



Biodiversity Assessment Report

Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2
DP753208), 1566 Chichester Road, Chichester NSW

Prepared for

S Hicks & S Cutler C/- Derive A&D

Final V4 / September 2025

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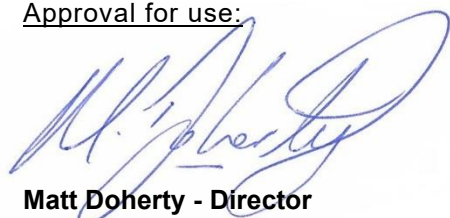
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DOCUMENT STATUS

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Matt Doherty - Director

26 September 2025

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EXECUTIVE SUMMARY

MJD Environmental has been engaged by S Hicks & S Cutler c/- Derive A&D to prepare a Biodiversity Assessment Report to accompany a Development Application (DA) to be submitted to Dungog Shire Council for the erection of a residential dwelling at Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2 DP753208), 1566 Chichester Road, Chichester, NSW. Hereafter referred to as the “study area”.

The objective of the assessment was also to examine the likelihood of the proposal having a significant effect on any threatened species, populations or ecological communities listed under the *NSW Biodiversity Conservation Act 2016* (BC Act). This assessment recognises the relevant requirements of the *EP&A Act 1979* as amended by the *NSW Environmental Planning and Assessment Amendment Act 1997*. Preliminary assessment was also made with regard to those threatened entities listed under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

An appraisal of the subject land to determine the appropriate assessment pathway under the BC Act determined the proposal on site does not trigger a Biodiversity Offset Scheme (BOS) entry threshold and on this basis an assessment of significance is required including application of the 5-part test.

The ecological field assessment found the maximum associated impacts to comprise of:

- 0.27 ha of PCT 3091: *Lower North Waterhousea-Water Gum Rainforest*
- 1.41 ha of exotic pasture

Communities

There are no Threatened Ecological Communities (TECs) associated with the delineated PCT on site.

Flora

No threatened flora species listed under the BC Act and EPBC Act were recorded within the subject land.

Fauna

No threatened flora species listed under the BC Act and EPBC Act were recorded within the subject land. No hollow bearing trees were recorded within the subject land.

An ecological impact assessment test of significance considered whether the removal of native vegetation on site, of up to 0.27 ha, would constitute a significant impact on known threatened species, populations, and ecological communities from the locality such that a local extinction may occur (5 Part Test).

The assessment concluded that the proposal was unlikely to have a significant impact on the threatened entities assessed.

Recommendations have been provided to mitigate potential impacts arising from the construction phase of the proposal.

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GLOSSARY OF TERMS AND ABBREVIATIONS

Term/ Abbreviation	Meaning
APZ	Asset Protection Zone
BC Act	Biodiversity Conservation Act 2016
BOS	Biodiversity Offset Scheme
Council	Dungog Shire Council
DoEE	Commonwealth Department of the Environment and Energy
DPIE	NSW Department of Planning, Industry and Environment
DPI Water	NSW Department of Primary Industries – Water
EEC	Endangered Ecological Community
EP&A Act	NSW Environmental Planning and Assessment Act 1979
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
ha	Hectare
HBT	Hollow-bearing Tree
LGA	Local Government Area
OEH	NSW Office of Environment and Heritage <i>[former]</i>
PCT	Plant Community Type
TEC	Threatened Ecological Community

1 Introduction

MJD Environmental has been engaged by S Hicks & S Cutler c/- Derive A&D to prepare a Biodiversity Assessment Report to accompany a Development Application (DA) to be submitted to Dungog Shire Council for the erection of a residential dwelling and garage at Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2 DP753208), 1566 Chichester Road, Chichester, NSW.

1.1 Description of Proposal

The proposed development within the subject land includes the construction of a single dwelling, access road and associated infrastructure at Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2 DP753208). The proposal will require the removal of vegetation comprised of predominately exotic pasture and the selective removal of canopy species to achieve Asset Protection Zone standards

Refer to **Appendix A** for plans of the proposal

1.2 Aims & Scope

The assessment aims to examine the likelihood of the proposed building construction and upgrades having a significant effect on any threatened species, populations or ecological communities listed under the *NSW Biodiversity Conservation Act 2016* (BC Act). This assessment recognises the relevant requirements of the EP&A Act 1979 as amended by the *NSW Environmental Planning and Assessment Amendment Act 1997*. Preliminary assessment was also undertaken having regard to those threatened entities listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The scope of this flora and fauna assessment is to:

- Determine the appropriate assessment pathway under the NSW BC Act
- Identify vascular plant species occurring within the site, including any threatened species listed under the BC Act and/or EPBC Act;
- Identify and map the extent of vegetation communities within the site, including any Threatened Ecological Communities (TEC) listed under the BC Act or EPBC Act;
- Identify any fauna species including threatened and migratory species, populations or their habitats, occurring within the site and are known or likely to occur within 10 km of the site (locality);
- Assess the potential of the proposed development to have a significant impact on any threatened species, populations or ecological communities (or their habitats) identified from the site;
- Describe measures to be implemented to avoid, minimise, manage or monitor potential impacts of the proposal; and
- In addition to the survey work conducted within the site, consideration for the broader habitat within the subject land has been accounted for when assessing threatened entities, including an assessment of potential direct and indirect impacts the proposal may have of those entities.

1.3 Site Particulars

Locality	The study area is located in Chichester, NSW
Land Title	Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2 DP753208)
LGA	Dungog Shire Council
Area	study area (Lot) – 189 ha subject land (Impact Area) – 1.68 ha
Minimum Lot Size	60 ha
Zoning	RU1: Primary Production
Boundaries	The study area is bound by Chichester Road to the south and a mix of forest vegetation and open paddocks to the west, north and east.
Current Land Use	An existing residential dwelling is located southwest of the lot approximately 44m from Chichester Road. The land is currently being used to graze cattle with a portion of the lot containing agricultural fencing. The lot is predominately vacant and forested.
Topography	The study area is located on the outskirts of Barrington Tops National Park and has a peak elevation of 350 m ASL with the lowest point being 220 m ASL.

1.4 Qualifications & Licencing

Qualifications

Field investigations and reporting were conducted by Stephanie Sheehy (B. Env. Sc. & Mgmt.) of MJD Environmental (Aust) Pty Ltd.

Licencing

Research was conducted under the following licences:

- NSW National Parks and Wildlife Service Scientific Investigation Licence SL101684 (Valid 31 March 2026).
- Animal Research Authority Project Approval Period (Project No: 16/170) issued by NSW Government – Regional NSW on recommendation of Animal Care and Ethics Committee (Valid 8 February 2022 to 8 February 2027).
- Animal Research Authority Approval Period (Project No: 16/170) issued by NSW Department of Primary Industries (Valid 8 February 2025 to 8 February 2026).
- Animal Research Establishment Accreditation (No. 85120) issued by NSW Department of Primary Industries (Valid 28 February 2025 to 27 February 2028).

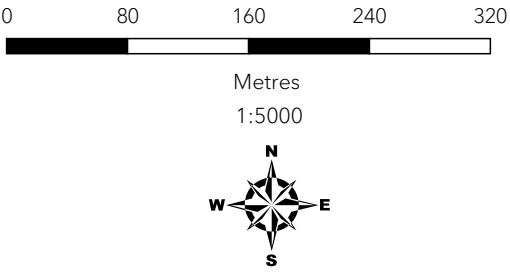


1566 CHICHESTER ROAD, CHICHESTER

FIGURE 1: SITE LOCATION

- Legend**

 - Subject Land
 - Proposed Building Footprint
 - Proposed Garage
 - Proposed Driveway
- Lot Boundary
 - Lot 1 / DP1321283
(Consolidation of Lots 2, 23, & 82 DP753208)



Aerial: Nearmap (2023) | Data: MJD Environmental, NSW Spatial Services (2025) | Datum/Projection: GDA2020 / MGA zone 56 | Date: 2025-08-25 | Version: 2 | Z:\24084 - 1566 Chichester Road, Chichester\QGZ\24084_Ecology_GDA2020z56_20250516.qgz | This plan should not be relied upon for critical design dimensions.

2 Biodiversity Assessment Pathway

The requirement to undertake a biodiversity assessment is a prerequisite for all Part 4 local developments (EPA Act), to assess potential development impacts on threatened species and threatened ecological communities.

The NSW Biodiversity reforms have delivered a new assessment pathway based on the understanding of the amount of clearing proposed, how the proposal will avoid and minimise impacts, and if required provide a strategy to offset the impacts in the form of biodiversity credits.

The following section provides guidance on the biodiversity assessment pathway selected for this project to reflect the amount of clearing associated with the proposal.

2.1 Assessment Methodology

The current biodiversity assessment pathway for proposed development activities requires determining the extent of native vegetation clearing with consideration of the minimum lot size (as outlined in the Local Environment Policy (LEP) for the local government area (LGA) and whether the proposal will have a significant impact on threatened species and/or threatened ecological communities.

To determine the biodiversity assessment pathway required for the development activity, the Biodiversity Offset Scheme (BOS) threshold is used to determine whether the Biodiversity Assessment Method (BAM) is applied to assess the impacts of the proposal and calculate required biodiversity credits to ensure no net loss of biodiversity occurs in the locality.

The *Biodiversity Conservation Regulation 2017* outlines when clearing of native vegetation for a development exceeds the threshold, it will trigger entry into the Biodiversity Offset Scheme and the use of the BAM method.

Thresholds for BOS entry are:

- Whether the amount of native vegetation being cleared exceeds a threshold area set out in section 7.2 (4);
- Whether the impacts occur on an area mapped on the Biodiversity Values map published by the minister for the Environment; and/or
- The proposal will have a significant impact.

In the cases where the extent of native vegetation clearing does not exceed the BOS entry threshold and the site is not mapped on the Biodiversity Values Map, a Test of Significance (ToS) is required to be carried in accordance with Section 7.3 of the *Biodiversity Conservation Act 2016*.

The subject land is not mapped as an area of high biodiversity value on the NSW OEH Biodiversity Values Map (BVM).

Using the Table in Clause 7.2 (4) of the *Biodiversity Conservation Regulation 2017*, the proposed development:

- Has a minimum lot size of 40 ha to less than 1000 ha (40 ha); and
- The development proposal does not exceed the 1 ha threshold of native vegetation clearing, and therefore does not exceed this BOS threshold.

Therefore, the proposal does not trigger automatic entry into the BOS and a Test of Significance Assessment is the applicable assessment pathway.

3 Methodology

This biodiversity assessment has been prepared in accordance with Section 7.3 of the *Biodiversity Conservation Act 2016*. This ecological assessment has been prepared in accordance with the Dungog Development Control Plan (DCP).

The techniques employed to inform this impact assessment are described in further detail below.

3.1 Desktop Assessment

A review of ecological information was undertaken to provide context and understanding of ecological values occurring on the site. Information reviewed included:

Online database searches involving a 10-km buffer around the subject land were undertaken from the:

- NSW BioNet Atlas (Accessed 22nd April 2025); and
- EPBC Act Protected Matters Search (Accessed 22nd April 2025).

The searches provided a current list of potentially occurring threatened flora and fauna and migratory species under both the BC Act and EPBC Act.

3.2 Field Survey

Field survey was undertaken on the 7th of May by an MJD Environmental Ecologist. The prevailing weather conditions during the survey are presented in **Table 1** below.

Table 1 Prevailing Weather Conditions

Date	Min Temp (°C)	Max Temp (°C)	Rain (mm)	Wind (km/h)	Sunrise-Sunset
7 th May 2025	11.9	13.5	0.6	SW 4 km/hr	0629-1710

Sources: <http://www.bom.gov.au/climate/dwo/IDCJDW2078.latest.shtml>
<https://sunrisesunset.willyweather.com.au/nsw/hunter/chichester.html>

Vegetation & Significant Flora Survey

Desktop analysis of regional mapping of the subject land and its surrounds was informed by large-scale vegetation mapping projects and aerial photography, including:

- Preliminary consultation of the NSW State Vegetation Type Map (DPIE 2022); and
- GIS analysis including - Aerial Photograph Interpretation (API) and consultation of topographic map (Scale 1:25,000) layers for the site.

Vegetation communities were delineated within the subject land based on the above-mentioned desktop information coupled with ground truthing of vegetation through a species inventory list. Surveys were recorded on the subject land using Avenza Maps (Version 4.1.1) with a handheld GPS.

The subject land was traversed by an MJD ecologist on the 7 May 2025 (**Figure 2**) for the purposes of producing a description of native vegetation present and to assess the potential for threatened flora species to occur and identify the presence of threatened flora within the subject land.

Threatened flora assessment was informed by a random meander over the subject land during the initial site assessment. Several threatened flora species were identified likely to occur under the Likelihood of Occurrence and Impact Assessment (Refer to **Table 3**). None were recorded during

survey. Based on the vegetation survey carried out by MJD Environmental, native vegetation is present along the outskirts of the subject land, though, much of the site has previously been cleared and is currently used for cattle grazing. As such, ground cover within cleared areas is comprised of predominately exotic pasture/weed species. A full compilation of flora species recorded during the site assessment is provided as **Appendix B**.

3.2.1 Fauna

A desktop assessment of the potential use of the subject land by threatened fauna species (as listed under the BC Act and EPBC Act) identified from the vicinity was undertaken prior to the commencement of field surveys (refer to **section 3.1**).

Fauna habitat values were assessed during the site assessment. The majority of the subject land has been previously cleared containing exotic pasture/weed species. The vegetation within the remainder of the subject land is primarily represented by native canopy, midstory and understory species.

In accordance with Chapter 3 Koala Habitat Protection 2020 (*SEPP (Biodiversity and Conservation) 2021*), the land does not represent potential koala habitat. Tree types listed in Schedule 1 do not constitute at least 15% of the total number of trees in the upper or lower strata of the tree component. No other targeted threatened fauna surveys were conducted on the subject land.

Secondary Indications and Incidental Observations

Opportunistic sightings of secondary indications (scratches, scats, diggings, tracks etc.) of resident fauna were noted. Such indicators included:

- Distinctive scats left by mammals;
- Scratch marks made by various types of arboreal animals;
- Nests made by various guilds of birds;
- Feeding scars on Eucalyptus trees made by Gliders;
- Whitewash, regurgitation pellets and prey remains from Owls;
- Recognition of bird and frog calls;
- Skeletal material of vertebrate fauna; and
- Searches for indirect evidence of fauna (such as scats, nests, burrows, hollows, tracks, and diggings).

3.2.2 Habitat Survey

An assessment of the relative habitat value present within the site was undertaken. This assessment focused primarily on the identification of specific habitat types and resources in the site favoured by known threatened species from the locality. The assessment also considered the potential value of the site (and surrounds) for all major guilds of native flora and fauna. Habitat assessment included:

- presence, size and types of tree hollows;
- presence of rocks, logs, caves, rocky outcrops, leaf litter, overhangs and crevices;
- vegetation complexity, structure and quality;
- presence of freshwater or estuarine aquatic habitats, noting permanency;
- connectivity to adjacent areas of habitat;
- extent and types of disturbance;
- presence of foraging opportunities such as flowering eucalypts, fruits, seeds or other nectar bearing native plants; and

- presence and abundance of various potential prey species

Habitat assessment was based on the specific habitat requirements of each threatened fauna species in regard to home range, feeding, roosting, breeding, movement patterns and corridor requirements. Consideration was given to contributing factors including topography, soil, light and hydrology for threatened flora and assemblages.

3.3 Limitations

Limitations associated with this Biodiversity Assessment report are presented herewith. The limitations have been taken into account specifically in relation to threatened species assessments, results and conclusions.

In these instances, a precautionary approach has been adopted; whereby 'assumed presence' of known and expected threatened species, populations and ecological communities has been made where relevant and scientifically justified to ensure a holistic assessment.

Seasonality & Conditions

Threatened flora species should be surveyed within their respective flowering periods to ensure accurate identification.

The flowering and fruiting plant species that attract some nomadic or migratory threatened species, often fruit or flower in cycles spanning a number of years. Furthermore, these resources might only be accessed in some areas during years when resources more accessible to threatened species fail. As a consequence, threatened species may be absent from some areas where potential habitat exists for extended periods and this might be the case for nomadic and opportunistic species.

Data Availability & Accuracy

The collated threatened flora and fauna species records provided by Bionet Species Sightings Search of NSW Wildlife are known to vary in accuracy and reliability. This is usually due to the reliability of information provided to the National Parks and Wildlife Service (NPWS) for collation and/or the need to protect specific threatened species locations. During the review of threatened species records sourced from OEH BioNet Atlas, consideration has been given to the date and accuracy of each threatened species record in addition to an assessment of habitat suitability within the site.

Similarly, EPBC Protected Matters Searches provide a list of threatened species and communities that have been recorded within 10 km of the subject land, or which have suitable habitat within the wider area, and are subject to the same inherent inaccuracy issues as the State derived databases.

In order to address these limitations in respect to data accuracy, threatened species records have only been used to provide a guide to the types of species that occur within the locality of the subject land. Consequently, habitat assessment and the results of surveys conducted within the site have been used to assess the likelihood of occurrence of threatened species, populations and ecological communities to occur therein.

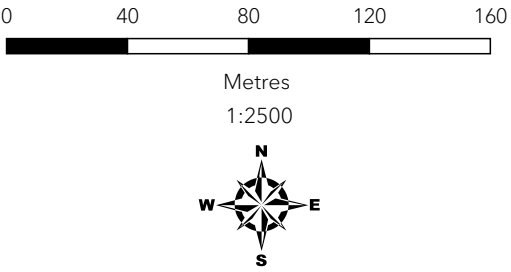


1566 CHICHESTER ROAD, CHICHESTER

FIGURE 2: SURVEY EFFORT

- Legend**

 - Subject Land
 - Proposed Building Footprint
 - Proposed Garage
 - Proposed Driveway
- Survey Effort
 - Lot Boundary
 - Lot 1 / DP1321283
(Consolidation of Lots 2, 23, & 82 DP753208)



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4 Results

4.1 Desktop Assessment

Using the NSW Wildlife Atlas database BioNet, and EPBC Act Protected Matters Search (22nd April 2025), a list of potentially occurring threatened species, populations and ecological communities from the locality (10 km radius) has been compiled (**Table 2**). A total of 89 entities have been recorded of which 15 threatened flora species, 34 fauna species, 12 ecological communities, 8 migratory species and 20 marine species have either been detected or have the potential to occur within the locality.

Note: Included in **Table 2** below are the numbers of records (not the number of individuals) for each species within the locality taken from the NSW Bionet Species Sightings Search database. The EPBC Act Protected Matters Search does not provide number of records within the locality. Therefore, the record count related only to those BC Act listed species that were detected within 10 km of the site. It is also noted that due to the terrestrial nature of the site, marine species were not considered under this ecological assessment and have not been included in the list.

Table 2 Threatened Flora & Fauna Database Search Results.

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Notes & Source
Threatened Ecological Communities					
<i>Carex Sedgeland of the New England Tableland, Nandewar, Brigalow Belt South and NSW North Coast Bioregions</i>		E	-	P	Community known to occur within area
<i>Central Hunter Valley eucalypt forest and woodland</i>		-	E	M	Community may occur within area
<i>Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland</i>		-	E	K	Community known to occur within area
<i>Lower Hunter Valley Dry Rainforest in the Sydney Basin and NSW North Coast Bioregions</i>		V	-	K	Community known to occur within area
<i>Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions</i>		E	-	K	Community known to occur within area
<i>Lower Hunter Valley Dry Rainforest in the Sydney Basin and NSW North Coast Bioregions</i>		-	V	K	Community known to occur within area
<i>Lowland Rainforest of Subtropical Australia</i>		-	CE	K	Community known to occur within area
<i>Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion</i>		E	-	K	Community known to occur within area
<i>Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions</i>		-	E	K	Community known to occur within area
<i>Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions</i>		-	E	K	Community known to occur within area
Flora					
<i>Arthraxon hispidus</i>	Hairy Joint grass	V	V	-	Species or species habitat may occur within area ¹
<i>Cryptostylis hunteriana</i>	Leafless Tongue Orchid	V	V	-	Species or species habitat may occur within area ¹

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<i>Cynanchum elegans</i>	White-flowered Wax Plant	E	E	2	Recorded within 10km of the Site ²
<i>Eucalyptus glaucina</i>	Slaty Red Gum	V	V		Species or species habitat may occur within area ¹
<i>Euphrasia arguta</i>	-	CE	CE	-	Species or species habitat may occur within area ¹
<i>Haloragis exalata</i> subsp. <i>Velutina</i>	Tall Velvet Sea Berry	V	V	-	Species or species habitat may occur within area ¹
<i>Persicaria elatior</i>	Tall Knotweed	V	V	-	Species or species habitat may occur within area ¹
<i>Pomaderris brunnea</i>	Brown Pomaderris	E	V	-	Species or species habitat may occur within area ¹
<i>Rhizanthella slateri</i>	Eastern Underground Orchid	E	-	-	Species or species habitat may occur within area ¹
<i>Rhodamnia rubescens</i>	Scrub Turpentine, Brown Malletwood	CE	CE	3	Recorded within 10km of the Site ²
<i>Rhodomyrtus psidioides</i>	Native Guava	CE	CE	1	Recorded within 10km of the Site ²
<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	V	V	-	Species or species habitat may occur within area ¹
<i>Tasmannia glaucifolia</i>	Fragrant Pepperbush	V	V	-	Species or species habitat may occur within area ¹
<i>Thesium australe</i>	Austral Toadflax	V	V	-	Species or species habitat may occur within area ¹
<i>Tylophora woollsii</i> benth.	Cryptic Forest Twiner	E	E	-	Species or species habitat may occur within area ¹
Birds					
<i>Anthochaera phrygia</i>	Regent Honeyeater	CE	CE	-	Species or species habitat may occur within area ¹
<i>Atrichornis rufescens</i>	Rufous Scrub-bird	V	E	-	Species or species habitat may occur within area ¹
<i>Botaurus poiciloptilus</i>	Australasian Bittern	E	E	-	Species or species habitat may occur within area ¹
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	E	E	-	Species or species habitat may occur within area ¹
<i>Calyptorhynchus lathami lathami</i>	South-eastern Glossy Black-Cockatoo	V	V	1	Recorded within 10km of the Site ²
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (south-eastern)	V	V	-	Species or species habitat may occur within area ¹
<i>Erythrorhynchus radiatus</i>	Red Goshawk	E	E	-	Species or species habitat may occur within area ¹
<i>Falco hypoleucos</i>	Grey Falcon	V	V	-	Species or species habitat may occur within area ¹
<i>Grantiella picta</i>	Painted Honeyeater	V	V	-	Species or species habitat may occur within area ¹
<i>Lathamus discolor</i>	Swift Parrot	E	CE	-	Species or species habitat may occur within area ¹
<i>Lophoictinia isura</i>	Square-tailed Kite	V	-	-	Species or species habitat may occur within area ¹
<i>Melanodryas cucullata cucullata</i>	South-eastern Hooded Robin	E	E	-	Species or species habitat may occur within area ¹
<i>Neophema chrysostoma</i>	Blue-winged Parrot	V	V	-	Species or species habitat may occur within area ¹

<i>Rostratula australis</i>	Australian Painted Snipe	E	E	-	Species or species habitat may occur within area ¹
<i>Stagonopleura guttata</i>	Diamond Firetail	V	V	-	Species or species habitat may occur within area ¹
Mammals					
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	E	E	-	Species or species habitat may occur within area ¹
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V	E	-	Species or species habitat may occur within area ¹
<i>Mastacomys fuscus mordicus</i>	Broad-toothed Rat	E	E	-	Species or species habitat may occur within area ¹
<i>Notamacropus parma</i>	Parma Wallaby	V	V	-	Species or species habitat may occur within area ¹
<i>Petauroides volans</i>	Greater Glider	E	E	-	Species or species habitat may occur within area ¹
<i>Petaurus australis</i>	Yellow-bellied glider	V	V	-	Species or species habitat may occur within area ¹
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	-	V	-	Species or species habitat may occur within area ¹
<i>Phascolarctos cinereus</i>	Koala	E	E	10	Recorded within 10km of the Site ²
<i>Potorous tridactylus tridactylus</i>	Long-nosed potoroo	-	V	-	Species or species habitat may occur within area ¹
<i>Pseudomys novaehollandiae</i>	New Holland Mouse	-	V	-	Species or species habitat may occur within area ¹
<i>Pseudomys oralis</i>	Hastings River Mouse	E	E	-	Species or species habitat may occur within area ¹
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	V	-	Species or species habitat may occur within area ¹
Amphibians					
<i>Litoria booroolongensis</i>	Booroolong Frog	E	E	-	Species or species habitat may occur within area ¹
<i>Litoria daviesae</i>	Davies' Tree Frog	V	V	-	Species or species habitat may occur within area ¹
<i>Eulamprus kosciuskoi</i>	Alpine Water Skink	-	V	-	Species or species habitat may occur within area ¹
<i>Mixophyes balbus</i>	Stuttering frog	E	V	-	Species or species habitat may occur within area ¹
<i>Mixophyes iteratus</i>	Giant Barred Frog	V	V	-	Species or species habitat may occur within area ¹
<i>Saltuarius moritzi</i>	New England Leaf-tailed Gecko	-	E	-	Species or species habitat may occur within area ¹
Insecta					
<i>Austrocordulia leonardi</i>	Sydney Hawk dragonfly	E	E	-	Species or species habitat may occur within area ¹
Listed Migratory Species					
Migratory Terrestrial Birds					
<i>Cuculus optatus</i>	Oriental Cuckoo, Horsfield's Cuckoo	-	M	-	Species or species habitat may occur within area ¹
<i>Hirundapus caudacutus</i>	White-throated Needletail	V	V	-	Species or species habitat may occur within area ¹

Biodiversity Assessment Report: Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2 DP753208),
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<i>Motacilla flava</i>	Yellow Wagtail	-	M	-	Species or species habitat may occur within area ¹
Migratory Wetland Birds					
<i>Actitis hypoleucos</i>	Common Sandpiper	-	M	-	Species or species habitat may occur within area ¹
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	-	V	-	Species or species habitat may occur within area ¹
<i>Calidris ferruginea</i>	Curlew Sandpiper	CE	CE	-	Species or species habitat may occur within area ¹
<i>Gallinago hardwickii</i>	Latham's Snipe, Japanese Snipe	-	V	-	Species or species habitat may occur within area ¹
Listed Marine Species					
Birds					
<i>Apus pacificus</i>	Fork-tailed Swift	-	M	2	Recorded within 10km of the Site ²

Key:

V = Vulnerable
E = Endangered

M = Migratory
CE = Critically Endangered

K = Known where there are confirmed records, specimens or otherwise verified sightings in any CMA subregion overlapping the search area

L = Likely to occur in area

1 - Commonwealth Protected Matters Search Tool, Department of the Environment (Accessed 22-04-2025)

2 - *Atlas of NSW Wildlife*, Office of Environment and Heritage (Accessed 22-04-2025).

4.2 Flora Survey

4.2.1 Vegetation Mapping & Delineation

The vegetation was broadly compared to local Plant Community Types (PCT) by reviewing the NSW State Vegetation Type Map (DPIE 2022) which predicted the presence of *PCT 3091 – Lower North Waterhousea-Water Gum Rainforest*.

The vegetation within the subject land has been divided into two zones, VZ1_PCT_3091_Disturbed and VZ2_ExoticPasture. VZ1 has delineated as a separate VZ due to the historical modification and clearance undertaken within VZ2, resulting in a paddock containing a mix of native and predominately exotic pasture species. An intact canopy and understory are present within VZ1 though the midstratum has been cleared with vegetation appearing to be subject to edge effects as the condition of the community increases further north and south. The predicted PCTs, as per the NSW State Vegetation Type Map (DPIE 2022), were used as a guide for the vegetation delineation of the subject land for the purpose of assessing the potential for BOS entry.

Identification of PCTs within the subject land were determined using:

- Occurrence within the NSW North Coast IBRA region;
- Vegetation formation and class:
- landscape position; and
- dominant species noted during field data collected from the full floristic plots/transects established in accordance.

Informed by these characteristics, and following a detailed site walkover, during which the floristic composition and structure of vegetation communities present across the entire subject land were characterised, the following PCTs were identified:

- ***PCT 3091 – Lower North Waterhousea-Water Gum Rainforest***

A total of 31 plant species were identified within in the subject land comprising 18 native species and 13 exotic species. The flora species list can be found in **Appendix B**. Below is a detailed description of the observed vegetation and justification for the PCT delineation.

Vegetation Description and justification

A single plant community was observed within the subject land, which was categorised into two Vegetation Zones (VZ) based on condition class.

The subject land is mapped as containing:

- VZ1: PCT 3091 Lower North Waterhousea-Water Gum Rainforest
- VZ2: Exotic pasture

Brief floristic descriptions and calculations of the overall area for each vegetation zone within the development footprint are provided below (also refer to **Figure 3**).

Vegetation Zones

VZ1

PCT 3091: Lower North Waterhousea-Water Gum Rainforest

Area within Development Area	0.27 ha
Vegetation Formation	KF_CH1 Rainforests
Vegetation Class	Dry Rainforest
Floristic Description	Vegetation within this VZ occurs in a disturbed state with a previously cleared understory evident through the lack of midstory in comparison with the vegetation further south of the study area. A natural recruitment of mature <i>Acacia melanoxylon</i> (Blackwood) borders the south with the community grading into PCT 3446 – Lower North Foothills Ironbark-Box Gum Grassy Forest in the north. A distinct ecotonal shift between the two vegetation communities is represented by the additional presence of <i>Eucalyptus saligna</i> (Sydney Blue Gum). The understory is dominated by <i>Pteridium esculentum</i> (Common Bracken) and <i>Imperata cylindrica</i> (Blady Grass) in conjunction with a mix of native and exotic species such as <i>Microlaena stipoides</i> (Weeping grass), <i>Echinopogon caespitosus</i> (Bushy Hedgehog-grass), <i>Cymbopogon refractus</i> (Barbed Wire Grass) and <i>Axonopus fissifolius</i> (Narrow-leafed Carpet Grass). Several weed species were recorded throughout the VZ, likely occurring as a disturbance response to cattle grazing.
Condition	Disturbed
Structure	The VZ occurs in a disturbed state due to historical clearing and edge effects due to current land practices. The mid-story occurs in an altered state with several weed species scattered throughout, resulting in low levels of species richness and a low abundance of native species with consideration to the community condition benchmark data.
Justification for PCT Selection	The study area occurs within the Mummel Escarpment IBRA subregion with the vegetation community presented as the outskirts of a dry rainforest. The study area occurs at an elevation of 230 m ASL which is above the known elevation range for the community however the community has been selected on the basis of 'best fit' due to the dominance of <i>Acacia melanoxylon</i> (Blackwood).
Status	BC Act: Not Listed EPBC Act: Not listed



Photo 1: Facing NE from southern elevation.

VZ2

Exotic Pasture	
Area within Development Area	1.41 ha
Vegetation Formation	N/A
Vegetation Class	N/A
Floristic Description	This VZ is the dominant vegetation type within the subject land however, it is not classified as being associated with a PCT (see below for the justification).
Condition	Disturbed
Structure	This VZ has been subjected to a similar disturbance history as VZ1, including clearing and grazing. Further modified by agricultural practices, has resulted in the canopy and midstory being absent and the groundcover being primarily dominated by non-native grasses.
Justification for PCT Selection	The vegetation within this VZ is extensively modified due to historic clearance and pasture management, and therefore, floristic composition could not be relied upon to accurately determine the PCT. As such, the same characteristics that drove the PCT determination for VZ1 including geographic distribution, landform, and climate conditions were primarily used to inform the PCT determination.
Status	N/A
	N/A



Photo 2: Highest elevation point of the subject land facing west.

4.2.2 Significant Flora Survey and Random Meander

No threatened flora species were observed during the site assessment. A random meander was undertaken over the entire subject land to survey for potential threatened flora habitat, and to aid the likelihood of occurrence test (**Table 3**). No flora species listed under the BC Act or EPBC Act were identified during these searches.

4.3 Fauna Survey

No threatened fauna species were observed during the site assessment. A full list of the fauna species recorded incidentally within the site is provided as **Appendix C**.

In accordance with Chapter 3 of the SEPP (Biodiversity and Conservation) 2021, the land does not represent potential koala habitat. Tree types listed in Schedule 2 do not constitute at least 15% of the total number of trees in the upper or lower strata of the tree component. No other threatened fauna surveys were conducted on the subject land.

Refer to **Section 5.3.2** for additional details regarding the results these surveying techniques.

4.3.1 Mammals

Arboreal

No arboreal mammals were present during the site assessment. No threatened arboreal mammals were observed.

Terrestrial

A single *Macropus giganteus* (Eastern Grey Kangaroo) was observed grazing on the outskirts of the subject land. No threatened terrestrial mammals were observed.

4.3.2 Avifauna

Several Avifauna species were observed within the subject land including *Malurus pulcherrimus* (Blue-breasted Fairy Wren), *Corvus coronoides* (Australian Raven) and a pair of *Calyptorhynchus funereus* (Yellow-tailed Black Cockatoo) flying over the site.

4.3.3 Herpetofauna

Several *Uperoleia fusca* (Dusky Toadlet) individuals were heard calling from ephemeral streams north of the site, though, the streams occurred outside of the development footprint.

4.4 Habitat Survey

The subject land covers approximately 1.68 ha of disturbed rainforest and pasture. The proposed dwelling and garage are situated over VZ2 with the associated APZ situated within VZ1. While the vegetation within VZ1 provides marginal foraging habitat in the form of Eucalypt and Mistletoe species, no suitable habitat features in the form of hollows were observed within the proposed footprint during the site assessment. Furthermore, vegetation within VZ1 will only be selectively cleared to meet the requirements of an APZ.

Connectivity

The subject land offers contiguous connectivity to the broader landscape to all aspects. The proposal will have minimal impact on connectivity as the proposal relates to the selective removal of canopy species to comply with APZ requirements (PBP 2019) resulting in a canopy cover of 15%. The individuals proposed to be removed are on the outskirts of the forest whereby the establishment of the APZ would not sever connectivity, but rather, slightly reducing the area of vegetation. While the proposal will impact several canopy trees present on site, the proposed development will not create new points of fragmentation within the broader landscape.

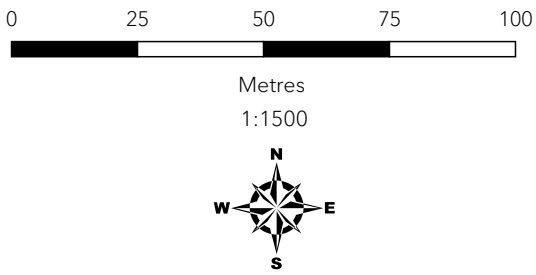


1566 CHICHESTER ROAD, CHICHESTER

FIGURE 3: VEGETATION

- Legend**

 - Subject Land
 - Proposed Building Footprint
 - Proposed Garage
 - Proposed Driveway
- VZ1_3091_Disturbed
 - Lot Boundary
 - Lot 1 / DP1321283
(Consolidation of Lots 2, 23, & 82 DP753208)



Aerial: Nearmap (2023) | Data: MJD Environmental, NSW Spatial Services (2025) | Datum/Projection: GDA2020 / MGA zone 56 | Date: 2025-08-25 | Version: 2 | Z:\24084 - 1566 Chichester Road, Chichester\QGZ\24084_Ecology_GDA2020z56_20250516.qgz | This plan should not be relied upon for critical design dimensions.

5 Impact Assessment

The following section provides an overview of the potential direct, indirect and cumulative impacts associated with the proposal. This overview has been used to inform a likelihood of occurrence and potential for impacts to occur to threatened species, populations and ecological communities. In such instances, this has determined the need for further assessment of significance (5-part test).

5.1 Potential Impacts

Based on the ecological survey results over the site, the following direct and indirect impacts have been generated to inform impact assessment over the subject land.

Direct Impacts

The ecological field assessment found the maximum associated impacts to comprise of:

- 0.27 ha of PCT 3091: Lower North Waterhousea-Water Gum Rainforest
- 1.41 ha of exotic pasture

Flora

No threatened flora species was identified within the subject land.

Fauna

No threatened fauna species or potential breeding habitat was identified within the subject land.

Indirect Impacts

The proposal may have the following indirect impacts associated with the proposed residential development:

- Introduction and/or dispersal of existing exotic flora species;
- Potential for increased sediment flows during construction in the absence of erosion and nutrient control devices being installed to industry best practice and maintained for the duration of construction / soil stabilisation works.

Mitigation measures have been recommended in **Section 6** to ameliorate these indirect impacts.

5.2 Threatened Species & Communities Likelihood of Occurrence Assessment

Threatened flora and fauna species (listed under the BC Act and/or EPBC Act) that have been gazetted and recorded within a 10 km radius of the site have been considered within the assessment contained in **Table 3**. Each species / community is considered for its likelihood to occur on the site and potential for impact arising from the proposal. Where a potential for impact is considered, the entity has been nominated for further assessment under the BC act with a Test of Significance (ToS) in **Appendix D**, or under the EBPC Act with a EPBC Act Test of Significance in **Appendix E**.

'Species / Community' – Lists each threatened species / EEC known from the locality (10 km radius). The status and number of records along with source and notes for each threatened entity under the BC Act and the EPBC Act are also provided.

'Habitat / Species Descriptions' – for up-to-date threatened species profiles including habitat descriptions and other key ecological information reference is made to the following online resources:

NSW OEH Threatened Species Profile Search -
<http://www.environment.nsw.gov.au/threatenedSpeciesApp/>

Commonwealth Biodiversity: Species Profile and Threats Database (SPRAT) -
<http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>

'Likelihood of Occurrence on Site' – Assesses the likelihood of each locally recorded species and EEC to occur within the site, using knowledge of each species' habitat and lifecycle requirements and with regard the habitat types present within the site, results of the literature review and database searches and field investigations. The location and number of records of the species (OEH Atlas of NSW Wildlife) were also considered in determining probability of occurrence.

'Potential for Impact' – Assesses the likelihood of impacts to each species / community that would result from the proposed development, taking into account direct and indirect short and long-term impacts.

Database searches were conducted of the NSW Wildlife Atlas (22-04-2025) and Commonwealth Protected Matters Tool (22-04-2025).

Note: marine species (bird, reptile, fish, mammal) recorded on the Protected Matters search have not been listed or assessed herewith.

Appendix 4 Likelihood of Occurrence and Impact Assessment

TEC Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Threatened Ecological Communities							
<i>Carex Sedgeland of the New England Tableland, Nandewar, Brigalow Belt South and NSW North Coast Bioregions</i>	E	-	P	Carex Sedgelands are fens dominated by sedges, grasses and semi-aquatic herbs. Dominant species are Carex appressa, Stellaria angustifolia, Scirpus polystachyus, Carex gaudichaudiana, Carex sp. Bendemeer, Carex tereticaulis and Isachne globosa, either as single species or in combinations. Carex Sedgeland falls within the general formation of montane bogs and fens of Beadle (1981) and Keith (2004). Carex Sedgelands include the fen communities C1 Carex appressa–Stellaria angustifolia, C2 Carex appressa, C3 Scirpus polystachyus–Carex appressa, C4 Carex tereticaulis, C5 Carex gaudichaudiana–Isachne globosa, and Carex sp. Bendemeer–Carex gaudichaudiana of Hunter and Bell (2009), as well as Sedge Fens of impeded drainage of the Nandewar and New England Tablelands Bioregion (ID 582) described by Benson et al. (2010). A comprehensive list of species that characterise the ecological community can be found in the NSW Scientific Committee Final Determination.	Low: This TEC was not detected within the subject land.	Low	No
<i>Central Hunter Valley eucalypt forest and woodland</i>	-	E	M	The Central Hunter Valley eucalypt forest and woodland ecological community generally occurs on soils derived from the Permian sedimentary bedrock found on the valley floors and on lower hillslopes and low ridges. The Permian derived soils are dominated by soloths, solodics, yellow podzolics, with limited areas of brown clays and red clays. These soils are typically medium in fertility, relative to nearby Quaternary deep alluvial soils (richer in fertility) and the skeletal soils of the bordering Triassic landscape (poorer in fertility). The Permian sediments are much older than the Triassic sediments; they are finer grained, typically supporting soils with a high clay content (argillaceous), as opposed to the more sandy soils associated with Triassic sediments (Peake, 2015).	Low: This TEC was not detected within the subject land.	Low	No

TEC Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
<i>Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland</i>	-	E	K	The ecological community is associated with forested palustrine wetlands, or swamp forests, found in the temperate to subtropical coastal valleys of Australia's east coast, and occurs between the Great Dividing Range and the coastline from near Gladstone in Queensland, through to the south coast of New South Wales.	Low: This TEC was not detected within the subject land.	Low	No
<i>Lower Hunter Valley Dry Rainforest in the Sydney Basin and NSW North Coast Bioregions</i>	V	-	K	The ecological community occurs on basalt and alluvial soils, including sand and old or elevated alluvial soils as well as floodplain alluvia. It also occurs occasionally on enriched rhyolitic soils and basaltically enriched metasediments. Lowland Rainforest mostly occurs in areas <300 m above sea level. Aspect can result in the ecological community being found at >300 m altitude on north-facing slopes, but typically 300 m defines the extent of the lowlands. In addition, Lowland Rainforest typically occurs in areas with high annual rainfall (>1300 mm).	Low: This TEC was not detected within the subject land	Low	No
<i>Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions</i>	E	-	K	Lowland Rainforest, in a relatively undisturbed state, has a closed canopy, characterised by a high diversity of trees whose leaves may be mesophyllous and encompass a wide variety of shapes and sizes. Typically, the trees form three major strata: emergent, canopy and sub-canopy which, combined with variations in crown shapes and sizes, give the canopy an irregular appearance (Floyd 1990). The trees are taxonomically diverse at the genus and family levels, and some may have buttressed roots. A range of plant growth forms are present in Lowland Rainforest, including palms, vines and vascular epiphytes. Scattered eucalypt emergent (e.g. <i>Eucalyptus grandis</i> , <i>E. saligna</i>) may occasionally be present. In disturbed stands of this community the canopy continuity may be broken, or the canopy may be smothered by exotic vines. Although every stand of rainforest is unique in terms of its biota, Lowland Rainforest can be characterised by the following species.	Low: This TEC was not detected within the subject land.	Low	No
<i>Lower Hunter Valley Dry Rainforest in the Sydney Basin and NSW North Coast Bioregions</i>	-	V	K	The ecological community primarily occurs from Maryborough in Queensland to the Clarence River (near Grafton) in New South Wales (NSW). The ecological community also includes isolated areas between the Clarence River and Hunter River such as the Bellinger	Low: This TEC was not detected within the subject land.	Low	No

TEC Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
				and Hastings valleys. The ecological community occurs in the following Interim Biogeographic Regionalisation for Australia Version 6.1 (IBRA) Bioregions: South Eastern Queensland Bioregion and NSW North Coast Bioregion.			
<i>Lowland Rainforest of Subtropical Australia</i>	-	CE	K	Lowland Rainforest typically occurs more than 2 km from the coast, however, it can (and does) intergrade with Littoral Rainforest in some coastal areas. Vegetation structure the ecological community is generally a moderately tall (=20 m) to tall (=30 m) closed forest (canopy cover =70%). Tree species with compound leaves are common and leaves are relatively large (notophyll to mesophyll). Typically, there is a relatively low abundance of species from the genera Eucalyptus, Melaleuca and Casuarina. Buttresses are common as is an abundance and diversity of vines. Lowland Rainforest has the most diverse tree flora of any vegetation type in NSW (Floyd, 1990a) and the species composition of the canopy varies between local stands and between regions (Keith, 2004). The ecological community typically has high species richness (= 30 woody species from Appendix A).	Low: This TEC was not detected within the subject land.	Low	No
<i>Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion</i>	E	-	K	Lowland Rainforest on Floodplain is a rainforest community which now occurs only as small remnants in scattered localities on the NSW north coast, with less than 1000ha in total thought to remain. Larger stands of the community typically have a dense canopy, which blocks most light from reaching the ground, creating cool, moist conditions within. Lowland Rainforest on Floodplain supports a rich diversity of plants and animals. Typical tree species in the community include figs (<i>Ficus macrophylla</i> , <i>F. obliqua</i> and <i>F. watkinsiana</i>), palms (<i>Archontophoenix cunninghamiana</i> and <i>Livistona australis</i>), Silky Oak (<i>Grevillea robusta</i>), Black Bean (<i>Castanospermum australe</i>) and Brush Cherry (<i>Syzygium australe</i>). Animals present include fruit-eating rainforest pigeons, Noisy Pitta, Brush-turkey, pademelons, flying foxes, the Land Mullet skink and rainforest snails.	Low: This TEC was not detected within the subject land.	Low	No
<i>Montane Peatlands and Swamps of the New England Tableland, NSW North Coast,</i>	-	E	K	Montane Peatlands typically have a dense groundcover of sedges, grasses and forbs, except where a dense cover of tall shrubs casts deep shade. Soft-leaved species of <i>Carex</i>	Low: This TEC was not detected within the subject land.	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
<i>Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions</i>					(eg. <i>C. appressa</i> , <i>C. fascicularis</i> , <i>C. gaudichaudiana</i>) and <i>Poa</i> (eg. <i>P. costiniana</i> , <i>P. labillardieri</i>) typically make up most of the groundcover biomass, while other common sedges include <i>Baloskion</i> spp., <i>Baumea rubiginosa</i> , <i>Empodisma minus</i> , <i>Juncus</i> spp. and <i>Schoenus apogon</i> . The Montane Peatlands community is associated with accumulated peaty or organic-mineral sediments on poorly drained flats in the headwaters of streams. It occurs on undulating tablelands and plateaux, above 400-500 m elevation, generally in catchments with basic volcanic or fine-grained sedimentary substrates or, occasionally, granite.			
<i>Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions</i>		-	E	K	The canopy varies across the extent of the community. Species which may dominate or co-dominate include <i>Corymbia intermedia</i> (pink bloodwood), <i>Eucalyptus bancroftii</i> (Bancroft's redgum), <i>E. moluccana</i> (grey box), <i>E. grandis</i> (flooded gum), <i>E. siderophloia</i> (grey ironbark), and <i>E. tereticornis</i> (forest red gum, red iron gum). North of the Macleay floodplain <i>Lophostemon confertus</i> (brush box) and/or <i>suaveolens</i> (swamp box, turpentine) may also be dominant, or co-dominant with species of <i>Corymbia</i> , <i>Eucalyptus</i> and <i>Syncarpia</i> , or form part of the subcanopy.	Low: This TEC was not detected within the subject land.	Low	No
<i>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</i>		-	CE	K	White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland is found from the Queensland border in the north, to the Victorian border in the south. It occurs in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions.	Low: The TEC was not detected within the subject land.	Low	No
Flora								
<i>Arthraxon hispidus</i>	Hairy Joint grass	V	V	-	Occurs over a wide area in south-east Queensland, and on the northern tablelands and north coast of NSW but is never common. Moisture and shade-loving grass, found in or on the edges of rainforest and in wet eucalypt forest, often near creeks or swamps.	Low: No records within 10 km of subject land. The species was not recorded during the site assessment.	Low	No
<i>Cryptostylis hunteriana</i>	Leafless Tongue Orchid	V	V	-	The Leafless Tongue Orchid has been recorded from as far north as Gibraltar Range National Park south into Victoria around the coast as far as Orbost. It has been recorded	Low: Species not associated with PCT. No records within 10km of subject land.	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					from a number of National Parks along the east coast of NSW. Does not appear to have well defined habitat preferences and is known from a range of communities, including swamp-heath and woodland. The larger populations typically occur in woodland dominated by <i>Eucalyptus sclerophylla</i> (Scribbly Gum), <i>E. sieberi</i> (Silvertop Ash), <i>Corymbia gummifera</i> (Red Bloodwood) and <i>Allocasuarina littoralis</i> (Black Sheoak); appears to prefer open areas in the understorey of this community and is often found in association with the <i>C. subulata</i> (Large Tongue Orchid) and the <i>C. erecta</i> (Tartan Tongue Orchid).			
<i>Cynanchum elegans</i>	White-flowered Wax Plant	E	E	2	Restricted to eastern NSW where it is distributed from Brunswick Heads on the north coast to Gerroa in the Illawarra region. The species has been recorded as far west as Merriwa in the upper Hunter River valley. The White-flowered Wax Plant usually occurs on the edge of dry rainforest vegetation. Other associated vegetation types include littoral rainforest; <i>Leptospermum laevigatum</i> (Coastal Tea-tree) – <i>Banksia integrifolia</i> subsp. <i>integrifolia</i> (Coastal Banksia) coastal scrub; <i>Eucalyptus tereticornis</i> (Forest Red Gum) aligned open forest and woodland; <i>Corymbia maculata</i> (Spotted Gum) aligned open forest and woodland; and <i>Melaleuca armillaris</i> (Bracelet Honey myrtle) scrub to open scrub.	Low: No OEH Bionet records occur within a 10 km search area. The species was not recorded during the site assessment.	Low	No
<i>Eucalyptus glaucina</i>	Slaty Red Gum	V	V		Found only on the north coast of NSW and in separate districts: near Casino where it can be locally common, and farther south, from Taree to Broke, west of Maitland. Grows in grassy woodland and dry eucalypt forest. Grows on deep, moderately fertile and well-watered soils.	Low: No OEH Bionet records occur within a 10 km search area. The species was not recorded during the site assessment.	Low	No
<i>Euphrasia arguta</i>	-	CE	CE	-	The current known populations are located in the Nundle State Forest in eucalypt forest with a mixed grass and shrub understorey (D Binns pers. comm. February 2009). This area is located at the junction of the New England Tableland, NSW North Coast, and Nandewar Bioregions. There are no known occurrences of <i>Euphrasia arguta</i> in a conservation reserve. The majority of <i>E. arguta</i> plants are located in Nundle State Forest. A small part of the largest population of <i>E. arguta</i> is located on private land that is	Low: Not associated with subject land PCT. No species records occur within a 10km search area. The species was not recorded during the site assessment.	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					adjacent to the State Forest. The land is currently used for rough grazing by sheep or cattle.			
<i>Haloragis exalata subsp. Velutina</i>	Tall Velvet Sea Berry	V	V	-	Tall Velvet Sea-berry is a shrub to 1.5 m high. The stems are ribbed and square in section. The velvety leaves are opposite, 50 - 60 mm long, 6 - 8 mm wide and have finely toothed margins. The three to seven small yellowish green flowers form where the leaf joins the stem and are followed by tiny pear-shaped fruit 2 mm long.	Low: No OEH Bionet records occur within a 10 km search area. The subject land is located outside of the geographic distribution for the species.	Low	No
<i>Persicaria elatior</i>	Tall Knotweed	V	V	-	In northern NSW it is known from Raymond Terrace (near Newcastle) and the Grafton area (Cherry Tree and Gibberagee State Forests). The species also occurs in Queensland. This species normally grows in damp places, especially beside streams and lakes. Occasionally in swamp forest or associated with disturbance.	Low: Species not associated with PCT. No records within 10km of subject land. The species was not recorded during the site inspection.	Low	No
<i>Pomaderris brunnea</i>	Brown Pomaderris	E	V	-	Brown Pomaderris is a shrub to 3 m tall that has distinctively hairy stems. The stem-hairs comprise long brownish hairs above a thick white hairy under-coat. The leaves are up to 4 cm long and 1.5 cm wide and have toothed margins. The upper leaf surface is hairless; the lower surface is densely hairy like the stem. The leaf veins extend to the margins. The small, yellowish flowers have no petals and form dense clusters at the ends of the branches.	Low: No OEH Bionet records occur within a 10 km search area. The species was not recorded during the site inspection.	Low	No
<i>Rhizanthella slateri</i>	Eastern Underground Orchid	E	-	-	Rhizanthella slateri is restricted to New South Wales where it is currently known from 14 populations including Bulahdelah, the Watagan Mountains, the Blue Mountains, Wiseman's Ferry area, Agnes Banks and near Nowra. The Rhizanthella slateri population in the Great Lakes Local Government Area (LGA) occurs at the known northern limit of the species' range and is disjunct from other known populations of the species. Surveys conducted between 2002 and 2005 near Bulahdelah (within the Great Lakes LGA) identified approximately 75 flowerheads, more than ten times the number observed at any other site. The Rhizanthella slateri population in the Great Lakes LGA is thus likely to be the largest and most extensive known population of the species. Other known populations of	Low: No OEH Bionet records occur within a 10 km search area. Given that the subject land contains grazing cattle, the land is frequently trampled thus altering the ecosystem. It is unlikely the species would occur, and no further assessment is required.	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					Rhizanthella slateri are fragmented and highly disjunct, comprising isolated individuals or small clusters of plants.			
<i>Rhodamnia rubescens</i>	Scrub Turpentine, Brown Malletwood	CE	CE	3	Occurs in coastal districts north from Batemans Bay in New South Wales, approximately 280 km south of Sydney, to areas inland of Bundaberg in Queensland. Populations of <i>R. rubescens</i> typically occur in coastal regions and occasionally extend inland onto escarpments up to 600 m a.s.l. in areas with rainfall of 1,000-1,600 mm. Found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest usually on volcanic and sedimentary soils.	Low: Three OEH Bionet records occur within a 10 km search area of subject land. The species was not recorded during the site assessment.	Low	No
<i>Rhodomyrtus psidioides</i>	Native Guava	CE	CE	1	Occurs from Broken Bay, approximately 90 km north of Sydney, New South Wales, to Maryborough in Queensland. Populations are typically restricted to coastal and sub-coastal areas of low elevation however the species does occur up to c. 120 km inland in the Hunter and Clarence River catchments and along the Border Ranges in NSW. Pioneer species found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest often near creeks and drainage lines.	Low: A single OEH Bionet record occurs within a 10 km search area. The species was not recorded during the site assessment.	Low	No
<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	V	V	-	The Magenta Lilly Pilly is found only in NSW, in a narrow, linear coastal strip from Upper Lansdowne to Conjola State Forest. On the south coast the Magenta Lilly Pilly occurs on grey soils over sandstone, restricted mainly to remnant stands of littoral (coastal) rainforest. On the central coast Magenta Lilly Pilly occurs on gravels, sands, silts and clays in riverside gallery rainforests and remnant littoral rainforest communities.	Low: No OEH Bionet records occur within a 10 km search area. The species was not recorded during the site assessment.	Low	No
<i>Tasmannia glaucifolia</i>	Fragrant Pepperbush	V	V	-	Fragrant Pepperbush is known from several locations at high altitude in northeast NSW, including the Ben Halls Gap, Point Lookout and Barrington Tops areas. Usually grows in or near Antarctic Beech <i>Nothofagus moorei</i> rainforest along streams in mountain areas at altitudes of between 1200 and 1500 m altitude. Also occurs in tall scrub, on seepage lines in tall eucalypt forest and in grassy woodland.	Low. No OEH Bionet records occur within a 10 km search area. The subject land is located outside of the geographic distribution for the species.		

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
<i>Thesium australe</i>	Austral Toadflax	V	V	-	Austral Toad-flax is found in very small populations scattered across eastern NSW, along the coast, and from the Northern to Southern Tablelands. It is also found in Tasmania and Queensland and in eastern Asia. Although originally described from material collected in the SW Sydney area, populations have not been seen in a long time. It may persist in some areas in the broader region. Occurs in grassland on coastal headlands or grassland and grassy woodland away from the coast.	Low: No OEH Bionet records occur within a 10 km search area. The species was not recorded during the site assessment.	Low	No
<i>Tylophora woollsii benth.</i>	Cryptic Forest Twiner	E	E	-	The Cryptic Forest Twiner is found from the NSW north coast and New England Tablelands to southern Queensland, but is very rare within that range. Known on the Tablelands from the Bald Rock and Boonoo Boonoo areas north of Tenterfield.	Low: No OEH Bionet records occur within a 10 km search area. The species was not recorded during the site assessment.	Low	No
Birds								
<i>Anthochaera phrygia</i>	Regent Honeyeater	CE	CE	-	The Regent Honeyeater mainly inhabits temperate woodlands and open forests of the inland slopes of south-east Australia. Birds are also found in drier coastal woodlands and forests in some years. Range is between north-eastern Victoria and south-eastern Queensland. There are only three known key breeding regions remaining: north-east Victoria (Chiltern-Albury), and in NSW at Capertee Valley and the Bundarra-Barraba region. In the last 10 years Regent Honeyeaters have been recorded in urban areas around Albury where woodlands tree species such as Mugga Ironbark and Yellow Box were planted 20 years ago. The Regent Honeyeater is a generalist forager, although it feeds mainly on the nectar from a relatively small number of eucalypts that produce high volumes of nectar.	Low: No OEH Bionet records occur within a 10 km search area. A high abundance of the mistletoe species <i>Amyema congener</i> (Variable Mistletoe) was recorded within the subject land, however, the species is known to prefer the nectar from <i>Amyema cabbagei</i> (Needle-leaf Mistletoe). Given the lack of habitat for the species, it is unlikely that it would occur.	Low	No
<i>Atrichornis rufescens</i>	Rufous Scrub-bird	V	E	-	Rufous Scrub-birds are endemic to south-eastern Australia and has a northern and southern subspecies. The range of the two subspecies ranges from Mistake Range in Queensland and the Gibraltar Range in northern NSW, to Dorrigo Plateau to Barrington Tops. The species is now generally only found in high-rainfall areas above 600m in elevation. Rufous Scrub-birds are now confined to high-	Low: No OEH Bionet records occur within a 10 km search area. The subject land has a peak elevation of 350 m ASL, as such, it is unlikely that the species would occur and no further assessment is required.	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					altitude (above 600m elevation) subtropical, warm temperate and cool temperate rainforests, and wet sclerophyll forests.			
<i>Botaurus poiciloptilus</i>	Australasian Bittern	E	E	-	Favours permanent freshwater wetlands with tall, dense vegetation, particularly bullrushes (<i>Typha</i> spp.) and spike rushes (<i>Eleocharis</i> spp.). Hides during the day amongst dense reeds or rushes and feed mainly at night on frogs, fish, yabbies, spiders, insects and snails. Feeding platforms may be constructed over deeper water from reeds trampled by the bird; platforms are often littered with prey remains. Breeding occurs in summer from October to January; nests are built in secluded places in densely vegetated wetlands on a platform of reeds; there are usually six olive-brown eggs to a clutch.	Low: Species not associated with PCT. No records within 10 km of subject land. No suitable habitat is present within the subject land.	Low	No
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	E	E	-	The Gang-gang Cockatoo is distributed from southern Victoria through south- and central-eastern New South Wales. In New South Wales, the Gang-gang Cockatoo is distributed from the south-east coast to the Hunter region, and inland to the Central Tablelands and south-west slopes. It occurs regularly in the Australian Capital Territory. It is rare at the extremities of its range, with isolated records known from as far north as Coffs Harbour and as far west as Mudgee. In spring and summer, generally found in tall mountain forests and woodlands, particularly in heavily timbered and mature wet sclerophyll forests. In autumn and winter, the species often moves to lower altitudes in drier more open eucalypt forests and woodlands, particularly box-gum and box-ironbark assemblages, or in dry forest in coastal areas and often found in urban areas. Feeds on eucalypt seeds.	Low. No OEH Bionet records occur within a 10 km search area. Given that the subject land does not contain any hollow suitable for the species and the presence of only two juvenile eucalypts, it is unlikely that the proposal would impact the species. No further assessment is required.	Low	No
<i>Calyptrorhynchus lathamii</i>	South-eastern Glossy Black-Cockatoo	V	V	2	South-eastern glossy black cockatoos are uncommon but widespread. They can be found from Mitchell, Queensland, through eastern New South Wales to East Gippsland, Victoria. Their distribution is continuous through the forested parts of the Great Dividing Range but becomes more scattered inland, to as far west as the Riverina in New South Wales (Higgins 1999; Garnett et al. 2011).	Low: Two Bionet records occur within 10 km of subject land. Suitable foraging and breeding habitat is present within the immediate surrounds however, the subject land does not contain any suitable breeding habitat for the	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
						species, and it is unlikely that the species would be impacted.		
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (south-eastern)	V	V	-	The Brown Treecreeper is endemic to eastern Australia and occurs in eucalypt forests and woodlands of inland plains and slopes of the Great Dividing Range. It is less commonly found on coastal plains and ranges. The western boundary of the range of the species runs approximately through Corowa, Wagga Wagga, Temora, Forbes, Dubbo and Inverell. The eastern subspecies lives in eucalypt woodlands through central NSW and in coastal areas with drier open woodlands. Found in eucalypt woodlands (including Box-Gum Woodland) and dry open forest; mainly inhabits woodlands dominated by stringybarks or other rough-barked eucalypts, usually with an open grassy understorey; also found in mallee and River Red Gum (<i>Eucalyptus camaldulensis</i>) Forest bordering wetlands with an open understorey of acacias, saltbush, lignum, cumbungi and grasses; usually not found in woodlands with a dense shrub layer; fallen timber is an important habitat component for foraging.	Low: The species is not associated with the vegetation community present (PCT 3091) and no species records occur within 10km. No further assessment is required.	Low	No
<i>Erythroriorchis radiatus</i>	Red Goshawk	E	E	-	The Red Goshawk occurs from the north-west to north-east coast of Australia. The Red Goshawk occurs in coastal and sub-coastal areas in wooded and forested lands of tropical and warm-temperate Australia. This species prefers forest and woodland with a mosaic of vegetation types, large prey populations (birds), and permanent water. The vegetation types include eucalypt woodland, open forest, tall open forest, gallery rainforest, swamp sclerophyll forest, and rainforest margins. In NSW favoured habitat is mixed subtropical rainforest and Melaleuca Forest along coastal rivers, often in rugged terrain.	Low: No waterbodies on subject land. No records within 10km of subject land. No nests were recorded within the subject land and no potential habitat for the species will be impacted by the proposal. No further assessment is required.	Low	No
<i>Falco hypoleucos</i>	Grey Falcon	V	V	-	The Grey Falcon is sparsely distributed in NSW, chiefly throughout the Murray-Darling Basin, with the occasional vagrant east of the Great Dividing Range. Usually restricted to shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast. Also occurs near wetlands where surface water attracts prey.	Low: Species not associated with PCT. No records within 10km of subject land. No nests were recorded within the subject land and no potential habitat for the species will be impacted by the proposal. No further assessment is required.	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
<i>Grantiella picta</i>	Painted Honeyeater	V	V	-	The greatest concentrations of the bird and almost all breeding occurs on the inland slopes of the Great Dividing Range in NSW, Victoria and southern Queensland. During the winter it is more likely to be found in the north of its distribution. Inhabits Boree, Brigalow and Box-Gum Woodlands and Box-Ironbark Forests. A specialist feeder on the fruits of mistletoes growing on woodland eucalypts and acacias. Prefers mistletoes of the genus Amyema.	Low: No OEH Bionet records occur within a 10 km search area. The species is not associated with the vegetation communities present. Boree, Brigalow and Box-Gum Woodlands and Box-Ironbark Forests are absent from the subject land. No further assessment is required.	Low	No
<i>Lathamus discolor</i>	Swift Parrot	E	CE	-	Breeds in Tasmania during spring and summer, migrating in the autumn and winter months to south-eastern Australia from Victoria and the eastern parts of South Australia to south-east Queensland. In NSW mostly occurs on the coast and south west slopes. Migrates to the Australian south-east mainland between March and October. On the mainland they occur in areas where eucalypts are flowering profusely or where there are abundant lerp (from sap-sucking bugs) infestations. Favoured feed trees include winter flowering species such as Swamp Mahogany Eucalyptus robusta, Spotted Gum Corymbia maculata, Red Bloodwood C. gummifera, Mugga Ironbark E. sideroxylon, and White Box E. albens. Commonly used lerp infested trees include Inland Grey Box E. microcarpa, Grey Box E. moluccana and Blackbutt E. pilularis. Return to some foraging sites on a cyclic basis depending on food availability. Following winter they return to Tasmania where they breed from September to January, nesting in old trees with hollows and feeding in forests dominated by Tasmanian Blue Gum Eucalyptus globulus.	Low: No OEH Bionet records occur within a 10 km search area. The site is not mapped as containing Important Habitat for the species. The proposal is unlikely to impact the species and no further assessment is required.	Low	No
<i>Lophoictinia isura</i>	Square-tailed Kite	V	-	-	The Square-tailed Kite ranges along coastal and subcoastal areas from south-western to northern Australia, Queensland, NSW and Victoria. In NSW, scattered records of the species throughout the state indicate that the species is a regular resident in the north, north-east and along the major west-flowing river systems. Found in a variety of timbered habitats including dry woodlands and open forests. Shows a particular preference for timbered watercourses. In arid north-western NSW, has been	Low: No OEH Bionet records occur within a 10 km search area. No nests were recorded within the subject land and no potential habitat for the species will be impacted by the proposal. No further assessment is required.	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					observed in stony country with a ground cover of chenopods and grasses, open acacia scrub and patches of low open eucalypt woodland.			
<i>Melanodryas cucullata cucullata</i>	South-eastern Hooded Robin	E	E	-	The Hooded Robin is widespread, found across Australia, except for the driest deserts and the wetter coastal areas - northern and eastern coastal Queensland and Tasmania. However, it is common in few places and rarely found on the coast. Prefers lightly wooded country, usually open eucalypt woodland, acacia scrub and mallee, often in or near clearings or open areas. Requires structurally diverse habitats featuring mature eucalypts, saplings, some small shrubs and a ground layer of moderately tall native grasses. Often perches on low dead stumps and fallen timber or on low-hanging branches, using a perch-and-pounce method of hunting insect prey.	Low. No OEH Bionet records occur within a 10 km search area. Suitable habitat for the species is largely absent from the subject land and its unlikely the species would occur.	Low	No
<i>Neophema chrysostoma</i>	Blue-winged Parrot	V	V	-	Blue-winged Parrots are nomadic, moving to different areas depending on the availability of grasses and herbs. Habitat includes woodlands, coastal heaths and grasslands.	Low: No OEH Bionet records occur within a 10 km search area. The species is not associated with the vegetation communities present. Given the low number of Bionet records and the lack of suitable habitat, it is unlikely the species would occur.	Low	No
<i>Rostratula australis</i>	Australian Painted Snipe	E	E	-	Most records of the Australian Painted Snipe are from the south east, particularly the Murray Darling Basin, with scattered records across northern Australia and historical records from around the Perth region in Western Australia. In NSW many records are from the Murray-Darling Basin including the Paroo wetlands, Lake Cowal, Macquarie Marshes, Fivebough Swamp and more recently, swamps near Balldale and Wanganella. Other important locations with recent records include wetlands on the Hawkesbury River and the Clarence and lower Hunter Valleys. Prefers fringes of swamps, dams and nearby marshy areas where there is a cover of grasses, lignum, low scrub or open timber. Nests on the ground amongst tall vegetation, such as grasses, tussocks or reeds.	Low: No OEH Bionet records occur within a 10 km search area. The species is not associated with the vegetation community present. No suitable habitat is present within the subject land, and it is unlikely the species would occur.	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
<i>Stagonopleura guttata</i>	Diamond Firetail	V	V	-	The Diamond Firetail is endemic to south-eastern Australia, extending from central Queensland to the Eyre Peninsula in South Australia. It is widely distributed in NSW, with a concentration of records from the Northern, Central and Southern Tablelands, the Northern, Central and South Western Slopes and the North West Plains and Riverina. Not commonly found in coastal districts, though there are records from near Sydney, the Hunter Valley and the Bega Valley. This species has a scattered distribution over the rest of NSW, though is very rare west of the Darling River. Found in grassy eucalypt woodlands, including Box-Gum Woodlands and Snow Gum Eucalyptus pauciflora Woodlands. Also occurs in open forest, mallee, Natural Temperate Grassland, and in secondary grassland derived from other communities. Often found in riparian areas (rivers and creeks), and sometimes in lightly wooded farmland.	Low. No OEH Bionet records occur within a 10 km search area. The species is not associated with the vegetation community present and no nests were recorded within the subject land. The species may occasionally pass through the site for foraging purposes but given that the surrounding vegetation offers higher quality habitat, it is unlikely the species would be impacted by the development. No further assessment is required.	Low	No
Mammals								
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	E	E	-	Found mainly in areas with extensive cliffs and caves, from Rockhampton in Queensland south to Bungonia in the NSW Southern Highlands. It is generally rare with a very patchy distribution in NSW. There are scattered records from the New England Tablelands and North West Slopes. Roosts in caves (near their entrances), crevices in cliffs, old mine workings and in the disused, bottle-shaped mud nests of the Fairy Martin (<i>Petrochelidon ariel</i>), frequenting low to mid-elevation dry open forest and woodland close to these features. Found in well-timbered areas containing gullies.	Low. No OEH Bionet records occur within a 10 km search area. No breeding habitat is present within the subject land. The species may pass through the site for foraging purposes but given the lack of records and no association with the vegetation community, it is unlikely the species would occur.	Low	No
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V	E	9	Recorded across a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline. Individual animals use hollow-bearing trees, fallen logs, small caves, rock outcrops and rocky-cliff faces as den sites.	Moderate. Nine OEH Bionet records occur within a 10 km search area. The species is associated with the vegetation community present (PCT 3091). No den sites were recorded during the site assessment; however, the species may occasionally pass through the site	Moderate	Yes

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
						for foraging purposes. Therefore, further assessment is required.		
<i>Mastacomys fuscus mordicus</i>	Broad-toothed Rat	E	E	-	A compact rodent, chubby-cheeked, with a short, wide face and ears, and long, dense, fine fur. It is brown above, with attractive, rufous highlights. The tail is shorter than the head and body length (<i>Rattus</i> species have tails as long or longer than the head and body). The tail is ringed, with very little fur. This species' large, fibrous, green droppings are distinctive. Broad-toothed Rats are more similar, genetically and ecologically, to native mice (<i>Pseudomys</i> species) than to <i>Rattus</i> species. The females' maximum number of four nipples distinguishes them from the <i>Rattus</i> species, which have at least twice as many. Broad-toothed Rats are gentle in demeanour and are very much an Australian native 'guinea-pig' in appearance and character.	Low. No OEH Bionet records occur within a 10 km search area. The subject land is located outside of the geographic distribution for the species.	Low	No
<i>Notamacropus parma</i>	Parma Wallaby	V	V	-	The species once occurred in north-eastern NSW from the Queensland boarder to the Bega area in the southeast. Their range is now confined to the coast and ranges of central and northern NSW from the Gosford district to south of the Bruxner Highway between Tenterfield and Casino.	Low. No OEH Bionet records occur within a 10 km search area. No suitable habitat is present within the subject land in the form of rocky outcrops. No further assessment is required.	Low	No
<i>Petauroides volans</i>	Greater Glider	E	E	-	The greater glider is restricted to eastern Australia, occurring from the Windsor Tableland in north Queensland through to central Victoria (Wombat State Forest), with an elevational range from sea level to 1200 m above sea level. The greater glider favours forests with a diversity of eucalypt species, due to seasonal variation in its preferred tree species. Roosts in tree hollows and is more common in areas abundant in tree hollows.	Low. No OEH Bionet records occur within a 10 km search area. No suitable habitat is present within the subject land as the peak elevation of the site is 350m ASL. No further assessment is required.	Low	No
<i>Petaurus australis</i>	Yellow-bellied glider	V	V	-	The Yellow-bellied Glider is found along the eastern coast to the western slopes of the Great Dividing Range, from southern Queensland to Victoria. Occur in tall mature	Low. No OEH Bionet records occur within a 10 km search area. The species is not associated with the vegetation community present (PCT	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					eucalypt forest generally in areas with high rainfall and nutrient rich soils.	3091). Suitable hollows for breeding are absent and its unlikely the species would be impacted by the proposal. No further assessment is required.		
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	-	V	-	The range of the Brush-tailed Rock-wallaby extends from south-east Queensland to the Grampians in western Victoria, roughly following the line of the Great Dividing Range. However the distribution of the species across its original range has declined significantly in the west and south and has become more fragmented. In NSW they occur from the Queensland border in the north to the Shoalhaven in the south, with the population in the Warrumbungle Ranges being the western limit. Occupy rocky escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges, often facing north. Browse on vegetation in and adjacent to rocky areas eating grasses and forbs as well as the foliage and fruits of shrubs and trees.	Low. No OEH Bionet records occur within a 10 km search area. No suitable habitat is present within the subject land in the form of rocky outcrops and no further assessment is required.	Low	No
<i>Phascolarctos cinereus</i>	Koala	E	E	10	The Koala has a fragmented distribution throughout eastern Australia from north-east Queensland to the Eyre Peninsula in South Australia. In NSW it mainly occurs on the central and north coasts with some populations in the west of the Great Dividing Range. Inhabit eucalypt woodlands and forests.	Moderate. There are 10 OEH Bionet records within a 10 km search area. The species is associated with the vegetation community present. As such, further assessment is required.	Low	Yes
<i>Potorous tridactylus tridactylus</i>	Long-nosed potoroo	-	V	-	The Long-nosed Potoroo is restricted to the eastern coast of Australia. In NSW it is generally restricted to coastal heaths and forests east of the Great Dividing Range, with an annual rainfall exceeding 760 mm. Inhabits coastal heaths and dry and wet sclerophyll forests. Dense understorey with occasional open areas is an essential part of habitat, and may consist of grass-trees, sedges, ferns or heath, or of low shrubs of tea-trees or melaleucas. A sandy loam soil is also a common feature.	Low. No OEH Bionet records occur within a 10 km search area. The species is not associated with the vegetation communities present. Furthermore, the subject land lacks a dense understory preferred by the species. No further assessment is required.	Low	No
<i>Pseudomys novaehollandiae</i>	New Holland Mouse	-	V	-	The New Holland Mouse has a fragmented distribution across Tasmania, Victoria, NSW and Queensland. The species is now largely restricted to the coast of central and	Low. No OEH Bionet records occur within a 10 km search area. The species is not associated with the	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					northern NSW, with one inland occurrence near Parkes. The New Holland Mouse has been found from coastal areas and up to 100 km inland on sandstone country. The species has been recorded from sea level up to around 900 m above sea level. Soil type may be an important indicator of suitability of habitat for the New Holland Mouse, with deeper top soils and softer substrates being preferred for digging burrows (Wilson & Laidlaw 2003). In Victoria, the species has been recorded on deep siliceous podsols, sandy clay, loamy sands, sand dunes and coastal dunes. Due to the largely granivorous diet of the species, sites where the New Holland Mouse is found are often high in floristic diversity, especially leguminous perennials. The mouse is known to inhabit open heathland, open woodland with a heathland understorey and vegetated sand dunes.	vegetation community present within the subject land. No burrows were observed during the site assessment. Given the current use of the land, the soil has been degraded, and the species is unlikely to be able to burrow. Therefore, it is unlikely to occur.		
<i>Pseudomys oralis</i>	Hastings River Mouse	E	E	-	A patchy distribution spanning the Great Dividing Range from the Hunter Valley, south of Mt Royal, north to the Bunya Mountains near Kingaroy in south-east Queensland, at elevations between 300 m and 1100 m. A variety of dry open forest types with dense, low ground cover and a diverse mixture of ferns, grass, sedges and herbs. Access to seepage zones, creeks and gullies is important, as is permanent shelter such as rocky outcrops and fallen logs.	Low. No OEH Bionet records occur within a 10 km search area. The species is not associated with the vegetation community present (PCT 3091). No burrows were observed during the site assessment. Given the current use of the land, the soil has been degraded, and the species is unlikely to be able to burrow. Therefore, it is unlikely to occur.	Low	No
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	V	-	Grey-headed Flying-foxes are generally found within 200 km of the eastern coast of Australia, from Rockhampton in Queensland to Adelaide in South Australia. In times of natural resource shortages, they may be found in unusual locations. Occur in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops. Roosting camps are generally located within 20 km of a regular food source and are commonly found in gullies, close to water, in vegetation with a dense canopy.	Low. No OEH Bionet records occur within a 10 km search area. No flying fox camps were recorded within the subject land with the nearest camp located at Stroud Road which is approximately 36 km southeast of the site. The species is unlikely to be impacted by the proposal. No further assessment is required.	Low	No

Herpetofauna

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
<i>Litoria booroolongensis</i>	Booroolong Frog	E	E	-	The Booroolong Frog is a medium sized tree frog, with adults growing to about 5 cm. Their body-colour may be grey, olive or brown with indistinct black markings. The abdomen is white. The skin usually has a slightly warty appearance. The fingers and toes have well developed discs, and the toes are strongly webbed. The call is a soft, purring 'craww craww craww'. Lives along permanent streams with some fringing vegetation cover such as ferns, sedges or grasses.	Low. No OEH Bionet records occur within a 10 km search area. No suitable habitat is present.	Low	No
<i>Litoria daviesae</i>	Davies' Tree Frog	V	V	-	Davies' Tree Frog occurs as a series of small populations along the eastern escarpment of the Great Divide and adjacent tablelands above 400 m elevation. Its habitat is highly fragmented and restricted to the region from Carrai Plateau to the Barrington Tops area. Davies' Tree Frog occurs in permanent, slow-flowing small streams above 400 m elevation, mostly in the headwaters of eastern-flowing streams (although it does occur in the headwaters of the western-flowing Peel River). On the tablelands, riparian habitat may be montane heath or dry open forest with fringing tea tree, tussocks and ferns. Escarpment habitat is typically rainforest and wet sclerophyll with a rainforest understorey.	Low. No OEH Bionet records occur within a 10 km search area. No suitable habitat is present.	Low	No
<i>Eulamprus kosciuskoi</i>	Alpine Water Skink	-	V	-	The alpine water skink is found at isolated high elevation sites (above 1000 m and up to 2000 m) in New South Wales (NSW), Australian Capital Territory (ACT) and Victoria (Vic). The distribution is naturally fragmented into 'sky islands' (McCormack et al. 2009), which are isolated high elevation site surrounded by unsuitable lowland habitat, which corresponds to substantial genetic divergences occurring over small geographic distances in this species (Pepper et al. 2018).	Low. No OEH Bionet records occur within a 10 km search area. The Study Area is not located at the elevation that the species prefers, and it is unlikely the species would occur.	Low	No
<i>Mixophyes balbus</i>	Stuttering frog	E	V	-	Found in rainforest and wet, tall open forest in the foothills and escarpment on the eastern side of the Great Dividing Range. Outside the breeding season adults live in deep leaf litter and thick understorey vegetation on the forest floor. Stuttering Frogs occur along the east coast of Australia from southern Queensland to north-eastern	Low: No OEH Bionet records occur within a 10 km search area. No suitable habitat is present.	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					Victoria. It is the only <i>Mixophyes</i> species that occurs in south-east NSW and in recent surveys it has only been recorded at three locations south of Sydney, and Dorrigo being the stronghold.			
<i>Mixophyes iteratus</i>	Giant Barred Frog	V	V	-	The Giant Barred Frog is distributed along the coast and ranges from Eumundi in south-east Queensland to Warrimoo in the Blue Mountains. Declines appear to have occurred at the margins of the species' range, with no recent records south of the Hawkesbury River and disappearances from a number of streams in QLD. Northern NSW, particularly the Coffs Harbour-Dorrigo area, is a stronghold. Giant Barred Frogs are found along freshwater streams with permanent or semi-permanent water, generally (but not always) at lower elevation. Moist riparian habitats such as rainforest or wet sclerophyll forest are favoured for the deep leaf litter that they provide for shelter and foraging, as well as open perching sites on the forest floor. However, Giant Barred Frogs will also sometimes occur in other riparian habitats, such as those in drier forest or degraded riparian remnants, and even occasionally around dams.	Low: No OEH Bionet records occur within a 10 km search area. No suitable habitat is present.	Low	No
<i>Saltuarius moritzi</i>	New England Leaf-tailed Gecko	-	E	-	Moritz's leaf-tailed gecko is patchily distributed from the Hunter River (NSW) in the south, to the Clarence River in the north on both public and private land (ALA 2023). Though not warranting consideration as separate species, two divergent lineages or evolutionarily significant units (ESUs) are recognised (Catullo & Moritz 2021).	Low: No OEH Bionet records occur within a 10 km search area. The species is understood to prefer rocky outcrops and boulders to forage and is frequently observed on larger trees and fallen logs that contain crevices and hollows for shelter. These features are present along the riparian zones of the study area but absent from the subject land. As such, the species is unlikely to occur and no further assessment is required.	Low	No

Insecta

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
<i>Austrocordulia leonardi</i>	Sydney Hawk dragonfly	E	E	-	A. leonardi was discovered in 1968 at sites on the Woronora River and Kangaroo Creek, south of Sydney (Theischinger 1973). It was later recorded from the Nepean River, Maldon Bridge near Wilton (Theischinger 1997; Hawking & Theischinger 1999) and most recently from both the Maldon Bridge site and another site 23km downstream near Menangle Weir (Greive & Theischinger 2020). This species has also been reported within the following drainages: Georges River, Port Hacking, Karuah and Chichester Rivers (Theischinger et al. 2013). The close clustering of sampling sites within the Sydney area and neighbouring Karuah and Chichester catchments mean that its range is in effect restricted to only two known locations (Fig 1). It is now believed extinct within its type locality on the Woronora River and at Audley on the Hacking River. However, it is believed to occur at two sites comprising the tightly clustered Sydney localities and Karuah and Chichester River sites making its EEO 5,600 km2 and its AOO 32 km2 (based on the species occupying two 2 km x 2 km grid cells).	Low: No OEH Bionet records occur within a 10 km search area. No suitable habitat will be impacted by the proposal. No further assessment is required.	Low	No
Listed Migratory Species								
Migratory Terrestrial Birds								
<i>Cuculus optatus</i>	Oriental Cuckoo, Horsfield's Cuckoo	-	M	-	This species migrates to the north and east coasts of Australia during the non-breeding season over winter. Mainly inhabiting forests, the Oriental cuckoo occurs in mixed, deciduous and coniferous forest. It is present at all levels of the forest canopy, and can be found at a range of elevations, occasionally being recorded in mountains as high up as 1,100 metres.	Low: No OEH Bionet records occur within a 10 km search area.	Low	No
<i>Hirundapus caudacutus</i>	White-throated Needle-tail	V	V	-	The White-throated Needle-tail is widespread in across the coast of eastern and south-eastern Australia, and Tasmania. White-throated Needle-tails only occur as vagrants in the Northern Territory and in Western Australia. In Australia, the White-throated Needle-tail is almost exclusively aerial, from heights of less than 1 m up to more than 1000 m above the ground. Because they are aerial, it has been stated that conventional habitat descriptions are	Low: No OEH Bionet records occur within a 10 km search area. The migratory species is predominately aerial, and it is unlikely that the subject land would be utilised by the species given the higher quality habitat within the broader region.	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					inapplicable (Cramp 1985), but there are, nevertheless, certain preferences exhibited by the species. They are probably recorded most often above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy, but they are less commonly recorded flying above woodland.			
<i>Motacilla flava</i>	Yellow Wagtail	-	M	-	Occurs throughout Australia. Can be found in a range of land uses including pastures, wetlands, shrublands, grasslands and man made environments. The yellow wagtail typically forages in damp grassland and on relatively bare open ground at edges of rivers, lakes and wetlands, but also feeds in dry grassland and in fields of cereal crops.	Low: No OEH Bionet records occur within a 10 km search area.	Low	No
Migratory Wetland Birds								
<i>Actitis hypoleucos</i>	Common Sandpiper	-	M	-	The Common Sandpiper is found along all coastlines of Australia and in many areas inland. The species utilises a wide range of coastal wetlands and some inland wetlands, with varying levels of salinity, and is mostly found around muddy margins or rocky shores and rarely on mudflats. The Common Sandpiper has been recorded in estuaries and deltas of streams, as well as on banks farther upstream; around lakes, pools, billabongs, reservoirs, dams and claypans, and occasionally piers and jetties. The muddy margins utilised by the species are often narrow, and may be steep. The species is often associated with mangroves, and sometimes found in areas of mud littered with rocks or snags.	Low: No suitable habitat is present within the study area. No OEH Bionet records occur within a 10 km search area.	Low	No
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	-	V	-	The Sharp-tailed Sandpiper spends the non-breeding season in Australia with small numbers occurring regularly in New Zealand. Most of the population migrates to Australia, mostly to the south-east and are widespread in both inland and coastal locations and in both freshwater and saline habitats. Many inland records are of birds on passage. In Australasia, the Sharp-tailed Sandpiper prefers muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation. This includes lagoons, swamps, lakes and	Low: No suitable habitat is present within the study area. No OEH Bionet records occur within a 10 km search area.	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					pools near the coast, and dams, waterholes, soaks, bore drains and bore swamps, salt pans and hypersaline salt lakes inland. They also occur in saltworks and sewage farms. They use flooded paddocks, sedgeland and other ephemeral wetlands, but leave when they dry. They use intertidal mudflats in sheltered bays, inlets, estuaries or seashores, and also swamps and creeks lined with mangroves. They tend to occupy coastal mudflats mainly after ephemeral terrestrial wetlands have dried out, moving back during the wet season. They may be attracted to mats of algae and water weed either floating or washed up around terrestrial wetlands, and coastal areas with much beachcast seaweed. Sometimes they occur on rocky shores and rarely on exposed reefs.			
<i>Calidris ferruginea</i>	Curlew Sandpiper	CE	CE	-	In Australia, Curlew Sandpipers occur around the coasts and are also quite widespread inland, though in smaller numbers. Records occur in all states during the non-breeding period, and also during the breeding season when many non-breeding one year old birds remain in Australia rather than migrating north. Curlew Sandpipers mainly occur on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. They are also recorded inland, though less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand. They occur in both fresh and brackish waters. Occasionally they are recorded around floodwaters.	Low: No suitable habitat is present within the study area. No OEH Bionet records occur within a 10 km search area.	Low	No
<i>Gallinago hardwickii</i>	Latham's Snipe, Japanese Snipe	-	V	-	Latham's Snipe is a non-breeding visitor to south-eastern Australia and is a passage migrant through northern Australia. The species has been recorded along the east coast of Australia from Cape York Peninsula through to south-eastern South Australia. In Australia, Latham's Snipe occurs in permanent and ephemeral wetlands up to 2000 m above sea-level. They usually inhabit open, freshwater wetlands with low, dense vegetation (e.g. swamps, flooded grasslands or heathlands, around bogs and other water	Low: No suitable habitat is present within the study area. No OEH Bionet records occur within a 10 km search area.	Low	No

TEC Name		BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					bodies). However, they can also occur in habitats with saline or brackish water, in modified or artificial habitats, and in habitats located close to humans or human activity. The structure and composition of the vegetation that occurs around these wetlands is not important in determining the suitability of habitat (Naarding 1983).			
Migratory Marine Birds								
Apus pacificus	Fork-tailed Swift	-	M	-	In NSW, the Fork-tailed Swift is recorded in all regions. Many records occur east of the Great Divide, however, a few populations have been found west of the Great Divide. These are widespread but scattered further west of the line joining Bourke and Dareton. Sightings have been recorded at Milparinka, the Bulloo River and Thurloo Downs (Higgins 1999). The Fork-tailed Swift is almost exclusively aerial, flying from less than 1 m to at least 300 m above ground and probably much higher. In Australia, they mostly occur over inland plains but sometimes above foothills or in coastal areas. They often occur over cliffs and beaches and also over islands and sometimes well out to sea. They also occur over settled areas, including towns, urban areas and cities. They mostly occur over dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh. They are also found at treeless grassland and sandplains covered with spinifex, open farmland and inland and coastal sand-dunes. The sometimes occur above rainforests, wet sclerophyll forest or open forest or plantations of pines (Higgins 1999). They forage aerially, up to hundreds of metres above ground, but also less than 1 m above open areas or over water.	Low: No suitable habitat is present within the study area. No OEH Bionet records occur within a 10 km search area.	Low	No

Key:

V = Vulnerable M = Migratory A = Marine

E = Endangered CE = Critically Endangered P = Protected

K = Known where there are confirmed records, specimens or otherwise verified sightings in any CMA subregion overlapping the search area

P = Predicted where there is high expectation by relevant experts that a species is likely to be present in any CMA subregion overlapping the search area, based on known presence of suitable habitat and distribution with adjoining subregions

1 – NSW BioNet Atlas, Office of Environment and Heritage (Accessed 22-04-2025).

2 – Commonwealth Protected Matters Search Tool, Department of the Environment (Accessed 22-04-2025).

5.3 Other Legislative Considerations

5.3.1 Key Threatening Processes

A Key Threatening Process (KTP) is defined in the BC Act as a process that “adversely affects threatened species or ecological communities, or it could cause species or ecological communities that are not threatened to become threatened.” They are listed under Schedule 4 of the BC Act and may adversely affect threatened species, populations or ecological communities or could cause species, populations or ecological communities that are not threatened to become threatened.

Four (4) KTP's have the potential to operate on site and require consideration under the site proposal:

1. Anthropogenic Climate Change
2. Clearing of native vegetation
3. Infection of native plants by *Phytophthora cinnamomi*
4. Invasion, establishment and spread of Lantana (*Lantana camara* L. sens. lat)

Anthropogenic Climate Change

Modification of the environment by humans is considered to contribute to Climate Change and as a result has been listed as a Key Threatening Process. Land use change and construction processes which will occur as a result of the Project are actions that can contribute to greenhouse gas emissions. This may indirectly impact upon known or potentially occurring threatened species as most species depend on climate for their distribution.

The proposal seeks the selective removal of 0.25 ha of native vegetation within the subject land. On this basis, the proposal is unlikely to make a significant contribution to the local climate such that alterations resulting in impacts on locally occurring threatened species, populations or ecological communities would occur.

Clearing of native vegetation

The KTP final determination lists nine factors that have the potential to impact to species distribution or result in extinction. These factors are:

- destruction of habitat resulting in loss of local populations or individual species;
- fragmentation;
- expansion of dryland salinity;
- riparian zone degradation;
- increased greenhouse gas emissions;
- increased habitat for invasive species;
- loss of leaf litter layer;
- loss or disruption of ecological function; and
- changes to soil biota.

The proposed dwelling has been positioned in a previously cleared location to minimise impact. The native canopy within the subject land will be subject to selective removal to correspond with APZ requirements. In total, the proposal will result in the removal of 0.27 ha of native rain forest and 1.41 ha of disturbed pasture, however, no habitat trees are proposed to be removed. Therefore, the removal of vegetation due to the proposed development is unlikely to contribute further to the loss of populations or individuals resulting in extinction.

No new points of fragmentation or connectivity will result from the proposal.

The proposal will have a minor impact on increasing greenhouse gas emissions and a minor loss on leaf litter layer due to the loss of vegetation within the site.

The proposal will have a minor impact on ecological function and soil biota of an already disturbed patch of exotic vegetation.

Infection of native plants by *Phytophthora cinnamomi*.

The soil born pathogen *Phytophthora cinnamomi* spreads in plant roots and has been known to infect a number of native plants. There was no evidence observed of *P. cinnamomi* impact on site during the survey period. Control measures should be enforced during site works to ensure infected materials are not introduced to the site (refer to **Section 6**). On the condition that such management measures are adhered to, it is unlikely that the proposal will contribute to this KTP.

Invasion, establishment and spread of *Lantana* (*Lantana camara* L. sens. lat)

The species was not recorded within the subject land; however, it was observed within other areas of the site. Control measures should be enforced during site works to ensure infected materials are not introduced to the site (refer to **Section 6**). On the condition that such management measures are adhered to, it is unlikely that the proposal will contribute to this KTP

5.3.2 SEPP (Biodiversity and Conservation) 2021

The *State Environmental Planning Policy (Biodiversity and Conservation) 2021* commenced on 1 March 2022 and combines 11 separate SEPPs into one consolidated document. SEPP (Biodiversity and Conservation) 2021 replaces and repeals those consolidated SEPPs, which includes amongst others, both the SEPP (Koala Habitat protection) 2020 and SEPP (Koala Habitat protection) 2021. The Biodiversity and Conservation SEPP 2021 provides the existing provisions as separate chapters.

The principles of the Biodiversity and Conservation SEPP 2021 are unchanged from the previous Koala SEPP 2020 and 2021 and aim to:

- Encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline.
- Help reverse the decline of koala populations by ensuring koala habitat is properly considered during the development assessment process.
- Provide a process for councils to strategically manage koala habitat through the development of koala plans of management.

The Biodiversity and Conservation SEPP 2021 reflects the policy framework of previous Koala SEPP 2020 (Chapter 3) and 2021 (Chapter 4) for Local Government Areas (LGA) in NSW. At this stage:

- In nine of these LGAs – Metropolitan Sydney (Blue Mountains, Campbelltown, Hawkesbury, Ku-Ring-Gai, Liverpool, Northern Beaches, Hornsby, Wollondilly) and the Central Coast LGA – **Chapter 4** of the Biodiversity and Conservation SEPP 2021 applies to **all zones**.
- In all other identified LGAs, **Chapter 3** of the Biodiversity and Conservation SEPP 2021 **applies** to land zoned RU1 Primary Production, RU2 Rural Landscape or RU3 Forestry.

The SEPP applies in accordance with *Part 3.2 Clause 3.5 – Land to which this part applies*

1.5 This part applies to land-

- a) *That is land to which this chapter applies, and*

- b) *That is land in relation to which a development application has been made, and*
- c) *That, whether or not the development application applies to the whole, or only part, of the land –*
 - i. *Has an area of more than 1 hectare, or*
 - ii. *Has, together with adjoining land in the same ownership, an area of more than 1 hectare.*

The subject land is adjoined to an area of more than 1 hectare.

1.6 Step 1– Is the land potential koala habitat?

- 1) *Before a council may grant consent to a development application for consent to carry out development on land to which this Part applies, the council must be satisfied as to whether or not the land is a potential koala habitat.*
- 2) *The council may be satisfied as to whether or not land is a potential koala habitat only on information obtained by it, or by the applicant, from a person who is qualified and experienced in tree identification.*
- 3) *If the council is satisfied-*
 - a) *That the land is not a potential koala habitat, it is not prevented, because of this Chapter, from granting consent to the development application, or*
 - b) *That the land is a potential koala habitat, it must comply with section 3.7.*

Tree species listed in Schedule 1 do not constitute at least 15% of the total number of trees in the upper or lower strata of the tree component, therefore, no potential koala habitat was recorded as being present within the site.

1.7 Step 2- Is the land core koala habitat?

- 1) *Before a council may grant consent to a development application for consent to carry out development on land to which this Part applies that it is satisfied is a potential koala habitat, is must satisfy itself as to whether or not the land is a core koala habitat.*
- 2) *The council may be satisfied as to whether or bit land is core koala habitat only on information obtained by it, or by the applicant, from a person with appropriate qualifications and experience in biological science and fauna survey and management.*
- 3) *If the council is satisfied-*
 - a) *That the land is not a core koala habitat, it is not prevented, because of this Chapter, from granting consent to the development application, or*
 - b) *That the land is a core koala habitat, it must comply with Section 3.8.*

No core koala habitat was recorded as being present within the site.

Based on the criteria above, a Koala Assessment Report (KAR) is not required to accompany the development application.

5.3.3 Commonwealth EPBC Act

The Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) Test determines whether an action is likely to have a significant impact on a Matter of National Environmental Significance (MNES). Subsequently, it informs whether a proposed development requires the submission of a referral to the Australian Government Department of the Environment for a decision by the Australian Government Environment Minister on whether assessment and approval is required under the EPBC Act.

An EPBC Act Protected Matters Search (accessed 22-04-2025) was undertaken to generate a list of those MNES from within 10 km of the subject land. An assessment of those MNES relevant to biodiversity has been undertaken in accordance with EPBC Act Policy Statement 1.1 Significant Impact Guidelines Matters of National Environmental Significance (DoE, 2013 – refer to **Appendix E**). The Matters of National Environmental Significance protected under national environment law include:

- Listed threatened species and communities;
- Listed migratory species;
- Ramsar wetlands of international importance;
- Commonwealth marine environment;
- World heritage properties;
- National heritage places;
- The Great Barrier Reef Marine Park;
- Nuclear actions; and
- A water resource, in relation to coal seam gas development and large coal mining development.

Listed Threatened Species and Communities

A total of 56 threatened species and 5 threatened ecological communities were listed under the EPBC Act as having been recorded on the protected matters search. A likelihood of occurrence assessment for these MNES has been completed in **Section 5.2**.

The likelihood of occurrence assessment found the following species listed under the EPBC Act to have a moderate likelihood of occurrence within the site, and potential impacts;

- *Dasyurus maculatus* – Spotted-tailed Quoll (E)
- *Phascolarctos cinereus* – Koala (E)

The EPBC Act Test of Significance concluded that the proposal is unlikely to significantly impact the listed species (See **Appendix E**).

No Threatened Ecological Communities listed under the EPBC Act have been recorded within the site or have been identified within any areas that have potential to be affected by indirect impacts.

Listed Migratory Species

The protected matters search nominated 10 migratory species or species habitat that may occur with the 10 km site buffer search area. Although migratory species may occupy and utilise various habitats throughout the site and locality, no habitat within the subject land is critical to their survival. Therefore, it is unlikely that the proposal over the site will impact migratory species.

Wetlands of International Significance (declared Ramsar wetlands):

The site is not a wetland of international significance or declared Ramsar wetland with the nearest declared wetland occurring 65 km to the southeast.

Commonwealth Marine Areas:

The site is not part of any Commonwealth Marine Areas.

World Heritage Properties:

The site is not a World Heritage area and is not in close proximity to any such area.

National Heritage Places:

The site is not a National Heritage area and is not in close proximity to any such area.

Great Barrier Reef Marine Parks:

The site is not part of or within close proximity to any Great Barrier Reef Marine Park.

Nuclear Actions:

The proposal over the site is not and does not form part of a Nuclear action.

Water Resources in relation to Coal Mining and CSG:

The proposal over the site is related to land development and as such is not or does not form part of a coal mining and/or CSG proposal.

Summary

In summary the proposed action is unlikely to have an impact to MNES considered under this report, and as such Commonwealth referral under the EPBC Act is not required.

6 Recommendations

The following recommendations have been generated with consideration to the proposed development at Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2 DP753208), 1566 Chichester Road, Chichester NSW.

General Mitigation Measures for the Construction Phase

The following mitigation measures have been provided for implementation to ensure best practice environmental management throughout the construction phase, including appropriate location and management of construction materials:

- Demarcate subject land boundary with visible flicker tape or temporary fencing to ensure no impacts occur to retained vegetation adjacent to the site;
- Implement Tree Protection Zones surrounding trees located along the boundary of the subject land;
- All contractors will be specifically advised of the designated work area. The following activities are not to occur outside of designated work areas to minimise environmental impacts:
 - Storage and mixing of materials;
 - Liquid disposal;
 - Machinery repairs and/or refuelling;
 - Combustion of any material; and
 - Any filling or excavation including trenching, topsoil skimming and/or surface excavation.
- All construction vehicles/machinery are to use the designated access from main roads. Speeds will be limited to reduce the potential of fauna strike and to reduce dust generation;
- Plant and machinery would be cleaned of any foreign soil and seed prior to being transported to the site to prevent the potential spread of weeds and *Phytophthora cinnamomi*;
- If machinery is transported from an area of confirmed infection of *Phytophthora cinnamomi* to the site, stringent wash down must be completed before leaving the area, removing all soil and vegetative material from cabins, trays, and under carriages;
- All liquids (fuel, oil, cleaning agents, etc.) will be stored appropriately and disposed of at suitably licensed facilities. Spill management procedures will be implemented as required; and
- Rubbish will be collected and removed from the site.

Tree Removal

- Prior to clearing, trees to be retained in the APZ in accordance with NSW RFS criteria, are to be identified with highly visible tape. Preference is to be given to mature trees.
- At the time of clearing, an ecologist be available to mobilise onsite to provide animal welfare as required.

Erosion and Sedimentation Control

Erosion and sediment control measures shall be implemented in accordance with the approved Sediment and Erosion control plan to be prepared prior to commencement of civil works on site. In general, erosion and sediment control measures include:

- Identification of potential erosion areas;
- Installation and maintenance of flow, erosion, sediment and nutrient control within the site during construction ahead of pavement and kerb establishment;

- Separation of 'dirty' construction water from the 'clean' natural overland flow water;
- Coordinated work practices aimed at minimising land disturbance;
- Minimise vegetation disturbance to surrounding retained vegetation; and
- Routine site inspections of drains, channels, sediment control structures and water quality.

Weed Control

- Control the establishment of weeds on the development site which could spread into adjacent native vegetation or affect watercourses.

7 Conclusion

MJD Environmental has been engaged by S Hicks & S Cutler c/- Derive A&D to prepare a Biodiversity Assessment Report to accompany a Development Application (DA) to be submitted to Dungog Shire Council for the erection of a residential dwelling at Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2 DP753208), 1566 Chichester Road, Chichester, NSW.

The objective of the assessment was also to examine the likelihood of the proposal having a significant effect on any threatened species, populations or ecological communities listed under the *NSW Biodiversity Conservation Act 2016* (BC Act). This assessment recognises the relevant requirements of the *EP&A Act 1979* as amended by the *NSW Environmental Planning and Assessment Amendment Act 1997*. Preliminary assessment was also made with regard to those threatened entities listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

An appraisal of the subject land to determine the appropriate assessment pathway under the BC Act determined the proposal on site does not trigger a Biodiversity Offset Scheme (BOS) entry threshold and on this basis an assessment of significance is required including application of the 5-part test.

The ecological field assessment found the maximum associated impacts to comprise of:

- 0.27 ha of PCT 3091: *Lower North Waterhousea-Water Gum Rainforest*
- 1.41 ha of exotic pasture

Communities

There are no Threatened Ecological Communities (TECs) associated with the delineated PCT on site.

Flora

No threatened flora species listed under the BC Act and EPBC Act were recorded within the subject land.

Fauna

No threatened flora species listed under the BC Act and EPBC Act were recorded within the subject land. No hollow bearing trees were recorded within the subject land.

An ecological impact assessment test of significance considered whether the removal of native vegetation on site, totalling 0.27 ha, would constitute a significant impact on known threatened species, populations, and ecological communities from the locality such that a local extinction may occur (5 Part Test).

The assessment concluded that the proposal was unlikely to have a significant impact on the threatened entities assessed.

Recommendations have been provided to mitigate potential impacts arising from the construction phase of the proposal.

8 References & Bibliography

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NSW OEH Threatened Species Profile Search -
<http://www.environment.nsw.gov.au/threatenedSpeciesApp/> (accessed April 2025)

Appendix A Plan of Proposal



1 SITE LOCATION PLAN
1:5000@A1 / 1:10000@A3

NOTE: AREAS SHOWN IN SOLID GREEN HATCH FORM SUBJECT PROPERTY





1 PART SITE PLAN
- 1:1250@A1 / 1:2500@A3

A DA ISSUE TO DUNGOOG SHIRE COUNCIL 25.09.25



CLIENT
S CUTLER + S HICKS

ADDRESS
1566 CHICHESTER ROAD CHICHESTER
Lot 1 DP 1321283 (Consolidation of Lots 2,23 & 82 in DP 753208)

DRAWING TITLE
PART SITE PLAN
PROJECT
CHICHESTER FARMHOUSE

REF
DD393

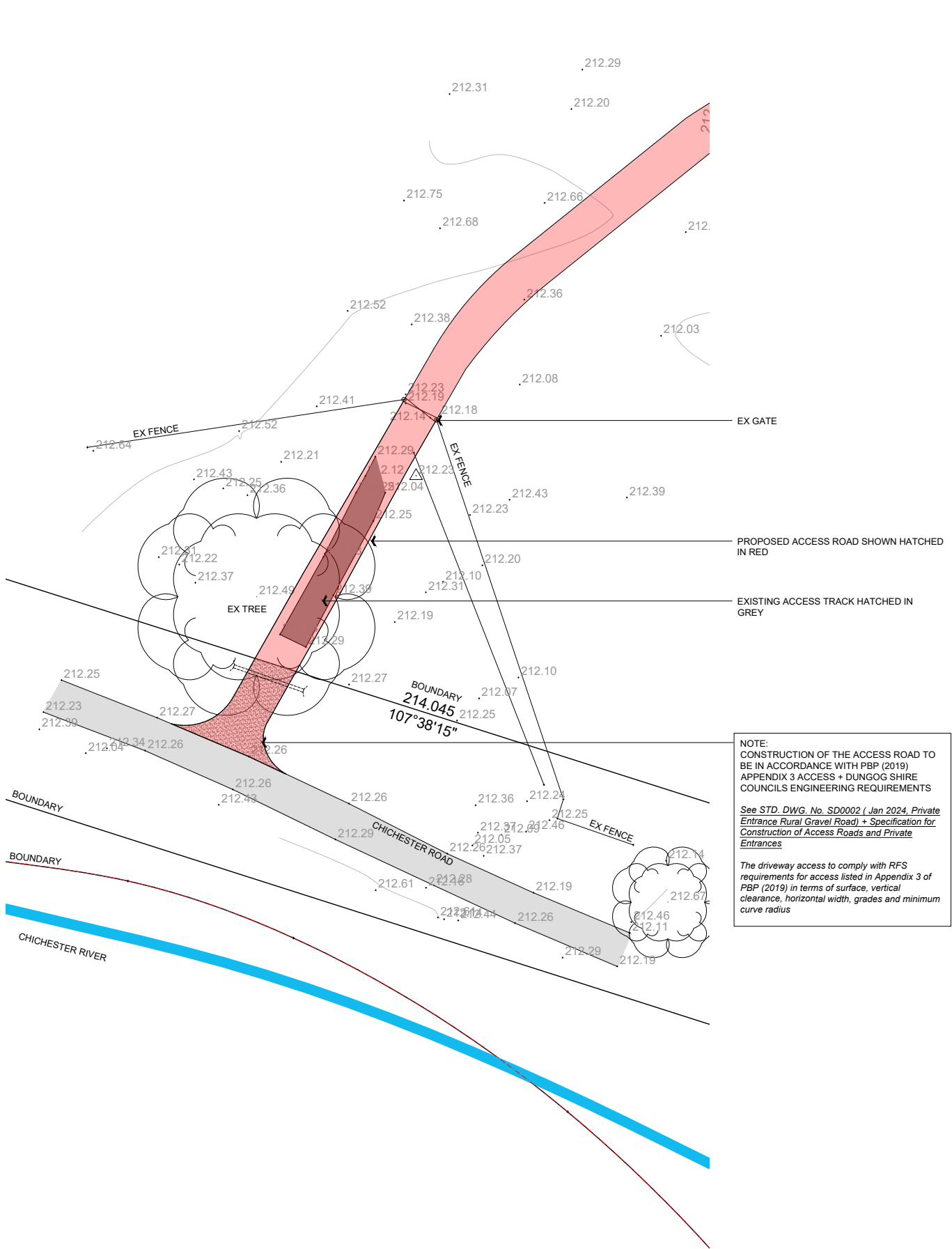
SCALE
1:2500@A3

A002

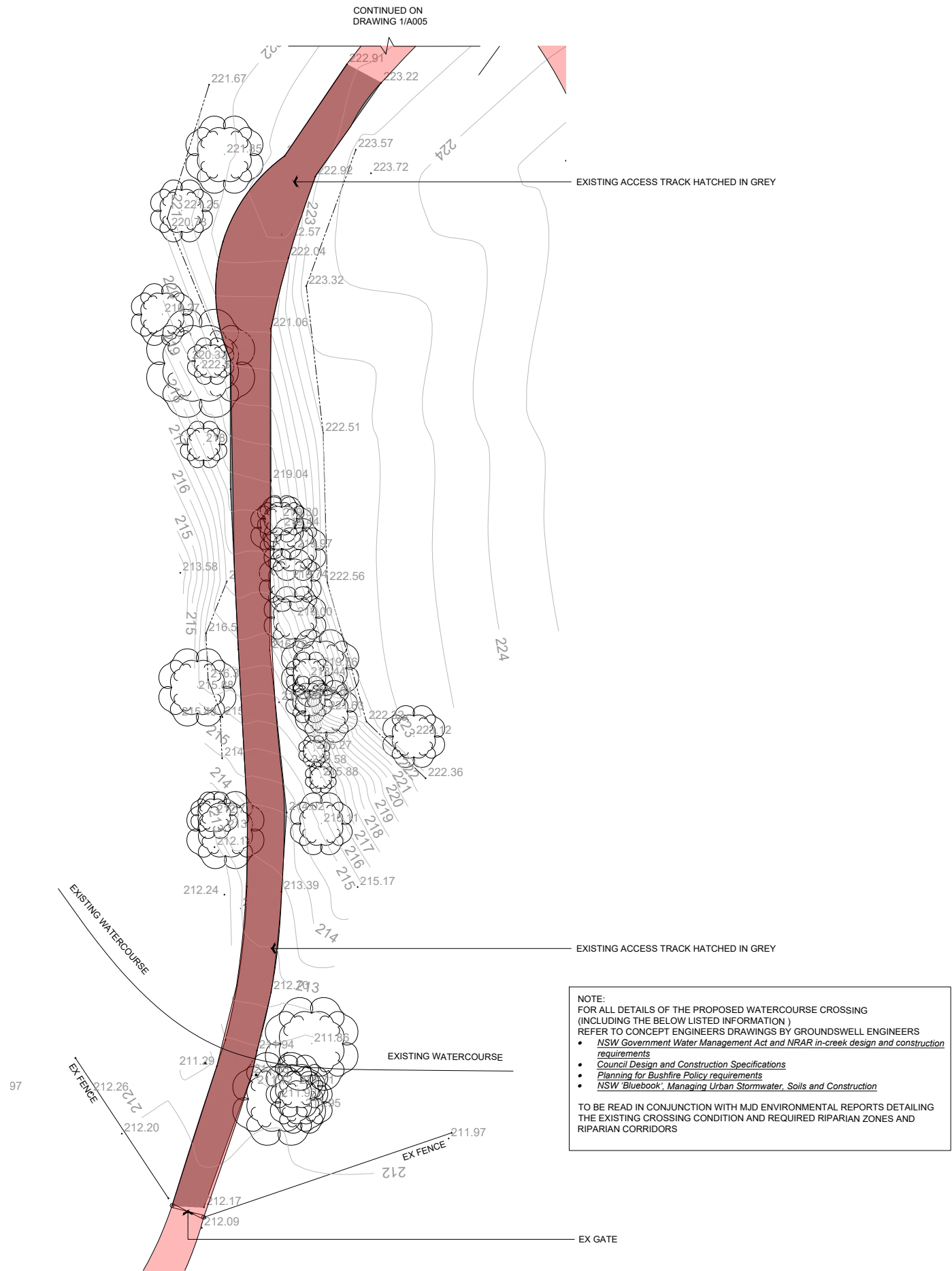
DERIVE / ARCHITECTURE
& DESIGN

CONCEPTS AND INFORMATION CONTAINED IN THIS DRAWING ARE COPYRIGHT AND MAY NOT BE REPRODUCED IN WHOLE OR PART OR BY ANY MEDIUM, WITHOUT THE WRITTEN PERMISSION OF DERIVE DESIGN. DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY. VERIFY ALL PROJECT DIMENSIONS BEFORE COMMENCING ON-SITE WORK OR OFF-SITE FABRICATION. NOTIFY DERIVE DESIGN OF ANY DISCREPANCIES AND SEEK INSTRUCTIONS.

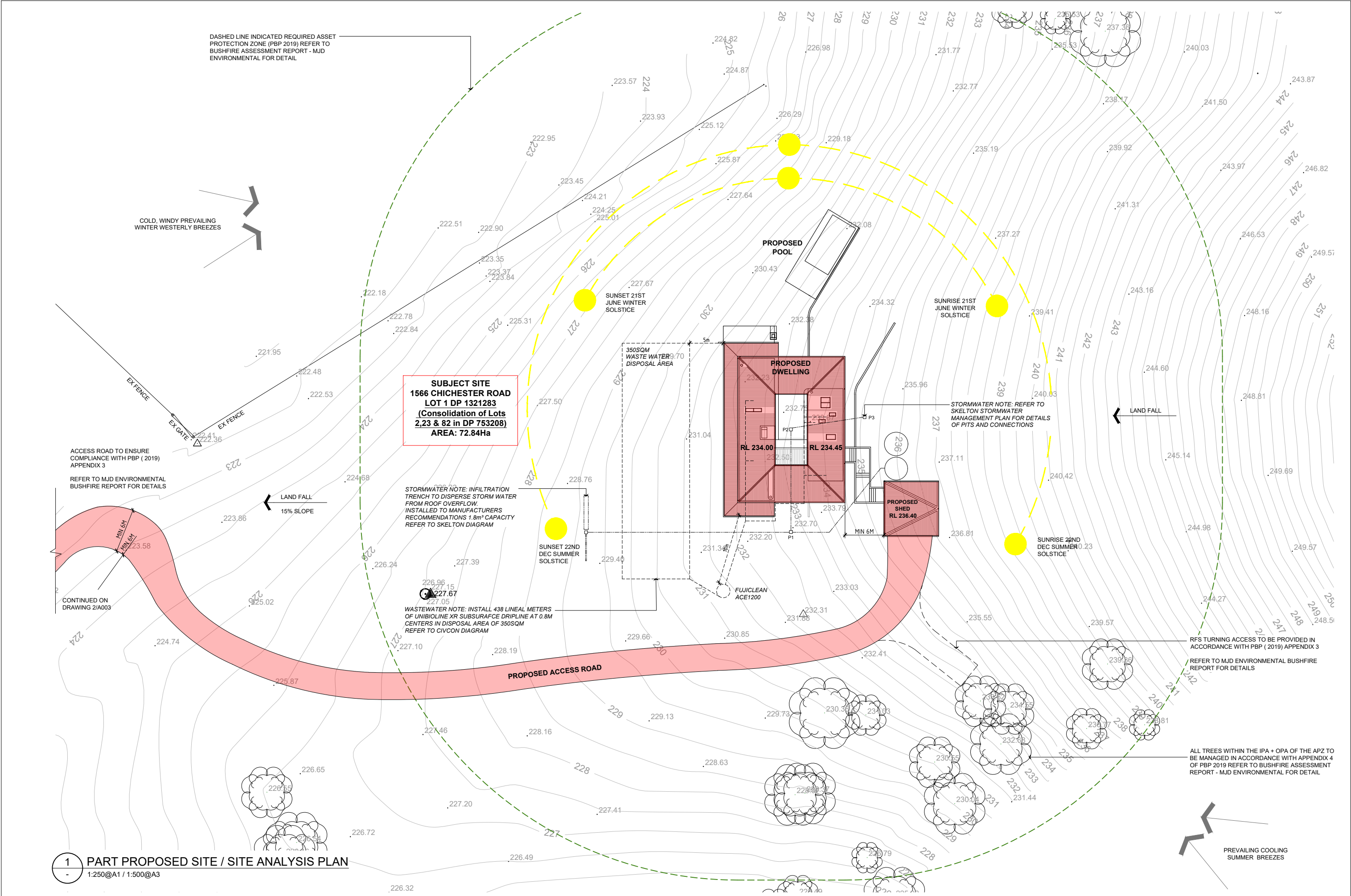
NOMINATED ARCHITECT JASON ELSLEY (8819) ABRN 62108638491



1 PROPOSED ACCESS ROAD - PART PLAN
A002 1:250@A1 / 1:500@A3



2 CROSSING DIAGRAM - PART PLAN
A002 1:250@A1 / 1:500@A3



Appendix B Flora Species List

Flora		
Family	Scientific Name	Common Name
Apiaceae	<i>Centella asiatica</i> *	Indian Pennywort
Apocynaceae	<i>Asclepias curassavica</i> *	Blood Flower
Asteraceae	<i>Conyza bonariensis</i> *	Flaxleaf Fleabane
	<i>Senecio madagascariensis</i> *	Fireweed
Campanulaceae	<i>Pratia purpurascens</i>	Whiteroot
Dennstaedtiaceae	<i>Pteridium esculentum</i>	Bracken
Fabaceae (Faboideae)	<i>Trifolium repens</i> *	White Clover
Fabaceae (Mimosoideae)	<i>Acacia floribunda</i> *	White sally wattle
	<i>Acacia melanoxylon</i>	Blackwood
	<i>Acacia spp.</i>	
Lomandraceae	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
Loranthaceae	<i>Amyema congener</i>	Variable Mistletoe
Meliaceae	<i>Toona ciliata</i>	Red Cedar
Myrtaceae	<i>Eucalyptus saligna</i>	Sydney Blue-gum
Plantaginaceae	<i>Plantago lanceolata</i> *	Plantain
Poaceae	<i>Axonopus fissifolius</i> *	Narrow-leafed Carpet Grass
	<i>Cenchrus clandestinus</i> *	Kikuyu Grass
	<i>Cymbopogon refractus</i>	Barbed Wire Grass
	<i>Cynodon dactylon</i>	Common Couch
	<i>Echinopogon caespitosus</i>	Bushy Hedgehog-grass
	<i>Eragrostis brownii</i>	Brown's Lovegrass
	<i>Eragrostis curvula</i> *	African Lovegrass
	<i>Imperata cylindrica</i>	Blady Grass
	<i>Microlaena stipoides</i>	Weeping Grass
	<i>Oplismenus aemulus</i>	Basket grass

	<i>Paspalum plicatulum</i>	
	<i>Sporobolus creber</i>	Slender Rat's Tail Grass
	<i>Rubus fruticosus</i> *	Blackberry complex
Rosaceae	<i>Rubus rosifolius</i>	Rose-leaf Bramble
Solanaceae	<i>Nicotiana glauca</i> *	Tree Tobacco
Verbenaceae	<i>Verbena rigida</i> *	Veined Verbena

*exotic species

Appendix C Fauna Species List

Scientific Name	Common Name	BC Act	EPBC Act
Birds			
<i>Malurus cyaneus</i>	Superb Fairy Wren	-	-
<i>Macropus giganteus</i>	Eastern Grey Kangaroo	-	-
<i>Calyptrorhynchus funereus</i>	Yellow-tailed Black Cockatoo	-	-
<i>Bos taurus</i>	Domestic Cattle	-	-
<i>Uperoleia fusca</i>	Dusky Toadlet	-	-

Appendix D Test of Significance (5-part Test)

Section 7.3 of the BC Act lists five factors that must be taken into account in the determination of whether proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats' (threatened biota) listed under the BC Act. The '5-part test' is used to determine whether there is likely to be a significant effect on threatened species, populations or ecological communities, or their habitats and thus whether the Biodiversity Offset Scheme will apply to the proposed development in which case a Biodiversity Development Assessment will be required.

The significance of the impacts on those threatened entities which have been recorded in the site or are likely to occur or utilise habitat to be potentially impacted by the proposal (see **Table 3**) have been assessed. The following threatened species and ecological community have been considered:

Fauna

- *Dasyurus maculatus* – Spotted-tail Quoll (V)
- *Phascolarctos cinereus* – Koala (E)

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

Fauna

- *Dasyurus maculatus* – Spotted-tail Quoll

No individuals of this were detected during field survey. Nine OEH Bionet records occur within a 10 km radius. The subject land may provide marginal foraging habitat but habitat for den sites is absent. However, potential den sites in the form of fallen logs are present within more intact vegetated areas of the lot. Owing to the available habitat within the locality and mobile nature of the species, potential impacts as a result of the proposal are unlikely to have an adverse effect on the life cycle of the species.

- *Phascolarctos cinereus* – Koala

No individuals of this species were detected during field surveys. There are 10 OEH Bionet records within 10 km of the subject land. The subject land provides the species with marginal foraging habitat represented by limited eucalypt canopy individuals. However, no feed tree species listed within Schedule 2 the SEPP (Biodiversity and Conservation) 2021 and given the availability of preferred feed tree species within the broader region, it is unlikely that the limited number of *Eucalyptus saligna* (Sydney Blue-gum) individuals that are present within the subject land are used for foraging. Owing to the available habitat within the locality, the mobile nature of the species, protentional impacts as a result of the proposal are unlikely to have an adverse effect on the life cycle of the species.

- 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***
- 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.***
- 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.***

N/A

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;**

N/A

- ii. whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity; and**

No threatened species habitat was confirmed present within the subject land. The proposal will remove occupancy of foraging habitat to 15% canopy cover within the subject site to comply with APZ standards. The proposal will not create new points of fragmentation or disrupt connectivity within the broader landscape.

d) Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value

No declared areas of outstanding biodiversity value occur within the site or within 10 km of the locality.

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.

A Key Threatening Process (KTP) is listed under Schedule 4 of the BC Act. KTPs considered relevant to the proposal is described in **Section 5.3.1**. This assessment concluded that the proposal was unlikely to trigger KTPs currently not operating on site and/or not significantly contribute to or increase the activity of a KTP operating on the site.

Appendix E EPBC Act Test of Significance

EPBC Listed Vulnerable Species

<i>Dasyurus maculatus</i> (Spotted-tailed Quoll)	Vulnerable
Significant Impact Guideline	Assessment
Lead to a long-term decrease in the size of an important population of a species	Based on the Approved Conservation Advice for the species (DEE 2020), the area of occupancy is extensive, with home ranges for females occurring over 200-500 ha and 500 to over 4000 ha for males. No priority sites occur within the study area however, given the topography of the local region, contiguous intact vegetation and species records within a 10 km search area, suitable breeding habitat has potential to occur within the lot. However, the proposal is situated over a previously cleared area that contains pasture with canopy species along the outskirts of the proposed APZ. The total impact footprint equates to an area of 1.68 ha of disturbed vegetation that is absent of breeding habitat due to the lack of fallen tree hollows. The species is known to be highly cryptic, occurring within areas that are remote. No areas within the subject land were identified as being suitable breeding habitat for the species, though the species may occasionally traverse through. Therefore, the proposal is unlikely to lead to a long-term decrease in the size of an important population of the species.
Reduce the area of occupancy of an important population	No, vegetation within the subject land is not considered suitable habitat given the absence of fallen tree hollows. Furthermore, VZ1 will only be reduced in order to meet APZ requirements.
Fragment an existing important population into two or more populations	No, the small size of the subject land and its location from obtained records within 10 km of the subject land will not fragment an existing important population
Adversely affect habitat critical to the survival of a species	No, the proposal will not adversely affect habitat critical to the species. No old growth forest stands will be impacted by the proposal.
Disrupt the breeding cycle of an important population	No, see above.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	As no suitable habitat will be impacted by the proposal, the species is unlikely to decline as a result.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	It is likely that exotic predators to the species already exist within the area and it is unlikely that predation will increase as a result of the proposal. Nonetheless, environmental safeguards for the management of biosecurity risks should be implemented to reduce these risks to a low level.
Introduce disease that may cause the species to decline	As above, environmental safeguards for the management of biosecurity risks should be implemented to reduce these risks to a low level.
Interfere with the recovery of the species.	As per the Conservation Advice for this species, the proposed development will not contribute to known threats for the species. The proposal is unlikely to impact the species recovery at a regional population scale.
Conclusion	Non-significant impact

EPBC Listed Endangered Species

<i>Phascolarctos cinereus</i> (Koala)	Endangered
Significant Impact Guideline	Assessment
Lead to a long-term decrease in the size of a population of a species	As per the Conservation Advice, the species is eligible for listing in the Endangered category due to the rapid decline of the species. It is estimated that the species has a decline rate of 45 percent over the relevant three generation moving window. This estimation excludes the impact of the 2019-2020 bushfires. The proposal will impact up to 0.27 ha of native vegetation with the subject land containing marginal foraging habitat for the species. Canopy within the subject land is primarily <i>Acacia melanoxylon</i> (Black Wood) with a low abundance of <i>Eucalyptus saligna</i> (Sydney Blue-gum). <i>Eucalyptus saligna</i> is listed as a Koala use tree species within Schedule 3 of the <i>Biodiversity and Conservation SEPP 2021</i>, though, removal of the species within the subject land will be selective to meet APZ standards only and most, if not all trees belonging to this species will be retained. The species is known to have a relatively large home range of 3 > 500 ha. Given the small portion of potential koala use trees being removed, it is unlikely the proposal would lead to a long-term decrease in the size of the local population.
Reduce the area of occupancy of the species	No, the proposal will involve the selective removal of canopy species to achieve APZ standards. Given that <i>Eucalyptus saligna</i> (Sydney Blue-gum) occurs at a low abundance and is the only koala use tree within the APZ, there is potential to retain most individuals of the species that occur within the APZ. It is unlikely the proposal will result in a significant reduction of the area of occupancy.
Fragment an existing important population into two or more populations	No, the proposal will not result in fragmentation of the local population.
Adversely affect habitat critical to the survival of a species	No, given the availability of higher quality habitat within the broader region it is unlikely that the selective removal of koala use trees would adversely affect habitat critical to the survival of the species. .
Disrupt the breeding cycle of a population	No, see above.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	No, the proposal will impact 0.27 ha of potential foraging habitat, however, not to the extent that the species is likely to decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the endangered species' habitat	Given the nature of the proposal, it is unlikely to result in an increase in invasive species that are harmful to the species. Environmental safeguards for the management of biosecurity risks should be implemented to reduce risks to a low level.
Introduce disease that may cause the species to decline	As above, environmental safeguards for the management of biosecurity risks should be implemented to reduce risks to a low level.
Interfere with the recovery of the species.	As per the Conservation Advice, clearing and degradation of koala habitat, encounters with vehicles and dogs and the inadvertent spread of Koala retrovirus (KoRV) and Chlamydia (<i>Chlamydia pecorum</i>) pose a risk to the recovery of the species. Based on this information, the proposal is unlikely to impact the species recovery at a regional population scale.
Conclusion	Non-significant impact