



ECOLOGICAL ASSESSMENT REPORT

PROPOSED REZONING

PACIFIC HIGHWAY

MOUNT WHITE

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DECEMBER 2021

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PREFACE

This Ecological Assessment Report has been prepared by *Conacher Consulting* for a proposed rezoning of the site at Pacific Highway Mount White.

This report provides an initial assessment of the proposed impacts to biodiversity in accordance with the *Biodiversity Conservation Act (2016)* and the *Environment Protection and Biodiversity Conservation Act (1999)*.

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NPWS Scientific Licence Number: SL100361

Project Director

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SECTION 1

INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

Conacher Consulting has been engaged to prepare an Ecological Assessment Report for a proposed rezoning of the land at Pacific Highway Mount White. The ecological information and assessments provided are prepared for initial consideration of a rezoning proposal under Part 3 of the Environmental Protection and Assessment Act (EP&A Act).

This report has been prepared to determine on a preliminary basis whether the proposed development is likely to significantly affect threatened species in accordance with Part 7 of the *Biodiversity Conservation Act (2016)* and if the future development is required to be assessed under the provisions of the BC Act which require the preparation of a Biodiversity Development Assessment Report (BDAR) for any future development application prepared under Part 4 of the EP&A Act.

This Report also provides an assessment of whether the proposal is likely to constitute a controlled action and require a referral under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

1.2 SITE CHARACTERISTICS

The planning and cadastral details of the subject site are provided in Table 1.1.

TABLE 1.1 SITE DETAILS	
Location	Lot 1 DP 207158, 231 Pacific Highway, Mount White
Allotment Area	3.3 ha
Zoning	RU1 – Primary Production
Local Government Area	Central Coast Council
Existing Land Use	Rural Residential

1.3 PROPOSED DEVELOPMENT

The development assessed in this Report is for a boutique hotel, conference centre and associated facilities such as landscape gardens, access and parking, effluent disposal area, bushfire asset protection zones and on site stormwater management measures.

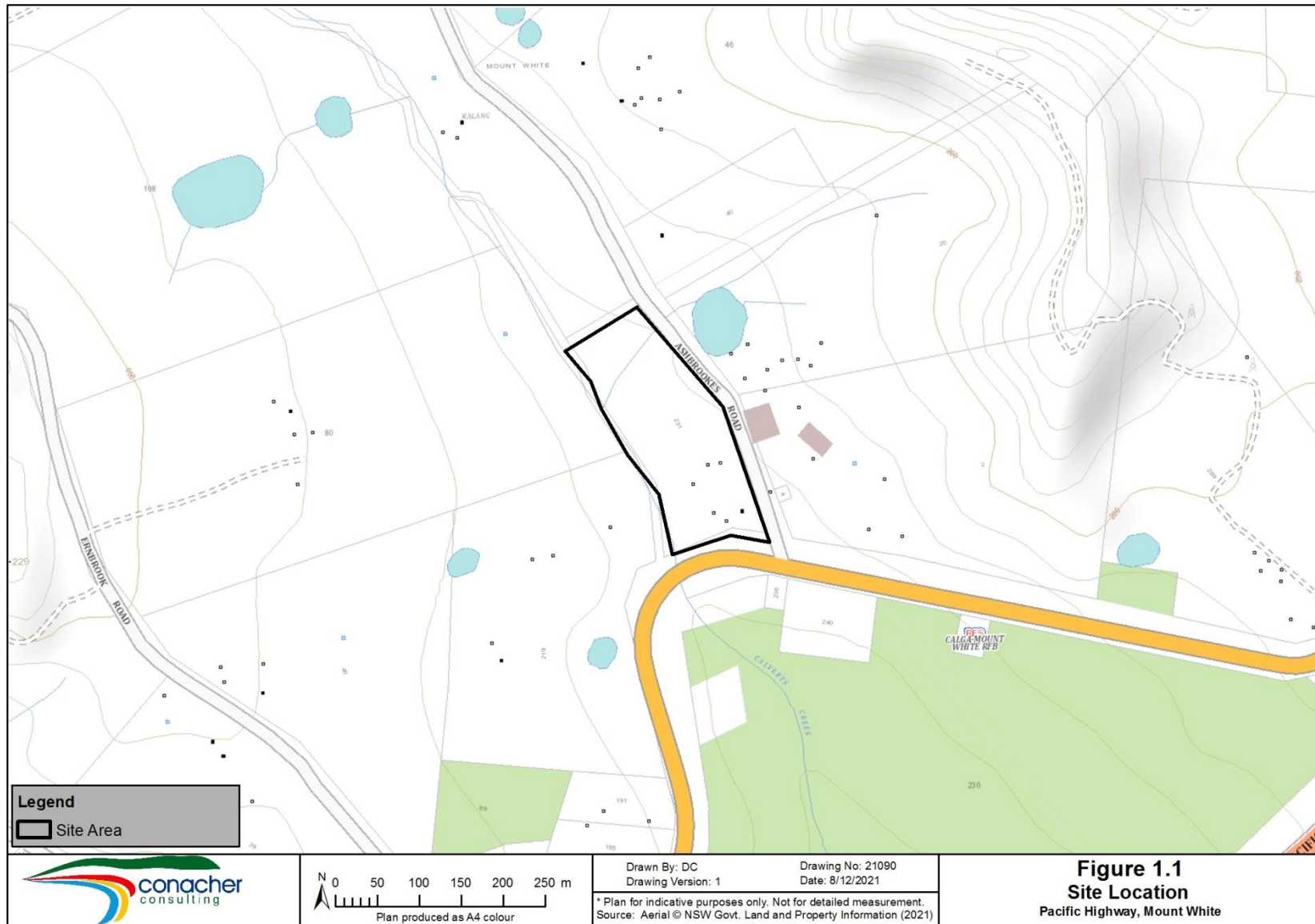
The proposed development will be limited to the previously cleared and developed areas and stock grazing paddocks adjoining these areas. The central and southern drainage lines and adjoining riparian vegetation along these drainage lines will be retained. These non-developed riparian areas may be subject to an ongoing weed management program.

1.4 SUMMARY OF BIODIVERSITY ASSESSMENTS COMPLETED

Summary details of biodiversity assessments undertaken within this Report and the outcomes of these assessments are provided in Table 1.2.

TABLE 1.2 SUMMARY OF BIODIVERSITY ASSESSMENTS		
Assessment	Relevant Report Section	Conclusion
Biodiversity Offset Scheme Threshold (BOSET)	4.1, Appendix 1	BDAR required for clearing more than 0.5 ha.
BC Act Assessment of Significance	4.2, Appendix 2	Not likely to significantly impact threatened habitats or their habitats
SEPP (Koala Habitat Protection) 2021	4.3, Appendix 5	No core koala habitat present.
EPBC Act Significance Assessment	4.4, Appendix 3	Not likely to significantly impact matters of national environmental significance.

In relation to the assessment and information outlined in Table 1.2 Appendix 5 contains the report provided as part of the EPBC Act Protected Matters Search completed for the site.





SECTION 2

FLORA DETAILS

2.1 FLORA DATABASE REVIEW

A search of the Bionet Atlas (NSW DPIE 2021) for threatened flora species listed within the *Biodiversity Conservation Act (2016)* and *Environment Protection and Biodiversity Conservation Act (1999)*, was undertaken to identify records within a 5km radius of the site (10x10 km search area).

NSW Scientific Committee Final Determinations and the EPBC Act List of Threatened Ecological Communities were accessed and the NSW Vegetation Information System Database was checked to determine threatened ecological communities with potential to occur. These matters are addressed in the following sections.

2.2 THREATENED ECOLOGICAL COMMUNITIES

The threatened ecological communities known from the local government area are detailed on Table 2.1:

TABLE 2.1 THREATENED ECOLOGICAL COMMUNITIES OF THE AREA				
Name	BCAct	EPBC Act	Habitat Requirements	Comments
Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E	VEC	Geology / Soils: Estuarine mud flats. Topography: Intertidal zone on the shores of estuaries and lagoons. Characteristic Species: <i>Sarcocornia quinqueflora</i> , <i>Sporobolus virginicus</i> , <i>Juncus kraussii</i> and <i>Baumea juncea</i> .	No suitable habitat present.
Coastal Upland Swamp in the Sydney Basin Bioregion	E	EEC	Geology / Soils: Periodically waterlogged acidic soils on Hawkesbury Sandstone. Topography: Impermeable sandstone plateaus in headwater valleys of streams and on sandstone benches with abundant moisture. Characteristic Species: Highly diverse and variable, includes scrubs, heaths, sedgelands and fernlands.	No suitable habitat present.
Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E	-	Geology / Soils: Silts, muds or humic loams. Topography: Depressions, flats, drainage lines, backswamps, lagoons and lakes associated with coastal floodplains. Characteristic Species: Composition is variable and dependent on water regime. May include amphibious grasses and sedges, emergent floating herbs and emergent tall sedges and floating and submerged aquatic herbs.	No suitable habitat present.

**TABLE 2.1
THREATENED ECOLOGICAL COMMUNITIES OF THE AREA**

Name	BCAct	EPBC Act	Habitat Requirements	Comments
Kincumber Scribbly Gum Forest in the Sydney Basin Bioregion	CEEC	-	<p>Geology / Soils: Terrigal Formation of the Narrabeen Group. Soils are characterised by Yellow Podzolic Soils and Yellow Earths of the Erina Soil Landscape.</p> <p>Topography: Foothslopes, gently inclined crests and ridges.</p> <p>Characteristic Species: <i>Eucalyptus racemosa</i>, <i>Angophora costata</i>, <i>Corymbia gummifera</i>, <i>Syncarpia glomulifera</i>, <i>Eucalyptus piperita</i> and <i>Allocasuarina littoralis</i>.</p>	No suitable habitat present.
Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E	CE	<p>Geology / Soils: Sand dunes and on soils derived from underlying rocks</p> <p>Topography: Located near the seaoin coastal dunes, headland or riparian habitats.</p> <p>Characteristic Species: Comprises the <i>Cupaniopsis anacardioides</i> - <i>Acmena</i> spp. alliance of Floyd (1990).</p>	No suitable habitat present.
Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions	E	CE	<p>Geology / Soils: High nutrient geological substrates, notably basalts and fine-grained sedimentary rocks.</p> <p>Topography: Coastal plains and plateaux, foothslopes and foothills up to 600m ASL and within the Sydney basin below 350m ALS</p> <p>Characteristic Species: Principally encompasses the following groupings of Floyd (1990): <i>Argyrodendron trifoliatum</i> alliance (suballiances 1, 5 & 6); <i>Dendrocnide excelsa</i> - <i>Ficus</i> spp. alliance (suballiances 14 & 15); and <i>Drypetes australasica</i> – <i>Araucaria cunninghamii</i> alliance (suballiances 21 & 22).</p>	No suitable habitat present.
Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion	E	-	<p>Geology / Soils: Shale-derived soils from Narrabeen series geology</p> <p>Topography: Undulating to rolling hills.</p> <p>Characteristic Species: <i>Corymbia maculata</i> and <i>Eucalyptus paniculata</i>.</p>	No suitable habitat present.

**TABLE 2.1
THREATENED ECOLOGICAL COMMUNITIES OF THE AREA**

Name	BCAct	EPBC Act	Habitat Requirements	Comments
River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E	-	<p>Geology / Soils: Silts, clay-loams and sandy loams.</p> <p>Topography: Periodically inundated alluvial flats, drainage lines and river terraces associated with coastal floodplains.</p> <p>Characteristic Species: Eucalypt canopy with species belonging to the genus <i>Angophora</i> or the sections <i>Exsertaria</i> or <i>Transversaria</i> of the genus <i>Eucalyptus</i>. Has low abundance of <i>E. robusta</i>, <i>Casuarina</i> and <i>Melaleuca</i> species and a groundcover of soft-leaved forbs and grasses.</p>	No suitable habitat present.
Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E	-	<p>Geology / Soils: Waterlogged or periodically inundated grey-black clay-loams and sandy loams, where the groundwater is saline or sub-saline.</p> <p>Topography: Flats, drainage lines, lake margins and estuarine fringes associated with coastal floodplains.</p> <p>Characteristic Species: <i>Casuarina glauca</i>.</p>	No suitable habitat present.
Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E	-	<p>Geology / Soils: Waterlogged or periodically inundated humic clay loams and sandy loams.</p> <p>Topography: Alluvial flats and drainage lines associated with coastal floodplains.</p> <p>Characteristic Species: <i>Eucalyptus robusta</i>, <i>E. longifolia</i>, <i>E. botryoides</i>, <i>Melaleuca quinquenervia</i> and <i>M. ericifolia</i>.</p>	No suitable habitat present.
Sydney Freshwater Wetlands in the Sydney Basin Bioregion	E	-	<p>Geology / Soils: Generally on the Warriewood and Tuggerah Soil Landscapes.</p> <p>Topography: Freshwater swamps in swales and depressions on sand dunes and low nutrient sand plain sites in coastal areas.</p> <p>Characteristic Species: <i>Eleocharis sphacelata</i>, <i>Baumea juncea</i>, <i>B. rubiginosa</i>, <i>B. articulata</i>, <i>Gahnia sieberiana</i>, <i>Ludwigia peploides</i> and <i>Persicaria</i> sp.</p>	No suitable habitat present.

TABLE 2.1 THREATENED ECOLOGICAL COMMUNITIES OF THE AREA				
Name	BCAct	EPBC Act	Habitat Requirements	Comments
Themeda grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions	E	-	Geology / Soils: Found on a range of substrates including old sand dunes above cliffs and on basalt headlands, and less frequently on sandstone. Topography: Sea cliffs and coastal headlands. Characteristic Species: <i>Themeda australis</i> .	No suitable habitat present.
Umina Coastal Sandplain Woodland in the Sydney Basin Bioregion	E	-	Geology / Soils: Holocene sediments of coastal sand. Iron podzols on the Woy Woy Soil Landscape. Topography: Sand plains on the Woy Woy Peninsula at Umina and Pearl Beach. Characteristic Species: <i>Eucalyptus botryoides</i> and <i>Angophora floribunda</i> with a diverse understorey of sclerophyllous shrubs.	No suitable habitat present.
Key to TSC Act and EP&BC Act Status Ext = Extinct - P. Ext = Presumed Extinct - CE = Critically Endangered – E = Endangered - V = Vulnerable Species				

No threatened ecological communities listed within the *EPBC Act* (1999) or the *BC Act* (2016) were observed within the subject site.

2.3 THREATENED FLORA SPECIES

The threatened flora species recorded within the Bionet Atlas search (NSW DPIE 2021) were subject to an initial assessment to determine candidate species with suitable habitat present within the subject site. Details on the habitats for these species has been obtained from the threatened species profiles prepared by the former NSW Office of Environment and Heritage and the current NSW Department of Planning, Industry and Environment as identified in Table 2.2, and are subject to further assessment.

TABLE 2.2 THREATENED FLORA SPECIES RECORDED WITHIN THE LOCALITY				
Species Name	BC Act Status	EPBC Act Status	Preferred Habitat	Comments
<i>Caladenia tessellata</i>	E	V	Found in grassy sclerophyll woodland on clay loam or sandy soils.	No suitable habitat present. Not observed during surveys
<i>Callistemon linearifolius</i>	V	-	Sclerophyll Forest in moist gullies on coast and adjacent ranges (Fairley and Moore 1995).	Suitable habitat present. Not observed during surveys

TABLE 2.2 THREATENED FLORA SPECIES RECORDED WITHIN THE LOCALITY				
Species Name	BC Act Status	EPBC Act Status	Preferred Habitat	Comments
<i>Darwinia glaucophylla</i>	V	-	Heath and woodlands associated with sandstone rock platforms	No suitable habitat present. Not observed during surveys
<i>Grevillea shiressii</i>	V	V	Grows along creek banks in wet sclerophyll forest in sandy soil on Hawkesbury sandstone.	Suitable habitat present. Not observed during surveys
<i>Hibbertia procumbens</i>	E	-	Heath on skeletal sandy soils on the Somersby Plateau. May also be found associated with 'hanging swamp' vegetation communities on sandy deposits.	No suitable habitat present. Not observed during surveys
<i>Hibbertia puberula</i>	E	-	Occurs on sandy soil on sandstone or clay in dry sclerophyll woodland communities, and heath on shallow sandstone soils.	No suitable habitat present. Not observed during surveys
<i>Micromyrtus blakelyi</i>	V	V	Low spreading shrub, occurs near the Hawkesbury River in The Hills and Hornsby LGAs.	No suitable habitat present. Not observed during surveys
<i>Rhodamnia rubescens</i>	CE	-	Wet sclerophyll forest and rainforest.	Suitable habitat present. Not observed during surveys
<i>Tetratheca glandulosa</i>	V	-	Strongly associated with areas of shale-sandstone transition habitat.	No suitable habitat present. Not observed during surveys

2.4 FLORA SURVEY METHODS

The preliminary flora surveys undertaken incorporate the following methods.

- General walkover survey of the proposed development area to determine the extent of disturbed areas, remnant tree details, vegetation community present in the drainage lines.
- Review of Biodiversity Development Assessment Report findings for the western part of the site.
- Determination of the tree species present for Koala habitat assessment purposes.
- The walkover flora surveys were undertaken on the following dates:

12 th February 2021	11.15am – 12.30pm
4 th May 2021	12.30pm – 4pm
10 th May 2021	10am – 12 noon
30 th November 2021	2.30pm – 3.45 pm

The vegetation surveys were completed with the development areas to the east of Calverts Creek and south of the central drainage line near the powerline. It is expected that more detailed flora surveys will be

required as part of the surveys completed for the BDAR component of the development application documentation.

2.5 FLORA SPECIES AND PLANT COMMUNITY TYPES

i. **Plant Community Type 1627 Smooth-barked Apple – Turpentine – Sydney Peppermint Heathy Woodland on Sandstone Ranges of the Central Coast**

Plant community type 1627 is present within the site. The trees present are characteristic of Plant Community Type 1627 Smooth-barked Apple – Turpentine – Sydney Peppermint Heathy Woodland on Sandstone Ranges of the Central Coast and Map Unit CC_DS19i Hawkesbury Peppermint Apple Forest of Bell (2019). This PCT has been mapped by Bell (2019) within the northern section of the site.

The native trees observed within the proposed rezoning area include:

<i>Acacia decurrens</i>	Black Wattle
<i>Angophora costata</i>	Smooth Barked Apple, Sydney Red Gum
<i>Araucaria bidwillii</i>	Bunya Bunya Pine
<i>Callistemon salignus</i>	Willow Bottlebrush
<i>Corymbia eximia</i>	Yellow Bloodwood
<i>Corymbia gummifera</i>	Red Bloodwood
<i>Eucalyptus haemastoma</i>	Scribbly Gum
<i>Eucalyptus piperita</i>	Sydney Peppermint Gum
<i>Eucalyptus punctata</i>	Grey Gum
<i>Eucalyptus sieberi</i>	Black Ash
<i>Eucalyptus globoidea</i>	White Stringybark-
<i>Eucalyptus tereticornis</i>	Forest Red Gum
<i>Pittosporum undulatum</i>	Native Daphne, Sweet Pittosporum

ii. **Planted Native Trees and Shrubs**

The planted native trees include:

- *Lophostemon confertus* (Brush Box)
- *Callistemon salignus* (Willow Bottlebrush)
- *Syzygium paniculatum* (Magenta Lilly Pilly)

iii. **Planted Exotic Trees and Shrubs**

Areas of exotic trees and shrubs are present within the site as landscaped gardens. The exotic tree species present within the proposed rezoning area include:

<i>Afrocarpus falcatus</i>	Outeniqua Yellow Wood
<i>Cedrus deodara</i>	Deodar Tree, Himalayan Cedar
<i>Cinnamomum camphora</i>	Camphor Laurel
<i>Cupressus funereus</i>	Chinese Weeping Cypress, Funeral Cypress
<i>Erythrina x sykesii</i>	Common Coral Tree
<i>Liquidambar styraciflua</i>	Liquidambar
<i>Lophostemon confertus</i>	Brushbox
<i>Pinus spp.</i>	Pine
<i>Populus alba</i>	White Poplar
<i>Populus deltoides</i>	Cottonwood
<i>Populus nigra 'Italica'</i>	Italian Cypress
<i>Salix babylonica</i>	Weeping Willow
<i>Syagrus romanzoffiana</i>	Cocos Palm, Queen Palm
<i>Ulmus procera</i>	English Elm

iv. **Planted Grass (mixed native and exotic)**

Planted Grass areas are dominated by *Cynodon dactylon* (Common Couch) and *Cenchrus clandestinus* (Kikuyu Grass). *Cynodon dactylon* is considered to potentially be a native species, however it has been introduced and planted within this site following historical clearing.

SECTION 3

FAUNA DETAILS

3.1 FAUNA DATABASE REVIEW

A search of the Bionet Atlas (NSW DPIE 2021) for threatened fauna species listed within the *Biodiversity Conservation Act (2016)* and *Environment Protection and Biodiversity Conservation Act (1999)*, was undertaken to identify records within a 5km radius of the site (10x10 km search area). These species are assessed in the following sections.

3.2 THREATENED FAUNA SPECIES

Details on the habitats for threatened fauna species (Table 3.1) have been obtained from the threatened species profiles prepared by the former NSW Office of Environment and Heritage and the current NSW Department of Planning, Industry and Environment.

TABLE 3.1 THREATENED FAUNA SPECIES RECORDED WITHIN THE LOCALITY				
Species Name	BC Act Status	EPBC Act Status	Preferred Habitat	Comments
Giant Burrowing Frog <i>Heleioporus australiacus</i>	V	V	Small streams, soaks and swamps on plateaus and upland gullies.	Suitable habitat present. Not observed during surveys
Red-crowned Toadlet <i>Pseudophryne australis</i>	V	-	Ephemeral sandstone watercourses.	Suitable habitat present. Not observed during surveys
Rosenberg's Goanna <i>Varanus rosenbergi</i>	V	-	Sandstone habitats.	Suitable habitat present. Not observed during surveys
Australasian Bittern <i>Botaurus poiciloptilus</i>	E	E	Shallow freshwater or brackish wetlands with tall dense vegetation.	Suitable habitat present. Not observed during surveys
Black Bittern <i>Ixobrychus flavicollis</i>	V	-	Permanent freshwater wetlands with tall, dense vegetation.	Suitable habitat present. Not observed during surveys
White-bellied Sea-Eagle <i>Haliaeetus leucogaster</i>	V	-	Coastal areas and inland rivers and wetlands. Nests in large emergent eucalypts.	Suitable habitat present. Not observed during surveys
Little Lorikeet <i>Glossopsitta pusilla</i>	V	-	Forests and woodlands with flowering eucalypts.	Suitable habitat present. Not observed during surveys.

TABLE 3.1 THREATENED FAUNA SPECIES RECORDED WITHIN THE LOCALITY				
Species Name	BC Act Status	EPBC Act Status	Preferred Habitat	Comments
Glossy Black-Cockatoo <i>Calyptorhynchus lathamii</i>	V	-	Forests with <i>Allocasuarina</i> species for foraging and hollows for nesting.	Suitable habitat present. Not observed during surveys
Powerful Owl <i>Ninox strenua</i>	V	-	Mature forests containing large hollows for breeding & densely vegetated gullies for roosting.	Suitable habitat present. Not observed during surveys.
Masked Owl <i>Tyto novaehollandiae</i>	V	-	Open forest & woodlands with cleared areas for hunting and hollow trees or dense vegetation for roosting.	Suitable habitat present. Not observed during surveys.
Swift Parrot <i>Lathamus discolor</i>	E	CE	Forests and woodlands with winter flowering eucalypts.	Suitable foraging habitat present. Not observed during surveys.
Regent Honeyeater <i>Anthochaera phrygia</i>	CE	CE	Box-Ironbark dry open forest and woodland and riparian River Sheoak forests. Also Coastal Swamp Forest and Spotted Gum Forest during winter.	Suitable foraging habitat present. Not observed during surveys.
Eastern Pygmy-possum <i>Cercartetus nanus</i>	V	-	Forages on nectar and pollen producing plants, particularly in sandstone heath and rainforest habitats.	Suitable habitat present. Not observed during surveys
Spotted-tailed Quoll <i>Dasyurus maculatus</i>	V	E	Forested habitats, requires large home ranges.	Suitable habitat present. Not observed during surveys
Parma Wallaby <i>Macropus parma</i>	V	-	Rainforests and wet and dry sclerophyll forests with a dense understorey and associated grassy patches.	Suitable habitat present. Not observed during surveys.
Squirrel Glider <i>Petaurus norfolcensis</i>	V	-	Forest with heath understorey. Shelters in tree hollows.	Suitable habitat present. Not observed during surveys.
Koala <i>Phascolarctos cinereus</i>	V	V	Forested habitats with suitable feed trees.	Suitable habitat present. Not observed during surveys.

TABLE 3.1 THREATENED FAUNA SPECIES RECORDED WITHIN THE LOCALITY				
Species Name	BC Act Status	EPBC Act Status	Preferred Habitat	Comments
Grey-headed Flying-fox <i>Pteropus poliocephalus</i>	V	V	Forested, urbanised and cultivated areas with suitable trees for foraging. Roosts in trees in gullies, riparian habitats and urban areas.	Suitable habitat present. Not observed during surveys.
Eastern Coastal Free-tailed Bat <i>Micronomus norfolkensis</i>	V	-	Eucalypt forest and woodland on the coastal side of the Great Dividing Range. Roosts in tree hollows, under bark and in various man-made structures.	Suitable habitat present. Not observed during surveys.
Eastern False Pipistrelle <i>Falsistrellus tasmaniensis</i>	V	-	Wet sclerophyll forest, open forest, rainforest and coastal mallee. Roosts in hollow trunks of eucalypts, caves and man-made structures.	Suitable habitat present. Not observed during surveys.
Large Bent-winged Bat <i>Miniopterus orianae oceanensis</i>	V	-	Coastal forests, vine thickets and adjoining cleared areas. Roosts in caves and man-made structures.	Suitable habitat present. Not observed during surveys.
Greater Broad-nosed Bat <i>Scoteanax rueppellii</i>	V	-	Moist gullies in mature coastal forest, rainforest, open woodland, sclerophyll forest and cleared areas with remnant trees. Roosts in tree hollows, under bark and in man-made structures.	Suitable foraging habitat present. Observed during surveys
Giant Dragonfly <i>Petalura gigantea</i>	E	-	Inhabits swamps and bogs with some free water and open vegetation.	Suitable habitat present. Not observed during surveys.

3.3 FAUNA SURVEY METHODS

Fauna surveys were undertaken incorporating the following methods:

- Diurnal fauna census (10, 30 November 2021);
- Habitat assessment and hollow bearing tree search (10, 30 November 2021);
- Microbat ultrasonic call recording (10 - 25 November 2021, 2 Microbat detectors);
- Remote baited camera surveys (10 - 25 November 2021, 4 camera traps).

Nocturnal spotlighting was not completed as hollow bearing trees were not observed during surveys.

3.4 FAUNA HABITAT DETAILS

The fauna habitats present consist of remnant trees, riparian vegetation and disturbed / cleared areas. No hollow bearing trees, ground logs or rock outcrops were observed within the proposed development areas.

Amphibians

Amphibian habitat is present within drainage lines and within the riparian habitats present. Shelter habitat is also present within the vegetated areas of the site.

Reptiles

Suitable foraging habitat is present for locally occurring reptile species in areas of scattered trees and riparian vegetation. Suitable shelter and breeding habitats are provided under fallen logs, in tree hollows and within leaf litter. No areas of substantial rock outcropping were observed.

Birds

The flower, nectar, fruit and seed producing tree and shrub species provide a seasonal foraging resource for bird species particularly passerines. The heathy ground layer vegetation throughout the vegetated drainage lines of the site provides structurally dense foraging habitats. Cleared / disturbed and open areas occur throughout the site and provide disturbed and exotic grassland habitats. The and drainage lines also provide a water source for bird species.

Mammals

The flower, nectar, fruit and seed producing tree and shrub species provide a seasonal foraging resource for arboreal mammals and bat species. A range of terrestrial habitats including dense areas of understorey vegetation, dead wood and hollow logs and leaf litter are present within the naturally vegetated areas of the site.

3.5 FAUNA SURVEY RESULTS

The fauna species observed during surveys are listed in Table 3.2.

TABLE 3.2 FAUNA OBSERVED AND RECORDED WITHIN THE SUBJECT SITE		
Common Name	Scientific Name	Observation Type
Birds		
Noisy Miner	<i>Manorina melanocephala</i>	OW
Red Wattlebird	<i>Anthochaera carunculata</i>	OW
Grey Butcherbird	<i>Cracticus torquatus</i>	W
Rainbow Lorikeet	<i>Trichoglossus haematodus</i>	OW
Yellow-tailed Black-Cockatoo	<i>Calyptorhynchus funereus</i>	OW
Galah	<i>Eolophus roseicapillus</i>	OW
Eastern Rosella	<i>Platycercus eximius</i>	OW
Laughing Kookaburra	<i>Dacelo novaeguineae</i>	OW
Welcome Swallow	<i>Hirundo neoxena</i>	OW
Grey Fantail	<i>Rhipidura albiscapa</i>	OW
Willie Wagtail	<i>Rhipidura leucophrys</i>	OW
Leaden Flycatcher	<i>Myiagra rubecula</i>	W
Magpie-lark	<i>Grallina cyanoleuca</i>	OW
Eastern Whipbird	<i>Psophodes olivaceus</i>	W
Striated Thornbill	<i>Acanthiza lineata</i>	OW
Superb Fairy-wren	<i>Malurus cyaneus</i>	OW
Variiegated Fairy-wren	<i>Malurus lamberti</i>	OW
Spotted Pardalote	<i>Pardalotus punctatus</i>	W
Lewin's Honeyeater	<i>Meliphaga lewinii</i>	OW
Olive-backed Oriole	<i>Oriolus sagittatus</i>	OW
Australian Magpie	<i>Cracticus tibicen</i>	OW
Little Wattlebird	<i>Anthochaera chrysoptera</i>	OW
Reptiles		
Dark-flecked Garden Sunskink	<i>Lampropholis delicata</i>	O
Eastern Water Dragon	<i>Intellagama lesueurii</i>	O
Amphibians		
Common Eastern Froglet	<i>Crinia signifera</i>	W
Bleating Tree Frog	<i>Litoria dentata</i>	W
Mammals		
Swamp Wallaby	<i>Wallabia bicolor</i>	O
White-striped Freetail Bat	<i>Austronomus australis</i>	U
Gould's Wattled Bat	<i>Chalinolobus gouldii</i>	U
Greater Broad-nosed Bat *	<i>Scoteanax rueppellii</i>	U
Brush-tailed Possum	<i>Trichosurus vulpecula</i>	C
Squirrel Glider	<i>Petaurus norfolcensis</i>	C
Key to Observation Type		
E - Nest / Roost	O - Observed	
F - Tracks / Scratchings / Chew Marks	OW - Observed and Heard Call	
FB - Burrow	P - Scat	
G - Crushed Cones	C - Camera	
H - Hair / Feathers / Skin	T - Trapped	
K - Dead	U - Ultrasonic Recording	
M - Miscellaneous Record	W - Heard	
Note: * indicates introduced species. ^{TS} indicates threatened species <i>BC Act</i> (2016).		



SECTION 4

ASSESSMENTS AND CONCLUSIONS

4.1 BIODIVERSITY OFFSET SCHEME THRESHOLD ASSESSMENT

The following considerations are provided in relation to the Biodiversity Offset Scheme Threshold and Biodiversity Development Assessment Report:

- A BOSET Report is provided in Appendix 1;
- The proposed development footprint assessed in this Report will impact approximately 1.5 ha of native vegetation, which is more than the 0.5 ha native vegetation area clearing threshold that exceeds the Biodiversity Offset Scheme Threshold for this site;
- Part of the subject site is located on the biodiversity values map: (Riparian area to the west)
- The proposed development will not be carried out in a declared area of outstanding biodiversity value.

It is considered that the future development application is required to be accompanied by a Biodiversity Development Assessment Report prepared in accordance with the Biodiversity Assessment Method for development applications under Part 4 of the EP&A Act.

4.2 BIODIVERSITY CONSERVATION ACT (2016) ASSESSMENT OF SIGNIFICANCE

A Threatened Species Assessment of Significance has been undertaken for those threatened species observed during surveys or identified have having suitable habitat contained within the site. Full details of this Assessment of Significance are provided in Appendix 2.

The Assessment of Significance has concluded that the future development is not likely to have a significant effect on threatened species, ecological communities or their habitats. However, a biodiversity Development Assessment Report I required for a development application for this proposal due to the area of vegetation required to be cleared triggering the Biodiversity Offset Scheme Threshold.

4.3 STATE ENVIRONMENTAL PLANNING POLICY (KOALA HABITAT PROTECTION) 2021

The site is located within a local government area listed in Schedule 1 of State Environmental Planning Policy (Koala Habitat Protection) 2021.

An assessment of koala habitat in accordance with Clause 6 (i) of SEPP (KHP) 2021 is provided in Appendix 5.

This assessment has concluded that the site does not contain core koala habitat and a low impact on koalas or their habitat will result from the proposed development.

4.4 ENVIRONMENTAL PROTECTION & BIODIVERSITY CONSERVATION ACT (1999) SIGNIFICANCE ASSESSMENT

The *Environment Protection and Biodiversity Conservation Act*, (1999) requires that Commonwealth approval be obtained for certain actions. The Act provides an assessment and approvals systems for actions that have a significant impact on matters of National Environment Significance (NES). These may include:-

- Wetlands protected by international treaty (the Ramsar Convention);
- Nationally listed threatened species and Ecological communities;
- Nationally listed migratory species.

Actions are projects, developments, undertakings, activities, series of activities or alteration of any of these. An action that needs Commonwealth approval is known as a controlled action. A controlled

action needs approval where the Commonwealth decides the action would have a significant effect on a NES matter.

Where a proposed activity is located in an area identified to be of NES, or such that it is likely to significantly affect threatened species, Ecological communities, migratory species or their habitats, the matter needs to be referred to the Australian Government Department of Agriculture, Water and the Environment (DAWE).

An assessment in accordance with the EPBC Significant Impact Guidelines is provided in Appendix 3. This assessment has concluded that: “the proposed action is not likely to have a significant impact on nationally listed threatened or migratory species or nationally listed threatened ecological communities”. Therefore a referral of the project to the Department of Agriculture, Water and the Environment is not required.

4.5 CONCLUSIONS

Based on the initial field surveys completed, information provided and assessments completed in this report it is concluded that:

- i. The threatened species *Syzigium paniculatum*, a species of plant listed as critically endangered under the *BC Act (2016)*, was observed during surveys. One plant was observed within the site and appears to be a planted landscape tree.
 - ii. No threatened ecological communities listed within the *BC Act (2016)* or the *EPBC Act (1999)* were observed within the subject site during surveys.
 - iii. A referral to the Australian Government Department of Agriculture, Water and the Environment is considered unnecessary.
 - iv. The proposed development is not likely to significantly affect threatened species or their habitats as determined in a preliminary assessment under Section 7.2 of the Biodiversity Conservation Act (2016);
- i. The proposed development will trigger the Biodiversity Offset Threshold identified in Part 7 of the Biodiversity Conservation Regulation (2017);
 - ii. A Biodiversity Development Assessment Report is required for the future development application.

REFERENCES

- Australian Government Department of the Environment (2013) *EPBC Act Policy Statement 1.1 Significant Impact Guidelines, Matters of National Environmental Significance*, Commonwealth of Australia.
- Australian Government Department of the Environment and Energy (2021) Protected Matters Search Tool. [Online]. Available from: <http://www.environment.gov.au/epbc/pmst/index.html>
- Biodiversity Conservation Act (2016), New South Wales Government.
- Central Coast Council (2019) Flora and Fauna Guidelines. Central Coast Council.
- Environment Protection and Biodiversity Conservation Act (1999). Commonwealth Government.
- NSW Office of Environment and Heritage 2021, NSW Bionet, [Online] Available from: <http://www.bionet.nsw.gov.au/>
- NSW Office of Environment and Heritage 2021, Threatened Species Test of Significance Guidelines, Office of Environment and Heritage, Sydney.
- NSW Office of Environment and Heritage 2020, NSW BioNet, [Online] Available from: <http://www.bionet.nsw.gov.au/>

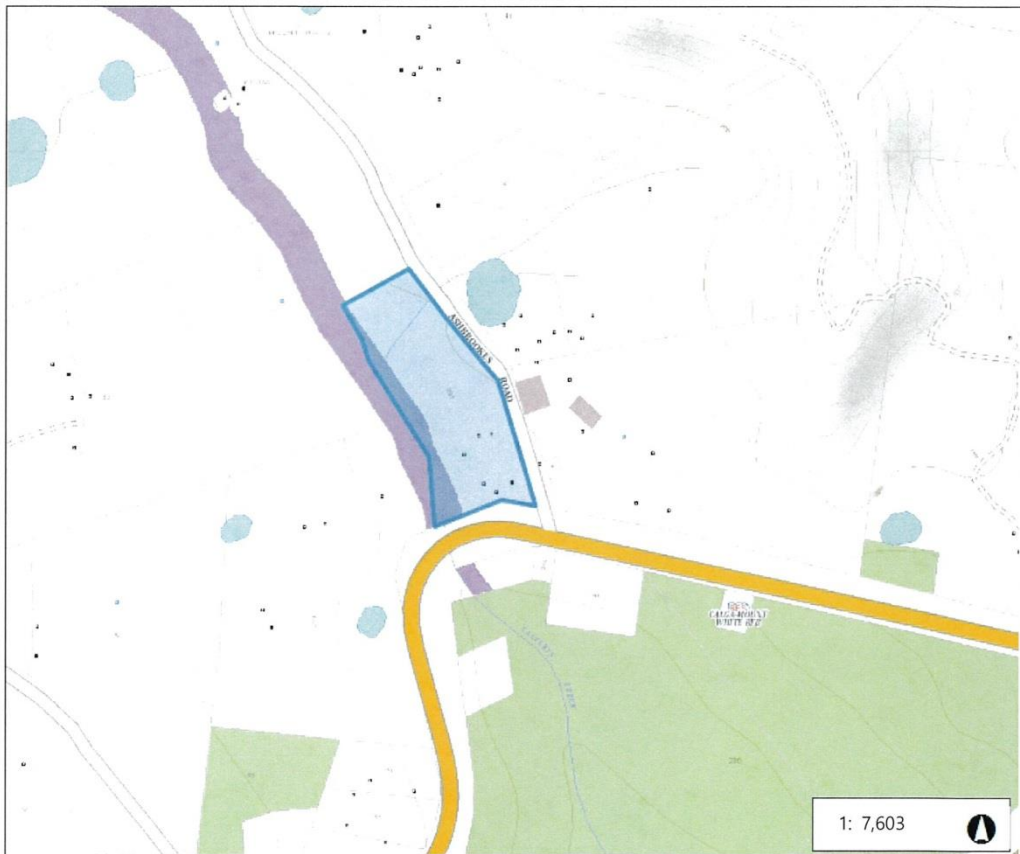
APPENDIX 1

BIODIVERSITY OFFSET SCHEME ENTRY THRESHOLD REPORT

A1.1 BIODIVERSITY OFFSET SCHEME ENTRY THRESHOLD MAP

The following print out from the Biodiversity Offset Scheme Entry Threshold Map Tool is provided for the purposes of establishing that the site is not located on the biodiversity values map and and determining the area clearing threshold which applies to the site.

Biodiversity Offset Scheme (BOS) Entry Threshold Map



386.3 0 193.13 386.3 Metres
WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Legend

- Biodiversity Values that have been mapped for more than 90 days
- Biodiversity Values added within last 90 days

Notes

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Biodiversity Values Map and Threshold Report

Results Summary

Date of Calculation	04/12/2021 8:44 AM	BDAR Required*
Total Digitised Area	3,29 ha	
Minimum Lot Size Method	LEP	
Minimum Lot Size	20 ha	
Area Clearing Threshold	0.5 ha	
Area clearing trigger Area of native vegetation cleared	Unknown #	Unknown #
Biodiversity values map trigger Impact on biodiversity values map(not including values added within the last 90 days)?	yes	yes
Date of the 90 day Expiry	N/A	

*If BDAR required has:

- at least one 'Yes': you have exceeded the BOS threshold. You are now required to submit a Biodiversity Development Assessment Report with your development application. Go to <https://customer.lmbc.nsw.gov.au/assessment/AccreditedAssessor> to access a list of assessors who are accredited to apply the Biodiversity Assessment Method and write a Biodiversity Development Assessment Report
- 'No': you have not exceeded the BOS threshold. You may still require a permit from local council. Review the development control plan and consult with council. You may still be required to assess whether the development is "likely to significantly affect threatened species' as determined under the test in s. 7.3 of the Biodiversity Conservation Act 2016. You may still be required to review the area where no vegetation mapping is available.

Where the area of impact occurs on land with no vegetation mapping available, the tool cannot determine the area of native vegetation cleared and if this exceeds the Area Threshold. You will need to work out the area of native vegetation cleared - refer to the BOSET user guide for how to do this.

On and after the 90 day expiry date a BDAR will be required.

Disclaimer

This results summary and map can be used as guidance material only. This results summary and map is not guaranteed to be free from error or omission. The State of NSW and Office of Environment and Heritage and its employees disclaim liability for any act done on the information in the results summary or map and any consequences of such acts or omissions. It remains the responsibility of the proponent to ensure that their development application complies will all aspects of the *Biodiversity Conservation Act 2016*.

The mapping provided in this tool has been done with the best available mapping and knowledge of species habitat requirements. This map is valid for a period of 30 days from the date of calculation (above).

Acknowledgement

I as the applicant for this development, submit that I have correctly depicted the area that will be impacted or likely to be impacted as a result of the proposed development.

Signature _____ Date: 04/12/2021 08:44 AM

APPENDIX 2

BIODIVERSITY CONSERVATION ACT (2016) TEST OF SIGNIFICANCE

BIODIVERSITY CONSERVATION ACT (2016) TEST OF SIGNIFICANCE

The following Threatened Species Test of Significance has been undertaken for those threatened species, populations and ecological communities observed during surveys or identified as having suitable habitat contained within the subject site.

The following Test of Significance has been completed in accordance with Section 7.3 of the *Biodiversity Conservation Act (2016)* to determine whether the proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats. This Assessment has been completed in accordance with the Threatened Species Test of Significance Guidelines (NSW OEH 2018). Notwithstanding the conclusions provided it is noted the following species will be subject to further detailed assessment as part of a future BDAR for the development application.

- a) ***In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of this species is likely to be placed at risk of extinction,***

THREATENED FLORA SPECIES

A part from the presence of the planted specimen of *Syzigium paniculatum*, no other threatened flora species were observed on the site of the proposed future development. . The proposal is predominantly confined to the existing disturbed areas of the site and the majority of the suitable habitats present for threatened flora species will be retained outside of the proposed development footprint. There are also larger areas of suitable habitats present offsite within the locality which will not be impacted by the proposal.

It is considered that the proposed action will not have an adverse effect on the life cycle any threatened flora species such that a viable local population of a threatened flora species is likely to be placed at risk of extinction.

THREATENED FAUNA SPECIES

GIANT BURROWING FROG (*Heleioporus australiacus*)

Habitat Preference

Northern populations occur from the Sydney Basin to Jervis Bay and prefer sandstone ridge top habitats and broader upland valleys where they occur in association with small headwater creek lines in woodland, heath and hanging swamp habitats. Southern populations occur from Narooma, south throughout eastern Victoria and prefer more heavily timbered habitats. They may also occur in artificial habitats such as dams which have naturalised over time and are surrounded by undisturbed habitats.

RED-CROWNED TOADLET (*Pseudophryne australis*)

Habitat Preference

The Red-crowned Toadlet shelters under flat sandstone rocks on bare rock or damp loamy soils, under logs on soil, beneath thick ground litter and in horizontal rock crevices near the ground on Hawkesbury and Narrabeen Sandstone. This species typically lives in the vicinity of permanently moist soaks or areas of dense ground vegetation or leaf litter along or near head-water stream beds with preference for first or second order drainage lines. Preferred drainage lines are ephemeral and sustain flow for short periods only which are of high water quality and low nutrient load. The specialised terrestrial reproductive strategy of the Red-crowned Toadlet relies on these flow characteristics and this species has not been recorded breeding in sites that are even mildly polluted, nor in permanently flowing watercourses.

ROSENBERGS GOANNA (*Varanus rosenbergi*)

Habitat Preference

Rosenberg's Goanna inhabits woodlands, dry eucalypt forests and heathland where it shelters in burrows, hollow logs, rock crevices and sandstone outcrops. Eggs are laid within a terrestrial termite

mound.

AUSTRALASIAN BITTERN (*Botaurus poiciloptilus*)

Habitat Preference

Prefers freshwater wetlands and stream habitats with dense vegetation such as bulrush and spikerush vegetation.

BLACK BITTERN (*Ixobrychus flavicollis*)

Habitat Preference

Inhabits terrestrial and estuarine wetlands, generally with permanent water and dense riparian vegetation. Feeds on frogs, reptiles, fish and aquatic fauna.

LITTLE LORIKEET (*Glossopsitta pusilla*)

Habitat Preference

The Little Lorikeet feeds primarily on nectar and pollen in the tree canopy, particularly on profusely-flowering eucalypts, but also on a variety of other species including, melaleucas and mistletoes.

GLOSSY BLACK-COCKATOO (*Calyptorhynchus lathamii*)

Habitat Preference

The Glossy Black-Cockatoo inhabits woodlands and open sclerophyll forests dominated by or with a middle stratum of *Allocasuarina*. They choose trees with larger cone crops, concentrating foraging in trees with a high ratio of total seed weight to cone weight. They breed in hollow trees or stumps usually in Eucalypts.

POWERFUL OWL (*Ninox strenua*)

Habitat Preference

The Powerful Owl breeds in open or closed sclerophyll forests and woodlands, including wet sclerophyll forest and dry sclerophyll forest and woodlands. They nest in hollows in large old trees; usually living Eucalyptus, within or below canopy in stumps or broken-off trunks. Powerful Owls are sedentary within home ranges of about 1,000 hectares within open eucalypt, casuarina or *Callitris* pine forest and woodlands, though they often roost in denser vegetation, including rainforest or exotic pine plantations. Powerful Owls feed mainly on medium-sized arboreal marsupials.

MASKED OWL (*Tyto novaehollandiae*)

Habitat Preference

The Masked Owl is widespread through forests and woodlands. The Masked Owl is known to utilise forest margins and isolated stands of trees within agricultural land. This species is often found in heavily disturbed forest where its prey of small and medium sized mammals can be readily obtained. The Masked Owl is dependent upon hollow bearing trees all year round requiring old mature trees with large hollows for breeding and as diurnal roosting sites.

SWIFT PARROT (*Lathamus discolor*)

Habitat Preference

This species feeds mainly on nectar and lerp from eucalypt flowers, particularly Blue Gum (*Eucalyptus globulus*). On the mainland, the Swift Parrot congregates where winter flowering species such as Yellow Gum, Red Ironbark, Mugga Ironbark, Box Gums and Swamp Gum. This species also occurs within Blackbutt, Forest Red Gum, Swamp Mahogany and Spotted Gum dominated communities along the coast. The Swift Parrot is a migratory species that breeds in Tasmania and its offshore islands in summer. In late March almost the entire population migrates to mainland Australia spreading from Victoria through to central and coastal NSW and south east Queensland.

REGENT HONEYEATER (*Anthochaera phrygia*)

Habitat Preference

The Regent Honeyeater inhabits mostly dry eucalypt woodlands and forests dominated by box ironbark eucalypts; on inland slopes of Great Divide, especially associations in moister more fertile sites, along creeks, broad river valleys and on lower slopes of foothills. Nectar is the principle food but sugary exudates from insects are also used. The Regent Honeyeater is known to breed along the western Slopes of the Great Dividing Range in New South Wales.

EASTERN PYGMY-POSSUM (*Cercartetus nanus*)

Habitat Preference

The Eastern Pygmy-possum is found from rainforest through sclerophyll forest to tree heath. Banksia and myrtaceous shrubs and trees are favoured. Eastern Pygmy-possums usually shelter alone in tree cavities, rotten stumps, holes in the ground, disused bird nests and possum dreys and in vegetation thickets. The home ranges of males, about 0.65 hectares are larger than those of females, about 0.35 hectares and not exclusive with home ranges broadly overlapping. Apart from females with young in the nest, individuals may utilise a number of nest sites within the home range.

SPOTTED-TAILED QUOLL (*Dasyurus maculatus*)

Habitat Preference

The Spotted-tailed Quoll inhabits a range of forest communities including wet and dry open forest and rainforest. It appears to prefer moist forest types and riparian habitat. It has been recorded from dry sclerophyll forest, open woodland and coastal heathland, and despite its occurrence in inland riparian areas, it also ranges over dry ridges.

PARMA WALLABY (*Macropus parma*)

Habitat Preference

This species inhabits dense moist eucalypt forest and heath and often forages on the edges of forest clearings.

SQUIRREL GLIDER (*Petaurus norfolcensis*)

Habitat Preference

The Squirrel Glider inhabits dry sclerophyll forest and woodland nesting in small tree hollows. The presence of mature, hollow-bearing eucalypts is a critical characteristic of habitat occupied by Squirrel Gliders as they are utilised for nesting and breeding.

KOALA (*Phascolarctos cinereus*)

Habitat Preference

Koalas inhabit forested areas with acceptable Eucalypt food trees, also utilising some other non-Eucalypt species as a food source. Koalas inhabit both wet and dry eucalypt forests that contain a canopy cover of between 10 and 70% as well as suitable feed trees.

GREY-HEADED FLYING-FOX (*Pteropus poliocephalus*)

Habitat Preference

Grey-headed Flying-foxes roost in camps during the day, which may contain tens of thousands of individuals, and then disperse to surrounding areas to forage at night. This species inhabits a wide range of habitats including rainforest, mangroves, paperbark forests, wet and dry sclerophyll forests and urbanised and agricultural areas. Camps are commonly formed in gullies, typically not far from water and usually in vegetation with a dense canopy. Camps may also be formed in urban parkland areas.

EASTERN COASTAL FREE-TAILED BAT (*Micronomus norfolkensis*)

Habitat Preference

The Eastern Freetail-bat utilises dry eucalypt forest and woodland on the coastal side of the Great Dividing Range. They show a preference for open spaces in woodland or forest, and are more active in the upper slopes of forest areas rather than in riparian zones. They also forage over large waterways. This species roosts in hollow trees (usually in hollow spouts), under exfoliating bark and in various man-made structures.

EASTERN FALSE PIPISTRELLE (*Falsistrellus tasmaniensis*)

Habitat Preference

The Eastern False Pipistrelle inhabits wet sclerophyll forest, open forest, rainforest and coastal mallee. They generally prefer tall and wet forests where the trees are more than 20 metres high and the understorey is dense. This species predominantly roosts in hollow trunks of eucalypts, however have also been reported to roost in caves and old buildings.

LARGE BENT-WINGED BAT (*Miniopterus orianae oceanensis*)

Habitat Preference

Preferred habitats for this species include rainforest, wet and dry sclerophyll forest, open woodland, Melaleuca forests and open grassland. The Large Bentwing-bat forages high in forested areas from just above canopy height to many times canopy height. In more open areas such as grasslands, flight may be within a few metres of the ground. Large Bentwing-bats are cave dwellers, but will also roost in man-made structures such as road culverts and mines.

GREATER BROAD-NOSED BAT (*Scoteanax rueppellii*)

Habitat Preference

A wide variety of habitats are utilised by this species including moist gullies in mature coastal forest, rainforest, open woodland, Melaleuca swamp woodland, wet and dry sclerophyll forest, cleared areas with remnant trees and tree-lined creeks in open areas. The Greater Broad-nosed Bat forages about 5m from the edge of isolated trees, forest remnants or along forest crowns with a slow direct flight pattern. This species is known to roost in tree hollows, cracks and fissures in trunks and dead branches, under exfoliating bark, as well as in man-made structures including roofs of old buildings.

GIANT DRAGONFLY (*Petalura gigantea*)

Habitat Preference

Occurs in permanent swamps, bogs and streams with open vegetation in heaths open forests.

ASSESSMENT COMMENTS

The proposal is predominantly confined to the existing disturbed areas of the site and the majority of the suitable habitats present for this species within the site will be retained outside of the proposed development footprint. There are also larger areas of suitable habitats present offsite within the locality which will not be impacted by the proposal.

It is considered that the proposed action will not have an adverse effect on the life cycle of any of the above threatened species such that a viable local population is likely to be placed at risk of extinction.

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*

The proposed rezoning area does not contain any endangered or critically endangered ecological communities.

It is therefore considered that the proposed development is not likely to have an adverse effect on the extent of an ecological community such that its local occurrence is likely to be placed at risk of extinction.

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 rezoning area does not contain any endangered or critically endangered ecological communities.

It is therefore considered that the proposed action is not likely to substantially and adversely modify the composition of an ecological community such that its local occurrence 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*

It is considered that the future development following rezoning is not likely to remove or modify habitat for any threatened species or threatened ecological community. This matter will be assessed in more detail as part of the BDAR to be completed for any future development application.

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*

The site does not contain a connective linkage for threatened species and there are no endangered ecological communities present.

The habitats within the proposed rezoning area have been substantially disturbed by historical land use and management practices and are of low value for threatened species.

It is therefore considered that the proposal is not likely to result in an area of habitat becoming fragmented or isolated from other areas of habitat.

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*

The habitat proposed to be removed and modified is of a relatively small area, is highly disturbed and does not contain habitat for any endangered ecological communities.

It is considered that the habitats to be removed or modified are not likely to be of significant importance to the long-term survival of any threatened species, populations or ecological community within the locality.

d) *Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),*

The subject site has not been listed as a declared area of outstanding biodiversity value. The proposed development is not likely to have an adverse 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 proposal is likely to increase the impact of the key threatening processes 'Clearing of native vegetation'. It is considered that the proposal is unlikely to increase the operation of this key threatening process to the extent that a significant effect on threatened biodiversity will occur.

BC ACT (2016) TEST OF SIGNIFICANCE CONCLUSION

Based on the ecological surveys completed and assessments undertaken above it is concluded that the proposed development is not likely to have a significant effect on threatened species, ecological communities or their habitats as listed within the *BC Act* (2016).

Notwithstanding, the above matters and threatened species will be subjected to detailed surveys and assessments to be completed for the Biodiversity Development Assessment Report for any future development application.

APPENDIX 3

EPBC SIGNIFICANT IMPACT ASSESSMENT

The following assessment in accordance with the EP&BC Act Policy Statement 1.1 *Significant Impact Guidelines* (DoE 2013) is provided:

i. Are there any Matters of National Environmental Significance located in the area of the proposed action?

A search of the Protected Matters Search Tool Department of Agriculture, Water and Environment (DAWE) was conducted for EPBC Listed threatened and migratory species recorded within 5 km of the subject site. The search results are provided in Appendix 4.

Suitable habitat is present for the following nationally listed threatened or migratory species recorded from the Protected Matters Search (DAWE 2021) which occur or which may occur within 5 km of the subject site:

Threatened Species

- White-throated Needletail (*Hirundapus caudacutus*)
- Swift Parrot (*Lathamus discolor*)
- Spotted-tailed Quoll (*Dasyurus maculatus*)
- Greater Glider (*Petauroides volans*)
- Grey-headed Flying-fox (*Pteropus poliocephalus*)
- Large-eared Pied Bat (*Chalinolobus dwyeri*)

These species were not observed during site surveys completed.

Migratory Species

- Oriental Cuckoo (*Cucuculus optatus*)
- White-throated Needletail (*Hirundapus caudacutus*)
- Black-faced Monarch (*Monarcha melanopsis*)
- Satin Flycatcher (*Myiagra cyanoleuca*)
- Rufous Fantail (*Rhipidura rufifrons*)

These species were not observed during site surveys completed.

Endangered Ecological Communities

The vegetation within the site does not correspond to any nationally listed threatened ecological community.

ii. Considering the proposed action at its broadest scope, is there potential for impacts on Matters of National Environmental Significance?

The proposal will require the removal or modification of approximately 0.15 hectare of highly disturbed native vegetation and habitats.

These areas provide highly disturbed habitat for the nationally listed locally occurring threatened and migratory species identified as having suitable habitat present.

iii. Are there any proposed measures to avoid or reduce impacts on Matters of National Environmental Significance?

Impact avoidance and/or avoidance measures are documented in Section 1.5 of this Report.

iv. Are any impacts of the proposed action on Matters of National Environmental Significance likely to be significant impacts?

**Nationally Listed Threatened Species
Vulnerable Listed Threatened Species**

With regard to nationally listed vulnerable species with suitable habitat present, it is considered that the proposal is not likely to:

- lead to a long-term decrease in the size of an important population of a species;
- reduce the area of occupancy of an important population;

- fragment an existing important population into two or more populations;
- adversely affect habitat critical to the survival of a species;
- disrupt the breeding cycle of an important population;
- modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline;
- result in invasive species that are harmful to a threatened species becoming established in the threatened species' habitat;
- introduce disease that may cause a species to decline; or
- interfere with the recovery of the species.

The following reasons are provided:

- The subject site contains only a relatively small area of highly disturbed habitat for these species; and
- No locally occurring nationally listed vulnerable species were observed within the subject site during surveys;

Endangered and Critically Endangered Listed Threatened Species

With regard to nationally listed endangered and critically endangered species with suitable habitat present, it is considered that the proposal is not likely to:

- lead to a long-term decrease in the size of a population;
- reduce the area of occupancy of the species;
- fragment an existing population into two or more populations;
- adversely affect habitat critical to the survival of a species;
- disrupt the breeding cycle of a population;
- modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline;
- result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat;
- introduce disease that may cause the species to decline; or
- interfere with the recovery of the species.

The following reasons are provided:

- The subject site does not provide suitable habitat for locally occurring critically endangered and endangered threatened species.

Nationally Listed Migratory Species

With regard to nationally listed migratory species it is considered that the proposal is not likely to:

- Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species;
- Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species; or
- Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.

The following reasons are provided:

- The subject site contains only a relatively small area of highly disturbed habitat for these species which is not likely to form important habitat; and
- These species were not observed during surveys.

Nationally Listed Endangered and Critically Endangered Ecological Communities

It is considered that the proposal is not likely to have a significant impact on nationally listed endangered or critically endangered ecological communities as the proposal is not likely to:

- reduce the extent of an Ecological community;
- fragment or increase fragmentation of an Ecological community, for example by clearing vegetation for roads or transmission lines;
- adversely affect habitat critical to the survival of an Ecological community;
- modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an Ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns;

- cause a substantial change in the species composition of an occurrence of an Ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting;
- cause a substantial reduction in the quality or integrity of an occurrence of an Ecological community, including, but not limited to:
- assisting invasive species, that are harmful to the listed Ecological community, to become established, or
 - causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the Ecological community which kill or inhibit the growth of species in the Ecological community; or
 - Interfere with the recovery of an Ecological community.

The following reasons are provided:

- The vegetation within the subject site does not correspond to a nationally listed endangered or critically endangered Ecological community.

Conclusion

It is considered that a referral to DAWE under *the EPBC Act* (1999) is not required.

APPENDIX 4

**ENVIRONMENT PROTECTION & BIODIVERSITY CONSERVATION ACT (1999)
PROTECTED MATTERS SEARCH REPORT**



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 04-Dec-2021

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

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Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar)	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	94
Listed Migratory Species:	52

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	2
Commonwealth Heritage Places:	None
Listed Marine Species:	77
Whales and Other Cetaceans:	6
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	4
Regional Forest Agreements:	1
Nationally Important Wetlands:	None
EPBC Act Referrals:	2
Key Ecological Features (Marine):	None
Biologically Important Areas:	3
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community likely to occur within area	In buffer area only
Coastal Upland Swamps in the Sydney Basin Bioregion	Endangered	Community likely to occur within area	In feature area
River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria	Critically Endangered	Community likely to occur within area	In feature area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area	In buffer area only

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat may occur within area	In buffer area only
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Numerius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area	In buffer area only
Pterodroma neglecta neglecta Kermadec Petrel (western) [64450]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In buffer area only
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thinornis cucullatus cucullatus Eastern Hooded Plover, Eastern Hooded Plover [90381]	Vulnerable	Species or species habitat may occur within area	In feature area
FISH			
Epinephelus daemeli Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Macquaria australasica Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area	In feature area
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thunnus maccoyii Southern Bluefin Tuna [69402]	Conservation Dependent	Species or species habitat likely to occur within area	In buffer area only
FROG			
Heleioporus australiacus Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat known to occur within area	In feature area
Litoria aurea Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat may occur within area	In feature area
Litoria littlejohni Littlejohn's Tree Frog, Heath Frog [64733]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Mixophyes balbus Stuttering Frog, Southern Barred Frog (in Victoria) [1942]	Vulnerable	Species or species habitat likely to occur within area	In feature area
MAMMAL			
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In buffer area only
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Isoodon obesulus obesulus Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern) [68050]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area	In feature area
Potorous tridactylus tridactylus Long-nosed Potoroo (SE Mainland) [66645]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat known to occur within area	In feature area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
OTHER			
Dendronephthya australis Cauliflower Soft Coral [90325]	Endangered	Species or species habitat may occur within area	In buffer area only
PLANT			
Acacia bynoeana Bynoe's Wattle, Tiny Wattle [8575]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Allocasuarina glareicola [21932]	Endangered	Species or species habitat may occur within area	In buffer area only
Asterolasia elegans [56780]	Endangered	Species or species habitat likely to occur within area	In feature area
Astrotricha crassifolia Thick-leaf Star-hair [10352]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Baloskion longipes Dense Cord-rush [68511]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Caladenia tessellata Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat may occur within area	In feature area
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Cynanchum elegans White-flowered Wax Plant [12533]	Endangered	Species or species habitat likely to occur within area	In feature area
Darwinia biflora [14619]	Vulnerable	Species or species habitat may occur within area	In feature area
Eucalyptus camfieldii Camfield's Stringybark [15460]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Genoplesium baueri Yellow Gnat-orchid, Bauer's Midge Orchid, Brittle Midge Orchid [7528]	Endangered	Species or species habitat likely to occur within area	In feature area
Grevillea shiressii [19186]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Haloragis exalata subsp. exalata Wingless Raspwort, Square Raspwort [24636]	Vulnerable	Species or species habitat may occur within area	In feature area
Haloragodendron lucasii Hal [6480]	Endangered	Species or species habitat may occur within area	In buffer area only
Kunzea rupestris [8798]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Lasiopetalum joyceae [20311]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Leptospermum deanei Deane's Tea-tree [21777]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Melaleuca biconvexa Biconvex Paperbark [5583]	Vulnerable	Species or species habitat may occur within area	In feature area
Melaleuca deanei Deane's Melaleuca [5818]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Micromyrtus blakelyi [6870]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Persicaria elatior Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitat may occur within area	In feature area
Persoonia hirsuta Hairy Geebung, Hairy Persoonia [19006]	Endangered	Species or species habitat likely to occur within area	In feature area
Pimelea curviflora var. curviflora [4182]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pomaderris brunnea Rufous Pomaderris, Brown Pomaderris [16845]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Prostanthera junonis Somersby Mintbush [64960]	Endangered	Species or species habitat may occur within area	In feature area
Rhizanthella slateri Eastern Underground Orchid [11768]	Endangered	Species or species habitat may occur within area	In feature area
Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Rhodomyrtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Syzygium paniculatum Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry [20307]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area	In feature area
Zieria involucreta [3087]	Vulnerable	Species or species habitat may occur within area	In buffer area only
REPTILE			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<i>Eretmochelys imbricata</i> Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Hoplcephalus bungaroides Broad-headed Snake [1182]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only

SHARK

Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area	In buffer area only

Listed Migratory Species

[[Resource Information](#)]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area	In buffer area only
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Ardenna grisea Sooty Shearwater [82651]		Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<i>Calonectris leucomelas</i> Streaked Shearwater [1077]		Species or species habitat known to occur within area	In buffer area only
<i>Diomedea antipodensis</i> Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<i>Diomedea epomophora</i> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<i>Diomedea exulans</i> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<i>Diomedea sanfordi</i> Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<i>Fregata ariel</i> Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area	In buffer area only
<i>Fregata minor</i> Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area	In buffer area only
<i>Macronectes giganteus</i> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
<i>Macronectes halli</i> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<i>Sternula albifrons</i> Little Tern [82849]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Migratory Marine Species			
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In buffer area only
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
Dugong dugon Dugong [28]		Species or species habitat may occur within area	In buffer area only
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area	In buffer area only
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat may occur within area	In buffer area only
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat may occur within area	In buffer area only
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rhincodon typus Whale Shark [86680]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Migratory Terrestrial Species			
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Commonwealth Lands [\[Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
Communications, Information Technology and the Arts - Telstra Corporation Limited Commonwealth Land - Australian Telecommunications Commission [11742]	NSW	In feature area

Transport and Regional Services - Airservices Australia	State	Buffer Status
Commonwealth Land - Airservices Australia [11743]	NSW	In buffer area only

Listed Marine Species [\[Resource Information \]](#)

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area	In buffer area only
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Ardenna grisea as Puffinus griseus Sooty Shearwater [82651]		Species or species habitat likely to occur within area	In buffer area only
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area overfly marine area	In feature area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea antipodensis gibsoni as Diomedea gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area	In buffer area only
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area	In buffer area only
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]		Species or species habitat likely to occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Sternula albifrons as Sterna albifrons Little Tern [82849]		Species or species habitat may occur within area	In buffer area only
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat may occur within area overfly marine area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche bulleri platei as Thalassarche sp. nov. Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thinornis cucullatus cucullatus as Thinornis rubricollis rubricollis Eastern Hooded Plover, Eastern Hooded Plover [90381]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area	In feature area
Fish			
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area	In buffer area only
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area	In buffer area only
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area	In buffer area only
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area	In buffer area only
Hippocampus abdominalis Big-belly Seahorse, Eastern Potbelly Seahorse, New Zealand Potbelly Seahorse [66233]		Species or species habitat may occur within area	In buffer area only
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area	In buffer area only
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area	In buffer area only
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area	In buffer area only
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area	In buffer area only
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area	In buffer area only
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area	In buffer area only
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area	In buffer area only
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area	In buffer area only
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area	In buffer area only
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area	In buffer area only
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area	In buffer area only
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area	In buffer area only
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area	In buffer area only
Mammal			
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area	In buffer area only
Arctocephalus pusillus Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat may occur within area	In buffer area only
Dugong dugon Dugong [28]		Species or species habitat may occur within area	In buffer area only
Reptile			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Pelamis platurus Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area	In buffer area only

Whales and Other Cetaceans [Resource Information]

Current Scientific Name	Status	Type of Presence	Buffer Status
Mammal			
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In buffer area only
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area	In buffer area only
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area	In buffer area only
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area	In buffer area only
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area	In buffer area only

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State	Buffer Status
Brisbane Water	National Park	NSW	In buffer area only
Dharug	National Park	NSW	In buffer area only
Marramarra	National Park	NSW	In buffer area only
Popran	National Park	NSW	In buffer area only

Regional Forest Agreements [Resource Information]

Note that all areas with completed RFAs have been included.

RFA Name	State	Buffer Status
North East NSW RFA	New South Wales	In feature area

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Referral decision				
Breeding program for Grey Nurse Sharks	2007/3245	Referral Decision	Completed	In buffer area only

Biologically Important Areas

Scientific Name	Behaviour	Presence	Buffer Status
Dolphins			
Tursiops aduncus			
Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Breeding	Likely to occur	In buffer area only
Seabirds			
Ardenna pacifica			
Wedge-tailed Shearwater [84292]	Foraging	Likely to occur	In buffer area only
Sharks			

Scientific Name	Behaviour	Presence	Buffer Status
Carcharias taurus			
Grey Nurse Shark [64469]	Foraging	Known to occur	In buffer area only

Bioregional Assessments			
SubRegion	BioRegion	Website	Buffer Status
Sydney	Sydney Basin	BA website	In feature area

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [Office of Environment and Heritage, New South Wales](#)
- [Department of Environment and Primary Industries, Victoria](#)
- [Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [Department of Environment, Water and Natural Resources, South Australia](#)
- [Department of Land and Resource Management, Northern Territory](#)
- [Department of Environmental and Heritage Protection, Queensland](#)
- [Department of Parks and Wildlife, Western Australia](#)
- [Environment and Planning Directorate, ACT](#)
- [Birdlife Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [Museum Victoria](#)
- [Australian Museum](#)
- [South Australian Museum](#)
- [Queensland Museum](#)
- [Online Zoological Collections of Australian Museums](#)
- [Queensland Herbarium](#)
- [National Herbarium of NSW](#)
- [Royal Botanic Gardens and National Herbarium of Victoria](#)
- [Tasmanian Herbarium](#)
- [State Herbarium of South Australia](#)
- [Northern Territory Herbarium](#)
- [Western Australian Herbarium](#)
- [Australian National Herbarium, Canberra](#)
- [University of New England](#)
- [Ocean Biogeographic Information System](#)
- [Australian Government, Department of Defence Forestry Corporation, NSW](#)
- [Geoscience Australia](#)
- [CSIRO](#)
- [Australian Tropical Herbarium, Cairns](#)
- [eBird Australia](#)
- [Australian Government – Australian Antarctic Data Centre](#)
- [Museum and Art Gallery of the Northern Territory](#)
- [Australian Government National Environmental Science Program](#)
- [Australian Institute of Marine Science](#)
- [Reef Life Survey Australia](#)
- [American Museum of Natural History](#)
- [Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

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APPENDIX 5

SEPP (KOALA HABITAT PROTECTION) 2021 ASSESSMENT



ASSESSMENT REPORT

**STATE ENVIRONMENTAL PLANNING POLICY
(KOALA HABITAT PROTECTION) 2021**

**PROPOSED REZONING
PACIFIC HIGHWAY
MOUNT WHITE**

**NOVEMBER 2021
REF: 21090/K**

ASSESSMENT REPORT

STATE ENVIRONMENTAL PLANNING POLICY

(KOALA HABITAT PROTECTION) 2021

PROPOSED REZONING

PACIFIC HIGHWAY

MOUNT WHITE

NOVEMBER 2021

Conacher Consulting Pty Ltd

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PREFACE

This Assessment Report has been prepared by Conacher Consulting for a proposed rezoning at Ashbrookes road and Pacific Highway, Mount White.

This Report provides details of the flora characteristics of the site in relation to the application of State Environmental Planning Policy (Koala Habitat Protection) 2021.

Site Assessment and Report completed by

PHILLIP ANTHONY CONACHER B.Sc.(Hons), Dip.Urb Reg Planning, M.Nat.Res.
NPWS Scientific Licence Number: SL100361
Project Director

1. INTRODUCTION

This Report is an assessment of the proposal in relation to State Environmental Planning Policy (Koala Habitat Protection) 2021, (SEPP (KHP) 2021). The subject site has an area of more than 1 hectare in size and is located in a local government area listed in Schedule 1 of the SEPP, therefore this SEPP applies. Details of the subject site are provided in Table 1.

TABLE 1.1 SITE DETAILS	
Location	231 Pacific Highway Mount White
Allotment Area	3.3 ha
Local Government Area	Central Coast Council
Proposed Development	Hotel and Conference Centre

For the purposes of this Report the following definitions, as provided in SEPP (Koala Habitat Protection) 2021, have been used.

Highly suitable Koala habitat – Highly suitable koala habitat is where 15% or greater of the total number of trees within any Plant Community Type (PCT) are the regionally relevant species of those listed in Schedule 2 of the SEPP (NSW Government 2021).

Core koala habitat –

(a) an area of land which has been assessed by a suitably qualified and experienced person as being highly suitable koala habitat and where koalas are recorded as being present at the time of assessment of the land as highly suitable koala habitat, or

(b) an area of land which has been assessed by a suitably qualified and experienced person as being highly suitable koala habitat and where koalas have been recorded as being present in the previous 18 years.

Suitably qualified and experienced person means a person who has:

- a) a tertiary qualification in ecology, environmental management, forestry or other equivalent qualifications, and*
- b) experience in flora and fauna identification, survey and management, including experience in conducting koala surveys.*

Koala Use Tree Species

Koala Use Tree Species

Those trees listed in Schedule 2 of SEPP (KHP) 2021 for the Central Coast Koala Management Area, are provided in Table 2.

TABLE 2 KOALA USE TREE SPECIES Central Coast Koala Management Area – Schedule 2 Koala use trees species	
Scientific name	Common name(s)
<i>Allocasuarina littoralis</i>	Black She-oak
<i>Allocasuarina torulosa</i>	Forest Oak
<i>Angophora bakeri</i>	Narrow-leaved Apple
<i>Angophora costata</i>	Smooth-barked Apple
<i>Angophora floribunda</i>	Rough-barked Apple
<i>Casuarina glauca</i>	Swamp Oak
<i>Corymbia eximia</i>	Yellow Bloodwood
<i>Corymbia gummifera</i>	Red Bloodwood
<i>Corymbia maculata</i>	Spotted Gum

<i>Eucalyptus acmenoides</i>	White Mahogany
<i>Eucalyptus agglomerata</i>	Blue-leaved Stringybark
<i>Eucalyptus albens</i>	White Box
<i>Eucalyptus amplifolia</i>	Cabbage Gum
<i>Eucalyptus beyeriana</i>	Beyer's Ironbark
<i>Eucalyptus blakelyi</i>	Blakely's Red Gum
<i>Eucalyptus bosistoana</i>	Coast Grey Box
<i>Eucalyptus botryoides</i>	Bangalay
<i>Eucalyptus camaldulensis</i>	River Red Gum
<i>Eucalyptus camfieldii</i>	Camfield's Stringybark
<i>Eucalyptus canaliculata</i>	Large-fruited Grey Gum
<i>Eucalyptus capitellata</i>	Brown Stringybark
<i>Eucalyptus carnea</i>	Thick-leaved Mahogany
<i>Eucalyptus consideriana</i>	Yertchuk
<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark
<i>Eucalyptus cypellocarpa</i>	Monkey Gum
<i>Eucalyptus deanei</i>	Mountain Blue Gum
<i>Eucalyptus eugenioides</i>	Narrow-leaved Stringybark
<i>Eucalyptus fibrosa</i>	Broad-leaved Red Ironbark
<i>Eucalyptus glaucina</i>	Slaty Red Gum
<i>Eucalyptus globoidea</i>	White Stringybark
<i>Eucalyptus grandis</i>	Flooded Gum
<i>Eucalyptus haemastoma</i>	Broad-leaved Scribbly Gum
<i>Eucalyptus imitans</i>	<i>Eucalyptus imitans</i>
<i>Eucalyptus largeana</i>	Craven Grey Box
<i>Eucalyptus longifolia</i>	Woollybutt
<i>Eucalyptus macrorhyncha</i>	Red Stringybark
<i>Eucalyptus melliodora</i>	Yellow Box
<i>Eucalyptus michaeliana</i>	Brittle Gum
<i>Eucalyptus microcorys</i>	Tallowwood
<i>Eucalyptus moluccana</i>	Grey Box
<i>Eucalyptus oblonga</i>	Stringybark
<i>Eucalyptus paniculata</i>	Grey Ironbark
<i>Eucalyptus parramattensis</i>	Parramatta Red Gum
<i>Eucalyptus pilularis</i>	Blackbutt
<i>Eucalyptus piperita</i>	Sydney Peppermint
<i>Eucalyptus propinqua</i>	Small-fruited Grey Gum
<i>Eucalyptus punctata</i>	Grey Gum
<i>Eucalyptus quadrangulata</i>	White-topped Box
<i>Eucalyptus racemosa</i>	Narrow-leaved Scribbly Gum
<i>Eucalyptus resinifera</i>	Red Mahogany
<i>Eucalyptus robusta</i>	Swamp Mahogany
<i>Eucalyptus saligna</i>	Sydney Blue Gum
<i>Eucalyptus scias</i>	Large-fruited Red Mahogany
<i>Eucalyptus sclerophylla</i>	Hard-leaved Scribbly Gum
<i>Eucalyptus siderophloia</i>	Grey Ironbark
<i>Eucalyptus sideroxylon</i>	Mugga Ironbark
<i>Eucalyptus sieberi</i>	Silvertop Ash
<i>Eucalyptus signata</i>	Scribbly Gum
<i>Eucalyptus sparsifolia</i>	Narrow-leaved Stringybark
<i>Eucalyptus squamosa</i>	Scaly Bark
<i>Eucalyptus tereticornis</i>	Forest Red Gum
<i>Eucalyptus umbra</i>	Bastard White Mahogany
<i>Eucalyptus viminalis</i>	Ribbon Gum
<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark
<i>Syncarpia glomulifera</i>	Turpentine
Note - Tree species present on site (highlighted).	

2. SITE VEGETATION

The vegetation present on the site consists of:

- Cleared land with occasional remnant native trees,
- Areas of extensive lawns, landscaped gardens,
- Planted ornamental exotic trees including jacaranda, conifers, citrus, olive and mulberry trees,
- Areas of open forest and eucalypt dominated woodland.

A full description of the vegetation present and plant community types is included in the Biodiversity Development Assessment.

An aerial photograph of the site and adjoining locality is provided in the Ecological Assessment Report. Species of koala use trees present are identified in Table 2.

3. SEPP (KOALA HABITAT PROTECTION) 2021 ASSESSMENT

The subject site was assessed for activity by koalas using the following methods:

- i. A search of the BioNet Atlas of NSW Wildlife (NSW OEH 2021) was undertaken to identify records of for the site or local area (within 2.5km);
- ii. A general walkover inspection was completed with any species of koala use trees being inspected for signs of koala usage. Trees were inspected, identified and assessed for presence of koalas and koala use such as scratch and claw marks on the trunk and scats around the base of trees;
- iii. Koalas were also searched for during daytime surveys;
- iv. Identification and assessment of the tree species listed as Koala use trees in Schedule 2 of State Environmental Planning Policy (Koala Habitat Protection) 2021, was undertaken. Koala use tree species observed on the site are identified in Table 2.

Presence of Highly Suitable Koala Habitat

The koala use tree species present on the site exceed more than 15% of the total native tree species present. Therefore on this basis the site is classified as containing highly suitable koala habitat.

Koala Records

There are not on-site or local area records for Koalas.

Determination of Core Koala Habitat

The subject site has been determined as not containing core koala habitat for the following reasons:

1. No field evidence of prior koala use such as:
 - koala scratch marks on tree trunks
 - scats under the tree canopy
 - no koala sightings during visual surveys
2. No previous records of koalas within the site or within 2.5 of the site.

Therefore, the site does not meet the criteria of SEPP (KHP) 2021 (Clause 4(i)) for core koala habitat.

Potential Impacts

Clause ii of SEPP (KHP) 2021 identified the following three levels of impact on Koalas or Koala Habitat:

- i) No impact
- ii) Low impact
- iii) Higher level of impact

Clause ii(3) identifies that..."if Council is satisfied that the development is likely to have low or no impact on Kolas or Koala habitat, the Council may grant consent to the development application.

The potential impact of the proposed development on a population of koala, if a population is present in the area, is considered a low impact due to:

- i) Small scale traffic generation
- ii) Extent of trees to be retained within the site and extent of forest areas in the locality.
- iii) Type of development proposed
- iv) Absence of evidence of Koalas using the trees on the site
- v) Absence of records for the Koala on the site or in the locality.

4. CONCLUSIONS

The site does not contain core koala habitat as defined by the SEPP. No koalas were observed during the koala survey and no evidence of koala habitation, such as scats, claw and scratch marks, were located on the site. Therefore it is considered that:

- i) The subject site does not form core koala habitat as defined by SEPP (Koala Habitat Protection) 2021.
- ii) No impact on Koalas or their habitat will result from the proposed development.

It is concluded that a more detailed Koala Assessment Report under the provisions of Clause ii(6) of SEPP (KHP) 2021 is not required for this proposed development.

5. REFERENCES

NSW Department of Planning, Industry and Environment 2021(a), NSW Bionet, [Online] Available from: <http://www.bionet.nsw.gov.au/>

NSW Department of Planning, Industry and Environment 2021(b), Koala SEPP 2021 Fact Sheet – Development Applications.

SEPP (KHP) 2021 State Environmental Planning Policy (Koala Habitat Protection) 2021 NSW Government