absent.
Culverts, bridges, mine shafts, or abandoned structures	Absent.
Nectar/lerp-bearing Trees	Present throughout – *Eucalyptus spp.*
Nectar-bearing shrubs	Absent.
Large stick nests	Absent.
Sap and gum sources	Absent.
She-oak fruit	Present throughout – *Casuarina spp.*
Seed-bearing trees and shrubs	Present throughout – *Eucalyptus spp.*
Soft-fruit-bearing trees/shrubs	Absent.
Dense shrubbery and leaf litter	Absent.
Tree hollows	Absent.
Decorticating bark	Absent.
Wetlands, soaks, and streams	Absent.
Open water bodies	Absent.
Estuarine, beach, mudflats, and rocky foreshores	Absent.

Habitat component	Subject Land
Termite Mounds	Absent.

5.2 Migratory Species

Database searches revealed seven migratory terrestrial species, or their habitat, are known to occur within the Subject Land (**Table 9**). These species do not breed in Australia.

Table 9. Migratory terrestrial species with potential to occur in the Subject Land.

Species	EPBC Act Status
Cuculus optatus (Oriental Cuckoo)	Migratory, CAMBA, JAMBA, ROKAMBA
Hirundapus caudacutus (White-throated Needletail)	Vulnerable, Migratory, CAMBA, JAMBA, ROKAMBA
Monarcha melanopsis (Black-faced Monarch)	Migratory, Bonn
Monarcha trivirgatus (Spectacled Monarch)	Migratory, Bonn
Motacilla flava (Yellow Wagtail)	Migratory, CAMBA, JAMBA, ROKAMBA
Myiagra cyanoleuca (Satin Flycatcher)	Migratory, Bonn
Rhipidura rufifrons (Rufous Fantail)	Migratory, Bonn

CAMBA = China-Australia Migratory Bird Agreement, JAMBA = Japan-Australia Migratory Bird Agreement, ROKAMBA = Republic of Korea-Australia Migratory Bird Agreement and Bonn = Convention on the Conservation of Migratory Species of Wild Animals.

Figure 5. Threatened species records within proximity to the Subject Land.

6. IMPACT SUMMARY

6.1 Direct Impacts

6.1.1 Impacts to Plant Community Types

The primary direct ecological impact of the proposed activity is clearing of native vegetation. The proposed activity will result in the following (worst case) impacts:

- Removal of 0.21ha of PCT 3320: Cumberland Shale Plains Woodland, and
- Removal of 0.06ha of Urban Native/ Exotic.

Based on the information provided by historical imagery (Spatial Services, 2025b) all vegetation (i.e. PCT 3320 and Urban Native/ Exotic) is likely to have been planted based on location i.e. in a cluster and their usage throughout Sydney region as a common street planting species. Removal of any of these trees is not likely to significantly impact the biodiversity value of the area. The extent of impacts to native vegetation is provided in **Figure 6**. Further details pertaining to trees requiring removal can be found in **Appendix B**.

6.1.2 Impacts to Protected Fauna

All vegetation proposed for removal provides minor foraging habitat for a suite of protected fauna species. Sensitive and/ or specialist fauna habitats that would be impacted by the activity include:

- Nectar/lerp-bearing trees
- Seed-bearing shrubs and trees, and
- She-oak fruit.

No other specialist habitat types, including hollow-bearing trees were identified within or in the vicinity of the Subject Land. Within the context of the surrounding landscape, these habitat types are unlikely to offer suitable breeding habitat for threatened fauna given the extensive habitat offered nearby. As such, it is unlikely that threatened fauna are to occupy the Subject Land in preference of surrounding areas.

6.1.3 Impacts to Threatened Species and Communities

The proposed activity will result in the removal of 0.21ha (worst case) of native trees characteristic the following BC Act Listed TEC;

- Cumberland Plain Woodland in the Sydney Basin Bioregion (Critically Endangered)

No threatened species were identified during the site assessment. The proposed activity has the potential to impact low quality foraging habitat for some highly mobile species that may occur within the Subject Land. However, based on the urban setting of the area and the ongoing operational impacts of the school, no species are considered to be dependent on the vegetation proposed for removal within the Subject Land (**Appendix C**).

Given the proposed impacts by the activity to the TEC, a 5-Part Test was completed. The result of the 5-Part Test was that the proposed activity will not result in a 'significant impact' on the TEC and therefore the BOS is not triggered (**Appendix C**). As such, a SIS or a BDAR is not required. The proposed activity will

not result in a ‘significant impact’ on any MNES and a referral to the Australian Government Minister for the Environment is not required.

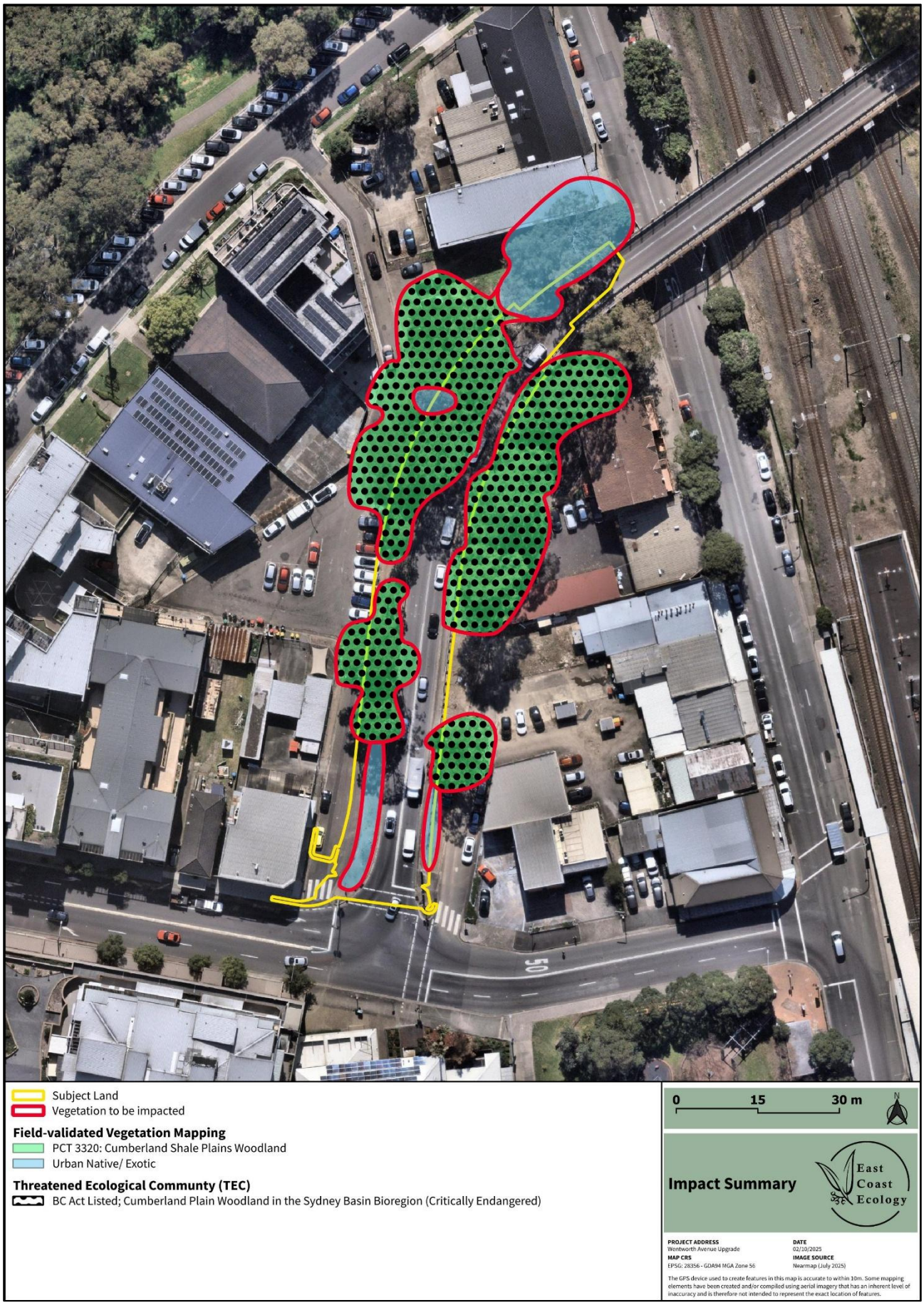

Figure 6. Impact Summary.

7. AVOIDANCE, MINIMISATION & MITIGATION

7.1 Avoidance and Minimisation

When assessing the biodiversity impacts of a proposed activity there are three key considerations. These three approaches are listed in a descending order of best biodiversity outcomes:

- Avoid: measures taken by a proponent such as careful site selection, or actions taken through the design, planning, construction and operational phases of the development to completely prevent impacts on biodiversity values, or certain areas of biodiversity
- Minimise: a process applied throughout the development planning and design life cycle that seeks to reduce the residual impacts of development on biodiversity values
- Compensate: measures in a proposed activity to compensate for the biodiversity values lost. This can be achieved through offsets (financial or not).

Given the nature of the proposed activity (i.e. road widening), opportunities to change the project design in favour of vegetation retention are fairly limited and defined by engineering requirements. Laydown and storage areas will be positioned outside of native vegetation to avoid any additional impacts to native vegetation beyond the unavoidable impacts associated with the proposed activity.

7.2 Offsets and other measures

Consider whether any impacts require the provision of biodiversity offsets, conservation measures or tree and hollow replacement in accordance with the Transport:

- No Net Loss Guidelines and supporting resources, and
- Tree and Hollow Replacement Guidelines and supporting resources.

7.2.1 Thresholds

Residual impacts from the proposal that do not exceed offset thresholds set out by No Net Loss Guidelines (Transport, 2022b) must consider the requirements of the Tree and Hollow Replacement Guidelines (Transport, 2022c). Offset thresholds are presented in **Table 10.**

Table 10. Offset thresholds (Transport No Net Loss Guidelines)

Impact	Threshold	Applicable to the Proposal?
Works involving clearing of a CEEC	Where there is any clearing of an CEEC in 'moderate to good' condition	No. CEEC identified and to be impacted is of 'poor condition'.
Works involving clearing of an EEC	Where clearing of a EEC ≥ 2 ha in 'moderate to good' condition	No. No EEC will be cleared.
Works involving clearing of VEC	Where clearing of VEC ≥ 5 ha in 'moderate to good' condition	No. No VEC will be cleared.
Works involving clearing of any habitat for a known species credit fauna species or clearing of breeding habitat (as defined	Where clearing ≥ 1 ha in 'moderate to good' condition	No. No species credit fauna species or breeding habitat for dual credit fauna species are

Impact	Threshold	Applicable to the Proposal?
by the TBDC) for dual-credit fauna species (excluding exotic and planted vegetation that cannot be assigned to a plant community type)		known from within the Subject Land.
Works involving removal of known threatened flora species and their habitat	Where loss of individuals is ≥10 or where clearing of habitat is ≥ 1 ha	No. No threatened flora species will be removed.
Type 1 or Type 2 key fish habitats	Where there is a net loss of habitat	No. No Type 1 or 2 KFH will be impacted.
Any residual biodiversity impact that doesn't require offsets in accordance with the No Net Loss Guideline is to be assessed against the requirements of the Tree and Hollow Replacement Guideline.	Any clearing of hollows and/or trees ≥5cm DBH	Yes.

7.2.2 Biodiversity offset strategy/tree and hollow replacement plan

Tree removal cannot be avoided to facilitate the proposal and therefore, the number of native and amenity trees and individual hollows to be removed must be counted and used to calculate the number of replacement trees and hollows as per **Table 11**. This should be undertaken by or verified by environment staff in consultation with the project manager. Replacement requirements should be included in a Tree and Hollow Replacement Plan.

Table 11. Tree and hollow replacement requirements

Impact	Threshold	Applicable to the Proposal?	Replacement Assessment completed	Unique Tree Identifiers
Very large tree (DBH greater than 100cm)	Plant minimum 16 trees	Not applicable. No very large trees present	Not applicable.	Not applicable.
Large tree (DBH between 50cm and 100cm)	Plant minimum eight trees	1 tree	Plant minimum 8 trees	T1
Medium tree (DBH greater than 20 cm, but less than 50cm)	Plant minimum four trees	18 trees	Plant minimum 72 trees	T2, T3, T15, T16, T20, T23, T26, T27, T28, T29, T30, T31, T32, T33, T34, T35, T36, T37
Small tree (DBH greater than 5cm, but less than 20cm)	Plant minimum two trees	39 trees	Plant minimum 78 trees	T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T17, T18, T19, T20, T21, T22, T24, T25 T38, T39, T40, T41, T42, T43,

Impact	Threshold	Applicable to the Proposal?	Replacement Assessment completed	Unique Tree Identifiers
				T44, T45, T46, T47, T48, T49, T50, T51, T52, T53, T54, T55, T56, T57
Hollow replacement requirement	Provide three artificial hollows for every occupied hollow removed	Not applicable. No hollow-bearing trees present	Not applicable.	

* For trees with multiple stems/trunks, calculate the payment required for the largest stem DBH. Only one stem requires replacement/payment

Once opportunities for delivery of tree and hollow replacement within the project boundary or on land in the proximity have been determined, any remaining requirement can be met by transferring funds into the Transport Conservation Fund as per the rates set out at **Table 12**. Transfer of funds to the Transport Conservation Fund must occur prior to commencement of works.

Table 12. Tree and hollow fund contributions.

Tree size	Contribution required per tree/hollow
Very large tree (DBH greater than 100cm)	$2500
Large tree (DBH between 50cm and 100cm)	$1000
Medium tree (DBH greater than 20 cm, but less than 50cm)	$500
Small tree (DBH greater than 5cm, but less than 20cm)	$125
Hollow	$500

7.3 Impact Mitigation and Minimisation Recommendations

This section of the report details recommended efforts to avoid and minimise impacts on biodiversity values associated with the proposed activity. Measures to be implemented before, during, and post construction are detailed in **Table 13**.

Table 13. Measures to be implemented before, during, and after construction to avoid and minimise the impacts of the proposed activity.

Action	Outcome	Timing	Responsibility
Assigning a Project Ecologist for Vegetation Clearing	Prior to works, the applicant should commission the services of a qualified and experienced Ecologist (minimum 3 years' experience). The Ecologist must be licensed with a current Department of Primary Industries Animal Research Authority permit and New South Wales Scientific License issued under the BC Act. The Ecologist will be commissioned to implement the following measures in accordance with best-practice, publicly available guidelines: ▪ Pre-clearing surveys will be undertaken in accordance with Guide 1: Pre-clearing process of the Biodiversity Guidelines: Protecting and managing biodiversity on Transport for NSW projects (Transport, 2024) ▪ Vegetation and Habitat removal should be undertaken in accordance with Guide 4: Clearing of vegetation and removal of bushrock of the Biodiversity Guidelines: Protecting and managing biodiversity on Transport for NSW projects (Transport, 2024) ▪ Fauna will be managed in accordance with Guide 9: Fauna handling of the Biodiversity Guidelines: Protecting and managing biodiversity on Transport for NSW projects (Transport, 2024) ▪ Habitat will be replaced or re-instated in accordance with Guide 5: Re-use of woody debris and bushrock and Guide 8: Nest boxes of the Biodiversity Guidelines: Protecting and managing biodiversity on Transport for NSW projects (Transport, 2024) The unexpected species find procedure is to be followed under Guide 1: Pre-clearing process of the Biodiversity Guidelines: Protecting and managing biodiversity on Transport for NSW projects (Transport, 2024) if threatened flora and fauna, not assessed in the biodiversity assessment, are identified in the Subject Land.	Prior to Construction	Cumberland Council Ecologist

Action	Outcome	Timing	Responsibility
Edge Effects on Adjacent Native Vegetation and Habitat	Exclusion zones will be set up at the limit of clearing in accordance with Guide 2: Exclusion zones of the Biodiversity Guidelines: Protecting and managing biodiversity on Transport for NSW projects (Transport, 2024).	During Construction	Cumberland Council
Erosion and Sedimentation	Appropriate erosion and sediment control should be erected and maintained at all times during construction in order to avoid the potential of incurring indirect impacts on biodiversity values. Erosion and sediment controls would be established in accordance with an erosion and sedimentation plan to be produced for the proposed works. As a minimum, such measures should comply with the relevant industry guidelines such as 'the Blue Book' (Landcom, 2004).	During Construction	Cumberland Council
Storage and Stockpiling (Soil and Materials)	Allocate all storage, stockpile, and laydown sites away from any vegetation that is planned to be retained. Avoid importing any soil from outside the site in order to avoid the potential of incurring indirect impacts on biodiversity values as this can introduce weeds and pathogens to the site. If materials are required to be imported for landscaping works, they are to be sterilised according to industry standards prior to importation to site.	During Construction	Cumberland Council
No Weeds imported on to the Subject Land	No priority or environmental weeds, pathogens or other biosecurity issues (e.g. fireants) are to be imported on to the site prior to or during construction works.	During Construction	Cumberland Council
Out of hours works (6pm – 6am)	Control measures (e.g. the directional lighting and task lighting) are to be installed to minimise glare and light spillage into adjoining vegetation to minimise potential impacts to fauna species.	During Construction and Operation	Cumberland Council

8. CONCLUSION

The following BC Act Listed TEC was identified within the Subject Land:

- Cumberland Plain Woodland in the Sydney Basin Bioregion (Critically Endangered)

The primary direct ecological impact of the proposed activity is clearing of native vegetation. The proposed activity will result in the following (worst case) impacts:

- Removal of 0.21ha of PCT 3320: Cumberland Shale Plains Woodland, and
- Removal of 0.06ha of Urban Native/ Exotic.

Based on the information provided by historical imagery (Spatial Services, 2025b) all vegetation (i.e. PCT 3320 and Urban Native/ Exotic) is likely to have been planted based on location i.e. in a cluster and their usage throughout Sydney region as a common street planting species. Removal of any of these trees is not likely to significantly impact the biodiversity value of the area. Information specific to the trees requiring removal from within the Subject Land is provided in **Appendix B**.

No threatened flora or fauna species were identified within the Subject Land however, this does not rule out the potential for threatened species to still exist within the Subject Land, particularly cryptic species. Based on habitat constraints **(Appendix C**), no threatened fauna species were considered likely to occur and/ or be significantly impacted by the proposed activity. The result of the Test of Significance (**Appendix D**) was that the proposal is not likely to have a significant impact to Cumberland Plain Woodland, subject to mitigation measures.

This assessment demonstrates that the relevant provisions of the *Environmental Planning and Assessment Act 1979, Biodiversity Conservation Act 2016* and the *Environment Protection and Biodiversity Conservation Act 1999* have been satisfied. If the appropriate recommendations in this report are followed, the proposed activity will have a non-significant impact to protected biodiversity and is unlikely to significantly impact any threatened ecological community or species, no threatened fauna species were considered likely to occur and/ or be significantly impacted by the proposed activity. The result of the Test of Significance (**Appendix D**) was that the proposal is not likely to have a significant impact to Cumberland Plain Woodland, subject to mitigation measures.

This assessment demonstrates that the relevant provisions of the *Environmental Planning and Assessment Act 1979, Biodiversity Conservation Act 2016* and the *Environment Protection and Biodiversity Conservation Act 1999* have been satisfied. If the appropriate recommendations in this report are followed, the proposed activity will have a non-significant impact to protected biodiversity and is unlikely to significantly impact any threatened ecological community or species.

9. REFERENCES

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10. APPENDICES

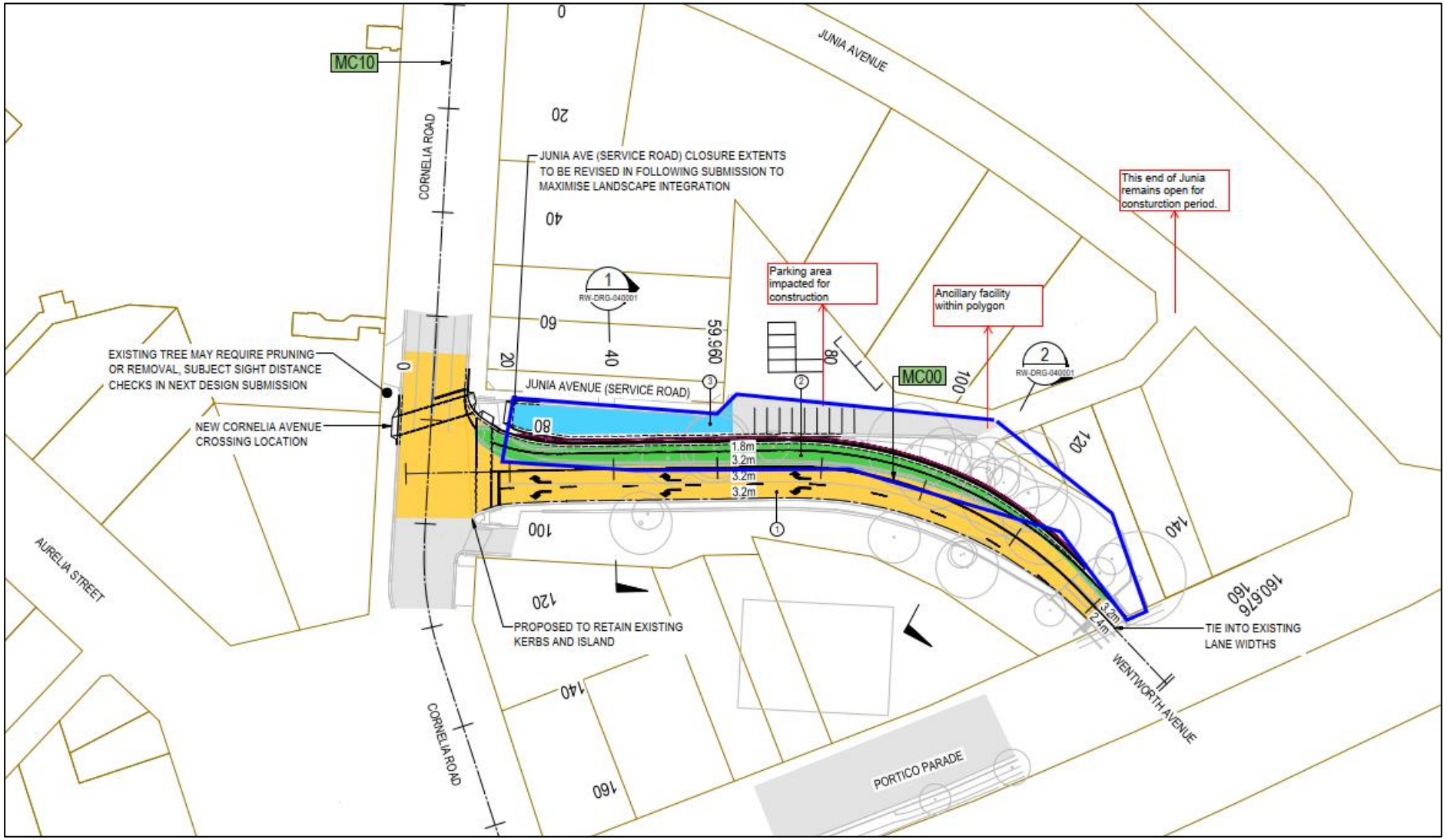
Appendix A. Wentworth Avenue Upgrade Design (ERM, 2025).

Appendix B. Tree Removal Inventory.

Appendix C. Assessment of likely occurrence of threatened species within the Subject Land.

Appendix D. 5-Part Tests (Tests of Significance) (BC Act).

Appendix A. Wentworth Avenue Upgrade Design (ERM, 2025).



Appendix B. Tree Removal Inventory.

Tree ID	GPS: 56H UTM		Species	'Native' or 'Amenity' Tree	DBH (cm)	Tree size category	Hollow-bearing	Alive or Dead	Notes/Removal status
	Easting	Northing							
T1, T2, T3	310227.914	6259647.631	*Eucalyptus moluccana* (3)	Native	90, 25, 20	Large, Medium, Medium	No hollows present	Alive	Proposed for Removal
T4, T5, T6, T7, T8, T9	310244.626	6259664.21	*Casuarina glauca* (6)	Native	5, 5, 5, 10, 15, 10	Small, Small, Small, Small, Small, Small	No hollows present	Alive	Proposed for Removal
T10, T11, T12	310242.654	6259660.319	*Casuarina glauca* (3)	Native	5, 10, 10	Small, Small, Small	No hollows present	Alive	Proposed for Removal
T13, T14	310243.747	6259661.611	*Casuarina glauca* (2)	Native	5, 10	Small, Small	No hollows present	Alive	Proposed for Removal
T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25	310248.951	6259667.763	*Casuarina glauca* (11)	Native	35, 20, 15, 15, 15, 20, 15, 15, 20, 15, 15	Medium, Medium, Small, Small, Small, Medium, Small, Small, Medium, Small, Small	No hollows present	Alive	Proposed for Removal
T26	310234.698	6259650.952	*Eucalyptus moluccana*	Native	29	Medium	No hollows present	Alive	Proposed for Removal

Tree ID	GPS: 56H UTM		Species	'Native' or 'Amenity' Tree	DBH (cm)	Tree size category	Hollow-bearing	Alive or Dead	Notes/Removal status
	Easting	Northing							
T27	310226.31	6259638.98	*Eucalyptus moluccana*	Native	26	Medium	No hollows present	Alive	Proposed for Removal
T28	310213.999	6259598.418	*Eucalyptus moluccana*	Native	25	Medium	No hollows present	Alive	Proposed for Removal
T29	310226.662	6259644.694	*Eucalyptus moluccana*	Native	25	Medium	No hollows present	Alive	Proposed for Removal
T30	310234.218	6259654.646	*Eucalyptus moluccana*	Native	25	Medium	No hollows present	Alive	Proposed for Removal
T31	310238.251	6259655.323	*Eucalyptus tereticornis*	Native	24	Medium	No hollows present	Alive	Proposed for Removal
T32	310224.93	6259642.246	*Eucalyptus microcorys*	Native	23	Medium	No hollows present	Alive	Proposed for Removal
T33	310222.173	6259634.042	*Eucalyptus moluccana*	Native	22	Medium	No hollows present	Alive	Proposed for Removal

Tree ID	GPS: 56H UTM		Species	'Native' or 'Amenity' Tree	DBH (cm)	Tree size category	Hollow-bearing	Alive or Dead	Notes/Removal status
	Easting	Northing							
T34	310214.582	6259585.582	*Eucalyptus tereticornis*	Native	20	Medium	No hollows present	Alive	Proposed for Removal
T35	310226.079	6259579.559	*Eucalyptus tereticornis*	Native	20	Medium	No hollows present	Alive	Proposed for Removal
T36	310235.576	6259629.568	*Eucalyptus tereticornis*	Native	20	Medium	No hollows present	Alive	Proposed for Removal
T37	310214.966	6259597.595	*Eucalyptus tereticornis*	Native	20	Medium	No hollows present	Alive	Proposed for Removal
T38	310248.129	6259665.89	*Casuarina glauca*	Native	19	Small	No hollows present	Alive	Proposed for Removal
T39	310226.77	6259578.636	*Eucalyptus tereticornis*	Native	19	Small	No hollows present	Alive	Proposed for Removal
T40	310231.029	6259646.23	*Eucalyptus moluccana*	Native	18	Small	No hollows present	Alive	Proposed for Removal

Tree ID	GPS: 56H UTM		Species	'Native' or 'Amenity' Tree	DBH (cm)	Tree size category	Hollow-bearing	Alive or Dead	Notes/Removal status
	Easting	Northing							
T41	310244.869	6259646.141	*Eucalyptus tereticornis*	Native	18	Small	No hollows present	Alive	Proposed for Removal
T42	310216.463	6259607.442	*Eucalyptus tereticornis*	Native	17	Small	No hollows present	Alive	Proposed for Removal
T43	310242.253	6259642.147	*Eucalyptus tereticornis*	Native	17	Small	No hollows present	Alive	Proposed for Removal
T44	310242.561	6259642.748	*Eucalyptus tereticornis*	Native	17	Small	No hollows present	Alive	Proposed for Removal
T45	310220.363	6259619.388	*Eucalyptus moluccana*	Native	16	Small	No hollows present	Alive	Proposed for Removal
T46	310220.212	6259626.636	*Eucalyptus moluccana*	Native	14	Small	No hollows present	Alive	Proposed for Removal
T47	310232.135	6259651.244	*Eucalyptus tereticornis*	Native	14	Small	No hollows present	Alive	Proposed for Removal

Tree ID	GPS: 56H UTM		Species	'Native' or 'Amenity' Tree	DBH (cm)	Tree size category	Hollow-bearing	Alive or Dead	Notes/Removal status
	Easting	Northing							
T48	310252.455	6259668.924	*Casuarina glauca*	Native	12	Small	No hollows present	Alive	Proposed for Removal
T49	310223.25	6259626.481	*Eucalyptus moluccana*	Native	12	Small	No hollows present	Alive	Proposed for Removal
T50	310240.361	6259659.341	*Eucalyptus tereticornis*	Native	12	Small	No hollows present	Alive	Proposed for Removal
T51	310222.974	6259629.022	*Eucalyptus moluccana*	Native	11	Small	No hollows present	Alive	Proposed for Removal
T52	310222.14	6259630.703	*Eucalyptus moluccana*	Native	10	Small	No hollows present	Alive	Proposed for Removal
T53	310222.23	6259636.356	*Eucalyptus moluccana*	Native	9	Small	No hollows present	Alive	Proposed for Removal
T54	310232.693	6259622.723	*Eucalyptus moluccana*	Native	9	Small	No hollows present	Alive	Proposed for Removal

Tree ID	GPS: 56H UTM		Species	'Native' or 'Amenity' Tree	DBH (cm)	Tree size category	Hollow-bearing	Alive or Dead	Notes/Removal status
	Easting	Northing							
T55	310231.319	6259611.713	*Eucalyptus tereticornis*	Native	8	Small	No hollows present	Alive	Proposed for Removal
T56	310222.237	6259633.174	*Eucalyptus moluccana*	Native	6	Small	No hollows present	Alive	Proposed for Removal
T57	310236.99	6259634.167	*Eucalyptus moluccana*	Native	5	Small	No hollows present	Alive	Proposed for Removal

Appendix C. Assessment of likely occurrence of threatened species within the Subject Land.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
Acacia pubescens	V	V	Concentrated around the Bankstown-Fairfield-Rookwood area and the Pitt Town area, with outliers occurring at Barden Ridge, Oakdale and Mountain Lagoon. Occurs on alluviums, shales and at the intergrade between shales and sandstones. The soils are characteristically gravely soils, often with ironstone. Grows in open woodland and forest, in a variety of plant communities, including Cooks River- Castlereagh Ironbark forest, Shale-Gravel Transition forest and Cumberland Plain woodland.	5	Low. A targeted survey was undertaken during the recognised survey period, and this species was absent from the Subject Land. No further assessment is required.
Epacris purpurascens var. purpurascens	V	-	Recorded from Gosford in the north, to Narrabeen in the east, Silverdale in the west and Avon Dam vicinity in the South. Found in a range of habitat types, most of which have a strong shale soil influence.	8	Low. A targeted survey was undertaken during the recognised survey period, and this species was absent from the Subject Land. No further assessment is required.
Eucalyptus nicholii	V	V	Typically grows in dry grassy woodland, on shallow soils of slopes and ridges. Found primarily on infertile soils derived from granite or metasedimentary rock. Seedling recruitment is common, even in disturbed soils, if protected from grazing and fire.	14	Low. A targeted survey was undertaken during the recognised survey period, and this species was absent from the Subject Land. No further assessment is required.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
Eucalyptus scoparia	E	V	In NSW it is known from only three locations near Tenterfield. Found in open eucalypt forest and woodland on well-drained granite hilltops, slopes and rocky outcrops, typically at high altitudes. At lower elevations can occur in less rocky soils in damp situations.	3	Low. A targeted survey was undertaken during the recognised survey period, and this species was absent from the Subject Land. No further assessment is required.
Grevillea juniperina subsp. juniperina	V	-	Endemic to Western Sydney, centred on an area bounded by Blacktown, Erskine Park, Londonderry and Windsor with outlier populations at Kemps Creek and Pitt Town. Recorded from Cumberland Plain woodland, Castlereagh Ironbark woodland, Castlereagh Scribbly Gum woodland and Shale-Gravel Transition forest. Grows on reddish clay to sandy soils derived from Wianamatta Shale and Tertiary alluvium (often with shale influence), typically containing lateritic gravels.	5	Low. A targeted survey was undertaken during the recognised survey period, and this species was absent from the Subject Land. No further assessment is required.
Isotoma fluviatilis subsp. fluviatilis	-	X	Known from only two adjacent sites on a single private property at Erskine Park in the Penrith LGA. Previous sightings are all from western Sydney, at Homebush and at Agnes Banks. Grows in damp places, on the Cumberland Plain, including freshwater wetland, grassland/alluvial woodland and an alluvial woodland/shale plains woodland (Cumberland Plain Woodland) and related vegetation types/. May be an early successional	1	Low. A targeted survey was undertaken during the recognised survey period, and this species was absent from the Subject Land. Further this species is presumed extinct. No further assessment is required.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			species that benefits from some disturbance. Possibly out competed when overgrown by some species such as Cyndon dactylon.		
Macadamia integrifolia	-	V	Macadamia Nut occurs from Mt Bauple, near Gympie, to Currumbin Valley in the Gold Coast hinterland, south-east Queensland. The species was known to occur in north-east New South Wales; was described from 1850-60 specimens collected from Camden Haven, and there are specimens also from Lismore. This species grows in remnant rainforest, including complex mixed notophyll forest, and prefers partially open areas such as rainforest edges.	3	Low. A targeted survey was undertaken during the recognised survey period, and this species was absent from the Subject Land. No further assessment is required.
Macadamia tetraphylla	V	V	Confined chiefly to the Richmond and Tweed Rivers in north-east NSW, extending just across the border into Queensland. Found in subtropical rainforest, usually near the coast.	1	Low. A targeted survey was undertaken during the recognised survey period, and this species was absent from the Subject Land. No further assessment is required.
Pimelea curviflora var. curviflora	V	V	Confined to the coastal area of Sydney between northern Sydney in the south and Maroota in the north-west. Former range extended south to the Parramatta River and Port Jackson region including Five Dock, Bellevue Hill and Manly. Occurs on shaley-lateritic soils over sandstone and shale-	8	Low. A targeted survey during the site assessment did not identify this species. If present, this species would have been easily identified during the September 2025 survey (at least to genus level). No further assessment is required.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			sandstone transition soils on ridgetops and upper slopes amongst woodlands.		
Pimelea spicata	E	E	Once widespread on the Cumberland Plain, the Spiked Rice-flower occurs in two disjunct areas; the Cumberland Plain (Narellan, Marayong, Prospect Reservoir areas) and the Illawarra (Landsdowne to Shellharbour to northern Kiama). In both the Cumberland Plain and Illawarra environments this species is found on well-structured clay soils. On the inland Cumberland Plain sites it is associated with grey box and Ironbark. In the coastal Illawarra it occurs commonly in Coast Banksia open woodland with a better developed shrub and grass understorey.	207	Low. A targeted survey was undertaken during the recognised survey period, and this species was absent from the Subject Land. No further assessment is required.
Pomaderris prunifolia	EP	-	Known from only three sites within the listed local government areas, at Rydalmere, within Rookwood Cemetery and at The Crest of Bankstown. At Rydalmere it occurs along a road reserve near a creek, among grass species on sandstone. At Rookwood Cemetery it occurs in a small gully of degraded Cooks River - Castlereagh Ironbark forest on shale soils.	2	Low. A targeted survey during the site assessment did not identify this species. If present, this species would have been easily identified during the September 2025 survey (at least to genus level). No further assessment is required.
Pterostylis saxicola	E	E	Restricted to western Sydney between Freemans Reach in the north and Picton in the south. Most	2	Low. A targeted survey during the site assessment did not identify this species. If

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			commonly found growing in small pockets of shallow soil in depressions on sandstone rock shelves above cliff lines. The vegetation communities above the shelves where Pterostylis saxicola occurs are sclerophyll forest or woodland on shale-sandstone transition soils or shale soils.		present, this species would have been easily identified during the September 2025 survey (at least to genus level). No further assessment is required.
Pultenaea parviflora	E	V	Endemic to the Cumberland Plain. May be locally abundant, particularly within scrubby-dry heath areas within Castlereagh Ironbark forest and Shale Gravel Transition forest on tertiary alluvium or laterised clays. May also be common in transitional areas where these communities adjoin Castlereagh Scribbly Gum woodland.	8	Low. A targeted survey was undertaken during the recognised survey period, and this species was absent from the Subject Land. No further assessment is required.
Syzygium paniculatum	V	V	Found only in NSW, in a narrow, linear coastal strip from Bulahdelah to Conjola State forest. On the south coast the species occurs on grey soils over sandstone, restricted mainly to remnant stands of littoral rainforest. On the central coast it occurs on gravels, sands, silts and clays in riverside gallery rainforests and remnant littoral rainforest communities	8	Low. A targeted survey during the site assessment did not identify this species. If present, this species would have been easily identified during the September 2025 survey (at least to genus level). No further assessment is required.
Anthochaera phrygia	E	CE	The Regent Honeyeater mainly inhabits temperate woodlands and open forests of the inland slopes of south-east Australia. Birds are also found in drier	1	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			coastal woodlands and forests in some years. The distribution of the species has contracted dramatically in the last 30 years to between north-eastern Victoria and south-eastern Queensland. There are only three known key breeding regions remaining: north-east Victoria (Chiltern-Albury), and in NSW at Capertee Valley and the Bundarra-Barraba region. In NSW the distribution is very patchy and mainly confined to the two main breeding areas and surrounding fragmented woodlands. In some years flocks converge on flowering coastal woodlands and forests.		locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. This species has not been recorded within the locality in the last 20-years. No further assessment is required.
Artamus cyanopterus cyanopterus	V	-	The Dusky Woodswallow is widespread in eastern, southern and southwestern Australia. In New South Wales it is widespread from coast to inland, including the western slopes of the Great Dividing Range and farther west. It is sparsely scattered in, or largely absent from, much of the Upper Western region. The Dusky Woodswallow is often reported in woodlands and dry open sclerophyll forests, usually dominated by eucalypts, including mallee associations. It has also been recorded in shrublands and heathlands and various modified habitats, including regenerating forests; very occasionally in moist forests or rainforests. At sites where Dusky Woodswallows are recorded the	37	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No further assessment is required.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			understorey is typically open with sparse eucalypt saplings, acacias and other shrubs, including heath. The ground cover may consist of grasses, sedges or open ground, often with coarse woody debris (Higgins and Peter 2002). Birds are also often observed in farm land, usually at the edges of forest or woodland or in roadside remnants or wind breaks with dead timber.		
Botaurus poiciloptilus	E	E	The Australasian Bitterns is widespread but uncommon over south-eastern Australia. In NSW they may be found over most of the state except for the far north-west. Favours permanent freshwater wetlands with tall, dense vegetation, particularly bullrushes and spikerushes.	1	Low. This highly mobile species may be an occasional visitor, but habitat constraints required for this species are absent from the Subject Land. No further assessment is required.
Burhinus grallarius	E	-	The Bush Stone-curlew is found throughout Australia except for the central southern coast and inland, the far south-east corner, and Tasmania. Only in northern Australia is it still common however and in the south-east it is either rare or extinct throughout its former range. Inhabits open forests and woodlands with a sparse grassy groundlayer and fallen timber. Largely nocturnal, being especially active on moonlit nights.	1	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No further assessment is required.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
Callocephalon fimbriatum	E	E	In summer, occupies tall montane forests and woodlands, particularly in heavily timbered and mature wet sclerophyll forests. Also occur in subalpine snow gum woodland and occasionally in temperate or regenerating forest. In winter, occurs at lower altitudes in drier, more open eucalypt forests and woodlands, particularly in box-ironbark assemblages, or in dry forest in coastal areas. It requires tree hollows in which to breed.	1	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No hollow-bearing trees suitable for breeding were identified within the Subject Land or in the immediate periphery. No further assessment is required.
Calyptorhynchus lathami lathami	V	V	Inhabits forest with low nutrients, characteristically with key Allocasuarina spp. Tends to prefer drier forest types with a middle stratum of Allocasuarina below Eucalyptus or Angophora. Often confined to remnant patches in hills and gullies. Breed in hollows stumps or limbs, either living or dead. Endangered population in the Riverina.	4	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No hollow-bearing trees suitable for breeding were identified within the Subject Land or in the immediate periphery. No further assessment is required.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
Chalinolobus dwyeri	E	E	Located in a variety of drier habitats, including the dry sclerophyll forests and woodlands to the east and west of the Great Dividing Range. Can also be found on the edges of rainforests and in wet sclerophyll forests. This species roosts in caves and mines in groups of between 3 and 37 individuals.	2	Low. This highly mobile species may be an occasional visitor, but habitat constraints required for this species are absent from the Subject Land. No further assessment is required.
Circus assimilis	V	-	The Spotted Harrier occurs throughout the Australian mainland, except in densly forested or wooded habitats of the coast, escarpment and ranges, and rarely in Tasmania. Individuals disperse widely in NSW and comprise a single population. 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.	3	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. This species has not been recorded within the locality in the last 10-years. No further assessment is required.
Daphoenositta chrysoptera	V	-	Inhabits wide variety of dry eucalypt forests and woodlands, usually with either shrubby under storey or grassy ground cover or both, in all climatic zones of Australia. Usually in areas with rough-barked trees, such as stringybarks or ironbarks, but also in paperbarks or mature Eucalypts with hollows.	55	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
					No further assessment is required.
Dasyurus maculatus	V	E	Spotted-tailed Quoll are found on the east coast of NSW, Tasmania, eastern Victoria and north-eastern Queensland. Only in Tasmania is it still considered common. Recorded across a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline.	2	Low. This species may occasionally forage within the Subject Land, however, are unlikely to reply upon these areas given the more appropriate foraging habitat available within the broader locality. No further assessment is required.
Falco subniger	V	-	The Black Falcon is found along tree-lined watercourses and in isolated woodlands, mainly in arid and semi-arid areas. It roosts in trees at night and often on power poles by day.	2	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No further assessment is required.
Falsistrellus tasmaniensis	V	-	Inhabit sclerophyll forests, preferring wet habitats where trees are more than 20 m high. Two observations have been made of roosts in stem holes of living eucalypts. There is debate about whether or not this species moves to lower altitudes during winter, or whether they remain sedentary but enter torpor . This species also appears to be highly mobile and records showing	22	Low. This highly mobile species may be an occasional visitor, but habitat constraints required for this species are absent from the Subject Land. No further assessment is required.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			movements of up to 12 km between roosting and foraging sites .		
Haliaeetus leucogaster	V	-	Inhabits coastal and near coastal areas, building large stick nests, and feeding mostly on marine and estuarine fish and aquatic fauna.	25	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No further assessment is required.
Hieraaetus morphnoides	V	-	Most abundant in lightly timbered areas with open areas nearby. Often recorded foraging in grasslands, crops, treeless dune fields, and recently logged areas. May nest in farmland, woodland and forest in tall trees.	8	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No further assessment is required.
Hirundapus caudacutus	V	V	An aerial species found in feeding concentrations over cities, hilltops and timbered ranges.	95	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
					such as winter flowering resources) on habitats in the Subject Land. No further assessment is required.
Lathamus discolor	E	CE	The Swift Parrot occurs in woodlands and forests of NSW from May to August, where it feeds on eucalypt nectar, pollen and associated insects . The Swift Parrot is dependent on flowering resources across a wide range of habitats in its wintering grounds in NSW . This species is migratory, breeding in Tasmania and also nomadic, moving about in response to changing food availability.	47	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No hollow-bearing trees suitable for breeding were identified within the Subject Land or in the immediate periphery. No further assessment is required.
Litoria aurea	E	V	Inhabits a very wide range of water bodies including marshes, dams and streams, particularly those containing emergent vegetation such as bullrushes or spikerushes. It also inhabits numerous types of man-made water bodies including quarries and sand extraction sites. Optimum habitat includes water-bodies that are un-shaded, free of predatory fish such as Plague	2	Low. Suitable sheltering and breeding habitat is absent from available the Subject Land. This species may occasionally visit, however are unlikely to rely upon these areas in preference of more appropriate habitat available within Girraween Creek. This species has not been recorded within the locality in the last 20-years.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			Minnow, have a grassy area nearby and diurnal sheltering sites available.		No further assessment is required.
Lophoictinia isura	V	-	Typically inhabits coastal forested and wooded lands of tropical and temperate Australia. In NSW it is often associated with ridge and gully forests dominated by Eucalyptus longifolia, Corymbia maculata, E. elata or E. smithii. Individuals appear to occupy large hunting ranges of more than 100km2. They require large living trees for breeding, particularly near water with surrounding woodland -forest close by for foraging habitat. Nest sites are generally located along or near watercourses, in a tree fork or on large horizontal limbs.	9	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No further assessment is required.
Melithreptus gularis gularis	V	-	Eucalypt woodlands within an approximate annual rainfall range of 400-700mm	1	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. This species has not been recorded within the locality in the last 20-years.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
					No further assessment is required.
Meridolum corneovirens	E	-	Primarily inhabits Cumberland Plain woodland (an EEC). This community is a grassy, open woodland with occasional dense patches of shrubs. Lives under litter of bark, leaves and logs, or shelters in loose soil around grass clumps. Occasionally shelters under rubbish.	17	Low. Appropriate habitat for this species is available within the Subject Land; however, they are unlikely to be relied upon given the more appropriate habitat available within the broader locality. No further assessment is required.
Micronomus norfolkensis	V	-	Most records are from dry eucalypt forests and woodlands to the east of the Great Dividing Range. Appears to roost in trees, but little is known of this species' habits.	29	Low. This species may occasionally forage within the Subject Land, however, are unlikely to reply upon these areas given the more appropriate foraging habitat available within the broader locality. No further assessment is required. No further assessment is required.
Miniopterus australis	V	-	Coastal north-eastern NSW and eastern Queensland. Little Bent-wing Bat is an insectivorous bat that roost in caves, in old mines, in tunnels, under bridges, or in similar structures. They breed in large aggregations in a small number of known caves and may travel 100s km from feeding home ranges to breeding sites. Little Bent-wing Bat has a preference for moist eucalypt forest,	24	Low. This highly mobile species may be an occasional visitor, but habitat constraints required for this species are absent from the Subject Land. No further assessment is required.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			rainforest or dense coastal banksia scrub where it forages below the canopy for insects.		
Miniopterus orianae oceanensis	V	-	Eastern Bent-wing 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.	66	Low. This highly mobile species may be an occasional visitor, but habitat constraints required for this species are absent from the Subject Land. No further assessment is required.
Myotis macropus	V	-	The Large-footed Myotis is found in the coastal band from the north-west of Australia, across the top-end and south to western Victoria. 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.	11	Low. This highly mobile species may be an occasional visitor, but habitat constraints required for this species are absent from the Subject Land. No further assessment is required.
Neophema pulchella	V	-	The Turquoise Parrot's range extends from southern Queensland through to northern Victoria, from the coastal plains to the western slopes of the Great Dividing Range. Lives on the edges of eucalypt woodland adjoining clearings, timbered ridges and creeks in farmland. Nests in tree hollows, logs or posts, from August to December. It	2	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No hollow-

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			lays four or five white, rounded eggs on a nest of decayed wood dust.		bearing trees suitable for breeding were identified within the Subject Land or in the immediate periphery. No further assessment is required.
Ninox connivens	V	-	Generally found in open forests, woodlands, swamp woodlands and dense scrub. Can also be found in the foothills and timber along watercourses in otherwise open country.	5	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No hollow-bearing trees suitable for breeding were identified within the Subject Land or in the immediate periphery. No further assessment is required.
Ninox strenua	V	-	Occupies wet and dry eucalypt forests and rainforests. Can occupy both un-logged and lightly logged forests as well as undisturbed forests where it usually roosts on the limbs of dense trees in gully areas. It is most commonly recorded within red turpentine in tall open forests and black she-oak within open forests. Large mature trees with hollows at least 0.5 m deep are required for nesting. Tree hollows are particularly important for the	171	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No hollow-bearing trees suitable for breeding were

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			Powerful Owl because a large proportion of the diet is made up of hollow-dependent arboreal marsupials. Nest trees for this species are usually emergent with a diameter at breast height of at least 100 cm.		identified within the Subject Land or in the immediate periphery. No further assessment is required.
Oxyura australis	V	-	Widespread in NSW, but most common in the southern Murray-Darling Basin area. Birds disperse during the breeding season to deep swamps up to 300 km away. It is generally only during summer or in drier years that they are seen in coastal areas. The Blue-billed Duck prefers deep water in large permanent wetlands and swamps with dense aquatic vegetation.	1	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. This species has not been recorded within the locality in the last 20-years. No further assessment is required.
Parvipsitta pusilla	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'	28	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No hollow-bearing trees suitable for breeding were

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			movements are suspected of breeding pairs. Nests in proximity to feeding areas if possible, most typically selecting hollows in the limb or trunk of smooth-barked Eucalypts. Entrance is small (3 cm) and usually high above the ground (2–15 m). These nest sites are often used repeatedly for decades, suggesting that preferred sites are limited. Riparian trees often chosen, including species like *Allocasuarina*.		identified within the Subject Land or in the immediate periphery. No further assessment is required.
Petroica boodang	V	-	The Scarlet Robin is found from SE Queensland to SE South Australia and also in Tasmania and SW Western Australia. In NSW, it occurs from the coast to the inland slopes. The Scarlet Robin lives in dry eucalypt forests and woodlands. The understorey is usually open and grassy with few scattered shrubs.	2	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No further assessment is required.
Phascolarctos cinereus	E	E	Inhabits eucalypt forests and woodlands. The suitability of these forests for habitation depends on the size and species of trees present, soil nutrients, climate and rainfall .	5	Low. Appropriate feed trees were identified within the Subject Land i.e. *Eucalyptus* spp. however in the context of the surrounding habitats and the relatively fragmented nature of the area due to the existing road, koala occupancy within the Subject Land is not likely.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
					No further assessment is required.
Pluvialis squatarola	V	V	In Australia, Grey Plovers occur almost entirely in coastal areas, where they usually inhabit sheltered embayments, estuaries and lagoons with mudflats and sandflats, and occasionally on rocky coasts with wave-cut platforms or reef-flats, or on reefs within muddy lagoons. They also occur around terrestrial wetlands such as near-coastal lakes and swamps, or salt-lakes. The species is also very occasionally recorded further inland, where they occur around wetlands or salt-lakes.	2	Low. This highly mobile species may be an occasional visitor, but habitat constraints required for this species are absent from the Subject Land. No further assessment is required.
Polytelis swainsonii	V	V	The Superb Parrot is found throughout eastern inland NSW. On the South-western Slopes their core breeding area is roughly bounded by Cowra and Yass in the east, and Grenfell, Cootamundra and Coolac in the west. Birds breeding in this region are mainly absent during winter, when they migrate north to the region of the upper Namoi and Gwydir Rivers. Inhabits box-gum, box-cypress-pine and boree woodlands and river red gum forest.	1	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No hollow-bearing trees suitable for breeding were identified within the Subject Land or in the immediate periphery. This species has not been recorded within the locality in the last 20-years.

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
					No further assessment is required.
Pommerhelix duralensis	E	E	Endemic to NSW and confined to northwest fringes of the Cumberland Plain. Distribution extends as far north as St. Albans; southwest to Mulgoa, and southeast to Parrammatta. Occurs in low densities in Hawkesbury Sandstone Vegetation and Shale/Sandstone Transition Forest. Found under rocks, logs, bark and in leaf litter. Has a strong preference for shale-influenced transitional landscapes and has not been confirmed outside such habitats.	6	Low. Appropriate habitat for this species is available within the Subject Land; however, they are unlikely to be relied upon given the more appropriate habitat available within the broader locality. No further assessment is required.
Pteropus poliocephalus	V	V	This species is a canopy-feeding frugivore and nectarivore of rainforests, open forests, woodlands, melaleuca swamps and banksia woodlands. Bats commute daily to foraging areas, usually within 15 km of the day roost although some individuals may travel up to 70 km.	793	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No further assessment is required.
Ptilinopus superbus	V	-	The Superb Fruit-dove occurs principally from north-eastern in Queensland to north-eastern NSW. It is much less common further south, where it is largely confined to pockets of suitable habitat as far south as Moruya. There are records of vagrants as	1	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			far south as eastern Victoria and Tasmania. Inhabits rainforest and similar closed forests where it forages high in the canopy, eating the fruits of many tree species such as figs and palms. It may also forage in eucalypt or acacia woodland where there are fruit-bearing trees.		such as winter flowering resources) on habitats in the Subject Land. This species has not been recorded within the locality in the last 20-years. No further assessment is required.
Rostratula australis	E	E	In NSW, this species has been recorded at the Paroo wetlands, Lake Cowell, Macquarie Marshes and Hexham Swamp. Most common in the Murray-Darling Basin. 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.	1	Low. This highly mobile species may be an occasional visitor, but habitat constraints required for this species are absent from the Subject Land. This species has not been recorded within the locality in the last 10-years. No further assessment is required.
Saccolaimus flaviventris	V	-	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.	4	Low. This highly mobile species may be an occasional visitor, but habitat constraints required for this species are absent from the Subject Land. No further assessment is required.
Scoteanax rueppellii	V	-	Prefer moist gullies in mature coastal forests and rainforests, between the Great Dividing Range and the coast. They are only found at low altitudes	11	Low. This highly mobile species may be an occasional visitor, but habitat constraints

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			below 500 m. In dense environments they utilise natural and human-made opening in the forest for flight paths. Creeks and small rivers are favoured foraging habitat. This species roosts in hollow tree trunks and branches.		required for this species are absent from the Subject Land. No further assessment is required.
Stagonopleura guttata	V	V	Feeds exclusively on the ground, on ripe and partly-ripe grass and herb seeds and green leaves, and on insects (especially in the breeding season). Found in grassy eucalypt woodlands, including box-gum woodlands and snow gum woodlands. Also occurs in open forest, mallee, natural temperate grassland, and in secondary grassland derived from other communities.	1	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. This species has not been recorded within the locality in the last 20-years. No further assessment is required.
Tyto novaehollandiae	V	-	Inhabits a diverse range of wooded habitat that provide tall or dense mature trees with hollows suitable for nesting and roosting. Mostly recorded in open forest and woodlands adjacent to cleared lands. Nest in hollows, in trunks and in near vertical spouts or large trees, usually living but sometimes dead. Nest hollows are usually located within dense forests or woodlands. Masked owls prey upon hollow-dependent arboreal marsupials, but	1	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No hollow-bearing trees suitable for breeding were

Scientific name	Status		Distribution and habitat	Number of records (BioNet)	Likelihood of occurrence
	BC Act	EPBC Act			
			terrestrial mammals make up the largest proportion of the diet.		identified within the Subject Land or in the immediate periphery. No further assessment is required.
Tyto tenebricosa	V	-	Often found in tall old-growth forests, including temperate and subtropical rainforests. In NSW mostly found on escarpments with a mean altitude less than 500 metres. Nests and roosts in hollows of tall emergent trees, mainly eucalypts often located in gullies. Nests have been located in trees 125 to 161 centimetres in diameter.	1	Low. This highly mobile species may be an occasional visitor, but habitat similar to the Subject Land is widely distributed in the locality, meaning the species is not dependent (i.e. for breeding or important life cycle periods such as winter flowering resources) on habitats in the Subject Land. No hollow-bearing trees suitable for breeding were identified within the Subject Land or in the immediate periphery. This species has not been recorded within the locality in the last 10-years. No further assessment is required.

Appendix D. 5-Part Tests (Tests of Significance) (BC Act).

Biodiversity Conservation Act 2016 – Test of Significance (5-part Test) for Threatened Ecological Communities	
Cumberland Plain Woodland in the Sydney Basin Bioregion (Critically Endangered)	
Species Ecology (Scientific Committee, 2009)	Cumberland Plain Woodland is the name given to the ecological community in the Sydney Basin bioregion associated with clay soils derived from Wianamatta Group geology, or more rarely alluvial substrates, on the Cumberland Plain, a rain shadow area to the west of Sydney's Central Business District. The community typically occurs on flat to undulating or hilly terrain up to about 350m elevation but may also occur on locally steep sites and at slightly higher elevations. Cumberland Plain Woodland is characterised by an open tree canopy of *Eucalyptus moluccana* (Grey Box) and *E. tereticornis* (Forest Red Gum), often with *E. crebra* (Grey Ironbark), *E. eugenioides* (Narrow-leaved Stringybark), *Corymbia maculata* (Spotted Gum) or other less frequently occurring eucalypts, including *Angophora floribunda, A. subvelutina* (Broad-leaved Apple), *E. amplifolia* (Cabbage Gum) and *E. fibrosa* (Broad-leaved Ironbark). The community may have an open stratum of small trees that may include any of these eucalypts, as well as species such as *Acacia decurrens* (Black Wattle), *A. parramattensis* (Parramatta Wattle), *A.implexa* (Hickory Wattle) or *Exocarpos cupressiformis* (Native Cherry). Shrubs may sometimes occur in locally dense stands. Less disturbed stands of the community may have a woodland or forest structure. Cumberland Plain Woodland was first listed as an Endangered Ecological Community under the Threatened Species Conservation Act 1995 in June 1997.
(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,	Not applicable.

Biodiversity Conservation Act 2016 – Test of Significance (5-part Test) for Threatened Ecological Communities		
Cumberland Plain Woodland in the Sydney Basin Bioregion (Critically Endangered)		
(b) in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:	**(i) 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**	No. The proposed activity is unlikely 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. Only 0.21ha (worst case) representative of the CEEC, will be removed to facilitate the proposal activity. This patch of vegetation consists solely of isolated roadside plantings. The habitat for this community within the Subject Land is effectively nil, as these trees are planted within islands, and road shoulders where the TEC is unable to self-sow. As such, the vegetation to be retained will continue to adjoin the site to areas of high-quality habitat within the broader locality based on information provided within the current State Vegetation Type Map (NSW DCCEEW, 2025d).
	(ii) 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,	The proposed activity is not 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. The proposed activity will impact 0.21ha (worst case) which constitute a part of the EEC. Of these, all species are well

Biodiversity Conservation Act 2016 – Test of Significance (5-part Test) for Threatened Ecological Communities		
Cumberland Plain Woodland in the Sydney Basin Bioregion (Critically Endangered)		
		represented elsewhere in the broader locality, which will not impacted. It is not expected that the proposed activity will cause the permanent loss of any complexity or unique floristic components of the ecological community, such that it is likely to be placed at risk of extinction.
(c) in relation to the habitat of a threatened species or ecological community:	**(i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and**	The proposed activity will require the removal/modification of 0.21ha (worst case) of habitat. This 'habitat' constitutes a small portion of the TEC within proximity to the Subject Land. Disturbance to the topsoil and other vegetation within the area is to be avoided as to retain the TEC within the area.
	(ii) 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, and	No increased fragmentation will occur as a result of the proposed activity. Connectivity will remain minimal within the Subject Land, given the already highly fragmented condition of the vegetation.
	(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality,	All areas which support viable patches are important. Historical imagery shows that the Subject Land was cleared prior to 1965, and native midstory and groundcover are almost entirely absent.
(d) whether the proposed development or activity is likely to have an adverse	The proposal is not likely to have an adverse effect on any declared area of critical habitat, directly or indirectly.	

Biodiversity Conservation Act 2016 – **Test of Significance (5-part Test) for Threatened Ecological Communities**	
Cumberland Plain Woodland in the Sydney Basin Bioregion (Critically Endangered)	
effect on any declared area of outstanding biodiversity value (either directly or indirectly),	
(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 following Key Threatening Processes (KTPs) are documented to impact upon the survival of the ecological community: ▪ Clearing of native vegetation
Conclusion There will be no significant impact on these species therefore the proposed action should not warrant the preparation of a Species Impact Statement (SIS) or Biodiversity Development Assessment Report (BDAR).	

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