



# Coppabella Mine Project - MNES Terrestrial Ecology Report

13 February 2024

Peabody Energy Australia Pty Ltd

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# Document Management

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# Definitions

Term	Definition
Disturbance Footprint	Portion of the Study Area in which the Coppabella Mine Project will be located.
Non-remnant vegetation	All vegetation that is not mapped as remnant vegetation. May include regrowth, heavily thinned or logged and significantly disturbed vegetation that fails to meet the structural and/ or floristic characteristics of remnant vegetation. It also includes urban and cropping land (Neldner et al., 2022).
Regional ecosystem	A vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil (Neldner et al., 2022) Regional Ecosystems are described in the Regional Ecosystem Description Database, produced by the Queensland Herbarium.
Regrowth	Non-remnant vegetation that has a significant woody component but fails to meet the structural and/or floristic characteristics of remnant vegetation. Includes vegetation that has regrown after clearing or been heavily thinned or logged (Neldner et al., 2022).
Remnant vegetation	A regional ecosystem that has not undergone recent clearing. It is defined under the <i>Queensland Vegetation Management Act 1999</i> as: forming the predominant canopy of the vegetation— (i) covering more than 50% of the undisturbed predominant canopy; and (ii) averaging more than 70% of the vegetation’s undisturbed height; and (iii) composed of species characteristic of the vegetation’s undisturbed predominant canopy.
Study Area	The area proposed for the Coppabella Mine Project and the adjoining landscape within Lot 1 on Plan SP107309, Lot 28 on Plan SP155252, Lot 4 on Plan SP144274, Lot 5270 on Plan SP144274 and Lot 2 on Plan SP113033.
The Project	Coppabella Mine Project
Threatened ecological community	An ecological community is a naturally occurring group of native plants, animals and other organisms that are interacting in a unique habitat. Its structure, composition and distribution are determined by environmental factors such as soil type, position in the landscape, altitude, climate and water availability. Threatened ecological communities are listed under the <i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i> .
Threatened species	A threatened species is any plant or animal species that is at risk of extinction. Species listed as extinct (EX), extinct in the wild (XW), critically endangered (CE), endangered (E), vulnerable (V) or conservation dependent (CD) under the <i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i> .
Vegetation community	An area of vegetation which is relatively uniform with respect to structure and floristic composition (Neldner et al., 2022).



# Abbreviations

Abbreviation	Description
ALA	Atlas of Living Australia
BAR	Bio-acoustic recorder
Biosecurity Act	Queensland <i>Biosecurity Act 2014</i>
BoM	Bureau of Meteorology
DAWE	Former Commonwealth Department of Agriculture, Water and the Environment (now DCCEEW)
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water
DES	Queensland Department of Environment and Science
DEWHA	Former Commonwealth Department of the Environment, Water, Heritage and the Arts (now DCCEEW)
DotE	Former Commonwealth Department of the Environment (now DCCEEW)
DoR	Department of Resources
E2M	E2M Pty Ltd
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
GDE	Groundwater dependent ecosystem
HVR	High value regrowth
LIKT	Locally important koala tree
LOO	Likelihood of occurrence
ML	Mining Lease
MDL	Mineral Development License
MNES	Matters of National Environmental Significance
MNES Guidelines	<i>EPBC Act Matters of National Environmental Significance: Significant Impact Guidelines 1</i>
Peabody	Peabody Energy Australia Pty Ltd
RE	Regional ecosystem
REDD	Regional Ecosystem Description Database
SAT	Spot assessment technique
SEWPaC	Former Commonwealth Department of Sustainability, Environment, Water, Population and Communities (now DCCEEW)
sp.	Singular species. For example, <i>Eucalyptus</i> sp. refers to a single species of <i>Eucalyptus</i>
spp.	Multiple species. For example, <i>Eucalyptus</i> spp. refers to multiple species of <i>Eucalyptus</i>



Abbreviation	Description
SPRAT	Species Profile and Threats Database
TEC	Threatened ecological community
TSSC	Threatened Species Scientific Committee
VM Act	Queensland <i>Vegetation Management Act 1999</i>
WoNS	Weeds of National Significance



# 1 Introduction

## 1.1 Purpose of document

This report provides information concerning terrestrial ecology values that are listed as Matters of National Environmental Significance (MNES) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This report has been prepared to be submitted as supporting documentation for an EPBC Act Referral for the Coppabella Mine Project (the Project). This report details the cumulative findings of a desktop assessment and field survey to assess the Project's proposed impacts on MNES and whether they are likely to constitute a significant impact defined in the *Significant Impact Guidelines 1.1* (MNES Guidelines).

## 1.2 Project background

Peabody Energy Australia Pty Ltd (Peabody) operates the Coppabella Mine, located 45 km north-east of the township of Moranbah. The mine currently operates within Mining Leases (MLs) 70164, 70161, 70236 and 70237. Peabody are seeking to develop additional areas within the current MLs as well as MLs 70384 to 70387, referred to herein as the Coppabella Mine Project. The Project also comprises the diversion of Humbug Gully Creek, situated north of the Mine and partially located within Mineral Development License (MDL) 494. The proposed watercourse diversion comprises three stages, utilising existing watercourses along the western extent of the MLs to connect with an unnamed tributary of Harrybrandt Creek (Figure 1).

E2M understands that Peabody has determined that land use within MLs 70164, ML 70161 and ML 70237 is permitted without further Commonwealth Government and Queensland State Government approval. However, assessment of MNES, including water resources in relation to a coal mining development, are likely to be required for proposed disturbance areas within ML 70236 and Stage 3 of the watercourse diversion within MDL 494. Accordingly, these areas are the primary focus of the assessment.

## 1.3 Area of assessment

The proposed 'Disturbance Footprint' applicable to the Referral comprises:

- the Stage 3 Humbug Gully diversion design plus a 100 m works buffer, located within MDL 494; and
- the balance of undisturbed land within ML 70236 (excluding existing disturbance and rehabilitated lands).

To suitably assess potential direct and indirect impacts to MNES within these areas, E2M has defined the 'Study Area' (depicted in Figure 1) as:

- a 500 m buffer of the Disturbance Footprint
- the extent of Humbug Gully and Harrybrandt Creek (plus a 100 m buffer either side of the watercourse) that is downstream of the Stage 1 and Stage 3 diversion works until they meet at the confluence point of both creeks; and
- arbitrary infill geometry that links the 500 m buffer areas of the Disturbance Footprint associated with Stage 3 and ML 70236.



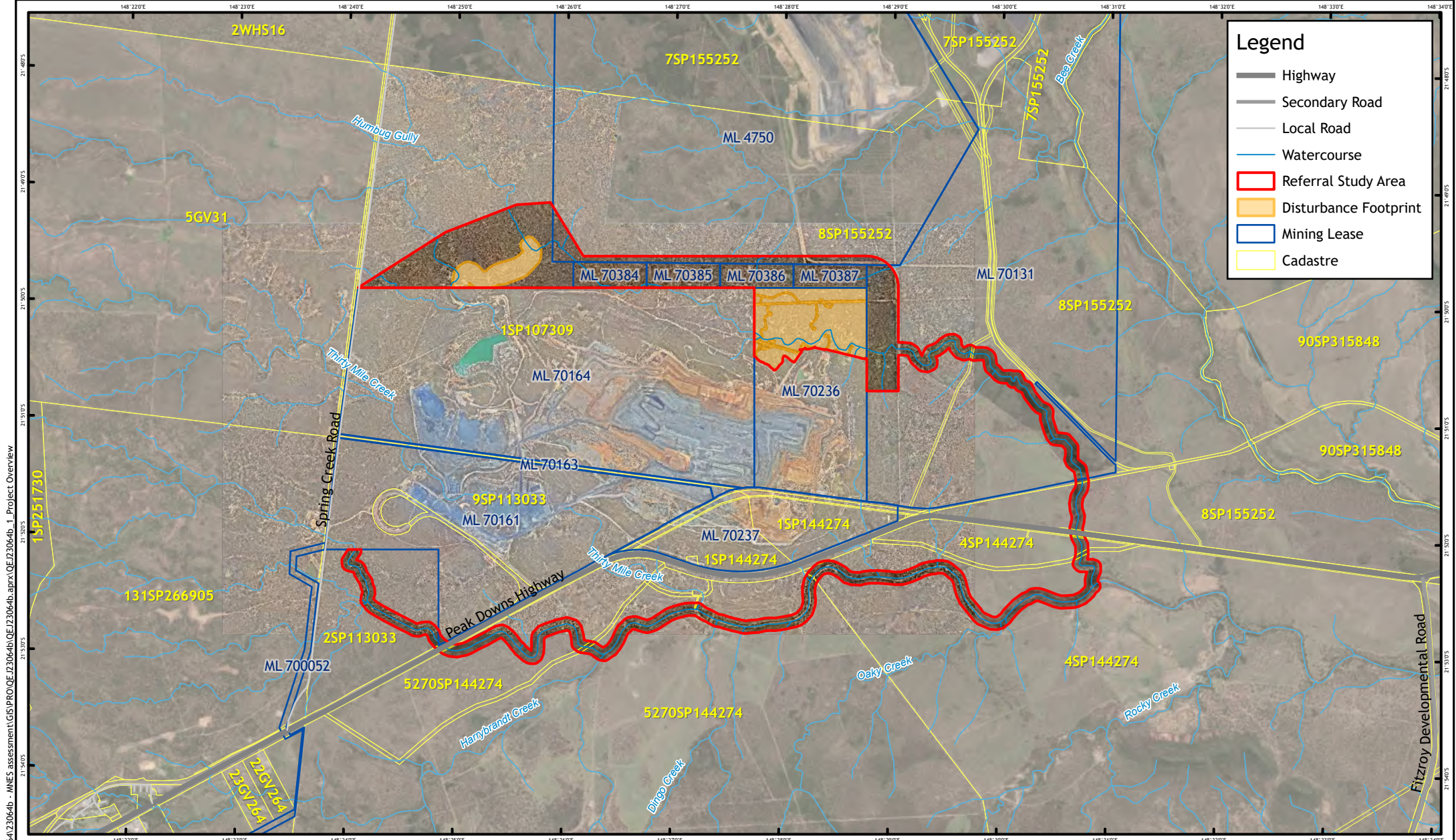


## 1.4 Scope

This report provides an ecological assessment to be submitted as supporting documentation to an EPBC Act Referral for the Project. This document includes the following items:

- methods undertaken during the desktop assessment and field survey
- ground-truthed regional ecosystems (REs) and threatened ecological communities (TECs), their condition, structure and composition, including a summary of the extent and area of each RE and TEC within the Study Area
- the presence and condition of fauna habitat, including likelihood of occurrence of EPBC Act-listed flora and fauna species; and
- self-assessment against the MNES Guidelines for MNES that are known or likely to occur within the Study Area.

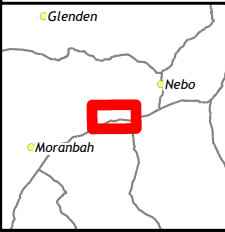




### Legend

- Highway
- Secondary Road
- Local Road
- Watercourse
- Referral Study Area
- Disturbance Footprint
- Mining Lease
- Cadastre

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## FIGURE 1: PROJECT OVERVIEW

Coppabella Mine Project  
 MNES Terrestrial Ecology Report  
 Peabody Energy

Map Number	Job Number	Rev
1 of 1	QEJ23064b	B

## 2 Environmental setting

### 2.1 Study Area description

The Study Area is situated in the agricultural and resources areas of the Isaac Region, located approximately 10 km north-east of the township of Coppabella. At a broad scale, the region primarily consists of remnant dry Eucalypt and Acacia woodlands, grazing lands, mining activities and regional townships (Figure 1).

The Study Area is located directly north of the Coppabella mine within associated MLs and consists mostly of remnant vegetation. The Study Area is situated on gently undulating plains of Cainozoic sand deposits, together with alluvial channels associated with Humbug Gully and Harrybrandt Creek. It is in the Isaac River sub-catchment and includes 6 km of Humbug Gully and 15 km of Harrybrandt creek. The Study Area consists mostly of eucalypt woodlands dominated by *Eucalyptus populnea*, *E. crebra* and/or *E. platyphylla*. There are areas associated with overland flow that are co-dominated by *Casuarina cristata* and *Acacia harpophylla*, as well as alluvial areas with a dominance of *Eucalyptus tereticornis*, *E. camaldulensis* and *Melaleuca* spp. Representative photographs of the Study Area are provided in Plate 1.

Infrastructure within the Study Area is limited to several unsealed access roads and cattle fencing. Larger stock yards, troughs and cleared grazing paddocks exist adjacent to the Study Area. The Study Area has historically been predominantly used for cattle grazing.



Plate 1: Section of Humbug Gully within the Disturbance footprint (left) and Harrybrandt Creek immediately after flow event within the Study Area (right)

## 2.2 Climate

The Study Area is in the seasonal dry tropics of central Queensland. The average annual rainfall is 562 mm, with most rain falling between November and March (BoM, 2023). Temperatures across the year range from a mean minimum of 8.8°C to a mean maximum of 35.0°C (Moranbah Airport (station 34035) about 40 km north of the Study Area) (BoM, 2023a, BoM, 2023b). Long-term climate statistics are depicted in Figure 2.

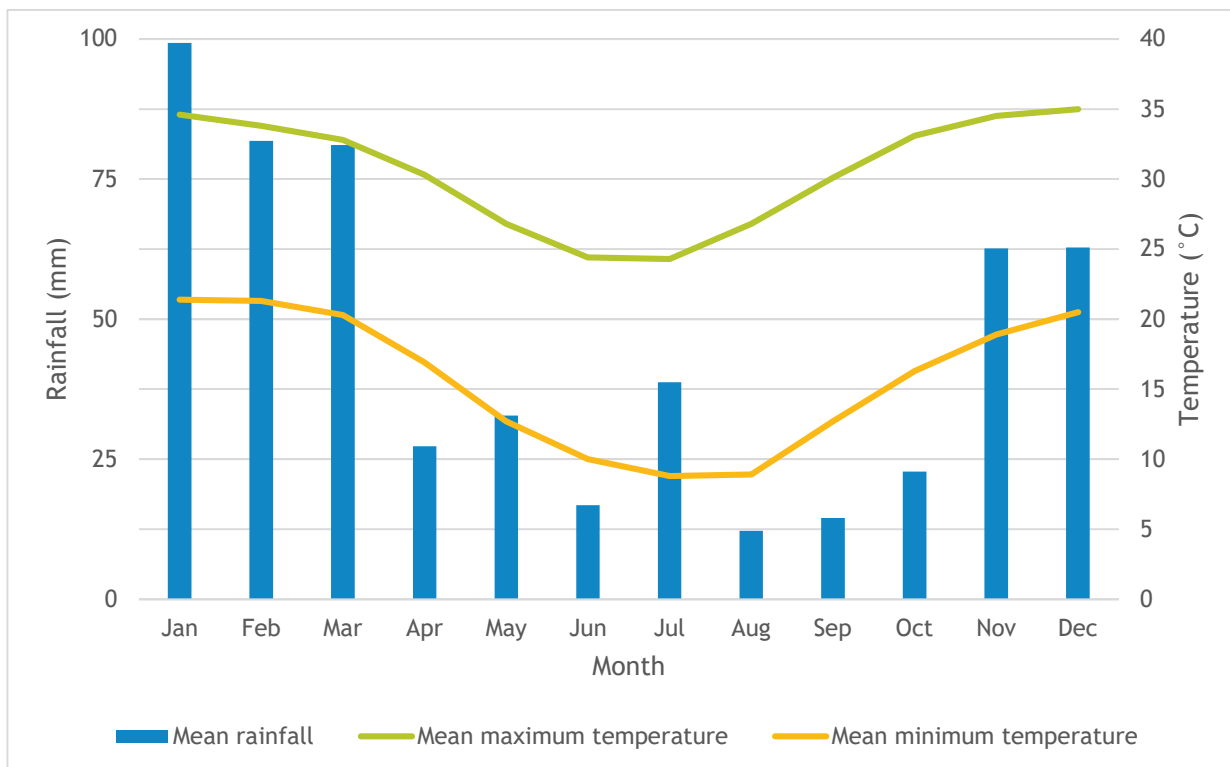


Figure 2: Climate data recorded at the Moranbah Airport (station 34035) (BoM, 2023; BoM, 2023a; BoM, 2023b)



## 2.3 Surface geology

The Geological Survey of Queensland (Geological Survey of Queensland, 2023) Detailed Surface Geology Mapping and GeoScience Australia 1:250,000 geology mapping (Mount Coolon SF 5507, Mackay SF5508) identified three geological units mapped within the Study Area (Table 1). Based on these mapped geological units, three potential land zones, as described by Wilson & Taylor (2012), are mapped within the Study Area, including:

- Cainozoic alluvial plains and piedmont fans (land zone 3)
- Cainozoic clay deposits, gently undulating plains (land zone 4); and
- Cainozoic sand deposits, extensive flat or gently undulating plains (land zone 5).

Soils within the Study Area are typically sandy, with small areas of higher clay content.

**Table 1: Surface geology and land zones within the Study Area**

Geological unit	Description	Land zone
TQa>Tu?	Locally red-brown mottled, poorly consolidated sand, silt, clay, minor gravel; high-level alluvial deposits (generally related to present stream valleys but commonly dissected)	4 and 5
TQa	Locally red-brown mottled, poorly consolidated sand, silt, clay, minor gravel; high-level alluvial deposits (generally related to present stream valleys but commonly dissected)	4 and 5
Qa	Clay, silt, sand and gravel; flood-plain alluvium	3



## 3 Methods

### 3.1 Desktop assessment methods

A comprehensive desktop assessment was undertaken to identify potential MNES within the Study Area and surrounding landscape. Previous ecological studies undertaken at Coppabella Mine were reviewed, including:

- Ison Environmental Planners. (1997). Flora and Fauna Assessment - Coppabella Mine
- McCollum Environmental Management Services. (2011). Coppabella Underground Project Terrestrial Ecological Baseline Assessment
- WBM Oceanics Australia. (2000). Flora and fauna habitat assessment for the Peak Downs Highway Diversion at Coppabella, and
- Wormington, K. (2015) *Regional Ecosystem Mapping at Coppabella Coal Mine*, KRW Environmental Pty Ltd, Queensland.

For desktop searches requiring a search extent, a search radius of 25 km from the approximate centre of the Study Area (-21.8559, 148.4641) was applied. The assessment included a review of data/information from the following sources:

- Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) EPBC Act - Protected Matters Search Tool (PMST) (DCCEEW 2023c)
- Queensland Department of Environment and Science (DES) Wildlife Online database (DES 2023c)
- Queensland Department of Resources (DoR) - Regulated Vegetation Management Map and Vegetation Management Supporting Map, including Essential Habitat Mapping (DoR, 2023)
- DES remnant RE and pre-clear mapping (Version 12.2) (DES, 2023a) and associated Regional Ecosystem Description Database (REDD) (Version 13) (Queensland Herbarium, 2023b) definitions
- Mapped wetlands under the *Queensland Wetlands Program and the Environmental Protection (Water and Wetland Biodiversity) Policy 2019* and their suitability as habitat for MNES
- Atlas of Living Australia (ALA) database (ALA 2023)
- Species Profiles and Threats Database (DCCEEW 2023d)
- Detailed Surface Geology Mapping and GeoScience Australia 1:250,000 geology mapping (Geological Survey of Queensland, 2023);
- Bureau of Meteorology (BoM) Groundwater Dependent Ecosystems Atlas; and
- the latest currently available aerial photography (Nearmap and Queensland Globe).

### 3.2 Likelihood of occurrence assessment

A preliminary likelihood of occurrence (LOO) was undertaken in order to inform field survey design and methods. This was based on distribution, records and mapped habitat types for MNES species. Following the completion of field surveys, the ratings for the MNES species were refined to incorporate field-verified habitats and features. This finalised LOO assessment considered the distribution, habitat requirements (foraging, breeding and shelter), presence of suitable habitat within the Study Area and records for each MNES within and surrounding the Study Area.



The occurrence of species within the Study Area was categorised as ‘known’, ‘likely’, ‘possible’ or ‘unlikely’ based primarily on the criteria outlined below:

- **Known to occur:** the species has been observed within the Study Area
- **Likely to occur:** suitable habitat to support the species is present within the Study Area, and the species has previously been recorded within the desktop search extent
- **Possible occurrence:** The Study Area is within the species known distribution and suitable habitat to support the species is present, however:
  - the species has not previously been recorded within the desktop search extent; and/or,
  - suitable habitat is degraded, limited in extent, and/or isolated from areas of known occupied habitat, thereby reducing the likelihood of the species occurrence; and/or
  - the species occurs within 25 km of the Study Area, however, the species known distribution does not intersect the Study Area due to specific microhabitat requirements.
- **Unlikely to occur:** the Study Area does not comprise suitable habitat for the species and/or is outside of the species known distribution; or records from within the desktop search extent are more than 40 years old and/or predate the decline and likely extinction of a species within the Study Area and surrounds.

### 3.3 Field assessment methods

Field surveys were conducted to identify and characterise the presence, extent and condition of terrestrial ecological values within the Study Area. The methods and timing of surveys comply with applicable Commonwealth and State Government survey guidelines as detailed in Section 3.5.

#### 3.3.1 Survey timing and conditions

Ecological surveys were undertaken across one 10-day survey event from 28 November to 7 December 2023. During the survey, conditions were mostly fine and hot. Maximum day time temperatures ranged from 33 to 38°C, with approximately 96 mm of rain falling in the preceding week (Moranbah Airport weather station) (BoM, 2023e, BoM, 2023d). At the beginning of the survey, most creeks had no flowing water. During the survey, storms with rain occurred on several afternoons and evenings resulting in short-term flowing water in creeks and still pools of water thereafter during the second half of the survey. Moranbah Airport recorded 13.8 mm of rainfall during the survey (BoM, 2023e, BoM, 2023d). Conditions for nocturnal surveys were favourable following the rain, with standing water and an abundance of frogs encountered. In addition, rainfall in the 12 months preceding November 2023 was at the long-term average for Moranbah (BoM, 2023).

#### 3.3.2 Flora survey

Vegetation and flora assessments were undertaken in accordance with relevant Commonwealth and State Government survey guidelines as detailed below. Section 3.5.2 details overall survey effort completed.

##### 3.3.2.1 Threatened ecological communities

Where vegetation dominated or co-dominated by *Acacia harpophylla* was encountered, a description of floristic structure and composition was recorded. Additionally, an assessment was undertaken against the condition thresholds provided by the Commonwealth Conservation Advice for this TEC. Specifically, the following attributes of the vegetation community were assessed:

- patch size, to determine whether the patch is 0.5 ha or more in size; and



- ground layer composition, to determine whether exotic perennial plants comprise less than 50% of the total vegetation cover of the patch, as assessed over a minimum sample area of 0.5 ha (100 m by 50 m) that is representative of the patch.

### 3.3.2.2 Vegetation communities

Ground-truthing and validating vegetation community mapping within the Study Area was conducted in accordance with the *Methodology for surveying and mapping of regional ecosystems and vegetation communities in Queensland* (Neldner et al., 2022). A combination of Tertiary and Quaternary vegetation assessments was undertaken across the Study Area. Tertiary assessments comprise comprehensive survey of flora species (by strata), relative abundance and overall vegetation structure such as height and cover. Tertiary assessments are usually undertaken during wet season conditions with the emergence of annual herbs and grasses, which more accurately reflects species richness and composition. Quaternary surveys are a rapid assessment used to verify RE based on the structure, composition and condition of the ecologically dominant layer.

Vegetation was categorised into three classes based on RE description, vegetation structure and condition. These categories comprised:

- **Remnant vegetation** - communities that conform with the definition under the Queensland *Vegetation Management Act 1999* (VM Act) and referenced by Neldner et al. (2022). Specifically, this comprises ‘vegetation, part of which forms the predominant canopy of the vegetation:
  - covering more than 50% of the undisturbed predominant canopy
  - averaging more than 70% of the vegetation’s undisturbed height; and
  - composed of species characteristic of the vegetation’s undisturbed predominant canopy.’
- **High-value regrowth (HVR)** - vegetation communities that conform with the definition under the VM Act and referenced by Neldner et al. (2022). Specifically, this comprises native vegetation regrowth that is greater than 15 years old and meets the minimum cover requirements specified by Neldner et al. (2022).
- **Non-remnant** - all areas that are not mapped as remnant vegetation or HVR. This includes vegetation communities that have been historically cleared/disturbed or heavily modified.

Information provided in the RE technical descriptions for the Brigalow Belt (DES, 2018) and structural formations of vegetation as defined by Specht (1970) served as a baseline for the undisturbed canopy cover, height and species with which to compare the field data and ascertain vegetation class.

### 3.3.2.3 Threatened flora meanders

The random meander technique (Cropper, 1993) was used to survey for potential threatened flora throughout suitable habitat within the Study Area. The meander technique involves traversing suitable habitat for threatened flora species and is particularly suitable for locating species that occur at low densities or that may be distributed in isolated clumps. This method was used to target *Eucalyptus raveretiana* and *Samadera bidwillii* (MNES flora species identified by the desktop assessment as likely or having the potential to occur within the Study Area). Threatened flora meanders were also supplemented by slow drive transects and foot traverses through areas of potentially suitable habitat.

### 3.3.2.4 Recording of pest flora

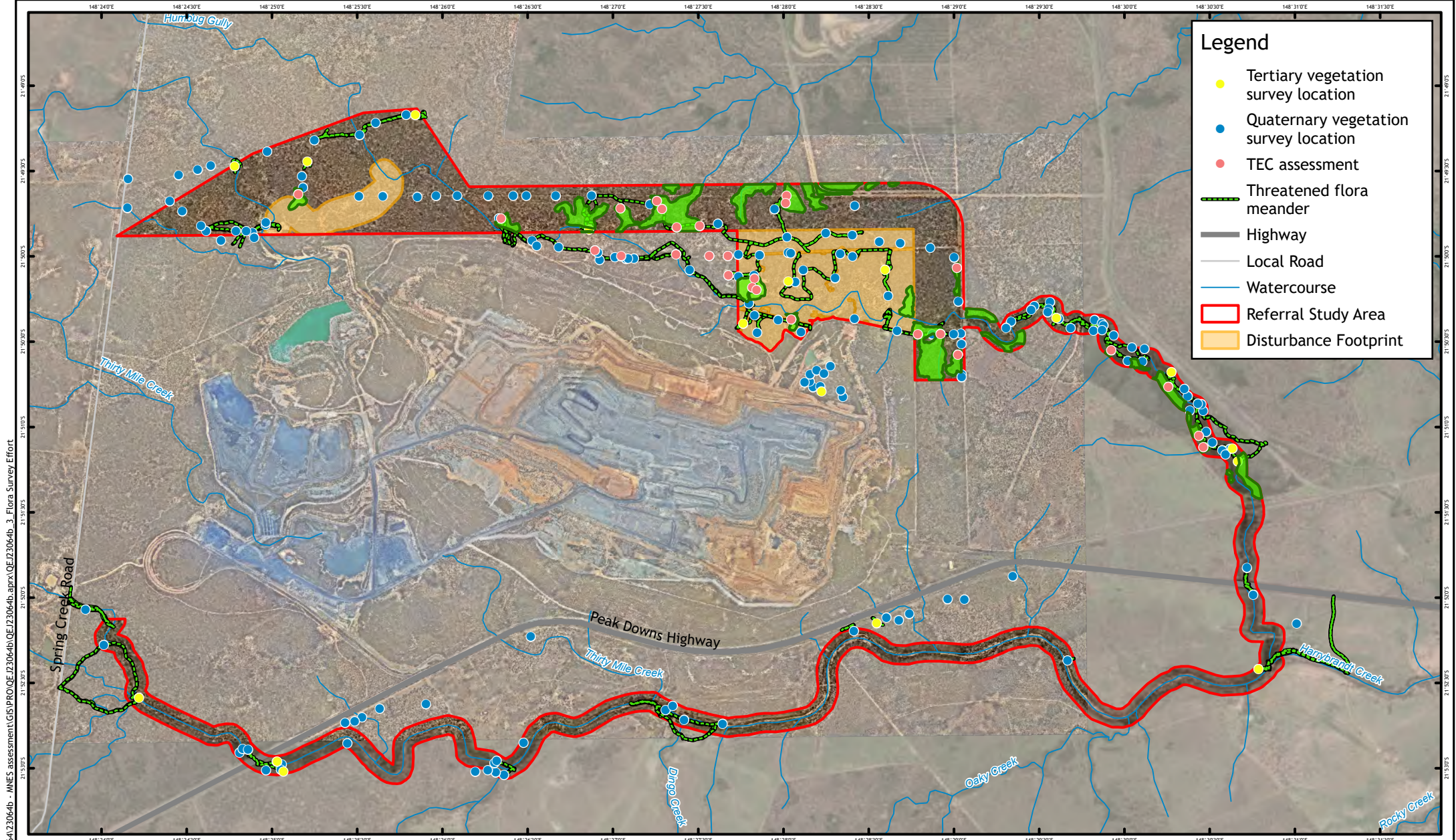
The presence of pest flora species was recorded opportunistically while driving and undertaking foot traverses. Pest flora species that were recorded included listed Prohibited and restricted matters under





the Queensland *Biosecurity Act 2014* (Biosecurity Act) or that are listed as a Weed of National Significance (WoNS) under the National Weeds Strategy.

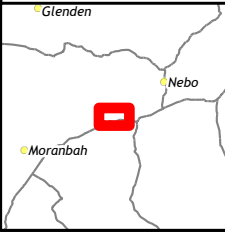




### Legend

- Tertiary vegetation survey location
- Quaternary vegetation survey location
- TEC assessment
- - - Threatened flora meander
- Highway
- Local Road
- Watercourse
- Referral Study Area
- Disturbance Footprint

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### FIGURE 3: DISTRIBUTION OF FLORA SURVEY EFFORT

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1 of 1	QEJ23064b	B

### 3.3.3 Fauna survey

Fauna assessments were undertaken in accordance with relevant Commonwealth and State Government survey guidelines as detailed below. Section 3.5.3 details overall survey effort completed.

#### 3.3.3.1 Survey guidelines

A suite of fauna survey methods tailored to detect the presence of target species were deployed within the Study Area in accordance with the following Commonwealth and Queensland Government guidelines:

- *Survey Guidelines for Australia's Threatened Birds* (DEWHA, 2010)
- *Survey Guidelines for Australia's Threatened Mammals* (SEWPaC, 2011)
- *National Recovery Plan for the EPBC Act listed Koala (*Phascolarctos cinereus*)* (DAWE, 2022b)
- *Terrestrial Vertebrate Fauna Survey Guidelines for Queensland* (Queensland Herbarium, 2018)
- *A review of koala habitat assessment criteria and methods* (Youngentob et al., 2021); and
- Species specific guidelines published by the Commonwealth Government (DCCEEW, 2023d).

#### 3.3.3.2 Habitat suitability assessment

Habitat assessments were undertaken throughout the Study Area to identify the presence of habitat features that may support MNES fauna. Specifically, the following were assessed:

- availability of suitable den/shelter sites (e.g., hollow-bearing trees, caves, lithorefugia and hollow logs)
- extent and likely availability of foraging habitat and food resources (e.g., presence/abundance of animal prey, seeding native grasses and preferred feed trees)
- availability of breeding habitat (e.g., ephemeral pools/ponds, dense ground cover, nest trees, and tree hollows)
- edaphic conditions affecting the suitability of habitat for flora species (e.g., soil type and structure, and drainage); and
- presence and severity of threatening processes (e.g., invasive weeds, feral animals, grazing impacts, inappropriate fire regimes, and habitat fragmentation).

Rapid fauna habitat assessments were completed at 38 sites across the Study Area, creating a general description of the habitat and its applicability to all fauna species. Additionally, 12 specific species habitat attribute assessments were undertaken to record specific features and microhabitat relevant to potentially occurring MNES within the Study Area. The outcomes of these habitat assessments were used to identify areas and quality of habitat within the Study Area. The locations of these assessments are presented in Figure 4.

#### 3.3.3.3 Remote activated camera trapping

Remote activated camera trapping was undertaken for squatter pigeon (southern) (*Geophaps scripta scripta*). A total of 8 cameras were deployed in potential squatter pigeon habitat for 4 to 7 days at the locations shown in Figure 4. All photos were reviewed to record the presence of the target species as well as other fauna species of note (including pest species).



#### 3.3.3.4 Bio-acoustic recorder deployment

Bio-acoustic recorders were used to identify the presence of koala (*Phascolarctos cinereus*). A total of two Tittley Chorus bioacoustic recorders were deployed for 4 to 6 days and set to record in 10-minute blocks from 6pm to 6am at the locations shown in Figure 4. The resulting recordings were processed through Kaleidoscope Pro software (Wildlife Acoustics) using the cluster analysis function which uses recognition algorithms to cluster groups of similar sounds using specified parameters. Several koala reference calls were included within the analysis to target listening effort.



### 3.3.3.5 Nocturnal spotlighting

Nocturnal spotlighting surveys targeting greater glider (southern and central) (*Petauroides volans*/*Petauroides armillatus*) and koala (*Phascolarctos cinereus*) were undertaken within suitable woodland/open forest habitat by two ecologists equipped with a handheld torch/spotlight and head torches. Nocturnal spotlighting surveys also targeted ornamental snake (*Denisonia maculata*) along watercourses and adjacent suitable habitat.

Nocturnal spotlighting surveys were undertaken half-an-hour after sunset while traversing areas of suitable habitat on foot for a total duration of 26 person hours over 3 nights. The location of spotlighting survey sites is shown in Figure 4.

Opportunistic slow-drive spotlighting surveys were also undertaken in Eucalypt woodland habitats along access tracks and when moving between survey sites, totalling 4 hours over the field survey.

### 3.3.3.6 Nocturnal call playback

Call playback surveys were conducted for koala in areas of suitable habitat within the Study Area. Call playback surveys were conducted at night using a loudspeaker paired to a smart phone. At each call playback site, koala calls were broadcast for 2 minutes followed by 2 minutes of silence/listening. Call playbacks were repeated and return calls were listened for during the remainder of the spotlighting survey. The location of call playback surveys is depicted in Figure 4.

### 3.3.3.7 Diurnal active searches

Active diurnal searches were undertaken opportunistically with other fauna habitat assessments, following the methods prescribed in the *Terrestrial Vertebrate Fauna Survey Guidelines for Queensland* (Queensland Herbarium, 2018). Active searches involved searching suitable microhabitat for the species, or evidence of the species presence. This method was used to target the following species:

- flushing surveys while traversing habitat on foot for squatter pigeon (southern) (*Geophaps scripta scripta*)<sup>1</sup>
- slow drive transects targeting squatter pigeon (southern) (*Geophaps scripta scripta*)
- koala scat and scratch surveys (Youngentob et al., 2021)
- observing the sky with binoculars for white-throated needletail (*Hirundapus caudacutus*) and fork-tailed swift (*Apus pacificus*)
- listening and observing diurnal bird species to detect oriental cuckoo (*Cuculus optatus*) and satin flycatcher (*Myiagra cyanoleuca*); and
- microhabitat searches including lifting logs for ornamental snake (*Denisonia maculata*) in suitable habitat.

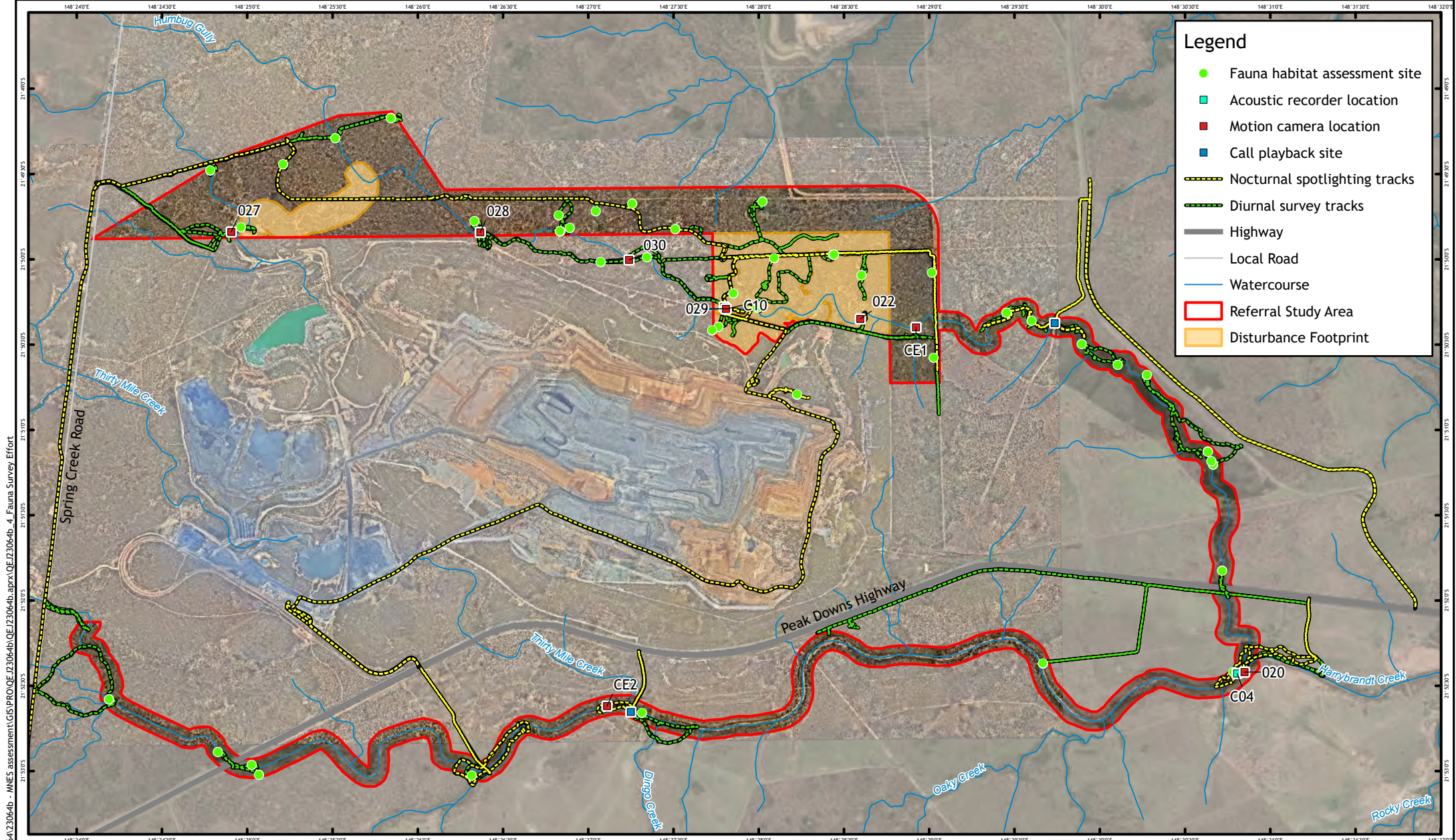
### 3.3.3.8 Opportunistic surveys

Fauna species for which evidence of presence was not detected via other survey methods, were recorded as opportunistic observations. Fauna observed while driving between survey sites were recorded as opportunistic fauna records.

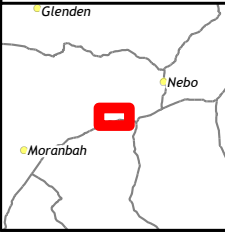
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<sup>1</sup> Flushing surveys for Australian painted snipe (*Rostratula australis*) and Latham's snipe (*Gallinago hardwickii*) were not undertaken due to the absence/paucity of surface water within areas of potentially suitable wetland habitat at time of survey.





Document Path: X:\JOBS\2023\02\J2064\22064b - MNES assessment\GIS\PROJ\02\J2064b.aprx\02\2064b\_4\_Fauna Survey Effort



**N**

Scale 1:55,000 (A4)

0 1 2  
Kilometres

Coordinate System: GDA2020

Notes:  
 Aerial Imagery: © ESRI 2024  
 Cadastre: © DoR 2024  
 Watercourse: © DoR 2024  
 Road: © DoR 2024  
 Site imagery: © Peabody Energy 2023

B	Issued for Review	DL	MW	13/02/2024
A	Issued for Review	GO	WH	15/01/2024
Rev	Description	Drawn	Approved	Date



**FIGURE 4: DISTRIBUTION OF FAUNA SURVEY EFFORT**

Coppabella Mine Project  
 MNES Terrestrial Ecology Report  
 Peabody Energy

Map Number	Job Number	Rev
1 of 1	QEJ23064b	B

## 3.4 Species habitat mapping

The results of desktop and field surveys were used to generate habitat mapping for threatened MNES flora and fauna species assessed as known or likely within the Study Area. Specifically, species habitat was mapped using the following categories:

- **Preferred habitat:** is most important to the species and provides breeding, roosting and/or foraging habitat that is required for the species to persist in the area.
- **Suitable habitat:** is habitat that provides breeding, roosting and/or reliable foraging habitat but is not essential for the species to persist in the area. It may occasionally provide resources or be in low density of resources and only be used intermittently.
- **Marginal habitat:** is habitat that provides limited resources for the species and may only be occupied infrequently, during transit between suitable habitat, or when desired habitat is scarce. The species is unlikely to be undertaking key activities such as breeding, roosting or extensive foraging.

Not all categories are relevant for each species due to their ecological role and regional context. What constitutes these categories for each species is discussed separately in Section 4.4.3.

## 3.5 Survey effort

Survey effort undertaken for MNES fauna and flora species assessed as known or likely to occur within the Study Area is summarised below. Surveys were undertaken at representative locations across the Study Area to provide appropriate survey coverage within each vegetation community/habitat type present. Survey effort was concentrated within Humbug Gully, the northern undeveloped MLs and Stage 3 of Humbug Gully diversion to provide a clearer understanding of ecological constraints to the proposed Project.

### 3.5.1 Field survey limitations

Ecological surveys have a range of inherent limitations associated with the seasonality/timing of surveys, variable climatic conditions and species' behaviour and ecology (e.g. cryptic behaviour, natural rarity). Seasonality and weather events resulted in a peak observation period where species were active and detectable at the time of survey.

Due to timing constraints not all areas of vegetation were observed and ground truthed during the survey event. Total flora survey effort is presented in Figure 3.

The results presented in this document are based on the field survey effort undertaken to date to assess the occurrence and suitability of habitat for the target MNES within the Study Area.

### 3.5.2 Flora survey effort

Flora survey sites were selected based on aerial imagery, DoR vegetation mapping, DES RE mapping and geological and topographic mapping of the Study Area. Site locations were adjusted and additional survey sites were included during the field surveys, as required, based on ground-truthed findings.

The following survey effort has been undertaken:

- 185 Quaternary assessments
- 21 Tertiary assessments; and
- meanders targeting habitat for potential and likely occurring threatened flora.



Table 2 and Section 3.3.2 detail the methodology undertaken for flora surveys, with reference to Commonwealth survey guidelines. The location of all flora survey sites is depicted in Figure 3.

**Table 2: Target threatened flora species survey effort summary**

Species	Survey effort considerations	Optimal survey timing	Survey effort
Black Ironbox ( <i>Eucalyptus raveretiana</i> )	Surveys should target semi-permanent or permanent creeks and rivers. <sup>1</sup>	No optimal survey period is specified as this is a perennial species that can be identified year-round.	Threatened flora meanders by two ecologists in suitable habitat (i.e. riparian vegetation mapped as RE 11.3.25) to determine presence and extents of populations (if present).
Quassia ( <i>Samadera bidwillii</i> )	No specific survey guidelines are prescribed for the species. The species is commonly found in areas adjacent to temporary and permanent watercourses in or on rainforest margins <sup>2</sup>	No optimal survey period is specified as this is a perennial species that can be identified year-round. Species flowers and fruits from November to March.	Threatened flora meanders by two ecologists in suitable habitat (i.e. REs 11.3.25, 11.3.4 and areas of 11.5.16 with scrub understory adjacent to watercourses) to determine presence and extent of populations (if present).

1 *Species Profile and Threats Database Eucalyptus raveretiana – Black Ironbox* (DCCEEW, 2023)

2 *Approved Conservation Advice for Quassia bidwillii – Quassia* (TSSC, 2008)

### 3.5.3 Fauna survey effort

Areas of potential habitat for target MNES fauna requiring survey were initially identified through the use of aerial imagery and RE mapping and subsequently ground-truthed in the field.

The following survey effort has been undertaken:

- 118 person hours of diurnal survey effort (driving and on foot) to target threatened fauna species. The survey involved random meanders, identification of suitable habitat that could potentially support the species and opportunistic searches.
- 26 person hours of nocturnal spotlighting on foot over three nights by two ecologists in suitable habitat for threatened species
- 4 person hours of nocturnal spotlighting slow-drive vehicle surveys over one night by two ecologists in suitable habitat
- two bio-acoustic recorder deployments over 4 to 6 consecutive days
- eight motion cameras deployed over 4 to 7 consecutive days
- four call playback sessions during spotlighting surveys
- 12 species habitat attribute assessment sites; and
- 38 rapid habitat assessments.

Table 3 and Section 3.3.3 detail the methodology undertaken for fauna surveys under the Commonwealth and State Government survey guidelines. The location of all fauna survey sites is depicted in Figure 4





Table 3: Target threatened fauna species survey effort summary

Species	Survey effort considerations		Optimal survey timing	Survey effort to date
	EPBC Act	NC Act*		
<b>Threatened fauna</b>				
Greater glider (southern and central) ( <i>Petauroides volans</i> / <i>Petauroides armillatus</i> )	No specific survey guidelines are prescribed for this species; however, general arboreal mammal survey methods may be applied <sup>2</sup> .	No species-specific guideline is provided, however general arboreal mammal survey methods and effort are: <ul style="list-style-type: none"> <li>spotlighting comprising two times 30 min spotlight searches per 100 x 100 m survey site; and</li> <li>scat and sign search: can coincide with systematic diurnal active searches, within 50 x 50 m quadrats of the survey site<sup>3</sup>.</li> </ul>	No optimal survey period specified	26 person hours of spotlighting effort on foot was undertaken across three nights. 4 hours of spotlighting via slow-drive vehicle transects in eucalypt woodland, access tracks and in-between sites. 8 species-specific habitat attribute assessment sites were undertaken across the Study Area to identify the presence and quality of habitat suitable for the species.
Koala ( <i>Phascolarctos cinereus</i> )	Survey effort is not prescribed but several direct and indirect survey methods are recommended including: <ul style="list-style-type: none"> <li>nocturnal spotlighting; and</li> <li>direct observations or signs (scats, scratches etc), including Spot Assessment Technique (SAT) surveys<sup>2,4</sup></li> </ul>	No species-specific guideline is provided, however general arboreal mammal survey methods and effort include: <ul style="list-style-type: none"> <li>spotlighting comprising two times 30 min spotlight searches per 100 x 100 m survey site</li> <li>call playback over two sessions undertaken at</li> </ul>	No optimal survey period specified	26 person hours of spotlighting effort on foot was undertaken across three nights. Call playback was undertaken on each of the three spotlighting nights with a total of four call playback sessions. 4 hours of spotlighting via slow-drive vehicle transects in eucalypt woodland, access tracks and in-between sites. 118 person hours of diurnal survey effort including foot traverses and slow-drive transects has been undertaken across 10 days



Species	Survey effort considerations		Optimal survey timing	Survey effort to date
	EPBC Act	NC Act*		
		<p>the midpoint of survey site; and</p> <ul style="list-style-type: none"> <li>scat and sign search: can coincide with systematic diurnal active searches, within 50 x 50 m quadrats of the survey site<sup>3</sup>.</li> </ul>		<p>as opportunistic searches, including scratch and scat searches, for signs of presence while traversing the Study Area.</p> <p>8 species-specific habitat attribute assessment sites were undertaken across the Study Area to identify the presence and quality of habitat suitable for the species.</p>
Ornamental snake ( <i>Denisonia maculata</i> )	<p>Survey guidelines recommend:</p> <ul style="list-style-type: none"> <li>active searches in suitable habitat, particularly on warm evenings, comprising three survey days and nights</li> <li>active searches while driving on roads, particularly after heavy rainfall events and/or on warm evenings<sup>6, 7</sup></li> </ul>	-	January - mid-March <sup>7</sup>	<p>26 person hours of spotlighting effort on foot was undertaken across three nights.</p> <p>4 hours of spotlighting via slow-drive vehicle transects in eucalypt woodland, access tracks and in-between sites.</p> <p>118 person hours of diurnal survey effort including foot traverses and slow-drive transects and microhabitat searches has been undertaken across 10 days as opportunistic searches for signs of presence while traversing the Study Area.</p> <p>11 species-specific habitat attribute assessment sites were undertaken across the Study Area to identify the presence and quality of habitat suitable for the species.</p>
Squatter pigeon (southern) ( <i>Geophaps scripta scripta</i> )	<p>Survey guidelines recommend:</p> <ul style="list-style-type: none"> <li>area searches or transect surveys in suitable habitat comprising 15 hours across three days (in areas less than 50 ha)</li> </ul>	<p>General diurnal bird survey methods and effort include:</p> <ul style="list-style-type: none"> <li>diurnal bird surveys comprising 6 times 5-10 min area searches within</li> </ul>	May - October (DCCEEW, 2023d)	118 person hours of diurnal survey effort including flushing surveys and slow-drive transects has been undertaken across 10 days as opportunistic searches for signs of presence while traversing the Study Area.



Species	Survey effort considerations		Optimal survey timing	Survey effort to date
	EPBC Act	NC Act*		
	<ul style="list-style-type: none"> <li>flushing surveys comprising 10 hours across three days (in areas less than 50 ha)</li> <li>slow drive transects; and</li> <li>diurnal stationary observations at water sources<sup>1</sup>.</li> </ul>	<ul style="list-style-type: none"> <li>a 100 x 100m survey site; and</li> <li>incidental detections<sup>3</sup>.</li> </ul>		<p>8 species-specific habitat attribute assessment sites were undertaken across the Study Area to identify the presence and quality of habitat suitable for the species.</p> <p>8 remotely triggered motion cameras deployed in potential squatter pigeon habitat for durations of 4 to 7 days.</p>
White-throated needletail ( <i>Hirundapus caudacutus</i> )	<p>No specific survey guidelines are prescribed and it is noted it is difficult to conduct systematic surveys of the species; however, general bird survey methods and effort include:</p> <ul style="list-style-type: none"> <li>area searches conducted over plots of 1-3 ha for 10-20 min</li> <li>transect surveys</li> <li>point surveys where the time at each point is usually 5-20 min</li> <li>broadcast surveys</li> <li>resource or habitat searches; and remote detection<sup>1</sup>.</li> </ul>		October - April <sup>8</sup>	118 person hours of diurnal survey effort including foot traverses and slow-drive transects has been undertaken across 10 days as opportunistic searches for signs of presence while traversing the Study Area.



Species	Survey effort considerations		Optimal survey timing	Survey effort to date
	EPBC Act	NC Act*		
Latham's snipe ( <i>Gallinago hardwickii</i> )	<p>No specific survey guidelines are prescribed and it is noted it is difficult to conduct systematic surveys of the species; however, general bird survey methods and effort include:</p> <ul style="list-style-type: none"> <li>• area searches conducted over plots of 1-3 ha for 10-20 min</li> <li>• transect surveys</li> <li>• point surveys where the time at each point is usually 5-20 min</li> <li>• broadcast surveys</li> <li>• resource or habitat searches; and remote detection<sup>1</sup>.</li> </ul>	<p>General diurnal bird survey methods and effort include:</p> <ul style="list-style-type: none"> <li>• diurnal bird surveys comprising 6 times 5-10 min area searches within a 100 x 100m survey site; and</li> </ul> <p>incidental detections<sup>3</sup>.</p>	October - February <sup>10</sup>	<p>118 person hours of diurnal survey effort including foot traverses and slow-drive transects has been undertaken across 10 days as opportunistic searches for signs of presence while traversing the Study Area.</p> <p>It should be noted that at the time of survey, Latham's snipe was listed a Migratory, but from the 5<sup>th</sup> of January 2024 has also been upgraded to Vulnerable under the EPBC Act (DCCEEW, 2023b). Survey methodology for the species applied is still consistent with existing guidelines.</p>



Species	Survey effort considerations		Optimal survey timing	Survey effort to date
	EPBC Act	NC Act*		
<b>Migratory birds</b>				
Fork-tailed swift ( <i>Apus pacificus</i> )	There are no specific survey guidelines for the associated migratory species, however general bird survey methods and effort include: <ul style="list-style-type: none"> <li>• area searches conducted over plots of 1-3 ha for 10-20 min</li> <li>• transect surveys</li> <li>• point surveys where the time at each point is usually 5-20 min</li> <li>• broadcast surveys</li> <li>• resource or habitat searches; and</li> <li>• remote detection<sup>1</sup>.</li> </ul>	General diurnal bird survey methods and effort include: <ul style="list-style-type: none"> <li>• diurnal bird surveys comprising 6 times 5-10 min area searches within a 100 x 100m survey site; and</li> <li>• incidental detections<sup>3</sup>.</li> </ul>	October - mid-April (fork-tailed swift) <sup>9</sup>	118 person hours of diurnal survey effort including foot traverses and slow-drive transects has been undertaken across 10 days as opportunistic searches for signs of presence while traversing the Study Area.
Oriental cuckoo ( <i>Cuculus optatus</i> )			September - May (oriental cuckoo) <sup>8</sup>	
Satin flycatcher ( <i>Myiagra cyanoleuca</i> )			May - September (satin flycatcher) <sup>8</sup>	

\* Nature Conservation Act 1992

1 Survey Guidelines for Australia's Threatened Birds (DEWHA, 2010)

2 Survey Guidelines for Australia's Threatened Mammals (DSEWPC, 2011b)

3 Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Queensland Herbarium, 2018)

4 A review of koala habitat assessment criteria and methods (Youngentob et al., 2021)

6 Draft referral guidelines for the nationally listed Brigalow Belt reptiles (DSEWPC, 2011a)

7 Species Profile and Threats Database - *Denisonia maculata* - Ornamental Snake (DotE, 2023c)

8 Appendix A: Supporting information for each of the 14 migratory listed birds (DotE 2015)

9 Species Profile and Threats Database - *Apus pacificus* – Fork-tailed Swift (DotE, 2023a)

10 Species Profile and Threats Database - *Gallinago hardwickii* – Latham's Snipe, Japanese Snipe (DotE, 2022e)



## 4 Results

### 4.1 Desktop assessment results

#### 4.1.1.1 MNES

The desktop assessment identified the following MNES as potentially occurring within, or in proximity to, the Study Area (see Appendix A):

- 24 threatened flora and fauna species, including:
  - four flora species
  - eight birds
  - five mammals; and
  - seven reptiles
- 10 migratory fauna species; and
- Four TECs.

No listed Wetlands of International Importance (Ramsar), World Heritage Properties or National Heritage Places listed under the EPBC Act were indicated to occur within the Study Area.

Previous studies that have been completed within the Coppabella Mine Site (refer Section 3.1) identified the presence of the following MNES:

- Brigalow (*Acacia harpophylla* dominant and co-dominant) ecological community (hereafter the Brigalow TEC)
- suitable foraging, shelter and dispersal habitat for the endangered koala (*Phascolarctos cinereus*)
- suitable foraging, shelter and dispersal habitat for the vulnerable ornamental snake (*Denisonia maculata*); and
- suitable foraging, breeding and dispersal habitat for the vulnerable squatter pigeon (southern) (*Geophaps scripta scripta*).

#### 4.1.1.2 Groundwater dependent ecosystems

Groundwater dependant ecosystems (GDEs) are identified as ‘water resources’ under the Commonwealth *Water Act 2007* and require assessment under the EPBC Act in relation to coal seam gas and large coal mining developments.

GDEs are communities that depend on direct access to groundwater for ongoing maintenance and survival (Eamus et al., 2006).

There are three main types of GDEs as defined by Eamus et al. (2006), including:

- aquifer/cave ecosystems, occupied by stygofauna (Subterranean GDEs)
- ecosystems dependant on the surface availability (discharge) of groundwater. These ecosystems are characterised by permanent provision of surface water (Aquatic GDEs); and
- ecosystems dependent on access to subsurface groundwater, which includes many riparian communities (Terrestrial GDEs).



For the purposes of this assessment, only terrestrial GDEs are included. Aquatic and subterranean GDEs were assessed as part of the aquatic ecology assessment.

Because of the scale and number of species that can comprise terrestrial communities, it is important to note that not all species making up a GDE community are likely to be dependent on groundwater (Eamus et al., 2006). Rather, a community that comprises some groundwater dependent species (i.e. indicator species), is typically considered to be a community that is groundwater-dependent (Eamus et al., 2006). As such, a GDE can comprise of flora species, such as some forb and grass species, that rely on precipitation and not directly reliant on the availability of groundwater.

Within the Study Area, the BoM Groundwater Dependent Ecosystems Atlas (BoM, 2023c) identified the watercourses and adjacent riparian vegetation of Humbug Gully and Harrybrandt Creek as high potential terrestrial GDEs. Some adjacent areas of woodland are identified as low potential terrestrial GDEs.

GDE communities can be determined by flora species composition and their relative dependence on groundwater for survival (Eamus, Froend, et al., 2006). Riparian and floodplain tree species are highly dependent on access to reliable water sources, including surface flows, soil moisture and groundwater (Kath et al., 2014). Particular flora species can be reliant on permanent access to groundwater and are considered to have 'obligate groundwater dependency' (Eamus, Hatton, et al., 2006). These species tend to occupy areas of the landscape that optimise access to groundwater, such as along the lower banks of waterways. Obligate species may include *Eucalyptus camaldulensis*, *Melaleuca leucadendra* and *M. fluviatilis* (Kath et al., 2014; O'Grady et al., 2006; Roberts & Marston, 2000). Species with an obligate dependence on groundwater do not always require access to groundwater; however, to survive long periods of drought, access to groundwater is essential.

Other species have adapted to occasional access to groundwater, usually following floods when groundwater levels rise. These facultative groundwater dependent species can utilise groundwater when it is available; however, can survive without (Eamus, Froend, et al., 2006). Facultative groundwater dependent species are usually located on the upper banks and floodplains of waterways, such *Casuarina cunninghamiana*, *Eucalyptus populnea* and *E. coolabah* (Eamus, Hatton, et al., 2006; Roberts & Marston, 2000).

Potential terrestrial GDEs within the Study Area are likely to be confined to the communities occupying alluvial areas (i.e. land zone 3), primarily REs 11.3.25, 11.3.9 and 11.3.4 associated with Humbug Gully and Harrybrandt Creek (refer to Figure 5). The community mapped as RE 11.3.25 is usually dominated by *Eucalyptus tereticornis*, and *E. camaldulensis*, species known to have an obligate dependence on groundwater. RE 11.3.9 in the Study Area has occasional *E. camaldulensis*, while RE 11.3.4 is dominated by *E. tereticornis*. Assessment of potential terrestrial GDEs mapped by the BoM GDE Atlas outside of these areas will be dependent on the modelled groundwater levels for the region and associated flora species present, to determine the ability to access and relative reliance on groundwater.

A review of nearby projects and terrestrial GDE assessments also identified that tributaries associated with Isaac River are likely to be groundwater dependant due to surface flow only occurring after times of high rainfall, the depth of the water table potentially being in reach of tap root systems, and clay soils that hold water for extending periods supporting adjacent wetland areas. Assessments for the Winchester South Project identified riparian vegetation associated with the Isaac River and Cherwell Creek (RE 11.3.25) had a moderate to high potential of being a terrestrial GDE, with any dependency on groundwater in the Quaternary alluvium likely to be facultative (Whitehaven Coal Pty Ltd, 2021). It was also concluded that the riparian vegetation surrounding these ephemeral wetlands (REs 11.3.27 and 11.3.3c) have a moderate potential of also being a terrestrial GDE, with any dependency on groundwater also likely to be facultative (Whitehaven Coal Pty Ltd, 2021). Some areas of vegetation associated with RE 11.5.3, but also with REs 11.3.2 and 11.3.4, were considered to have low potential of meeting the



definition of a terrestrial GDE, due to the poor quality (high salinity) of the groundwater source (Whitehaven Coal Pty Ltd, 2021).

Terrestrial GDE assessments undertaken for the Isaac Downs Project identified GDEs in association with riparian communities along the Isaac River, comprising RE 11.3.25 (3D Environmental, 2019). These terrestrial GDE communities, located on the immediate fringing alluvial high bank of the Isaac River, were identified as interacting with the shallow groundwater in the alluvial aquifer (3D Environmental, 2019). Further back from the immediate river edge however, trees on the upper banks of the Isaac River were considered likely to have no, or limited, dependence on groundwater, and therefore have a low potential to be GDEs (3D Environmental, 2019). Generally, the Isaac Downs Project assessment found that terrestrial GDEs are limited to deeper rooted eucalypt species along the immediately fringing riparian zone, within tens of metres of the river channel. There was no evidence of GDEs outside this area.

Based on this information, riparian communities located within the Study Area are likely to contain terrestrial GDEs (facultative and/or obligate) and have the potential to be subject to impacts resulting from the Project (e.g. reduced surface water quantity and quality). In particular, the RE 11.3.25 vegetation community is likely to comprise a terrestrial GDE, depending on the depth to groundwater relative to the possible maximum tap root length. Other vegetation communities mapped within the Study Area that may also be groundwater dependant include communities with occasional *E. camaldulensis* or dominated by *E. tereticornis* on alluvial soils (i.e. REs 11.3.4 and 11.3.9).

## 4.2 Ground-truthed vegetation communities

Ground-truthing of RE mapping was carried out across the Study Area at 185 Quaternary and 21 Tertiary survey sites.

The field assessment ground-truthed a total of seven distinct remnant RE types, totalling 1,144.42 ha across the Study Area. Of this, 230.36 ha of remnant REs was within the Disturbance Footprint. A total of 120.33 ha of the Study Area did not comprise an RE and was mapped as non-remnant. Descriptions of the extent and condition of each ground-truthed RE is detailed in Table 4 and depicted in Figure 5. All vegetation communities showed varying levels of degradation associated with historic land use, namely impacts of grazing pressure and occasionally the clearing/thinning of canopy trees.

Non-remnant vegetation within the Study Area around Harrybrandt Creek included cleared areas that have been seeded with non-native grass species. These areas have been subject to historical clearing/thinning, pasture improvement and weed encroachment. The ground layer within these non-remnant areas was dominated by *Stylosanthes scabra*\*, *Cenchrus ciliaris*\* and *Melinis repens*\*.





Table 4: Ground-truthed vegetation communities within the Study Area

Vegetation community	Corresponding RE	Site-specific description	Area (ha)	
			Within Study Area	Within Disturbance Footprint
<i>Eucalyptus tereticornis</i> and <i>Eucalyptus</i> spp. woodland on alluvial plains	11.3.4	Woodland to tall open woodland of <i>Eucalyptus tereticornis</i> and <i>Corymbia tessellaris</i> and <i>C. clarksoniana</i> . The mid layer is occasionally absent, but an open sub-canopy with species such as <i>Petalostigma pubescens</i> , <i>Alphitonia excelsa</i> and mixed <i>Acacia</i> spp. Sometimes occurred.  Occurs on alluvial plains and levees adjacent to watercourses influenced by flooding and high flow events. Large areas of this community have been cleared around Harrybrandt Creek.	59.57	0.42
<i>Eucalyptus platyphylla</i> woodland on alluvial plains	11.3.9	<i>Eucalyptus platyphylla</i> open woodland with occasional <i>Eucalyptus camaldulensis</i> and <i>Corymbia tessellaris</i> in an open depression with water holding potential. Mid-layer and shrub layer are generally absent, and dominated by <i>Melaleuca viridiflora</i> when occasionally present. Ground layer is dominated by <i>Diplachne fusca</i> and <i>Eragrostis</i> spp. The area is seasonally inundated from overland flow and has evidence of disturbance from cattle trampling.	1.53	0.00
<i>Eucalyptus tereticornis</i> and <i>E. camaldulensis</i> woodland fringing watercourses	11.3.25	Watercourse fringing woodland of <i>Eucalyptus tereticornis</i> and <i>E. camaldulensis</i> with occasional co-dominance of <i>Melaleuca leucadendra</i> and <i>M. fluviatilis</i> . <i>Corymbia tessellaris</i> is common. A midstory layer is sometimes present with high diversity. This vegetation community exists as a narrow band along Humbug Gully and Harrybrandt Creek and occasionally on adjacent levees. Mid-stream islands can occur supporting <i>Melaleuca</i> spp. and <i>Imperata cylindrica</i> . There is occasionally a weedy influence of <i>Chloris gayana</i> *, <i>Hyparrhenia rufa</i> * and <i>Parthenium hysterophorus</i> *.	209.21	19.68
<i>Eucalyptus crebra</i> woodland on gently undulating plains	11.5.2	The canopy showed heavy dominance of <i>Eucalyptus crebra</i> with occasional <i>Corymbia Dallachiana</i> , <i>E. platyphylla</i> , <i>C. clarksoniana</i> and <i>C. erythrophloia</i> . The subcanopy was generally sparse with a high diversity of species including <i>Petalostigma pubescens</i> , <i>Bursaria incana</i> , <i>Denhamia cunninghamii</i> , <i>Alphitonia excelsa</i> and <i>Acacia holosericea</i> . The ground layer was dominated by <i>Melinis repens</i> *, <i>Themeda triandra</i> , <i>Stylosanthes scabra</i> * and <i>Heteropogon contortus</i> .	59.48	12.96



Vegetation community	Corresponding RE	Site-specific description	Area (ha)	
			Within Study Area	Within Disturbance Footprint
<i>Eucalyptus populnea</i> woodland on gently undulating plains	11.5.3	<p><i>Eucalyptus populnea</i> woodland on gently undulating plains. Other trees in the canopy included <i>E. crebra</i>, <i>Corymbia dallachiana</i>, <i>C. clarksoniana</i> and <i>E. platyphylla</i>. In the north of the Study Area some areas were dominated by <i>C. clarksoniana</i>. The subcanopy consisted of a mixed diversity including canopy recruits together with <i>Alphitonia excelsa</i>, <i>Grevillea parallela</i>, <i>Acacia salicina</i>, <i>Cassia brewsteri</i> and <i>Petalostigma pubescens</i>. The shrub layer consisted of <i>Carissa ovata</i>, <i>Alphitonia excelsa</i>, <i>Sida hackettiana</i>, <i>Grewia latifolia</i>, <i>Breynia oblongifolia</i> and occasionally <i>Lantana camara</i>*</p> <p>The ground layer was dominated by <i>Cenchrus ciliaris</i>*, <i>Stylosanthes viscosa</i>* and <i>Heteropogon contortus</i>, and also contained <i>Aristida</i> spp., <i>Melinis repens</i>*, <i>Panicum effusum</i>, <i>Eragrostis sororia</i> and <i>Capparis lasiantha</i>.</p>	546.46	142.25



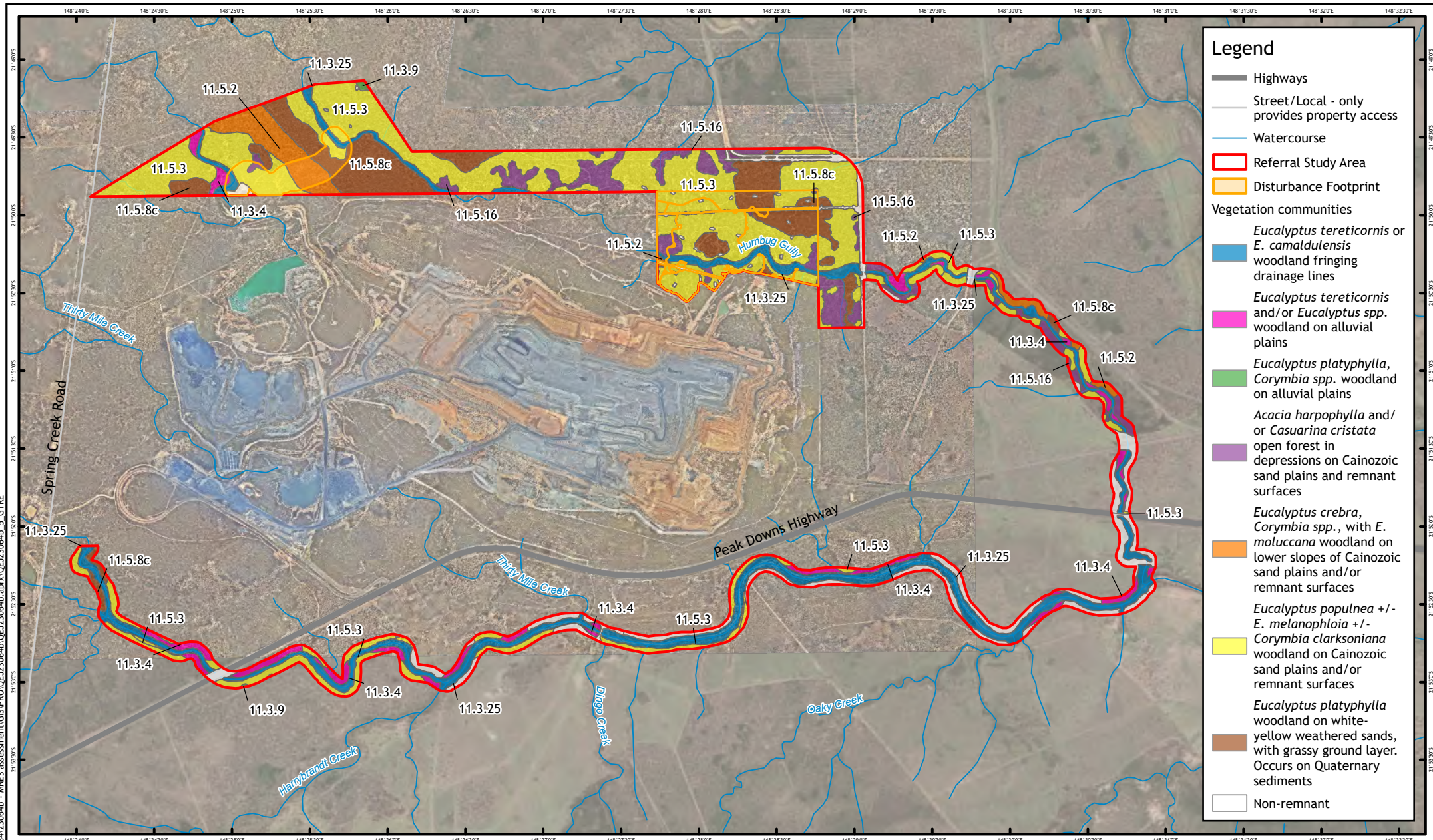
Vegetation community	Corresponding RE	Site-specific description	Area (ha)	
			Within Study Area	Within Disturbance Footprint
<i>Eucalyptus platyphylla</i> dominated woodland on gently undulating plains	11.5.8c	<p><i>Eucalyptus platyphylla</i> dominated woodland on gently undulating plains. Occasionally the system would present as an open woodland. At the time of survey, the <i>E. platyphylla</i> were experiencing a thinned crown across the Study Area. Individuals with more foliage cover were present around lower, wetter areas. Other trees in the canopy included <i>E. populnea</i>, <i>E. tereticornis</i>, <i>Corymbia clarksoniana</i>, <i>C. dallachiana</i> and <i>C. trachyphloia</i>. The subcanopy was mixed and consisted of canopy recruits, <i>Alphitonia excelsa</i>, <i>Acacia excelsa</i>, <i>A. salicina</i>, <i>Petalostigma pubescens</i>, <i>Melaleuca nervosa</i>, <i>Santalum lanceolatum</i>, <i>Grevillea parallela</i>, <i>Bursaria incana</i>, and <i>Psydrax odorata</i>. Occasionally groves of <i>Melaleuca nervosa</i>, <i>Grevillea parallela</i> or <i>Petalostigma pubescens</i> would occur. The sparse shrub layer was dominated by <i>Alphitonia excelsa</i>, <i>Carissa ovata</i>, <i>Breynia oblongifolia</i>, <i>Stylosanthes scabra</i>* and occasionally <i>Grewia latifolia</i>, <i>Lantana camara</i>*, <i>Acacia excelsa</i>, <i>Erythroxylum australe</i>, <i>Diospyros humilis</i>, and <i>Exocarpos latifolius</i>.</p> <p>The sparse to dense ground layer was dominated by <i>Melinis repens</i>*, <i>Cenchrus ciliaris</i>*, and <i>Heteropogon contortus</i>. Non-native grass cover was generally dominant however the system had a high native grass and forb diversity.</p>	171.52	43.88



Vegetation community	Corresponding RE	Site-specific description	Area (ha)	
			Within Study Area	Within Disturbance Footprint
<i>Acacia harpophylla</i> and/or <i>Casuarina cristata</i> open forest to woodland	11.5.16	<p><i>Acacia harpophylla</i> or <i>Casuarina cristata</i> open forest to woodland in depressions on Cainozoic sand plains. Variation occurred across the Study Area with both trees (<i>Acacia harpophylla</i> and <i>casuarina cristata</i>) occurring at varying dominance and density. Other trees in the canopy include <i>Eucalyptus populnea</i>, <i>Terminalia oblongata</i>, <i>Flindersia dissosperma</i> and <i>Lysiphyllum hookeri</i>. The subcanopy and shrub layer often included a scrub understory with dry rainforest influence including <i>Psydrax odorata</i>, <i>Erythroxylum australe</i>, <i>Geijera salicifolia</i>, <i>Denhamia cunninghamii</i>, <i>Carissa ovata</i>, <i>Cynanchum viminale</i>, <i>Leichhardtia viridiflora</i>, <i>Capparis lasiantha</i>, <i>C. mitchellii</i>, <i>Alectryon diversifolius</i>, and <i>Diospyros humilis</i>.</p> <p>The ground layer was sparse and dominated by native grasses. Common species were <i>Paspalidium distans</i>, <i>Heteropogon contortus</i>, <i>Sporobolus caroli</i>, <i>Ancistrachne uncinulata</i>, <i>Cenchrus ciliaris</i>*, <i>Megathyrsus maximus</i>*, and <i>Cheilanthes distans</i>.</p> <p>This vegetation community occurred in wetter areas around drainage lines and low points accumulating a higher clay content. This resulted in some areas with gilgai microrelief within the Study Area.</p>	96.64	11.16

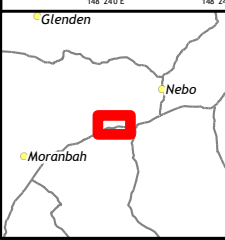
\* Indicates a naturalised (non-native) species





- ### Legend
- Highways
  - Street/Local - only provides property access
  - Watercourse
  - ▭ Referral Study Area
  - ▭ Disturbance Footprint
- Vegetation communities
- Eucalyptus tereticornis* or *E. camaldulensis* woodland fringing drainage lines
  - Eucalyptus tereticornis* and/or *Eucalyptus* spp. woodland on alluvial plains
  - Eucalyptus platyphylla*, *Corymbia* spp. woodland on alluvial plains
  - Acacia harpophylla* and/or *Casuarina cristata* open forest in depressions on Cainozoic sand plains and remnant surfaces
  - Eucalyptus crebra*, *Corymbia* spp., with *E. moluccana* woodland on lower slopes of Cainozoic sand plains and/or remnant surfaces
  - Eucalyptus populnea* +/- *E. melanophloia* +/- *Corymbia clarksoniana* woodland on Cainozoic sand plains and/or remnant surfaces
  - Eucalyptus platyphylla* woodland on white-yellow weathered sands, with grassy ground layer. Occurs on Quaternary sediments
  - ▭ Non-remnant

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Scale 1:60,000 (A4)

0 1 2  
Kilometres

Coordinate System: GDA2020

Notes:  
 Aerial Imagery: © ESRI 2024  
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 Site imagery: © Peabody Energy 2023

Rev	Description	Drawn	Approved	Date
B	Issued for Review	DL	MW	13/02/2024
A	Issued for Review	GO	WH	19/01/2024



### FIGURE 5: GROUND-TRUTHED VEGETATION COMMUNITIES

Coppabella Mine Project  
 MNES Terrestrial Ecology Report  
 Peabody Energy

Map Number	Job Number	Rev
1 of 1	QEJ23064b	B

## 4.3 Likelihood of occurrence

Information from desktop and field investigations completed to date were used to assess the likelihood of MNES occurrence within the Study Area. The resulting LOO assessment identified six MNES as known to occur within the Study Area as confirmed during field surveys, including:

- brigalow (*Acacia harpophylla* dominant and co-dominant) TEC - Endangered
- fork-tailed swift (*Apus pacificus*) - Migratory
- greater glider (southern and central) (*Petauroides volans/ Petauroides armillatus*) - Endangered
- koala (*Phascolarctos cinereus*) - Endangered
- ornamental snake (*Denisonia maculata*) - Vulnerable; and
- squatter pigeon (southern) (*Geophaps scripta scripta*) - Vulnerable.

An additional MNES species is considered likely to occur within the Study Area:

- white-throated needletail (*Hirundapus caudacutus*) - Vulnerable.

The LOO assessment identified four species as possibly occurring within the Study Area, including:

- Australian painted snipe (*Rostratula australis*) - Endangered
- Latham's snipe (*Gallinago hardwickii*) - Migratory and Vulnerable
- oriental cuckoo (*Cuculus optatus*) - Migratory; and
- satin flycatcher (*Myiagra cyanoleuca*) - Migratory.

Possibly occurring species are not considered further in this assessment due to:

- the lower likelihood of these species' occurring within the Study Area
- likely absence from the Study Area and Disturbance Footprint due to a lack of suitable or preferred habitat and;
- the low potential for Project impacts on these species.

Full LOO assessment for all potentially occurring species' is presented in Appendix B.

## 4.4 Study Area suitability assessment

### 4.4.1 Threatened ecological communities

#### 4.4.1.1 Brigalow (*Acacia harpophylla* dominant and co-dominant)

Field investigations identified the presence of one TEC, namely brigalow (*Acacia harpophylla* dominant and co-dominant) (Brigalow TEC) within the Study area. This community is listed as endangered under the EPBC Act. The TEC is characterised by the presence of *A. harpophylla* as dominant in the tree layer, or co-dominant with other species (notably *Casuarina cristata*, other species of *Acacia*, or species of *Eucalyptus*). Condition thresholds for the TEC relate to a minimum patch size of 0.5 ha and exotic perennial plants must comprise less than 50% of the total vegetation cover of the patch, as assessed over a minimum sample area of 0.5 ha (DCCEEW, 2023b).

Areas of Brigalow TEC were remnant patches with tree heights averaging between 16-20 m and a canopy cover of 40-55%. The Brigalow TEC within the Study Area had a high native diversity of shrubs, forbs, and grasses in the understory. Small trees in the understory included *Geijera salicifolia*, *Erythroxylum*



*australe*, *Psydrax odorata* and *Santalum lanceolatum*. The ground layer was largely dominated by native grass species including *Paspalidium distans*, *Heteropogon contortus*, *Sporobolus caroli*, *Chloris ventricosa*, and *Ancistrachne uncinulata*. Weedy occurrences did occur within the ground layer, including *Melinis repens*\*, *Cenchrus ciliaris*\* and *Megathyrsus maximus*\* as well as a lower abundance of *Harrisia martinii*\* and *Opuntia tomentosa*\*. These non-native species were common but did not make up the majority of the cover within the system.

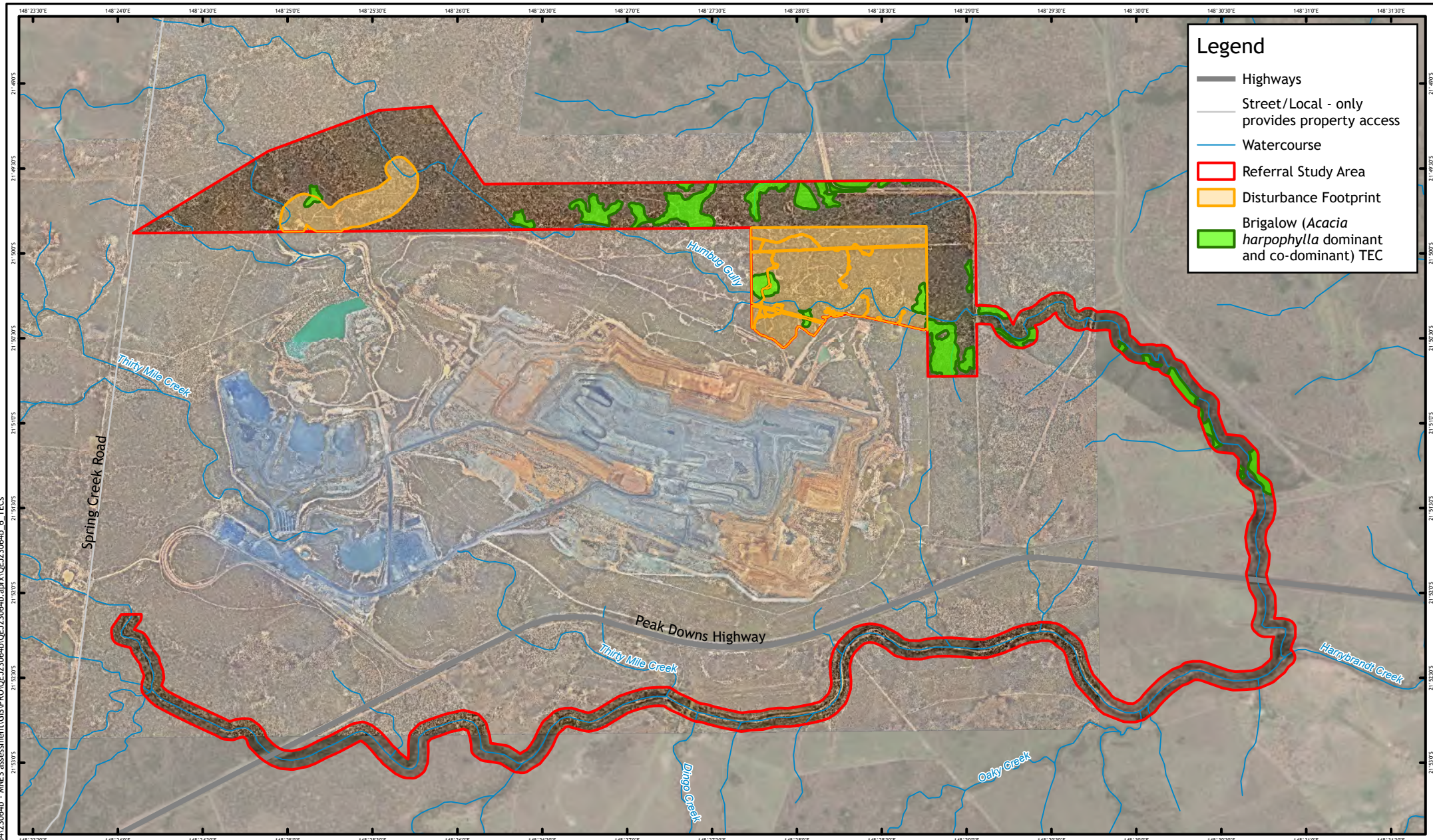
The Brigalow TEC was consistent with RE 11.5.16 where *Acacia harpophylla* occurred as both a dominant and co-dominant species in the canopy with *Casuarina cristata*. Often *Eucalyptus populnea* would occur in the canopy within the system. The extent of this vegetation community was conservatively mapped during the field survey; further survey and habitat quality analysis may determine that the total extent of Brigalow TEC may be reduced to exclude areas where *Casuarina cristata* is dominant and *Acacia harpophylla* is absent.

Areas of brigalow TEC that were less than 0.5 ha were excluded due to not meeting key diagnostics.

Based on recent field investigations conducted by E2M, the Study Area has been mapped as containing 95.75 ha of Brigalow TEC, including 10.69 ha within the Disturbance Footprint.

The extent of Brigalow TEC within the Study Area is shown in Figure 6.





### Legend

- Highways
- Street/Local - only provides property access
- Watercourse
- Referral Study Area
- Disturbance Footprint
- Brigalow (*Acacia harpophylla* dominant and co-dominant) TEC

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Scale 1:55,000 (A4)

0 1 2 Kilometres

Coordinate System: GDA2020

Notes:  
 Aerial Imagery: © ESRI 2024  
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Rev	Description	Drawn	Approved	Date
B	Issued for Review	DL	MW	13/02/2024
A	Issued for Review	GO	WH	12/01/2024



### FIGURE 6: BRIGALOW TEC EXTENT

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 MNES Terrestrial Ecology Report  
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1 of 1	QEJ23064b	B



#### 4.4.2 Threatened flora

No threatened flora species were recorded or considered likely to occur in the Study Area. The following sections address flora species that were identified by the desktop assessment as previously recorded within the search extent.

##### 4.4.2.1 *Eucalyptus raveretiana*

No individuals of this species were identified during the field survey. Survey effort was focussed in riparian areas along Humbug Gully and in Harrybrandt Creek (Section 3.5.2). It is a large, long-lived species that can be readily identified year-round.

This species is a riparian woodland canopy tree and usually occurs in a high density forming a common or dominant part of the ecosystem. The species is in high abundance along Bee Creek in the adjacent catchment where it is co-dominant with *Eucalyptus tereticornis* in the canopy. Based on the survey effort expended and the absence of individuals, this species is considered unlikely to occur. Accordingly, this species is not considered further in this assessment.

##### 4.4.2.2 *Dichanthium queenslandicum*

This species occurs on black cracking clay in tussock grasslands mainly in association with other species of blue grasses (*Dichanthium* spp. and *Bothriochloa* spp.). It is mostly confined to natural grassland on the heavy black clay soils (basalt downs, basalt cracking clay, open downs) on undulating plains. Other communities where *Dichanthium queenslandicum* can be found include *Acacia salicina* thickets in grassland and eucalypt woodlands (i.e. *Corymbia dallachiana*, *C. erythrophloia*, *E. orgadophila*) (DES, 2022a). No suitable habitats were observed within the Study Area such that it can be concluded with a high degree of confidence that it is absent.

#### 4.4.3 Threatened fauna

The following sections detail the habitat and occupancy of the Study Area for threatened fauna species deemed likely and/or known to occur within the Study Area.

##### 4.4.3.1 Greater glider (southern and central)

Greater glider (southern and central) is listed as endangered under the EPBC Act. Greater glider (southern and central) are an arboreal nocturnal marsupial, predominantly solitary and largely restricted to eucalypt forests and woodlands of eastern Australia.

During field survey, 16 observations of greater glider were recorded in remnant eucalypt woodland within the Study Area (Figure 7a). The majority of records were adjacent to watercourses within REs 11.3.25 and 11.3.4. The species was frequently observed feeding in *Corymbia tessellaris* and emerging from medium to large hollows in *Eucalyptus tereticornis* and *E. camaldulensis*. The species has a very similar ecological function to koala in its folivorous feeding habit (DCCEEW, 2022). Approximately 85% of its water consumption is from leaves which nutrient and moisture rich riverine *Eucalyptus* and *Corymbia* species can provide (DCCEEW, 2022).

The species was also recorded in eucalypt woodlands away from watercourses including REs 11.5.3, 11.5.2 and 11.5.8c where denning habitat (medium to large hollows in *Eucalyptus populnea*, *E. crebra* and *E. platyphylla*) and feed trees (*E. populnea*, *Corymbia tessellaris* and *E. crebra*) were abundant. The species is likely utilising large areas of remnant eucalypt woodland within the landscape.



Greater glider habitat within the Study Area has been mapped as either preferred or suitable habitat in alignment with Section 3.4, with guidance from *Guide to greater glider habitat in Queensland* (Eyre et al., 2022).

Preferred habitat for the species within the Study Area includes:

- areas of REs 11.3.25 and 11.3.4 with food trees (*Corymbia tessellaris*) and denning trees (*Eucalyptus tereticornis* and *E. camaldulensis*)
- areas of REs 11.3.25 and 11.3.4 with denning trees and abutting areas of suitable feed trees including *E. crebra* and/or *E. populnea* woodland mapped as REs 11.5.3 and 11.5.2; and
- areas of RE 11.3.25 with or without suitable denning trees and feed trees that connect areas of preferred habitat within the Study Area.

Suitable habitat for the species within the Study Area includes:

- areas of REs 11.3.9, 11.5.2, 11.5.3 and 11.5.8c providing denning (*Eucalyptus platyphylla*, *E. crebra*) and feed trees (*Eucalyptus populnea*, *E. crebra*, *Corymbia tessellaris*) in a moderate density within the landscape; and
- remnant vegetation linking areas of preferred and suitable habitat for the species.

Based on desktop and field investigations completed, the Study Area contains 1049.93 ha of habitat for the species. This includes:

- 270.73 ha of preferred habitat within the Study Area, including 20.10 ha within the Disturbance Footprint, and;
- 779.20 ha of suitable habitat within the Study Area, including 199.09 ha within the Disturbance Footprint.

The location of greater glider (southern and central) survey records and extent of habitat for the species within the Study Area are shown in Figure 7a, with representative photographs in Plate 2.



Plate 2: Greater glider in *Corymbia tessellaris* within the Disturbance Footprint during nocturnal spotlighting (left), and *Eucalyptus tereticornis* in RE 11.3.25 providing suitable denning habitat in the Study Area (right).

#### 4.4.3.2 Koala

Koala is listed as endangered under the EPBC Act. In Queensland, koala inhabit the moist coastal forests, southern and central western subhumid woodlands, and a number of eucalypt woodlands adjacent to waterbodies in the semi-arid western parts of the state. In many locations, koala populations are of low density, widespread and fragmented.

A total of nine koala observations were recorded within the Study Area during the survey. It is likely that koala were moving and therefore the total number of distinct individuals is unknown. The locations of koala observations are presented in Figure 7b. Koala were also recorded calling during bio-acoustic surveys at BAR site C10 at Humbug Gully (Figure 4). Multiple scratches and scats attributable koala were recorded along Humbug Gully and Harrybrandt Creek. Koala were recorded in riparian REs associated with Humbug Gully and Harrybrandt Creek. Riverine environments that provide a high abundance of refugia and eucalypt trees with high moisture content are of high importance to the continuing of koala populations in rural Queensland. (DAWE, 2022; Runge et al., 2014; Seabrook et al., 2011;). Stream fringing eucalypts (*Eucalyptus camaldulensis* and *E. tereticornis*) have the highest leaf moisture content, and as koalas largely rely on diet to meet their water intake requirements, the presence of eucalypts with a high leaf moisture content is likely to positively influence habitat suitability, particularly during times of drought (Seabrook et al., 2011). Koala are known to utilise all types of eucalypt woodland across its range where Locally Important Koala Trees (LIKTs) are abundant.

Koala habitat within the Study Area has been mapped as either preferred or suitable habitat in alignment with Section 3.4, with guidance from *A review of koala habitat assessment criteria and methods* (Youngtob et al., 2021).

Preferred habitat mapped within the Study Area includes:

- areas of RE 11.3.25 and 11.3.4 with abundant LIKTs with high moisture content (*Eucalyptus tereticornis* and *Eucalyptus camaldulensis*) and ancillary habitat trees (*Corymbia tessellaris*) where records of koala were abundant within the Study Area.

Suitable habitat for the species within the Study Area includes:

- areas of RE 11.3.9, 11.5.2, 11.5.3 providing abundant LIKTs (*Eucalyptus populnea* and *E. crebra*) and ancillary habitat trees (*Eucalyptus platyphylla* and *Corymbia tessellaris*) with connectivity to preferred habitat. Although koalas were not recorded in these areas, the species is likely to utilise this habitat
- areas of RE 11.5.8c providing few LIKTs (*Eucalyptus populnea* and *E. tereticornis*) and abundant ancillary habitat trees (*Eucalyptus platyphylla* and *Corymbia dallachiana*) with connectivity to preferred habitat
- remnant vegetation linking areas of preferred and suitable habitat for the species; and
- areas of non-remnant vegetation along watercourses and drainage features that provide connectivity between areas of preferred habitat.

Based on desktop and field investigations to date, the Study Area contains 1049.93 ha of habitat for the species. This includes:

- 270.73 ha of preferred habitat within the Study Area, including 20.10 ha within the Disturbance Footprint; and
- 779.20 ha of suitable habitat within the Study Area, including 199.09 ha within the Disturbance Footprint.

The locations of koala survey observations and extent of habitat for the species within the Study Area are shown in Figure 7b, and representative photographs are provided in Plate 3.





Plate 3: Koala in *Eucalyptus tereticornis* in RE 11.3.25 in the Disturbance Footprint (left), and koala scats in RE. 11.3.25 on Harrybrandt Creek (right).

#### 4.4.3.3 Ornamental snake

Ornamental snake is listed as vulnerable under the EPBC Act. The species is known to prefer woodlands and open forests associated with moist areas, particularly gilgai (melon-hole) mounds and depressions in land zone 4, but also lake margins and wetlands. Gilgai formations are found where deep-cracking alluvial soils with high clay contents occur.

One ornamental snake was identified within the Disturbance Footprint. The individual was identified along a sandy creek bed of Humbug Gully. The creek had flowed the previous day and the frog diversity and abundance at the time of survey was high. Vegetation adjacent to Humbug Gully is dominated by *Casuarina cristata* and *Acacia harpophylla* (RE 11.5.16) and occurs over small steep gullies. These areas have a higher clay content and, in some areas, form gilgais. The wide channel of Humbug Gully has fine sediment deposits that pool water along the sides of the low flow channel. Deep cracks were not visible within Humbug Gully; however, the species is likely seeking refuge in inconspicuous smaller cracks within the soil profile or within other microrefugia in the landscape. There is abundant woody debris along Humbug Gully as well as a dense mat of *Imperata cylindrica*, *Megathyrsus maximus*\* and *Melinis repens*\* over islands and banks of the watercourse.

Previous surveys within the Study Area have identified ornamental snake along Humbug gully in similar habitat (McCollum, 2011).

Ornamental snake habitat within the Study Area has been mapped as either preferred or suitable habitat in alignment with Section 3.4, with guidance from the *Draft Referral guidelines for the nationally listed Brigalow Belt reptiles* (DSEWPC, 2011).

Preferred habitat mapped within the Study Area includes:

- areas of REs 11.3.25 and 11.3.4 adjacent to areas of RE 11.5.16 (within 500 m) where suitable shelter is present and sediments allow for pooling of water suitable as amphibian breeding habitat
- areas of RE 11.5.16 where suitable shelter is present and sediments allow for pooling of water suitable as amphibian breeding habitat; and
- areas of non-remnant vegetation where suitable shelter is present and sediments allow for pooling of water suitable as amphibian breeding habitat.



Suitable habitat for the species within the Study Area includes:

- areas of non-remnant vegetation and REs 11.5.16 and 11.3.25 that provide dispersal for the species to access habitat downstream of Humbug Gully and Harrybrandt Creek.

Based on desktop and field investigations to date, the Study Area contains 177.33 ha of habitat for the species. This includes:

- 167.03 ha of preferred habitat within the Study Area, including 29.48 ha within the Disturbance Footprint; and
- 10.30 ha of suitable habitat within the Study Area.

The location of ornamental snake records and extent of habitat for the species within the Study Area are shown in Figure 7c, and representative photographs are provided in Plate 4.



Plate 4: Ornamental snake in RE 11.3.25 in the Disturbance Footprint during nocturnal spotlighting (left), and pooling water in RE. 11.3.25 providing suitable foraging habitat (amphibian breeding habitat) for the species (right).

#### 4.4.3.4 Squatter pigeon (southern)

Squatter pigeon (southern) is listed as vulnerable under the EPBC Act. The species is locally abundant within the northern part of its range (i.e. Brigalow Belt (North) and Desert Uplands Bioregions). The species occurs in a wide range of habitats wherever there is a grassy understorey of an open eucalypt woodland (and less often savannas). It is often found within close proximity of water bodies.

Squatter pigeon (southern) was observed eight times during the field survey, including two observations within the Study Area. Most records were from the western portion of the Study Area along Spring Creek Road in association with cattle troughs adjacent to the road. The species was also recorded along Harrybrandt Creek.

Ground cover was variable throughout the Study Area in terms of composition (native and non-native species) and percent ground cover. The majority of areas contained a mixture of native and non-native ground cover species and total ground cover was generally suitable for squatter pigeon breeding and foraging habitat (less than 33% cover) (DotE, 2015a). Areas with a higher ground cover percentage were in non-grazed areas with a sparse tree canopy (RE 11.5.8c in the Disturbance Footprint). It is likely that most areas within the Study Area experience a fluctuating ground cover through rain, grazing and fire.



Areas of non-remnant vegetation without a canopy were limited in extent in the Study Area. These areas were not suitable for squatter pigeon (southern) due to the high percentage of ground cover in these open areas.

Permanent water sources inside and adjacent to the Study Area have been mapped as dams and cattle troughs. Publicly available surface water and dam geospatial data as well as aerial imagery was used as a reference to supplement ground-truthed permanent water sources observed during the field survey. All watercourses within the Study Area are ephemeral and have not been used as permanent water sources for squatter pigeon habitat.

Squatter pigeon (southern) habitat within the Study Area has been mapped as either preferred or suitable habitat in alignment with Section 3.4, with guidance from the Species Profile and Threats Database (SPRAT) profile for squatter pigeon (southern) (DotE, 2015a).

Preferred habitat mapped within the Study Area includes:

- areas of eucalypt woodland on land zones 3 and 5 within 1 km from a permanent water source with a patchy ground cover of mixed native and introduced grasses suitable for breeding.

Suitable habitat for the species within the Study Area includes:

- areas of eucalypt woodland on land zones 3 and 5 within 3 km from a permanent water source with a patchy ground cover of mixed native and introduced grasses suitable for foraging
- areas of non-remnant vegetation on land zones 3 and 5 within 3 km from a permanent water source with a patchy ground cover of mixed native and introduced grasses suitable for foraging; and
- remnant and non-remnant vegetation linking areas of preferred and suitable habitat for the species.

Based on desktop and field investigations to date, the Study Area contains 1046.33 ha of habitat for the species. This includes:

- 309.96 ha of preferred habitat within the Study Area, including 42.63 ha within the Disturbance Footprint;
- 736.37 ha of suitable habitat within the Study Area, including 175.51 ha within the Disturbance Footprint.

The location of squatter pigeon (southern) records and extent of habitat for the species within the Study Area are shown in Figure 7d, and representative photographs are provided in Plate 5.





Plate 5: Squatter pigeon (southern) in RE 11.3.25 at Harrybrandt Creek in the Study Area (left), and squatter pigeons in non-remnant vegetation adjacent to RE. 11.3.25 at Harrybrandt Creek (right).

#### 4.4.3.5 White-throated needletail

White-throated needletail is listed as vulnerable and migratory under the EPBC Act. The species is almost exclusively aerial. In the non-breeding season in Australia, the species can occur over most habitat types. The species is most often recorded above wooded areas including open forest, closed forest and rainforest.

White-throated needletail was not recorded during field surveys within the Study Area, but has previously been recorded from the surrounding landscape (ALA, 2023). The species is likely to utilise airspace over the Study Area for foraging. While predominately aerial when in Australia, the species is known to roost in trees at night (amongst foliage, in tree hollows or clinging to the side of rough-barked trees) (M. Tarburton, 2023; M. K. Tarburton, 2015; TSSC, 2016a). Roosting birds likely require a clear airspace when approaching roost trees at night and are known to roost in canopy trees on ridges, low spurs and trees at the edges of clearings (Tarburton, 2015).

Suitable habitat for the species mapped within the Study Area includes:

- areas of tall trees adjacent to (within 10 m) cleared vegetation suitable for roosting for the species.

Marginal habitat for the species mapped within the Study Area includes:

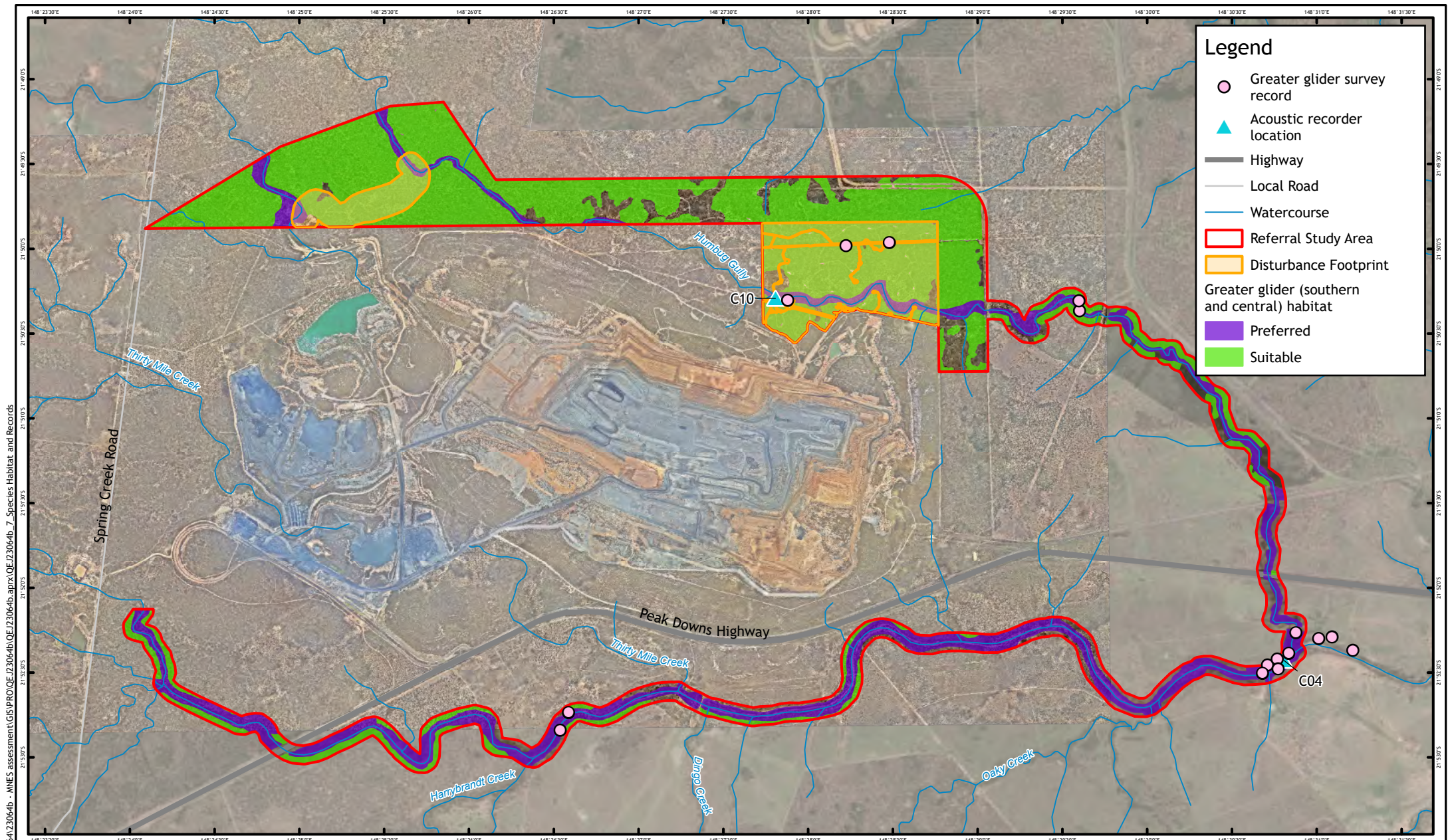
- All areas within the Study Area that provide potential foraging habitat in the airspace above.

Based on desktop and field investigations, the Study Area contains 1264.74 ha of habitat for the species. This includes:

- 122.79 ha of suitable habitat within the Study Area; and
- 1141.95 ha of marginal habitat within the Study Area, including 238.58 ha within the Disturbance Footprint.

The extent of habitat for the species within the Study Area is shown in Figure 7e.





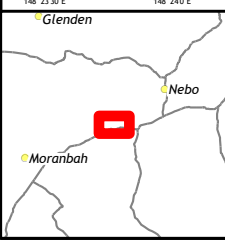
### Legend

- Greater glider survey record
- ▲ Acoustic recorder location
- Highway
- Local Road
- Watercourse
- Referral Study Area
- Disturbance Footprint

Greater glider (southern and central) habitat

- Preferred
- Suitable

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Kilometres

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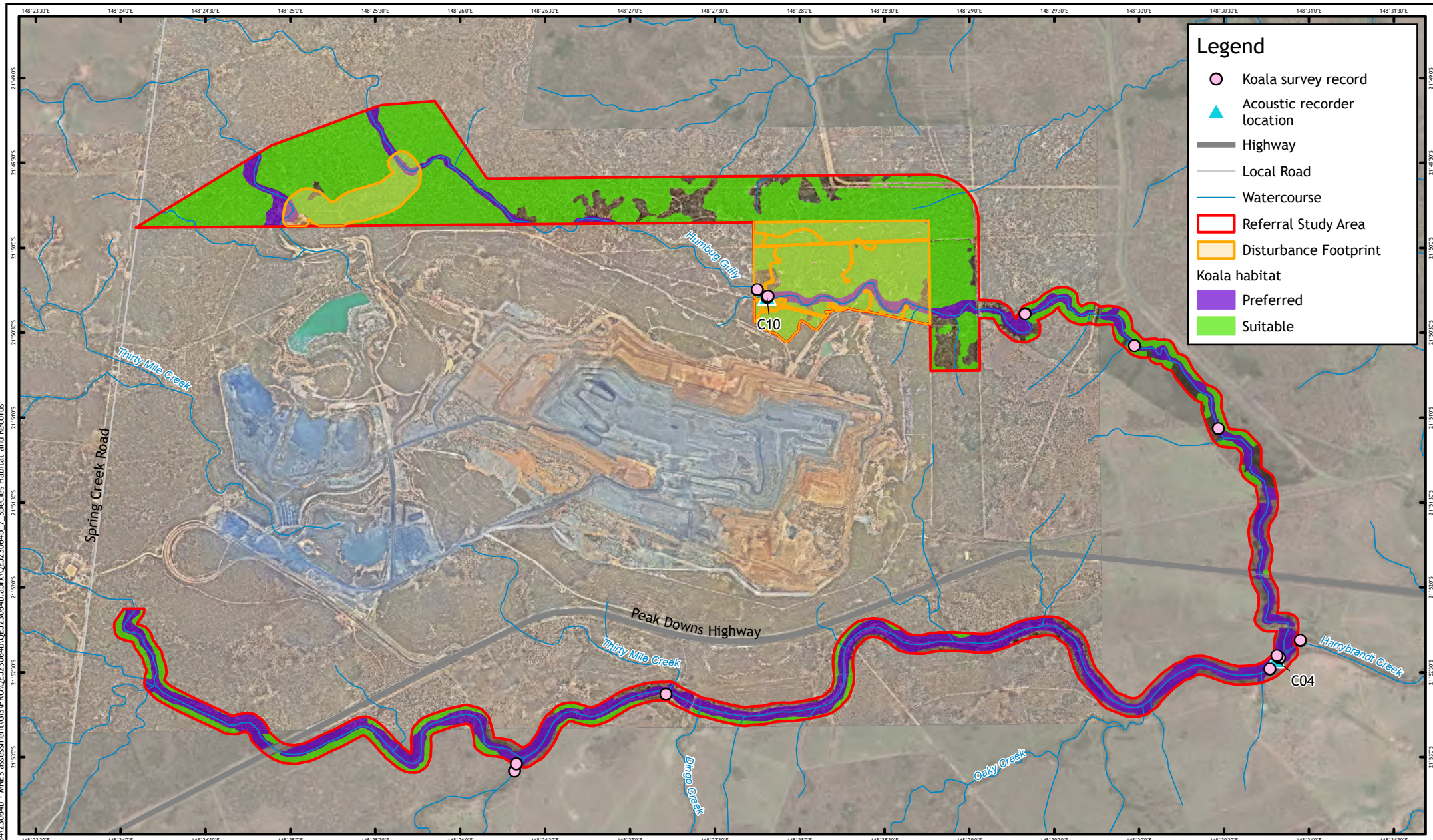


**FIGURE 7A: GREATER GLIDER (SOUTHERN AND CENTRAL) SURVEY RECORDS AND HABITAT EXTENT**

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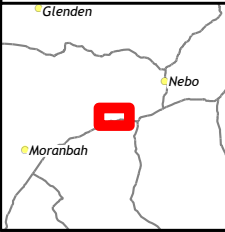
### Legend

- Koala survey record
- ▲ Acoustic recorder location
- Highway
- Local Road
- Watercourse
- Referral Study Area
- Disturbance Footprint

Koala habitat

- Preferred
- Suitable

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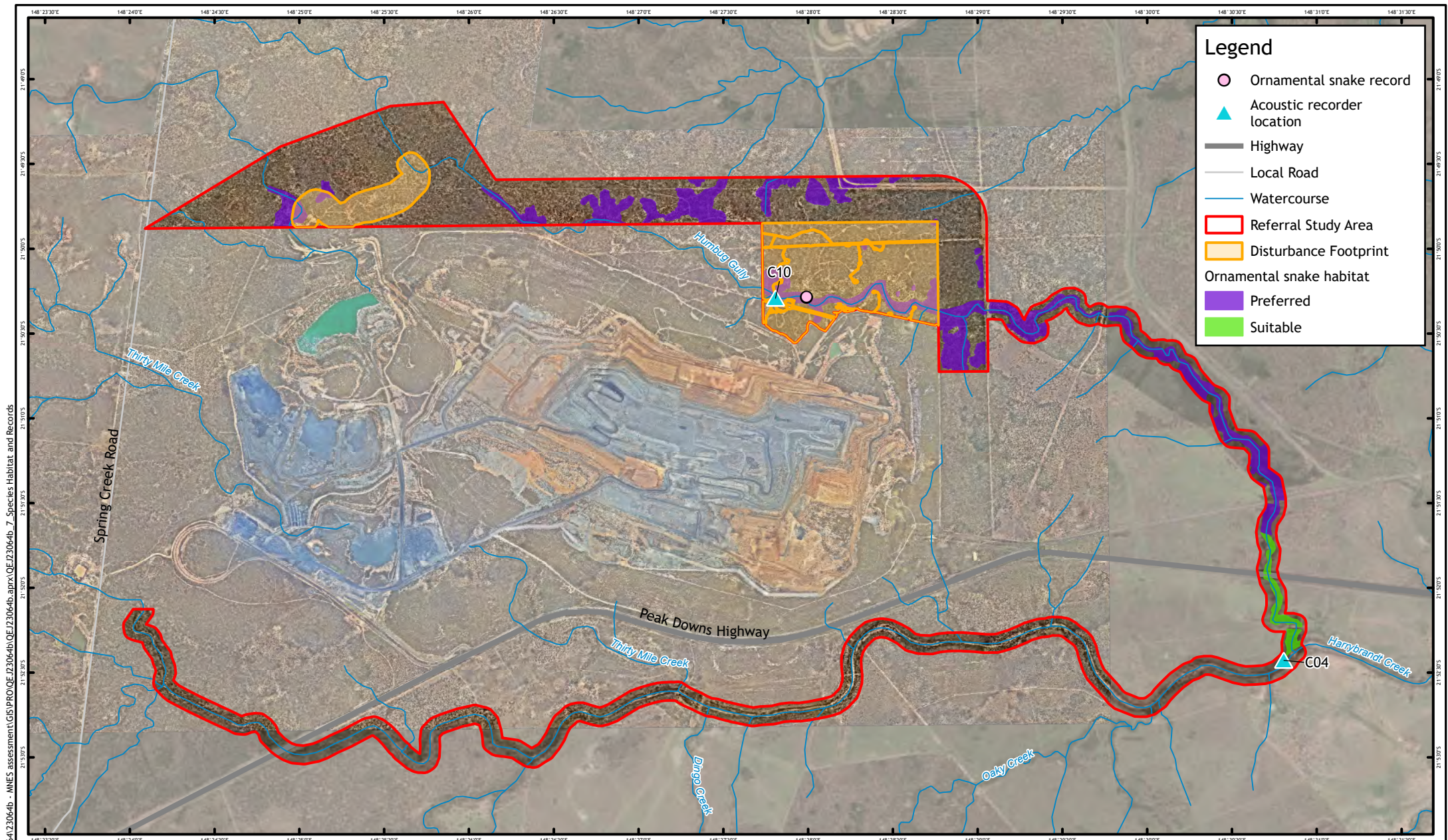
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### FIGURE 7B: KOALA SURVEY RECORDS AND HABITAT EXTENT

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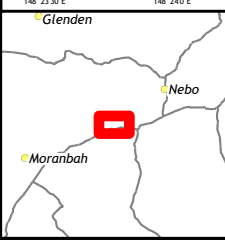
Map Number	Job Number	Rev
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### Legend

- Ornamental snake record
- ▲ Acoustic recorder location
- Highway
- Local Road
- Watercourse
- Referral Study Area
- Disturbance Footprint
- Ornamental snake habitat**
- Preferred
- Suitable

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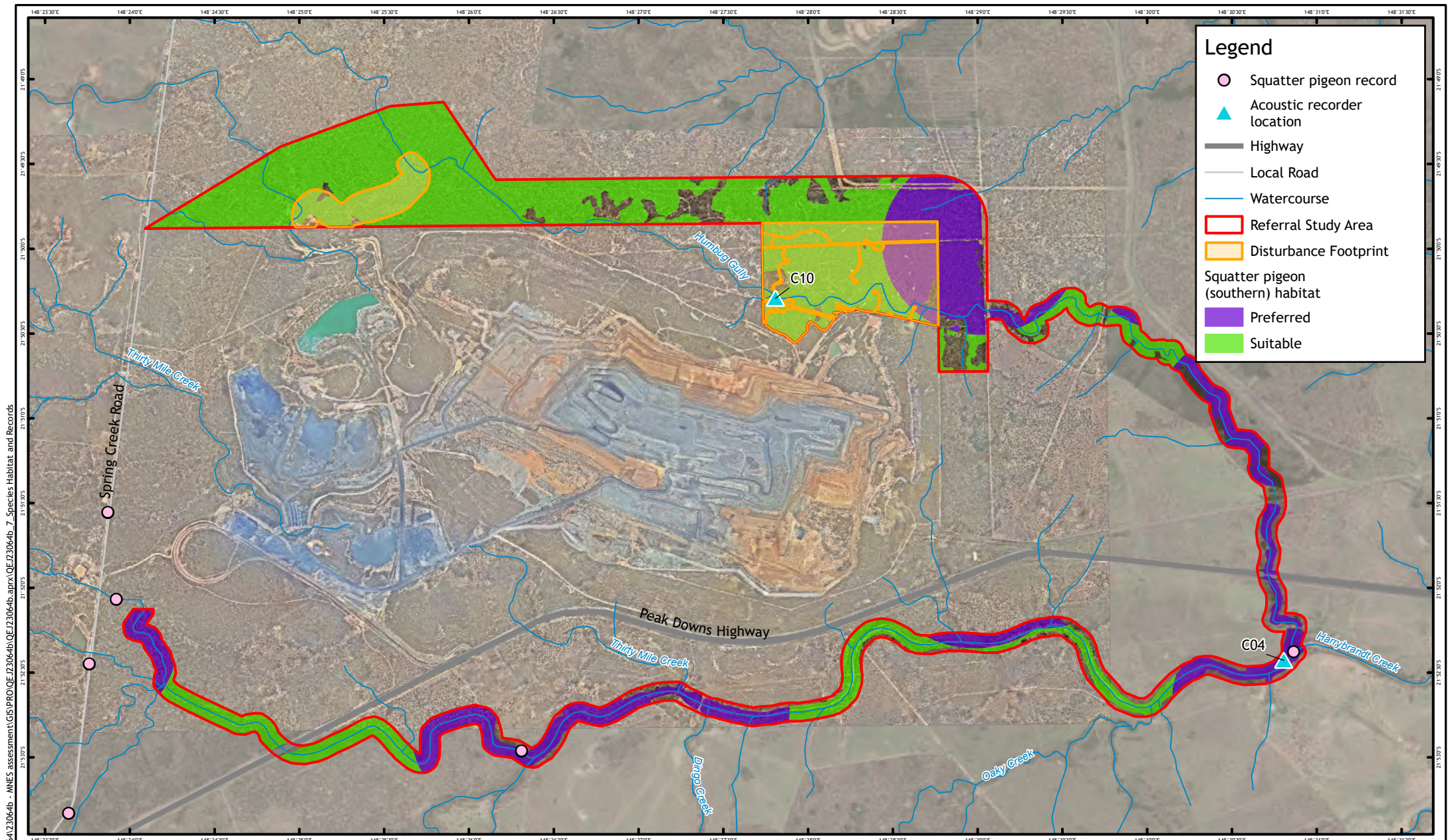
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**FIGURE 7C: ORNAMENTAL SNAKE SURVEY RECORDS AND HABITAT EXTENT**

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 MNES Terrestrial Ecology Report  
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### Legend

- Squatter pigeon record
- ▲ Acoustic recorder location
- Highway
- Local Road
- Watercourse
- Referral Study Area
- Disturbance Footprint

Squatter pigeon (southern) habitat

- Preferred
- Suitable

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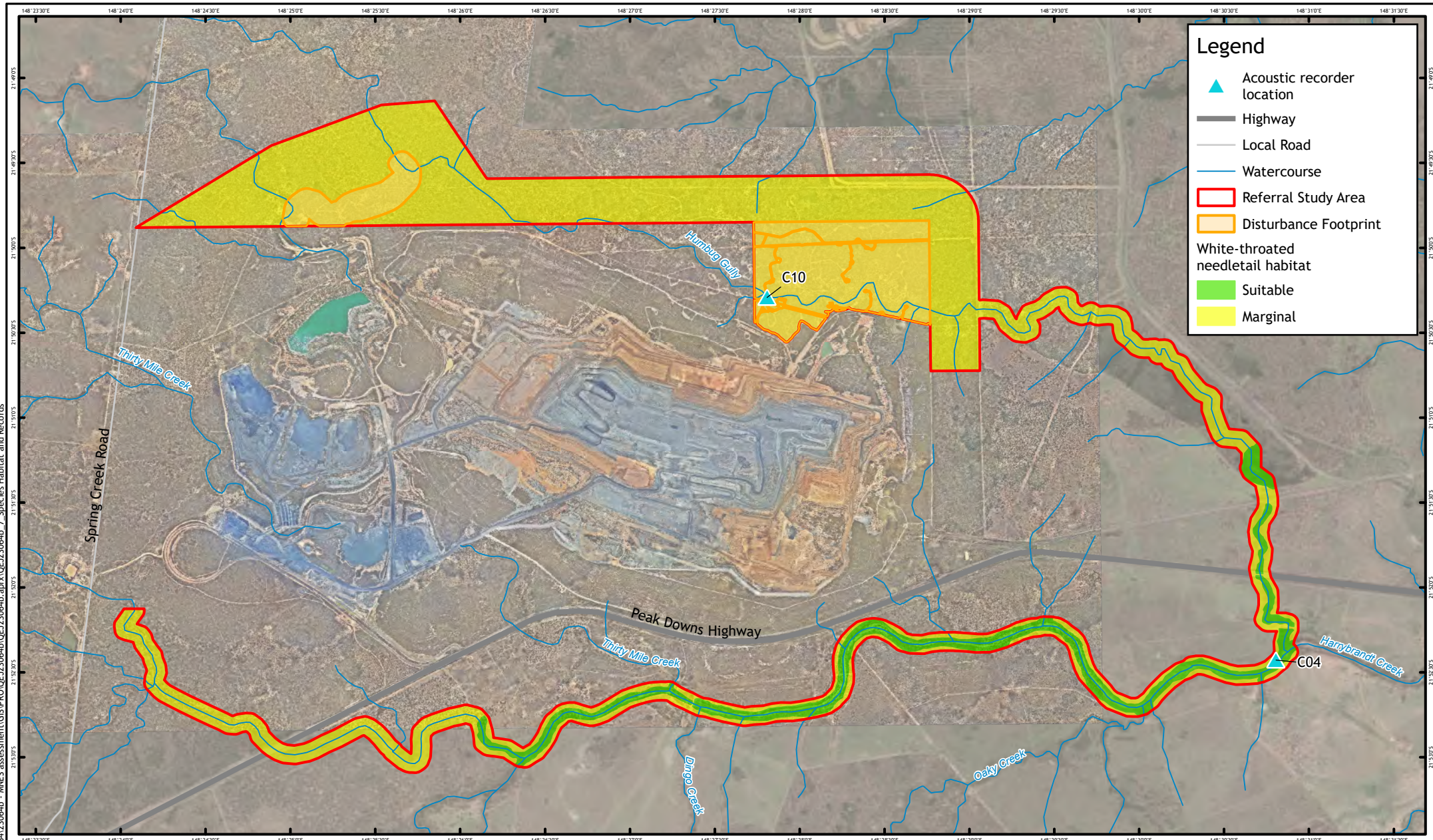
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**FIGURE 7D: SQUATTER PIGEON (SOUTHERN) SURVEY RECORDS AND HABITAT EXTENT**

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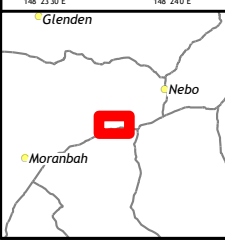
### Legend

- Acoustic recorder location
- Highway
- Local Road
- Watercourse
- Referral Study Area
- Disturbance Footprint

White-throated needletail habitat

- Suitable
- Marginal

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### FIGURE 7E: WHITE-THROATED NEEDLETAIL HABITAT EXTENT

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#### 4.4.4 Migratory fauna

##### 4.4.4.1 Fork-tailed swift

Fork-tailed swift is listed as migratory under the EPBC Act. The species is predominantly aerial and occurs over inland areas and occasionally above the foothills in coastal areas with dry and open habitat. The species can also occur over low scrub, heathland, saltmarsh and riparian woodlands and are associated with low pressure systems that favour the occurrence of insect prey.

During the field survey, a flock of 20-40 fork-tailed swifts were observed high in the airspace above the Study Area at Humbug Gully. The species is likely to utilise airspace over the Study Area for foraging. The species is likely to be completely aerial in Australia with only one record of the species roosting in Australia in emergent branches above foliage (Newell, 1930).

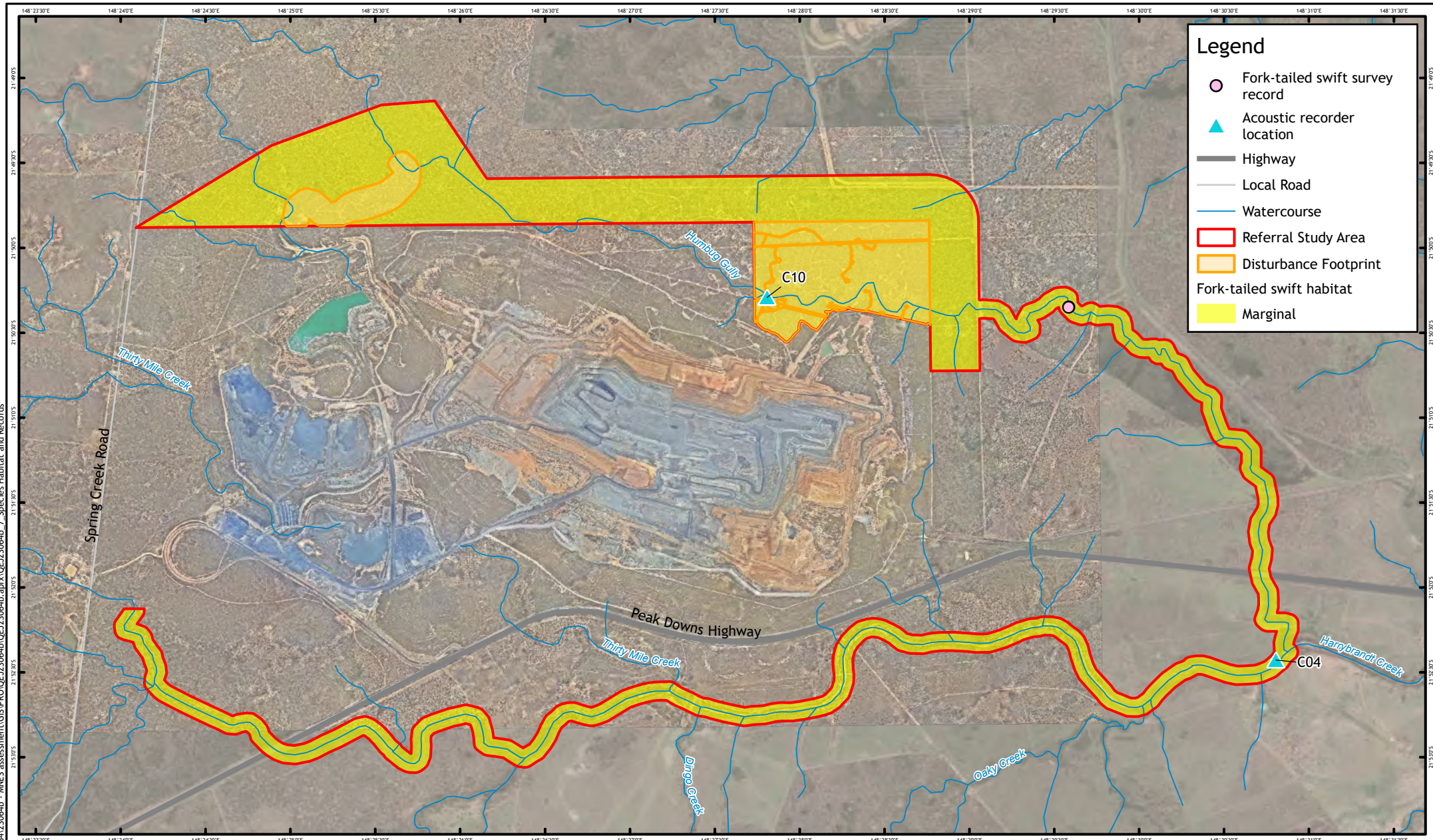
Marginal habitat for the species mapped within the Study Area includes:

- all areas within the Study Area that provide potential foraging habitat in the airspace above.

Based on desktop and field investigations to date, the Study Area contains 1280.28 ha of marginal habitat for the species, including 253.10 ha of marginal habitat within the Disturbance Footprint.

- The extent of habitat for the species within the Study Area is shown in Figure 8.

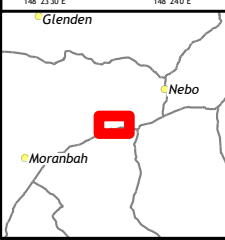




### Legend

- Fork-tailed swift survey record
- Acoustic recorder location
- Highway
- Local Road
- Watercourse
- Referral Study Area
- Disturbance Footprint
- Fork-tailed swift habitat**
- Marginal

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### FIGURE 8: FORK-TAILED SWIFT HABITAT EXTENT

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## 4.5 Pest species

### 4.5.1 Pest flora

Five weed species listed as WoNS and/or restricted matter under the Biosecurity Act were recorded within the Study Area (Figure 9). This included lantana (*Lantana camara*\*), velvet prickly-pear (*Opuntia tomentosa*\*), harrisia cactus (*Harrisia martinii*\*), bellyache bush (*Jatropha gossypifolia*\*) and parthenium (*Parthenium hysterophorus*\*) (Table 5).

Whilst not classified as a WoNS or as restricted matter, infestations of stylo (*Stylosanthes scabra*\*) were frequently observed throughout Study Area. Other commonly-encountered introduced species identified within the Study Area included red Natal grass (*Melinis repens*\*), Guinea grass (*Megathyrsus maximus*\*) and buffel grass (*Cenchrus ciliaris*\*).

**Table 5: Pest flora within the Study Area**

Scientific name	Common name	WoNs	Biosecurity Act status	Location and relative abundance
<i>Harrisia martinii</i>	harrisia cactus	-	Category 3	Localised infestations and scattered plants throughout the Study Area including in REs 11.5.2, 11.5.16 and 11.3.25, including riparian and woodland areas. Observed to be flowering during the survey.
<i>Jatropha gossypifolia</i>	bellyache bush	WoNs	Category 3	Localised infestation in riparian area along Harrybrandt Creek.
<i>Lantana camara</i>	lantana	WoNs	Category 3	Localised minor to moderate infestations throughout the Study Area, mostly in riparian areas but also in woodland.
<i>Opuntia tomentosa</i>	velvet prickly-pear	WoNs	Category 3	Localised infestations and scattered plants throughout the Study Area in all REs except 11.5.2, including riparian and woodland areas.
<i>Parthenium hysterophorus</i>	parthenium	WoNs	Category 3	Scattered minor to moderate infestations mainly association with riparian vegetation along Humbug Gully downstream of the mining lease and along Harrybrandt Creek.

### 4.5.2 Pest fauna

Five pest fauna species were recorded within the Study Area during the field assessments (Figure 9):

- cane toad (*Rhinella marina*)
- cat (*Felis catus*)
- rabbit (*Oryctolagus cuniculus*)
- wild dog/dingo (*Canis lupus dingo*); and
- pig (*Sus scrofa*).



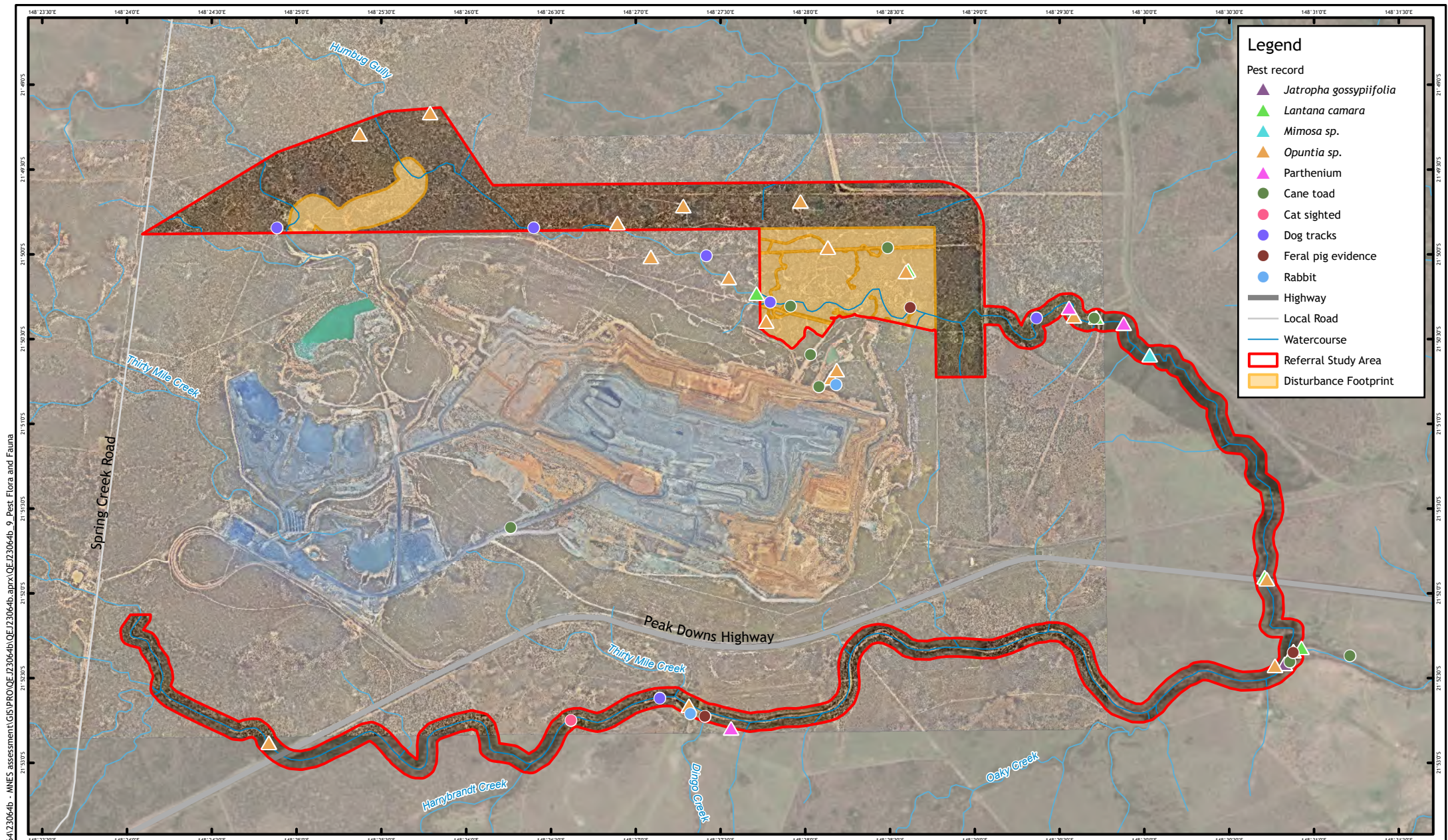
During the survey there was evidence of minor habitat disturbance by feral pigs within the Study Area including pig rooting on the bank of Humbug Gully. Pig remains were found in Harrybrandt Creek. Numerous pigs were detected at Motion Camera 022 in Humbug Gully on four different days. Two individual wild dogs were detected on a creek in the north-west of the Study Area on Motion Camera 027 on two separate days. Numerous dog prints on sandy creek beds were observed throughout the Study Area, mainly in Humbug Gully. A cat was observed during nocturnal spotlighting in the riparian area of Harrybrandt Creek. Numerous cane toads were observed during nocturnal spotlighting, mainly within the Disturbance Footprint in Humbug Gully.

Wild dogs/dingoes and feral pigs are currently prevalent within the Study Area, as substantiated by the large number of animals captured on remote activated camera traps and direct observations made during the field survey (Plate 6). The presence of these species may pose a significant threat to target MNES within the Study Area, with predation by dogs/dingoes and feral cats considered a major threat to some species (DAWE 2022a; TSSC 2015; TSSC 2015).



Plate 6: Images of feral pigs (Motion camera 022) and wild dog/dingo recorded within the Study Area (Motion Camera 27)





### Legend

**Pest record**

- ▲ *Jatropha gossypifolia*
- ▲ *Lantana camara*
- ▲ *Mimosa sp.*
- ▲ *Opuntia sp.*
- ▲ Parthenium
- Cane toad
- Cat sighted
- Dog tracks
- Feral pig evidence
- Rabbit

— Highway

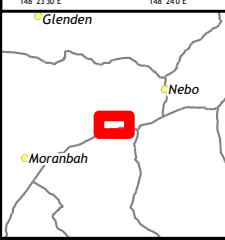
— Local Road

— Watercourse

▭ Referral Study Area

▭ Disturbance Footprint

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### FIGURE 9: PEST FLORA AND FAUNA SURVEY RECORDS

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## 5 Project impacts

Construction and operation of the Project has the potential to impact on MNES both directly and indirectly.

Direct impacts of the Project on MNES, include:

- vegetation clearance and associated habitat removal
- habitat disturbance and degradation, including:
  - fragmentation and edge effects
  - incursions by pest flora and fauna
  - increased light, noise and dust levels
  - fauna injury and/or mortality
  - erosion, sedimentation and spills; and
  - increased risk of fire.

Indirect impacts of the Project on MNES include:

- hydrological impacts to ecosystems from watercourse diversion.

The following sections provide a description of the above-listed impacts.

### 5.1 Direct impacts

#### 5.1.1 Vegetation clearing and habitat removal

Clearing and removal of native vegetation within the Disturbance Footprint has the potential to directly impact MNES flora and fauna species by:

- eliminating or reducing the extent/availability of nesting, denning and roosting/shelter habitat
- fragmenting habitat
- removing or reducing the availability of food and foraging habitat; and
- increasing competition through reduced availability of resources.

Vegetation clearing can also exacerbate the impact of other threatening processes on threatened species/communities (Nelder et al, 2017).

A total of 1,160 ha of remnant vegetation was ground-truthed within the Study Area, with the Disturbance Footprint containing approximately 245 ha of remnant and 120 ha of non-remnant vegetation, including 10.69 ha of Brigalow TEC. A summary of direct impacts on vegetation communities within the Disturbance Footprint, including Brigalow TEC, is provided in Table 7.

Vegetation clearing for the Project will also have direct impacts on potential terrestrial GDEs and fauna habitat (including habitat for MNES fauna specie), within the Disturbance Footprint. A summary of habitat for MNES species directly impacted by the Project is presented in Table 8.



**Table 6: Vegetation cover within the Study Area and Disturbance Footprint**

Vegetation Community	Associated REs	Brigalow TEC	Extent within Study Area (ha)	Extent within Disturbance Footprint (ha)
<i>Eucalyptus tereticornis</i> and <i>Eucalyptus</i> spp. woodland on alluvial plains	11.3.4	-	59.57	0.42
<i>Eucalyptus platyphylla</i> woodland on alluvial plains	11.3.9	-	1.53	0.00
<i>Eucalyptus tereticornis</i> and <i>E. camaldulensis</i> woodland fringing watercourses	11.3.25	-	209.21	19.68
<i>Eucalyptus crebra</i> woodland on gently undulating plains	11.5.2	-	59.48	12.96
<i>Eucalyptus populnea</i> woodland on gently undulating plains	11.5.3	-	546.46	142.25
<i>Eucalyptus platyphylla</i> dominated woodland on gently undulating plains	11.5.8	-	171.52	43.88
<i>Acacia harpophylla</i> and/or <i>Casuarina cristata</i> open forest to woodland	11.5.16	✓	96.64, comprising 95.75 ha of Brigalow TEC	11.16, comprising 10.69 ha of Brigalow TEC
Non-remnant vegetation	NA	-	120.33	8.22
<b>Total</b>			<b>1,280.29</b>	<b>253.10</b>

**Table 7: Extent of MNES habitat within the Study Area and Disturbance Footprint**

MNES	EPBC Act status	Extent within Study Area (ha)		Extent within Disturbance Footprint (direct impact) (ha)	
Brigalow TEC	E	Viabale	95.75	Viabale	10.69
Fork-tailed swift	Migratory	Marginal	1264.74	Marginal	238.58
Greater glider	E	Preferred	270.73	Preferred	20.10
		Suitable	779.20	Suitable	199.09
Koala	E	Preferred	270.73	Preferred	20.10
		Suitable	779.20	Suitable	199.09
Ornamental snake	V	Preferred	167.03	Preferred	29.48
		Suitable	10.30	Suitable	0
Squatter pigeon	V	Preferred	309.96	Preferred	42.63
		Suitable	736.37	Suitable	175.51
White-throated needletail	V	Suitable	122.79	Suitable	0
		Marginal	1141.95	Marginal	238.58

### 5.1.2 Habitat disturbance and degradation

In addition to causing habitat loss, the Project may result in the disturbance and degradation of habitat for MNES flora and fauna via:

- Fragmentation and edge effects
- The establishment and spread of pest flora and fauna species
- Light, noise and dust emissions
- Injury and/or mortality of fauna
- Contamination from spills and leaks; and
- Increased risk of fire.

Each of these impacts are discussed in further detail below.

#### 5.1.2.1 Fragmentation and edge effects

The Study Area is comprised predominantly of remnant vegetation and large tracts of contiguous native vegetation. Clearing within the Disturbance Footprint is therefore likely to fragment habitat within the Study Area as well as resulting in edge effects in habitat adjacent the Disturbance Footprint.

Remnant and regrowth vegetation within and adjacent the Disturbance Footprint is likely important for fauna movement within the Study Area and wider surrounds. Riparian vegetation associated with Humbug Gully appears particularly important in this regard, serving as a movement corridor for a number of fauna species, including koala and greater glider. Clearing within the Disturbance Footprint is likely to fragment habitat and result in the loss of connectivity values associated with this riparian corridor.



Clearing and construction activities within the Disturbance Footprint could also degrade areas of adjoining habitat as a result of edge effects (i.e., reduced quality/suitability of habitat due to changes in vegetation cover along ecotones and adjacent disturbance areas (Laurance & Yensen, 1991)). Potential edge effects on adjacent habitat, include: incursions by feral plants and animals (see 5.1.2.2 below), increased predation risk, increased frequency of human-wildlife interactions, as well as increased dust, noise and light levels (Ben-Ami & Ramp, 2013; Laurance & Yensen, 1991; Pickering et al., 2007; Ramp et al., 2005; Weston et al., 2011; Wolf & Croft, 2014).

As habitat within the Study Area and surrounds is largely intact, the Project is considered likely to increase the potential for edge effects on adjacent habitat for MNES.

#### 5.1.2.2 Pest flora and fauna

Vegetation clearing and other activities associated with the Project have the potential to impact native flora and fauna within the Study Area and surrounds (including MNES species) through the introduction and spread of pest plant and animal species.

Introduced flora species disrupt ecosystems by outcompeting and replacing native species, resulting in altered ecosystem diversity and function. Proliferation and spread of environmental weeds and pests may occur with vegetation clearing, soil disturbance and increased movement of heavy machinery and vehicles. Weed seeds can be transported in contaminated landfill, seed and material on machinery, vehicles or personnel. Construction activities have the potential to spread or introduce weeds throughout adjacent environs, resulting in the reduction in vegetation/habitat quality and native species assemblages. The presence of invasive plants, such as *Lantana camara*\* and *Parthenium hysterophorus*\*, is well documented within the Study Area. However, further pest flora incursions have the potential to impact MNES in the Study Area through the degradation of vegetation community structure and composition. Resulting changes in vegetation structure and composition can also result in increased fuel loads and more frequent and intense fires. This may potentially provide favourable conditions for pest fauna to proliferate and facilitate movement of pest fauna into the wider Study Area. Changes in vegetation structure and condition can also result in increased risk of erosion, further degrading and reducing the availability of habitats.

The Project could also result in an increase in the presence and abundance of feral animals through improper waste disposal and increased permanency of water sources (e.g. dams and troughs). This could result in adverse impacts to native fauna occurring within the Study Area, including MNES species, through:

- increased competition of resources
- predation
- spreading weeds
- grazing and trampling of native vegetation
- introduction and spread of pathogens
- poisoning (e.g., cane toads)
- soil disturbance (e.g., pig diggings), and
- reduced water quality (e.g., eutrophication and/or increased sedimentation and turbidity).

#### 5.1.2.3 Increased light, noise and dust levels

Construction and operational activities can disrupt local fauna roosting, breeding and foraging activities as a result of increased exposure to artificial lighting, noise/vibration and dust. Fauna will generally move



away from noise and light sources as these may be perceived as a threat. Acclimatisation by some species is likely to occur over the medium to long term and many of the species identified in the Study Area are known to occur in areas subject to noise, light and human activity.

Artificial lighting used during construction and operational phases of the Project has the potential to impact fauna and flora (including MNES species) occupying habitat adjacent work areas. Potential impacts on flora and fauna adjacent the Disturbance Footprint include: disorientation from or attraction toward artificial light sources, increased risk of collision with built structures, disruption of fauna breeding and migration behaviour, changes in the flowering patterns of plants, and increased risk of predation (Department of the Environment and Energy, 2020).

Noise levels in the north of the Study Area will likely increase during construction and operational phases of the Project, due to the shifting of mining operations northwards from the existing mining area. The resulting increase in noise levels may impact fauna occupying habitat adjacent work areas by disrupting communication between individuals, startling or frightening animals, or forcing animals to avoid or abandon areas of nearby habitat. Noise thresholds for terrestrial fauna are not well understood, although Mancini et al. (1988) suggests that sound levels above ~90 dB are likely to adversely impact mammal species and result in avoidance behaviour freezing, or a strong startle response. More recent studies on the impact of noise of fauna species in Australia indicate that birds are more likely to be affected by noise than other fauna and will move away from noisy areas (Lindenmayer et al., 2016). By contrast, studies in Europe have shown noise levels up to 60 dBA do not result in negative or adverse response in some terrestrial fauna (Helldin et al., 2012).

Construction and operational activities are also likely to generate dust emissions. Excessive deposition of dust on leaves of plants can suppress growth and photosynthesis and result in reduced habitat quality for fauna. High levels of airborne dust particles can also irritate the respiratory systems of fauna and potentially result in ingestion of dust-coated seeds and other foods. Excessive deposition of dust on open water bodies may also degrade water quality and overall habitat quality for fauna, adjacent disturbance areas.

#### 5.1.2.4 Erosion, sedimentation and spills

Erosion and contamination of soils and water may occur as a result of construction and operational activities, such as vegetation clearing, unexpected releases and operation of heavy machinery. Soil erosion may occur in areas disturbed by activities associated with the Project, particularly in relation to the diversion of Humbug Gully. Erosion can remove the most productive part of the soil profile, the topsoil, resulting in a greatly reduced opportunity for natural regeneration of vegetation communities (unless stockpiled). Where these activities occur on dispersive soils and/or on slopes, sedimentation of watercourses can occur. Impacts to aquatic ecosystems can include build-up of sediment in waterholes with a resultant reduction in available microhabitat and smothering of aquatic plants and substrate.

Inappropriate disposal of liquid and solid wastes, including spills and leaks from transfers (fuel, chemicals) and inadequate storage may also result in point-source contamination of surrounding land, including habitats of threatened and migratory species. Direct adverse impacts include toxic impacts on vegetation (resulting in degradation or loss), direct toxic impacts on fauna (from contact, inhalation or ingestion) or indirect impacts on threatened species from habitat loss. Direct adverse impacts on surface and groundwater quality are also possible.

#### 5.1.2.5 Increased risk of fire

Increased risk of fire incursion is more likely to be associated with the construction phase of the Project. Construction activities have the potential to increase the risk of fire, causing injury or loss of human life, loss of flora and vegetation, fauna and habitat and impacting surface water quality. Aspects of the Project that could lead to more frequent or intense fires include:



- Introduction of ignition sources including vehicles and machinery and equipment such as generators
- Welding, grinding and other hot works
- Introduction or spread of weed species which can increase fuel load.

Depending on the extent, severity and frequency of increased fire incursion, impacts may be either short-term or long-term. These risks are considered low with the implementation of on-site controls and adherence to local bushfire restrictions, particularly during the dry conditions.

### 5.1.3 Fauna injury and/or mortality

Clearing and earth works within the Disturbance Footprint have the potential result in the injury and/or mortality of MNES fauna present within the Disturbance Footprint. Open excavation areas also pose a risk to fauna with animals falling into open pits or trenches potentially succumbing to injury and/or becoming trapped and subsequently dying (due to lack of cover, water and/or foraging resources and or drowning following heavy rain). Animals moving through the Disturbance Footprint may also be susceptible to vehicle strike during construction and operational phases of the Project.

## 5.2 Indirect impacts

### 5.2.1 Changes in hydrology

#### 5.2.1.1 Changes in water quality and quantity

The Project has the potential to alter existing hydrological conditions within the Study Area and surrounds, including surface water flows and groundwater levels. The Project proposes a diversion of surface flows on Humbug Gully, which may have a downstream influence on surface flow volumes to the east, where fringing riparian habitats are identified as potential Terrestrial GDEs and supporting habitat for MNES threatened fauna. Further assessment of surface flow impacts resulting from the Project, particularly on Humbug Gully where a diversion is proposed, will be required to adequately assess impacts to Terrestrial GDEs and downstream environs.

Changes in surface water quality may also impact terrestrial ecosystems downstream of disturbance associated with the Project due to increased erosion and sedimentation of receiving surface waters and mobilisation of other contaminants in runoff from construction and disturbance areas. These changes in water quality have the potential to impact vegetation and habitat fringing the proposed Humbug Gully diversion as well as communities located downstream of the Project, including Humbug Gully and Harrybrandt Creek.

Additional impacts on surface water quality may arise from leakage or accidental spills of fuel or other chemicals stored onsite used during construction or operation entering drainage lines and waterways. Potential sources of waterway contamination include: chemical and fuel spills from temporary refuelling facilities, temporary chemical storage facilities (including oil and waste oil), and construction/commissioning of permanent fuel and chemical storage facilities. Without appropriate mitigation measures, contaminated runoff generated through these activities could enter drainage lines, altering the physical and chemical characteristics of receiving waters. This in turn may result in acute and/or chronic toxicity effects on aquatic plants and animals as well as terrestrial fauna accessing contaminated water to drink.

The significance of potential Project impacts on surface and ground waters will depend on the quantity and nature of contaminants as well as whether the contaminants are directly released to surface waters.



If spills or leaks occur in construction areas, contaminants will either soak into soils or be captured by sediment containment devices and/or permanent stormwater systems.

#### 5.2.1.2 Groundwater drawdown

The Project will likely require dewatering to lower groundwater levels to the base of the proposed workings for safe and efficient mining activities within ML 70236 (in addition to approved development areas within ML 70164). Groundwater levels within the Study Area may also be impacted by changes in groundwater infiltration and groundwater aquifer as a result of the proposed watercourse diversion and excavation of the pit area. As a result, groundwater levels within the Study Area will likely be lowered during the construction and operational phases of the Project.

Lowering of groundwater levels could potentially have an adverse impact on terrestrial GDEs and associated habitat for MNES fauna within the Study Area. Further detailed assessment of impacts to groundwater and associated Terrestrial GDEs, particularly along Humbug Gully and associated floodplains, will be required to adequately assess impacts on Terrestrial GDEs and associated habitat for MNES fauna species (in particular greater glider and koala).





## 6 Impact avoidance and mitigation measures

### 6.1 Avoidance, minimisation and mitigation

The implementation of impact avoidance, minimisation and mitigation measures will assist in reducing Project impacts on ecological values identified within the Study Area and surrounds. Where impacts are unable to be avoided or suitably mitigated (e.g., loss of habitat due to vegetation clearing) offsets may be required. Measures for avoiding, minimising and mitigating potential Project impacts on MNES are presented in the following sections.

#### 6.1.1 Impact avoidance and minimisation

Peabody is currently permitted to continue mining activities within ML 70164 without further Commonwealth Government or Queensland State Government approval, including the development of areas associated with Humbug Gully in the north-eastern extent of the ML. The diversion of Humbug Gully is required to exclude overland flows and facilitate mine activities within this ML and to allow the expansion of mining within ML 70236. The proposed expansion of mining activities within ML70236 would not be possible without this diversion.

The proposed diversion of Humbug Gully will connect with the existing watercourse diversion stages proposed along the western extent of MLs 70164 and 70161, ultimately connecting with an unnamed tributary of Harrybrandt Creek, located south of Coppabella Mine.

With regard to the expansion of mine activities within ML 70236, significant mine engineering design has been undertaken in the development of the finalised Disturbance Footprint for the Project. With regard to mine activities, the location of the Disturbance Footprint is largely defined by the nature and extent of the coal deposit. As such, it is constrained by resource, geographic, existing infrastructure and feasibility considerations.

The finalised Project layout aims to optimise mining activities in order to access most of the target resource within the smallest footprint, so as to minimise environmental impacts within the Study Area and surrounds. The Project's target resource is located predominantly in ML 70236 which is contiguous with leases currently held by Peabody for the existing Coppabella Mine. The Project location will maximise the use of existing Coppabella Mine infrastructure and minimise the need for additional disturbance. The Project will also prioritise the clearing of non-remnant vegetation within the Project Footprint; however, due to the extent of remnant vegetation within the Study Area, impacts on remnant communities are unavoidable. In these instances, impacts on remnant vegetation have been minimised (see below).

#### 6.1.2 Mitigation

##### 6.1.2.1 Vegetation clearing and habitat removal

A range of measures will be implemented over the construction and operational phases of the Project to mitigate and minimise the removal of native vegetation and fauna habitat (including habitat for MNES fauna) within the Study Area. These measures include:

- Vegetation clearing extents will be kept to the minimum area necessary for construction. Areas that must not be cleared or damaged would also be clearly identified on construction plans.
- Placement of temporary infrastructure is to be located outside of remnant vegetation, with areas previously cleared/degraded (non-remnant) to be prioritised.



- Boundaries of areas to be cleared, and those not to be cleared are to be clearly defined during clearing activities and clearly communicated to all necessary construction personnel. Where necessary, signage, flagging and/or barricade fencing may be used to demarcate areas not to be cleared.
- Threatened Species Management Plans will be developed prior to the commencement of construction to comply with Commonwealth and Queensland legislation and promote conservation outcomes for:
  - Koala (*Phascolarctos cinereus*)
  - Greater glider (central and southern) (*Petauroides volans*)
  - Ornamental snake (*Denisonia maculata*); and
  - Squatter pigeon (southern subspecies) (*Geophaps scripta scripta*).

The Threatened Species Management Plan should include species-specific mitigation measures and controls to minimise and mitigate long term impacts on these species

- Pre-clearance fauna surveys are to be undertaken by a suitably experienced and qualified ecologist to identify fauna at direct risk from clearing activities.
- A suitably experienced and qualified fauna spotter/catcher will be present during the clearing of any structures that may serve as habitat or refugia for animals.
- Prior to removal, all hollow-bearing trees approved for removal are to be thoroughly checked for fauna presence prior to felling. If fauna presence is confirmed, it is recommended that trees be left overnight to allow for self-dispersal.
- Hollow-bearing trees providing shelter for native fauna should be felled slowly (in sections), so as to minimise the risk of injury to fauna.
- Fauna captured during clearing will be treated for injuries and transferred to suitable habitat elsewhere within or adjacent the Study Area.
- In the event a koala is identified within areas to be cleared, the individual is to be left to vacate the area on its own accord.
- Vegetation clearing should be carried out sequentially over the life of the Project to allow fauna species the opportunity to disperse away from clearing areas.
- Directional clearing towards retained vegetation would be undertaken where practical to enable the movement of fauna into retained vegetation.
- During construction works, work areas and excavations (trenches) are to be checked for fauna that may have become trapped.
- Fauna exclusion fencing will be erected around open trenches and pits >1 m depth to minimise the risk of injury to fauna.
- If trenches remain open after daily site works have been completed, fauna ramps would be put in place.

#### 6.1.2.1.1 Rehabilitation

A Rehabilitation Management Plan will be developed outlining requirements for land to be progressively rehabilitated to achieve completion criteria for a safe, stable and non-polluting landform able to sustain an agreed post-mining land use. The Rehabilitation Management Plan will detail:

- rehabilitation objectives, indicators and performance criteria for rehabilitation activities during construction and operation



- a methodology for achieving rehabilitation objectives, and
- any monitoring and maintenance requirements regarding rehabilitation areas, including actions associated with the Humbug Gully diversion (i.e., bank stabilisation, erosion monitoring etc.) to assess and demonstrate the efficacy of measures outlined in the plan.

The Rehabilitation Management Plan should include measures to ensure:

- Revegetation and stabilisation of excavated banks associated with the Humbug Gully diversion and associated controls.
- Rehabilitation of areas containing temporary infrastructure and cleared areas which are no longer required are to be rehabilitated as soon as practicable.
- Topsoil within areas for temporary infrastructure is stockpiled for redistribution during rehabilitation activities.
- Hollow bearing trees, woody debris, logs and rocks providing shelter habitat for fauna are salvaged for re-use in rehabilitation areas or relocated into adjacent areas of retained habitat.

### 6.1.2.2 Habitat disturbance and degradation

#### 6.1.2.2.1 Fragmentation and edge effects

Potential impacts associated with fragmentation and edge effects will be largely managed in association with measures detailed within the following sections. In summary, potential impacts to adjacent vegetation and habitat will be managed through the development of:

- A Rehabilitation Management Plan (refer to Section 6.1.2.1.1)
- a Weed and Pest Management Plan (refer to Section 6.1.2.2.2)
- a Dust Management Plan and mitigation measures to minimise impacts associated with artificial lighting and noise (refer to Section 6.1.2.2.3); and
- an Erosion and Sediment Control Plan (refer to Section 6.1.2.2.5).

#### 6.1.2.2.2 Pest flora and fauna

A Weed and Pest Management Plan for the Project will be developed to help minimise/mitigate impacts of pest species on native flora and fauna within the Study Area. This plan will include measures to manage/control weed and pest animal species within the Project area and surrounds during construction and operational phases of the Project, as detailed below.

- Weeds or soil removed as a result of construction activities are to be appropriately disposed of or stored separately to minimise potential spread and proliferation of weed species.
- Prior to vegetation clearing activities, a pre-clearance survey will be undertaken to identify and map infestations of biosecurity matter to minimise the spread during clearing works and operational phase.
- Waste management, including suitable disposal of waste food, to minimise occurrences of pest fauna.
- All vehicles, equipment and materials (e.g. landfill, soil etc) brought to site are to be certified free of biosecurity matter and carry weed hygiene certification.
- Rehabilitation monitoring to identify environmental weeds within rehabilitation areas
- Biosecurity monitoring to identify and assess the risk of weed and pest occurrences within the Project and adjacent mine areas.



- Control measures for target biosecurity species and other weed and pest species identified within the Project and adjacent mine areas.

#### 6.1.2.2.3 Increased light, noise and dust levels

To mitigate the potential impacts of light, noise and dust during construction and operation of the Project, the following management measures will be applied:

- Where artificial lighting is required, directional lighting should be implemented so as to:
  - focus on disturbance/work areas, and
  - minimise/avoid lighting of remnant vegetation/habitat adjacent work areas (through the use of directional lighting and glare guards).
- Development of a Dust Management Plan including the following measures:
  - Topsoil stockpiles are to be kept to a maximum height of 3 m and side slopes profiled to decrease wind erosion/dispersal of stockpiled soil
  - Active haul roads are to be regularly watered (or applied with dust suppressants) to minimise dust generation potential
  - Active mining areas and haul roads are to be maintained in good condition to minimise emissions
  - Blasting operations are to be monitored in relation to wind speed and direction to ensure that emissions do not adversely impact on sensitive receivers; and
  - Completed mining areas and any other cleared areas should be rehabilitated as soon as possible after use.
- Regular maintenance of machinery and mobile plants should be undertaken to minimise unnecessary noise.

#### 6.1.2.2.4 Fauna injury and/or mortality

To mitigate potential impacts to fauna, including MNES species, the following management measures should be implemented during construction and operational phases of the Project:

- Vehicles are to remain on designated access tracks and adhere to site rules relating to speed limits
- Speed limits are to be clearly signposted to minimise potential fauna strike
- Removal of roadkill should be undertaken to minimise the risk of attracting other fauna to the road corridor
- Contingencies and procedures for the treatment of injured fauna
- Where installation of wire fencing is required to exclude personnel or vehicular traffic, consideration should be given to movement of fauna around and/or through such fencing; and
- Barbed wire should not be used on the top strand of wire fences unless necessary for security.

The above measures should also be included in Threatened Species Management Plans.

#### 6.1.2.2.5 Erosion, sedimentation and spills

An Erosion and Sediment Control Plan will be developed to reduce the amount of sediment laden run-off entering waterways adjacent to and downstream of the Disturbance Footprint. The following general principles should apply to erosion and sediment controls:



- minimising the extent of land clearing and amount soil disturbance upstream of drainage lines/water courses
- where possible, applying local temporary erosion control measures (e.g., silt fencing)
- intercept run-off from undisturbed areas and divert around surface disturbance areas, through the use of up-catchment diversions
- where temporary measures are likely to be ineffective, direct surface water run-off from surface disturbance areas to sediment dams prior to release from the Project area; and
- disturbed areas will be rehabilitated to reduce the level of exposed soils as soon as practicable.

To minimise the risk of hazardous substances entering receiving waters adjacent or downstream of work areas:

- bunding and appropriate storage of fuels and other hazardous and flammable materials will be undertaken in accordance with AS1940:2004 and where practical, located away from any waterbodies
- oil spill recovery equipment will be available when working adjacent to drainage channels with the ability to discharge off site; and
- spill kits for containing and cleaning up chemical spills will be located with construction crews conducting activities with the potential for significant spills.

#### 6.1.2.2.6 Increased risk of fire

Potential impacts from bushfire risk for the Project will be mitigated through the following measures:

- managing vegetation within the MLs to maintain safe fuel loads and firebreaks
- any chemicals used in the Project area should be handled and disposed of in accordance with the relevant Material Safety Data Sheets
- establishing and maintaining access tracks to be used by Queensland Fire and Rescue Service for emergency purposes; and
- implementing an Emergency Response Procedure for fires prepared in consultation with emergency services.

#### 6.1.2.3 Changes in hydrology

Further assessment and modelling of hydrologic conditions within and adjacent the Study Area are required to characterise and quantify indirect Project impacts to groundwater and surface water hydrology on terrestrial GDEs and associated MNES fauna habitat.

Effective management/mitigation of Project impacts on terrestrial GDEs and associated MNES will require development of a Groundwater Dependent Ecosystem Monitoring and Management Plan, including annual monitoring of groundwater quality and potential drawdown to identify trends and changes over time in terrestrial GDEs, vegetation and habitat, within the predicted drawdown extent and downstream of the Project.

Project impacts on surface water flows may also require the design and installation of stormwater infrastructure to manage runoff into areas adjoining the Disturbance Footprint south of the Humbug Gully diversion.



#### 6.1.2.4 Monitoring

Monitoring will be undertaken during the construction and operation phases of the Project (and, where necessary, after completion of the Project) in order to assess Project impacts on MNES and gauge the efficacy of proposed impacts mitigation measures. Monitoring will focus on the quality and condition of vegetation and MNES fauna habitat adjacent to mining activities as well as vegetation communities located downstream of the Project. Monitoring methods, frequency of monitoring, and criteria for assessing the success (or otherwise) of impact mitigation measures will be detailed in the following management plans:

- Weed and Pest Management Plan
- Dust Management Plan
- Rehabilitation Management Plan
- Threatened Species Management Plan for threatened fauna
- Erosion and Sediment Control Plan; and
- Groundwater Dependent Ecosystem Monitoring and Management Plan.



## 7 MNES Significant Impact Assessment

The Australian Government has produced the *Matters of National Environmental Significance: Significant Impact Guidelines 1.1* (2013) (MNES Referral Guidelines) to assist in determining if residual impacts associated with a project require referral. Self-assessments against the MNES Referral Guidelines are provided in Appendix C. Based on the findings of the desktop and field assessments, a preliminary assessment against the MNES Referral Guidelines identified that the Project is **likely** to significantly impact the Brigalow TEC and three threatened species listed under the EPBC Act (koala, greater glider and ornamental snake), as summarised below.

### 7.1 Threatened ecological communities

#### 7.1.1 Brigalow TEC

The Project will result in the direct removal of 10.69 ha of Brigalow TEC. The Approved Conservation Advice for the Brigalow ecological community (DoE, 2013a) outlines that areas critical to the survival of the community include all patches that meet the key diagnostic characteristics and condition thresholds for the TEC. As described in Section 4.4.1, the Brigalow patches within the Study Area meet the key diagnostic characteristics and condition thresholds of the TEC, such that they constitute habitat critical to survival of the TEC. Accordingly, the Project is expected to lead to a significant impact on the Brigalow TEC as a result of:

- reduction in the extent of the TEC
- adversely affecting habitat critical to the survival of the TEC; and
- interfering with the recovery of the TEC.

It is also anticipated that modification of abiotic factors (i.e. water) and/or change in species composition of downstream areas of the TEC may occur as a result of hydrological changes.

### 7.2 Threatened species -endangered species

#### 7.2.1 Koala

The Project will result in the direct loss of 219.19 ha of koala habitat, comprising 20.10 ha of preferred and 199.09 ha of suitable habitat for the species. Based on the habitat characteristics together with the extent and condition, it is likely that habitat within the Disturbance Footprint meets essential life cycle requirements via supporting foraging, breeding, social behaviour and/or dispersal such that it meets the requirements to constitute habitat critical to survival. The Project is expected to lead to a significant impact on koala as a result of:

- leading to a long-term decrease in the population size
- adversely affecting habitat critical to the survival of the species
- disrupting the breeding cycle of the population
- modification of downstream habitats; and
- interfering with the recovery of the species.



### 7.2.2 Greater glider

The Project will result in the direct loss of 219.19 ha of greater glider habitat, comprising 20.10 ha of preferred and 199.09 ha of suitable habitat for the species. Habitat within the Disturbance Footprint meets definition of habitat critical to the survival of greater glider (Department of the Environment (DotE), 2016), being *large contiguous areas of eucalypt forest, which contain mature hollow-bearing trees and a diverse range of the species' preferred food species in a particular region*. The Project is expected to lead to a significant impact on greater glider as a result of:

- leading to a long-term decrease in the population size
- adversely affecting habitat critical to the survival of the species
- disrupting the breeding cycle of the population
- modification of downstream habitats; and
- interfering with the recovery of the species.

## 7.3 Threatened species - vulnerable species

### 7.3.1 Ornamental snake

The Project will result in the direct clearing of 29.48 ha of preferred habitat for ornamental snake, including areas known to be occupied by the species. Under the Draft referral guidelines for the nationally listed Brigalow Belt reptiles (SEWPC, 2011), important habitat for the ornamental snake is a surrogate for an important population for the species. Important habitat for ornamental snake includes areas with gilgai depressions and mounds, or habitat that functions as connectivity between such areas (SEWPC, 2011). Given that the Disturbance Footprint provides connectivity between gilgai habitats associated with RE 11.5.16, the habitat and population impacted by the Project are deemed to be important. The Project is expected to lead to a significant impact on ornamental snake as a result of:

- leading to a long-term decrease in the population size
- fragmenting a population
- adversely affecting habitat critical to the survival of the species
- disrupting the breeding cycle of the population
- modification of downstream habitats; and
- interfering with the recovery of the species.





## 8 Conclusion

E2M was engaged by Peabody to investigate ecological matters requiring consideration for development and approvals associated with the Project, including MNES prescribed under the EPBC Act.

Based on desktop and field investigations undertaken, seven MNES species are known or likely to occur within the Study Area, including:

- brigalow (*Acacia harpophylla* dominant and co-dominant) TEC - Endangered)
- koala (*Phascolarctos cinereus*) - Endangered
- greater glider (southern and central) (*Petauroides volans/ Petauroides armillatus*) - Endangered
- ornamental snake (*Denisonia maculata*) - Vulnerable
- squatter pigeon (southern) (*Geophaps scripta scripta*) - Vulnerable
- white-throated needletail (*Hirundapus caudacutus*) - Vulnerable; and
- fork-tailed swift (*Apus pacificus*) - Migratory.

The known/potential occurrence and extent of potentially suitable habitat for these MNES species within the Study Area and Disturbance Footprint are summarised in Table 6.

Potential impacts to MNES as a result of the Project include the following:

- removal of native vegetation and habitat loss
- habitat degradation
- introduction and spread of weeds and pests
- injury or mortality of fauna
- disturbance from light, dust and noise
- modification of hydrology
- changes in surface water and groundwater quality; and
- groundwater drawdown.

Assessment of the significance of these potential impacts to MNES identified that a significant impact on Brigalow TEC, koala, greater glider and ornamental snake may occur as a result of:

- leading to a long-term decrease in population size
- adversely affecting habitat critical to the survival of the species
- disrupting the breeding cycle of the population
- modification of downstream habitats; and
- interfering with the recovery of the species.



Table 8: Summary of MNES ‘known’ or ‘likely to occur’ within the Study Area

MNES	EPBC Act	Presence within the Study Area	Presence within the Disturbance Footprint	Area of habitat (ha)	
				Within the Study Area	Within the Disturbance Footprint
<b>TEC</b>					
Brigalow ( <i>Acacia harpophylla</i> dominant and codominant)	Endangered	Known to occur	Known to occur	95.75	10.69
<b>Fauna</b>					
fork-tailed swift <i>Apus pacificus</i>	Marine; Migratory	Known to occur	Likely to occur	<b>Marginal: 1280.28</b>	<b>Marginal: 253.10</b>
greater glider (northern) <i>Petauroides minor</i>	Vulnerable	Known to occur	Known to occur	<b>Preferred: 270.73</b> <b>Suitable: 779.21</b>	<b>Preferred: 20.10</b> <b>Suitable: 199.09</b>
koala <i>Phascolarctos cinereus</i>	Endangered	Known to occur	Known to occur	<b>Preferred: 270.73</b> <b>Suitable: 779.20</b>	<b>Preferred: 20.10</b> <b>Suitable: 199.09</b>
ornamental snake <i>Denisonia maculata</i>	Vulnerable	Known to occur	Known to occur	<b>Preferred: 167.03</b> <b>Suitable: 10.30</b>	<b>Preferred: 29.48</b> <b>Suitable: 0.00</b>
squatter pigeon (southern) <i>Geophaps scripta scripta</i>	Vulnerable	Known to occur	Known to occur	<b>Preferred: 309.96</b> <b>Suitable: 736.37</b>	<b>Preferred: 42.63</b> <b>Suitable: 175.51</b>



MNES	EPBC Act	Presence within the Study Area	Presence within the Disturbance Footprint	Area of habitat (ha)	
				Within the Study Area	Within the Disturbance Footprint
White-throated needletail <i>Hirundapus caudacutus</i>	Vulnerable; Marine; Migratory	Likely to occur	Likely to occur	Suitable: 122.79 Marginal: 1141.95	Suitable: 0.00 Marginal: 238.58



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## Appendix A Desktop search results





Australian Government

Department of Climate Change, Energy,  
the Environment and Water

# EPBC Act Protected Matters Report

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

Report created: 31-Oct-2023

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

# Summary

## Matters of National Environment Significance

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

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Wetlands of International Importance (Ramsar)</a>	None
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	4
<a href="#">Listed Threatened Species:</a>	24
<a href="#">Listed Migratory Species:</a>	11

## Other Matters Protected by the EPBC Act

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

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

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

<a href="#">Commonwealth Lands:</a>	None
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	16
<a href="#">Whales and Other Cetaceans:</a>	None
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None
<a href="#">Habitat Critical to the Survival of Marine Turtles:</a>	None

## Extra Information

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

<a href="#">State and Territory Reserves:</a>	1
<a href="#">Regional Forest Agreements:</a>	None
<a href="#">Nationally Important Wetlands:</a>	None
<a href="#">EPBC Act Referrals:</a>	10
<a href="#">Key Ecological Features (Marine):</a>	None
<a href="#">Biologically Important Areas:</a>	None
<a href="#">Bioregional Assessments:</a>	None
<a href="#">Geological and Bioregional Assessments:</a>	None

# Details

## Matters of National Environmental Significance

### Listed Threatened Ecological Communities

[ [Resource Information](#) ]

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

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

Community Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Brigalow (Acacia harpophylla dominant and co-dominant)</a>	Endangered	Community known to occur within area	In feature area
<a href="#">Natural Grasslands of the Queensland Central Highlands and northern Fitzroy Basin</a>	Endangered	Community likely to occur within area	In feature area
<a href="#">Poplar Box Grassy Woodland on Alluvial Plains</a>	Endangered	Community likely to occur within area	In feature area
<a href="#">Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions</a>	Endangered	Community likely to occur within area	In feature area

### Listed Threatened Species

[ [Resource Information](#) ]

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

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>BIRD</b>			
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Erythrotriorchis radiatus</a> Red Goshawk [942]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Falco hypoleucos</a> Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Geophaps scripta scripta</a> Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Neochmia ruficauda ruficauda</a> Star Finch (eastern), Star Finch (southern) [26027]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Poephila cincta cincta</a> Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Rostratula australis</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Stagonopleura guttata</a> Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area
<b>MAMMAL</b>			
<a href="#">Dasyurus hallucatus</a> Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Macroderma gigas</a> Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Nyctophilus corbeni</a> Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Petauroides volans</a> Greater Glider (southern and central) [254]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a> Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
<b>PLANT</b>			
<a href="#">Dichanthium queenslandicum</a> King Blue-grass [5481]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Dichanthium setosum</a> bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Eucalyptus raveretiana</a> Black Ironbox [16344]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Samadera bidwillii</a> Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area	In feature area

## REPTILE

<a href="#">Denisonia maculata</a> Ornamental Snake [1193]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Egernia rugosa</a> Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Elseya albagula</a> Southern Snapping Turtle, White-throated Snapping Turtle [81648]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Furina dunmalli</a> Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Hemiaspis damelii</a> Grey Snake [1179]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Lerista allanae</a> Allan's Lerista, Retro Slider [1378]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Rheodytes leukops</a> Fitzroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle, White-eyed River Diver [1761]	Vulnerable	Species or species habitat may occur within area	In feature area

## Listed Migratory Species

[ [Resource Information](#) ]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
<b>Migratory Terrestrial Species</b>			
<a href="#">Cuculus optatus</a> Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat may occur within area	In buffer area only
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat may occur within area	In feature area
<b>Migratory Wetlands Species</b>			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area	In feature area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat likely to occur within area	In buffer area only

## Other Matters Protected by the EPBC Act

Listed Marine Species			[ Resource Information ]
Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>Bird</b>			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
<a href="#">Anseranas semipalmata</a> Magpie Goose [978]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Bubulcus ibis as Ardea ibis</a> Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Chalcites osculans as Chrysococcyx osculans</a> Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat may occur within area overfly marine area	In buffer area only
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
<a href="#">Rostratula australis as Rostratula benghalensis (sensu lato)</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area

## Extra Information

State and Territory Reserves			[ <a href="#">Resource Information</a> ]
Protected Area Name	Reserve Type	State	Buffer Status
Dipperu	National Park (Scientific)	QLD	In buffer area only



EPBC Act Referrals [ [Resource Information](#) ]

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Controlled action</b>				
<a href="#">Alpha Coal Project - Mine and Rail Development</a>	2008/4648	Controlled Action	Post-Approval	In feature area
<a href="#">Arrow Bowen Pipeline (CSG), QLD</a>	2012/6459	Controlled Action	Post-Approval	In buffer area only
<a href="#">Bowen Gas Project</a>	2012/6377	Controlled Action	Post-Approval	In feature area
<a href="#">Construct and Operate the Connors River Dam and Pipelines</a>	2008/4429	Controlled Action	Post-Approval	In feature area
<a href="#">Goonyella Riverside Mine to South Walker Creek Mine Dragline Move</a>	2016/7788	Controlled Action	Completed	In feature area
<a href="#">Harrybrandt Open Cut Coal Mine and Associated Infrastructure, Bowen Basin, Qld</a>	2012/6483	Controlled Action	Completed	In feature area
<a href="#">MRA2C Project, South Walker Creek Operations</a>	2017/7957	Controlled Action	Post-Approval	In buffer area only
<a href="#">South Walker Creek Mulgrave Pit mine extension, Nebo, QLD</a>	2014/7272	Controlled Action	Post-Approval	In buffer area only
<b>Not controlled action</b>				
<a href="#">Coppabella-Ingston Railway Duplication</a>	2008/4103	Not Controlled Action	Completed	In buffer area only
<a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a>	2015/7522	Not Controlled Action	Completed	In feature area

# Caveat

## 1 PURPOSE

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

The report contains the mapped locations of:

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

## 2 DISCLAIMER

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

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

## 3 DATA SOURCES

Threatened ecological communities

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

Threatened, migratory and marine species

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

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

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

## 4 LIMITATIONS

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

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

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

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

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

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

# Acknowledgements

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

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

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

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

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# Queensland Government

## WildNet species list

Search Criteria: Species List for a Specified Point  
Species: All  
Type: Native  
Queensland status: Rare and threatened species  
Records: All  
Date: Since 1980  
Latitude: -21.8354  
Longitude: 148.4588  
Distance: 25  
Email: kurtis.kemp@e2mconsulting.com.au  
Date submitted: Tuesday 09 Jan 2024 15:57:57  
Date extracted: Tuesday 09 Jan 2024 16:00:06

The number of records retrieved = 11

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Information about your Species lists request is logged for quality assurance, user support and product enhancement purposes only.

The information provided should be appropriately acknowledged as being derived from WildNet database when it is used. As the WildNet Program is still in a process of collating and vetting data, it is possible the information given is not complete. Go to the WildNet database webpage (<https://www.qld.gov.au/environment/plants-animals/species-information/wildnet>) to find out more about WildNet and where to access other WildNet information products approved for publication. Feedback about WildNet species lists should be emailed to [wildlife.online@des.qld.gov.au](mailto:wildlife.online@des.qld.gov.au).



## **Vegetation management report**

For Lot: 2 Plan: SP113033

31/10/2023



## **Vegetation management report**

For Lot: 1 Plan: SP144274

31/10/2023

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# Recent changes

## Updated mapping

On September 6 2023, the Department of Environment and Science updated the Protected Plant Flora Survey Trigger Map to include recent species classification changes and Queensland Herbarium scientific updates. The updated map is included in Section 5 of the following report.

Updated vegetation mapping was released on 8 September 2022 and includes the most recent Queensland Herbarium scientific updates to the Regulated Vegetation Management Map, regional ecosystems, wetland, high-value regrowth and essential habitat mapping.

The Department of Environment and Science have also updated their koala protection mapping to align with the Queensland Herbarium scientific updates.

## Overview

Based on the lot on plan details you have supplied, this report provides the following detailed information:

**Property details** - information about the specified Lot on Plan, lot size, local government area, bioregion(s), subregion(s) and catchment(s);

**Vegetation management framework** - an explanation of the application of the framework and contact details for the Department of Resources who administer the framework;

**Vegetation management framework details for the specified Lot on Plan** including:

- the vegetation management categories on the property;
- the vegetation management regional ecosystems on the property;
- vegetation management watercourses or drainage features on the property;
- vegetation management wetlands on the property;
- vegetation management essential habitat on the property;
- whether any area management plans are associated with the property;
- whether the property is coastal or non-coastal; and
- whether the property is mapped as Agricultural Land Class A or B;

**Protected plant framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework, including:

- high risk areas on the protected plant flora survey trigger map for the property;

**Koala protection framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework; and

**Koala protection framework details for the specified Lot on Plan** including:

- the koala district the property is located in;
- koala priority areas on the property;
- core and locally refined koala habitat areas on the property;
- whether the lot is located in an identified koala broad-hectare area; and
- koala habitat regional ecosystems on the property for core koala habitat areas.

This information will assist you to determine your options for managing vegetation under:

- the vegetation management framework, which may include:

- exempt clearing work;
- accepted development vegetation clearing code;
- an area management plan;
- a development approval;

- the protected plant framework, which may include:

- the need to undertake a flora survey;
- exempt clearing;
- a protected plant clearing permit;

- the koala protection framework, which may include:

- exempted development;

- a development approval;
- the need to undertake clearing sequentially and in the presence of a koala spotter.

## Other laws

The clearing of native vegetation is regulated by both Queensland and Australian legislation, and some local governments also regulate native vegetation clearing. You may need to obtain an approval or permit under another Act, such as the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Section 8 of this guide provides contact details of other agencies you should confirm requirements with, before commencing vegetation clearing.

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# 1. Property details

## 1.1 Tenure and title area

All of the lot, plan, tenure and title area information associated with property Lot: 1 Plan: SP144274, are listed in Table 1.

**Table 1: Lot, plan, tenure and title area information for the property**

Lot	Plan	Tenure	Property title area (sq metres)
1	SP144274	Lands Lease	2,965,000
B	SP144274	Easement	2,129
A	KL182	Easement	0.0
A	KL181	Easement	0.0

The tenure of the land may affect whether clearing is considered exempt clearing work or may be carried out under an accepted development vegetation clearing code.

### Does this property have a freehold tenure and is in the Wet Tropics of Queensland World Heritage Area?

No, this property is not located in the Wet Tropics of Queensland World Heritage Area.

## 1.2 Property location

Table 2 provides a summary of the locations for property Lot: 1 Plan: SP144274, in relation to natural and administrative boundaries.

**Table 2: Property location details**

Local Government(s)
Isaac Regional

Bioregion(s)	Subregion(s)
Brigalow Belt	Northern Bowen Basin

Catchment(s)
Fitzroy

## 2. Vegetation management framework (administered by the Department of Resources)

The *Vegetation Management Act 1999* (VMA), the *Vegetation Management Regulation 2012*, the *Planning Act 2016* and the *Planning Regulation 2017*, in conjunction with associated policies and codes, form the Vegetation Management Framework.

The VMA does not apply to all land tenures or vegetation types. State forests, national parks, forest reserves and some tenures under the *Forestry Act 1959* and *Nature Conservation Act 1992* are not regulated by the VMA. Managing or clearing vegetation on these tenures may require approvals under these laws.

The following native vegetation is not regulated under the VMA but may require permit(s) under other laws:

- grass or non-woody herbage;
- a plant within a grassland regional ecosystem prescribed under Schedule 5 of the *Vegetation Management Regulation 2012*; and
- a mangrove.

### 2.1 Exempt clearing work

Exempt clearing work is an activity for which you do not need to notify the Department of Resources or obtain an approval under the vegetation management framework. Exempt clearing work was previously known as exemptions.

In areas that are mapped as Category X (white in colour) on the regulated vegetation management map (see section 4.1), and where the land tenure is freehold, indigenous land and leasehold land for agriculture and grazing purposes, the clearing of vegetation is considered exempt clearing work and does not require notification or development approval under the vegetation management framework. For all other land tenures, contact the Department of Resources before commencing clearing to ensure that the proposed activity is exempt clearing work.

A range of routine property management activities are considered exempt clearing work. A list of exempt clearing work is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/exemptions>.

Exempt clearing work may be affected if the proposed clearing area is subject to development approval conditions, a covenant, an environmental offset, an exchange area, a restoration notice, or an area mapped as Category A. Exempt clearing work may require approval under other Commonwealth, State or Local Government laws, or local government planning schemes. Contact the Department of Resources prior to clearing in any of these areas.

### 2.2 Accepted development vegetation clearing codes

Some clearing activities can be undertaken under an accepted development vegetation clearing code. The codes can be downloaded at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/codes>

If you intend to clear vegetation under an accepted development vegetation clearing code, you must notify the Department of Resources before commencing. The information in this report will assist you to complete the online notification form.

You can complete the online form at

<https://apps.dnrm.qld.gov.au/vegetation/>

## 2.3 Area management plans

Area Management Plans (AMP) provide an alternative approval system for vegetation clearing under the vegetation management framework. They list the purposes and clearing conditions that have been approved for the areas covered by the plan. It is not necessary to use an AMP, even when an AMP applies to your property.

On 8 March 2020, AMPs ended for fodder harvesting, managing thickened vegetation and managing encroachment. New notifications cannot be made for these AMPs. You will need to consider options for fodder harvesting, managing thickened vegetation or encroachment under a relevant accepted development vegetation clearing code or apply for a development approval.

New notifications can be made for all other AMPs. These will continue to apply until their nominated end date.

If an Area Management Plan applies to your property for which you can make a new notification, it will be listed in Section 3.6 of this report. Before clearing under one of these AMPs, you must first notify the Department of Resources and then follow the conditions and requirements listed in the AMP.

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/area-management-plans>

## 2.4 Development approvals

If under the vegetation management framework your proposed clearing is not exempt clearing work, or is not permitted under an accepted development vegetation clearing code, or an AMP, you may be able to apply for a development approval. Information on how to apply for a development approval is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/development>

## 2.5. Contact information for the Department of Resources

For further information on the vegetation management framework:

**Phone** 135VEG (135 834)

**Email** [vegetation@resources.qld.gov.au](mailto:vegetation@resources.qld.gov.au)

**Visit** <https://www.resources.qld.gov.au/?contact=vegetation> to submit an online enquiry.

### 3. Vegetation management framework for Lot: 1 Plan: SP144274

#### 3.1 Vegetation categories

The vegetation categories on your property are shown on the regulated vegetation management map in section 4.1 of this report. A summary of vegetation categories on the subject lot are listed in Table 3. Descriptions for these categories are shown in Table 4.

**Table 3: Vegetation categories for subject property. Total area: 296.55ha**

Vegetation category	Area (ha)
Category B	4.3
Category R	7.2
Category X	285.1

**Table 4: Description of vegetation categories**

Category	Colour on Map	Description	Requirements / options under the vegetation management framework
A	red	Compliance areas, environmental offset areas and voluntary declaration areas	Special conditions apply to Category A areas. Before clearing, contact the Department of Resources to confirm any requirements in a Category A area.
B	dark blue	Remnant vegetation areas	Exempt clearing work, or notification and compliance with accepted development vegetation clearing codes, area management plans or development approval.
C	light blue	High-value regrowth areas	Exempt clearing work, or notification and compliance with managing Category C regrowth vegetation accepted development vegetation clearing code.
R	yellow	Regrowth within 50m of a watercourse or drainage feature in the Great Barrier Reef catchment areas	Exempt clearing work, or notification and compliance with managing Category R regrowth accepted development vegetation clearing code or area management plans.
X	white	Clearing on freehold land, indigenous land and leasehold land for agriculture and grazing purposes is considered exempt clearing work under the vegetation management framework. Contact the Department of Resources to clarify whether a development approval is required for other State land tenures.	No permit or notification required on freehold land, indigenous land and leasehold land for agriculture and grazing. A development approval may be required for some State land tenures.

#### Property Map of Assessable Vegetation (PMAV)

There is no Property Map of Assessable Vegetation (PMAV) present on this property.

## 3.2 Regional ecosystems

The endangered, of concern and least concern regional ecosystems on your property are shown on the vegetation management supporting map in section 4.2 and are listed in Table 5.

A description of regional ecosystems can be accessed online at <https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/descriptions/>

**Table 5: Regional ecosystems present on subject property**

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
11.3.4	Of concern	B	1.29	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.3.4	Of concern	R	1.11	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.4.9	Endangered	R	0.70	Acacia harpophylla shrubby woodland with Terminalia oblongata on Cainozoic clay plains	Sparse
11.5.3	Least concern	B	3.01	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.5.3	Least concern	R	5.36	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
non-rem	None	X	285.09	None	None

Please note:

1. All area and area derived figures included in this table have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.
2. If Table 5 contains a Category 'plant', please be aware that this refers to 'plantations' such as forestry, and these areas are considered non-remnant under the VMA.

The VMA status of the regional ecosystem (whether it is endangered, of concern or least concern) also determines if any of the following are applicable:

- exempt clearing work;
- accepted development vegetation clearing codes;
- performance outcomes in State Code 16 of the State Development Assessment Provisions (SDAP).

## 3.3 Watercourses

Vegetation management watercourses and drainage features for this property are shown on the vegetation management supporting map in section 4.2.

## 3.4 Wetlands

There are no vegetation management wetlands present on this property.

## 3.5 Essential habitat

Under the VMA, essential habitat for protected wildlife is native wildlife prescribed under the *Nature Conservation Act 1992* (NCA) as critically endangered, endangered, vulnerable or near-threatened wildlife.



Essential habitat for protected wildlife includes suitable habitat on the lot, or where a species has been known to occur up to 1.1 kilometres from a lot on which there is assessable vegetation. These important habitat areas are protected under the VMA.

Any essential habitat on this property will be shown as blue hatching on the vegetation supporting map in section 4.2.

If essential habitat is identified on the lot, information about the protected wildlife species is provided in Table 6 below. The numeric labels on the vegetation management supporting map can be cross referenced with Table 6 to outline the essential habitat factors for that particular species. There may be essential habitat for more than one species on each lot, and areas of Category A, Category B and Category C can be mapped as Essential Habitat.

Essential habitat is compiled from a combination of species habitat models and buffered species records. Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated. Essential habitat, for protected wildlife, means an area of vegetation shown on the Regulated Vegetation Management Map -

- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database. Essential habitat factors are comprised of - regional ecosystem (mandatory for most species), vegetation community, altitude, soils, position in landscape; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

If there is no essential habitat mapping shown on the vegetation management supporting map for this lot, and there is no table in the sections below, it confirms that there is no essential habitat on the lot.

### Category A and/or Category B and/or Category C

**Table 6: Essential habitat in Category A and/or Category B and/or Category C**

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
483	Denisonia maculata	ornamental snake	V	Riparian woodland/open forest and shrub/woodland including Brigalow Acacia harpophylla; into drier habitats in summer.	100-450m.	Cracking clay with gilgai/soil crack microrelief and sandy loam substrates.	Near freshwater waterholes/creeks and low lying poorly drained areas that are frequently inundated by freshwater.
1785	Geophaps scripta scripta	squatter pigeon (southern subspecies)	V	Dry eucalypt woodland (including poplar box, spotted gum, yellow box, acacia and callitris), with sparse short grass, often on sandy areas near to permanent water; grassy eucalypt woodlands. Nest on ground near or under grass tussock, log or low bush.	None	None	Gravelly ridges, traprock and river flats.

Label	Regional Ecosystem (mandatory unless otherwise specified)
483	10.3.2, 10.3.3, 10.3.4, 10.3.7, 10.3.13, 10.3.14, 10.3.15, 10.3.16, 10.3.27, 10.3.30, 10.3.31, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.4.8, 10.5.5, 10.9.1, 10.9.6, 10.9.7, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.9, 11.3.10, 11.3.12, 11.3.15, 11.3.21, 11.3.23, 11.3.24, 11.3.25, 11.3.27, 11.3.28, 11.3.31, 11.3.34, 11.3.37, 11.3.38, 11.3.40, 11.4.2, 11.4.3, 11.4.4, 11.4.6, 11.4.7, 11.4.8, 11.4.9, 11.4.11, 11.5.2, 11.5.3, 11.5.16, 11.8.11, 11.9.1, 11.9.2, 11.9.3, 11.9.5, 11.9.7, 11.9.11, 11.9.12, 11.9.14, 11.11.15, 11.12.6
1785	8.2.1, 8.2.7, 8.2.8, 8.2.12, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.13, 8.5.2, 8.5.3, 8.5.5, 8.5.6, 8.9.1, 8.11.1, 8.11.3, 8.11.4, 8.11.5, 8.11.6, 8.11.8, 8.12.6, 8.12.7, 8.12.9, 8.12.12, 8.12.14, 8.12.20, 8.12.22, 8.12.23, 8.12.25, 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.3.6, 9.3.7, 9.3.8, 9.3.9, 9.3.11, 9.3.13, 9.3.14, 9.3.15, 9.3.16, 9.3.17, 9.3.18, 9.3.19, 9.3.20, 9.3.21, 9.3.22, 9.3.23, 9.4.1, 9.4.2, 9.4.3, 9.5.3, 9.5.4, 9.5.5, 9.5.6, 9.5.7, 9.5.8, 9.5.9, 9.5.10, 9.5.11, 9.5.12, 9.5.16, 9.7.1, 9.7.2, 9.7.3, 9.7.5, 9.7.6, 9.8.1, 9.8.2, 9.8.4, 9.8.5, 9.8.6, 9.8.9, 9.8.10, 9.8.11, 9.10.1, 9.10.3, 9.10.6, 9.10.7, 9.10.8, 9.11.1, 9.11.2, 9.11.3, 9.11.4, 9.11.5, 9.11.7, 9.11.10, 9.11.11, 9.11.12, 9.11.13, 9.11.15, 9.11.16, 9.11.17, 9.11.18, 9.11.19, 9.11.23, 9.11.26, 9.11.28, 9.11.29, 9.11.31, 9.11.32, 9.12.1, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7, 9.12.10, 9.12.11, 9.12.12, 9.12.13, 9.12.16, 9.12.17, 9.12.18, 9.12.19, 9.12.20, 9.12.21, 9.12.22, 9.12.23, 9.12.24, 9.12.26, 9.12.28, 9.12.30, 9.12.31, 9.12.33, 9.12.35, 9.12.37, 9.12.39, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.9, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.19, 10.3.20, 10.3.27, 10.3.28, 10.3.30, 10.3.31, 10.4.3, 10.5.1, 10.5.2, 10.5.4, 10.5.5, 10.5.7, 10.5.9, 10.5.10, 10.5.11, 10.5.12, 10.7.2, 10.7.3, 10.7.5, 10.7.11, 10.7.12, 10.9.1, 10.9.2, 10.9.3, 10.9.5, 10.10.1, 10.10.3, 10.10.4, 10.10.5, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.7, 11.3.8, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.23, 11.3.25, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.35, 11.3.36, 11.3.37, 11.3.38, 11.3.39, 11.4.2, 11.4.3, 11.4.5, 11.4.8, 11.4.10, 11.4.12, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.8, 11.5.9, 11.5.12, 11.5.13, 11.5.14, 11.5.17, 11.5.20, 11.5.21, 11.7.1, 11.7.2, 11.7.4, 11.7.6, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.9, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.2, 11.9.3, 11.9.7, 11.9.9, 11.9.14, 11.10.1, 11.10.4, 11.10.6, 11.10.7, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.15, 11.11.16, 11.11.19, 11.11.20, 11.12.1, 11.12.2, 11.12.3, 11.12.5, 11.12.6, 11.12.7, 11.12.8, 11.12.9, 11.12.10, 11.12.11, 11.12.12, 11.12.13, 11.12.14, 11.12.17, 11.12.20, 12.2.5, 12.2.6, 12.2.7, 12.2.10, 12.2.11, 12.3.3, 12.3.6, 12.3.10, 12.3.12, 12.3.14, 12.3.18, 12.3.19, 12.5.1, 12.5.2, 12.5.4, 12.5.5, 12.5.7, 12.5.8, 12.5.11, 12.5.12, 12.7.1, 12.7.2, 12.8.14, 12.8.16, 12.8.17, 12.8.19, 12.9.10.5, 12.9.10.7, 12.9.10.8, 12.9.10.12, 12.9.10.13, 12.9.10.25, 12.9.10.26, 12.9.10.28, 12.11.5, 12.11.7, 12.11.8, 12.11.14, 12.11.15, 12.11.20, 12.11.21, 12.11.22, 12.11.24, 12.11.25, 12.11.26, 12.11.27, 12.11.28, 12.12.7, 12.12.8, 12.12.9, 12.12.12, 12.12.14, 12.12.21, 12.12.22, 12.12.23, 12.12.24, 12.12.25, 12.12.27, 13.3.1, 13.3.4, 13.3.7, 13.11.1, 13.11.3, 13.11.4, 13.11.8, 13.12.2, 13.12.3, 13.12.5, 13.12.8, 13.12.9, 13.12.10

## 3.6 Area Management Plan(s)

Nil

### 3.7 Coastal or non-coastal

For the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP), this property is regarded as\*

Non Coastal

\*See also Map 4.3

### 3.8 Agricultural Land Class A or B

The following can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code:

**Does this lot contain land that is mapped as Agricultural Land Class A or B in the State Planning Interactive Mapping System?**

No Class A

No Class B

Note - This confirms Agricultural Land Classes as per the State Planning Interactive Mapping System only. This response does not include Agricultural Land Classes identified under local government planning schemes. For further information, check the Planning Scheme for your local government area.

See Map 4.4 to identify the location and extent of Class A and/or Class B Agricultural land on Lot: 1 Plan: SP144274.

## 4. Vegetation management framework maps

Vegetation management maps included in this report may also be requested individually at:

<https://www.resources.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form>

### **Regulated vegetation management map**

The regulated vegetation management map shows vegetation categories needed to determine clearing requirements. These maps are updated monthly to show new [property maps of assessable vegetation \(PMAV\)](#).

### **Vegetation management supporting map**

The vegetation management supporting map provides information on regional ecosystems, wetlands, watercourses and essential habitat.

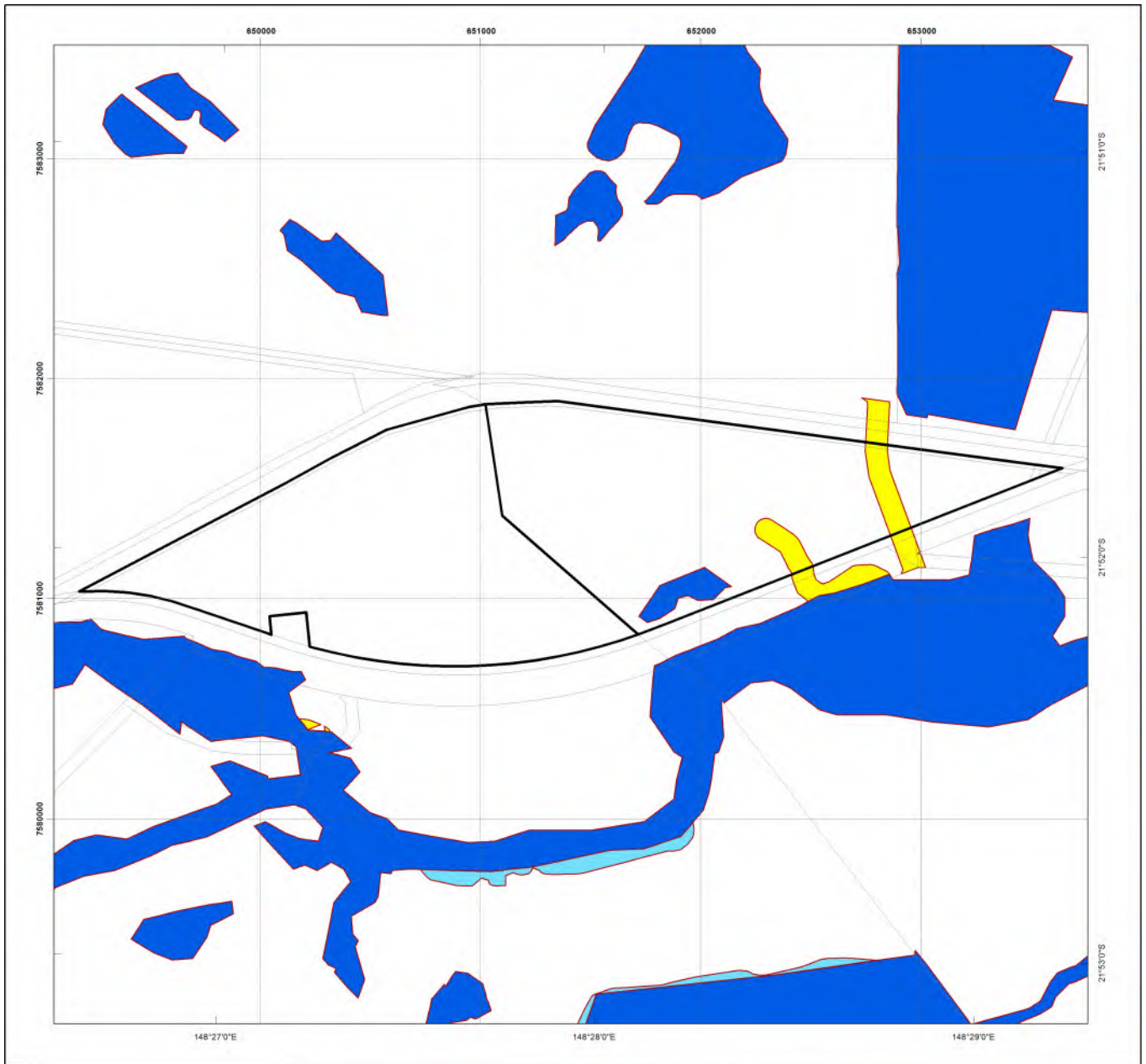
### **Coastal/non-coastal map**

The coastal/non-coastal map confirms whether the lot, or which parts of the lot, are considered coastal or non-coastal for the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP).

### **Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture**

The Agricultural Land Class map confirms the location and extent of land mapped as Agricultural Land Classes A or B as identified on the State Planning Interactive Mapping System. Please note that this map does not include areas identified as Agricultural Land Class A or B in local government planning schemes. This map can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code.

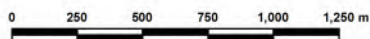
# 4.1 Regulated vegetation management map



## Regulated Vegetation Management Map

### Legend

- Selected Lot and Plan
- Category A area (Vegetation offsets/compliance notices/VDecs)
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watercourse vegetation)
- Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
- Water
- Other land parcel boundaries



This product is projected into:  
GDA 1994 MGA Zone 55

### Disclaimer:

While every care is taken to ensure the accuracy of this product, the Department of Resources makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.

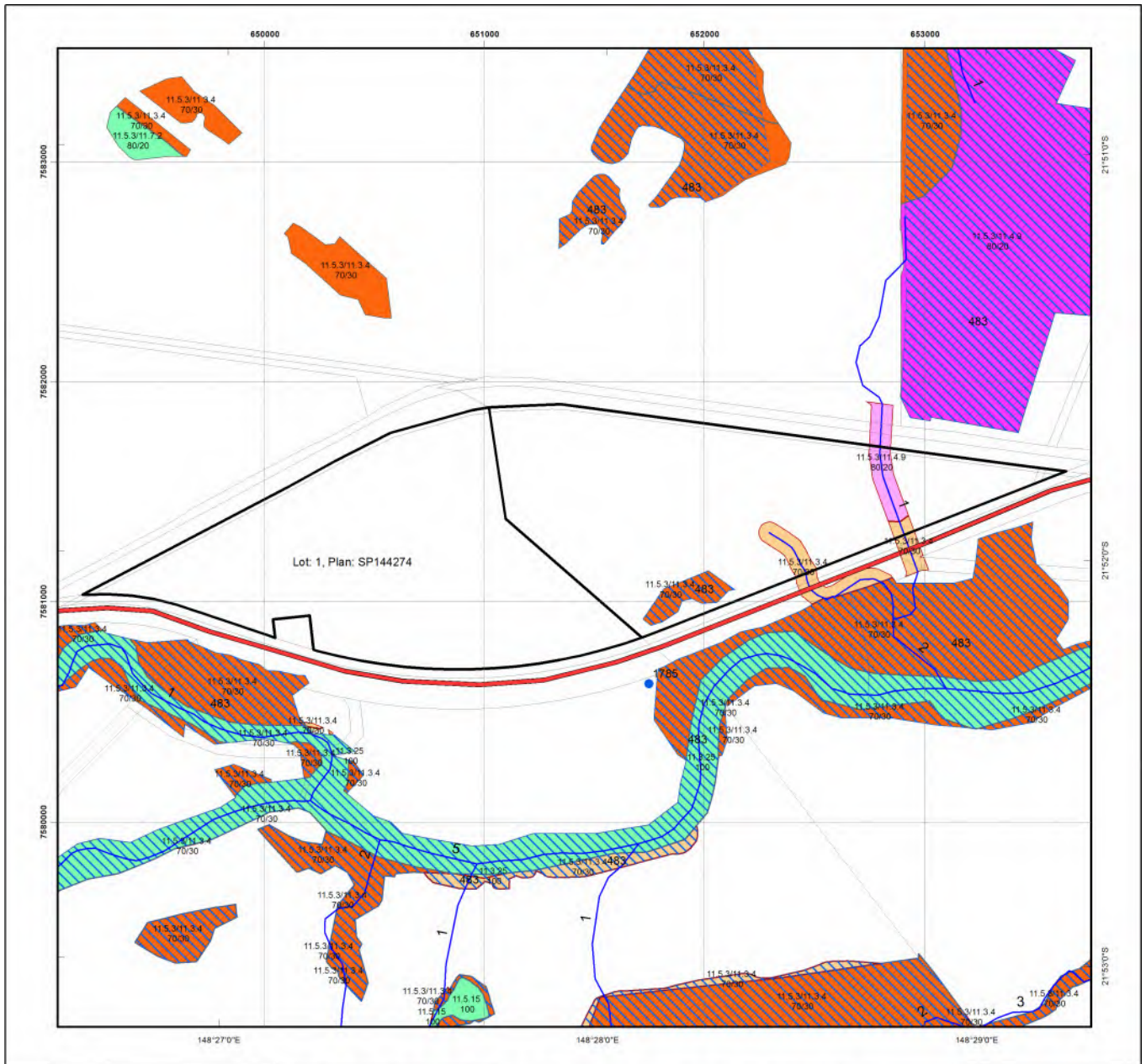
This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.



Queensland Government

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## 4.2 Vegetation management supporting map



### Vegetation Management Supporting Map

#### Legend

- Selected Lot and Plan
- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries



0 180 360 540 720 900 m

This product is projected into:  
GDA 1994 MGA Zone 55

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

#### Disclaimer:

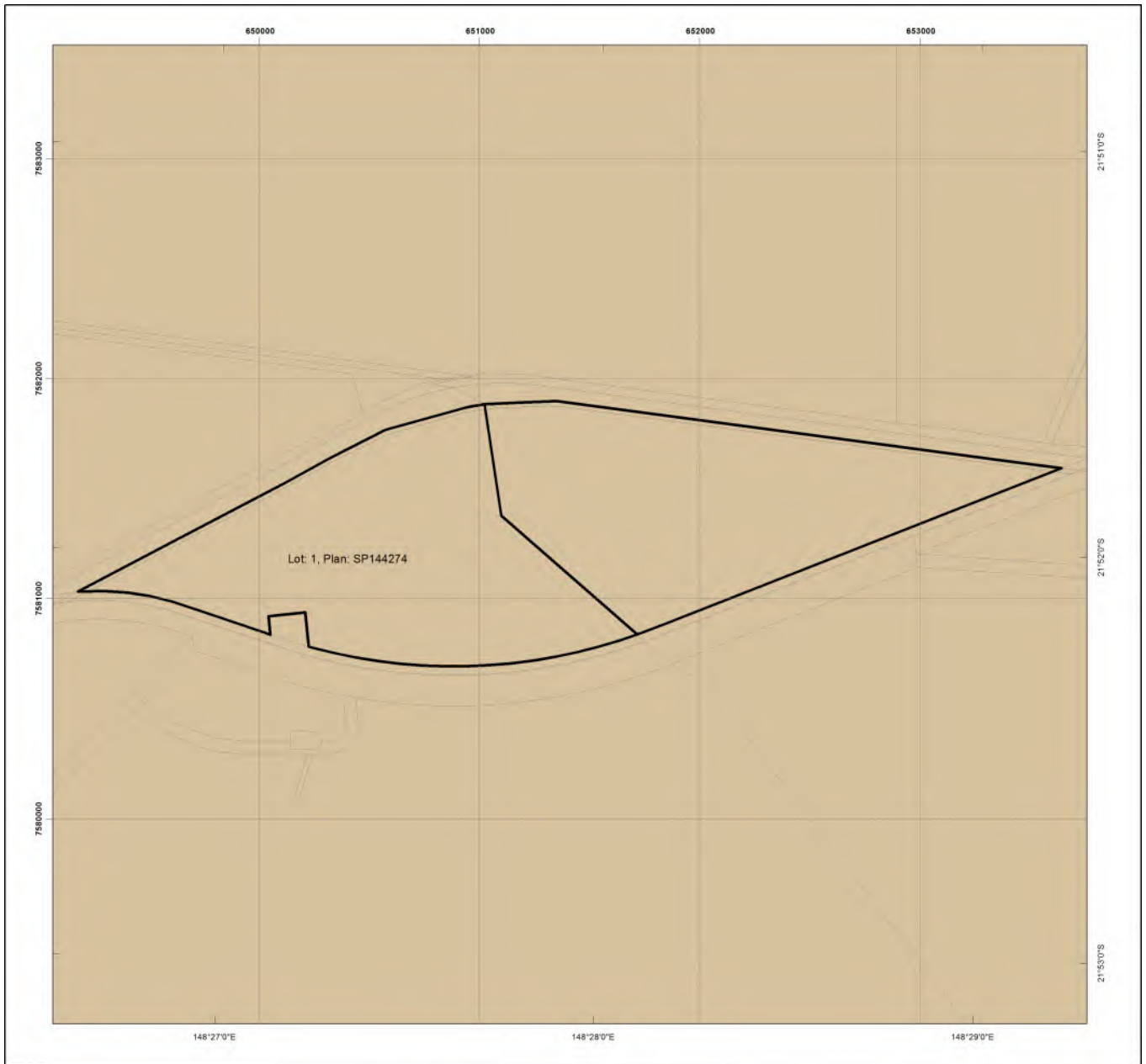
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Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>





Land parcel boundaries are provided as locational aid only.

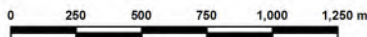
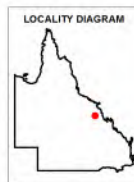
# 4.3 Coastal/non-coastal map



## Coastal/Non Coastal Map

### Legend

-  Selected Lot and Plan
-  Coastal
-  Non Coastal
-  Other land parcel boundaries



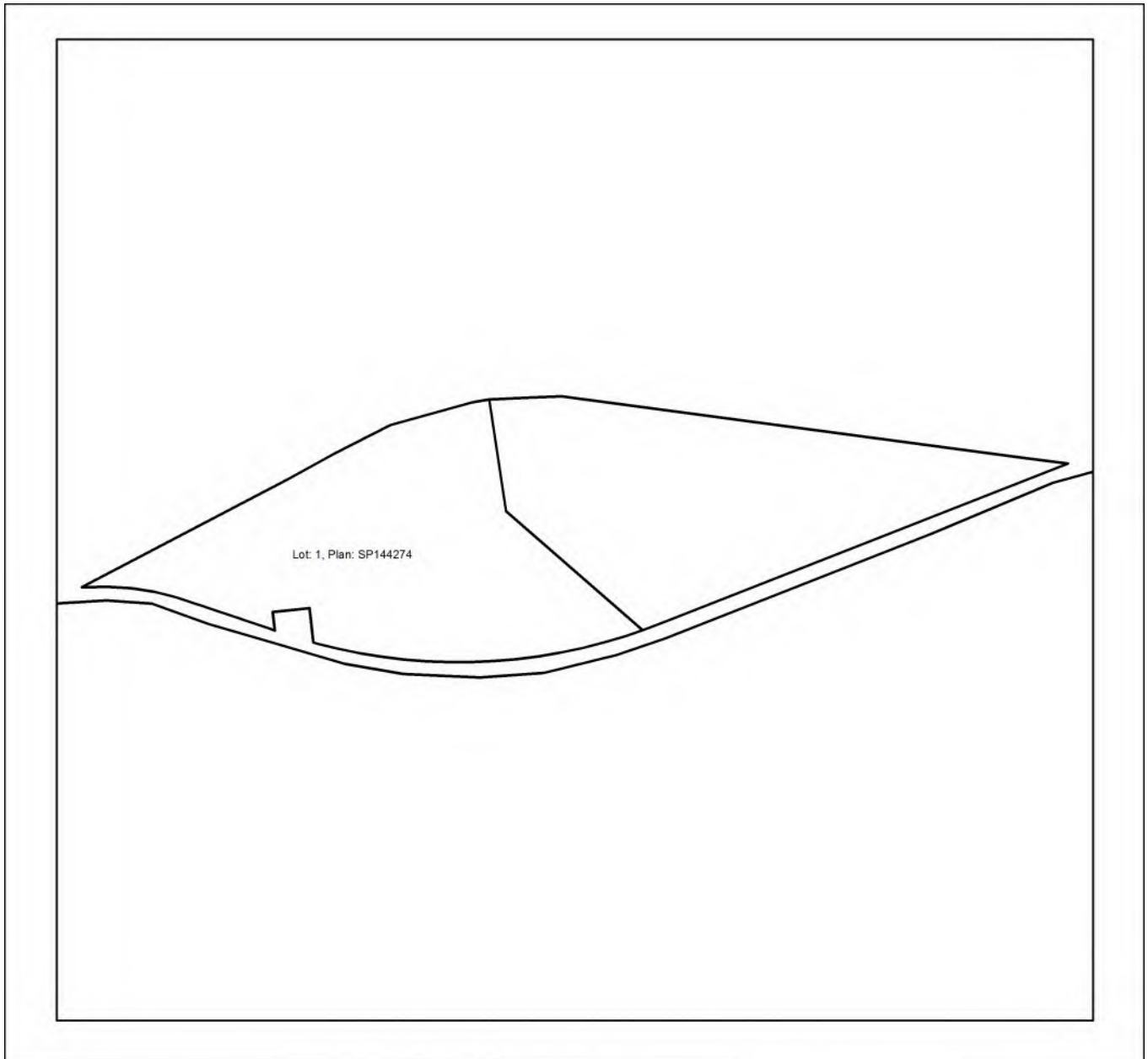
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Land parcel boundaries shown are provided as a locational aid only.











# 4.4 Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture



## Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture

### Legend

-  Selected Lot and Plan
-  Towns
-  Rivers and creeks
-  Freeways / motorways; Highways
-  Secondary roads; Streets
- Agricultural land class A or B
-  A
-  B
-  Not class A or B



### Disclaimer

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## 5. Protected plants framework (administered by the Department of Environment and Science (DES))

In Queensland, all plants that are native to Australia are protected plants under the [Nature Conservation Act 1992](#) (NCA). The NCA regulates the clearing of protected plants 'in the wild' (see [Operational policy: When a protected plant in Queensland is considered to be 'in the wild'](#)) that are listed as critically endangered, endangered, vulnerable or near threatened under the Act.

Please note that the protected plant clearing framework applies irrespective of the classification of the vegetation under the *Vegetation Management Act 1999* and any approval or exemptions given under another Act, for example, the *Vegetation Management Act 1999* or *Planning Regulation 2017*.

### 5.1 Clearing in high risk areas on the flora survey trigger map

The flora survey trigger map identifies high-risk areas for threatened and near threatened plants. These are areas where threatened or near threatened plants are known to exist or are likely to exist based on the habitat present. The flora survey trigger map for this property is provided in section 5.5.

If you are proposing to clear an area shown as high risk on the flora survey trigger map, a flora survey of the clearing impact area must be undertaken by a suitably qualified person in accordance with the [Flora survey guidelines](#). The main objective of a flora survey is to locate any threatened or near threatened plants that may be present in the clearing impact area.

If the flora survey identifies that threatened or near threatened plants are not present within the clearing impact area or clearing within 100m of a threatened or near threatened plant can be avoided, the clearing activity is exempt from a permit. An [exempt clearing notification form](#) must be submitted to the Department of Environment and Science, with a copy of the flora survey report, at least one week prior to clearing.

If the flora survey identifies that threatened or near threatened plants are present in, or within 100m of, the area to be cleared, a clearing permit is required before any clearing is undertaken. The flora survey report, as well as an impact management report, must be submitted with the [clearing permit application form](#).

### 5.2 Clearing outside high risk areas on the flora survey trigger map

In an area other than a high risk area, a clearing permit is only required where a person is, or becomes aware that threatened or near threatened plants are present in, or within 100m of, the area to be cleared. You must keep a copy of the flora survey trigger map for the area subject to clearing for five years from the day the clearing starts. If you do not clear within the 12 month period that the flora survey trigger map was printed, you need to print and check a new flora survey trigger map.

### 5.3 Exemptions

Many activities are 'exempt' under the protected plant clearing framework, which means that clearing of native plants that are in the wild can be undertaken for these activities with no need for a flora survey or a protected plant clearing permit. The Information sheet - General exemptions for the take of protected plants provides some of these exemptions.

Some exemptions under the NCA are the same as exempt clearing work (formerly known as exemptions) under the *Vegetation Management Act 1999* (i.e. listed in Schedule 21 of the Planning Regulations 2017) while some are different.

### 5.4 Contact information for DES

For further information on the protected plants framework:

**Phone** 1300 130 372 (and select option four)

**Email** [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

**Visit** <https://www.qld.gov.au/environment/plants-animals/plants/protected-plants>



## 5.5 Protected plants flora survey trigger map

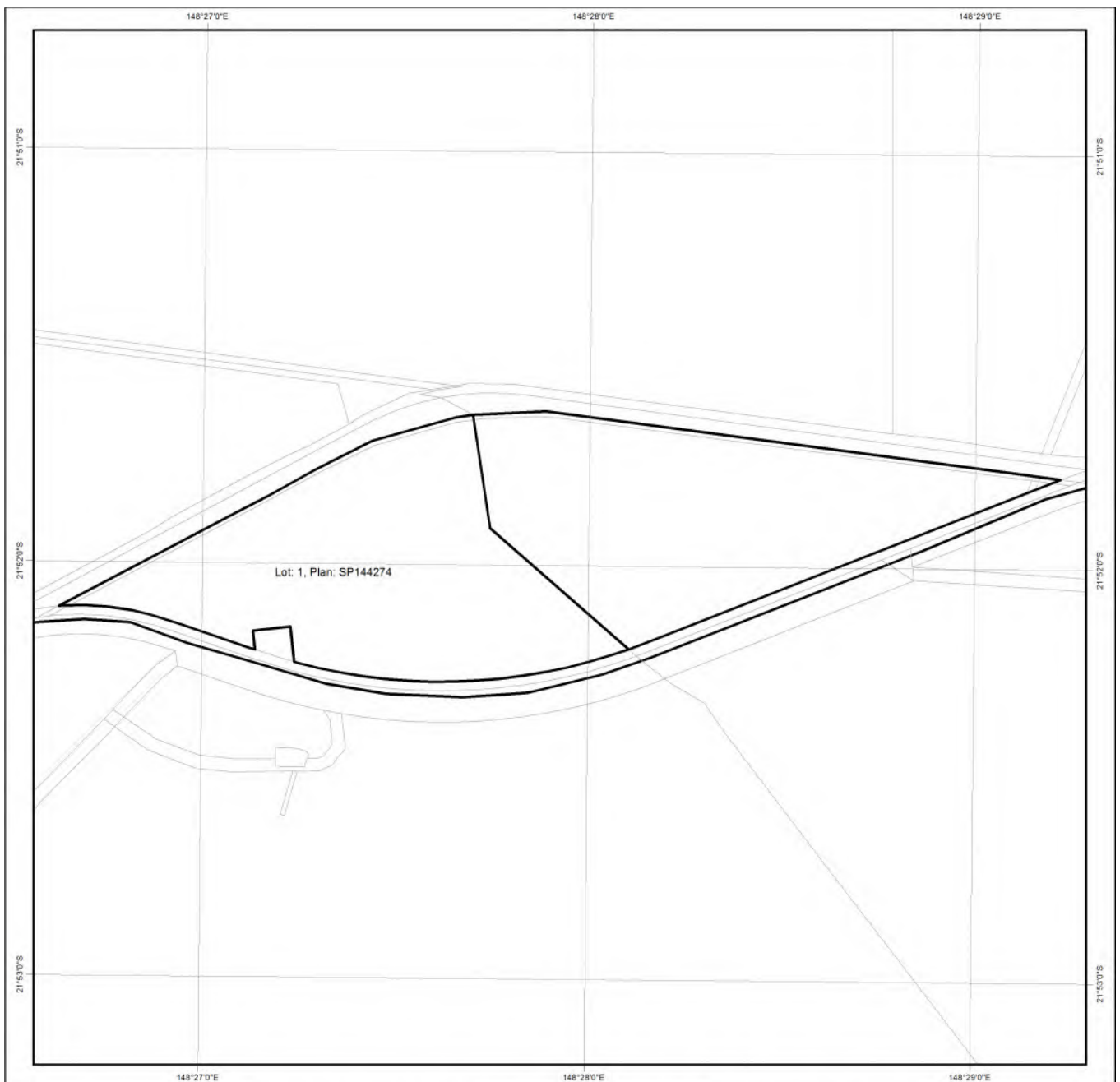
This map included may also be requested individually at: <https://apps.des.qld.gov.au/map-request/flora-survey-trigger/>.

### Updates to the data informing the flora survey trigger map

The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.

### Species information

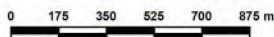
Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the [Queensland Spatial Catalogue](#), the Department of Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the [clearing of protected plants](#) for more information.



### Protected Plants Flora Survey Trigger Map

#### Legend

- Selected Lot and Plan
- High risk area
- Other land parcel boundaries
- Freeways / motorways / highways
- Secondary roads / streets



This product is projected into:  
GDA 1994 MGA Zone 55

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

Land parcel boundaries are provided as locational aid only.

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Science at [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

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## 6. Koala protection framework (administered by the Department of Environment and Science (DES))

The koala (*Phascolarctos cinereus*) is listed in Queensland as endangered by the Queensland Government under *Nature Conservation Act 1992* and by the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999*.

The Queensland Government's koala protection framework is comprised of the *Nature Conservation Act 1992*, the Nature Conservation (Animals) Regulation 2020, the Nature Conservation (Koala) Conservation Plan 2017, the *Planning Act 2016* and the Planning Regulation 2017.

### 6.1 Koala mapping

#### 6.1.1 Koala districts

The parts of Queensland where koalas are known to occur has been divided into three koala districts - koala district A, koala district B and koala district C. Each koala district is made up of areas with comparable koala populations (e.g. density, extent and significance of threatening processes affecting the population) which require similar management regimes.

Section 7.1 identifies which koala district your property is located in.

#### 6.1.2 Koala habitat areas

Koala habitat areas are areas of vegetation that have been determined to contain koala habitat that is essential for the conservation of a viable koala population in the wild based on the combination of habitat suitability and biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water). In order to protect this important koala habitat, clearing controls have been introduced into the Planning Regulation 2017 for development in koala habitat areas.

Please note that koala habitat areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley, Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

There are two different categories of koala habitat area (core koala habitat area and locally refined koala habitat), which have been determined using two different methodologies. These methodologies are described in the document [Spatial modelling in South East Queensland](#).

Section 7.2 shows any koala habitat area that exists on your property.

Under the Nature Conservation (Koala) Conservation Plan 2017, an owner of land (or a person acting on the owner's behalf with written consent) can request to make, amend or revoke a koala habitat area determination if they believe, on reasonable grounds, that the existing determination for all or part of their property is incorrect.

More information on requests to make, amend or revoke a koala habitat area determination can be found in the document [Guideline - Requests to make, amend or revoke a koala habitat area determination](#).

The koala habitat area map will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

Changes to the koala habitat area map which occur between annual updates because of a request to make, amend or revoke a koala habitat area determination can be viewed on the register of approved requests to make, amend or revoke a koala habitat area available at: <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/koalamaps>. The register includes the lot on plan for the change, the date the decision was made and the map issued to the landholder that shows areas determined to be koala habitat areas.

#### 6.1.3 Koala priority areas

Koala priority areas are large, connected areas that have been determined to have the highest likelihood of achieving conservation outcomes for koalas based on the combination of habitat suitability, biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water) and a koala conservation cost benefit analysis.

Conservation efforts will be prioritised in these areas to ensure the conservation of viable koala populations in the wild including a focus on management (e.g. habitat protection, habitat restoration and threat mitigation) and monitoring. This includes a prohibition on clearing in koala habitat areas that are in koala priority areas under the Planning Regulation 2017 (subject to some exemptions).

Please note that koala priority areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley,

Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

Section 7.2 identifies if your property is in a koala priority area.

#### 6.1.4 Identified koala broad-hectare areas

There are seven identified koala broad-hectare areas in SEQ. These are areas of koala habitat that are located in areas committed to meet development targets in the SEQ Regional Plan to accommodate SEQ's growing population including bring-forward Greenfield sites under the Queensland Housing Affordability Strategy and declared master planned areas under the repealed *Sustainable Planning Act 2009* and the repealed *Integrated Planning Act 1997*.

Specific assessment benchmarks apply to development applications for development proposed in identified koala broad-hectare areas to ensure koala conservation measures are incorporated into the proposed development.

Section 7.2 identifies if your property is in an identified koala broad-hectare area.

## 6.2 Koala habitat planning controls

On 7 February 2020, the Queensland Government introduced new planning controls to the Planning Regulation 2017 to strengthen the protection of koala habitat in South East Queensland (i.e. koala district A).

More information on these planning controls can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

As a high-level summary, the koala habitat planning controls make:

- development that involves interfering with koala habitat (defined below) in an area that is both a koala priority area and a koala habitat area, prohibited development (i.e. development for which a development application cannot be made);
- development that involves interfering with koala habitat (defined below) in an area that is a koala habitat area but is not a koala priority area, assessable development (i.e. development for which development approval is required); and
- development that is for extractive industries where the development involves interfering with koala habitat (defined below) in an area that is both a koala habitat area and a key resource area, assessable development (i.e. development for which development approval is required).

**Interfering with koala habitat means:**

- 1) Removing, cutting down, ringbarking, pushing over, poisoning or destroying in anyway, including by burning, flooding or draining native vegetation in a koala habitat area; but
- 2) Does not include destroying standing vegetation by stock or lopping a tree.

However, these planning controls do not apply if the development is exempted development as defined in Schedule 24 of the [Planning Regulation 2017](#). More information on exempted development can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

There are also assessment benchmarks that apply to development applications for:

- building works, operational works, material change of use or reconfiguration of a lot where:
  - the local government planning scheme makes the development assessable;
  - the premises includes an area that is both a koala priority area and a koala habitat area; and
  - the development does not involve interfering with koala habitat (defined above); and
- development in identified koala broad-hectare areas.

The [Guideline - Assessment Benchmarks in relation to Koala Habitat in South East Queensland assessment benchmarks](#) outlines these assessment benchmarks, the intent of these assessment benchmarks and advice on how proposed development may meet these assessment benchmarks.

## 6.3 Koala Conservation Plan clearing requirements

Section 10 and 11 of the [Nature Conservation \(Koala\) Conservation Plan 2017](#) prescribes requirements that must be met when clearing koala habitat in koala district A and koala district B.

These clearing requirements are independent to the koala habitat planning controls introduced into the Planning Regulation 2017, which means they must be complied with irrespective of any approvals or exemptions offered under other legislation.

Unlike the clearing controls prescribed in the Planning Regulation 2017 that are to protect koala habitat, the clearing requirements prescribed in the Nature Conservation (Koala) Conservation Plan 2017 are in place to prevent the injury or death of koalas when koala habitat is being cleared.

## 6.4 Contact information for DES

For further information on the koala protection framework:

**Phone** 13 QGOV (13 74 68)

**Email** [koala.assessment@des.qld.gov.au](mailto:koala.assessment@des.qld.gov.au)

**Visit** <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping>

## 7. Koala protection framework details for Lot: 1 Plan: SP144274

### 7.1 Koala districts













Koala District C

## 7.2 Koala priority area, koala habitat area and identified koala broad-hectare area map



### Koala priority area, koala habitat area and identified koala broad-hectare area map

#### Legend

-  Selected Lot and Plan
-  Koala habitat area (core)
-  Koala habitat area (locally refined)
-  Koala priority area
-  Identified koala broad-hectare area
-  Cadastral Boundaries
-  Towns
-  Highway
-  Connector
-  Street/Local Road
-  Major rivers/creeks
-  Queensland

The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.



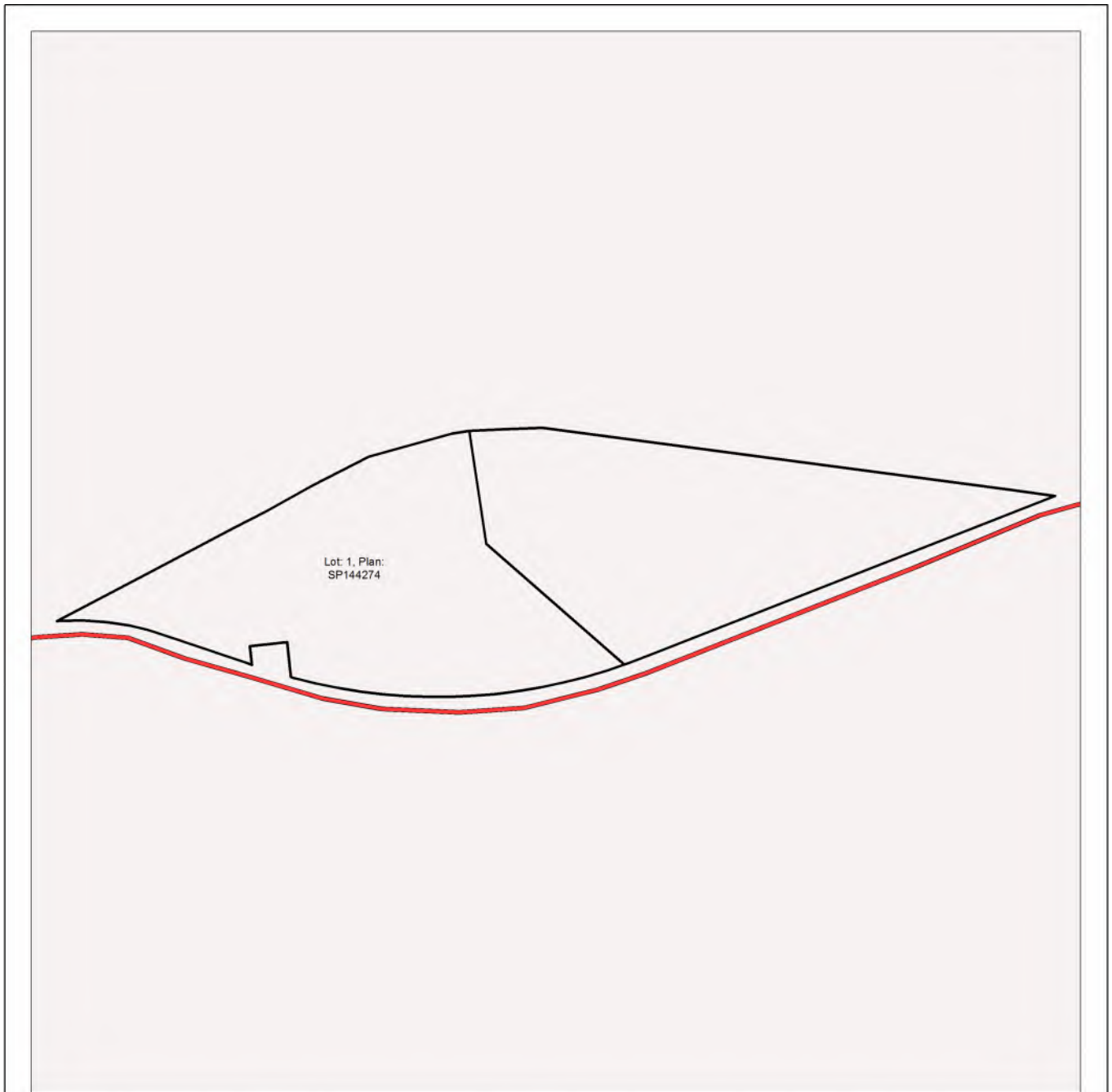
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The koala conservation plan maps will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.









In order to ensure that the most recent map for an area of interest can be accessed, prior to the annual update, a register of changes made to koala habitat areas as a result of the map amendment process will be available at:  
<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/>.  
 The register will include lot on plan for the change, the date the decision was made and the map issued to the landholder which shows areas determined to be koala habitat areas.

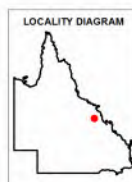
## 7.3 Koala habitat regional ecosystems for core koala habitat areas



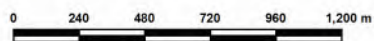
### Koala habitat regional ecosystems for core koala habitat areas

#### Legend

-  Selected Lot and Plan
-  Koala habitat area (core)
-  Towns
-  Highway
-  Connector
-  Street/Local Road
-  Major rivers/creeks
-  Queensland



N



The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.

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This product is projected into GDA 1994 MGA Zone 55

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## 8. Other relevant legislation contacts list

Activity	Legislation	Agency	Contact details
<ul style="list-style-type: none"> <li>• Interference with overland flow</li> <li>• Earthworks, significant disturbance</li> </ul>	<i>Water Act 2000</i> <i>Soil Conservation Act 1986</i>	Department of Regional Development, Manufacturing and Water (Queensland Government) Department of Resources (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.rdmw.qld.gov.au">www.rdmw.qld.gov.au</a> <a href="http://www.resources.qld.gov.au">www.resources.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Indigenous Cultural Heritage</li> </ul>	<i>Aboriginal Cultural Heritage Act 2003</i> <i>Torres Strait Islander Cultural Heritage Act 2003</i>	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships	Ph: 13 QGOV (13 74 68) <a href="http://www.datsip.qld.gov.au">www.datsip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Mining and environmentally relevant activities</li> <li>• Infrastructure development (coastal)</li> <li>• Heritage issues</li> </ul>	<i>Environmental Protection Act 1994</i> <i>Coastal Protection and Management Act 1995</i> <i>Queensland Heritage Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Protected plants and protected areas</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 1300 130 372 (option 4) <a href="mailto:palm@des.qld.gov.au">palm@des.qld.gov.au</a> <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Koala mapping and regulations</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="mailto:Koala.assessment@des.qld.gov.au">Koala.assessment@des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Interference with fish passage in a watercourse, mangroves</li> <li>• Forestry activities on State land tenures</li> </ul>	<i>Fisheries Act 1994</i> <i>Forestry Act 1959</i>	Department of Agriculture and Fisheries (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.daf.qld.gov.au">www.daf.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Matters of National Environmental Significance including listed threatened species and ecological communities</li> </ul>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Department of Agriculture, Water and the Environment (Australian Government)	Ph: 1800 803 772 <a href="http://www.environment.gov.au">www.environment.gov.au</a>
<ul style="list-style-type: none"> <li>• Development and planning processes</li> </ul>	<i>Planning Act 2016</i> <i>State Development and Public Works Organisation Act 1971</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.dsdmip.qld.gov.au">www.dsdmip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Local government requirements</li> </ul>	<i>Local Government Act 2009</i> <i>Planning Act 2016</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) Your relevant local government office
<ul style="list-style-type: none"> <li>• Harvesting timber in the Wet Tropics of Qld World Heritage area</li> </ul>	<i>Wet Tropics World Heritage Protection and Management Act 1993</i>	Wet Tropics Management Authority	Ph: (07) 4241 0500 <a href="http://www.wettropics.gov.au">www.wettropics.gov.au</a>



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# Recent changes

## Updated mapping

On September 6 2023, the Department of Environment and Science updated the Protected Plant Flora Survey Trigger Map to include recent species classification changes and Queensland Herbarium scientific updates. The updated map is included in Section 5 of the following report.

Updated vegetation mapping was released on 8 September 2022 and includes the most recent Queensland Herbarium scientific updates to the Regulated Vegetation Management Map, regional ecosystems, wetland, high-value regrowth and essential habitat mapping.

The Department of Environment and Science have also updated their koala protection mapping to align with the Queensland Herbarium scientific updates.

## Overview

Based on the lot on plan details you have supplied, this report provides the following detailed information:

**Property details** - information about the specified Lot on Plan, lot size, local government area, bioregion(s), subregion(s) and catchment(s);

**Vegetation management framework** - an explanation of the application of the framework and contact details for the Department of Resources who administer the framework;

**Vegetation management framework details for the specified Lot on Plan** including:

- the vegetation management categories on the property;
- the vegetation management regional ecosystems on the property;
- vegetation management watercourses or drainage features on the property;
- vegetation management wetlands on the property;
- vegetation management essential habitat on the property;
- whether any area management plans are associated with the property;
- whether the property is coastal or non-coastal; and
- whether the property is mapped as Agricultural Land Class A or B;

**Protected plant framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework, including:

- high risk areas on the protected plant flora survey trigger map for the property;

**Koala protection framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework; and

**Koala protection framework details for the specified Lot on Plan** including:

- the koala district the property is located in;
- koala priority areas on the property;
- core and locally refined koala habitat areas on the property;
- whether the lot is located in an identified koala broad-hectare area; and
- koala habitat regional ecosystems on the property for core koala habitat areas.

This information will assist you to determine your options for managing vegetation under:

- the vegetation management framework, which may include:

- exempt clearing work;
- accepted development vegetation clearing code;
- an area management plan;
- a development approval;

- the protected plant framework, which may include:

- the need to undertake a flora survey;
- exempt clearing;
- a protected plant clearing permit;

- the koala protection framework, which may include:

- exempted development;

- a development approval;
- the need to undertake clearing sequentially and in the presence of a koala spotter.

## Other laws

The clearing of native vegetation is regulated by both Queensland and Australian legislation, and some local governments also regulate native vegetation clearing. You may need to obtain an approval or permit under another Act, such as the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Section 8 of this guide provides contact details of other agencies you should confirm requirements with, before commencing vegetation clearing.

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# 1. Property details

## 1.1 Tenure and title area

All of the lot, plan, tenure and title area information associated with property Lot: 2 Plan: SP113033, are listed in Table 1.

**Table 1: Lot, plan, tenure and title area information for the property**

Lot	Plan	Tenure	Property title area (sq metres)
2	SP113033	Lands Lease	3,994,000

The tenure of the land may affect whether clearing is considered exempt clearing work or may be carried out under an accepted development vegetation clearing code.

### **Does this property have a freehold tenure and is in the Wet Tropics of Queensland World Heritage Area?**

No, this property is not located in the Wet Tropics of Queensland World Heritage Area.

## 1.2 Property location

Table 2 provides a summary of the locations for property Lot: 2 Plan: SP113033, in relation to natural and administrative boundaries.

**Table 2: Property location details**

Local Government(s)
Isaac Regional

Bioregion(s)	Subregion(s)
Brigalow Belt	Northern Bowen Basin

Catchment(s)
Fitzroy

## 2. Vegetation management framework (administered by the Department of Resources)

The *Vegetation Management Act 1999* (VMA), the *Vegetation Management Regulation 2012*, the *Planning Act 2016* and the *Planning Regulation 2017*, in conjunction with associated policies and codes, form the Vegetation Management Framework.

The VMA does not apply to all land tenures or vegetation types. State forests, national parks, forest reserves and some tenures under the *Forestry Act 1959* and *Nature Conservation Act 1992* are not regulated by the VMA. Managing or clearing vegetation on these tenures may require approvals under these laws.

The following native vegetation is not regulated under the VMA but may require permit(s) under other laws:

- grass or non-woody herbage;
- a plant within a grassland regional ecosystem prescribed under Schedule 5 of the *Vegetation Management Regulation 2012*; and
- a mangrove.

### 2.1 Exempt clearing work

Exempt clearing work is an activity for which you do not need to notify the Department of Resources or obtain an approval under the vegetation management framework. Exempt clearing work was previously known as exemptions.

In areas that are mapped as Category X (white in colour) on the regulated vegetation management map (see section 4.1), and where the land tenure is freehold, indigenous land and leasehold land for agriculture and grazing purposes, the clearing of vegetation is considered exempt clearing work and does not require notification or development approval under the vegetation management framework. For all other land tenures, contact the Department of Resources before commencing clearing to ensure that the proposed activity is exempt clearing work.

A range of routine property management activities are considered exempt clearing work. A list of exempt clearing work is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/exemptions>.

Exempt clearing work may be affected if the proposed clearing area is subject to development approval conditions, a covenant, an environmental offset, an exchange area, a restoration notice, or an area mapped as Category A. Exempt clearing work may require approval under other Commonwealth, State or Local Government laws, or local government planning schemes. Contact the Department of Resources prior to clearing in any of these areas.

### 2.2 Accepted development vegetation clearing codes

Some clearing activities can be undertaken under an accepted development vegetation clearing code. The codes can be downloaded at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/codes>

If you intend to clear vegetation under an accepted development vegetation clearing code, you must notify the Department of Resources before commencing. The information in this report will assist you to complete the online notification form.

You can complete the online form at

<https://apps.dnrm.qld.gov.au/vegetation/>

## 2.3 Area management plans

Area Management Plans (AMP) provide an alternative approval system for vegetation clearing under the vegetation management framework. They list the purposes and clearing conditions that have been approved for the areas covered by the plan. It is not necessary to use an AMP, even when an AMP applies to your property.

On 8 March 2020, AMPs ended for fodder harvesting, managing thickened vegetation and managing encroachment. New notifications cannot be made for these AMPs. You will need to consider options for fodder harvesting, managing thickened vegetation or encroachment under a relevant accepted development vegetation clearing code or apply for a development approval.

New notifications can be made for all other AMPs. These will continue to apply until their nominated end date.

If an Area Management Plan applies to your property for which you can make a new notification, it will be listed in Section 3.6 of this report. Before clearing under one of these AMPs, you must first notify the Department of Resources and then follow the conditions and requirements listed in the AMP.

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/area-management-plans>

## 2.4 Development approvals

If under the vegetation management framework your proposed clearing is not exempt clearing work, or is not permitted under an accepted development vegetation clearing code, or an AMP, you may be able to apply for a development approval.

Information on how to apply for a development approval is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/development>

## 2.5. Contact information for the Department of Resources

For further information on the vegetation management framework:

**Phone** 135VEG (135 834)

**Email** [vegetation@resources.qld.gov.au](mailto:vegetation@resources.qld.gov.au)

**Visit** <https://www.resources.qld.gov.au/?contact=vegetation> to submit an online enquiry.

### 3. Vegetation management framework for Lot: 2 Plan: SP113033

#### 3.1 Vegetation categories

The vegetation categories on your property are shown on the regulated vegetation management map in section 4.1 of this report. A summary of vegetation categories on the subject lot are listed in Table 3. Descriptions for these categories are shown in Table 4.

**Table 3: Vegetation categories for subject property. Total area: 399.41ha**

Vegetation category	Area (ha)
Category B	390.7
Category R	0.9
Category X	7.8

**Table 4: Description of vegetation categories**

Category	Colour on Map	Description	Requirements / options under the vegetation management framework
A	red	Compliance areas, environmental offset areas and voluntary declaration areas	Special conditions apply to Category A areas. Before clearing, contact the Department of Resources to confirm any requirements in a Category A area.
B	dark blue	Remnant vegetation areas	Exempt clearing work, or notification and compliance with accepted development vegetation clearing codes, area management plans or development approval.
C	light blue	High-value regrowth areas	Exempt clearing work, or notification and compliance with managing Category C regrowth vegetation accepted development vegetation clearing code.
R	yellow	Regrowth within 50m of a watercourse or drainage feature in the Great Barrier Reef catchment areas	Exempt clearing work, or notification and compliance with managing Category R regrowth accepted development vegetation clearing code or area management plans.
X	white	Clearing on freehold land, indigenous land and leasehold land for agriculture and grazing purposes is considered exempt clearing work under the vegetation management framework. Contact the Department of Resources to clarify whether a development approval is required for other State land tenures.	No permit or notification required on freehold land, indigenous land and leasehold land for agriculture and grazing. A development approval may be required for some State land tenures.

#### Property Map of Assessable Vegetation (PMAV)

The following Property Map of Assessable Vegetation (PMAVs) may be present on this property:

**Reference number**

2012/004643



## 3.2 Regional ecosystems

The endangered, of concern and least concern regional ecosystems on your property are shown on the vegetation management supporting map in section 4.2 and are listed in Table 5.

A description of regional ecosystems can be accessed online at

<https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/descriptions/>

**Table 5: Regional ecosystems present on subject property**

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
11.3.25	Least concern	B	43.50	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.25	Least concern	R	0.19	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.4	Of concern	B	91.67	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.3.4	Of concern	R	0.14	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.5.3	Least concern	B	251.99	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.5.3	Least concern	R	0.53	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.7.2	Least concern	B	3.56	Acacia spp. woodland on Cainozoic lateritic duricrust. Scarp retreat zone	Sparse
non-rem	None	X	7.83	None	None

Please note:

1. All area and area derived figures included in this table have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

2. If Table 5 contains a Category 'plant', please be aware that this refers to 'plantations' such as forestry, and these areas are considered non-remnant under the VMA.

The VMA status of the regional ecosystem (whether it is endangered, of concern or least concern) also determines if any of the following are applicable:

- exempt clearing work;
- accepted development vegetation clearing codes;
- performance outcomes in State Code 16 of the State Development Assessment Provisions (SDAP).

## 3.3 Watercourses

Vegetation management watercourses and drainage features for this property are shown on the vegetation management supporting map in section 4.2.

## 3.4 Wetlands

There are no vegetation management wetlands present on this property.

## 3.5 Essential habitat

Under the VMA, essential habitat for protected wildlife is native wildlife prescribed under the *Nature Conservation Act 1992* (NCA) as critically endangered, endangered, vulnerable or near-threatened wildlife.

Essential habitat for protected wildlife includes suitable habitat on the lot, or where a species has been known to occur up to 1.1 kilometres from a lot on which there is assessable vegetation. These important habitat areas are protected under the VMA.

Any essential habitat on this property will be shown as blue hatching on the vegetation supporting map in section 4.2.

If essential habitat is identified on the lot, information about the protected wildlife species is provided in Table 6 below. The numeric labels on the vegetation management supporting map can be cross referenced with Table 6 to outline the essential habitat factors for that particular species. There may be essential habitat for more than one species on each lot, and areas of Category A, Category B and Category C can be mapped as Essential Habitat.

Essential habitat is compiled from a combination of species habitat models and buffered species records. Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated. Essential habitat, for protected wildlife, means an area of vegetation shown on the Regulated Vegetation Management Map -

- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database. Essential habitat factors are comprised of - regional ecosystem (mandatory for most species), vegetation community, altitude, soils, position in landscape; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

If there is no essential habitat mapping shown on the vegetation management supporting map for this lot, and there is no table in the sections below, it confirms that there is no essential habitat on the lot.

### Category A and/or Category B and/or Category C

**Table 6: Essential habitat in Category A and/or Category B and/or Category C**

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
483	Denisonia maculata	ornamental snake	V	Riparian woodland/open forest and shrub/woodland including Brigalow Acacia harpophylla; into drier habitats in summer.	100-450m.	Cracking clay with gilgai/soil crack microrelief and sandy loam substrates.	Near freshwater waterholes/creeks and low lying poorly drained areas that are frequently inundated by freshwater.

Label	Regional Ecosystem (mandatory unless otherwise specified)
483	10.3.2, 10.3.3, 10.3.4, 10.3.7, 10.3.13, 10.3.14, 10.3.15, 10.3.16, 10.3.27, 10.3.30, 10.3.31, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.4.8, 10.5.5, 10.9.1, 10.9.6, 10.9.7, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.9, 11.3.10, 11.3.12, 11.3.15, 11.3.21, 11.3.23, 11.3.24, 11.3.25, 11.3.27, 11.3.28, 11.3.31, 11.3.34, 11.3.37, 11.3.38, 11.3.40, 11.4.2, 11.4.3, 11.4.4, 11.4.6, 11.4.7, 11.4.8, 11.4.9, 11.4.11, 11.5.2, 11.5.3, 11.5.16, 11.8.11, 11.9.1, 11.9.2, 11.9.3, 11.9.5, 11.9.7, 11.9.11, 11.9.12, 11.9.14, 11.11.15, 11.12.6

## 3.6 Area Management Plan(s)

Nil

## 3.7 Coastal or non-coastal

For the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP), this property is regarded as\*

Non Coastal

\*See also Map 4.3

## 3.8 Agricultural Land Class A or B

The following can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code:

**Does this lot contain land that is mapped as Agricultural Land Class A or B in the State Planning Interactive Mapping System?**

No Class A

No Class B

Note - This confirms Agricultural Land Classes as per the State Planning Interactive Mapping System only. This response does not include Agricultural Land Classes identified under local government planning schemes. For further information, check the Planning Scheme for your local government area.

See Map 4.4 to identify the location and extent of Class A and/or Class B Agricultural land on Lot: 2 Plan: SP113033.

## 4. Vegetation management framework maps

Vegetation management maps included in this report may also be requested individually at:

<https://www.resources.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form>

### **Regulated vegetation management map**

The regulated vegetation management map shows vegetation categories needed to determine clearing requirements. These maps are updated monthly to show new [property maps of assessable vegetation \(PMAV\)](#).

### **Vegetation management supporting map**

The vegetation management supporting map provides information on regional ecosystems, wetlands, watercourses and essential habitat.

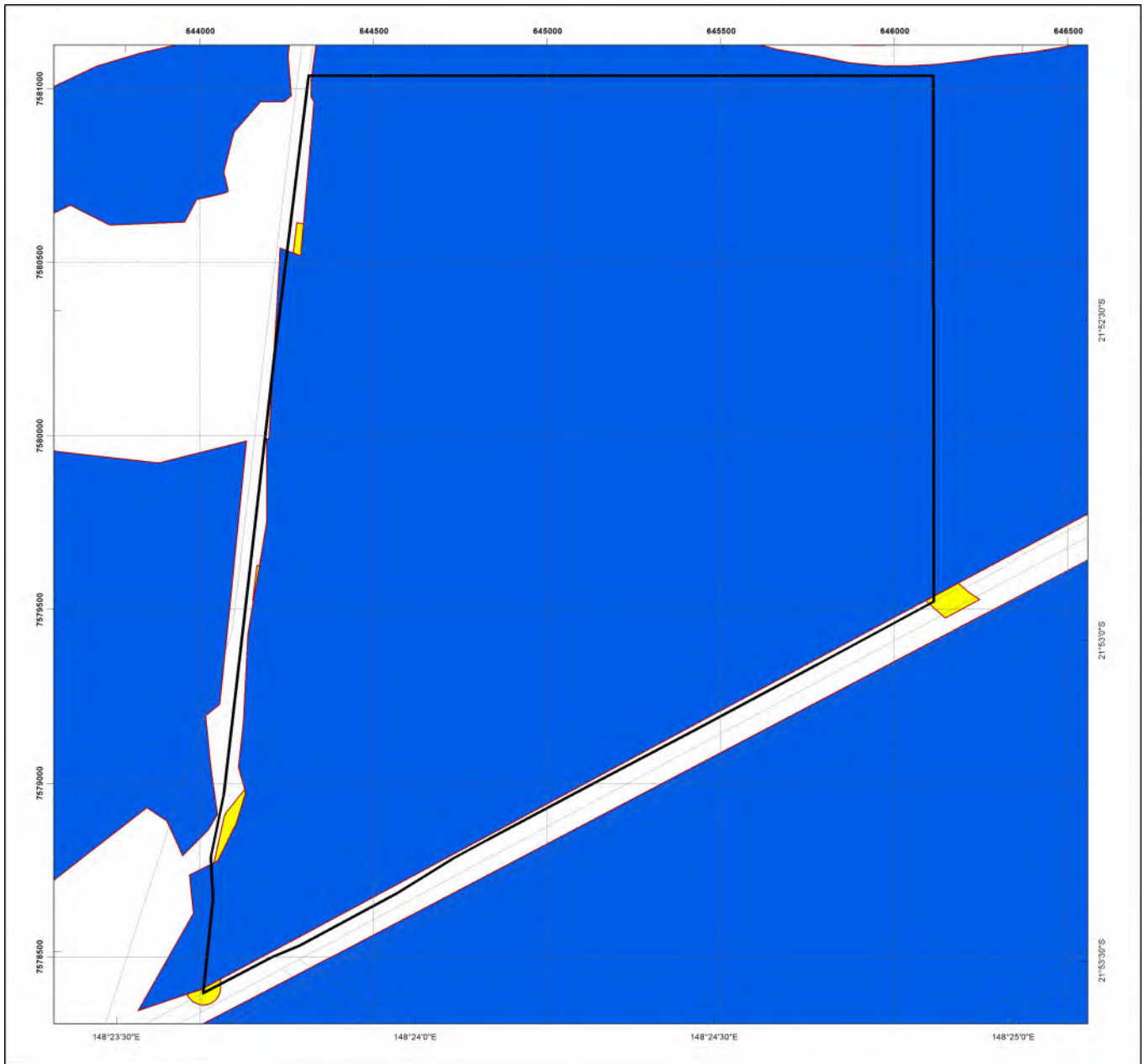
### **Coastal/non-coastal map**

The coastal/non-coastal map confirms whether the lot, or which parts of the lot, are considered coastal or non-coastal for the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP).

### **Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture**









The Agricultural Land Class map confirms the location and extent of land mapped as Agricultural Land Classes A or B as identified on the State Planning Interactive Mapping System. Please note that this map does not include areas identified as Agricultural Land Class A or B in local government planning schemes. This map can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code.

# 4.1 Regulated vegetation management map



## Regulated Vegetation Management Map

### Legend

-  Selected Lot and Plan
-  Category A area (Vegetation offsets/compliance notices/VDecs)
-  Category B area (Remnant vegetation)
-  Category C area (High-value regrowth vegetation)
-  Category R area (Reef regrowth watercourse vegetation)
-  Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
-  Water
-  Other land parcel boundaries



This product is projected into:  
GDA 1994 MGA Zone 55

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Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

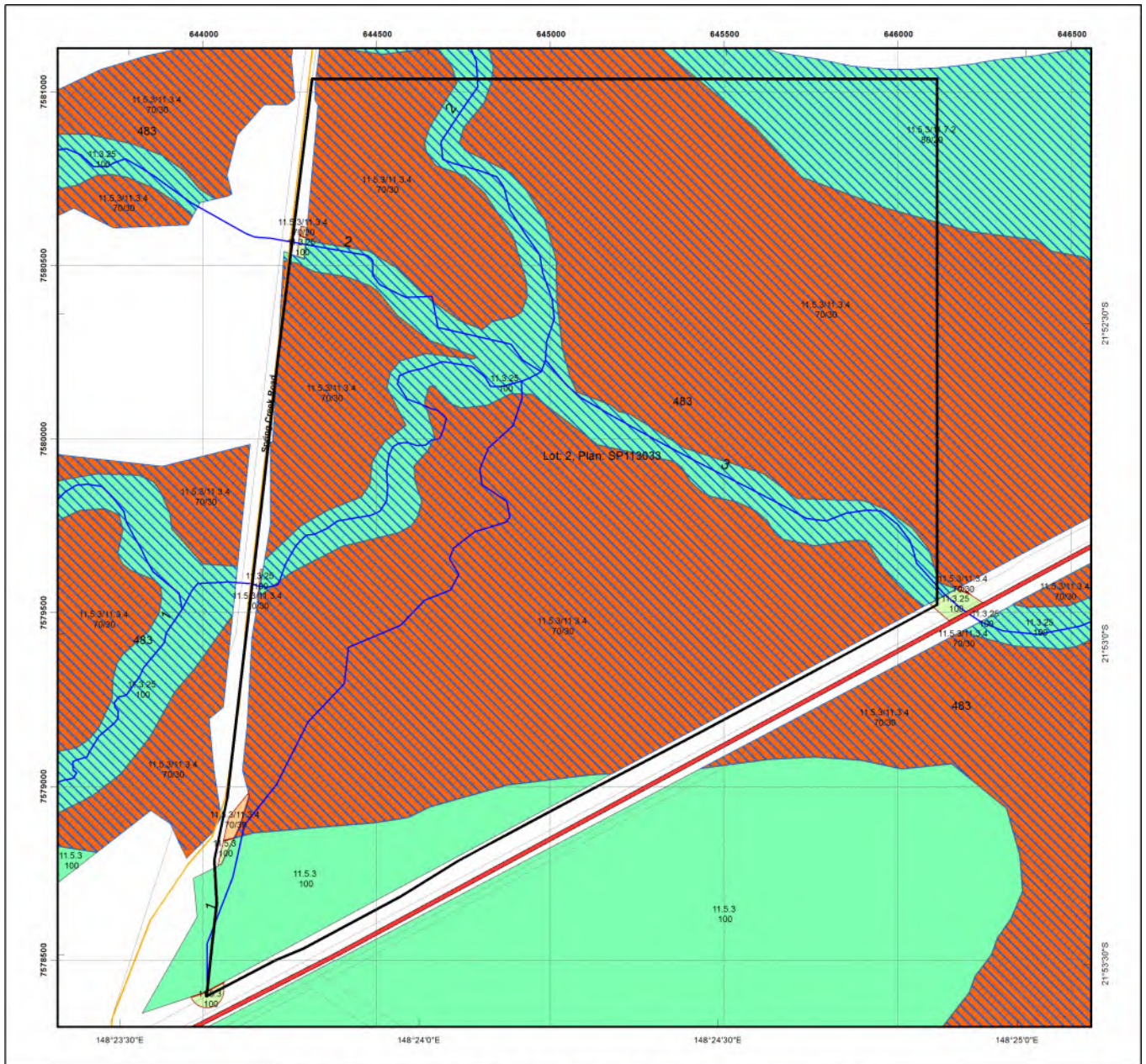
Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.



## 4.2 Vegetation management supporting map



### Vegetation Management Supporting Map

#### Legend

- Selected Lot and Plan
- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries



0 110 220 330 440 550 m

This product is projected into:  
GDA 1994 MGA Zone 55

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

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Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

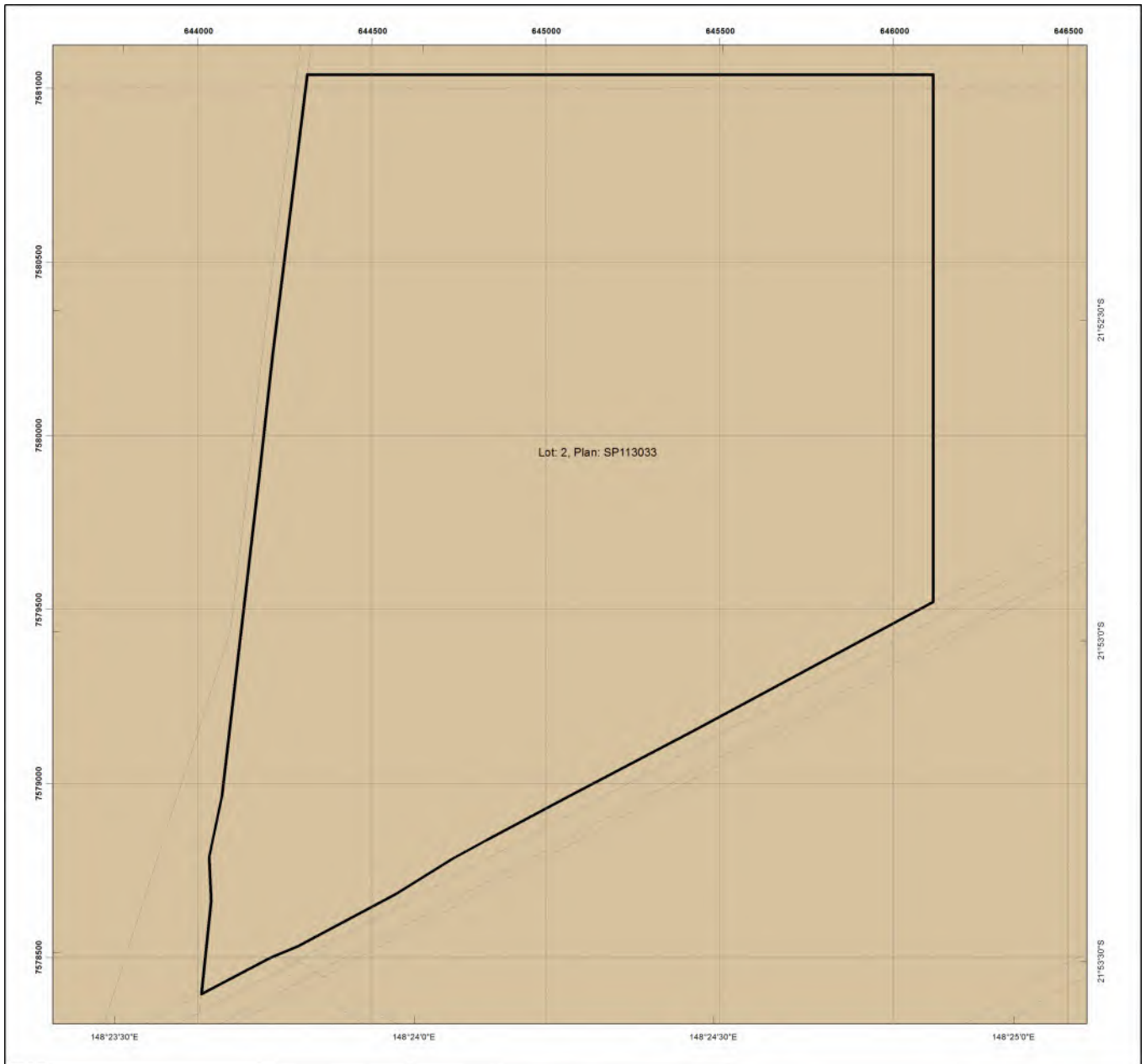
Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.







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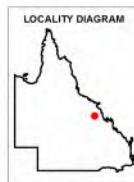
# 4.3 Coastal/non-coastal map



## Coastal/Non Coastal Map

### Legend

-  Selected Lot and Plan
-  Coastal
-  Non Coastal
-  Other land parcel boundaries



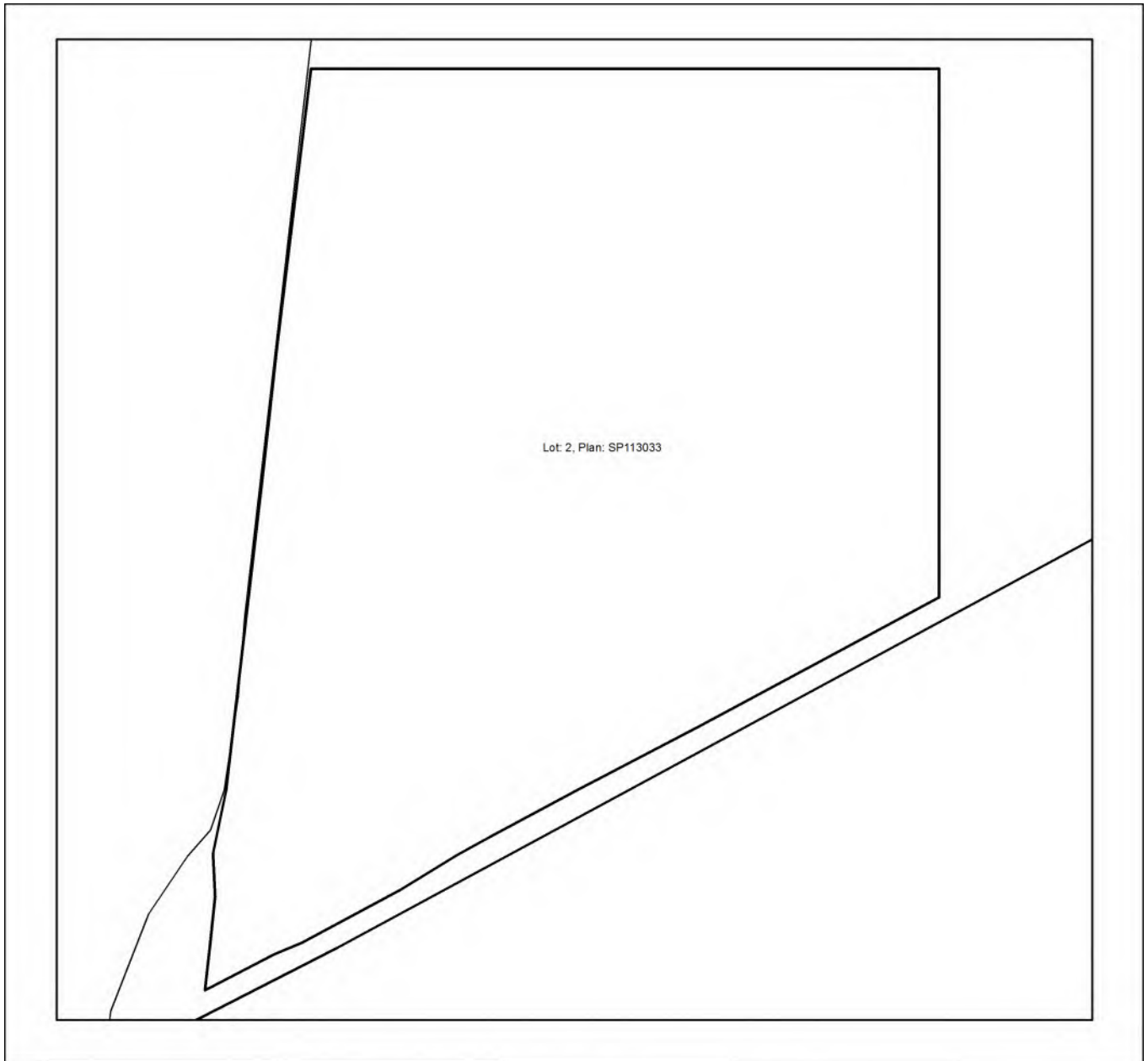
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








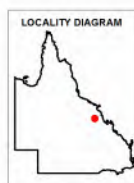
# 4.4 Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture



## Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture

### Legend

-  Selected Lot and Plan
-  Towns
-  Rivers and creeks
-  Freeways / motorways; Highways
-  Secondary roads; Streets
- Agricultural land class A or B
-  A
-  B
-  Not class A or B



This product is projected into GDA 1994 MGA Zone 55

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## 5. Protected plants framework (administered by the Department of Environment and Science (DES))

In Queensland, all plants that are native to Australia are protected plants under the [Nature Conservation Act 1992](#) (NCA). The NCA regulates the clearing of protected plants 'in the wild' (see [Operational policy: When a protected plant in Queensland is considered to be 'in the wild'](#)) that are listed as critically endangered, endangered, vulnerable or near threatened under the Act.

Please note that the protected plant clearing framework applies irrespective of the classification of the vegetation under the *Vegetation Management Act 1999* and any approval or exemptions given under another Act, for example, the *Vegetation Management Act 1999* or *Planning Regulation 2017*.

### 5.1 Clearing in high risk areas on the flora survey trigger map

The flora survey trigger map identifies high-risk areas for threatened and near threatened plants. These are areas where threatened or near threatened plants are known to exist or are likely to exist based on the habitat present. The flora survey trigger map for this property is provided in section 5.5.

If you are proposing to clear an area shown as high risk on the flora survey trigger map, a flora survey of the clearing impact area must be undertaken by a suitably qualified person in accordance with the [Flora survey guidelines](#). The main objective of a flora survey is to locate any threatened or near threatened plants that may be present in the clearing impact area.

If the flora survey identifies that threatened or near threatened plants are not present within the clearing impact area or clearing within 100m of a threatened or near threatened plant can be avoided, the clearing activity is exempt from a permit. An [exempt clearing notification form](#) must be submitted to the Department of Environment and Science, with a copy of the flora survey report, at least one week prior to clearing.

If the flora survey identifies that threatened or near threatened plants are present in, or within 100m of, the area to be cleared, a clearing permit is required before any clearing is undertaken. The flora survey report, as well as an impact management report, must be submitted with the [clearing permit application form](#).

### 5.2 Clearing outside high risk areas on the flora survey trigger map

In an area other than a high risk area, a clearing permit is only required where a person is, or becomes aware that threatened or near threatened plants are present in, or within 100m of, the area to be cleared. You must keep a copy of the flora survey trigger map for the area subject to clearing for five years from the day the clearing starts. If you do not clear within the 12 month period that the flora survey trigger map was printed, you need to print and check a new flora survey trigger map.

### 5.3 Exemptions

Many activities are 'exempt' under the protected plant clearing framework, which means that clearing of native plants that are in the wild can be undertaken for these activities with no need for a flora survey or a protected plant clearing permit. The Information sheet - General exemptions for the take of protected plants provides some of these exemptions.

Some exemptions under the NCA are the same as exempt clearing work (formerly known as exemptions) under the *Vegetation Management Act 1999* (i.e. listed in Schedule 21 of the Planning Regulations 2017) while some are different.

### 5.4 Contact information for DES

For further information on the protected plants framework:

**Phone** 1300 130 372 (and select option four)

**Email** [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

**Visit** <https://www.qld.gov.au/environment/plants-animals/plants/protected-plants>

## 5.5 Protected plants flora survey trigger map

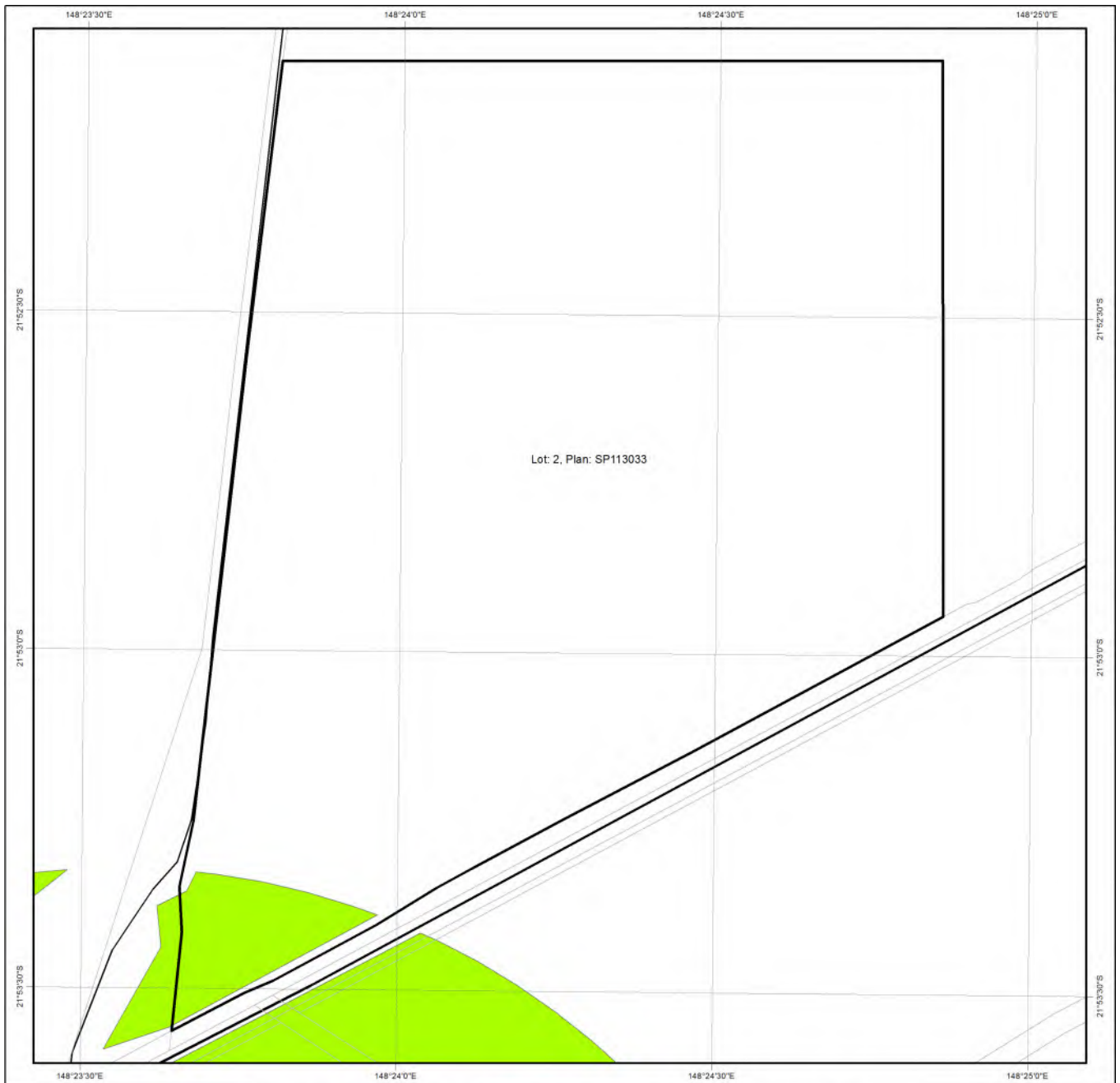
This map included may also be requested individually at: <https://apps.des.qld.gov.au/map-request/flora-survey-trigger/>.

### Updates to the data informing the flora survey trigger map

The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.






### Species information

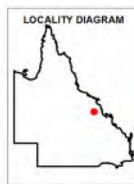
Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the [Queensland Spatial Catalogue](#), the Department of Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the [clearing of protected plants](#) for more information.



### Protected Plants Flora Survey Trigger Map

#### Legend

-  Selected Lot and Plan
-  High risk area
-  Other land parcel boundaries
-  Freeways / motorways / highways
-  Secondary roads / streets



This product is projected into:  
GDA 1994 MGA Zone 55

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

Land parcel boundaries are provided as locational aid only.

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Science at [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

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## 6. Koala protection framework (administered by the Department of Environment and Science (DES))

The koala (*Phascolarctos cinereus*) is listed in Queensland as endangered by the Queensland Government under *Nature Conservation Act 1992* and by the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999*.

The Queensland Government's koala protection framework is comprised of the *Nature Conservation Act 1992*, the Nature Conservation (Animals) Regulation 2020, the Nature Conservation (Koala) Conservation Plan 2017, the *Planning Act 2016* and the Planning Regulation 2017.

### 6.1 Koala mapping

#### 6.1.1 Koala districts

The parts of Queensland where koalas are known to occur has been divided into three koala districts - koala district A, koala district B and koala district C. Each koala district is made up of areas with comparable koala populations (e.g. density, extent and significance of threatening processes affecting the population) which require similar management regimes.

Section 7.1 identifies which koala district your property is located in.

#### 6.1.2 Koala habitat areas

Koala habitat areas are areas of vegetation that have been determined to contain koala habitat that is essential for the conservation of a viable koala population in the wild based on the combination of habitat suitability and biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water). In order to protect this important koala habitat, clearing controls have been introduced into the Planning Regulation 2017 for development in koala habitat areas.

Please note that koala habitat areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley, Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

There are two different categories of koala habitat area (core koala habitat area and locally refined koala habitat), which have been determined using two different methodologies. These methodologies are described in the document [Spatial modelling in South East Queensland](#).

Section 7.2 shows any koala habitat area that exists on your property.

Under the Nature Conservation (Koala) Conservation Plan 2017, an owner of land (or a person acting on the owner's behalf with written consent) can request to make, amend or revoke a koala habitat area determination if they believe, on reasonable grounds, that the existing determination for all or part of their property is incorrect.

More information on requests to make, amend or revoke a koala habitat area determination can be found in the document [Guideline - Requests to make, amend or revoke a koala habitat area determination](#).

The koala habitat area map will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

Changes to the koala habitat area map which occur between annual updates because of a request to make, amend or revoke a koala habitat area determination can be viewed on the register of approved requests to make, amend or revoke a koala habitat area available at: <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/koalamaps>. The register includes the lot on plan for the change, the date the decision was made and the map issued to the landholder that shows areas determined to be koala habitat areas.

#### 6.1.3 Koala priority areas

Koala priority areas are large, connected areas that have been determined to have the highest likelihood of achieving conservation outcomes for koalas based on the combination of habitat suitability, biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water) and a koala conservation cost benefit analysis.

Conservation efforts will be prioritised in these areas to ensure the conservation of viable koala populations in the wild including a focus on management (e.g. habitat protection, habitat restoration and threat mitigation) and monitoring. This includes a prohibition on clearing in koala habitat areas that are in koala priority areas under the Planning Regulation 2017 (subject to some exemptions).

Please note that koala priority areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley,

Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

Section 7.2 identifies if your property is in a koala priority area.

#### 6.1.4 Identified koala broad-hectare areas

There are seven identified koala broad-hectare areas in SEQ. These are areas of koala habitat that are located in areas committed to meet development targets in the SEQ Regional Plan to accommodate SEQ's growing population including bring-forward Greenfield sites under the Queensland Housing Affordability Strategy and declared master planned areas under the repealed *Sustainable Planning Act 2009* and the repealed *Integrated Planning Act 1997*.

Specific assessment benchmarks apply to development applications for development proposed in identified koala broad-hectare areas to ensure koala conservation measures are incorporated into the proposed development.

Section 7.2 identifies if your property is in an identified koala broad-hectare area.

## 6.2 Koala habitat planning controls

On 7 February 2020, the Queensland Government introduced new planning controls to the Planning Regulation 2017 to strengthen the protection of koala habitat in South East Queensland (i.e. koala district A).

More information on these planning controls can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

As a high-level summary, the koala habitat planning controls make:

- development that involves interfering with koala habitat (defined below) in an area that is both a koala priority area and a koala habitat area, prohibited development (i.e. development for which a development application cannot be made);
- development that involves interfering with koala habitat (defined below) in an area that is a koala habitat area but is not a koala priority area, assessable development (i.e. development for which development approval is required); and
- development that is for extractive industries where the development involves interfering with koala habitat (defined below) in an area that is both a koala habitat area and a key resource area, assessable development (i.e. development for which development approval is required).

**Interfering with koala habitat means:**

- 1) Removing, cutting down, ringbarking, pushing over, poisoning or destroying in anyway, including by burning, flooding or draining native vegetation in a koala habitat area; but
- 2) Does not include destroying standing vegetation by stock or lopping a tree.

However, these planning controls do not apply if the development is exempted development as defined in Schedule 24 of the [Planning Regulation 2017](#). More information on exempted development can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

There are also assessment benchmarks that apply to development applications for:

- building works, operational works, material change of use or reconfiguration of a lot where:
  - the local government planning scheme makes the development assessable;
  - the premises includes an area that is both a koala priority area and a koala habitat area; and
  - the development does not involve interfering with koala habitat (defined above); and
- development in identified koala broad-hectare areas.

The [Guideline - Assessment Benchmarks in relation to Koala Habitat in South East Queensland assessment benchmarks](#) outlines these assessment benchmarks, the intent of these assessment benchmarks and advice on how proposed development may meet these assessment benchmarks.

## 6.3 Koala Conservation Plan clearing requirements

Section 10 and 11 of the [Nature Conservation \(Koala\) Conservation Plan 2017](#) prescribes requirements that must be met when clearing koala habitat in koala district A and koala district B.

These clearing requirements are independent to the koala habitat planning controls introduced into the Planning Regulation 2017, which means they must be complied with irrespective of any approvals or exemptions offered under other legislation.

Unlike the clearing controls prescribed in the Planning Regulation 2017 that are to protect koala habitat, the clearing requirements prescribed in the Nature Conservation (Koala) Conservation Plan 2017 are in place to prevent the injury or death of koalas when koala habitat is being cleared.

## 6.4 Contact information for DES

For further information on the koala protection framework:

**Phone** 13 QGOV (13 74 68)

**Email** [koala.assessment@des.qld.gov.au](mailto:koala.assessment@des.qld.gov.au)

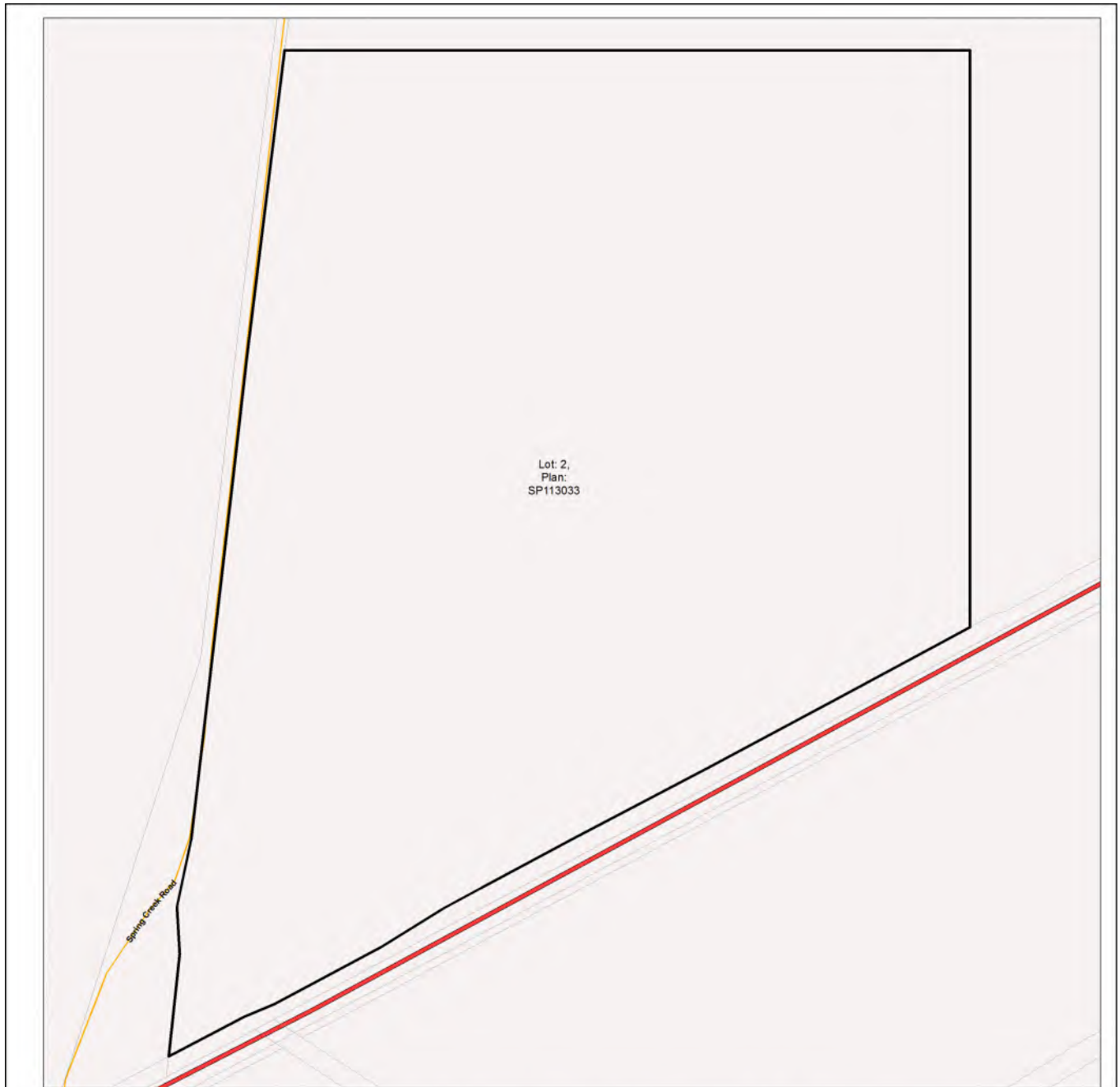
**Visit** <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping>

## 7. Koala protection framework details for Lot: 2 Plan: SP113033

### 7.1 Koala districts













Koala District C

## 7.2 Koala priority area, koala habitat area and identified koala broad-hectare area map

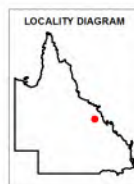


### Koala priority area, koala habitat area and identified koala broad-hectare area map

#### Legend

-  Selected Lot and Plan
-  Koala habitat area (core)
-  Koala habitat area (locally refined)
-  Koala priority area
-  Identified koala broad-hectare area
-  Cadastral Boundaries
-  Towns
-  Highway
-  Connector
-  Street/Local Road
-  Major rivers/creeks
-  Queensland

The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.



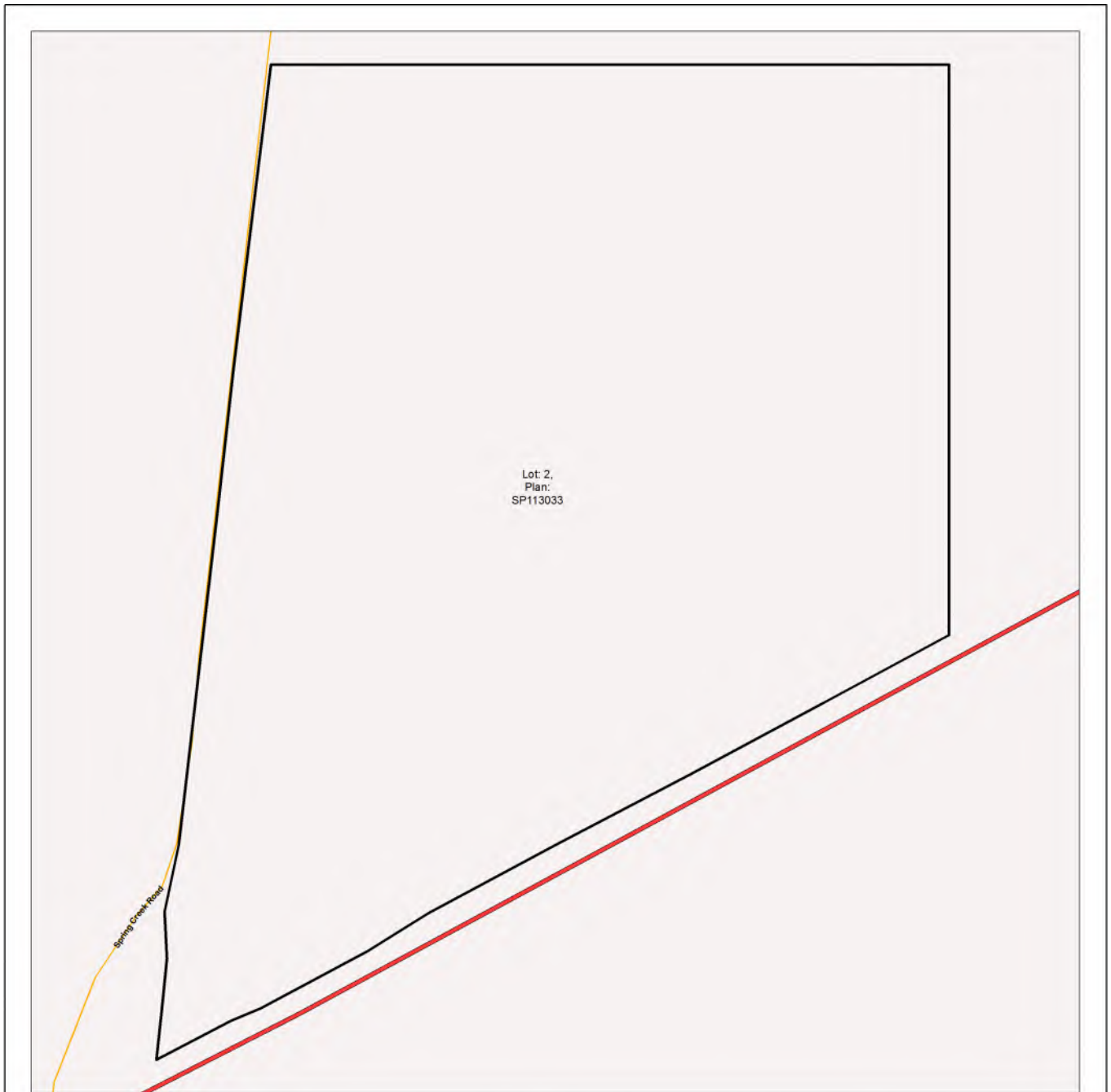
#### Disclaimer:

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The koala conservation plan maps will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.









In order to ensure that the most recent map for an area of interest can be accessed, prior to the annual update, a register of changes made to koala habitat areas as a result of the map amendment process will be available at:  
<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/>.  
 The register will include lot on plan for the change, the date the decision was made and the map issued to the landholder which shows areas determined to be koala habitat areas.

## 7.3 Koala habitat regional ecosystems for core koala habitat areas



### Koala habitat regional ecosystems for core koala habitat areas

#### Legend

-  Selected Lot and Plan
-  Koala habitat area (core)
-  Towns
-  Highway
-  Connector
-  Street/Local Road
-  Major rivers/creeks
-  Queensland



N



0 140 280 420 560 700 m



The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.

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## 8. Other relevant legislation contacts list

Activity	Legislation	Agency	Contact details
<ul style="list-style-type: none"> <li>• Interference with overland flow</li> <li>• Earthworks, significant disturbance</li> </ul>	<i>Water Act 2000</i> <i>Soil Conservation Act 1986</i>	Department of Regional Development, Manufacturing and Water (Queensland Government) Department of Resources (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.rdmw.qld.gov.au">www.rdmw.qld.gov.au</a> <a href="http://www.resources.qld.gov.au">www.resources.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Indigenous Cultural Heritage</li> </ul>	<i>Aboriginal Cultural Heritage Act 2003</i> <i>Torres Strait Islander Cultural Heritage Act 2003</i>	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships	Ph: 13 QGOV (13 74 68) <a href="http://www.datsip.qld.gov.au">www.datsip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Mining and environmentally relevant activities</li> <li>• Infrastructure development (coastal)</li> <li>• Heritage issues</li> </ul>	<i>Environmental Protection Act 1994</i> <i>Coastal Protection and Management Act 1995</i> <i>Queensland Heritage Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Protected plants and protected areas</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 1300 130 372 (option 4) <a href="mailto:palm@des.qld.gov.au">palm@des.qld.gov.au</a> <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Koala mapping and regulations</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="mailto:Koala.assessment@des.qld.gov.au">Koala.assessment@des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Interference with fish passage in a watercourse, mangroves</li> <li>• Forestry activities on State land tenures</li> </ul>	<i>Fisheries Act 1994</i> <i>Forestry Act 1959</i>	Department of Agriculture and Fisheries (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.daf.qld.gov.au">www.daf.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Matters of National Environmental Significance including listed threatened species and ecological communities</li> </ul>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Department of Agriculture, Water and the Environment (Australian Government)	Ph: 1800 803 772 <a href="http://www.environment.gov.au">www.environment.gov.au</a>
<ul style="list-style-type: none"> <li>• Development and planning processes</li> </ul>	<i>Planning Act 2016</i> <i>State Development and Public Works Organisation Act 1971</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.dsdmip.qld.gov.au">www.dsdmip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Local government requirements</li> </ul>	<i>Local Government Act 2009</i> <i>Planning Act 2016</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) Your relevant local government office
<ul style="list-style-type: none"> <li>• Harvesting timber in the Wet Tropics of Qld World Heritage area</li> </ul>	<i>Wet Tropics World Heritage Protection and Management Act 1993</i>	Wet Tropics Management Authority	Ph: (07) 4241 0500 <a href="http://www.wettropics.gov.au">www.wettropics.gov.au</a>



## **Vegetation management report**

For Lot: 4 Plan: SP144274

31/10/2023

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# Recent changes

## Updated mapping

On September 6 2023, the Department of Environment and Science updated the Protected Plant Flora Survey Trigger Map to include recent species classification changes and Queensland Herbarium scientific updates. The updated map is included in Section 5 of the following report.

Updated vegetation mapping was released on 8 September 2022 and includes the most recent Queensland Herbarium scientific updates to the Regulated Vegetation Management Map, regional ecosystems, wetland, high-value regrowth and essential habitat mapping.

The Department of Environment and Science have also updated their koala protection mapping to align with the Queensland Herbarium scientific updates.

## Overview

Based on the lot on plan details you have supplied, this report provides the following detailed information:

**Property details** - information about the specified Lot on Plan, lot size, local government area, bioregion(s), subregion(s) and catchment(s);

**Vegetation management framework** - an explanation of the application of the framework and contact details for the Department of Resources who administer the framework;

**Vegetation management framework details for the specified Lot on Plan** including:

- the vegetation management categories on the property;
- the vegetation management regional ecosystems on the property;
- vegetation management watercourses or drainage features on the property;
- vegetation management wetlands on the property;
- vegetation management essential habitat on the property;
- whether any area management plans are associated with the property;
- whether the property is coastal or non-coastal; and
- whether the property is mapped as Agricultural Land Class A or B;

**Protected plant framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework, including:

- high risk areas on the protected plant flora survey trigger map for the property;

**Koala protection framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework; and

**Koala protection framework details for the specified Lot on Plan** including:

- the koala district the property is located in;
- koala priority areas on the property;
- core and locally refined koala habitat areas on the property;
- whether the lot is located in an identified koala broad-hectare area; and
- koala habitat regional ecosystems on the property for core koala habitat areas.

This information will assist you to determine your options for managing vegetation under:

- the vegetation management framework, which may include:

- exempt clearing work;
- accepted development vegetation clearing code;
- an area management plan;
- a development approval;

- the protected plant framework, which may include:

- the need to undertake a flora survey;
- exempt clearing;
- a protected plant clearing permit;

- the koala protection framework, which may include:

- exempted development;

- a development approval;
- the need to undertake clearing sequentially and in the presence of a koala spotter.

## Other laws

The clearing of native vegetation is regulated by both Queensland and Australian legislation, and some local governments also regulate native vegetation clearing. You may need to obtain an approval or permit under another Act, such as the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Section 8 of this guide provides contact details of other agencies you should confirm requirements with, before commencing vegetation clearing.

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# 1. Property details

## 1.1 Tenure and title area

All of the lot, plan, tenure and title area information associated with property Lot: 4 Plan: SP144274, are listed in Table 1.

**Table 1: Lot, plan, tenure and title area information for the property**

Lot	Plan	Tenure	Property title area (sq metres)
4	SP144274	Lands Lease	66,500,000
A	KL182	Easement	0.0
B	KL199	Easement	2,336
PO	SP251693	Easement	429,700

The tenure of the land may affect whether clearing is considered exempt clearing work or may be carried out under an accepted development vegetation clearing code.

### Does this property have a freehold tenure and is in the Wet Tropics of Queensland World Heritage Area?

No, this property is not located in the Wet Tropics of Queensland World Heritage Area.

## 1.2 Property location

Table 2 provides a summary of the locations for property Lot: 4 Plan: SP144274, in relation to natural and administrative boundaries.

**Table 2: Property location details**

Local Government(s)
Isaac Regional

Bioregion(s)	Subregion(s)
Brigalow Belt	Northern Bowen Basin

Catchment(s)
Fitzroy

## 2. Vegetation management framework (administered by the Department of Resources)

The *Vegetation Management Act 1999* (VMA), the *Vegetation Management Regulation 2012*, the *Planning Act 2016* and the *Planning Regulation 2017*, in conjunction with associated policies and codes, form the Vegetation Management Framework.

The VMA does not apply to all land tenures or vegetation types. State forests, national parks, forest reserves and some tenures under the *Forestry Act 1959* and *Nature Conservation Act 1992* are not regulated by the VMA. Managing or clearing vegetation on these tenures may require approvals under these laws.

The following native vegetation is not regulated under the VMA but may require permit(s) under other laws:

- grass or non-woody herbage;
- a plant within a grassland regional ecosystem prescribed under Schedule 5 of the *Vegetation Management Regulation 2012*; and
- a mangrove.

### 2.1 Exempt clearing work

Exempt clearing work is an activity for which you do not need to notify the Department of Resources or obtain an approval under the vegetation management framework. Exempt clearing work was previously known as exemptions.

In areas that are mapped as Category X (white in colour) on the regulated vegetation management map (see section 4.1), and where the land tenure is freehold, indigenous land and leasehold land for agriculture and grazing purposes, the clearing of vegetation is considered exempt clearing work and does not require notification or development approval under the vegetation management framework. For all other land tenures, contact the Department of Resources before commencing clearing to ensure that the proposed activity is exempt clearing work.

A range of routine property management activities are considered exempt clearing work. A list of exempt clearing work is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/exemptions>.

Exempt clearing work may be affected if the proposed clearing area is subject to development approval conditions, a covenant, an environmental offset, an exchange area, a restoration notice, or an area mapped as Category A. Exempt clearing work may require approval under other Commonwealth, State or Local Government laws, or local government planning schemes. Contact the Department of Resources prior to clearing in any of these areas.

### 2.2 Accepted development vegetation clearing codes

Some clearing activities can be undertaken under an accepted development vegetation clearing code. The codes can be downloaded at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/codes>

If you intend to clear vegetation under an accepted development vegetation clearing code, you must notify the Department of Resources before commencing. The information in this report will assist you to complete the online notification form.

You can complete the online form at

<https://apps.dnrm.qld.gov.au/vegetation/>



## 2.3 Area management plans

Area Management Plans (AMP) provide an alternative approval system for vegetation clearing under the vegetation management framework. They list the purposes and clearing conditions that have been approved for the areas covered by the plan. It is not necessary to use an AMP, even when an AMP applies to your property.

On 8 March 2020, AMPs ended for fodder harvesting, managing thickened vegetation and managing encroachment. New notifications cannot be made for these AMPs. You will need to consider options for fodder harvesting, managing thickened vegetation or encroachment under a relevant accepted development vegetation clearing code or apply for a development approval.

New notifications can be made for all other AMPs. These will continue to apply until their nominated end date.

If an Area Management Plan applies to your property for which you can make a new notification, it will be listed in Section 3.6 of this report. Before clearing under one of these AMPs, you must first notify the Department of Resources and then follow the conditions and requirements listed in the AMP.

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/area-management-plans>

## 2.4 Development approvals

If under the vegetation management framework your proposed clearing is not exempt clearing work, or is not permitted under an accepted development vegetation clearing code, or an AMP, you may be able to apply for a development approval. Information on how to apply for a development approval is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/development>

## 2.5. Contact information for the Department of Resources

For further information on the vegetation management framework:

**Phone** 135VEG (135 834)

**Email** [vegetation@resources.qld.gov.au](mailto:vegetation@resources.qld.gov.au)

**Visit** <https://www.resources.qld.gov.au/?contact=vegetation> to submit an online enquiry.

### 3. Vegetation management framework for Lot: 4 Plan: SP144274

#### 3.1 Vegetation categories

The vegetation categories on your property are shown on the regulated vegetation management map in section 4.1 of this report. A summary of vegetation categories on the subject lot are listed in Table 3. Descriptions for these categories are shown in Table 4.

**Table 3: Vegetation categories for subject property. Total area: 6838.29ha**

Vegetation category	Area (ha)
Category B	4443.0
Category C	7.0
Category R	0.4
Category X	2387.9

**Table 4: Description of vegetation categories**

Category	Colour on Map	Description	Requirements / options under the vegetation management framework
A	red	Compliance areas, environmental offset areas and voluntary declaration areas	Special conditions apply to Category A areas. Before clearing, contact the Department of Resources to confirm any requirements in a Category A area.
B	dark blue	Remnant vegetation areas	Exempt clearing work, or notification and compliance with accepted development vegetation clearing codes, area management plans or development approval.
C	light blue	High-value regrowth areas	Exempt clearing work, or notification and compliance with managing Category C regrowth vegetation accepted development vegetation clearing code.
R	yellow	Regrowth within 50m of a watercourse or drainage feature in the Great Barrier Reef catchment areas	Exempt clearing work, or notification and compliance with managing Category R regrowth accepted development vegetation clearing code or area management plans.
X	white	Clearing on freehold land, indigenous land and leasehold land for agriculture and grazing purposes is considered exempt clearing work under the vegetation management framework. Contact the Department of Resources to clarify whether a development approval is required for other State land tenures.	No permit or notification required on freehold land, indigenous land and leasehold land for agriculture and grazing. A development approval may be required for some State land tenures.

#### Property Map of Assessable Vegetation (PMAV)

The following Property Map of Assessable Vegetation (PMAVs) may be present on this property:

**Reference number**

2011/007674

2007/010500

**Reference number**

2009/009325

## 3.2 Regional ecosystems

The endangered, of concern and least concern regional ecosystems on your property are shown on the vegetation management supporting map in section 4.2 and are listed in Table 5.

A description of regional ecosystems can be accessed online at

<https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/descriptions/>

**Table 5: Regional ecosystems present on subject property**

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
11.11.1	Least concern	B	504.32	Eucalyptus crebra +/- Acacia rhodoxylon woodland on old sedimentary rocks with varying degrees of metamorphism and folding	Sparse
11.11.1	Least concern	C	3.36	Eucalyptus crebra +/- Acacia rhodoxylon woodland on old sedimentary rocks with varying degrees of metamorphism and folding	Sparse
11.11.1	Least concern	R	less than 0.01	Eucalyptus crebra +/- Acacia rhodoxylon woodland on old sedimentary rocks with varying degrees of metamorphism and folding	Sparse
11.12.4	Least concern	B	158.34	Semi-evergreen vine thicket and microphyll vine forest on igneous rocks	Dense
11.3.1	Endangered	B	126.90	Acacia harpophylla and/or Casuarina cristata open forest on alluvial plains	Mid-dense
11.3.25	Least concern	B	280.20	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.25	Least concern	C	0.50	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.25	Least concern	R	0.24	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.4	Of concern	B	159.10	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.3.4	Of concern	R	0.04	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.4.2	Of concern	B	103.83	Eucalyptus spp. and/or Corymbia spp. grassy or shrubby woodland on Cainozoic clay plains	Sparse
11.4.9	Endangered	B	15.77	Acacia harpophylla shrubby woodland with Terminalia oblongata on Cainozoic clay plains	Sparse
11.5.2	Least concern	B	698.97	Eucalyptus crebra, Corymbia spp., with E. moluccana woodland on lower slopes of Cainozoic sand plains and/or remnant surfaces	Sparse
11.5.3	Least concern	B	939.32	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.5.3	Least concern	C	3.15	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
11.5.3	Least concern	R	0.09	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.9.5	Endangered	B	93.21	Acacia harpophylla and/or Casuarina cristata open forest to woodland on fine-grained sedimentary rocks	Mid-dense
11.9.7	Of concern	B	693.08	Eucalyptus populnea, Eremophila mitchellii shrubby woodland on fine-grained sedimentary rocks	Sparse
11.9.7	Of concern	C	less than 0.01	Eucalyptus populnea, Eremophila mitchellii shrubby woodland on fine-grained sedimentary rocks	Sparse
11.9.7	Of concern	R	less than 0.01	Eucalyptus populnea, Eremophila mitchellii shrubby woodland on fine-grained sedimentary rocks	Sparse
11.9.9	Least concern	B	669.92	Eucalyptus crebra woodland on fine-grained sedimentary rocks	Sparse
11.9.9	Least concern	C	less than 0.01	Eucalyptus crebra woodland on fine-grained sedimentary rocks	Sparse
11.9.9	Least concern	R	less than 0.01	Eucalyptus crebra woodland on fine-grained sedimentary rocks	Sparse
non-rem	None	X	2,387.93	None	None

Please note:

1. All area and area derived figures included in this table have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.
2. If Table 5 contains a Category 'plant', please be aware that this refers to 'plantations' such as forestry, and these areas are considered non-remnant under the VMA.

The VMA status of the regional ecosystem (whether it is endangered, of concern or least concern) also determines if any of the following are applicable:

- exempt clearing work;
- accepted development vegetation clearing codes;
- performance outcomes in State Code 16 of the State Development Assessment Provisions (SDAP).

### 3.3 Watercourses

Vegetation management watercourses and drainage features for this property are shown on the vegetation management supporting map in section 4.2.

### 3.4 Wetlands

There are no vegetation management wetlands present on this property.

### 3.5 Essential habitat

Under the VMA, essential habitat for protected wildlife is native wildlife prescribed under the *Nature Conservation Act 1992* (NCA) as critically endangered, endangered, vulnerable or near-threatened wildlife.

Essential habitat for protected wildlife includes suitable habitat on the lot, or where a species has been known to occur up to 1.1 kilometres from a lot on which there is assessable vegetation. These important habitat areas are protected under the VMA.

Any essential habitat on this property will be shown as blue hatching on the vegetation supporting map in section 4.2.

If essential habitat is identified on the lot, information about the protected wildlife species is provided in Table 6 below. The numeric labels on the vegetation management supporting map can be cross referenced with Table 6 to outline the essential habitat factors for that particular species. There may be essential habitat for more than one species on each lot, and areas of Category A, Category B and Category C can be mapped as Essential Habitat.

Essential habitat is compiled from a combination of species habitat models and buffered species records. Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated. Essential habitat, for protected wildlife, means an area of vegetation shown on the Regulated Vegetation Management Map -

- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database. Essential habitat factors are comprised of - regional ecosystem (mandatory for most species), vegetation community, altitude, soils, position in landscape; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

If there is no essential habitat mapping shown on the vegetation management supporting map for this lot, and there is no table in the sections below, it confirms that there is no essential habitat on the lot.

### Category A and/or Category B and/or Category C

**Table 6: Essential habitat in Category A and/or Category B and/or Category C**

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
483	Denisonia maculata	ornamental snake	V	Riparian woodland/open forest and shrub/woodland including Brigalow Acacia harpophylla; into drier habitats in summer.	100-450m.	Cracking clay with gilgai/soil crack microrelief and sandy loam substrates.	Near freshwater waterholes/creeks and low lying poorly drained areas that are frequently inundated by freshwater.
1785	Geophaps scripta scripta	squatter pigeon (southern subspecies)	V	Dry eucalypt woodland (including poplar box, spotted gum, yellow box, acacia and callitris), with sparse short grass, often on sandy areas near to permanent water; grassy eucalypt woodlands. Nest on ground near or under grass tussock, log or low bush.	None	None	Gravelly ridges, traprock and river flats.

Label	Regional Ecosystem (mandatory unless otherwise specified)
483	10.3.2, 10.3.3, 10.3.4, 10.3.7, 10.3.13, 10.3.14, 10.3.15, 10.3.16, 10.3.27, 10.3.30, 10.3.31, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.4.8, 10.5.5, 10.9.1, 10.9.6, 10.9.7, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.9, 11.3.10, 11.3.12, 11.3.15, 11.3.21, 11.3.23, 11.3.24, 11.3.25, 11.3.27, 11.3.28, 11.3.31, 11.3.34, 11.3.37, 11.3.38, 11.3.40, 11.4.2, 11.4.3, 11.4.4, 11.4.6, 11.4.7, 11.4.8, 11.4.9, 11.4.11, 11.5.2, 11.5.3, 11.5.16, 11.8.11, 11.9.1, 11.9.2, 11.9.3, 11.9.5, 11.9.7, 11.9.11, 11.9.12, 11.9.14, 11.11.15, 11.12.6
1785	8.2.1, 8.2.7, 8.2.8, 8.2.12, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.13, 8.5.2, 8.5.3, 8.5.5, 8.5.6, 8.9.1, 8.11.1, 8.11.3, 8.11.4, 8.11.5, 8.11.6, 8.11.8, 8.12.6, 8.12.7, 8.12.9, 8.12.12, 8.12.14, 8.12.20, 8.12.22, 8.12.23, 8.12.25, 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.3.6, 9.3.7, 9.3.8, 9.3.9, 9.3.11, 9.3.13, 9.3.14, 9.3.15, 9.3.16, 9.3.17, 9.3.18, 9.3.19, 9.3.20, 9.3.21, 9.3.22, 9.3.23, 9.4.1, 9.4.2, 9.4.3, 9.5.3, 9.5.4, 9.5.5, 9.5.6, 9.5.7, 9.5.8, 9.5.9, 9.5.10, 9.5.11, 9.5.12, 9.5.16, 9.7.1, 9.7.2, 9.7.3, 9.7.5, 9.7.6, 9.8.1, 9.8.2, 9.8.4, 9.8.5, 9.8.6, 9.8.9, 9.8.10, 9.8.11, 9.10.1, 9.10.3, 9.10.6, 9.10.7, 9.10.8, 9.11.1, 9.11.2, 9.11.3, 9.11.4, 9.11.5, 9.11.7, 9.11.10, 9.11.11, 9.11.12, 9.11.13, 9.11.15, 9.11.16, 9.11.17, 9.11.18, 9.11.19, 9.11.23, 9.11.26, 9.11.28, 9.11.29, 9.11.31, 9.11.32, 9.12.1, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7, 9.12.10, 9.12.11, 9.12.12, 9.12.13, 9.12.16, 9.12.17, 9.12.18, 9.12.19, 9.12.20, 9.12.21, 9.12.22, 9.12.23, 9.12.24, 9.12.26, 9.12.28, 9.12.30, 9.12.31, 9.12.33, 9.12.35, 9.12.37, 9.12.39, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.9, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.19, 10.3.20, 10.3.27, 10.3.28, 10.3.30, 10.3.31, 10.4.3, 10.5.1, 10.5.2, 10.5.4, 10.5.5, 10.5.7, 10.5.9, 10.5.10, 10.5.11, 10.5.12, 10.7.2, 10.7.3, 10.7.5, 10.7.11, 10.7.12, 10.9.1, 10.9.2, 10.9.3, 10.9.5, 10.10.1, 10.10.3, 10.10.4, 10.10.5, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.7, 11.3.8, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.23, 11.3.25, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.35, 11.3.36, 11.3.37, 11.3.38, 11.3.39, 11.4.2, 11.4.3, 11.4.5, 11.4.8, 11.4.10, 11.4.12, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.8, 11.5.9, 11.5.12, 11.5.13, 11.5.14, 11.5.17, 11.5.20, 11.5.21, 11.7.1, 11.7.2, 11.7.4, 11.7.6, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.9, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.2, 11.9.3, 11.9.7, 11.9.9, 11.9.14, 11.10.1, 11.10.4, 11.10.6, 11.10.7, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.15, 11.11.16, 11.11.19, 11.11.20, 11.12.1, 11.12.2, 11.12.3, 11.12.5, 11.12.6, 11.12.7, 11.12.8, 11.12.9, 11.12.10, 11.12.11, 11.12.12, 11.12.13, 11.12.14, 11.12.17, 11.12.20, 12.2.5, 12.2.6, 12.2.7, 12.2.10, 12.2.11, 12.3.3, 12.3.6, 12.3.10, 12.3.12, 12.3.14, 12.3.18, 12.3.19, 12.5.1, 12.5.2, 12.5.4, 12.5.5, 12.5.7, 12.5.8, 12.5.11, 12.5.12, 12.7.1, 12.7.2, 12.8.14, 12.8.16, 12.8.17, 12.8.19, 12.9-10.5, 12.9-10.7, 12.9-10.8, 12.9-10.12, 12.9-10.13, 12.9-10.25, 12.9-10.26, 12.9-10.28, 12.11.5, 12.11.7, 12.11.8, 12.11.14, 12.11.15, 12.11.20, 12.11.21, 12.11.22, 12.11.24, 12.11.25, 12.11.26, 12.11.27, 12.11.28, 12.12.7, 12.12.8, 12.12.9, 12.12.12, 12.12.14, 12.12.21, 12.12.22, 12.12.23, 12.12.24, 12.12.25, 12.12.27, 13.3.1, 13.3.4, 13.3.7, 13.11.1, 13.11.3, 13.11.4, 13.11.8, 13.12.2, 13.12.3, 13.12.5, 13.12.8, 13.12.9, 13.12.10

### 3.6 Area Management Plan(s)

Nil

### 3.7 Coastal or non-coastal

For the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP), this property is regarded as\*

Non Coastal

\*See also Map 4.3

### 3.8 Agricultural Land Class A or B

The following can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code:

**Does this lot contain land that is mapped as Agricultural Land Class A or B in the State Planning Interactive Mapping System?**

Class A (with urban areas masked as per SPP): 863.68ha

No Class B

Note - This confirms Agricultural Land Classes as per the State Planning Interactive Mapping System only. This response does not include Agricultural Land Classes identified under local government planning schemes. For further information, check the Planning Scheme for your local government area.

See Map 4.4 to identify the location and extent of Class A and/or Class B Agricultural land on Lot: 4 Plan: SP144274.

## 4. Vegetation management framework maps

Vegetation management maps included in this report may also be requested individually at:

<https://www.resources.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form>

### **Regulated vegetation management map**

The regulated vegetation management map shows vegetation categories needed to determine clearing requirements. These maps are updated monthly to show new [property maps of assessable vegetation \(PMAV\)](#).

### **Vegetation management supporting map**

The vegetation management supporting map provides information on regional ecosystems, wetlands, watercourses and essential habitat.

### **Coastal/non-coastal map**

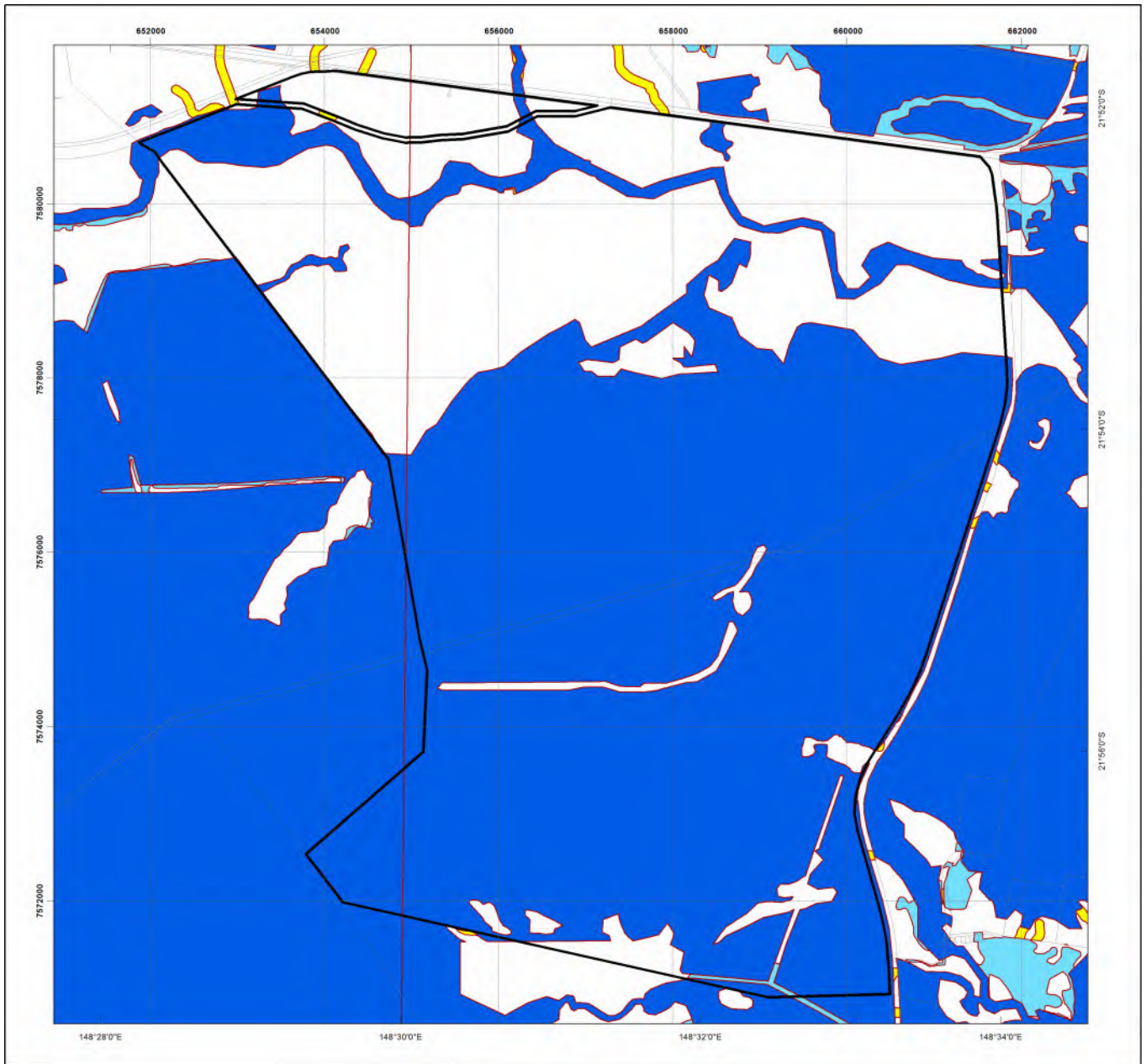
The coastal/non-coastal map confirms whether the lot, or which parts of the lot, are considered coastal or non-coastal for the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP).

### **Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture**

The Agricultural Land Class map confirms the location and extent of land mapped as Agricultural Land Classes A or B as identified on the State Planning Interactive Mapping System. Please note that this map does not include areas identified as Agricultural Land Class A or B in local government planning schemes. This map can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code.



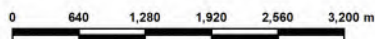
# 4.1 Regulated vegetation management map



## Regulated Vegetation Management Map

### Legend

- Selected Lot and Plan
- Category A area (Vegetation offsets/compliance notices/VDecs)
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watercourse vegetation)
- Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
- Water
- Other land parcel boundaries



This product is projected into:  
GDA 1994 MGA Zone 55

### Disclaimer:

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Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

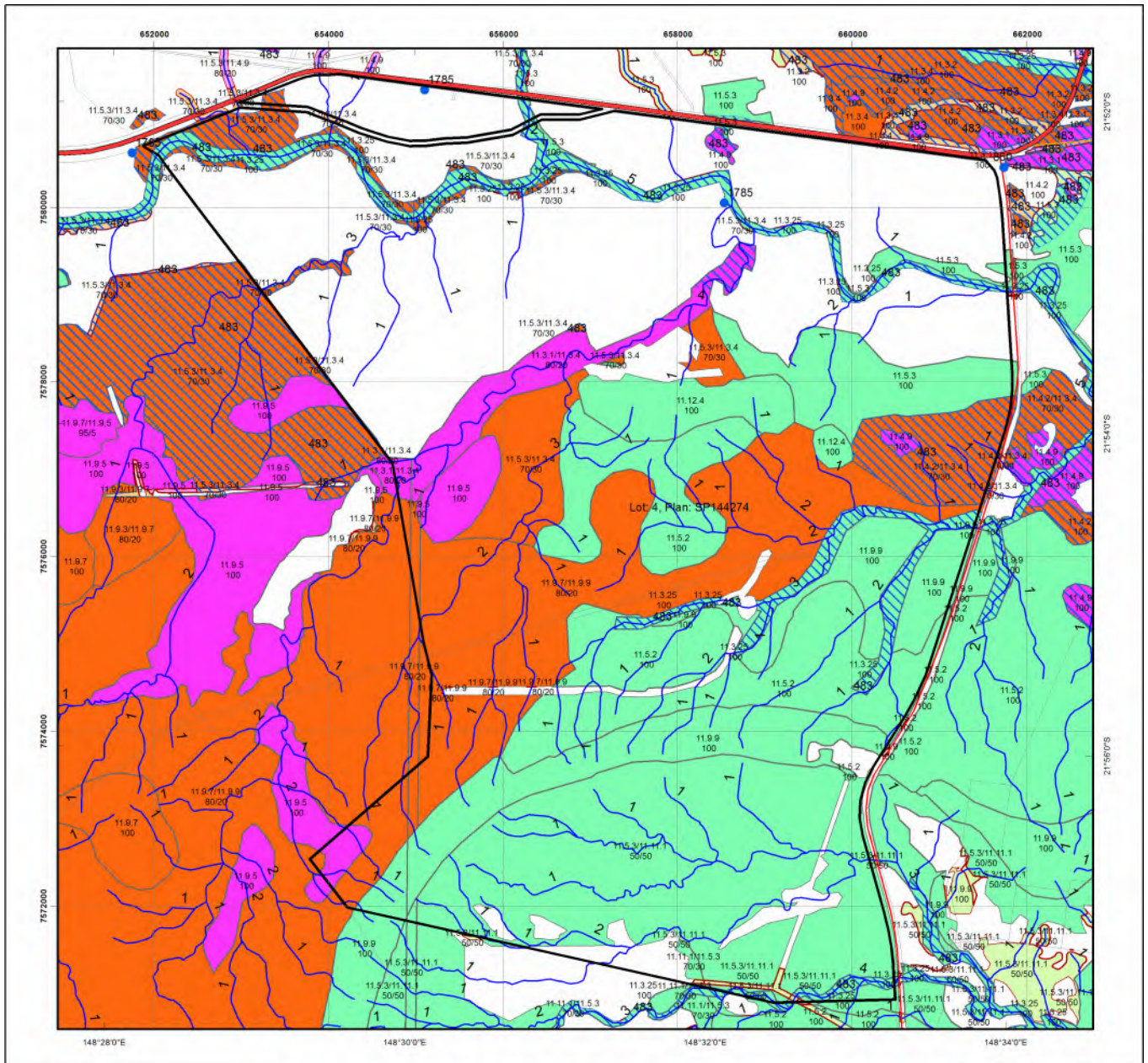
Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.



## 4.2 Vegetation management supporting map



### Vegetation Management Supporting Map

#### Legend

- Selected Lot and Plan
- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries



0 460 920 1,380 1,840 2,300 m

This product is projected into:  
GDA 1994 MGA Zone 55

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

#### Disclaimer:

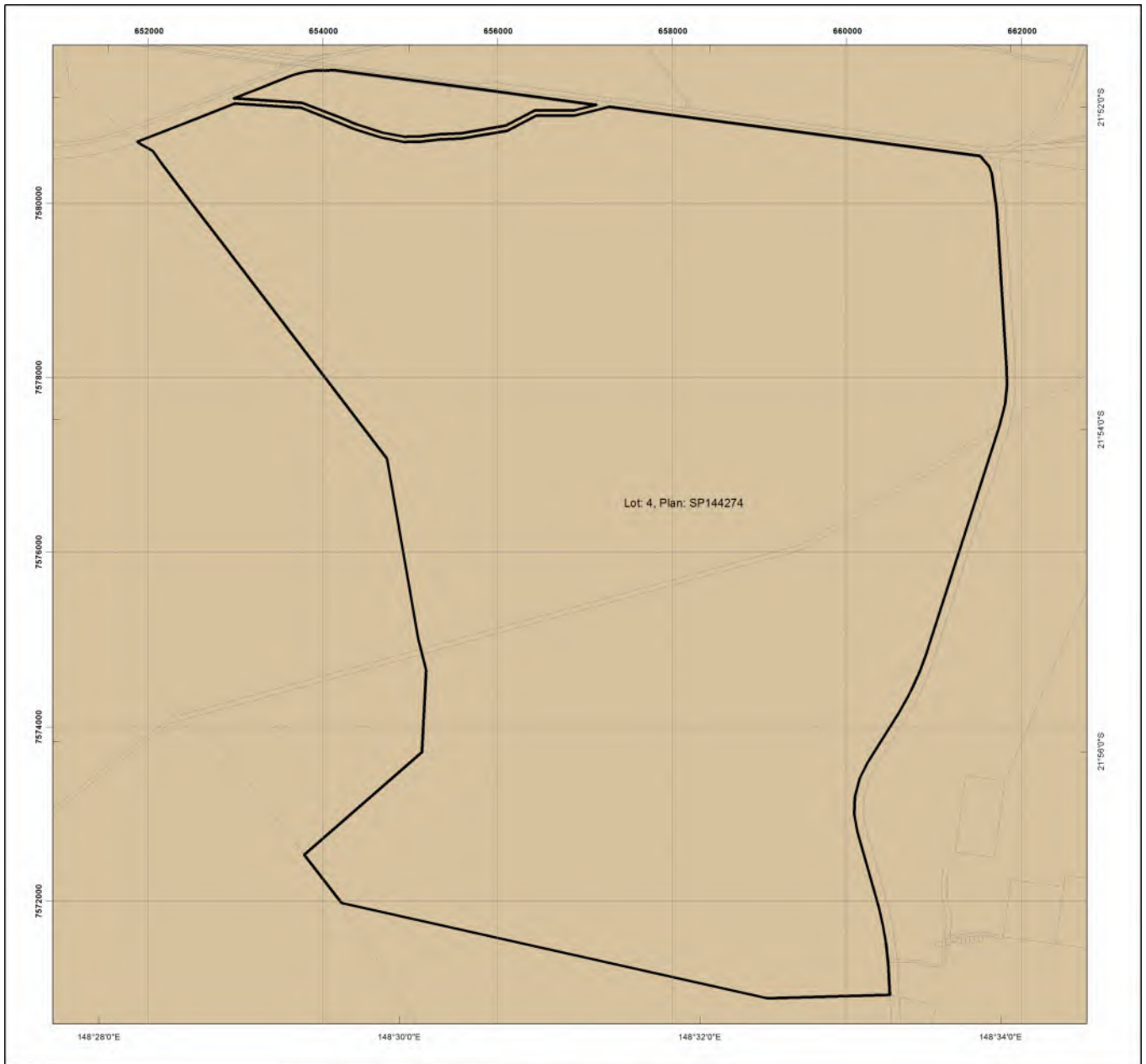
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Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>





Land parcel boundaries are provided as locational aid only.

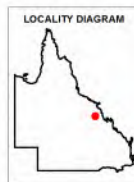
# 4.3 Coastal/non-coastal map



## Coastal/Non Coastal Map

### Legend

-  Selected Lot and Plan
-  Coastal
-  Non Coastal
-  Other land parcel boundaries



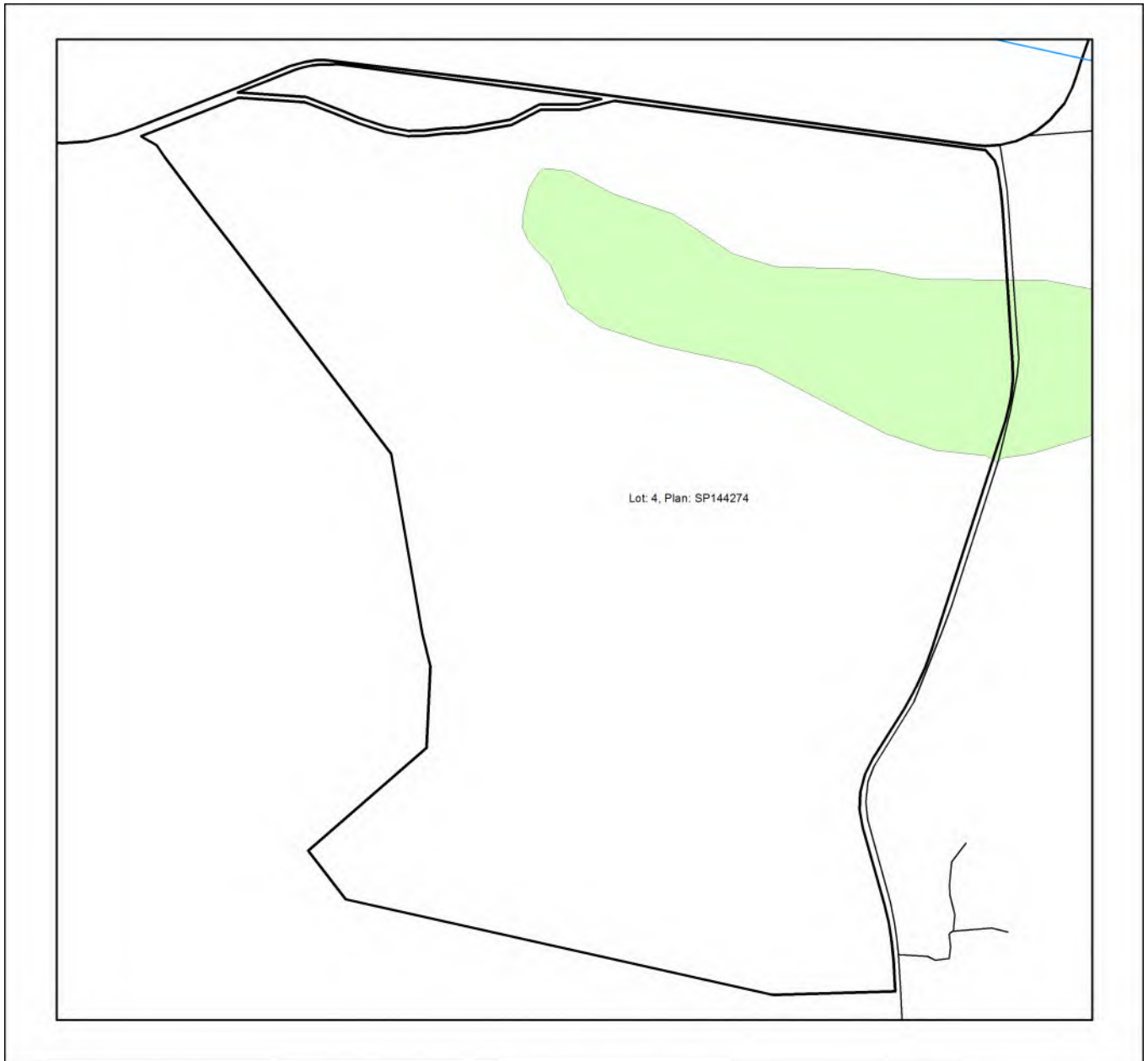
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








# 4.4 Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture



## Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture

### Legend

-  Selected Lot and Plan
-  Towns
-  Rivers and creeks
-  Freeways / motorways; Highways
-  Secondary roads; Streets
- Agricultural land class A or B
-  A
-  B
-  Not class A or B



This product is projected into GDA 1994 MGA Zone 55

#### Disclaimer

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## 5. Protected plants framework (administered by the Department of Environment and Science (DES))

In Queensland, all plants that are native to Australia are protected plants under the [Nature Conservation Act 1992](#) (NCA). The NCA regulates the clearing of protected plants 'in the wild' (see [Operational policy: When a protected plant in Queensland is considered to be 'in the wild'](#)) that are listed as critically endangered, endangered, vulnerable or near threatened under the Act.

Please note that the protected plant clearing framework applies irrespective of the classification of the vegetation under the *Vegetation Management Act 1999* and any approval or exemptions given under another Act, for example, the *Vegetation Management Act 1999* or *Planning Regulation 2017*.

### 5.1 Clearing in high risk areas on the flora survey trigger map

The flora survey trigger map identifies high-risk areas for threatened and near threatened plants. These are areas where threatened or near threatened plants are known to exist or are likely to exist based on the habitat present. The flora survey trigger map for this property is provided in section 5.5.

If you are proposing to clear an area shown as high risk on the flora survey trigger map, a flora survey of the clearing impact area must be undertaken by a suitably qualified person in accordance with the [Flora survey guidelines](#). The main objective of a flora survey is to locate any threatened or near threatened plants that may be present in the clearing impact area.

If the flora survey identifies that threatened or near threatened plants are not present within the clearing impact area or clearing within 100m of a threatened or near threatened plant can be avoided, the clearing activity is exempt from a permit. An [exempt clearing notification form](#) must be submitted to the Department of Environment and Science, with a copy of the flora survey report, at least one week prior to clearing.

If the flora survey identifies that threatened or near threatened plants are present in, or within 100m of, the area to be cleared, a clearing permit is required before any clearing is undertaken. The flora survey report, as well as an impact management report, must be submitted with the [clearing permit application form](#).

### 5.2 Clearing outside high risk areas on the flora survey trigger map

In an area other than a high risk area, a clearing permit is only required where a person is, or becomes aware that threatened or near threatened plants are present in, or within 100m of, the area to be cleared. You must keep a copy of the flora survey trigger map for the area subject to clearing for five years from the day the clearing starts. If you do not clear within the 12 month period that the flora survey trigger map was printed, you need to print and check a new flora survey trigger map.

### 5.3 Exemptions

Many activities are 'exempt' under the protected plant clearing framework, which means that clearing of native plants that are in the wild can be undertaken for these activities with no need for a flora survey or a protected plant clearing permit. The Information sheet - General exemptions for the take of protected plants provides some of these exemptions.

Some exemptions under the NCA are the same as exempt clearing work (formerly known as exemptions) under the *Vegetation Management Act 1999* (i.e. listed in Schedule 21 of the Planning Regulations 2017) while some are different.

### 5.4 Contact information for DES

For further information on the protected plants framework:

**Phone** 1300 130 372 (and select option four)

**Email** [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

**Visit** <https://www.qld.gov.au/environment/plants-animals/plants/protected-plants>

## 5.5 Protected plants flora survey trigger map

This map included may also be requested individually at: <https://apps.des.qld.gov.au/map-request/flora-survey-trigger/>.

### Updates to the data informing the flora survey trigger map

The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.

### Species information

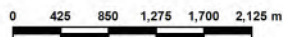
Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the [Queensland Spatial Catalogue](#), the Department of Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the [clearing of protected plants](#) for more information.



### Protected Plants Flora Survey Trigger Map

#### Legend

- Selected Lot and Plan
- High risk area
- Other land parcel boundaries
- Freeways / motorways / highways
- Secondary roads / streets



This product is projected into:  
GDA 1994 MGA Zone 55

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

Land parcel boundaries are provided as locational aid only.

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Science at [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

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## 6. Koala protection framework (administered by the Department of Environment and Science (DES))

The koala (*Phascolarctos cinereus*) is listed in Queensland as endangered by the Queensland Government under *Nature Conservation Act 1992* and by the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999*.

The Queensland Government's koala protection framework is comprised of the *Nature Conservation Act 1992*, the Nature Conservation (Animals) Regulation 2020, the Nature Conservation (Koala) Conservation Plan 2017, the *Planning Act 2016* and the Planning Regulation 2017.

### 6.1 Koala mapping

#### 6.1.1 Koala districts

The parts of Queensland where koalas are known to occur has been divided into three koala districts - koala district A, koala district B and koala district C. Each koala district is made up of areas with comparable koala populations (e.g. density, extent and significance of threatening processes affecting the population) which require similar management regimes.

Section 7.1 identifies which koala district your property is located in.

#### 6.1.2 Koala habitat areas

Koala habitat areas are areas of vegetation that have been determined to contain koala habitat that is essential for the conservation of a viable koala population in the wild based on the combination of habitat suitability and biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water). In order to protect this important koala habitat, clearing controls have been introduced into the Planning Regulation 2017 for development in koala habitat areas.

Please note that koala habitat areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley, Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

There are two different categories of koala habitat area (core koala habitat area and locally refined koala habitat), which have been determined using two different methodologies. These methodologies are described in the document [Spatial modelling in South East Queensland](#).

Section 7.2 shows any koala habitat area that exists on your property.

Under the Nature Conservation (Koala) Conservation Plan 2017, an owner of land (or a person acting on the owner's behalf with written consent) can request to make, amend or revoke a koala habitat area determination if they believe, on reasonable grounds, that the existing determination for all or part of their property is incorrect.

More information on requests to make, amend or revoke a koala habitat area determination can be found in the document [Guideline - Requests to make, amend or revoke a koala habitat area determination](#).

The koala habitat area map will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

Changes to the koala habitat area map which occur between annual updates because of a request to make, amend or revoke a koala habitat area determination can be viewed on the register of approved requests to make, amend or revoke a koala habitat area available at: <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/koalamaps>. The register includes the lot on plan for the change, the date the decision was made and the map issued to the landholder that shows areas determined to be koala habitat areas.

#### 6.1.3 Koala priority areas

Koala priority areas are large, connected areas that have been determined to have the highest likelihood of achieving conservation outcomes for koalas based on the combination of habitat suitability, biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water) and a koala conservation cost benefit analysis.

Conservation efforts will be prioritised in these areas to ensure the conservation of viable koala populations in the wild including a focus on management (e.g. habitat protection, habitat restoration and threat mitigation) and monitoring. This includes a prohibition on clearing in koala habitat areas that are in koala priority areas under the Planning Regulation 2017 (subject to some exemptions).

Please note that koala priority areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley,



Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

Section 7.2 identifies if your property is in a koala priority area.

#### 6.1.4 Identified koala broad-hectare areas

There are seven identified koala broad-hectare areas in SEQ. These are areas of koala habitat that are located in areas committed to meet development targets in the SEQ Regional Plan to accommodate SEQ's growing population including bring-forward Greenfield sites under the Queensland Housing Affordability Strategy and declared master planned areas under the repealed *Sustainable Planning Act 2009* and the repealed *Integrated Planning Act 1997*.

Specific assessment benchmarks apply to development applications for development proposed in identified koala broad-hectare areas to ensure koala conservation measures are incorporated into the proposed development.

Section 7.2 identifies if your property is in an identified koala broad-hectare area.

## 6.2 Koala habitat planning controls

On 7 February 2020, the Queensland Government introduced new planning controls to the Planning Regulation 2017 to strengthen the protection of koala habitat in South East Queensland (i.e. koala district A).

More information on these planning controls can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

As a high-level summary, the koala habitat planning controls make:

- development that involves interfering with koala habitat (defined below) in an area that is both a koala priority area and a koala habitat area, prohibited development (i.e. development for which a development application cannot be made);
- development that involves interfering with koala habitat (defined below) in an area that is a koala habitat area but is not a koala priority area, assessable development (i.e. development for which development approval is required); and
- development that is for extractive industries where the development involves interfering with koala habitat (defined below) in an area that is both a koala habitat area and a key resource area, assessable development (i.e. development for which development approval is required).

**Interfering with koala habitat means:**

- 1) Removing, cutting down, ringbarking, pushing over, poisoning or destroying in anyway, including by burning, flooding or draining native vegetation in a koala habitat area; but
- 2) Does not include destroying standing vegetation by stock or lopping a tree.

However, these planning controls do not apply if the development is exempted development as defined in Schedule 24 of the [Planning Regulation 2017](#). More information on exempted development can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

There are also assessment benchmarks that apply to development applications for:

- building works, operational works, material change of use or reconfiguration of a lot where:
  - the local government planning scheme makes the development assessable;
  - the premises includes an area that is both a koala priority area and a koala habitat area; and
  - the development does not involve interfering with koala habitat (defined above); and
- development in identified koala broad-hectare areas.

The [Guideline - Assessment Benchmarks in relation to Koala Habitat in South East Queensland assessment benchmarks](#) outlines these assessment benchmarks, the intent of these assessment benchmarks and advice on how proposed development may meet these assessment benchmarks.

## 6.3 Koala Conservation Plan clearing requirements

Section 10 and 11 of the [Nature Conservation \(Koala\) Conservation Plan 2017](#) prescribes requirements that must be met when clearing koala habitat in koala district A and koala district B.

These clearing requirements are independent to the koala habitat planning controls introduced into the Planning Regulation 2017, which means they must be complied with irrespective of any approvals or exemptions offered under other legislation.

Unlike the clearing controls prescribed in the Planning Regulation 2017 that are to protect koala habitat, the clearing requirements prescribed in the Nature Conservation (Koala) Conservation Plan 2017 are in place to prevent the injury or death of koalas when koala habitat is being cleared.

## 6.4 Contact information for DES

For further information on the koala protection framework:

**Phone** 13 QGOV (13 74 68)

**Email** [koala.assessment@des.qld.gov.au](mailto:koala.assessment@des.qld.gov.au)

**Visit** <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping>

## 7. Koala protection framework details for Lot: 4 Plan: SP144274

### 7.1 Koala districts

Koala District C

## 7.2 Koala priority area, koala habitat area and identified koala broad-hectare area map

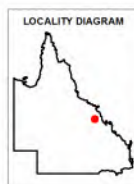


### Koala priority area, koala habitat area and identified koala broad-hectare area map

#### Legend

- Selected Lot and Plan
- Koala habitat area (core)
- Koala habitat area (locally refined)
- Koala priority area
- Identified koala broad-hectare area
- Cadastral Boundaries
- Towns
- Highway
- Connector
- Street/Local Road
- Major rivers/creeks
- Queensland

The koala habitat mapping within South East Queensland uses regional ecosystem line-work compiled at a scale varying from 1:25,000 to 1:100,000. Line-work should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.



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The koala conservation plan maps will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.









In order to ensure that the most recent map for an area of interest can be accessed, prior to the annual update, a register of changes made to koala habitat areas as a result of the map amendment process will be available at:  
<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/>  
 The register will include lot on plan for the change, the date the decision was made and the map issued to the landholder which shows areas determined to be koala habitat areas.

## 7.3 Koala habitat regional ecosystems for core koala habitat areas



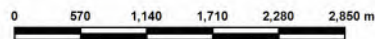
### Koala habitat regional ecosystems for core koala habitat areas

**Legend**

-  Selected Lot and Plan
-  Koala habitat area (core)
-  Towns
-  Highway
-  Connector
-  Street/Local Road
-  Major rivers/creeks
-  Queensland



N



The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.

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## 8. Other relevant legislation contacts list

Activity	Legislation	Agency	Contact details
<ul style="list-style-type: none"> <li>• Interference with overland flow</li> <li>• Earthworks, significant disturbance</li> </ul>	<i>Water Act 2000</i> <i>Soil Conservation Act 1986</i>	Department of Regional Development, Manufacturing and Water (Queensland Government) Department of Resources (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.rdmw.qld.gov.au">www.rdmw.qld.gov.au</a> <a href="http://www.resources.qld.gov.au">www.resources.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Indigenous Cultural Heritage</li> </ul>	<i>Aboriginal Cultural Heritage Act 2003</i> <i>Torres Strait Islander Cultural Heritage Act 2003</i>	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships	Ph: 13 QGOV (13 74 68) <a href="http://www.datsip.qld.gov.au">www.datsip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Mining and environmentally relevant activities</li> <li>• Infrastructure development (coastal)</li> <li>• Heritage issues</li> </ul>	<i>Environmental Protection Act 1994</i> <i>Coastal Protection and Management Act 1995</i> <i>Queensland Heritage Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Protected plants and protected areas</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 1300 130 372 (option 4) <a href="mailto:palm@des.qld.gov.au">palm@des.qld.gov.au</a> <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Koala mapping and regulations</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="mailto:Koala.assessment@des.qld.gov.au">Koala.assessment@des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Interference with fish passage in a watercourse, mangroves</li> <li>• Forestry activities on State land tenures</li> </ul>	<i>Fisheries Act 1994</i> <i>Forestry Act 1959</i>	Department of Agriculture and Fisheries (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.daf.qld.gov.au">www.daf.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Matters of National Environmental Significance including listed threatened species and ecological communities</li> </ul>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Department of Agriculture, Water and the Environment (Australian Government)	Ph: 1800 803 772 <a href="http://www.environment.gov.au">www.environment.gov.au</a>
<ul style="list-style-type: none"> <li>• Development and planning processes</li> </ul>	<i>Planning Act 2016</i> <i>State Development and Public Works Organisation Act 1971</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.dsdmip.qld.gov.au">www.dsdmip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Local government requirements</li> </ul>	<i>Local Government Act 2009</i> <i>Planning Act 2016</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) Your relevant local government office
<ul style="list-style-type: none"> <li>• Harvesting timber in the Wet Tropics of Qld World Heritage area</li> </ul>	<i>Wet Tropics World Heritage Protection and Management Act 1993</i>	Wet Tropics Management Authority	Ph: (07) 4241 0500 <a href="http://www.wettropics.gov.au">www.wettropics.gov.au</a>



## **Vegetation management report**

For Lot: 8 Plan: SP155252

31/10/2023

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# Recent changes

## Updated mapping

On September 6 2023, the Department of Environment and Science updated the Protected Plant Flora Survey Trigger Map to include recent species classification changes and Queensland Herbarium scientific updates. The updated map is included in Section 5 of the following report.

Updated vegetation mapping was released on 8 September 2022 and includes the most recent Queensland Herbarium scientific updates to the Regulated Vegetation Management Map, regional ecosystems, wetland, high-value regrowth and essential habitat mapping.

The Department of Environment and Science have also updated their koala protection mapping to align with the Queensland Herbarium scientific updates.

## Overview

Based on the lot on plan details you have supplied, this report provides the following detailed information:

**Property details** - information about the specified Lot on Plan, lot size, local government area, bioregion(s), subregion(s) and catchment(s);

**Vegetation management framework** - an explanation of the application of the framework and contact details for the Department of Resources who administer the framework;

**Vegetation management framework details for the specified Lot on Plan** including:

- the vegetation management categories on the property;
- the vegetation management regional ecosystems on the property;
- vegetation management watercourses or drainage features on the property;
- vegetation management wetlands on the property;
- vegetation management essential habitat on the property;
- whether any area management plans are associated with the property;
- whether the property is coastal or non-coastal; and
- whether the property is mapped as Agricultural Land Class A or B;

**Protected plant framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework, including:

- high risk areas on the protected plant flora survey trigger map for the property;

**Koala protection framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework; and

**Koala protection framework details for the specified Lot on Plan** including:

- the koala district the property is located in;
- koala priority areas on the property;
- core and locally refined koala habitat areas on the property;
- whether the lot is located in an identified koala broad-hectare area; and
- koala habitat regional ecosystems on the property for core koala habitat areas.

This information will assist you to determine your options for managing vegetation under:

- the vegetation management framework, which may include:

- exempt clearing work;
- accepted development vegetation clearing code;
- an area management plan;
- a development approval;

- the protected plant framework, which may include:

- the need to undertake a flora survey;
- exempt clearing;
- a protected plant clearing permit;

- the koala protection framework, which may include:

- exempted development;



- a development approval;
- the need to undertake clearing sequentially and in the presence of a koala spotter.

## Other laws

The clearing of native vegetation is regulated by both Queensland and Australian legislation, and some local governments also regulate native vegetation clearing. You may need to obtain an approval or permit under another Act, such as the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Section 8 of this guide provides contact details of other agencies you should confirm requirements with, before commencing vegetation clearing.

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# 1. Property details

## 1.1 Tenure and title area

All of the lot, plan, tenure and title area information associated with property Lot: 8 Plan: SP155252, are listed in Table 1.

**Table 1: Lot, plan, tenure and title area information for the property**

Lot	Plan	Tenure	Property title area (sq metres)
8	SP155252	Freehold	111,087,645
K	SP266885	Easement	240,000
B	SP132683	Easement	207,900
J	SP266885	Easement	20,910
A	SP132683	Easement	35,400
C	SP145152	Easement	42,180
D	SP155252	Easement	38,290

The tenure of the land may affect whether clearing is considered exempt clearing work or may be carried out under an accepted development vegetation clearing code.

**Does this property have a freehold tenure and is in the Wet Tropics of Queensland World Heritage Area?**

No, this property is not located in the Wet Tropics of Queensland World Heritage Area.

## 1.2 Property location

Table 2 provides a summary of the locations for property Lot: 8 Plan: SP155252, in relation to natural and administrative boundaries.

**Table 2: Property location details**

Local Government(s)
Isaac Regional

Bioregion(s)	Subregion(s)
Brigalow Belt	Northern Bowen Basin

Catchment(s)
Fitzroy

## 2. Vegetation management framework (administered by the Department of Resources)

The *Vegetation Management Act 1999* (VMA), the *Vegetation Management Regulation 2012*, the *Planning Act 2016* and the *Planning Regulation 2017*, in conjunction with associated policies and codes, form the Vegetation Management Framework.

The VMA does not apply to all land tenures or vegetation types. State forests, national parks, forest reserves and some tenures under the *Forestry Act 1959* and *Nature Conservation Act 1992* are not regulated by the VMA. Managing or clearing vegetation on these tenures may require approvals under these laws.

The following native vegetation is not regulated under the VMA but may require permit(s) under other laws:

- grass or non-woody herbage;
- a plant within a grassland regional ecosystem prescribed under Schedule 5 of the *Vegetation Management Regulation 2012*; and
- a mangrove.

### 2.1 Exempt clearing work

Exempt clearing work is an activity for which you do not need to notify the Department of Resources or obtain an approval under the vegetation management framework. Exempt clearing work was previously known as exemptions.

In areas that are mapped as Category X (white in colour) on the regulated vegetation management map (see section 4.1), and where the land tenure is freehold, indigenous land and leasehold land for agriculture and grazing purposes, the clearing of vegetation is considered exempt clearing work and does not require notification or development approval under the vegetation management framework. For all other land tenures, contact the Department of Resources before commencing clearing to ensure that the proposed activity is exempt clearing work.

A range of routine property management activities are considered exempt clearing work. A list of exempt clearing work is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/exemptions>.

Exempt clearing work may be affected if the proposed clearing area is subject to development approval conditions, a covenant, an environmental offset, an exchange area, a restoration notice, or an area mapped as Category A. Exempt clearing work may require approval under other Commonwealth, State or Local Government laws, or local government planning schemes. Contact the Department of Resources prior to clearing in any of these areas.

### 2.2 Accepted development vegetation clearing codes

Some clearing activities can be undertaken under an accepted development vegetation clearing code. The codes can be downloaded at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/codes>

If you intend to clear vegetation under an accepted development vegetation clearing code, you must notify the Department of Resources before commencing. The information in this report will assist you to complete the online notification form.

You can complete the online form at

<https://apps.dnrm.qld.gov.au/vegetation/>

## 2.3 Area management plans

Area Management Plans (AMP) provide an alternative approval system for vegetation clearing under the vegetation management framework. They list the purposes and clearing conditions that have been approved for the areas covered by the plan. It is not necessary to use an AMP, even when an AMP applies to your property.

On 8 March 2020, AMPs ended for fodder harvesting, managing thickened vegetation and managing encroachment. New notifications cannot be made for these AMPs. You will need to consider options for fodder harvesting, managing thickened vegetation or encroachment under a relevant accepted development vegetation clearing code or apply for a development approval.

New notifications can be made for all other AMPs. These will continue to apply until their nominated end date.

If an Area Management Plan applies to your property for which you can make a new notification, it will be listed in Section 3.6 of this report. Before clearing under one of these AMPs, you must first notify the Department of Resources and then follow the conditions and requirements listed in the AMP.

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/area-management-plans>

## 2.4 Development approvals

If under the vegetation management framework your proposed clearing is not exempt clearing work, or is not permitted under an accepted development vegetation clearing code, or an AMP, you may be able to apply for a development approval.

Information on how to apply for a development approval is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/development>

## 2.5. Contact information for the Department of Resources

For further information on the vegetation management framework:

**Phone** 135VEG (135 834)

**Email** [vegetation@resources.qld.gov.au](mailto:vegetation@resources.qld.gov.au)

**Visit** <https://www.resources.qld.gov.au/?contact=vegetation> to submit an online enquiry.

### 3. Vegetation management framework for Lot: 8 Plan: SP155252

#### 3.1 Vegetation categories

The vegetation categories on your property are shown on the regulated vegetation management map in section 4.1 of this report. A summary of vegetation categories on the subject lot are listed in Table 3. Descriptions for these categories are shown in Table 4.

**Table 3: Vegetation categories for subject property. Total area: 11052.02ha**

Vegetation category	Area (ha)
Category B	5676.3
Category C	579.5
Category R	489.4
Category X	4306.9

**Table 4: Description of vegetation categories**

Category	Colour on Map	Description	Requirements / options under the vegetation management framework
A	red	Compliance areas, environmental offset areas and voluntary declaration areas	Special conditions apply to Category A areas. Before clearing, contact the Department of Resources to confirm any requirements in a Category A area.
B	dark blue	Remnant vegetation areas	Exempt clearing work, or notification and compliance with accepted development vegetation clearing codes, area management plans or development approval.
C	light blue	High-value regrowth areas	Exempt clearing work, or notification and compliance with managing Category C regrowth vegetation accepted development vegetation clearing code.
R	yellow	Regrowth within 50m of a watercourse or drainage feature in the Great Barrier Reef catchment areas	Exempt clearing work, or notification and compliance with managing Category R regrowth accepted development vegetation clearing code or area management plans.
X	white	Clearing on freehold land, indigenous land and leasehold land for agriculture and grazing purposes is considered exempt clearing work under the vegetation management framework. Contact the Department of Resources to clarify whether a development approval is required for other State land tenures.	No permit or notification required on freehold land, indigenous land and leasehold land for agriculture and grazing. A development approval may be required for some State land tenures.

#### Property Map of Assessable Vegetation (PMAV)

The following Property Map of Assessable Vegetation (PMAVs) may be present on this property:

**Reference number**

2012/004643

2006/001772



## 3.2 Regional ecosystems

The endangered, of concern and least concern regional ecosystems on your property are shown on the vegetation management supporting map in section 4.2 and are listed in Table 5.

A description of regional ecosystems can be accessed online at

<https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/descriptions/>

**Table 5: Regional ecosystems present on subject property**

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
11.10.1	Least concern	B	319.60	Corymbia citriodora woodland on coarse-grained sedimentary rocks	Sparse
11.10.1	Least concern	C	5.53	Corymbia citriodora woodland on coarse-grained sedimentary rocks	Sparse
11.10.1	Least concern	R	11.67	Corymbia citriodora woodland on coarse-grained sedimentary rocks	Sparse
11.12.2	Least concern	B	7.94	Eucalyptus melanophloia woodland on igneous rocks	Sparse
11.12.4	Least concern	B	10.64	Semi-evergreen vine thicket and microphyll vine forest on igneous rocks	Dense
11.12.4	Least concern	C	0.67	Semi-evergreen vine thicket and microphyll vine forest on igneous rocks	Dense
11.12.4	Least concern	R	2.07	Semi-evergreen vine thicket and microphyll vine forest on igneous rocks	Dense
11.3.1	Endangered	B	25.53	Acacia harpophylla and/or Casuarina cristata open forest on alluvial plains	Mid-dense
11.3.1	Endangered	C	7.74	Acacia harpophylla and/or Casuarina cristata open forest on alluvial plains	Mid-dense
11.3.1	Endangered	R	32.93	Acacia harpophylla and/or Casuarina cristata open forest on alluvial plains	Mid-dense
11.3.2	Of concern	B	403.12	Eucalyptus populnea woodland on alluvial plains	Sparse
11.3.2	Of concern	C	61.43	Eucalyptus populnea woodland on alluvial plains	Sparse
11.3.2	Of concern	R	5.22	Eucalyptus populnea woodland on alluvial plains	Sparse
11.3.25	Least concern	B	422.32	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.25	Least concern	C	4.46	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.25	Least concern	R	8.96	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.27	Least concern	B	12.42	Freshwater wetlands	Other
11.3.4	Of concern	B	707.47	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.3.4	Of concern	C	98.38	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.3.4	Of concern	R	5.89	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse



Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
11.4.2	Of concern	B	70.34	Eucalyptus spp. and/or Corymbia spp. grassy or shrubby woodland on Cainozoic clay plains	Sparse
11.4.2	Of concern	C	17.80	Eucalyptus spp. and/or Corymbia spp. grassy or shrubby woodland on Cainozoic clay plains	Sparse
11.4.9	Endangered	B	389.78	Acacia harpophylla shrubby woodland with Terminalia oblongata on Cainozoic clay plains	Sparse
11.4.9	Endangered	C	32.67	Acacia harpophylla shrubby woodland with Terminalia oblongata on Cainozoic clay plains	Sparse
11.4.9	Endangered	R	50.90	Acacia harpophylla shrubby woodland with Terminalia oblongata on Cainozoic clay plains	Sparse
11.5.3	Least concern	B	2,402.37	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.5.3	Least concern	C	22.62	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.5.3	Least concern	R	29.11	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.7.2	Least concern	B	29.17	Acacia spp. woodland on Cainozoic lateritic duricrust. Scarp retreat zone	Sparse
11.8.11	Of concern	B	91.92	Dichanthium sericeum grassland on Cainozoic igneous rocks	Grassland Sch 4
11.8.11	Of concern	C	19.26	Dichanthium sericeum grassland on Cainozoic igneous rocks	Grassland Sch 4
11.8.11	Of concern	R	23.85	Dichanthium sericeum grassland on Cainozoic igneous rocks	Grassland Sch 4
11.8.5	Least concern	B	214.25	Eucalyptus orgadophila open woodland on Cainozoic igneous rocks	Very sparse
11.8.5	Least concern	C	53.37	Eucalyptus orgadophila open woodland on Cainozoic igneous rocks	Very sparse
11.8.5	Least concern	R	61.38	Eucalyptus orgadophila open woodland on Cainozoic igneous rocks	Very sparse
11.9.1	Endangered	B	71.04	Acacia harpophylla-Eucalyptus cambageana woodland to open forest on fine-grained sedimentary rocks	Mid-dense
11.9.1	Endangered	C	22.01	Acacia harpophylla-Eucalyptus cambageana woodland to open forest on fine-grained sedimentary rocks	Mid-dense
11.9.1	Endangered	R	137.88	Acacia harpophylla-Eucalyptus cambageana woodland to open forest on fine-grained sedimentary rocks	Mid-dense
11.9.2	Least concern	B	163.54	Eucalyptus melanophloia +/- E. orgadophila woodland to open woodland on fine-grained sedimentary rocks	Sparse

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
11.9.2	Least concern	C	214.54	Eucalyptus melanophloia +/- E. orgadophila woodland to open woodland on fine-grained sedimentary rocks	Sparse
11.9.2	Least concern	R	39.85	Eucalyptus melanophloia +/- E. orgadophila woodland to open woodland on fine-grained sedimentary rocks	Sparse
11.9.5	Endangered	B	31.20	Acacia harpophylla and/or Casuarina cristata open forest to woodland on fine-grained sedimentary rocks	Mid-dense
11.9.5	Endangered	C	0.25	Acacia harpophylla and/or Casuarina cristata open forest to woodland on fine-grained sedimentary rocks	Mid-dense
11.9.5	Endangered	R	9.20	Acacia harpophylla and/or Casuarina cristata open forest to woodland on fine-grained sedimentary rocks	Mid-dense
11.9.9	Least concern	B	303.64	Eucalyptus crebra woodland on fine-grained sedimentary rocks	Sparse
11.9.9	Least concern	C	18.77	Eucalyptus crebra woodland on fine-grained sedimentary rocks	Sparse
11.9.9	Least concern	R	70.45	Eucalyptus crebra woodland on fine-grained sedimentary rocks	Sparse
non-rem	None	X	4,306.85	None	None

Please note:

1. All area and area derived figures included in this table have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.
2. If Table 5 contains a Category 'plant', please be aware that this refers to 'plantations' such as forestry, and these areas are considered non-remnant under the VMA.

The VMA status of the regional ecosystem (whether it is endangered, of concern or least concern) also determines if any of the following are applicable:

- exempt clearing work;
- accepted development vegetation clearing codes;
- performance outcomes in State Code 16 of the State Development Assessment Provisions (SDAP).

### 3.3 Watercourses

Vegetation management watercourses and drainage features for this property are shown on the vegetation management supporting map in section 4.2.

### 3.4 Wetlands

Vegetation management wetlands are present on this property and are shown on the vegetation management supporting map in section 4.2 of this report.

### 3.5 Essential habitat

Under the VMA, essential habitat for protected wildlife is native wildlife prescribed under the *Nature Conservation Act 1992* (NCA) as critically endangered, endangered, vulnerable or near-threatened wildlife.

Essential habitat for protected wildlife includes suitable habitat on the lot, or where a species has been known to occur up to 1.1 kilometres from a lot on which there is assessable vegetation. These important habitat areas are protected under the VMA.

Any essential habitat on this property will be shown as blue hatching on the vegetation supporting map in section 4.2.

If essential habitat is identified on the lot, information about the protected wildlife species is provided in Table 6 below. The numeric labels on the vegetation management supporting map can be cross referenced with Table 6 to outline the essential habitat factors for that particular species. There may be essential habitat for more than one species on each lot, and areas of Category A, Category B and Category C can be mapped as Essential Habitat.

Essential habitat is compiled from a combination of species habitat models and buffered species records. Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated. Essential habitat, for protected wildlife, means an area of vegetation shown on the Regulated Vegetation Management Map -

- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database. Essential habitat factors are comprised of - regional ecosystem (mandatory for most species), vegetation community, altitude, soils, position in landscape; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

If there is no essential habitat mapping shown on the vegetation management supporting map for this lot, and there is no table in the sections below, it confirms that there is no essential habitat on the lot.

### Category A and/or Category B and/or Category C

**Table 6: Essential habitat in Category A and/or Category B and/or Category C**

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
483	Denisonia maculata	ornamental snake	V	Riparian woodland/open forest and shrub/woodland including Brigalow Acacia harpophylla; into drier habitats in summer.	100-450m.	Cracking clay with gilgai/soil crack microrelief and sandy loam substrates.	Near freshwater waterholes/creeks and low lying poorly drained areas that are frequently inundated by freshwater.
860	Phascolarctos cinereus	koala	E	Open forests and woodlands containing Eucalyptus, Corymbia, Lophostemon or Melaleuca trees having a trunk of a diameter of more than 10cm at 1.3m above the ground. Tree species used for food and habitat varies across the state and can include: Corymbia citriodora, Corymbia henryi, Corymbia intermedia, Eucalyptus acmenoides, Eucalyptus bancroftii, Eucalyptus biturbinata, Eucalyptus blakelyi, Eucalyptus brownii, Eucalyptus camaldulensis, Eucalyptus carnea, Eucalyptus chloroclada, Eucalyptus coolabah, Eucalyptus crebra, Eucalyptus dealbata, Eucalyptus drepanophylla, Eucalyptus dunnii, Eucalyptus eugenioides, Eucalyptus exserta, Eucalyptus fibrosa, Eucalyptus grandis, Eucalyptus helidonica, Eucalyptus latisinensis, Eucalyptus longirostrata, Eucalyptus major, Eucalyptus melanophloia, Eucalyptus melliodora, Eucalyptus microcarpa, Eucalyptus microcorys, Eucalyptus microtheca, Eucalyptus moluccana, Eucalyptus montivaga, Eucalyptus orgadophila, Eucalyptus papuana, Eucalyptus pilularis, Eucalyptus platyphylla, Eucalyptus populnea, Eucalyptus portuensis, Eucalyptus propinqua, Eucalyptus racemosa, Eucalyptus resinifera, Eucalyptus robusta, Eucalyptus saligna, Eucalyptus seeana, Eucalyptus siderophloia, Eucalyptus sideroxydon, Eucalyptus tereticornis, Eucalyptus thozetiana, Eucalyptus tindaliae, Eucalyptus umbra, Lophostemon confertus, Melaleuca leucadendra, Melaleuca quinquenervia.	Sea level to 1000m.	None	Riparian areas, plains and hill/escarpment slopes.

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
1785	Geophaps scripta scripta	squatter pigeon (southern subspecies)	V	Dry eucalypt woodland (including poplar box, spotted gum, yellow box, acacia and callitris), with sparse short grass, often on sandy areas near to permanent water; grassy eucalypt woodlands. Nest on ground near or under grass tussock, log or low bush.	None	None	Gravelly ridges, traprock and river flats.
2455	Petauroides armillatus	central greater glider	E	Tall mature open wet and dry eucalypt forest (Eucalyptus &/or Corymbia spp.) to low open eucalypt woodland; presence of hollow-bearing trees.	Sea level to 1300m.	Usually on soils of relatively high fertility.	None

Label	Regional Ecosystem (mandatory unless otherwise specified)
483	10.3.2, 10.3.3, 10.3.4, 10.3.7, 10.3.13, 10.3.14, 10.3.15, 10.3.16, 10.3.27, 10.3.30, 10.3.31, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.4.8, 10.5.5, 10.9.1, 10.9.6, 10.9.7, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.9, 11.3.10, 11.3.12, 11.3.15, 11.3.21, 11.3.23, 11.3.24, 11.3.25, 11.3.27, 11.3.28, 11.3.31, 11.3.34, 11.3.37, 11.3.38, 11.3.40, 11.4.2, 11.4.3, 11.4.4, 11.4.6, 11.4.7, 11.4.8, 11.4.9, 11.4.11, 11.5.2, 11.5.3, 11.5.16, 11.8.11, 11.9.1, 11.9.2, 11.9.3, 11.9.5, 11.9.7, 11.9.11, 11.9.12, 11.9.14, 11.11.15, 11.12.6
860	4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.8, 4.3.10, 4.3.11, 4.5.3, 4.5.5, 4.5.6, 4.5.8, 4.5.9, 4.7.1, 4.7.7, 4.7.8, 4.9.6, 4.9.10, 4.9.12, 4.9.17, 6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.7, 6.3.8, 6.3.9, 6.3.11, 6.3.12, 6.3.17, 6.3.16, 6.3.22, 6.3.24, 6.3.25, 6.4.1, 6.4.2, 6.4.3, 6.4.4, 6.5.1, 6.5.2, 6.5.3, 6.5.5, 6.5.6, 6.5.7, 6.5.8, 6.5.9, 6.5.10, 6.5.11, 6.5.13, 6.5.14, 6.5.15, 6.5.16, 6.5.17, 6.5.18, 6.5.19, 6.6.2, 6.7.1, 6.7.2, 6.7.5, 6.7.6, 6.7.7, 6.7.9, 6.7.11, 6.7.12, 6.7.13, 6.7.14, 6.7.17, 6.9.3, 7.2.3, 7.2.4, 7.2.7, 7.2.11, 7.3.7, 7.3.8, 7.3.9, 7.3.12, 7.3.13, 7.3.14, 7.3.16, 7.3.19, 7.3.20, 7.3.21, 7.3.25, 7.3.26, 7.3.39, 7.3.40, 7.3.42, 7.3.43, 7.3.44, 7.3.45, 7.3.47, 7.3.48, 7.3.50, 7.5.1, 7.5.2, 7.5.3, 7.5.4, 7.8.7, 7.8.8, 7.8.10, 7.8.15, 7.8.16, 7.8.17, 7.8.18, 7.8.19, 7.11.5, 7.11.6, 7.11.13, 7.11.14, 7.11.16, 7.11.18, 7.11.19, 7.11.20, 7.11.21, 7.11.31, 7.11.32, 7.11.33, 7.11.34, 7.11.35, 7.11.37, 7.11.41, 7.11.42, 7.11.43, 7.11.44, 7.11.45, 7.11.46, 7.11.47, 7.11.48, 7.11.49, 7.11.50, 7.11.51, 7.12.4, 7.12.5, 7.12.17, 7.12.21, 7.12.22, 7.12.23, 7.12.24, 7.12.25, 7.12.26, 7.12.27, 7.12.28, 7.12.29, 7.12.30, 7.12.33, 7.12.34, 7.12.35, 7.12.51, 7.12.52, 7.12.53, 7.12.54, 7.12.55, 7.12.56, 7.12.57, 7.12.58, 7.12.59, 7.12.60, 7.12.61, 7.12.62, 7.12.63, 7.12.65, 7.12.66, 7.12.69, 8.1.5, 8.2.3, 8.2.6, 8.2.7, 8.2.8, 8.2.11, 8.2.12, 8.2.13, 8.2.14, 8.3.1, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.8, 8.3.10, 8.3.11, 8.3.13, 8.5.1, 8.5.2, 8.5.3, 8.5.5, 8.5.6, 8.5.7, 8.9.1, 8.10.1, 8.11.1, 8.11.3, 8.11.4, 8.11.5, 8.11.6, 8.11.8, 8.11.10, 8.11.12, 8.12.4, 8.12.5, 8.12.6, 8.12.7, 8.12.8, 8.12.9, 8.12.12, 8.12.14, 8.12.20, 8.12.22, 8.12.23, 8.12.25, 8.12.26, 8.12.27, 8.12.29, 8.12.31, 8.12.32, 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.3.6, 9.3.7, 9.3.8, 9.3.10, 9.3.11, 9.3.13, 9.3.14, 9.3.15, 9.3.16, 9.3.17, 9.3.19, 9.3.20, 9.3.21, 9.3.22, 9.3.27, 9.4.1, 9.4.2, 9.5.1, 9.5.3, 9.5.4, 9.5.5, 9.5.6, 9.5.7, 9.5.8, 9.5.9, 9.5.10, 9.5.11, 9.5.12, 9.5.15, 9.5.16, 9.5.17, 9.7.1, 9.7.2, 9.7.3, 9.7.4, 9.7.5, 9.7.6, 9.8.1, 9.8.2, 9.8.3, 9.8.4, 9.8.5, 9.8.9, 9.8.10, 9.8.11, 9.8.13, 9.10.1, 9.10.3, 9.10.4, 9.10.5, 9.10.7, 9.10.8, 9.11.1, 9.11.2, 9.11.3, 9.11.4, 9.11.5, 9.11.7, 9.11.10, 9.11.12, 9.11.13, 9.11.14, 9.11.15, 9.11.16, 9.11.17, 9.11.18, 9.11.19, 9.11.21, 9.11.22, 9.11.23, 9.11.24, 9.11.25, 9.11.26, 9.11.28, 9.11.29, 9.11.30, 9.11.31, 9.11.32, 9.12.1, 9.12.2, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7, 9.12.10, 9.12.11, 9.12.12, 9.12.13, 9.12.14, 9.12.15, 9.12.16, 9.12.17, 9.12.18, 9.12.19, 9.12.20, 9.12.21, 9.12.22, 9.12.23, 9.12.24, 9.12.25, 9.12.26, 9.12.27, 9.12.28, 9.12.29, 9.12.30, 9.12.31, 9.12.32, 9.12.33, 9.12.35, 9.12.36, 9.12.37, 9.12.38, 9.12.39, 9.12.44, 10.3.2, 10.3.3, 10.3.5, 10.3.6, 10.3.9, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.17, 10.3.20, 10.3.27, 10.3.28, 10.4.3, 10.4.9, 10.5.1, 10.5.2, 10.5.4, 10.5.5, 10.5.7, 10.5.8, 10.5.9, 10.5.10, 10.5.11, 10.5.12, 10.7.1, 10.7.2, 10.7.3, 10.7.4, 10.7.5, 10.7.9, 10.7.10, 10.7.11, 10.7.12, 10.9.2, 10.9.3, 10.9.5, 10.10.1, 10.10.3, 10.10.4, 10.10.5, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.5, 11.3.6, 11.3.7, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.21, 11.3.23, 11.3.25, 11.3.26, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.32, 11.3.33, 11.3.35, 11.3.36, 11.3.37, 11.3.38, 11.3.39, 11.4.2, 11.4.3, 11.4.7, 11.4.8, 11.4.9, 11.4.10, 11.4.12, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.7, 11.5.8, 11.5.9, 11.5.12, 11.5.13, 11.5.14, 11.5.17, 11.5.18, 11.5.20, 11.5.21, 11.7.1, 11.7.2, 11.7.3, 11.7.4, 11.7.6, 11.7.7, 11.8.1, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.1, 11.9.2, 11.9.3, 11.9.5, 11.9.6, 11.9.7, 11.9.9, 11.9.10, 11.9.11, 11.9.13, 11.9.14, 11.10.1, 11.10.2, 11.10.3, 11.10.4, 11.10.5, 11.10.6, 11.10.7, 11.10.9, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.2, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.2, 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12.11.28, 12.12.2, 12.12.3, 12.12.4, 12.12.5, 12.12.6, 12.12.7, 12.12.8, 12.12.9, 12.12.11, 12.12.12, 12.12.14, 12.12.15, 12.12.23, 12.12.24, 12.12.25, 12.12.28, 13.3.1, 13.3.2, 13.3.3, 13.3.4, 13.3.5, 13.3.7, 13.9.2, 13.11.1, 13.11.2, 13.11.3, 13.11.4, 13.11.5, 13.11.6, 13.11.8, 13.11.9, 13.12.1, 13.12.2, 13.12.3, 13.12.4, 13.12.5, 13.12.6, 13.12.8, 13.12.9, 13.12.10
1785	8.2.1, 8.2.7, 8.2.8, 8.2.12, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.13, 8.5.2, 8.5.3, 8.5.5, 8.5.6, 8.9.1, 8.11.1, 8.11.3, 8.11.4, 8.11.5, 8.11.6, 8.11.8, 8.12.6, 8.12.7, 8.12.9, 8.12.12, 8.12.14, 8.12.20, 8.12.22, 8.12.23, 8.12.25, 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.3.6, 9.3.7, 9.3.8, 9.3.9, 9.3.11, 9.3.13, 9.3.14, 9.3.15, 9.3.16, 9.3.17, 9.3.18, 9.3.19, 9.3.20, 9.3.21, 9.3.22, 9.3.23, 9.4.1, 9.4.2, 9.4.3, 9.5.3, 9.5.4, 9.5.5, 9.5.6, 9.5.7, 9.5.8, 9.5.9, 9.5.10, 9.5.11, 9.5.12, 9.5.16, 9.7.1, 9.7.2, 9.7.3, 9.7.5, 9.7.6, 9.8.1, 9.8.2, 9.8.4, 9.8.5, 9.8.6, 9.8.9, 9.8.10, 9.8.11, 9.10.1, 9.10.3, 9.10.6, 9.10.7, 9.10.8, 9.11.1, 9.11.2, 9.11.3, 9.11.4, 9.11.5, 9.11.7, 9.11.10, 9.11.11, 9.11.12, 9.11.13, 9.11.15, 9.11.16, 9.11.17, 9.11.18, 9.11.19, 9.11.23, 9.11.26, 9.11.28, 9.11.29, 9.11.31, 9.11.32, 9.12.1, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7, 9.12.10, 9.12.11, 9.12.12, 9.12.13, 9.12.16, 9.12.17, 9.12.18, 9.12.19, 9.12.20, 9.12.21, 9.12.22, 9.12.23, 9.12.24, 9.12.26, 9.12.28, 9.12.30, 9.12.31, 9.12.33, 9.12.35, 9.12.37, 9.12.39, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.9, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.19, 10.3.20, 10.3.27, 10.3.28, 10.3.30, 10.3.31, 10.4.3, 10.5.1, 10.5.2, 10.5.4, 10.5.5, 10.5.7, 10.5.8, 10.5.9, 10.5.10, 10.5.11, 10.5.12, 10.7.2, 10.7.3, 10.7.5, 10.7.11, 10.7.12, 10.9.1, 10.9.2, 10.9.3, 10.9.5, 10.10.1, 10.10.3, 10.10.4, 10.10.5, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.7, 11.3.8, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.23, 11.3.25, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.35, 11.3.36, 11.3.37, 11.3.38, 11.3.39, 11.4.2, 11.4.3, 11.4.5, 11.4.8, 11.4.10, 11.4.12, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.8, 11.5.9, 11.5.12, 11.5.13, 11.5.14, 11.5.17, 11.5.20, 11.5.21, 11.7.1, 11.7.2, 11.7.4, 11.7.6, 11.7.7, 11.8.1, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.1, 11.9.2, 11.9.3, 11.9.5, 11.9.6, 11.9.7, 11.9.9, 11.9.10, 11.9.11, 11.9.13, 11.9.14, 11.10.1, 11.10.2, 11.10.3, 11.10.4, 11.10.5, 11.10.6, 11.10.7, 11.10.9, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.2, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.15, 11.11.16, 11.11.19, 11.11.20, 11.12.1, 11.12.2, 11.12.3, 11.12.5, 11.12.6, 11.12.7, 11.12.8, 11.12.9, 11.12.10, 11.12.11, 11.12.12, 11.12.13, 11.12.14, 11.12.17, 11.12.20, 12.2.5, 12.2.6, 12.2.7, 12.2.10, 12.2.11, 12.3.3, 12.3.6, 12.3.10, 12.3.12, 12.3.14, 12.3.16, 12.3.19, 12.5.1, 12.5.2, 12.5.4, 12.5.5, 12.5.7, 12.5.8, 12.5.11, 12.5.12, 12.7.1, 12.7.2, 12.8.14, 12.8.16, 12.8.17, 12.8.19, 12.9-10.5, 12.9-10.7, 12.9-10.8, 12.9-10.12, 12.9-10.13, 12.9-10.25, 12.9-10.26, 12.9-10.28, 12.9-10.29, 12.11.5, 12.11.7, 12.11.8, 12.11.14, 12.11.15, 12.11.20, 12.11.21, 12.11.22, 12.11.24, 12.11.25, 12.11.27, 12.11.28, 12.12.7, 12.12.8, 12.12.9, 12.12.12, 12.12.22, 12.12.23, 13.3.1, 13.3.4, 13.3.7, 13.11.1, 13.11.3, 13.11.4, 13.11.5, 13.11.8, 13.11.9, 13.12.1, 13.12.2, 13.12.3, 13.12.4, 13.12.5, 13.12.6, 13.12.8, 13.12.9, 13.12.10

Label	Regional Ecosystem (mandatory unless otherwise specified)
2455	2.10.2, 2.10.3, 2.5.24, 7.3.19, 7.3.26, 7.3.39, 7.3.40, 7.3.42, 7.3.43, 7.5.2, 7.5.4, 7.8.7, 7.8.8, 7.8.10, 7.8.15, 7.8.16, 7.8.17, 7.8.18, 7.8.19, 7.11.35, 7.12.21, 7.12.22, 7.12.24, 7.12.27, 7.12.29, 7.12.30, 7.12.34, 7.12.35, 7.12.51, 7.12.52, 7.12.53, 7.12.61, 7.12.63, 8.3.2, 8.3.5, 8.3.6, 8.3.8, 8.11.3, 8.11.8, 8.12.4, 8.12.5, 8.12.6, 8.12.7, 8.12.8, 8.12.9, 8.12.12, 8.12.20, 8.12.23, 8.12.31, 8.12.32, 9.3.1, 9.3.3, 9.3.8, 9.3.15, 9.3.16, 9.5.5, 9.7.3, 9.8.1, 9.8.4, 9.8.9, 9.11.2, 9.11.4, 9.11.10, 9.11.14, 9.11.16, 9.12.1, 9.12.2, 9.12.17, 9.12.18, 9.12.19, 9.12.20, 9.12.22, 9.12.23, 9.12.26, 10.3.13, 11.3.3, 11.3.4, 11.3.7, 11.3.9, 11.3.14, 11.3.23, 11.3.25, 11.3.26, 11.3.27, 11.3.29, 11.3.35, 11.3.36, 11.3.38, 11.3.39, 11.4.8, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.8, 11.5.9, 11.5.12, 11.5.20, 11.5.21, 11.7.4, 11.7.6, 11.7.7, 11.8.1, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.9.2, 11.9.9, 11.9.13, 11.10.1, 11.10.2, 11.10.4, 11.10.5, 11.10.7, 11.10.13, 11.11.1, 11.11.3, 11.11.4, 11.11.7, 11.11.10, 11.11.15, 11.12.1, 11.12.2, 11.12.3, 11.12.6, 11.12.13, 12.3.2, 12.3.3, 12.3.6, 12.3.7, 12.3.9, 12.3.11, 12.3.14, 12.3.15, 12.5.1, 12.5.2, 12.5.3, 12.5.4, 12.5.6, 12.5.7, 12.5.11, 12.5.12, 12.8.1, 12.8.8, 12.8.10, 12.8.11, 12.8.14, 12.8.16, 12.8.20, 12.8.24, 12.8.25, 12.9-10.1, 12.9-10.2, 12.9-10.3, 12.9-10.4, 12.9-10.5, 12.9-10.7, 12.9-10.11, 12.9-10.12, 12.9-10.14, 12.9-10.17, 12.9-10.18, 12.9-10.19, 12.9-10.20, 12.9-10.21, 12.9-10.23, 12.9-10.24, 12.9-10.26, 12.9-10.27, 12.11.2, 12.11.3, 12.11.5, 12.11.6, 12.11.7, 12.11.9, 12.11.14, 12.11.15, 12.11.16, 12.11.17, 12.11.18, 12.11.19, 12.11.22, 12.11.23, 12.11.24, 12.11.25, 12.11.26, 12.11.27, 12.12.2, 12.12.3, 12.12.4, 12.12.5, 12.12.6, 12.12.7, 12.12.11, 12.12.12, 12.12.14, 12.12.15, 12.12.20, 12.12.22, 12.12.23, 12.12.24, 12.12.25, 12.12.27, 12.12.28, 13.11.3, 13.11.5, 13.11.6, 13.11.8, 13.12.1, 13.12.2

### 3.6 Area Management Plan(s)

Nil

### 3.7 Coastal or non-coastal

For the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP), this property is regarded as\*

Non Coastal

\*See also Map 4.3

### 3.8 Agricultural Land Class A or B

The following can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code:

**Does this lot contain land that is mapped as Agricultural Land Class A or B in the State Planning Interactive Mapping System?**

Class A (with urban areas masked as per SPP): 1199.7ha

Class B (with urban areas masked as per SPP): 1.35ha

Note - This confirms Agricultural Land Classes as per the State Planning Interactive Mapping System only. This response does not include Agricultural Land Classes identified under local government planning schemes. For further information, check the Planning Scheme for your local government area.

See Map 4.4 to identify the location and extent of Class A and/or Class B Agricultural land on Lot: 8 Plan: SP155252.

## 4. Vegetation management framework maps

Vegetation management maps included in this report may also be requested individually at:

<https://www.resources.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form>

### **Regulated vegetation management map**

The regulated vegetation management map shows vegetation categories needed to determine clearing requirements. These maps are updated monthly to show new [property maps of assessable vegetation \(PMAV\)](#).

### **Vegetation management supporting map**

The vegetation management supporting map provides information on regional ecosystems, wetlands, watercourses and essential habitat.

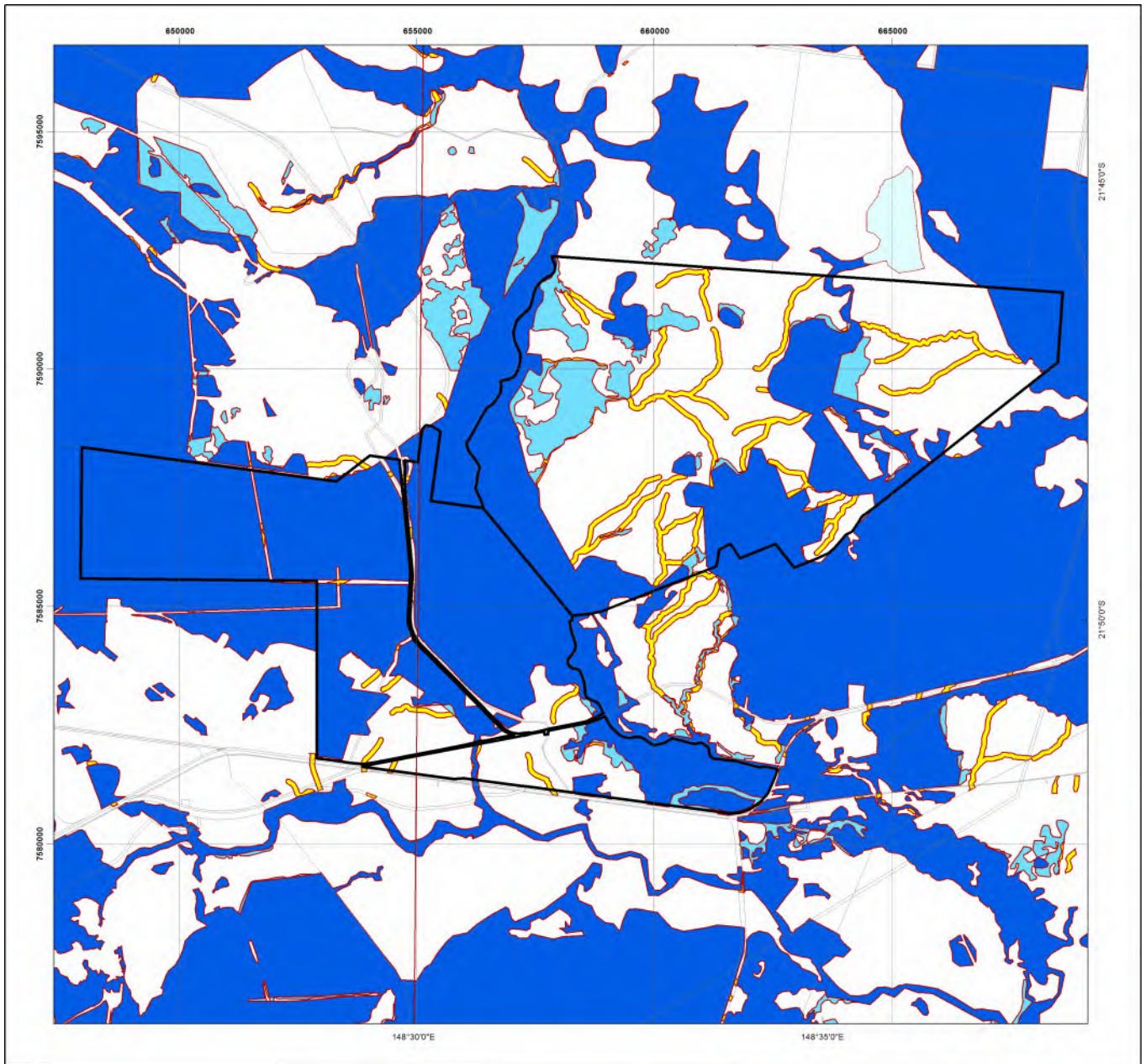
### **Coastal/non-coastal map**

The coastal/non-coastal map confirms whether the lot, or which parts of the lot, are considered coastal or non-coastal for the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP).

### **Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture**









The Agricultural Land Class map confirms the location and extent of land mapped as Agricultural Land Classes A or B as identified on the State Planning Interactive Mapping System. Please note that this map does not include areas identified as Agricultural Land Class A or B in local government planning schemes. This map can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code.

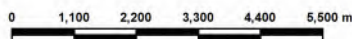
# 4.1 Regulated vegetation management map



## Regulated Vegetation Management Map

### Legend

-  Selected Lot and Plan
-  Category A area (Vegetation offsets/compliance notices/VDecs)
-  Category B area (Remnant vegetation)
-  Category C area (High-value regrowth vegetation)
-  Category R area (Reef regrowth watercourse vegetation)
-  Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
-  Water
-  Other land parcel boundaries



This product is projected into:  
GDA 1994 MGA Zone 55

### Disclaimer:

While every care is taken to ensure the accuracy of this product, the Department of Resources makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

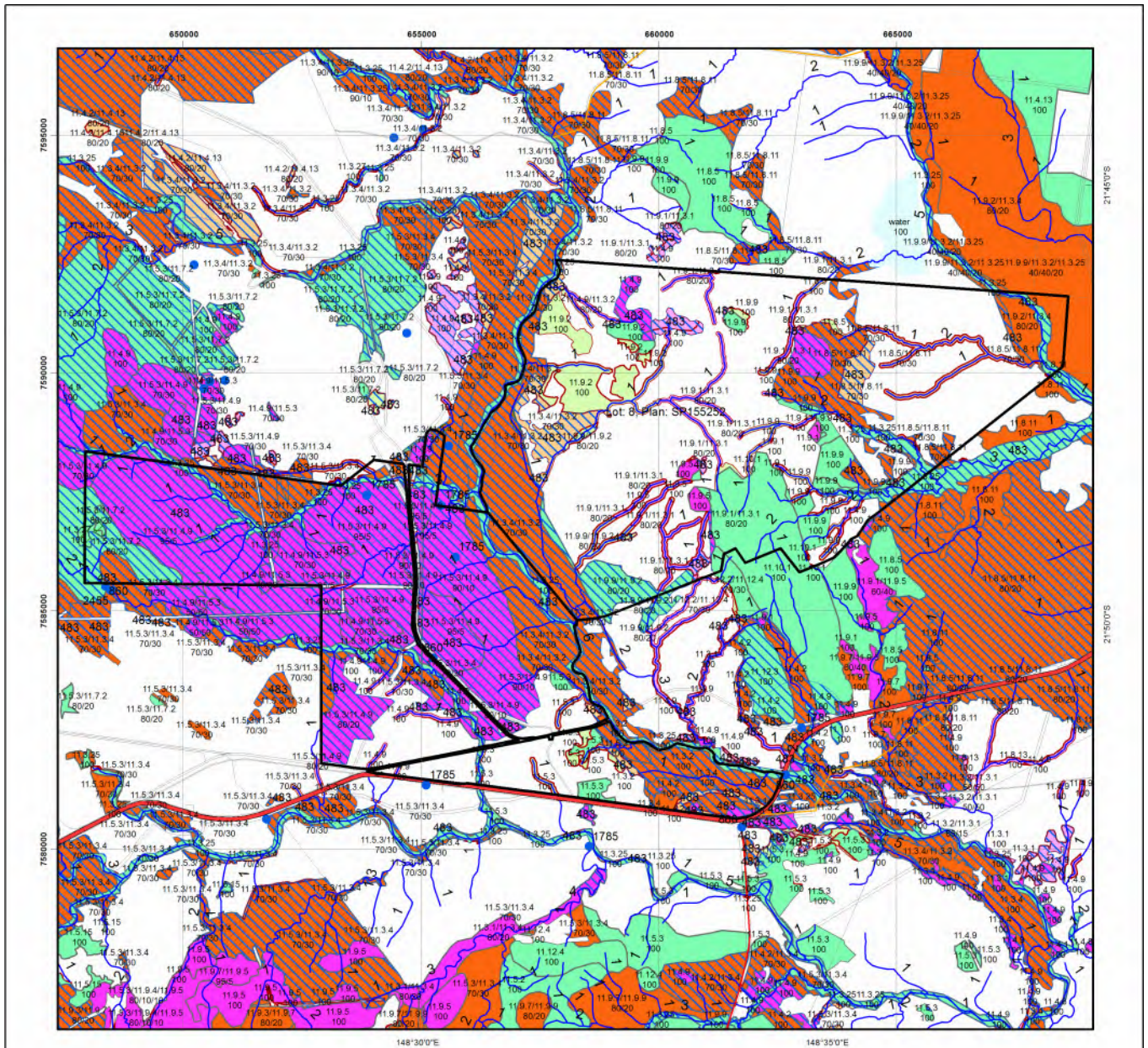
Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.



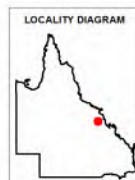
## 4.2 Vegetation management supporting map



### Vegetation Management Supporting Map

#### Legend

- Selected Lot and Plan
- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries



0 850 1,700 2,550 3,400 4,250 m

This product is projected into:  
GDA 1994 MGA Zone 55

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

**Disclaimer:**  
While every care is taken to ensure the accuracy of this product, the Department of Resources makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

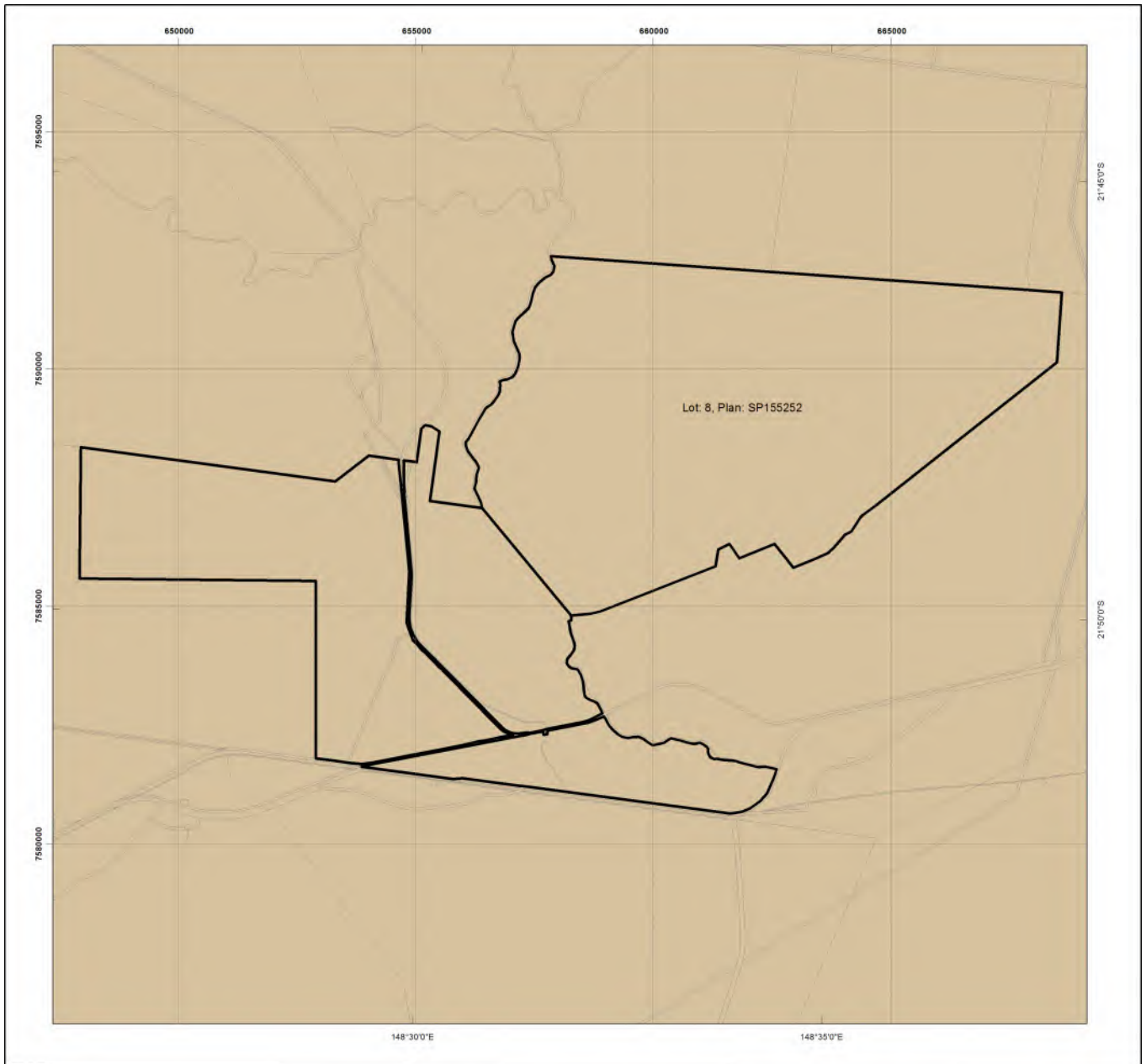
Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.







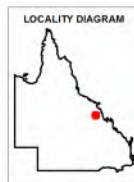
## 4.3 Coastal/non-coastal map



### Coastal/Non Coastal Map

#### Legend

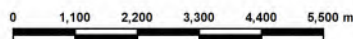
-  Selected Lot and Plan
-  Coastal
-  Non Coastal
-  Other land parcel boundaries



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Land parcel boundaries shown are provided as a locational aid only.

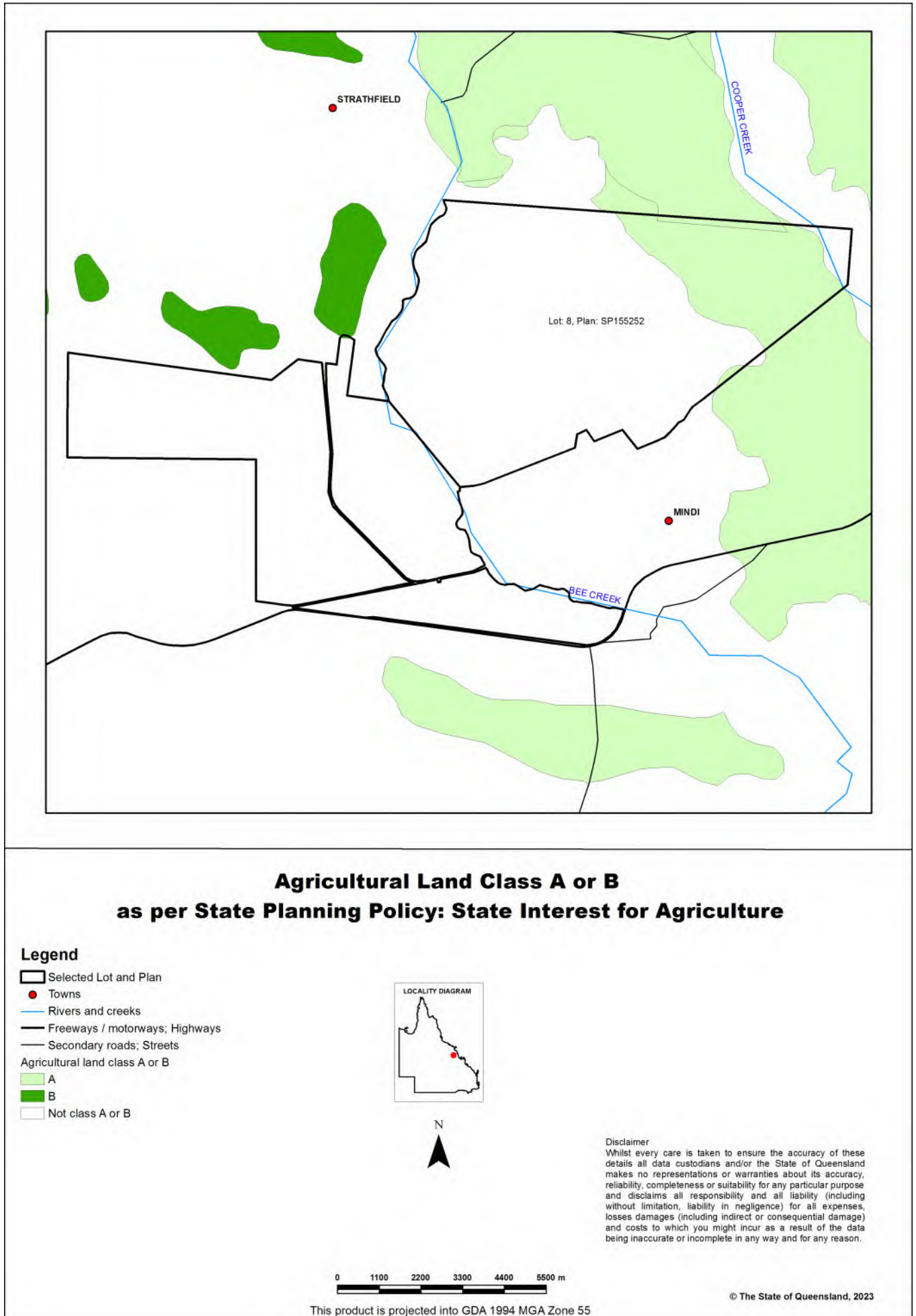


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## 4.4 Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture



## 5. Protected plants framework (administered by the Department of Environment and Science (DES))

In Queensland, all plants that are native to Australia are protected plants under the [Nature Conservation Act 1992](#) (NCA). The NCA regulates the clearing of protected plants 'in the wild' (see [Operational policy: When a protected plant in Queensland is considered to be 'in the wild'](#)) that are listed as critically endangered, endangered, vulnerable or near threatened under the Act.

Please note that the protected plant clearing framework applies irrespective of the classification of the vegetation under the *Vegetation Management Act 1999* and any approval or exemptions given under another Act, for example, the *Vegetation Management Act 1999* or *Planning Regulation 2017*.

### 5.1 Clearing in high risk areas on the flora survey trigger map

The flora survey trigger map identifies high-risk areas for threatened and near threatened plants. These are areas where threatened or near threatened plants are known to exist or are likely to exist based on the habitat present. The flora survey trigger map for this property is provided in section 5.5.

If you are proposing to clear an area shown as high risk on the flora survey trigger map, a flora survey of the clearing impact area must be undertaken by a suitably qualified person in accordance with the [Flora survey guidelines](#). The main objective of a flora survey is to locate any threatened or near threatened plants that may be present in the clearing impact area.

If the flora survey identifies that threatened or near threatened plants are not present within the clearing impact area or clearing within 100m of a threatened or near threatened plant can be avoided, the clearing activity is exempt from a permit. An [exempt clearing notification form](#) must be submitted to the Department of Environment and Science, with a copy of the flora survey report, at least one week prior to clearing.

If the flora survey identifies that threatened or near threatened plants are present in, or within 100m of, the area to be cleared, a clearing permit is required before any clearing is undertaken. The flora survey report, as well as an impact management report, must be submitted with the [clearing permit application form](#).

### 5.2 Clearing outside high risk areas on the flora survey trigger map

In an area other than a high risk area, a clearing permit is only required where a person is, or becomes aware that threatened or near threatened plants are present in, or within 100m of, the area to be cleared. You must keep a copy of the flora survey trigger map for the area subject to clearing for five years from the day the clearing starts. If you do not clear within the 12 month period that the flora survey trigger map was printed, you need to print and check a new flora survey trigger map.

### 5.3 Exemptions

Many activities are 'exempt' under the protected plant clearing framework, which means that clearing of native plants that are in the wild can be undertaken for these activities with no need for a flora survey or a protected plant clearing permit. The Information sheet - General exemptions for the take of protected plants provides some of these exemptions.

Some exemptions under the NCA are the same as exempt clearing work (formerly known as exemptions) under the *Vegetation Management Act 1999* (i.e. listed in Schedule 21 of the Planning Regulations 2017) while some are different.

### 5.4 Contact information for DES

For further information on the protected plants framework:

**Phone** 1300 130 372 (and select option four)

**Email** [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

**Visit** <https://www.qld.gov.au/environment/plants-animals/plants/protected-plants>

## 5.5 Protected plants flora survey trigger map

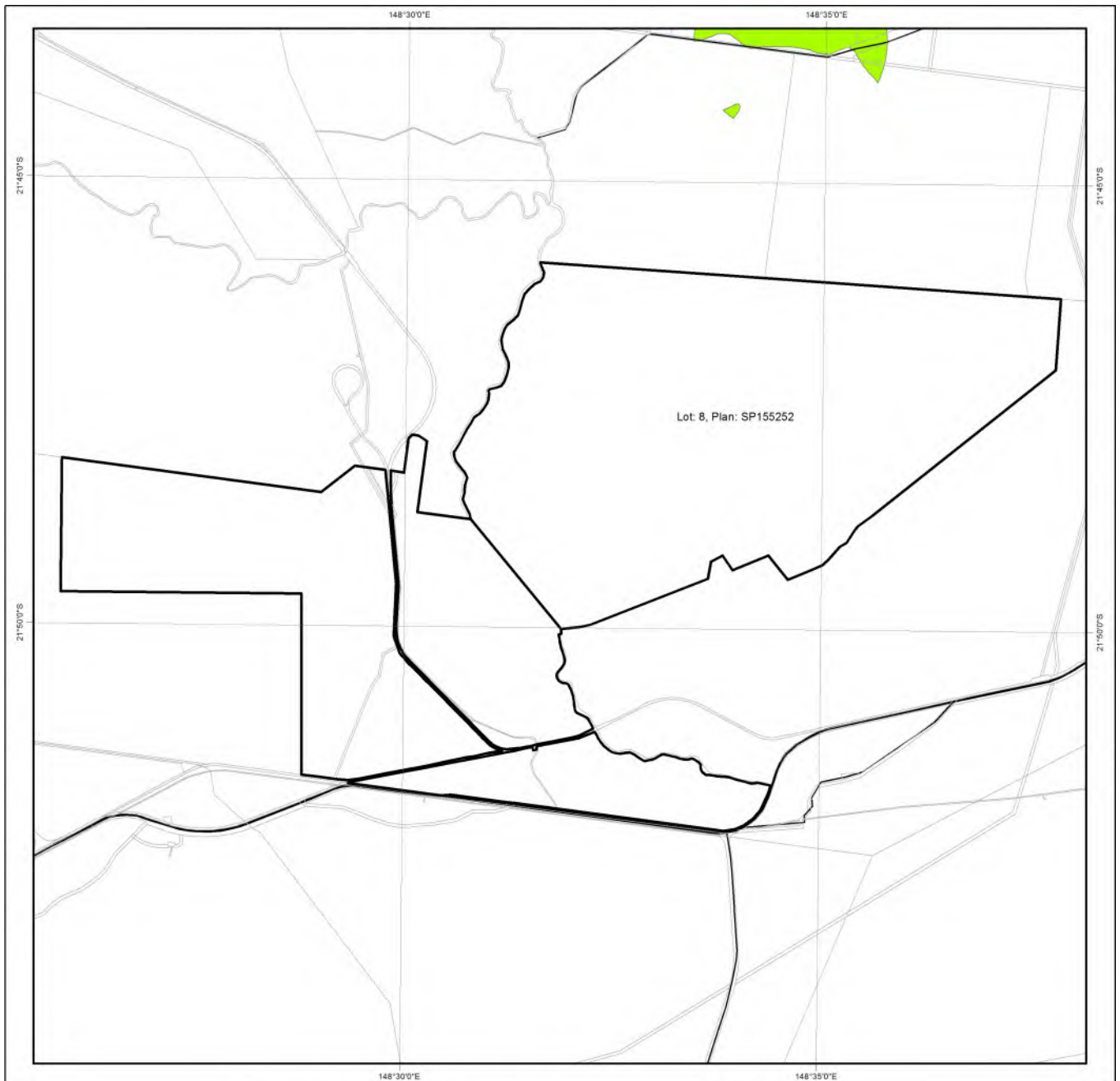
This map included may also be requested individually at: <https://apps.des.qld.gov.au/map-request/flora-survey-trigger/>.

### Updates to the data informing the flora survey trigger map

The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.

### Species information

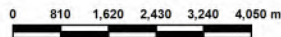
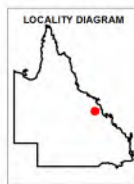
Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the [Queensland Spatial Catalogue](#), the Department of Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the [clearing of protected plants](#) for more information.



### Protected Plants Flora Survey Trigger Map

#### Legend

- Selected Lot and Plan
- High risk area
- Other land parcel boundaries
- Freeways / motorways / highways
- Secondary roads / streets



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This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

Land parcel boundaries are provided as locational aid only.

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Science at [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

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## 6. Koala protection framework (administered by the Department of Environment and Science (DES))

The koala (*Phascolarctos cinereus*) is listed in Queensland as endangered by the Queensland Government under *Nature Conservation Act 1992* and by the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999*.

The Queensland Government's koala protection framework is comprised of the *Nature Conservation Act 1992*, the Nature Conservation (Animals) Regulation 2020, the Nature Conservation (Koala) Conservation Plan 2017, the *Planning Act 2016* and the Planning Regulation 2017.

### 6.1 Koala mapping

#### 6.1.1 Koala districts

The parts of Queensland where koalas are known to occur has been divided into three koala districts - koala district A, koala district B and koala district C. Each koala district is made up of areas with comparable koala populations (e.g. density, extent and significance of threatening processes affecting the population) which require similar management regimes.

Section 7.1 identifies which koala district your property is located in.

#### 6.1.2 Koala habitat areas

Koala habitat areas are areas of vegetation that have been determined to contain koala habitat that is essential for the conservation of a viable koala population in the wild based on the combination of habitat suitability and biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water). In order to protect this important koala habitat, clearing controls have been introduced into the Planning Regulation 2017 for development in koala habitat areas.

Please note that koala habitat areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley, Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

There are two different categories of koala habitat area (core koala habitat area and locally refined koala habitat), which have been determined using two different methodologies. These methodologies are described in the document [Spatial modelling in South East Queensland](#).

Section 7.2 shows any koala habitat area that exists on your property.

Under the Nature Conservation (Koala) Conservation Plan 2017, an owner of land (or a person acting on the owner's behalf with written consent) can request to make, amend or revoke a koala habitat area determination if they believe, on reasonable grounds, that the existing determination for all or part of their property is incorrect.

More information on requests to make, amend or revoke a koala habitat area determination can be found in the document [Guideline - Requests to make, amend or revoke a koala habitat area determination](#).

The koala habitat area map will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

Changes to the koala habitat area map which occur between annual updates because of a request to make, amend or revoke a koala habitat area determination can be viewed on the register of approved requests to make, amend or revoke a koala habitat area available at: <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/koalamaps>. The register includes the lot on plan for the change, the date the decision was made and the map issued to the landholder that shows areas determined to be koala habitat areas.

#### 6.1.3 Koala priority areas

Koala priority areas are large, connected areas that have been determined to have the highest likelihood of achieving conservation outcomes for koalas based on the combination of habitat suitability, biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water) and a koala conservation cost benefit analysis.

Conservation efforts will be prioritised in these areas to ensure the conservation of viable koala populations in the wild including a focus on management (e.g. habitat protection, habitat restoration and threat mitigation) and monitoring. This includes a prohibition on clearing in koala habitat areas that are in koala priority areas under the Planning Regulation 2017 (subject to some exemptions).

Please note that koala priority areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley,

Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

Section 7.2 identifies if your property is in a koala priority area.

#### 6.1.4 Identified koala broad-hectare areas

There are seven identified koala broad-hectare areas in SEQ. These are areas of koala habitat that are located in areas committed to meet development targets in the SEQ Regional Plan to accommodate SEQ's growing population including bring-forward Greenfield sites under the Queensland Housing Affordability Strategy and declared master planned areas under the repealed *Sustainable Planning Act 2009* and the repealed *Integrated Planning Act 1997*.

Specific assessment benchmarks apply to development applications for development proposed in identified koala broad-hectare areas to ensure koala conservation measures are incorporated into the proposed development.

Section 7.2 identifies if your property is in an identified koala broad-hectare area.

## 6.2 Koala habitat planning controls

On 7 February 2020, the Queensland Government introduced new planning controls to the Planning Regulation 2017 to strengthen the protection of koala habitat in South East Queensland (i.e. koala district A).

More information on these planning controls can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

As a high-level summary, the koala habitat planning controls make:

- development that involves interfering with koala habitat (defined below) in an area that is both a koala priority area and a koala habitat area, prohibited development (i.e. development for which a development application cannot be made);
- development that involves interfering with koala habitat (defined below) in an area that is a koala habitat area but is not a koala priority area, assessable development (i.e. development for which development approval is required); and
- development that is for extractive industries where the development involves interfering with koala habitat (defined below) in an area that is both a koala habitat area and a key resource area, assessable development (i.e. development for which development approval is required).

**Interfering with koala habitat means:**

- 1) Removing, cutting down, ringbarking, pushing over, poisoning or destroying in anyway, including by burning, flooding or draining native vegetation in a koala habitat area; but
- 2) Does not include destroying standing vegetation by stock or lopping a tree.

However, these planning controls do not apply if the development is exempted development as defined in Schedule 24 of the [Planning Regulation 2017](#). More information on exempted development can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

There are also assessment benchmarks that apply to development applications for:

- building works, operational works, material change of use or reconfiguration of a lot where:
  - the local government planning scheme makes the development assessable;
  - the premises includes an area that is both a koala priority area and a koala habitat area; and
  - the development does not involve interfering with koala habitat (defined above); and
- development in identified koala broad-hectare areas.

The [Guideline - Assessment Benchmarks in relation to Koala Habitat in South East Queensland assessment benchmarks](#) outlines these assessment benchmarks, the intent of these assessment benchmarks and advice on how proposed development may meet these assessment benchmarks.

## 6.3 Koala Conservation Plan clearing requirements

Section 10 and 11 of the [Nature Conservation \(Koala\) Conservation Plan 2017](#) prescribes requirements that must be met when clearing koala habitat in koala district A and koala district B.

These clearing requirements are independent to the koala habitat planning controls introduced into the Planning Regulation 2017, which means they must be complied with irrespective of any approvals or exemptions offered under other legislation.

Unlike the clearing controls prescribed in the Planning Regulation 2017 that are to protect koala habitat, the clearing requirements prescribed in the Nature Conservation (Koala) Conservation Plan 2017 are in place to prevent the injury or death of koalas when koala habitat is being cleared.

## 6.4 Contact information for DES

For further information on the koala protection framework:

**Phone** 13 QGOV (13 74 68)

**Email** [koala.assessment@des.qld.gov.au](mailto:koala.assessment@des.qld.gov.au)

**Visit** <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping>

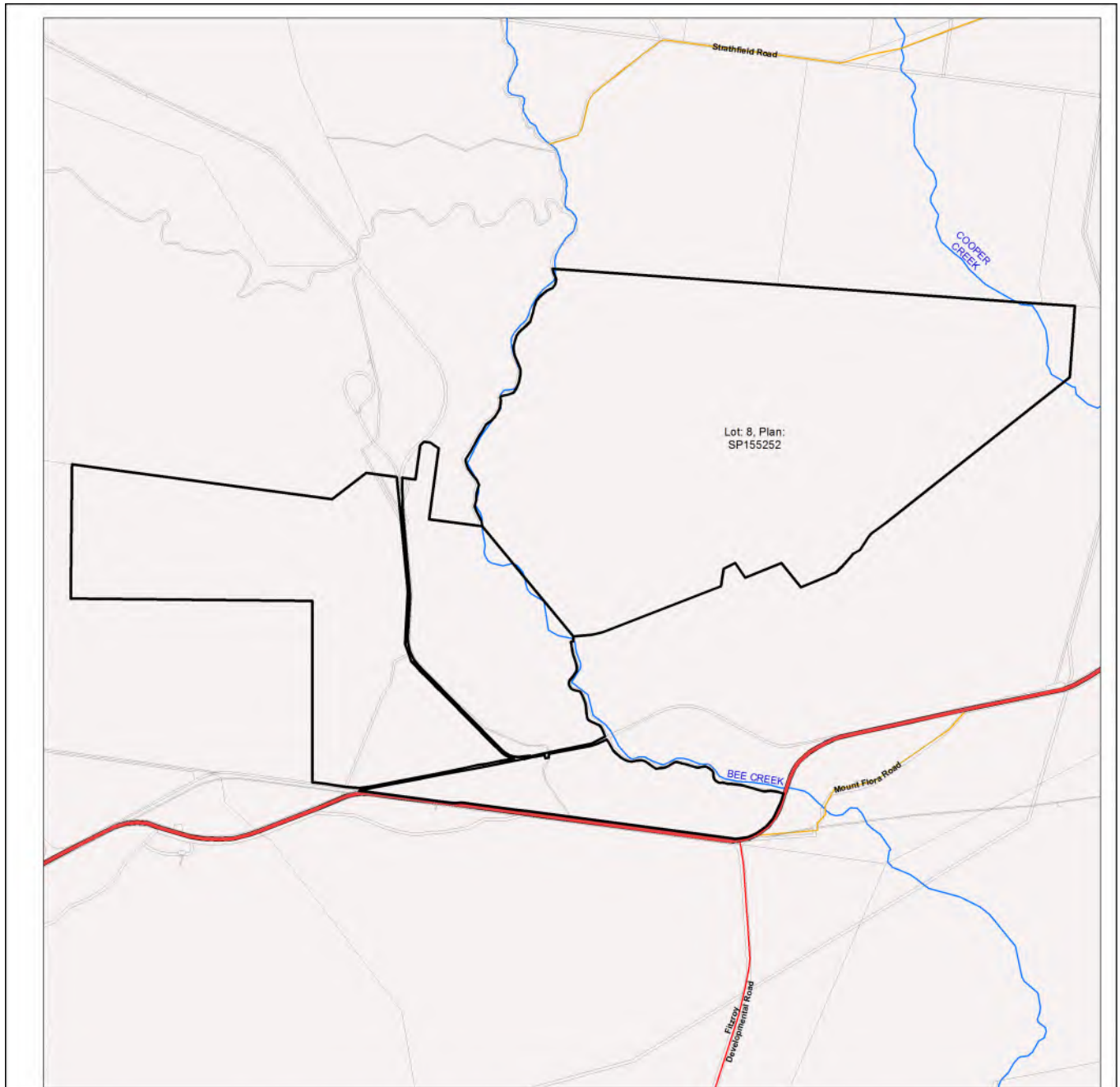
## 7. Koala protection framework details for Lot: 8 Plan: SP155252

### 7.1 Koala districts

Koala District C



## 7.2 Koala priority area, koala habitat area and identified koala broad-hectare area map

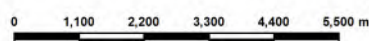
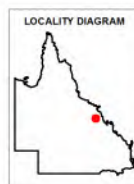


### Koala priority area, koala habitat area and identified koala broad-hectare area map

#### Legend

- Selected Lot and Plan
- Koala habitat area (core)
- Koala habitat area (locally refined)
- Koala priority area
- Identified koala broad-hectare area
- Cadastral Boundaries
- Towns
- Highway
- Connector
- Street/Local Road
- Major rivers/creeks
- Queensland

The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.



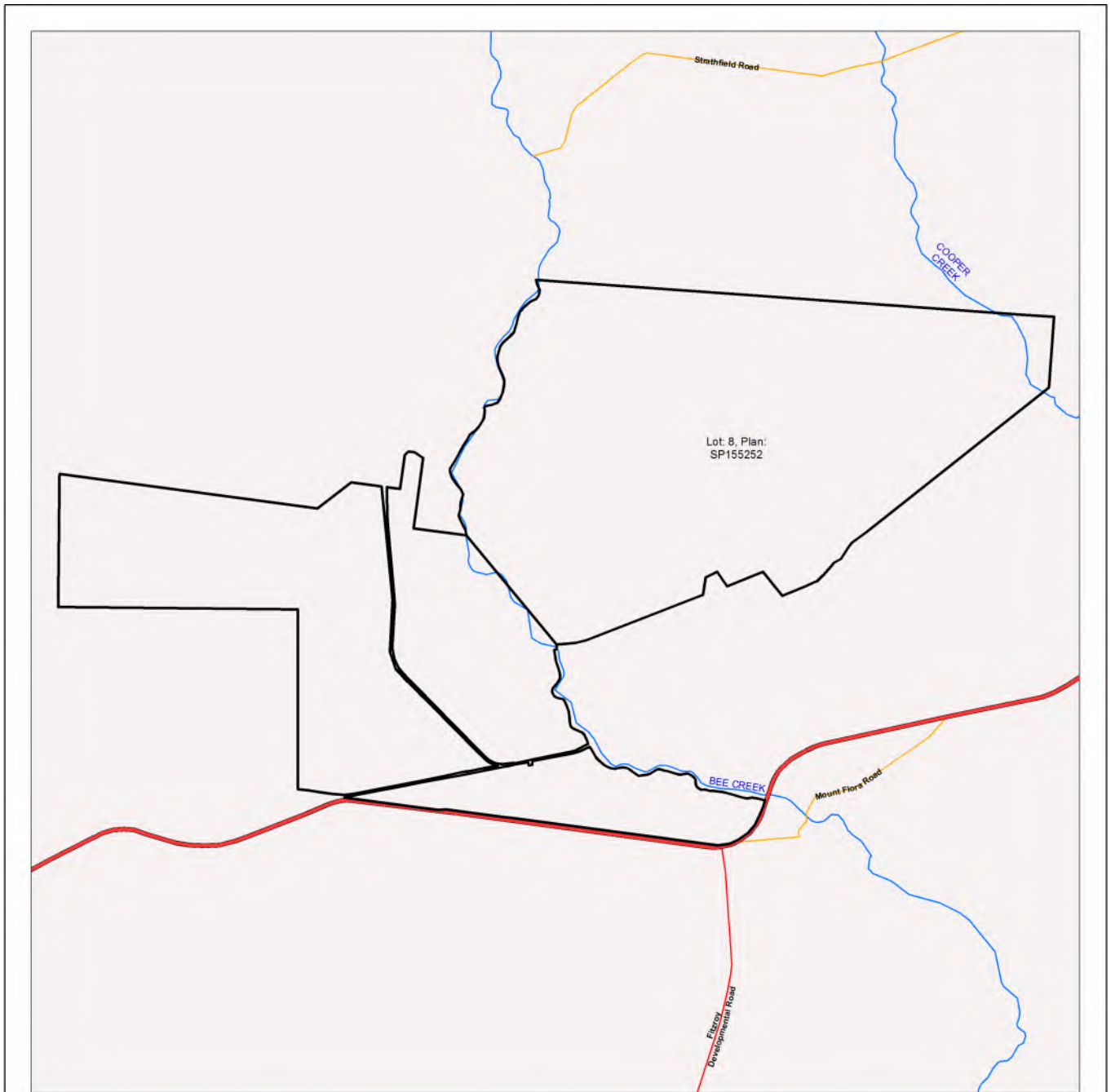
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The koala conservation plan maps will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.









In order to ensure that the most recent map for an area of interest can be accessed, prior to the annual update, a register of changes made to koala habitat areas as a result of the map amendment process will be available at:  
<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/>.  
 The register will include lot on plan for the change, the date the decision was made and the map issued to the landholder which shows areas determined to be koala habitat areas.

## 7.3 Koala habitat regional ecosystems for core koala habitat areas



### Koala habitat regional ecosystems for core koala habitat areas

#### Legend

-  Selected Lot and Plan
-  Koala habitat area (core)
-  Towns
-  Highway
-  Connector
-  Street/Local Road
-  Major rivers/creeks
-  Queensland



N



0 1,100 2,200 3,300 4,400 5,600 m



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The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.

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## 8. Other relevant legislation contacts list

Activity	Legislation	Agency	Contact details
<ul style="list-style-type: none"> <li>• Interference with overland flow</li> <li>• Earthworks, significant disturbance</li> </ul>	<i>Water Act 2000</i> <i>Soil Conservation Act 1986</i>	Department of Regional Development, Manufacturing and Water (Queensland Government) Department of Resources (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.rdmw.qld.gov.au">www.rdmw.qld.gov.au</a> <a href="http://www.resources.qld.gov.au">www.resources.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Indigenous Cultural Heritage</li> </ul>	<i>Aboriginal Cultural Heritage Act 2003</i> <i>Torres Strait Islander Cultural Heritage Act 2003</i>	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships	Ph: 13 QGOV (13 74 68) <a href="http://www.datsip.qld.gov.au">www.datsip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Mining and environmentally relevant activities</li> <li>• Infrastructure development (coastal)</li> <li>• Heritage issues</li> </ul>	<i>Environmental Protection Act 1994</i> <i>Coastal Protection and Management Act 1995</i> <i>Queensland Heritage Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Protected plants and protected areas</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 1300 130 372 (option 4) <a href="mailto:palm@des.qld.gov.au">palm@des.qld.gov.au</a> <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Koala mapping and regulations</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="mailto:Koala.assessment@des.qld.gov.au">Koala.assessment@des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Interference with fish passage in a watercourse, mangroves</li> <li>• Forestry activities on State land tenures</li> </ul>	<i>Fisheries Act 1994</i> <i>Forestry Act 1959</i>	Department of Agriculture and Fisheries (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.daf.qld.gov.au">www.daf.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Matters of National Environmental Significance including listed threatened species and ecological communities</li> </ul>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Department of Agriculture, Water and the Environment (Australian Government)	Ph: 1800 803 772 <a href="http://www.environment.gov.au">www.environment.gov.au</a>
<ul style="list-style-type: none"> <li>• Development and planning processes</li> </ul>	<i>Planning Act 2016</i> <i>State Development and Public Works Organisation Act 1971</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.dsdmip.qld.gov.au">www.dsdmip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Local government requirements</li> </ul>	<i>Local Government Act 2009</i> <i>Planning Act 2016</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) Your relevant local government office
<ul style="list-style-type: none"> <li>• Harvesting timber in the Wet Tropics of Qld World Heritage area</li> </ul>	<i>Wet Tropics World Heritage Protection and Management Act 1993</i>	Wet Tropics Management Authority	Ph: (07) 4241 0500 <a href="http://www.wettropics.gov.au">www.wettropics.gov.au</a>



## **Vegetation management report**

For Lot: 9 Plan: SP113033

31/10/2023

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# Recent changes

## Updated mapping

On September 6 2023, the Department of Environment and Science updated the Protected Plant Flora Survey Trigger Map to include recent species classification changes and Queensland Herbarium scientific updates. The updated map is included in Section 5 of the following report.

Updated vegetation mapping was released on 8 September 2022 and includes the most recent Queensland Herbarium scientific updates to the Regulated Vegetation Management Map, regional ecosystems, wetland, high-value regrowth and essential habitat mapping.

The Department of Environment and Science have also updated their koala protection mapping to align with the Queensland Herbarium scientific updates.

## Overview

Based on the lot on plan details you have supplied, this report provides the following detailed information:

**Property details** - information about the specified Lot on Plan, lot size, local government area, bioregion(s), subregion(s) and catchment(s);

**Vegetation management framework** - an explanation of the application of the framework and contact details for the Department of Resources who administer the framework;

**Vegetation management framework details for the specified Lot on Plan** including:

- the vegetation management categories on the property;
- the vegetation management regional ecosystems on the property;
- vegetation management watercourses or drainage features on the property;
- vegetation management wetlands on the property;
- vegetation management essential habitat on the property;
- whether any area management plans are associated with the property;
- whether the property is coastal or non-coastal; and
- whether the property is mapped as Agricultural Land Class A or B;

**Protected plant framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework, including:

- high risk areas on the protected plant flora survey trigger map for the property;

**Koala protection framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework; and

**Koala protection framework details for the specified Lot on Plan** including:

- the koala district the property is located in;
- koala priority areas on the property;
- core and locally refined koala habitat areas on the property;
- whether the lot is located in an identified koala broad-hectare area; and
- koala habitat regional ecosystems on the property for core koala habitat areas.

This information will assist you to determine your options for managing vegetation under:

- the vegetation management framework, which may include:

- exempt clearing work;
- accepted development vegetation clearing code;
- an area management plan;
- a development approval;

- the protected plant framework, which may include:

- the need to undertake a flora survey;
- exempt clearing;
- a protected plant clearing permit;

- the koala protection framework, which may include:

- exempted development;

- a development approval;
- the need to undertake clearing sequentially and in the presence of a koala spotter.

## Other laws

The clearing of native vegetation is regulated by both Queensland and Australian legislation, and some local governments also regulate native vegetation clearing. You may need to obtain an approval or permit under another Act, such as the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Section 8 of this guide provides contact details of other agencies you should confirm requirements with, before commencing vegetation clearing.

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# 1. Property details

## 1.1 Tenure and title area

All of the lot, plan, tenure and title area information associated with property Lot: 9 Plan: SP113033, are listed in Table 1.

**Table 1: Lot, plan, tenure and title area information for the property**

Lot	Plan	Tenure	Property title area (sq metres)
9	SP113033	Lands Lease	9,480,000

The tenure of the land may affect whether clearing is considered exempt clearing work or may be carried out under an accepted development vegetation clearing code.

### **Does this property have a freehold tenure and is in the Wet Tropics of Queensland World Heritage Area?**

No, this property is not located in the Wet Tropics of Queensland World Heritage Area.

## 1.2 Property location

Table 2 provides a summary of the locations for property Lot: 9 Plan: SP113033, in relation to natural and administrative boundaries.

**Table 2: Property location details**

Local Government(s)
Isaac Regional

Bioregion(s)	Subregion(s)
Brigalow Belt	Northern Bowen Basin

Catchment(s)
Fitzroy

## 2. Vegetation management framework (administered by the Department of Resources)

The *Vegetation Management Act 1999* (VMA), the *Vegetation Management Regulation 2012*, the *Planning Act 2016* and the *Planning Regulation 2017*, in conjunction with associated policies and codes, form the Vegetation Management Framework.

The VMA does not apply to all land tenures or vegetation types. State forests, national parks, forest reserves and some tenures under the *Forestry Act 1959* and *Nature Conservation Act 1992* are not regulated by the VMA. Managing or clearing vegetation on these tenures may require approvals under these laws.

The following native vegetation is not regulated under the VMA but may require permit(s) under other laws:

- grass or non-woody herbage;
- a plant within a grassland regional ecosystem prescribed under Schedule 5 of the *Vegetation Management Regulation 2012*; and
- a mangrove.

### 2.1 Exempt clearing work

Exempt clearing work is an activity for which you do not need to notify the Department of Resources or obtain an approval under the vegetation management framework. Exempt clearing work was previously known as exemptions.

In areas that are mapped as Category X (white in colour) on the regulated vegetation management map (see section 4.1), and where the land tenure is freehold, indigenous land and leasehold land for agriculture and grazing purposes, the clearing of vegetation is considered exempt clearing work and does not require notification or development approval under the vegetation management framework. For all other land tenures, contact the Department of Resources before commencing clearing to ensure that the proposed activity is exempt clearing work.

A range of routine property management activities are considered exempt clearing work. A list of exempt clearing work is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/exemptions>.

Exempt clearing work may be affected if the proposed clearing area is subject to development approval conditions, a covenant, an environmental offset, an exchange area, a restoration notice, or an area mapped as Category A. Exempt clearing work may require approval under other Commonwealth, State or Local Government laws, or local government planning schemes. Contact the Department of Resources prior to clearing in any of these areas.

### 2.2 Accepted development vegetation clearing codes

Some clearing activities can be undertaken under an accepted development vegetation clearing code. The codes can be downloaded at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/codes>

If you intend to clear vegetation under an accepted development vegetation clearing code, you must notify the Department of Resources before commencing. The information in this report will assist you to complete the online notification form.

You can complete the online form at

<https://apps.dnrm.qld.gov.au/vegetation/>

## 2.3 Area management plans

Area Management Plans (AMP) provide an alternative approval system for vegetation clearing under the vegetation management framework. They list the purposes and clearing conditions that have been approved for the areas covered by the plan. It is not necessary to use an AMP, even when an AMP applies to your property.

On 8 March 2020, AMPs ended for fodder harvesting, managing thickened vegetation and managing encroachment. New notifications cannot be made for these AMPs. You will need to consider options for fodder harvesting, managing thickened vegetation or encroachment under a relevant accepted development vegetation clearing code or apply for a development approval.

New notifications can be made for all other AMPs. These will continue to apply until their nominated end date.

If an Area Management Plan applies to your property for which you can make a new notification, it will be listed in Section 3.6 of this report. Before clearing under one of these AMPs, you must first notify the Department of Resources and then follow the conditions and requirements listed in the AMP.

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/area-management-plans>

## 2.4 Development approvals

If under the vegetation management framework your proposed clearing is not exempt clearing work, or is not permitted under an accepted development vegetation clearing code, or an AMP, you may be able to apply for a development approval.

Information on how to apply for a development approval is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/development>

## 2.5. Contact information for the Department of Resources

For further information on the vegetation management framework:

**Phone** 135VEG (135 834)

**Email** [vegetation@resources.qld.gov.au](mailto:vegetation@resources.qld.gov.au)

**Visit** <https://www.resources.qld.gov.au/?contact=vegetation> to submit an online enquiry.

### 3. Vegetation management framework for Lot: 9 Plan: SP113033

#### 3.1 Vegetation categories

The vegetation categories on your property are shown on the regulated vegetation management map in section 4.1 of this report. A summary of vegetation categories on the subject lot are listed in Table 3. Descriptions for these categories are shown in Table 4.

**Table 3: Vegetation categories for subject property. Total area: 948.0ha**

Vegetation category	Area (ha)
Category B	384.7
Category C	6.4
Category R	7.4
Category X	549.5

**Table 4: Description of vegetation categories**

Category	Colour on Map	Description	Requirements / options under the vegetation management framework
A	red	Compliance areas, environmental offset areas and voluntary declaration areas	Special conditions apply to Category A areas. Before clearing, contact the Department of Resources to confirm any requirements in a Category A area.
B	dark blue	Remnant vegetation areas	Exempt clearing work, or notification and compliance with accepted development vegetation clearing codes, area management plans or development approval.
C	light blue	High-value regrowth areas	Exempt clearing work, or notification and compliance with managing Category C regrowth vegetation accepted development vegetation clearing code.
R	yellow	Regrowth within 50m of a watercourse or drainage feature in the Great Barrier Reef catchment areas	Exempt clearing work, or notification and compliance with managing Category R regrowth accepted development vegetation clearing code or area management plans.
X	white	Clearing on freehold land, indigenous land and leasehold land for agriculture and grazing purposes is considered exempt clearing work under the vegetation management framework. Contact the Department of Resources to clarify whether a development approval is required for other State land tenures.	No permit or notification required on freehold land, indigenous land and leasehold land for agriculture and grazing. A development approval may be required for some State land tenures.

#### Property Map of Assessable Vegetation (PMAV)

The following Property Map of Assessable Vegetation (PMAVs) may be present on this property:

**Reference number**

2012/004643

## 3.2 Regional ecosystems

The endangered, of concern and least concern regional ecosystems on your property are shown on the vegetation management supporting map in section 4.2 and are listed in Table 5.

A description of regional ecosystems can be accessed online at

<https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/descriptions/>

**Table 5: Regional ecosystems present on subject property**

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
11.3.25	Least concern	B	36.85	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.25	Least concern	C	1.01	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.25	Least concern	R	6.43	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.4	Of concern	B	44.29	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.3.4	Of concern	C	1.63	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.3.4	Of concern	R	0.29	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.5.3	Least concern	B	263.51	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.5.3	Least concern	C	3.80	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.5.3	Least concern	R	0.68	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.7.2	Least concern	B	40.04	Acacia spp. woodland on Cainozoic lateritic duricrust. Scarp retreat zone	Sparse
non-rem	None	X	549.47	None	None

Please note:

1. All area and area derived figures included in this table have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.
2. If Table 5 contains a Category 'plant', please be aware that this refers to 'plantations' such as forestry, and these areas are considered non-remnant under the VMA.

The VMA status of the regional ecosystem (whether it is endangered, of concern or least concern) also determines if any of the following are applicable:

- exempt clearing work;
- accepted development vegetation clearing codes;
- performance outcomes in State Code 16 of the State Development Assessment Provisions (SDAP).

## 3.3 Watercourses

Vegetation management watercourses and drainage features for this property are shown on the vegetation management supporting map in section 4.2.

### 3.4 Wetlands

There are no vegetation management wetlands present on this property.

### 3.5 Essential habitat

Under the VMA, essential habitat for protected wildlife is native wildlife prescribed under the *Nature Conservation Act 1992* (NCA) as critically endangered, endangered, vulnerable or near-threatened wildlife.

Essential habitat for protected wildlife includes suitable habitat on the lot, or where a species has been known to occur up to 1.1 kilometres from a lot on which there is assessable vegetation. These important habitat areas are protected under the VMA.

Any essential habitat on this property will be shown as blue hatching on the vegetation supporting map in section 4.2.

If essential habitat is identified on the lot, information about the protected wildlife species is provided in Table 6 below. The numeric labels on the vegetation management supporting map can be cross referenced with Table 6 to outline the essential habitat factors for that particular species. There may be essential habitat for more than one species on each lot, and areas of Category A, Category B and Category C can be mapped as Essential Habitat.

Essential habitat is compiled from a combination of species habitat models and buffered species records. Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated. Essential habitat, for protected wildlife, means an area of vegetation shown on the Regulated Vegetation Management Map -

- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database. Essential habitat factors are comprised of - regional ecosystem (mandatory for most species), vegetation community, altitude, soils, position in landscape; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

If there is no essential habitat mapping shown on the vegetation management supporting map for this lot, and there is no table in the sections below, it confirms that there is no essential habitat on the lot.

#### Category A and/or Category B and/or Category C

**Table 6: Essential habitat in Category A and/or Category B and/or Category C**

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
483	Denisonia maculata	ornamental snake	V	Riparian woodland/open forest and shrub/woodland including Brigalow Acacia harpophylla; into drier habitats in summer.	100-450m.	Cracking clay with gilgai/soil crack microrelief and sandy loam substrates.	Near freshwater waterholes/creeks and low lying poorly drained areas that are frequently inundated by freshwater.
1785	Geophaps scripta scripta	squatter pigeon (southern subspecies)	V	Dry eucalypt woodland (including poplar box, spotted gum, yellow box, acacia and callitris), with sparse short grass, often on sandy areas near to permanent water; grassy eucalypt woodlands. Nest on ground near or under grass tussock, log or low bush.	None	None	Gravelly ridges, traprock and river flats.

Label	Regional Ecosystem (mandatory unless otherwise specified)
483	10.3.2, 10.3.3, 10.3.4, 10.3.7, 10.3.13, 10.3.14, 10.3.15, 10.3.16, 10.3.27, 10.3.30, 10.3.31, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.4.8, 10.5.5, 10.9.1, 10.9.6, 10.9.7, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.9, 11.3.10, 11.3.12, 11.3.15, 11.3.21, 11.3.23, 11.3.24, 11.3.25, 11.3.27, 11.3.28, 11.3.31, 11.3.34, 11.3.37, 11.3.38, 11.3.40, 11.4.2, 11.4.3, 11.4.4, 11.4.6, 11.4.7, 11.4.8, 11.4.9, 11.4.11, 11.5.2, 11.5.3, 11.5.16, 11.8.11, 11.9.1, 11.9.2, 11.9.3, 11.9.5, 11.9.7, 11.9.11, 11.9.12, 11.9.14, 11.11.15, 11.12.6

Label	Regional Ecosystem (mandatory unless otherwise specified)
1785	8.2.1, 8.2.7, 8.2.8, 8.2.12, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.13, 8.5.2, 8.5.3, 8.5.5, 8.5.6, 8.9.1, 8.11.1, 8.11.3, 8.11.4, 8.11.5, 8.11.6, 8.11.8, 8.12.6, 8.12.7, 8.12.9, 8.12.12, 8.12.14, 8.12.20, 8.12.22, 8.12.23, 8.12.25, 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.3.6, 9.3.7, 9.3.8, 9.3.9, 9.3.11, 9.3.13, 9.3.14, 9.3.15, 9.3.16, 9.3.17, 9.3.18, 9.3.19, 9.3.20, 9.3.21, 9.3.22, 9.3.23, 9.4.1, 9.4.2, 9.4.3, 9.5.3, 9.5.4, 9.5.5, 9.5.6, 9.5.7, 9.5.8, 9.5.9, 9.5.10, 9.5.11, 9.5.12, 9.5.16, 9.7.1, 9.7.2, 9.7.3, 9.7.5, 9.7.6, 9.8.1, 9.8.2, 9.8.4, 9.8.5, 9.8.6, 9.8.9, 9.8.10, 9.8.11, 9.10.1, 9.10.3, 9.10.6, 9.10.7, 9.10.8, 9.11.1, 9.11.2, 9.11.3, 9.11.4, 9.11.5, 9.11.7, 9.11.10, 9.11.11, 9.11.12, 9.11.13, 9.11.15, 9.11.16, 9.11.17, 9.11.18, 9.11.19, 9.11.23, 9.11.26, 9.11.28, 9.11.29, 9.11.31, 9.11.32, 9.12.1, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7, 9.12.10, 9.12.11, 9.12.12, 9.12.13, 9.12.16, 9.12.17, 9.12.18, 9.12.19, 9.12.20, 9.12.21, 9.12.22, 9.12.23, 9.12.24, 9.12.26, 9.12.28, 9.12.30, 9.12.31, 9.12.33, 9.12.35, 9.12.37, 9.12.39, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.9, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.19, 10.3.20, 10.3.27, 10.3.28, 10.3.30, 10.3.31, 10.4.3, 10.5.1, 10.5.2, 10.5.4, 10.5.5, 10.5.7, 10.5.9, 10.5.10, 10.5.11, 10.5.12, 10.7.2, 10.7.3, 10.7.5, 10.7.11, 10.7.12, 10.9.1, 10.9.2, 10.9.3, 10.9.5, 10.10.1, 10.10.3, 10.10.4, 10.10.5, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.7, 11.3.8, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.23, 11.3.25, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.35, 11.3.36, 11.3.37, 11.3.38, 11.3.39, 11.4.2, 11.4.3, 11.4.5, 11.4.8, 11.4.10, 11.4.12, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.8, 11.5.9, 11.5.12, 11.5.13, 11.5.14, 11.5.17, 11.5.20, 11.5.21, 11.7.1, 11.7.2, 11.7.4, 11.7.6, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.9, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.2, 11.9.3, 11.9.7, 11.9.9, 11.9.14, 11.10.1, 11.10.4, 11.10.6, 11.10.7, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.15, 11.11.16, 11.11.19, 11.11.20, 11.12.1, 11.12.2, 11.12.3, 11.12.5, 11.12.6, 11.12.7, 11.12.8, 11.12.9, 11.12.10, 11.12.11, 11.12.12, 11.12.13, 11.12.14, 11.12.17, 11.12.20, 12.2.5, 12.2.6, 12.2.7, 12.2.10, 12.2.11, 12.3.3, 12.3.6, 12.3.10, 12.3.12, 12.3.14, 12.3.18, 12.3.19, 12.5.1, 12.5.2, 12.5.4, 12.5.5, 12.5.7, 12.5.8, 12.5.11, 12.5.12, 12.7.1, 12.7.2, 12.8.14, 12.8.16, 12.8.17, 12.8.19, 12.9-10.5, 12.9-10.7, 12.9-10.8, 12.9-10.12, 12.9-10.13, 12.9-10.25, 12.9-10.26, 12.9-10.28, 12.11.5, 12.11.7, 12.11.8, 12.11.14, 12.11.15, 12.11.20, 12.11.21, 12.11.22, 12.11.24, 12.11.25, 12.11.26, 12.11.27, 12.11.28, 12.12.7, 12.12.8, 12.12.9, 12.12.12, 12.12.14, 12.12.21, 12.12.22, 12.12.23, 12.12.24, 12.12.25, 12.12.27, 13.3.1, 13.3.4, 13.3.7, 13.11.1, 13.11.3, 13.11.4, 13.11.8, 13.12.2, 13.12.3, 13.12.5, 13.12.8, 13.12.9, 13.12.10

### 3.6 Area Management Plan(s)

Nil

### 3.7 Coastal or non-coastal

For the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP), this property is regarded as\*

Non Coastal

\*See also Map 4.3

### 3.8 Agricultural Land Class A or B

The following can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code:

**Does this lot contain land that is mapped as Agricultural Land Class A or B in the State Planning Interactive Mapping System?**

No Class A

No Class B

Note - This confirms Agricultural Land Classes as per the State Planning Interactive Mapping System only. This response does not include Agricultural Land Classes identified under local government planning schemes. For further information, check the Planning Scheme for your local government area.

See Map 4.4 to identify the location and extent of Class A and/or Class B Agricultural land on Lot: 9 Plan: SP113033.

## 4. Vegetation management framework maps

Vegetation management maps included in this report may also be requested individually at:

<https://www.resources.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form>

### **Regulated vegetation management map**

The regulated vegetation management map shows vegetation categories needed to determine clearing requirements. These maps are updated monthly to show new [property maps of assessable vegetation \(PMAV\)](#).

### **Vegetation management supporting map**

The vegetation management supporting map provides information on regional ecosystems, wetlands, watercourses and essential habitat.

### **Coastal/non-coastal map**

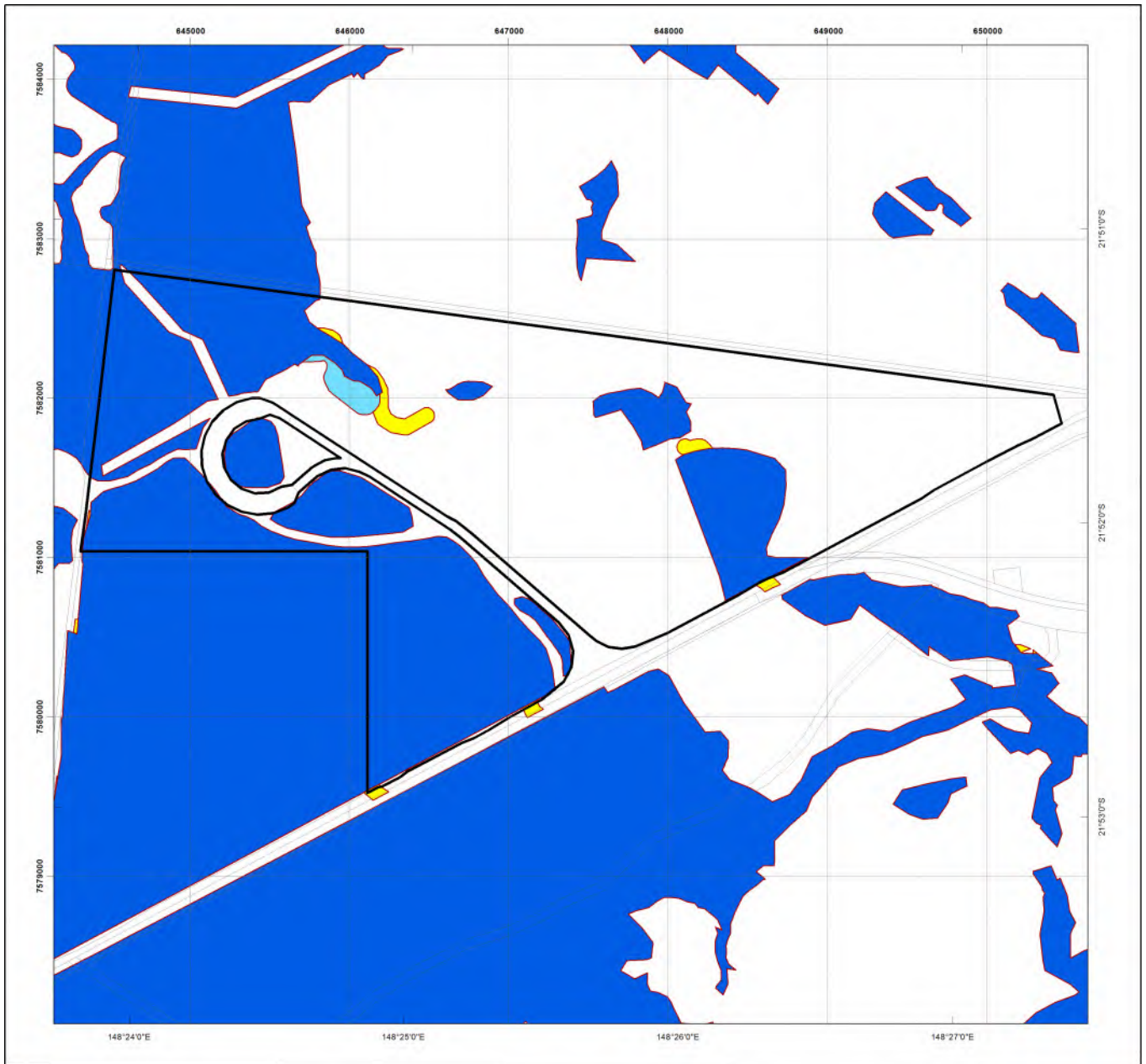
The coastal/non-coastal map confirms whether the lot, or which parts of the lot, are considered coastal or non-coastal for the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP).

### **Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture**

The Agricultural Land Class map confirms the location and extent of land mapped as Agricultural Land Classes A or B as identified on the State Planning Interactive Mapping System. Please note that this map does not include areas identified as Agricultural Land Class A or B in local government planning schemes. This map can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code.



# 4.1 Regulated vegetation management map



## Regulated Vegetation Management Map

### Legend

- Selected Lot and Plan
- Category A area (Vegetation offsets/compliance notices/VDecs)
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watercourse vegetation)
- Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
- Water
- Other land parcel boundaries



This product is projected into:  
GDA 1994 MGA Zone 55

### Disclaimer:

While every care is taken to ensure the accuracy of this product, the Department of Resources makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

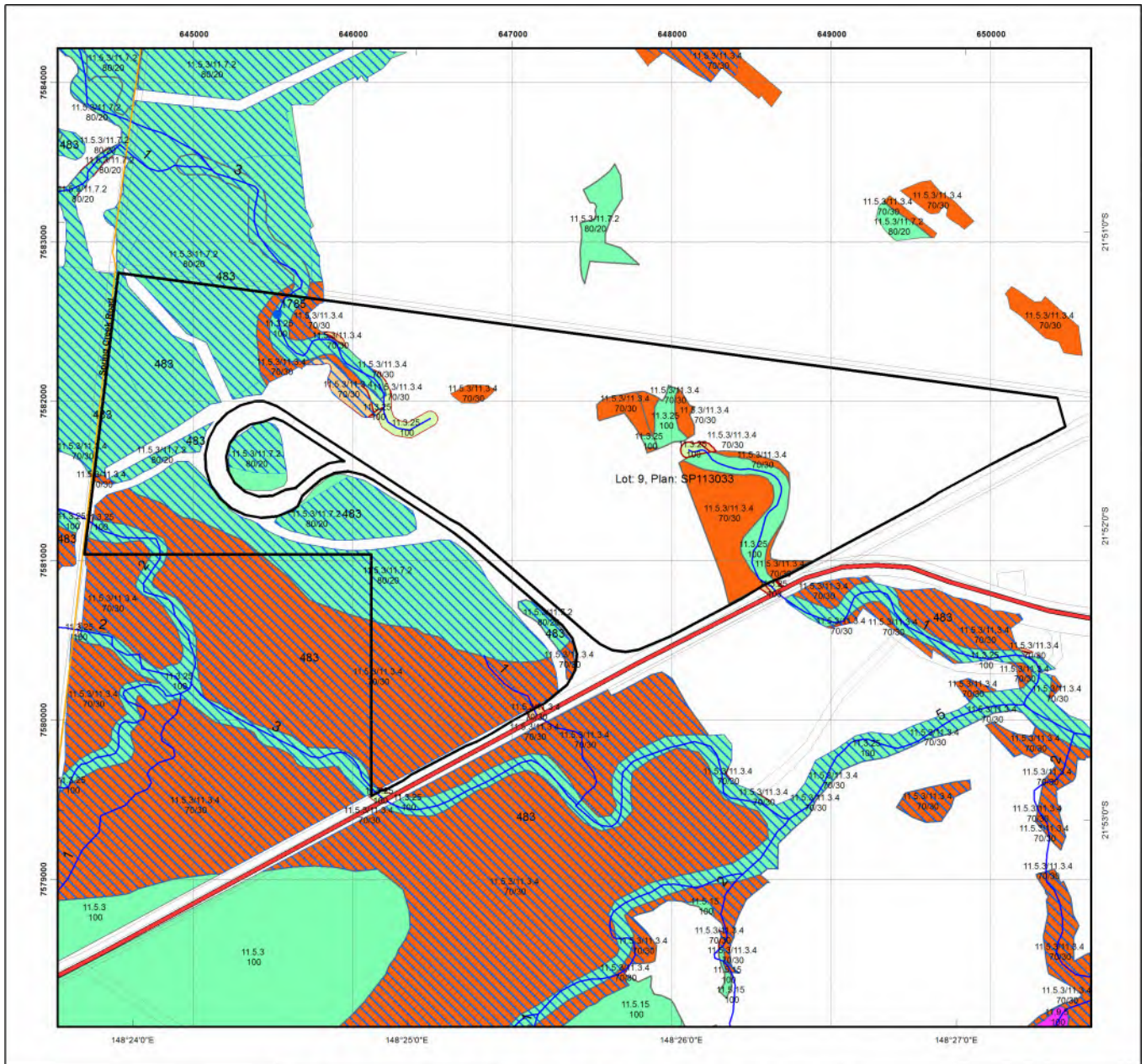
Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.



## 4.2 Vegetation management supporting map



### Vegetation Management Supporting Map

#### Legend

- Selected Lot and Plan
- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries



0 250 500 750 1,000 1,250 m

This product is projected into:  
GDA 1994 MGA Zone 55

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

#### Disclaimer:

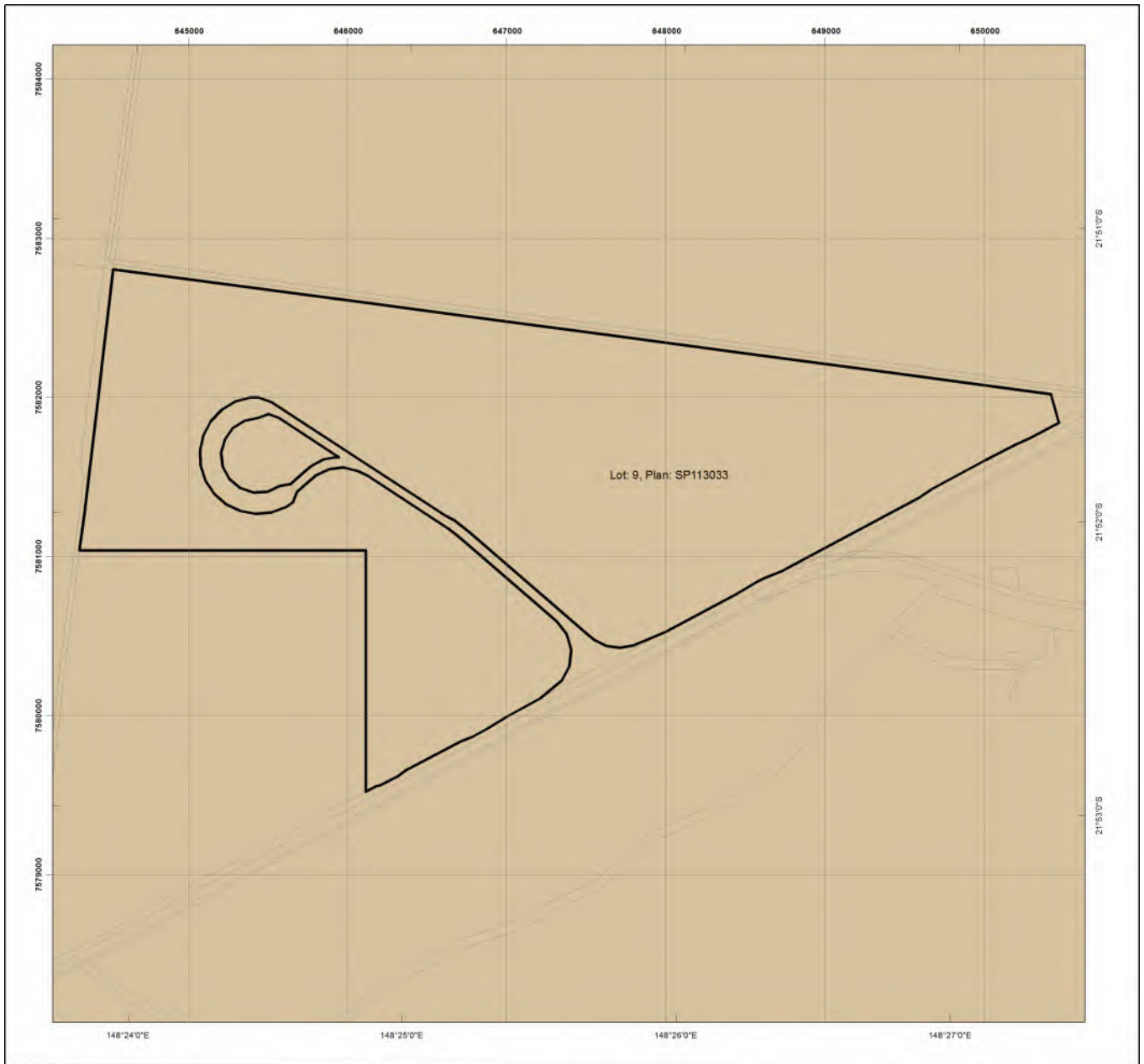
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Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>





Land parcel boundaries are provided as locational aid only.

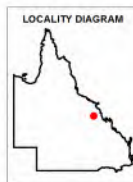
# 4.3 Coastal/non-coastal map



## Coastal/Non Coastal Map

### Legend

-  Selected Lot and Plan
-  Coastal
-  Non Coastal
-  Other land parcel boundaries



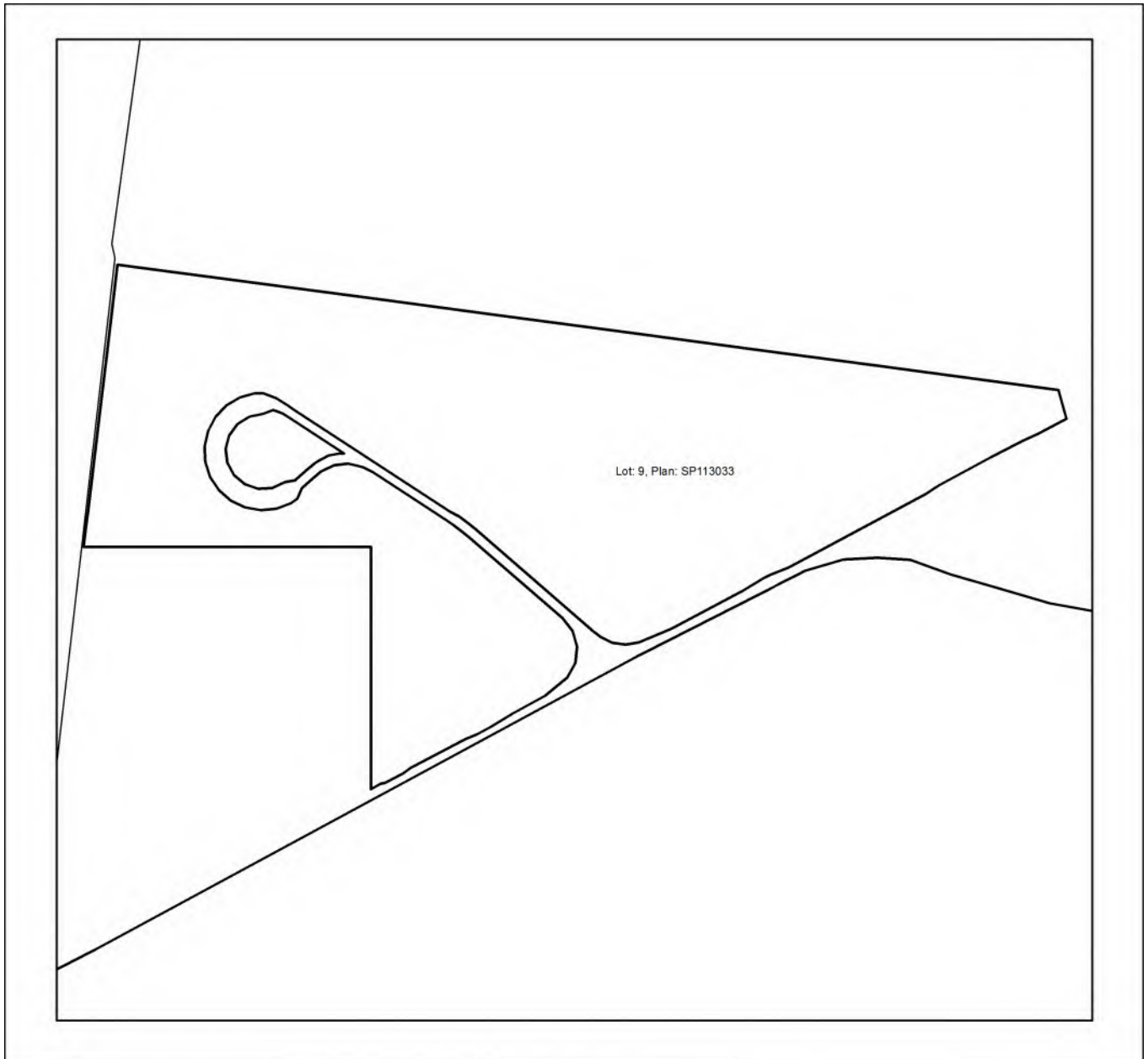
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








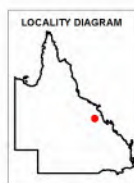
## 4.4 Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture



### Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture

#### Legend

-  Selected Lot and Plan
-  Towns
-  Rivers and creeks
-  Freeways / motorways; Highways
-  Secondary roads; Streets
- Agricultural land class A or B
-  A
-  B
-  Not class A or B



This product is projected into GDA 1994 MGA Zone 55

#### Disclaimer

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## 5. Protected plants framework (administered by the Department of Environment and Science (DES))

In Queensland, all plants that are native to Australia are protected plants under the [Nature Conservation Act 1992](#) (NCA). The NCA regulates the clearing of protected plants 'in the wild' (see [Operational policy: When a protected plant in Queensland is considered to be 'in the wild'](#)) that are listed as critically endangered, endangered, vulnerable or near threatened under the Act.

Please note that the protected plant clearing framework applies irrespective of the classification of the vegetation under the *Vegetation Management Act 1999* and any approval or exemptions given under another Act, for example, the *Vegetation Management Act 1999* or *Planning Regulation 2017*.

### 5.1 Clearing in high risk areas on the flora survey trigger map

The flora survey trigger map identifies high-risk areas for threatened and near threatened plants. These are areas where threatened or near threatened plants are known to exist or are likely to exist based on the habitat present. The flora survey trigger map for this property is provided in section 5.5.

If you are proposing to clear an area shown as high risk on the flora survey trigger map, a flora survey of the clearing impact area must be undertaken by a suitably qualified person in accordance with the [Flora survey guidelines](#). The main objective of a flora survey is to locate any threatened or near threatened plants that may be present in the clearing impact area.

If the flora survey identifies that threatened or near threatened plants are not present within the clearing impact area or clearing within 100m of a threatened or near threatened plant can be avoided, the clearing activity is exempt from a permit. An [exempt clearing notification form](#) must be submitted to the Department of Environment and Science, with a copy of the flora survey report, at least one week prior to clearing.

If the flora survey identifies that threatened or near threatened plants are present in, or within 100m of, the area to be cleared, a clearing permit is required before any clearing is undertaken. The flora survey report, as well as an impact management report, must be submitted with the [clearing permit application form](#).

### 5.2 Clearing outside high risk areas on the flora survey trigger map

In an area other than a high risk area, a clearing permit is only required where a person is, or becomes aware that threatened or near threatened plants are present in, or within 100m of, the area to be cleared. You must keep a copy of the flora survey trigger map for the area subject to clearing for five years from the day the clearing starts. If you do not clear within the 12 month period that the flora survey trigger map was printed, you need to print and check a new flora survey trigger map.

### 5.3 Exemptions

Many activities are 'exempt' under the protected plant clearing framework, which means that clearing of native plants that are in the wild can be undertaken for these activities with no need for a flora survey or a protected plant clearing permit. The Information sheet - General exemptions for the take of protected plants provides some of these exemptions.

Some exemptions under the NCA are the same as exempt clearing work (formerly known as exemptions) under the *Vegetation Management Act 1999* (i.e. listed in Schedule 21 of the Planning Regulations 2017) while some are different.

### 5.4 Contact information for DES

For further information on the protected plants framework:

**Phone** 1300 130 372 (and select option four)

**Email** [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

**Visit** <https://www.qld.gov.au/environment/plants-animals/plants/protected-plants>

## 5.5 Protected plants flora survey trigger map

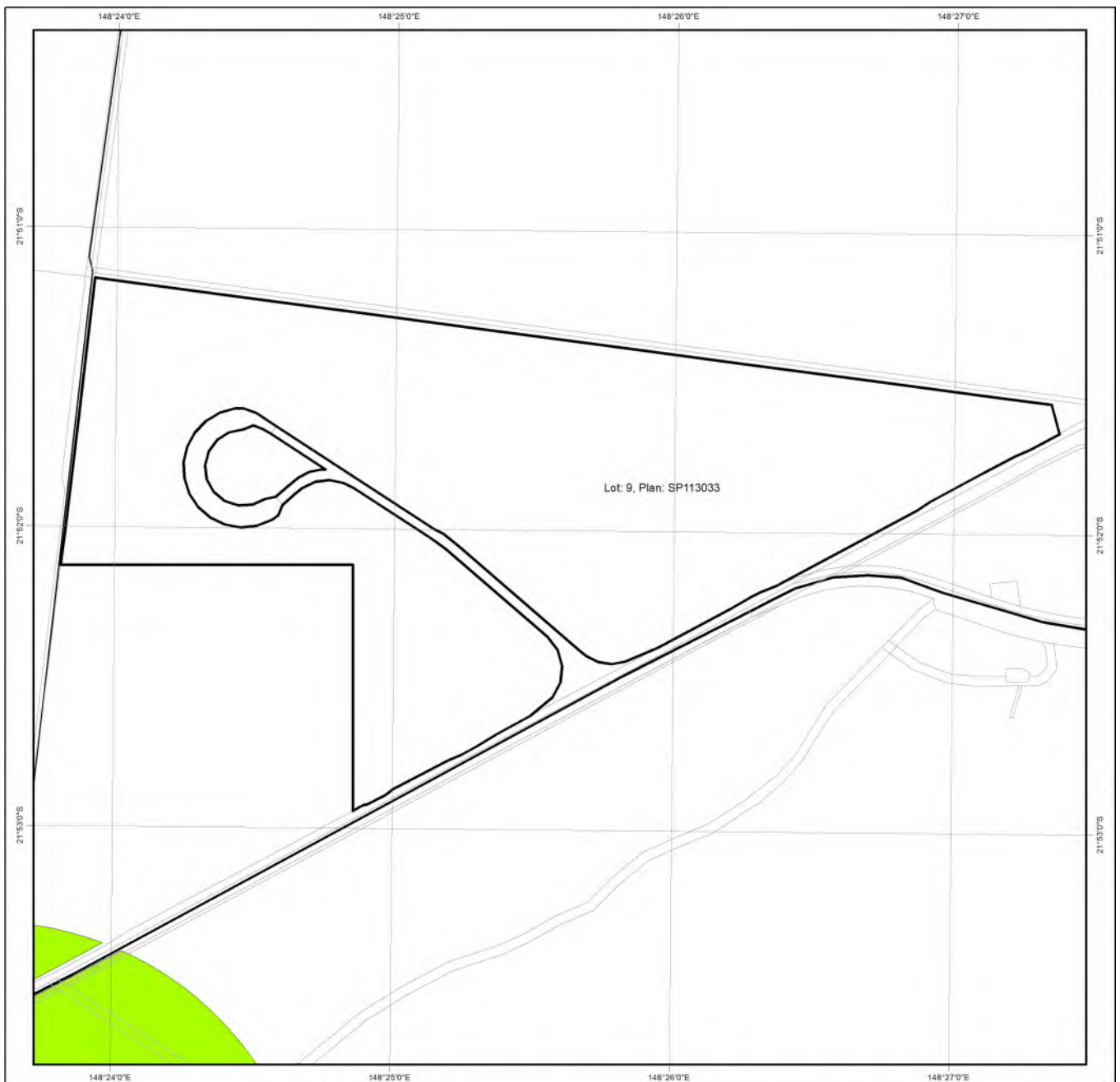
This map included may also be requested individually at: <https://apps.des.qld.gov.au/map-request/flora-survey-trigger/>.

### Updates to the data informing the flora survey trigger map

The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.






### Species information

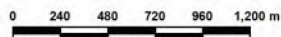
Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the [Queensland Spatial Catalogue](#), the Department of Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the [clearing of protected plants](#) for more information.



## Protected Plants Flora Survey Trigger Map

### Legend

-  Selected Lot and Plan
-  High risk area
-  Other land parcel boundaries
-  Freeways / motorways / highways
-  Secondary roads / streets



This product is projected into:  
GDA 1994 MGA Zone 55

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

Land parcel boundaries are provided as locational aid only.

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Science at [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

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## 6. Koala protection framework (administered by the Department of Environment and Science (DES))

The koala (*Phascolarctos cinereus*) is listed in Queensland as endangered by the Queensland Government under *Nature Conservation Act 1992* and by the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999*.

The Queensland Government's koala protection framework is comprised of the *Nature Conservation Act 1992*, the Nature Conservation (Animals) Regulation 2020, the Nature Conservation (Koala) Conservation Plan 2017, the *Planning Act 2016* and the Planning Regulation 2017.

### 6.1 Koala mapping

#### 6.1.1 Koala districts

The parts of Queensland where koalas are known to occur has been divided into three koala districts - koala district A, koala district B and koala district C. Each koala district is made up of areas with comparable koala populations (e.g. density, extent and significance of threatening processes affecting the population) which require similar management regimes.

Section 7.1 identifies which koala district your property is located in.

#### 6.1.2 Koala habitat areas

Koala habitat areas are areas of vegetation that have been determined to contain koala habitat that is essential for the conservation of a viable koala population in the wild based on the combination of habitat suitability and biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water). In order to protect this important koala habitat, clearing controls have been introduced into the Planning Regulation 2017 for development in koala habitat areas.

Please note that koala habitat areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley, Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

There are two different categories of koala habitat area (core koala habitat area and locally refined koala habitat), which have been determined using two different methodologies. These methodologies are described in the document [Spatial modelling in South East Queensland](#).

Section 7.2 shows any koala habitat area that exists on your property.

Under the Nature Conservation (Koala) Conservation Plan 2017, an owner of land (or a person acting on the owner's behalf with written consent) can request to make, amend or revoke a koala habitat area determination if they believe, on reasonable grounds, that the existing determination for all or part of their property is incorrect.

More information on requests to make, amend or revoke a koala habitat area determination can be found in the document [Guideline - Requests to make, amend or revoke a koala habitat area determination](#).

The koala habitat area map will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

Changes to the koala habitat area map which occur between annual updates because of a request to make, amend or revoke a koala habitat area determination can be viewed on the register of approved requests to make, amend or revoke a koala habitat area available at: <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/koalamaps>. The register includes the lot on plan for the change, the date the decision was made and the map issued to the landholder that shows areas determined to be koala habitat areas.

#### 6.1.3 Koala priority areas

Koala priority areas are large, connected areas that have been determined to have the highest likelihood of achieving conservation outcomes for koalas based on the combination of habitat suitability, biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water) and a koala conservation cost benefit analysis.

Conservation efforts will be prioritised in these areas to ensure the conservation of viable koala populations in the wild including a focus on management (e.g. habitat protection, habitat restoration and threat mitigation) and monitoring. This includes a prohibition on clearing in koala habitat areas that are in koala priority areas under the Planning Regulation 2017 (subject to some exemptions).

Please note that koala priority areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley,



Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

Section 7.2 identifies if your property is in a koala priority area.

#### 6.1.4 Identified koala broad-hectare areas

There are seven identified koala broad-hectare areas in SEQ. These are areas of koala habitat that are located in areas committed to meet development targets in the SEQ Regional Plan to accommodate SEQ's growing population including bring-forward Greenfield sites under the Queensland Housing Affordability Strategy and declared master planned areas under the repealed *Sustainable Planning Act 2009* and the repealed *Integrated Planning Act 1997*.

Specific assessment benchmarks apply to development applications for development proposed in identified koala broad-hectare areas to ensure koala conservation measures are incorporated into the proposed development.

Section 7.2 identifies if your property is in an identified koala broad-hectare area.

## 6.2 Koala habitat planning controls

On 7 February 2020, the Queensland Government introduced new planning controls to the Planning Regulation 2017 to strengthen the protection of koala habitat in South East Queensland (i.e. koala district A).

More information on these planning controls can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

As a high-level summary, the koala habitat planning controls make:

- development that involves interfering with koala habitat (defined below) in an area that is both a koala priority area and a koala habitat area, prohibited development (i.e. development for which a development application cannot be made);
- development that involves interfering with koala habitat (defined below) in an area that is a koala habitat area but is not a koala priority area, assessable development (i.e. development for which development approval is required); and
- development that is for extractive industries where the development involves interfering with koala habitat (defined below) in an area that is both a koala habitat area and a key resource area, assessable development (i.e. development for which development approval is required).

**Interfering with koala habitat means:**

- 1) Removing, cutting down, ringbarking, pushing over, poisoning or destroying in anyway, including by burning, flooding or draining native vegetation in a koala habitat area; but
- 2) Does not include destroying standing vegetation by stock or lopping a tree.

However, these planning controls do not apply if the development is exempted development as defined in Schedule 24 of the [Planning Regulation 2017](#). More information on exempted development can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

There are also assessment benchmarks that apply to development applications for:

- building works, operational works, material change of use or reconfiguration of a lot where:
  - the local government planning scheme makes the development assessable;
  - the premises includes an area that is both a koala priority area and a koala habitat area; and
  - the development does not involve interfering with koala habitat (defined above); and
- development in identified koala broad-hectare areas.

The [Guideline - Assessment Benchmarks in relation to Koala Habitat in South East Queensland assessment benchmarks](#) outlines these assessment benchmarks, the intent of these assessment benchmarks and advice on how proposed development may meet these assessment benchmarks.

## 6.3 Koala Conservation Plan clearing requirements

Section 10 and 11 of the [Nature Conservation \(Koala\) Conservation Plan 2017](#) prescribes requirements that must be met when clearing koala habitat in koala district A and koala district B.

These clearing requirements are independent to the koala habitat planning controls introduced into the Planning Regulation 2017, which means they must be complied with irrespective of any approvals or exemptions offered under other legislation.

Unlike the clearing controls prescribed in the Planning Regulation 2017 that are to protect koala habitat, the clearing requirements prescribed in the Nature Conservation (Koala) Conservation Plan 2017 are in place to prevent the injury or death of koalas when koala habitat is being cleared.

## 6.4 Contact information for DES

For further information on the koala protection framework:

**Phone** 13 QGOV (13 74 68)

**Email** [koala.assessment@des.qld.gov.au](mailto:koala.assessment@des.qld.gov.au)

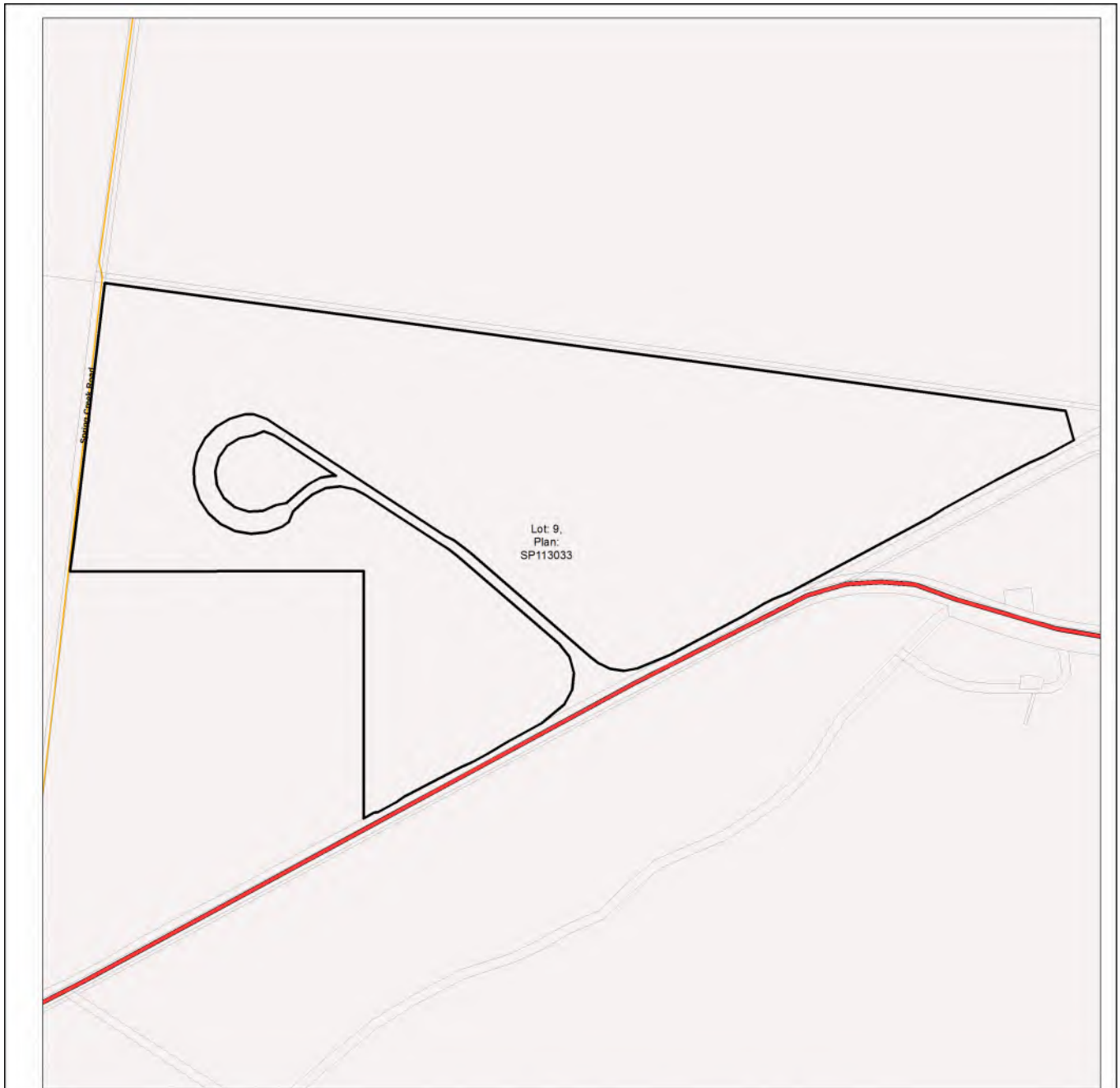
**Visit** <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping>

## 7. Koala protection framework details for Lot: 9 Plan: SP113033

### 7.1 Koala districts

Koala District C

## 7.2 Koala priority area, koala habitat area and identified koala broad-hectare area map

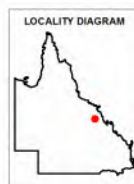


### Koala priority area, koala habitat area and identified koala broad-hectare area map

#### Legend

- Selected Lot and Plan
- Koala habitat area (core)
- Koala habitat area (locally refined)
- Koala priority area
- Identified koala broad-hectare area
- Cadastral Boundaries
- Towns
- Highway
- Connector
- Street/Local Road
- Major rivers/creeks
- Queensland

The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.



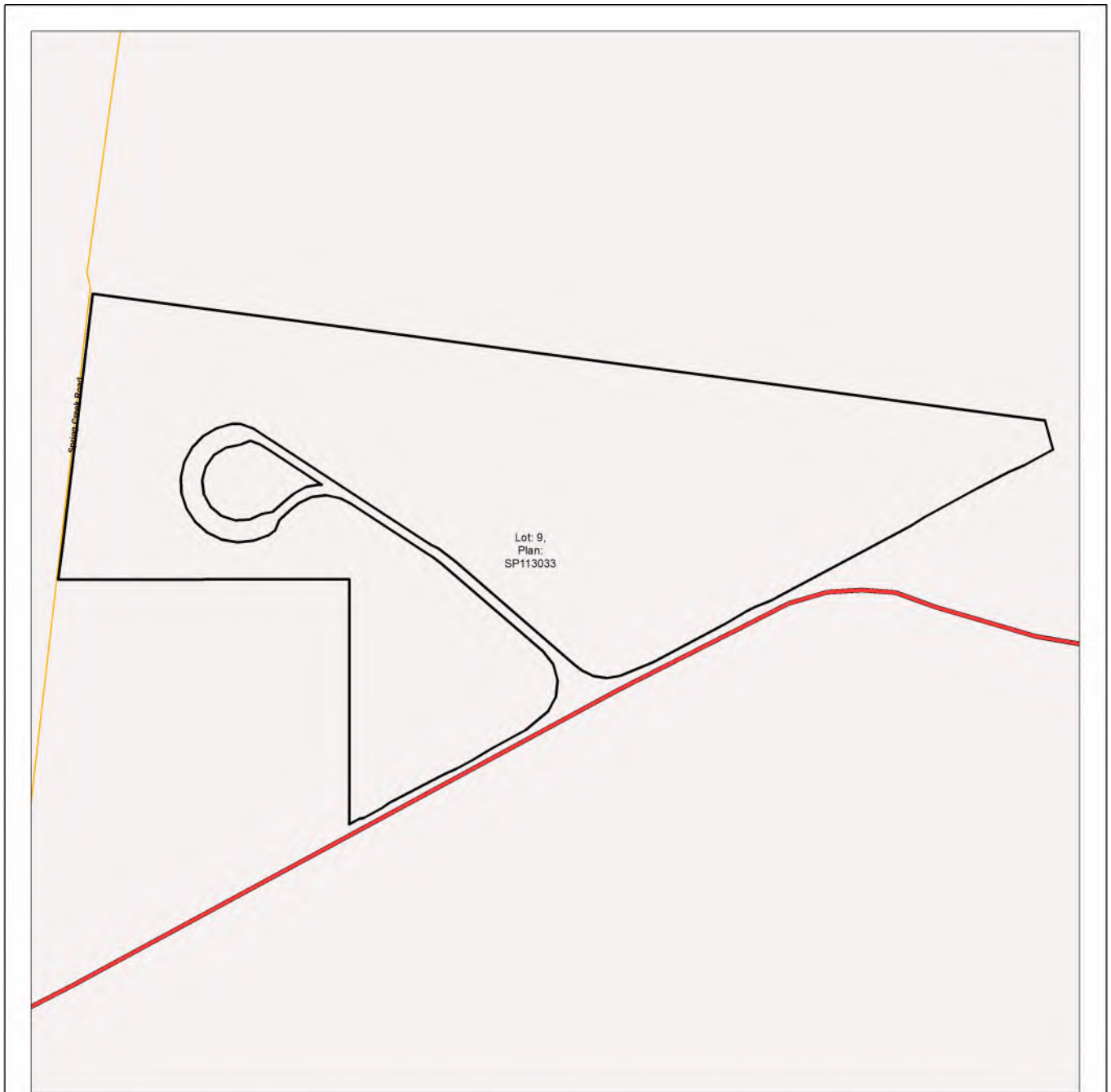
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The koala conservation plan maps will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.









In order to ensure that the most recent map for an area of interest can be accessed, prior to the annual update, a register of changes made to koala habitat areas as a result of the map amendment process will be available at:  
<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/>.  
The register will include lot on plan for the change, the date the decision was made and the map issued to the landholder which shows areas determined to be koala habitat areas.

## 7.3 Koala habitat regional ecosystems for core koala habitat areas



### Koala habitat regional ecosystems for core koala habitat areas

#### Legend

-  Selected Lot and Plan
-  Koala habitat area (core)
-  Towns
-  Highway
-  Connector
-  Street/Local Road
-  Major rivers/creeks
-  Queensland



N



The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.

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## 8. Other relevant legislation contacts list

Activity	Legislation	Agency	Contact details
<ul style="list-style-type: none"> <li>• Interference with overland flow</li> <li>• Earthworks, significant disturbance</li> </ul>	<i>Water Act 2000</i> <i>Soil Conservation Act 1986</i>	Department of Regional Development, Manufacturing and Water (Queensland Government) Department of Resources (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.rdmw.qld.gov.au">www.rdmw.qld.gov.au</a> <a href="http://www.resources.qld.gov.au">www.resources.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Indigenous Cultural Heritage</li> </ul>	<i>Aboriginal Cultural Heritage Act 2003</i> <i>Torres Strait Islander Cultural Heritage Act 2003</i>	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships	Ph: 13 QGOV (13 74 68) <a href="http://www.datsip.qld.gov.au">www.datsip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Mining and environmentally relevant activities</li> <li>• Infrastructure development (coastal)</li> <li>• Heritage issues</li> </ul>	<i>Environmental Protection Act 1994</i> <i>Coastal Protection and Management Act 1995</i> <i>Queensland Heritage Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Protected plants and protected areas</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 1300 130 372 (option 4) <a href="mailto:palm@des.qld.gov.au">palm@des.qld.gov.au</a> <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Koala mapping and regulations</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="mailto:Koala.assessment@des.qld.gov.au">Koala.assessment@des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Interference with fish passage in a watercourse, mangroves</li> <li>• Forestry activities on State land tenures</li> </ul>	<i>Fisheries Act 1994</i> <i>Forestry Act 1959</i>	Department of Agriculture and Fisheries (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.daf.qld.gov.au">www.daf.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Matters of National Environmental Significance including listed threatened species and ecological communities</li> </ul>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Department of Agriculture, Water and the Environment (Australian Government)	Ph: 1800 803 772 <a href="http://www.environment.gov.au">www.environment.gov.au</a>
<ul style="list-style-type: none"> <li>• Development and planning processes</li> </ul>	<i>Planning Act 2016</i> <i>State Development and Public Works Organisation Act 1971</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.dsdmip.qld.gov.au">www.dsdmip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Local government requirements</li> </ul>	<i>Local Government Act 2009</i> <i>Planning Act 2016</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) Your relevant local government office
<ul style="list-style-type: none"> <li>• Harvesting timber in the Wet Tropics of Qld World Heritage area</li> </ul>	<i>Wet Tropics World Heritage Protection and Management Act 1993</i>	Wet Tropics Management Authority	Ph: (07) 4241 0500 <a href="http://www.wettropics.gov.au">www.wettropics.gov.au</a>

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Cacatuidae	<i>Calyptorhynchus lathami erebus</i>	glossy black-cockatoo (northern)		V		4
animals	birds	Columbidae	<i>Geophaps scripta scripta</i>	squatter pigeon (southern subspecies)		V	V	14
animals	mammals	Emballonuridae	<i>Taphozous australis</i>	coastal sheathtail bat		NT		1
animals	mammals	Phascolarctidae	<i>Phascolarctos cinereus</i>	koala		E	E	41
animals	mammals	Pseudocheiridae	<i>Petauroides volans volans</i>	southern greater glider		E	E	52
animals	reptiles	Elapidae	<i>Denisonia maculata</i>	ornamental snake		V	V	5
plants	land plants	Capparaceae	<i>Capparis humistrata</i>			E		1/1
plants	land plants	Combretaceae	<i>Macropteranthes leiocaulis</i>			NT		1/1
plants	land plants	Euphorbiaceae	<i>Bertya pedicellata</i>			NT		14/7
plants	land plants	Poaceae	<i>Dichanthium queenslandicum</i>			V	E	2/2
plants	land plants	Poaceae	<i>Digitaria porrecta</i>			NT		1/1

#### CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*.

The codes are Extinct (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*.

The values of EPBC are Extinct (EX), Extinct in the Wild (XW), Critically Endangered (CE), Endangered (E), Vulnerable (V) and Conservation Dependent (CD).

Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).

This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.

This number is output as 999 if it equals or exceeds this value.



## **Vegetation management report**

For Lot: 5270 Plan: SP144274

31/10/2023

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# Recent changes

## Updated mapping

On September 6 2023, the Department of Environment and Science updated the Protected Plant Flora Survey Trigger Map to include recent species classification changes and Queensland Herbarium scientific updates. The updated map is included in Section 5 of the following report.

Updated vegetation mapping was released on 8 September 2022 and includes the most recent Queensland Herbarium scientific updates to the Regulated Vegetation Management Map, regional ecosystems, wetland, high-value regrowth and essential habitat mapping.

The Department of Environment and Science have also updated their koala protection mapping to align with the Queensland Herbarium scientific updates.

## Overview

Based on the lot on plan details you have supplied, this report provides the following detailed information:

**Property details** - information about the specified Lot on Plan, lot size, local government area, bioregion(s), subregion(s) and catchment(s);

**Vegetation management framework** - an explanation of the application of the framework and contact details for the Department of Resources who administer the framework;

**Vegetation management framework details for the specified Lot on Plan** including:

- the vegetation management categories on the property;
- the vegetation management regional ecosystems on the property;
- vegetation management watercourses or drainage features on the property;
- vegetation management wetlands on the property;
- vegetation management essential habitat on the property;
- whether any area management plans are associated with the property;
- whether the property is coastal or non-coastal; and
- whether the property is mapped as Agricultural Land Class A or B;

**Protected plant framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework, including:

- high risk areas on the protected plant flora survey trigger map for the property;

**Koala protection framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework; and

**Koala protection framework details for the specified Lot on Plan** including:

- the koala district the property is located in;
- koala priority areas on the property;
- core and locally refined koala habitat areas on the property;
- whether the lot is located in an identified koala broad-hectare area; and
- koala habitat regional ecosystems on the property for core koala habitat areas.

This information will assist you to determine your options for managing vegetation under:

- the vegetation management framework, which may include:

- exempt clearing work;
- accepted development vegetation clearing code;
- an area management plan;
- a development approval;

- the protected plant framework, which may include:

- the need to undertake a flora survey;
- exempt clearing;
- a protected plant clearing permit;

- the koala protection framework, which may include:

- exempted development;

- a development approval;
- the need to undertake clearing sequentially and in the presence of a koala spotter.

## Other laws

The clearing of native vegetation is regulated by both Queensland and Australian legislation, and some local governments also regulate native vegetation clearing. You may need to obtain an approval or permit under another Act, such as the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Section 8 of this guide provides contact details of other agencies you should confirm requirements with, before commencing vegetation clearing.

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# 1. Property details

## 1.1 Tenure and title area

All of the lot, plan, tenure and title area information associated with property Lot: 5270 Plan: SP144274, are listed in Table 1.

**Table 1: Lot, plan, tenure and title area information for the property**

Lot	Plan	Tenure	Property title area (sq metres)
5270	SP144274	Lands Lease	90,200,000
PP	SP251694	Easement	160,800
A	KL181	Easement	0.0

The tenure of the land may affect whether clearing is considered exempt clearing work or may be carried out under an accepted development vegetation clearing code.

### **Does this property have a freehold tenure and is in the Wet Tropics of Queensland World Heritage Area?**

No, this property is not located in the Wet Tropics of Queensland World Heritage Area.

## 1.2 Property location

Table 2 provides a summary of the locations for property Lot: 5270 Plan: SP144274, in relation to natural and administrative boundaries.

**Table 2: Property location details**

Local Government(s)
Isaac Regional

Bioregion(s)	Subregion(s)
Brigalow Belt	Northern Bowen Basin

Catchment(s)
Fitzroy

## 2. Vegetation management framework (administered by the Department of Resources)

The *Vegetation Management Act 1999* (VMA), the *Vegetation Management Regulation 2012*, the *Planning Act 2016* and the *Planning Regulation 2017*, in conjunction with associated policies and codes, form the Vegetation Management Framework.

The VMA does not apply to all land tenures or vegetation types. State forests, national parks, forest reserves and some tenures under the *Forestry Act 1959* and *Nature Conservation Act 1992* are not regulated by the VMA. Managing or clearing vegetation on these tenures may require approvals under these laws.

The following native vegetation is not regulated under the VMA but may require permit(s) under other laws:

- grass or non-woody herbage;
- a plant within a grassland regional ecosystem prescribed under Schedule 5 of the *Vegetation Management Regulation 2012*; and
- a mangrove.

### 2.1 Exempt clearing work

Exempt clearing work is an activity for which you do not need to notify the Department of Resources or obtain an approval under the vegetation management framework. Exempt clearing work was previously known as exemptions.

In areas that are mapped as Category X (white in colour) on the regulated vegetation management map (see section 4.1), and where the land tenure is freehold, indigenous land and leasehold land for agriculture and grazing purposes, the clearing of vegetation is considered exempt clearing work and does not require notification or development approval under the vegetation management framework. For all other land tenures, contact the Department of Resources before commencing clearing to ensure that the proposed activity is exempt clearing work.

A range of routine property management activities are considered exempt clearing work. A list of exempt clearing work is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/exemptions>.

Exempt clearing work may be affected if the proposed clearing area is subject to development approval conditions, a covenant, an environmental offset, an exchange area, a restoration notice, or an area mapped as Category A. Exempt clearing work may require approval under other Commonwealth, State or Local Government laws, or local government planning schemes. Contact the Department of Resources prior to clearing in any of these areas.

### 2.2 Accepted development vegetation clearing codes

Some clearing activities can be undertaken under an accepted development vegetation clearing code. The codes can be downloaded at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/codes>

If you intend to clear vegetation under an accepted development vegetation clearing code, you must notify the Department of Resources before commencing. The information in this report will assist you to complete the online notification form.

You can complete the online form at

<https://apps.dnrm.qld.gov.au/vegetation/>

## 2.3 Area management plans

Area Management Plans (AMP) provide an alternative approval system for vegetation clearing under the vegetation management framework. They list the purposes and clearing conditions that have been approved for the areas covered by the plan. It is not necessary to use an AMP, even when an AMP applies to your property.

On 8 March 2020, AMPs ended for fodder harvesting, managing thickened vegetation and managing encroachment. New notifications cannot be made for these AMPs. You will need to consider options for fodder harvesting, managing thickened vegetation or encroachment under a relevant accepted development vegetation clearing code or apply for a development approval.

New notifications can be made for all other AMPs. These will continue to apply until their nominated end date.

If an Area Management Plan applies to your property for which you can make a new notification, it will be listed in Section 3.6 of this report. Before clearing under one of these AMPs, you must first notify the Department of Resources and then follow the conditions and requirements listed in the AMP.

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/area-management-plans>

## 2.4 Development approvals

If under the vegetation management framework your proposed clearing is not exempt clearing work, or is not permitted under an accepted development vegetation clearing code, or an AMP, you may be able to apply for a development approval.

Information on how to apply for a development approval is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/development>

## 2.5. Contact information for the Department of Resources

For further information on the vegetation management framework:

**Phone** 135VEG (135 834)

**Email** [vegetation@resources.qld.gov.au](mailto:vegetation@resources.qld.gov.au)

**Visit** <https://www.resources.qld.gov.au/?contact=vegetation> to submit an online enquiry.

### 3. Vegetation management framework for Lot: 5270 Plan: SP144274

#### 3.1 Vegetation categories

The vegetation categories on your property are shown on the regulated vegetation management map in section 4.1 of this report. A summary of vegetation categories on the subject lot are listed in Table 3. Descriptions for these categories are shown in Table 4.

**Table 3: Vegetation categories for subject property. Total area: 8763.09ha**

Vegetation category	Area (ha)
Category B	5289.9
Category C	41.0
Category R	5.0
Category X	3427.2

**Table 4: Description of vegetation categories**

Category	Colour on Map	Description	Requirements / options under the vegetation management framework
A	red	Compliance areas, environmental offset areas and voluntary declaration areas	Special conditions apply to Category A areas. Before clearing, contact the Department of Resources to confirm any requirements in a Category A area.
B	dark blue	Remnant vegetation areas	Exempt clearing work, or notification and compliance with accepted development vegetation clearing codes, area management plans or development approval.
C	light blue	High-value regrowth areas	Exempt clearing work, or notification and compliance with managing Category C regrowth vegetation accepted development vegetation clearing code.
R	yellow	Regrowth within 50m of a watercourse or drainage feature in the Great Barrier Reef catchment areas	Exempt clearing work, or notification and compliance with managing Category R regrowth accepted development vegetation clearing code or area management plans.
X	white	Clearing on freehold land, indigenous land and leasehold land for agriculture and grazing purposes is considered exempt clearing work under the vegetation management framework. Contact the Department of Resources to clarify whether a development approval is required for other State land tenures.	No permit or notification required on freehold land, indigenous land and leasehold land for agriculture and grazing. A development approval may be required for some State land tenures.

#### Property Map of Assessable Vegetation (PMAV)

The following Property Map of Assessable Vegetation (PMAVs) may be present on this property:

**Reference number**

2009/009325

2012/005184

**Reference number**

2007/010500

2011/007674



## 3.2 Regional ecosystems

The endangered, of concern and least concern regional ecosystems on your property are shown on the vegetation management supporting map in section 4.2 and are listed in Table 5.

A description of regional ecosystems can be accessed online at

<https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/descriptions/>

**Table 5: Regional ecosystems present on subject property**

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
11.3.1	Endangered	B	7.05	Acacia harpophylla and/or Casuarina cristata open forest on alluvial plains	Mid-dense
11.3.1	Endangered	R	less than 0.01	Acacia harpophylla and/or Casuarina cristata open forest on alluvial plains	Mid-dense
11.3.25	Least concern	B	235.42	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.25	Least concern	C	3.46	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.25	Least concern	R	0.27	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.4	Of concern	B	357.77	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.3.4	Of concern	C	4.59	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.3.4	Of concern	R	0.06	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.5.15	Least concern	B	136.19	Semi-evergreen vine thicket on Cainozoic sand plains and/or remnant surfaces	Dense
11.5.15	Least concern	C	9.30	Semi-evergreen vine thicket on Cainozoic sand plains and/or remnant surfaces	Dense
11.5.15	Least concern	R	0.15	Semi-evergreen vine thicket on Cainozoic sand plains and/or remnant surfaces	Dense
11.5.3	Least concern	B	1,279.73	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.5.3	Least concern	C	12.24	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.5.3	Least concern	R	1.41	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces	Sparse
11.7.2	Least concern	B	199.74	Acacia spp. woodland on Cainozoic lateritic duricrust. Scarp retreat zone	Sparse
11.7.2	Least concern	C	0.38	Acacia spp. woodland on Cainozoic lateritic duricrust. Scarp retreat zone	Sparse
11.7.2	Least concern	R	0.09	Acacia spp. woodland on Cainozoic lateritic duricrust. Scarp retreat zone	Sparse
11.9.1	Endangered	B	10.83	Acacia harpophylla-Eucalyptus cambageana woodland to open forest on fine-grained sedimentary rocks	Mid-dense

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
11.9.1	Endangered	C	0.09	Acacia harpophylla-Eucalyptus cambageana woodland to open forest on fine-grained sedimentary rocks	Mid-dense
11.9.1	Endangered	R	0.01	Acacia harpophylla-Eucalyptus cambageana woodland to open forest on fine-grained sedimentary rocks	Mid-dense
11.9.2	Least concern	B	103.79	Eucalyptus melanophloia +/- E. orgadophila woodland to open woodland on fine-grained sedimentary rocks	Sparse
11.9.2	Least concern	R	0.87	Eucalyptus melanophloia +/- E. orgadophila woodland to open woodland on fine-grained sedimentary rocks	Sparse
11.9.3	Least concern	B	381.82	Dichanthium spp., Astrebla spp. grassland on fine-grained sedimentary rocks	Grassland Sch 4
11.9.3	Least concern	C	2.22	Dichanthium spp., Astrebla spp. grassland on fine-grained sedimentary rocks	Grassland Sch 4
11.9.3	Least concern	R	0.01	Dichanthium spp., Astrebla spp. grassland on fine-grained sedimentary rocks	Grassland Sch 4
11.9.4	Of concern	B	69.60	Semi-evergreen vine thicket or Acacia harpophylla with a semi-evergreen vine thicket understorey on fine-grained sedimentary rocks	Dense
11.9.4	Of concern	R	0.42	Semi-evergreen vine thicket or Acacia harpophylla with a semi-evergreen vine thicket understorey on fine-grained sedimentary rocks	Dense
11.9.5	Endangered	B	732.38	Acacia harpophylla and/or Casuarina cristata open forest to woodland on fine-grained sedimentary rocks	Mid-dense
11.9.5	Endangered	C	6.55	Acacia harpophylla and/or Casuarina cristata open forest to woodland on fine-grained sedimentary rocks	Mid-dense
11.9.5	Endangered	R	1.36	Acacia harpophylla and/or Casuarina cristata open forest to woodland on fine-grained sedimentary rocks	Mid-dense
11.9.7	Of concern	B	1,503.65	Eucalyptus populnea, Eremophila mitchellii shrubby woodland on fine-grained sedimentary rocks	Sparse
11.9.7	Of concern	C	1.85	Eucalyptus populnea, Eremophila mitchellii shrubby woodland on fine-grained sedimentary rocks	Sparse
11.9.7	Of concern	R	0.29	Eucalyptus populnea, Eremophila mitchellii shrubby woodland on fine-grained sedimentary rocks	Sparse
11.9.9	Least concern	B	271.91	Eucalyptus crebra woodland on fine-grained sedimentary rocks	Sparse
11.9.9	Least concern	C	0.32	Eucalyptus crebra woodland on fine-grained sedimentary rocks	Sparse
11.9.9	Least concern	R	0.05	Eucalyptus crebra woodland on fine-grained sedimentary rocks	Sparse
non-rem	None	X	3,427.15	None	None

Please note:

1. All area and area derived figures included in this table have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

2. If Table 5 contains a Category 'plant', please be aware that this refers to 'plantations' such as forestry, and these areas are considered non-remnant under the VMA.

The VMA status of the regional ecosystem (whether it is endangered, of concern or least concern) also determines if any of the following are applicable:

- exempt clearing work;
- accepted development vegetation clearing codes;
- performance outcomes in State Code 16 of the State Development Assessment Provisions (SDAP).

### 3.3 Watercourses

Vegetation management watercourses and drainage features for this property are shown on the vegetation management supporting map in section 4.2.

### 3.4 Wetlands

There are no vegetation management wetlands present on this property.

### 3.5 Essential habitat

Under the VMA, essential habitat for protected wildlife is native wildlife prescribed under the *Nature Conservation Act 1992* (NCA) as critically endangered, endangered, vulnerable or near-threatened wildlife.

Essential habitat for protected wildlife includes suitable habitat on the lot, or where a species has been known to occur up to 1.1 kilometres from a lot on which there is assessable vegetation. These important habitat areas are protected under the VMA.

Any essential habitat on this property will be shown as blue hatching on the vegetation supporting map in section 4.2.

If essential habitat is identified on the lot, information about the protected wildlife species is provided in Table 6 below. The numeric labels on the vegetation management supporting map can be cross referenced with Table 6 to outline the essential habitat factors for that particular species. There may be essential habitat for more than one species on each lot, and areas of Category A, Category B and Category C can be mapped as Essential Habitat.

Essential habitat is compiled from a combination of species habitat models and buffered species records. Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated. Essential habitat, for protected wildlife, means an area of vegetation shown on the Regulated Vegetation Management Map -

- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database. Essential habitat factors are comprised of - regional ecosystem (mandatory for most species), vegetation community, altitude, soils, position in landscape; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

If there is no essential habitat mapping shown on the vegetation management supporting map for this lot, and there is no table in the sections below, it confirms that there is no essential habitat on the lot.

#### Category A and/or Category B and/or Category C

**Table 6: Essential habitat in Category A and/or Category B and/or Category C**

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
483	Denisonia maculata	ornamental snake	V	Riparian woodland/open forest and shrub/woodland including Brigalow Acacia harpophylla; into drier habitats in summer.	100-450m.	Cracking clay with gilgai/soil crack microrelief and sandy loam substrates.	Near freshwater waterholes/creeks and low lying poorly drained areas that are frequently inundated by freshwater.

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
1785	Geophaps scripta scripta	squatter pigeon (southern subspecies)	V	Dry eucalypt woodland (including poplar box, spotted gum, yellow box, acacia and callitris), with sparse short grass, often on sandy areas near to permanent water; grassy eucalypt woodlands. Nest on ground near or under grass tussock, log or low bush.	None	None	Gravelly ridges, traprock and river flats.

Label	Regional Ecosystem (mandatory unless otherwise specified)
483	10.3.2, 10.3.3, 10.3.4, 10.3.7, 10.3.13, 10.3.14, 10.3.15, 10.3.16, 10.3.27, 10.3.30, 10.3.31, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.4.8, 10.5.5, 10.9.1, 10.9.6, 10.9.7, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.9, 11.3.10, 11.3.12, 11.3.15, 11.3.21, 11.3.23, 11.3.24, 11.3.25, 11.3.27, 11.3.28, 11.3.31, 11.3.34, 11.3.37, 11.3.38, 11.3.40, 11.4.2, 11.4.3, 11.4.4, 11.4.6, 11.4.7, 11.4.8, 11.4.9, 11.4.11, 11.5.2, 11.5.3, 11.5.16, 11.8.11, 11.9.1, 11.9.2, 11.9.3, 11.9.5, 11.9.7, 11.9.11, 11.9.12, 11.9.14, 11.11.15, 11.12.6
1785	8.2.1, 8.2.7, 8.2.8, 8.2.12, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.13, 8.5.2, 8.5.3, 8.5.5, 8.5.6, 8.9.1, 8.11.1, 8.11.3, 8.11.4, 8.11.5, 8.11.6, 8.11.8, 8.12.6, 8.12.7, 8.12.9, 8.12.12, 8.12.14, 8.12.20, 8.12.22, 8.12.23, 8.12.25, 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.3.6, 9.3.7, 9.3.8, 9.3.9, 9.3.11, 9.3.13, 9.3.14, 9.3.15, 9.3.16, 9.3.17, 9.3.18, 9.3.19, 9.3.20, 9.3.21, 9.3.22, 9.3.23, 9.4.1, 9.4.2, 9.4.3, 9.5.3, 9.5.4, 9.5.5, 9.5.6, 9.5.7, 9.5.8, 9.5.9, 9.5.10, 9.5.11, 9.5.12, 9.5.16, 9.7.1, 9.7.2, 9.7.3, 9.7.5, 9.7.6, 9.8.1, 9.8.2, 9.8.4, 9.8.5, 9.8.6, 9.8.9, 9.8.10, 9.8.11, 9.10.1, 9.10.3, 9.10.6, 9.10.7, 9.10.8, 9.11.1, 9.11.2, 9.11.3, 9.11.4, 9.11.5, 9.11.7, 9.11.10, 9.11.11, 9.11.12, 9.11.13, 9.11.15, 9.11.16, 9.11.17, 9.11.18, 9.11.19, 9.11.23, 9.11.26, 9.11.28, 9.11.29, 9.11.31, 9.11.32, 9.12.1, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7, 9.12.10, 9.12.11, 9.12.12, 9.12.13, 9.12.16, 9.12.17, 9.12.18, 9.12.19, 9.12.20, 9.12.21, 9.12.22, 9.12.23, 9.12.24, 9.12.26, 9.12.28, 9.12.30, 9.12.31, 9.12.33, 9.12.35, 9.12.37, 9.12.39, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.9, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.19, 10.3.20, 10.3.27, 10.3.28, 10.3.30, 10.3.31, 10.4.3, 10.5.1, 10.5.2, 10.5.4, 10.5.5, 10.5.7, 10.5.9, 10.5.10, 10.5.11, 10.5.12, 10.7.2, 10.7.3, 10.7.5, 10.7.11, 10.7.12, 10.9.1, 10.9.2, 10.9.3, 10.9.5, 10.10.1, 10.10.3, 10.10.4, 10.10.5, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.7, 11.3.8, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.23, 11.3.25, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.35, 11.3.36, 11.3.37, 11.3.38, 11.3.39, 11.4.2, 11.4.3, 11.4.5, 11.4.8, 11.4.10, 11.4.12, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.8, 11.5.9, 11.5.12, 11.5.13, 11.5.14, 11.5.17, 11.5.20, 11.5.21, 11.7.1, 11.7.2, 11.7.4, 11.7.6, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.9, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.2, 11.9.3, 11.9.7, 11.9.9, 11.9.14, 11.10.1, 11.10.4, 11.10.6, 11.10.7, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.15, 11.11.16, 11.11.19, 11.11.20, 11.12.1, 11.12.2, 11.12.3, 11.12.5, 11.12.6, 11.12.7, 11.12.8, 11.12.9, 11.12.10, 11.12.11, 11.12.12, 11.12.13, 11.12.14, 11.12.17, 11.12.20, 12.2.5, 12.2.6, 12.2.7, 12.2.10, 12.2.11, 12.3.3, 12.3.6, 12.3.10, 12.3.12, 12.3.14, 12.3.18, 12.3.19, 12.5.1, 12.5.2, 12.5.4, 12.5.5, 12.5.7, 12.5.8, 12.5.11, 12.5.12, 12.7.1, 12.7.2, 12.8.14, 12.8.16, 12.8.17, 12.8.19, 12.9-10.5, 12.9-10.7, 12.9-10.8, 12.9-10.12, 12.9-10.13, 12.9-10.25, 12.9-10.26, 12.9-10.28, 12.11.5, 12.11.7, 12.11.8, 12.11.14, 12.11.15, 12.11.20, 12.11.21, 12.11.22, 12.11.24, 12.11.25, 12.11.26, 12.11.27, 12.11.28, 12.12.7, 12.12.8, 12.12.9, 12.12.12, 12.12.14, 12.12.21, 12.12.22, 12.12.23, 12.12.24, 12.12.25, 12.12.27, 13.3.1, 13.3.4, 13.3.7, 13.11.1, 13.11.3, 13.11.4, 13.11.8, 13.12.2, 13.12.3, 13.12.5, 13.12.8, 13.12.9, 13.12.10

### 3.6 Area Management Plan(s)

Nil

### 3.7 Coastal or non-coastal

For the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP), this property is regarded as\*

Non Coastal

\*See also Map 4.3

### 3.8 Agricultural Land Class A or B

The following can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code:

**Does this lot contain land that is mapped as Agricultural Land Class A or B in the State Planning Interactive Mapping System?**

No Class A

No Class B

Note - This confirms Agricultural Land Classes as per the State Planning Interactive Mapping System only. This response does not include Agricultural Land Classes identified under local government planning schemes. For further information, check the Planning Scheme for your local government area.

See Map 4.4 to identify the location and extent of Class A and/or Class B Agricultural land on Lot: 5270 Plan: SP144274.

## 4. Vegetation management framework maps

Vegetation management maps included in this report may also be requested individually at:

<https://www.resources.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form>

### **Regulated vegetation management map**

The regulated vegetation management map shows vegetation categories needed to determine clearing requirements. These maps are updated monthly to show new [property maps of assessable vegetation \(PMAV\)](#).

### **Vegetation management supporting map**

The vegetation management supporting map provides information on regional ecosystems, wetlands, watercourses and essential habitat.

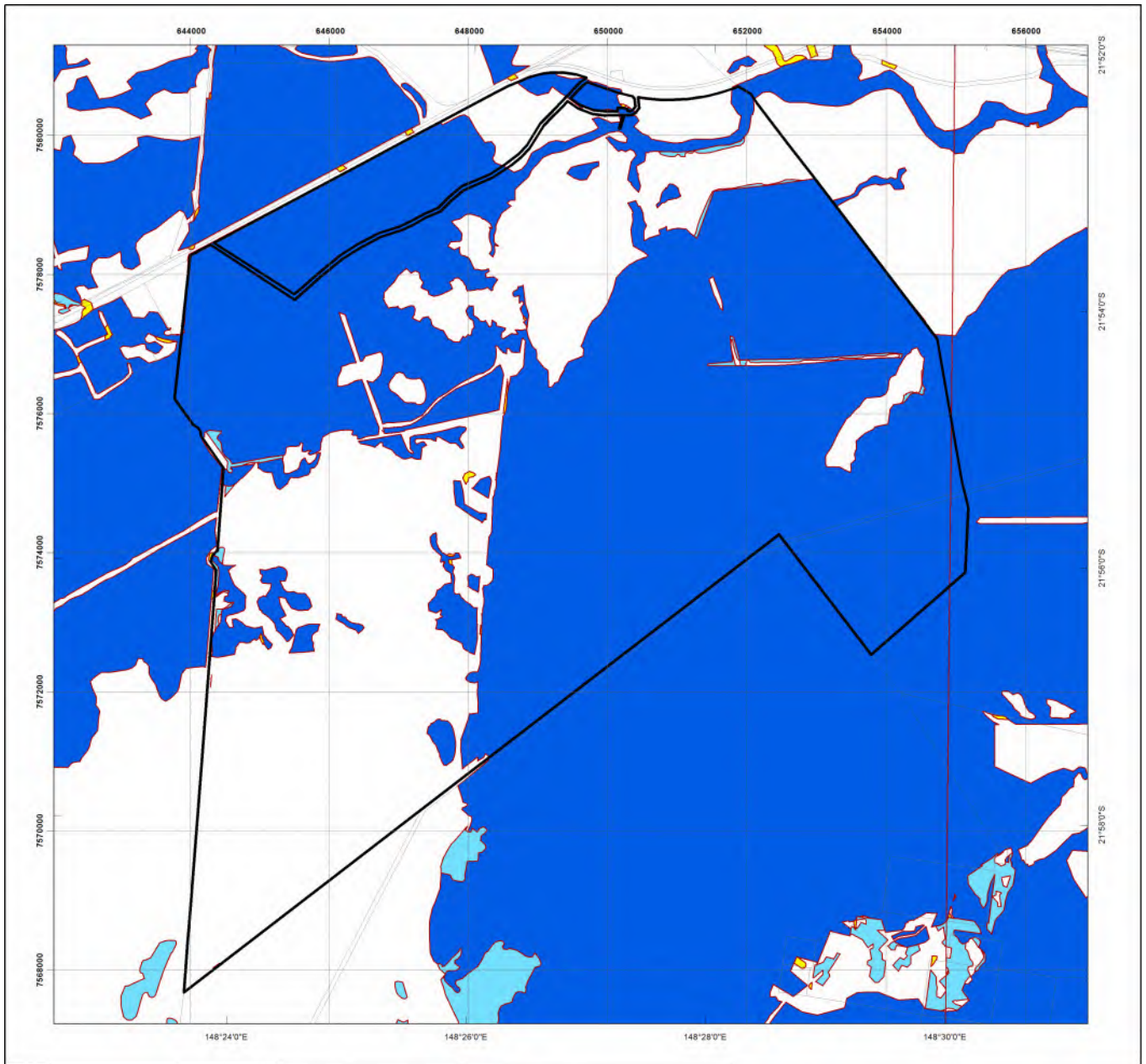
### **Coastal/non-coastal map**

The coastal/non-coastal map confirms whether the lot, or which parts of the lot, are considered coastal or non-coastal for the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP).

### **Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture**









The Agricultural Land Class map confirms the location and extent of land mapped as Agricultural Land Classes A or B as identified on the State Planning Interactive Mapping System. Please note that this map does not include areas identified as Agricultural Land Class A or B in local government planning schemes. This map can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code.

# 4.1 Regulated vegetation management map



## Regulated Vegetation Management Map

### Legend

-  Selected Lot and Plan
-  Category A area (Vegetation offsets/compliance notices/VDecs)
-  Category B area (Remnant vegetation)
-  Category C area (High-value regrowth vegetation)
-  Category R area (Reef regrowth watercourse vegetation)
-  Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
-  Water
-  Other land parcel boundaries



This product is projected into:  
GDA 1994 MGA Zone 55

### Disclaimer:

While every care is taken to ensure the accuracy of this product, the Department of Resources makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

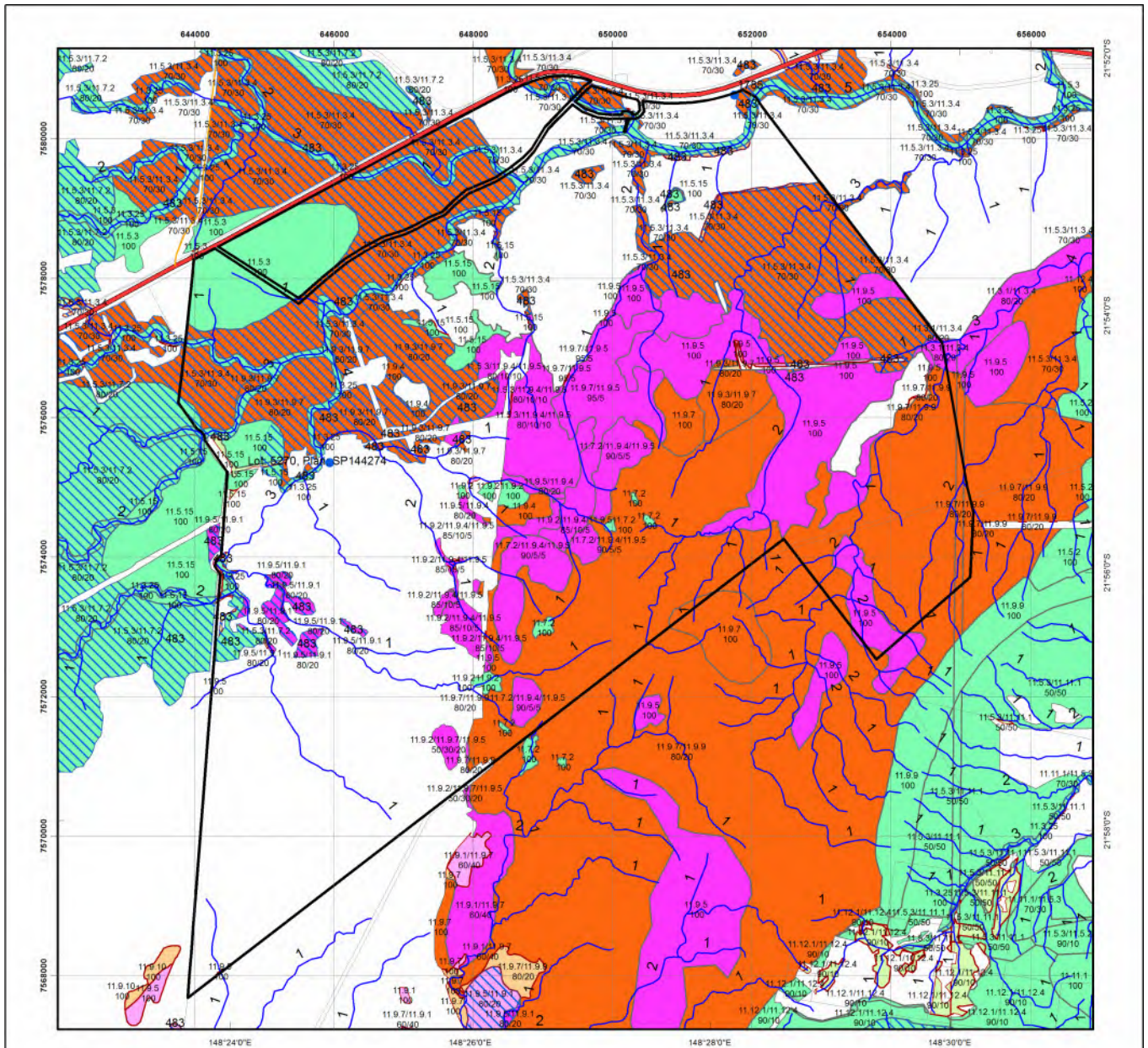
Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.



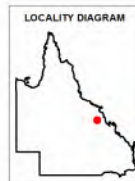
## 4.2 Vegetation management supporting map



### Vegetation Management Supporting Map

#### Legend

- Selected Lot and Plan
- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries



0 575 1,150 1,725 2,300 2,875 m

This product is projected into:  
GDA 1994 MGA Zone 55

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

#### Disclaimer:

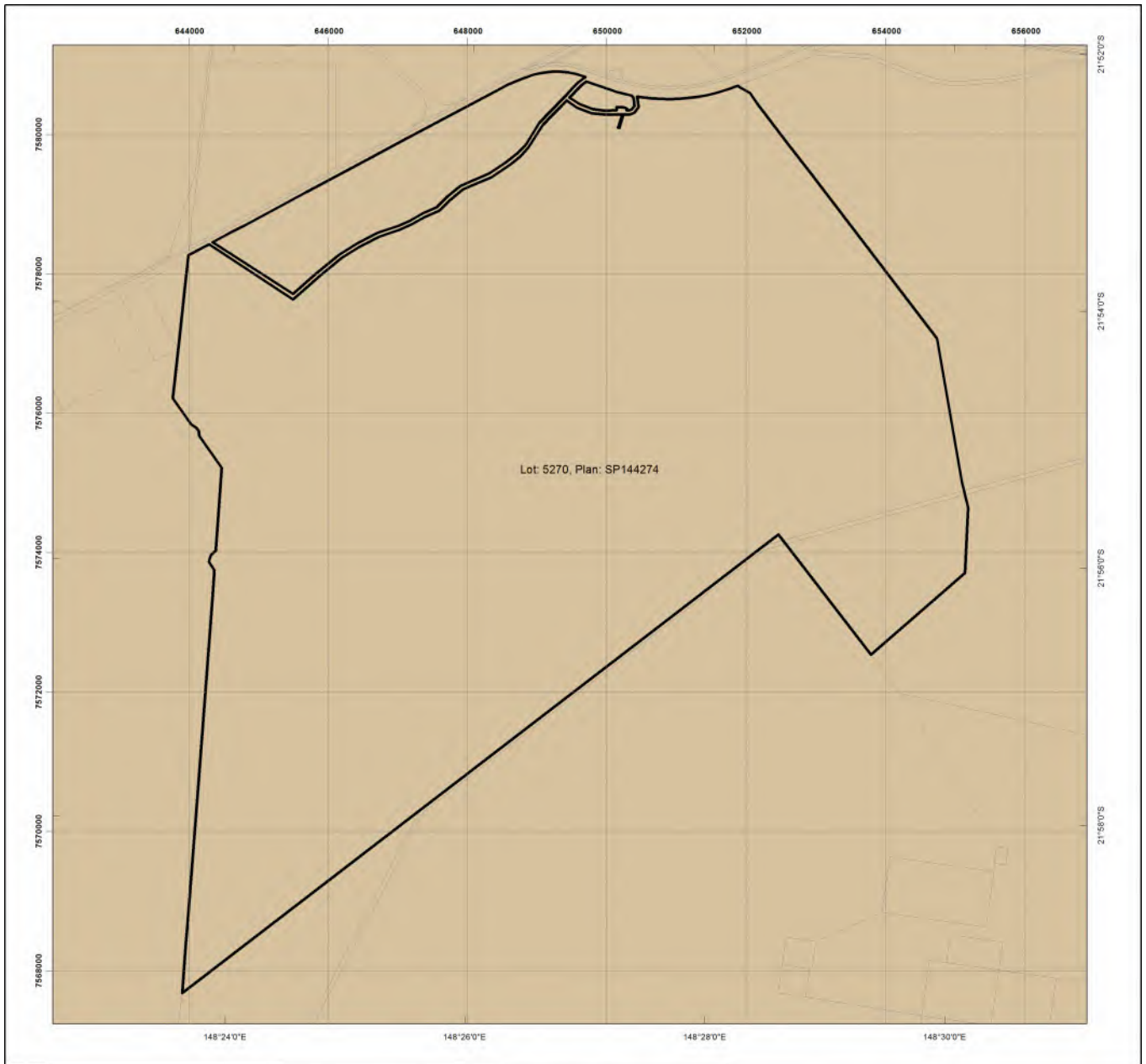
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Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>





Land parcel boundaries are provided as locational aid only.

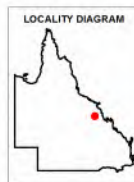
# 4.3 Coastal/non-coastal map



## Coastal/Non Coastal Map

### Legend

-  Selected Lot and Plan
-  Coastal
-  Non Coastal
-  Other land parcel boundaries



This product is projected into:  
GDA 1994 MGA Zone 55

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Land parcel boundaries shown are provided as a locational aid only.













## 4.4 Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture



### Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture

#### Legend

-  Selected Lot and Plan
-  Towns
-  Rivers and creeks
-  Freeways / motorways; Highways
-  Secondary roads; Streets
- Agricultural land class A or B
-  A
-  B
-  Not class A or B



0 800 1600 2400 3200 4000 m

This product is projected into GDA 1994 MGA Zone 55

#### Disclaimer

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## 5. Protected plants framework (administered by the Department of Environment and Science (DES))

In Queensland, all plants that are native to Australia are protected plants under the [Nature Conservation Act 1992](#) (NCA). The NCA regulates the clearing of protected plants 'in the wild' (see [Operational policy: When a protected plant in Queensland is considered to be 'in the wild'](#)) that are listed as critically endangered, endangered, vulnerable or near threatened under the Act.

Please note that the protected plant clearing framework applies irrespective of the classification of the vegetation under the *Vegetation Management Act 1999* and any approval or exemptions given under another Act, for example, the *Vegetation Management Act 1999* or *Planning Regulation 2017*.

### 5.1 Clearing in high risk areas on the flora survey trigger map

The flora survey trigger map identifies high-risk areas for threatened and near threatened plants. These are areas where threatened or near threatened plants are known to exist or are likely to exist based on the habitat present. The flora survey trigger map for this property is provided in section 5.5.

If you are proposing to clear an area shown as high risk on the flora survey trigger map, a flora survey of the clearing impact area must be undertaken by a suitably qualified person in accordance with the [Flora survey guidelines](#). The main objective of a flora survey is to locate any threatened or near threatened plants that may be present in the clearing impact area.

If the flora survey identifies that threatened or near threatened plants are not present within the clearing impact area or clearing within 100m of a threatened or near threatened plant can be avoided, the clearing activity is exempt from a permit. An [exempt clearing notification form](#) must be submitted to the Department of Environment and Science, with a copy of the flora survey report, at least one week prior to clearing.

If the flora survey identifies that threatened or near threatened plants are present in, or within 100m of, the area to be cleared, a clearing permit is required before any clearing is undertaken. The flora survey report, as well as an impact management report, must be submitted with the [clearing permit application form](#).

### 5.2 Clearing outside high risk areas on the flora survey trigger map

In an area other than a high risk area, a clearing permit is only required where a person is, or becomes aware that threatened or near threatened plants are present in, or within 100m of, the area to be cleared. You must keep a copy of the flora survey trigger map for the area subject to clearing for five years from the day the clearing starts. If you do not clear within the 12 month period that the flora survey trigger map was printed, you need to print and check a new flora survey trigger map.

### 5.3 Exemptions

Many activities are 'exempt' under the protected plant clearing framework, which means that clearing of native plants that are in the wild can be undertaken for these activities with no need for a flora survey or a protected plant clearing permit. The Information sheet - General exemptions for the take of protected plants provides some of these exemptions.

Some exemptions under the NCA are the same as exempt clearing work (formerly known as exemptions) under the *Vegetation Management Act 1999* (i.e. listed in Schedule 21 of the Planning Regulations 2017) while some are different.

### 5.4 Contact information for DES

For further information on the protected plants framework:

**Phone** 1300 130 372 (and select option four)

**Email** [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

**Visit** <https://www.qld.gov.au/environment/plants-animals/plants/protected-plants>

## 5.5 Protected plants flora survey trigger map

This map included may also be requested individually at: <https://apps.des.qld.gov.au/map-request/flora-survey-trigger/>.

### Updates to the data informing the flora survey trigger map

The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.

### Species information

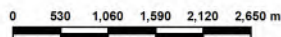
Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the [Queensland Spatial Catalogue](#), the Department of Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the [clearing of protected plants](#) for more information.



## Protected Plants Flora Survey Trigger Map

### Legend

- Selected Lot and Plan
- High risk area
- Other land parcel boundaries
- Freeways / motorways / highways
- Secondary roads / streets



This product is projected into:  
GDA 1994 MGA Zone 55

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

Land parcel boundaries are provided as locational aid only.

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Science at [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

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## 6. Koala protection framework (administered by the Department of Environment and Science (DES))

The koala (*Phascolarctos cinereus*) is listed in Queensland as endangered by the Queensland Government under *Nature Conservation Act 1992* and by the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999*.

The Queensland Government's koala protection framework is comprised of the *Nature Conservation Act 1992*, the Nature Conservation (Animals) Regulation 2020, the Nature Conservation (Koala) Conservation Plan 2017, the *Planning Act 2016* and the Planning Regulation 2017.

### 6.1 Koala mapping

#### 6.1.1 Koala districts

The parts of Queensland where koalas are known to occur has been divided into three koala districts - koala district A, koala district B and koala district C. Each koala district is made up of areas with comparable koala populations (e.g. density, extent and significance of threatening processes affecting the population) which require similar management regimes.

Section 7.1 identifies which koala district your property is located in.

#### 6.1.2 Koala habitat areas

Koala habitat areas are areas of vegetation that have been determined to contain koala habitat that is essential for the conservation of a viable koala population in the wild based on the combination of habitat suitability and biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water). In order to protect this important koala habitat, clearing controls have been introduced into the Planning Regulation 2017 for development in koala habitat areas.

Please note that koala habitat areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley, Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

There are two different categories of koala habitat area (core koala habitat area and locally refined koala habitat), which have been determined using two different methodologies. These methodologies are described in the document [Spatial modelling in South East Queensland](#).

Section 7.2 shows any koala habitat area that exists on your property.

Under the Nature Conservation (Koala) Conservation Plan 2017, an owner of land (or a person acting on the owner's behalf with written consent) can request to make, amend or revoke a koala habitat area determination if they believe, on reasonable grounds, that the existing determination for all or part of their property is incorrect.

More information on requests to make, amend or revoke a koala habitat area determination can be found in the document [Guideline - Requests to make, amend or revoke a koala habitat area determination](#).

The koala habitat area map will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

Changes to the koala habitat area map which occur between annual updates because of a request to make, amend or revoke a koala habitat area determination can be viewed on the register of approved requests to make, amend or revoke a koala habitat area available at: <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/koalamaps>. The register includes the lot on plan for the change, the date the decision was made and the map issued to the landholder that shows areas determined to be koala habitat areas.

#### 6.1.3 Koala priority areas

Koala priority areas are large, connected areas that have been determined to have the highest likelihood of achieving conservation outcomes for koalas based on the combination of habitat suitability, biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water) and a koala conservation cost benefit analysis.

Conservation efforts will be prioritised in these areas to ensure the conservation of viable koala populations in the wild including a focus on management (e.g. habitat protection, habitat restoration and threat mitigation) and monitoring. This includes a prohibition on clearing in koala habitat areas that are in koala priority areas under the Planning Regulation 2017 (subject to some exemptions).

Please note that koala priority areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley,

Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

Section 7.2 identifies if your property is in a koala priority area.

#### 6.1.4 Identified koala broad-hectare areas

There are seven identified koala broad-hectare areas in SEQ. These are areas of koala habitat that are located in areas committed to meet development targets in the SEQ Regional Plan to accommodate SEQ's growing population including bring-forward Greenfield sites under the Queensland Housing Affordability Strategy and declared master planned areas under the repealed *Sustainable Planning Act 2009* and the repealed *Integrated Planning Act 1997*.

Specific assessment benchmarks apply to development applications for development proposed in identified koala broad-hectare areas to ensure koala conservation measures are incorporated into the proposed development.

Section 7.2 identifies if your property is in an identified koala broad-hectare area.

## 6.2 Koala habitat planning controls

On 7 February 2020, the Queensland Government introduced new planning controls to the Planning Regulation 2017 to strengthen the protection of koala habitat in South East Queensland (i.e. koala district A).

More information on these planning controls can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

As a high-level summary, the koala habitat planning controls make:

- development that involves interfering with koala habitat (defined below) in an area that is both a koala priority area and a koala habitat area, prohibited development (i.e. development for which a development application cannot be made);
- development that involves interfering with koala habitat (defined below) in an area that is a koala habitat area but is not a koala priority area, assessable development (i.e. development for which development approval is required); and
- development that is for extractive industries where the development involves interfering with koala habitat (defined below) in an area that is both a koala habitat area and a key resource area, assessable development (i.e. development for which development approval is required).

**Interfering with koala habitat means:**

- 1) Removing, cutting down, ringbarking, pushing over, poisoning or destroying in anyway, including by burning, flooding or draining native vegetation in a koala habitat area; but
- 2) Does not include destroying standing vegetation by stock or lopping a tree.

However, these planning controls do not apply if the development is exempted development as defined in Schedule 24 of the [Planning Regulation 2017](#). More information on exempted development can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

There are also assessment benchmarks that apply to development applications for:

- building works, operational works, material change of use or reconfiguration of a lot where:
  - the local government planning scheme makes the development assessable;
  - the premises includes an area that is both a koala priority area and a koala habitat area; and
  - the development does not involve interfering with koala habitat (defined above); and
- development in identified koala broad-hectare areas.

The [Guideline - Assessment Benchmarks in relation to Koala Habitat in South East Queensland assessment benchmarks](#) outlines these assessment benchmarks, the intent of these assessment benchmarks and advice on how proposed development may meet these assessment benchmarks.

## 6.3 Koala Conservation Plan clearing requirements

Section 10 and 11 of the [Nature Conservation \(Koala\) Conservation Plan 2017](#) prescribes requirements that must be met when clearing koala habitat in koala district A and koala district B.

These clearing requirements are independent to the koala habitat planning controls introduced into the Planning Regulation 2017, which means they must be complied with irrespective of any approvals or exemptions offered under other legislation.

Unlike the clearing controls prescribed in the Planning Regulation 2017 that are to protect koala habitat, the clearing requirements prescribed in the Nature Conservation (Koala) Conservation Plan 2017 are in place to prevent the injury or death of koalas when koala habitat is being cleared.

## 6.4 Contact information for DES

For further information on the koala protection framework:

**Phone** 13 QGOV (13 74 68)

**Email** [koala.assessment@des.qld.gov.au](mailto:koala.assessment@des.qld.gov.au)

**Visit** <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping>

## 7. Koala protection framework details for Lot: 5270 Plan: SP144274

### 7.1 Koala districts













Koala District C

## 7.2 Koala priority area, koala habitat area and identified koala broad-hectare area map

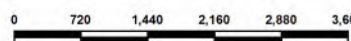


### Koala priority area, koala habitat area and identified koala broad-hectare area map

#### Legend

-  Selected Lot and Plan
-  Koala habitat area (core)
-  Koala habitat area (locally refined)
-  Koala priority area
-  Identified koala broad-hectare area
-  Cadastral Boundaries
-  Towns
-  Highway
-  Connector
-  Street/Local Road
-  Major rivers/creeks
-  Queensland

The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.



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The koala conservation plan maps will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

In order to ensure that the most recent map for an area of interest can be accessed, prior to the annual update, a register of changes made to koala habitat areas as a result of the map amendment process will be available at:  
<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/>.  
The register will include lot on plan for the change, the date the decision was made and the map issued to the landholder which shows areas determined to be koala habitat areas.











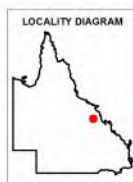
## 7.3 Koala habitat regional ecosystems for core koala habitat areas



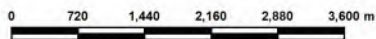
### Koala habitat regional ecosystems for core koala habitat areas

#### Legend

-  Selected Lot and Plan
-  Koala habitat area (core)
-  Towns
-  Highway
-  Connector
-  Street/Local Road
-  Major rivers/creeks
-  Queensland



N



This product is projected into GDA 1994 MGA Zone 55

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The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.

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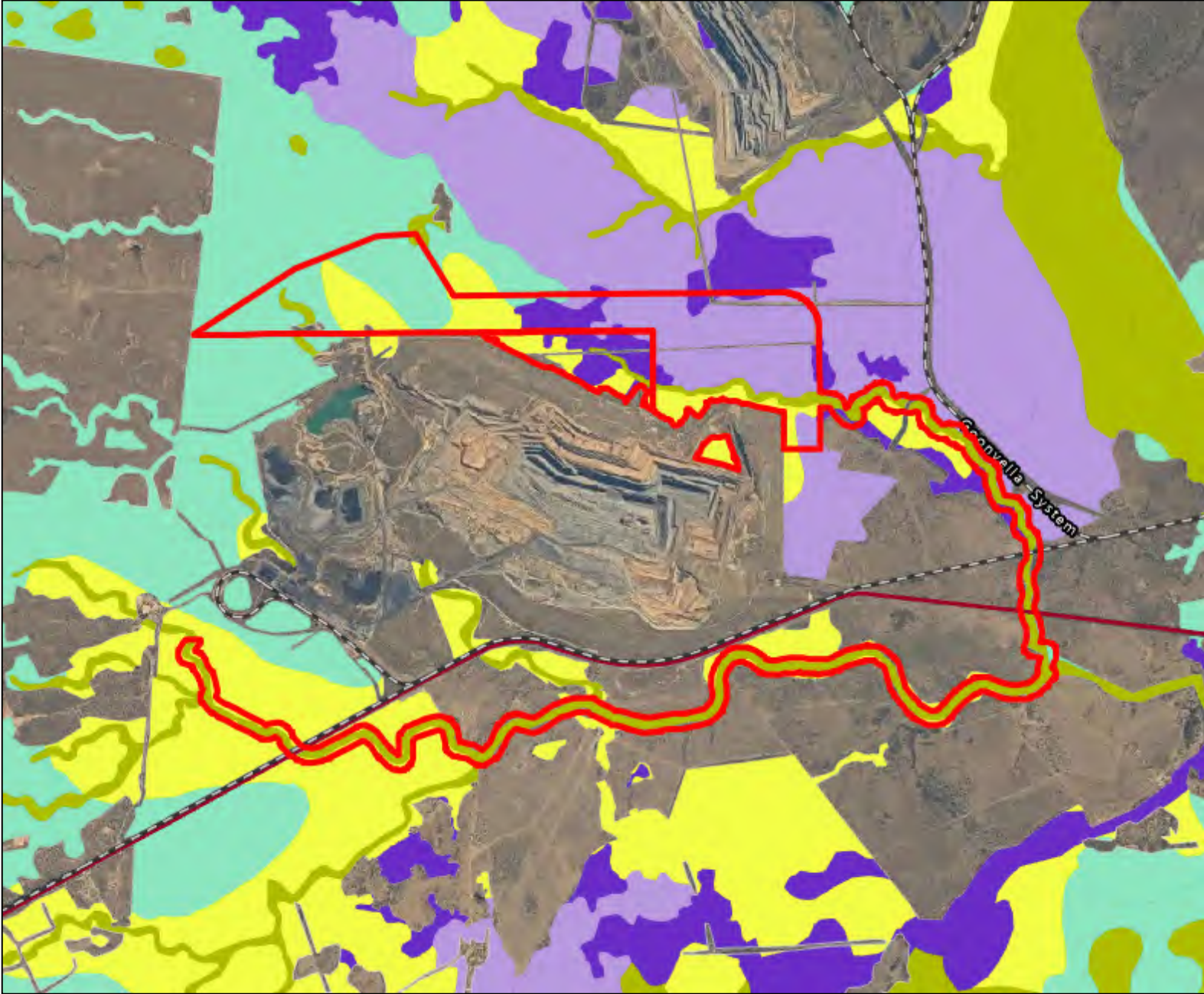
## 8. Other relevant legislation contacts list

Activity	Legislation	Agency	Contact details
<ul style="list-style-type: none"> <li>• Interference with overland flow</li> <li>• Earthworks, significant disturbance</li> </ul>	<i>Water Act 2000</i> <i>Soil Conservation Act 1986</i>	Department of Regional Development, Manufacturing and Water (Queensland Government) Department of Resources (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.rdmw.qld.gov.au">www.rdmw.qld.gov.au</a> <a href="http://www.resources.qld.gov.au">www.resources.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Indigenous Cultural Heritage</li> </ul>	<i>Aboriginal Cultural Heritage Act 2003</i> <i>Torres Strait Islander Cultural Heritage Act 2003</i>	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships	Ph: 13 QGOV (13 74 68) <a href="http://www.datsip.qld.gov.au">www.datsip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Mining and environmentally relevant activities</li> <li>• Infrastructure development (coastal)</li> <li>• Heritage issues</li> </ul>	<i>Environmental Protection Act 1994</i> <i>Coastal Protection and Management Act 1995</i> <i>Queensland Heritage Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Protected plants and protected areas</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 1300 130 372 (option 4) <a href="mailto:palm@des.qld.gov.au">palm@des.qld.gov.au</a> <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Koala mapping and regulations</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="mailto:Koala.assessment@des.qld.gov.au">Koala.assessment@des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Interference with fish passage in a watercourse, mangroves</li> <li>• Forestry activities on State land tenures</li> </ul>	<i>Fisheries Act 1994</i> <i>Forestry Act 1959</i>	Department of Agriculture and Fisheries (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.daf.qld.gov.au">www.daf.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Matters of National Environmental Significance including listed threatened species and ecological communities</li> </ul>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Department of Agriculture, Water and the Environment (Australian Government)	Ph: 1800 803 772 <a href="http://www.environment.gov.au">www.environment.gov.au</a>
<ul style="list-style-type: none"> <li>• Development and planning processes</li> </ul>	<i>Planning Act 2016</i> <i>State Development and Public Works Organisation Act 1971</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.dsdmip.qld.gov.au">www.dsdmip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Local government requirements</li> </ul>	<i>Local Government Act 2009</i> <i>Planning Act 2016</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) Your relevant local government office
<ul style="list-style-type: none"> <li>• Harvesting timber in the Wet Tropics of Qld World Heritage area</li> </ul>	<i>Wet Tropics World Heritage Protection and Management Act 1993</i>	Wet Tropics Management Authority	Ph: (07) 4241 0500 <a href="http://www.wettropics.gov.au">www.wettropics.gov.au</a>

# Biodiversity Status - Remnant

21°47'25"S 148°22'34"E

21°47'25"S 148°32'7"E



Legend located on next page



Scale: 1:85060

Printed at: A4  
Print date: 1/11/2023

Not suitable for accurate measurement.  
Projection: Web Mercator EPSG 102100 (3857)

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21°54'43"S 148°22'34"E

21°54'43"S 148°32'7"E

# Biodiversity Status - Remnant

## Legend

POLYGON-  
Referral\_Study\_Area.zip -  
poly



POLYGON-  
Secondary\_Study\_Area.zip -  
poly



Biodiversity status - remnant

- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Non-remnant vegetation, cultivated or built environment
- Plantation
- Water

Cities and Towns



Green bridges



Roads and tracks

- Motorway
- Highway
- Secondary
- Connector
- Local
- Restricted Access Road
- Mall
- Busway
- Bikeway
- Restricted Access Bikeway
- Walkway
- Restricted Access Walkway
- Non-vehicular Track
- Track
- Restricted Access Track
- Ferry
- Proposed Thoroughfare

Railway



Railway station



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Queensland Herbarium (2022) Biodiversity Status of Pre-clearing Regional Ecosystems of Queensland. State of Queensland (Department of Environment and Science).

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Bridges



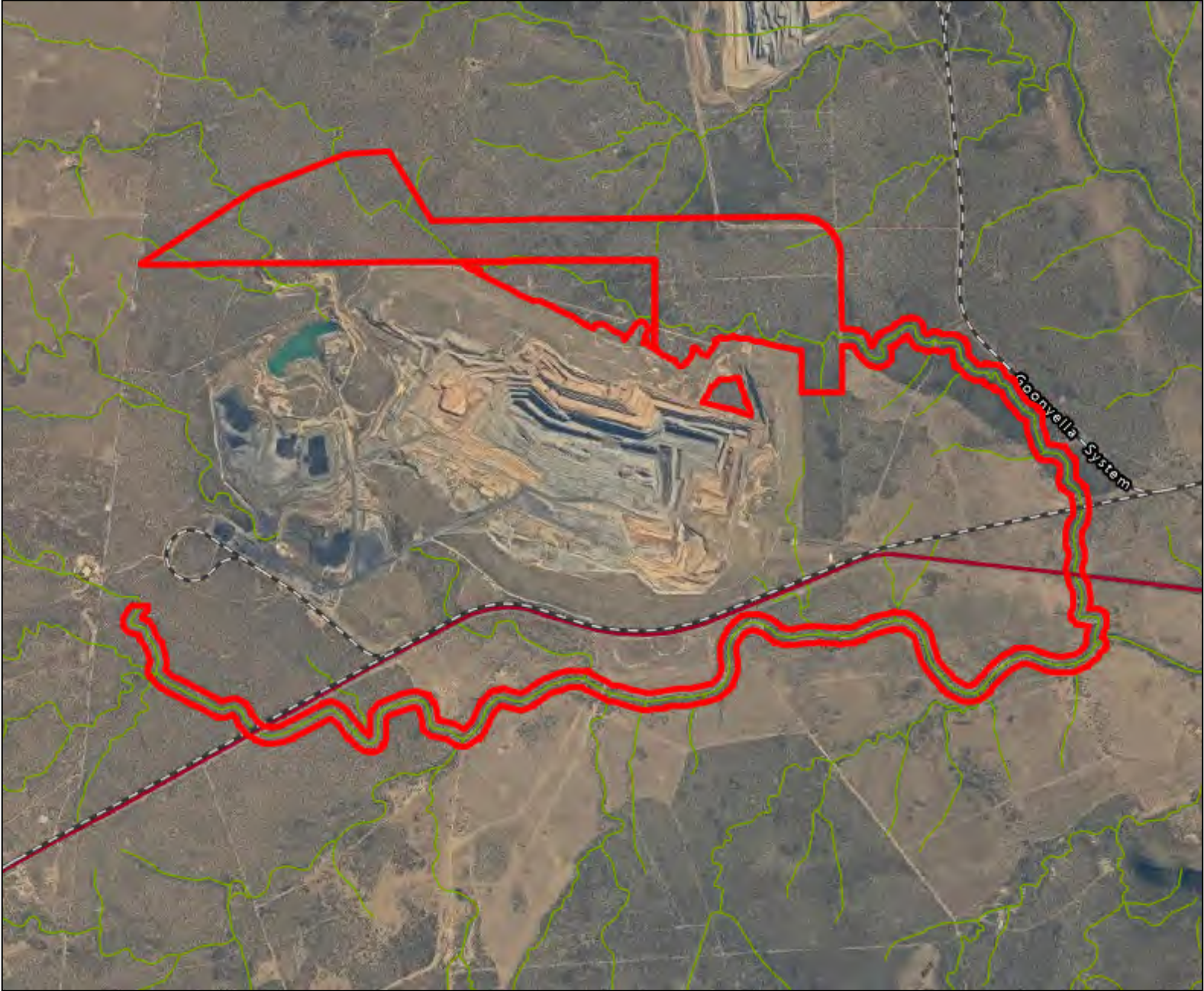
Tunnels



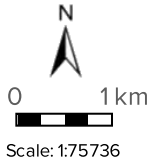
# MSES Wetland Values

21°48'9"S 148°23'6"E

21°48'9"S 148°31'36"E



Legend located on next page



Printed at: A4  
Print date: 1/11/2023  
Not suitable for accurate measurement.  
Projection: Web Mercator EPSG 102100 (3857)  
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21°54'39"S 148°23'6"E

21°54'39"S 148°31'36"E

# MSES Wetland Values

## Legend

POLYGON-  
Referral\_Study\_Area.zip -  
poly



POLYGON-  
Secondary\_Study\_Area.zip -  
poly



MSES regulated vegetation  
[defined watercourse]



MSES declared high  
ecological value waters  
[watercourse]



MSES declared high  
ecological value waters  
[wetland]



MSES high ecological  
significance wetlands



### Roads and tracks

- Motorway
- Highway
- Secondary
- Connector
- Local
- Restricted Access Road
- Mall
- Busway
- Bikeway
- Restricted Access Bikeway
- Walkway
- Restricted Access Walkway
- Non-vehicular Track
- Track
- Restricted Access Track
- Ferry
- Proposed Thoroughfare

### Tunnels



### Railway



### Railway station

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© State of Queensland (Department of Resources) 2021

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MSES strategic  
environmental area  
[designated precinct]



Cities and Towns



Green bridges



Bridges





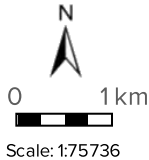
# MSES Wildlife Habitat

21°48'3"S 148°23'14"E

21°48'3"S 148°31'44"E



Legend located on next page



Printed at: A4  
Print date: 1/11/2023

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Projection: Web Mercator EPSG 102100 (3857)

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21°54'34"S 148°23'14"E

21°54'34"S 148°31'44"E

# MSES Wildlife Habitat

## Legend

POLYGON-  
Referral\_Study\_Area.zip -  
poly



POLYGON-  
Secondary\_Study\_Area.zip -  
poly



MSES wildlife habitat  
[endangered or vulnerable]



MSES wildlife habitat  
[special least concern  
animal]



MSES wildlife habitat [SEQ  
koala habitat - core]



MSES wildlife habitat [SEQ  
koala habitat - locally  
refined]



### Roads and tracks

- Motorway
- Highway
- Secondary
- Connector
- Local
- Restricted Access Road
- Mall
- Busway
- Bikeway
- Restricted Access Bikeway
- Walkway
- Restricted Access Walkway
- Non-vehicular Track
- Track
- Restricted Access Track
- Ferry
- Proposed Thoroughfare

### Bridges



### Tunnels



### Cities and Towns

## Attribution

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MSES wildlife habitat [sea  
turtle nesting areas]



Railway



Railway station



Green bridges



# WetlandMaps Report



For selected area of interest Custom Geometry

Current as at 01/11/2023

## Environmental Reports - General Information

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the Area of Interest (AOI) (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no matters of interest have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

### Important Note to User

Information presented in this report is based upon the mapping of water bodies and wetland regional ecosystems across Queensland. The Queensland wetland mapping was produced using existing information including water body mapping derived from Landsat satellite imagery, regional ecosystem mapping, topographic data, and a springs database. The result is a consistent wetland map for the whole of Queensland.

Ancillary data, such as higher resolution imagery (for example SPOT and aerial photographs), other vegetation and wetland mapping, geology, soil and land system mapping was also used in attributing and assessing the derived Queensland Wetlands Program wetland mapping products.

The wetland mapping was done in accordance with a detailed peer reviewed methodology which included quality assurance measures for all steps in the process. For more detailed information on how the Queensland Wetlands Program wetland mapping was produced, please see the [Wetland Mapping and Classification Methodology](#).

### Disclaimer

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## Summary Information

The following table provides an overview of the area of interest.

**Table 1. Area of interest details**

Size (ha)	8,228.23
Local Government(s)	Isaac Regional
Bioregion(s)	Brigalow Belt
Subregion(s)	Northern Bowen Basin
Catchment(s)	Fitzroy
Drainage sub-basin	Isaac River

### NRM Regions

The following NRM region(s) are in the area of interest:

Fitzroy Basin  
Association

### Water Resource Plan Boundaries

The following Water Resource Plan(s) are in the area of interest:

Fitzroy Basin

## Learn more about how Wetlands are mapped in Queensland:

### Queensland Wetlands Mapping Definitions

Wetlands are areas of permanent or periodic/intermittent inundation, with water that is static or flowing fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed 6 metres. To be a wetland the area must have one or more of the following attributes:

- at least periodically the land supports plants or animals that are adapted to and dependent on living in wet conditions for at least part of their life cycle, or
- the substratum is predominantly undrained soils that are saturated, flooded or ponded long enough to develop anaerobic conditions in the upper layers, or
- the substratum is not soil and is saturated with water, or covered by water at some time.

Examples under this definition **include**:

- those areas shown as a river, stream, creek, swamp, lake, marsh, waterhole, wetland, billabong, pool or spring on the latest Sunmap 1:25,000, 1:50,000, 1:100,000 or 1:250,000 topographic map
- areas defined as wetlands on local or regional maps prepared with the aim of mapping wetlands
- wetland regional ecosystems (REs) as defined by the Queensland Herbarium (Environmental Protection Agency 2005a)
- areas containing recognised hydrophytes as provided by the Queensland Herbarium
- saturated parts of the riparian zone
- artificial wetlands such as farm dams
- water bodies not connected to rivers or flowing water such as billabongs and rock pools.

Examples under this definition **exclude**:

- areas that may be covered by water but are not wetlands according to the definition
- floodplains that are intermittently covered by flowing water but do not meet the hydrophytes and soil criteria
- riparian zone above the saturation level.



## Wetland Systems

*Riverine wetlands* are all wetlands and deepwater habitats within a channel. The channels are naturally or artificially created, periodically or continuously contain moving water, or connecting two bodies of standing water.

*Palustrine wetlands* are primarily vegetated non-channel environments of less than 8 hectares. They include billabongs, swamps, bogs, springs, soaks etc, and have more than 30% emergent vegetation.

*Lacustrine wetlands* are large, open, water-dominated systems (for example, lakes) larger than 8ha. This definition also applies to modified systems (for example, dams), which are similar to lacustrine systems (for example, deep, standing or slow-moving waters).

*Marine wetlands* include the area of ocean from the coastline or estuary, extending to the jurisdictional limits of Queensland waters (3 nautical mile limit). This definition differs from that in Ramsar, as it includes waters deeper than 6m below the lowest astronomical tide.

*Estuarine wetlands* are those with oceanic water sometimes diluted with freshwater run-off from the land.

*Subterranean wetlands* are wetlands occurring below the surface of the ground and that are fed by groundwater i.e. caves and aquifers. These wetlands provide water to groundwater dependent ecosystems.

Methodology and Wetland Classification: <https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/wetland-background/>

## Links and support

Other sites that deliver wetland related information include:

WetlandSummary tool: <https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/>

Queensland Spatial Catalogue: <http://qldspatial.information.qld.gov.au/catalogue/custom/index.page>

Queensland Globe: <https://qldglobe.information.qld.gov.au/>

Environmental reports online: <https://environment.ehp.qld.gov.au/report-request/environment/>

Wetland on-line education modules: <https://wetlandinfo.des.qld.gov.au/wetlands/resources/training/>

Regional Ecosystem Mapping information: :

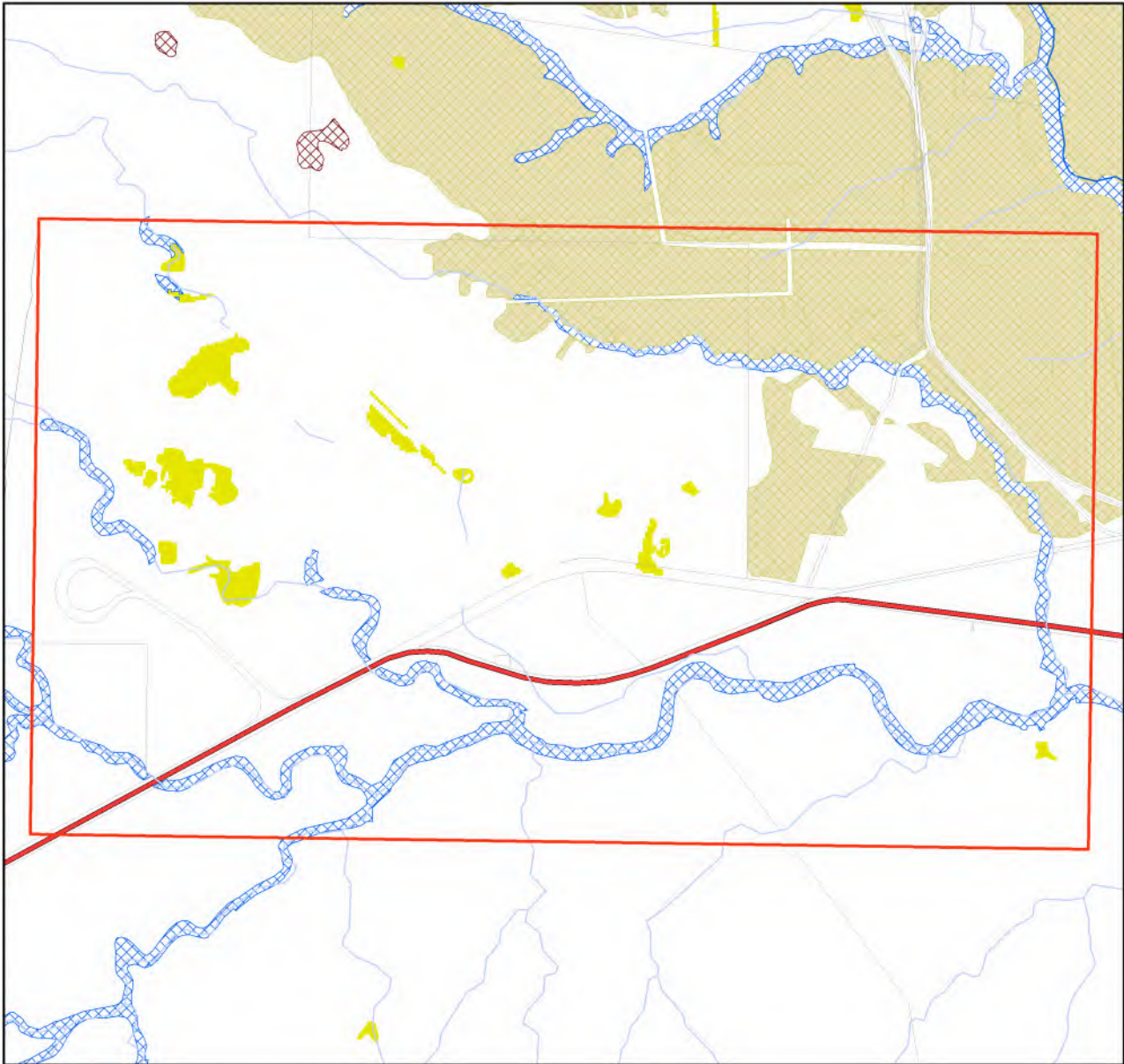
<https://www.qld.gov.au/environment/plants-animals/plants/herbarium/mapping-ecosystems>

Aquatic Conservation Assessments: : <https://wetlandinfo.des.qld.gov.au/wetlands/assessment/assessment-methods/aca/>

Groundwater Dependant Ecosystems information:

<https://wetlandinfo.des.qld.gov.au/wetlands/ecology/aquatic-ecosystems-natural/groundwater-dependent/>





**Legend**

- polygon
- ▲ Springs
- Dams and weirs
- Towns
- Highways
- Roads
- Cadastral boundaries
- Sub-basin
- Riverine System Drainage Lines**
- Major
- Minor

**Wetland Mapping**

**Hydrologically natural Wetlands**

- Lacustrine Wetlands (hydrologically natural)
- Palustrine Wetlands (hydrologically natural)
- Riverine Wetlands (hydrologically natural)
- Intertidal Wetlands (hydrologically natural)
- Subtidal Wetlands (hydrologically natural)
- Intertidal/Subtidal Wetlands (hydrologically natural)

**Hydrologically Modified and Artificial Wetlands**

- Lacustrine Wetlands (hydrologically modified or artificial)
- Palustrine Wetlands (hydrologically modified or artificial)
- Riverine Wetlands (hydrologically modified or artificial)
- Intertidal Wetlands (hydrologically modified or artificial)
- Subtidal Wetlands (hydrologically modified or artificial)
- Intertidal/Subtidal Wetlands (hydrologically modified or artificial)

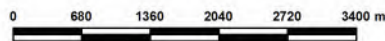
**Subdominant Wetlands**

- Subdominant Wetlands (51 - 80%)

**Contains Wetlands**

- Contains Wetlands (1 - 50%)

**Queensland Wetland Map**

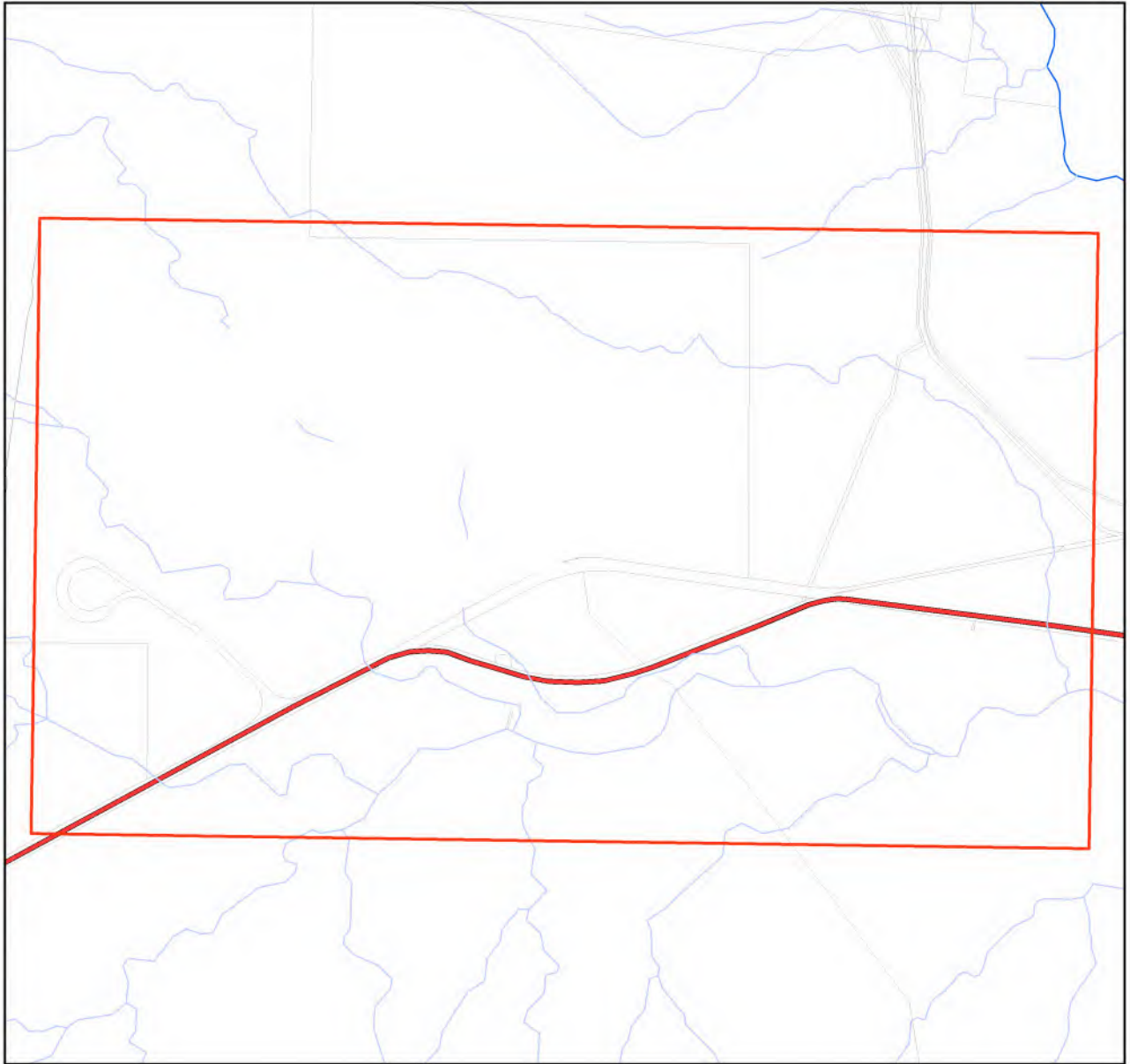


Horizontal Datum: Geographic Datum of Australia 1994 (GDA94)

This map was produced by the Queensland Wetlands Program, Department of Environment and Science, November 2023.

For further information contact: [wetlands@des.qld.gov.au](mailto:wetlands@des.qld.gov.au)

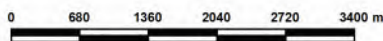
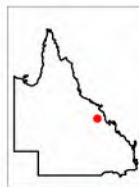
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## Queensland Wetlands of Importance Map

### Legend

- polygon
- Towns
- Cadastral boundaries
- Highways
- Roads
- Sub-basin
- Directory of Important Wetlands
- Ramsar Wetlands
- Riverine System Drainage Lines**
- Major
- Minor

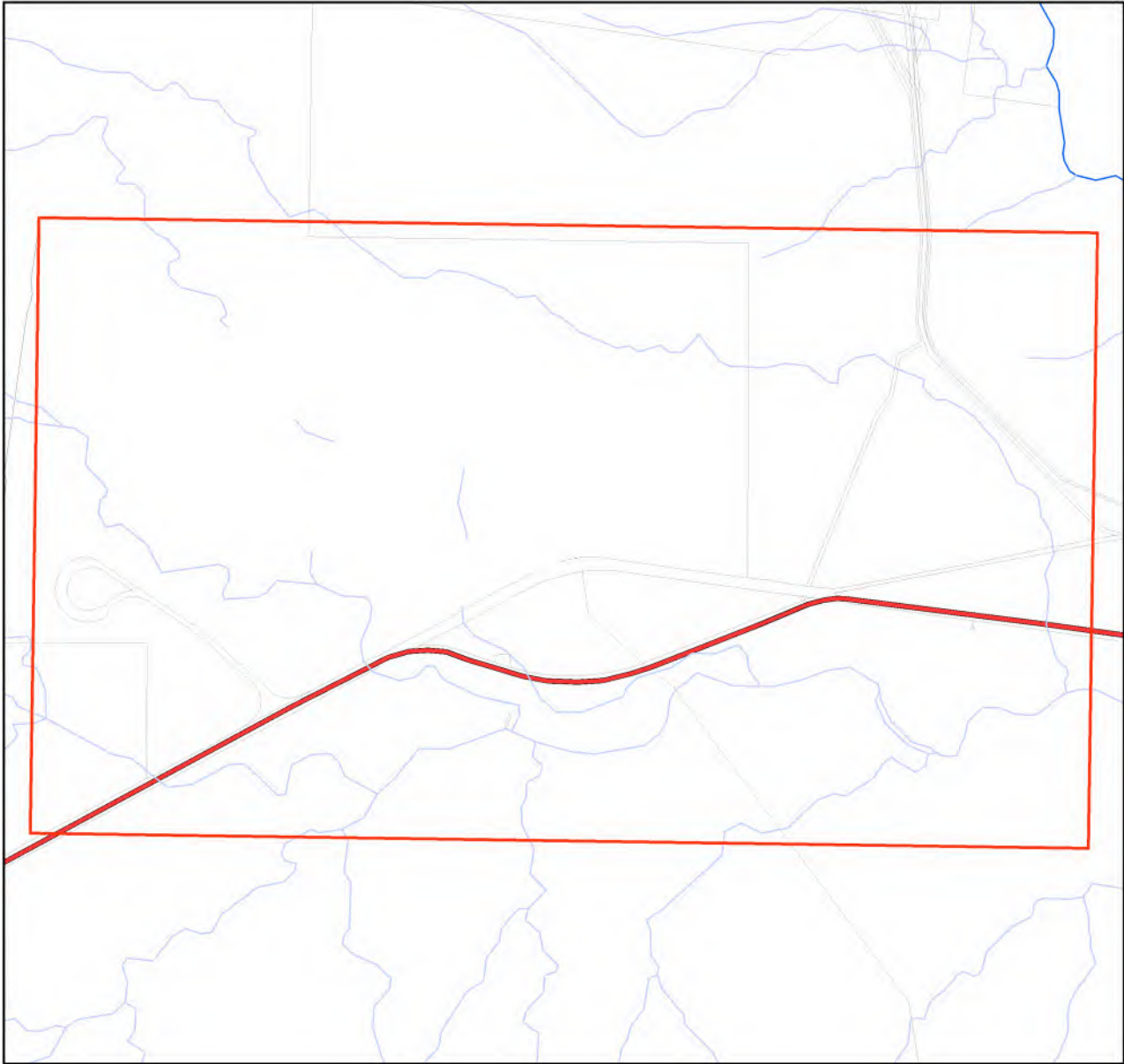


Horizontal Datum: Geographic Datum of Australia 1994 (GDA94)

This map was produced by the Queensland Wetlands Program, Department of Environment and Science, November 2023.

For further information contact: [wetlands@des.qld.gov.au](mailto:wetlands@des.qld.gov.au)

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### Legend

- polygon
- Towns
- Cadastral boundaries
- Highways
- Roads
- Sub-basin
- Riverine System Drainage Lines**
- Major
- Minor
- Protected Areas**
- National Park
- National Park (Scientific)
- National Park (CYPAL)
- Conservation Park
- Resources Reserve
- Forest Reserve
- State Forest
- Timber Reserve
- Marine Parks**
- General Use Zone
- Habitat Protection Zone
- Estuarine Conservation Zone
- Conservation Park Zone
- Buffer Zone
- Scientific Research Zone
- Marine National Park Zone
- Preservation Zone

## Queensland Protected Area Map



Horizontal Datum: Geographic Datum of Australia 1994 (GDA94)

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Wetland habitat types in the AOI. Total area: 1845.58ha

Wetland Class	Habitat type	Area (ha)
CPA	NOA	1309.75
RIV	NOA	396.99
LAC	NOA	138.84

**Queensland wetland habitat typology: Major wetland habitat types for wetland conceptual models and wetland management profiles**

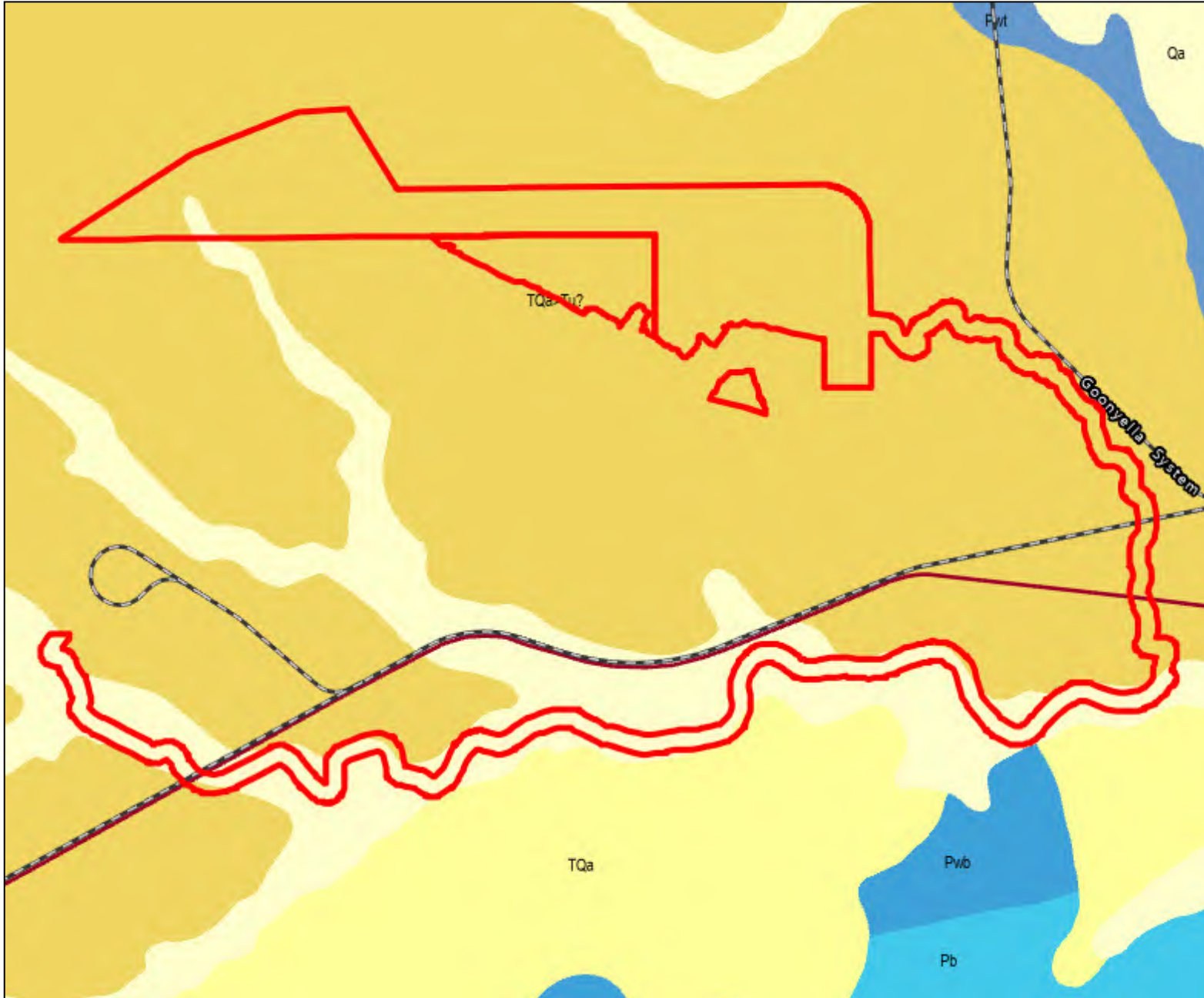
Wetland name	Conceptual model	Wetland profile
Mangrove Wetlands	Not developed	<a href="#">Mangrove Wetlands</a>
Saltmarsh Wetlands	Not developed	<a href="#">Saltmarsh Wetlands</a>
Coastal and subcoastal saline swamps of all substrates, water regimes, topographic types and vegetation communities	<a href="#">Coastal and subcoastal saline swamps</a>	<a href="#">Coastal grass-sedge wetlands</a>
Coastal and subcoastal non-floodplain tree swamps (Melaleuca and Eucalypt) of all substrates and water regimes	<a href="#">Coastal and subcoastal non-floodplain tree swamps - melaleuca and eucalypt</a>	<a href="#">Coastal and subcoastal tree swamps</a>
Coastal and subcoastal non-floodplain wet heath swamps of all substrates and water regimes	<a href="#">Coastal and subcoastal non-floodplain wet heath swamps</a>	<a href="#">Coastal and subcoastal wet heath swamps</a>
Coastal and subcoastal non-floodplain grass, sedge and herb swamps of all substrates and water regimes	<a href="#">Coastal and subcoastal non-floodplain grass, sedge and herb swamps</a>	<a href="#">Coastal grass-sedge wetlands</a>
Coastal and subcoastal spring swamps of all substrates, water types, water regimes and vegetation communities	Coastal and subcoastal spring swamps	<a href="#">Great Artesian Basin spring wetlands</a>
Coastal and subcoastal floodplain tree swamps - melaleuca and eucalypt of all substrates and water regimes	<a href="#">Coastal and subcoastal floodplain tree swamps - melaleuca and eucalypt</a>	<a href="#">Coastal and subcoastal tree swamps</a>
Coastal and subcoastal floodplain wet heath swamps of all substrates and water regimes	<a href="#">Coastal and subcoastal floodplain wet heath swamps</a>	<a href="#">Coastal and subcoastal wet heath swamps</a>
Coastal and subcoastal floodplain, grass, sedge herb swamps of all substrates and water regimes	<a href="#">Coastal and subcoastal floodplain grass, sedge, herb swamps</a>	<a href="#">Coastal grass-sedge wetlands</a>
Coastal and subcoastal tree swamps - palm of all substrates, topographic types and water regimes	<a href="#">Coastal and subcoastal floodplain tree swamps - palm</a>	<a href="#">Coastal Palm Swamps</a>
Coastal and subcoastal Floodplain Lakes of all substrates, water types and water regimes	<a href="#">Coastal and subcoastal Floodplain Lakes</a>	<a href="#">Coastal and subcoastal floodplain lakes and non-floodplain soil lakes</a>
Coastal and subcoastal non-floodplain rock lakes of all water types and water regimes	<a href="#">Coastal and subcoastal non-floodplain rock lakes</a>	<a href="#">Coastal and subcoastal non-floodplain rock lakes</a>
Coastal and subcoastal non-floodplain sand lakes (window) of all water types and water regimes	<a href="#">Coastal and subcoastal non-floodplain sand lakes - window</a>	<a href="#">Coastal non-floodplain sand lakes</a>
Coastal and subcoastal non-floodplain sand lakes (perched) of all water types and water regimes	<a href="#">Coastal and subcoastal non-floodplain sand lakes - perched</a>	<a href="#">Coastal non-floodplain sand lakes</a>
Coastal and subcoastal non-floodplain soil lakes of all water types and water regimes	<a href="#">Coastal and subcoastal non-floodplain soil lakes</a>	<a href="#">Coastal and subcoastal floodplain lakes and non-floodplain soil lakes</a>
Arid and semi-arid saline swamps of all substrates, water regimes, topographic types and vegetation communities	<a href="#">Arid and semi-arid saline swamps</a>	<a href="#">Semi-arid swamps</a>

Wetland name	Conceptual model	Wetland profile
Arid and semi-arid fresh tree swamps of all substrates, and water regimes and topographic types	<a href="#">Arid and semi-arid tree swamps</a>	<a href="#">Arid swamps</a> <a href="#">Semi-Arid swamps</a>
Arid and semi-arid lignum swamps of all substrates, and water regimes and topographic types	<a href="#">Arid and semi-arid lignum swamps</a>	<a href="#">Arid swamps</a> <a href="#">Semi-Arid swamps</a>
Arid and semi-arid grass, sedge, herb swamps of all substrates, water regimes and topographic types	<a href="#">Arid and semi-arid grass, sedge, herb swamps</a>	<a href="#">Arid swamps</a> <a href="#">Semi-Arid swamps</a>
Arid and semi-arid fresh non-floodplain tree swamps of all substrates and water regimes	<a href="#">Arid and semi-arid non-floodplain tree swamps</a>	<a href="#">Arid swamps</a> <a href="#">Semi-Arid swamps</a>
Arid and semi-arid fresh non-floodplain lignum swamps of all substrates and water regimes	<a href="#">Arid and semi-arid non-floodplain lignum swamps</a>	<a href="#">Arid swamps</a> <a href="#">Semi-Arid swamps</a>
Arid and semi-arid fresh non-floodplain grass, sedge, herb swamps of all substrates and water regimes	<a href="#">Arid and semi-arid non-floodplain grass, sedge, herb swamps</a>	<a href="#">Arid swamps</a> <a href="#">Semi-Arid swamps</a>
Arid and semi-arid, non-floodplain swamps - springs of all substrates, water regimes and vegetation communities	Arid and semi-arid spring swamps	<a href="#">Great Artesian Basin spring wetlands</a>
Arid and semi-arid, saline lakes of all substrates, topographic types and water regimes	<a href="#">Arid and semi-arid saline lakes</a>	<a href="#">Arid and semi-arid lakes</a>
Arid and semi-arid, floodplain lakes of all, substrates and water regimes	<a href="#">Arid and semi-arid floodplain lakes</a>	<a href="#">Arid and semi-arid lakes</a>
Arid and semi-arid, non-floodplain Lakes of all substrates and water regimes	<a href="#">Arid and semi-arid non-floodplain lakes</a>	<a href="#">Arid and semi-arid lakes</a>
Arid/ semi-arid, non-floodplain (clay pans) lakes of all substrates and water regimes	<a href="#">Arid and semi-arid fresh non-floodplain lakes (clay pans)</a>	<a href="#">Arid and semi-arid lakes</a>
Arid and semi-arid, Permanent Lakes permanently inundated lakes of all substrates, water types, topographic types and vegetation communities	<a href="#">Arid and semi-arid permanent lakes</a>	<a href="#">Arid and semi-arid lakes</a>



21°48'32"S 148°23'44"E

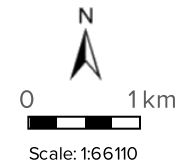
21°48'32"S 148°31'10"E



21°54'12"S 148°23'44"E

21°54'12"S 148°31'10"E

Legend located on next page



Printed at: A4  
Print date: 1/11/2023




Not suitable for accurate measurement.  
Projection: Web Mercator EPSG 102100 (3857)

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 Legend

-  Qa-QLD (Qa)
-  TQa-QLD (TQa)
-  TQa-QLD>Suttor  
Formation? (TQa>Tu?)

 Attribution

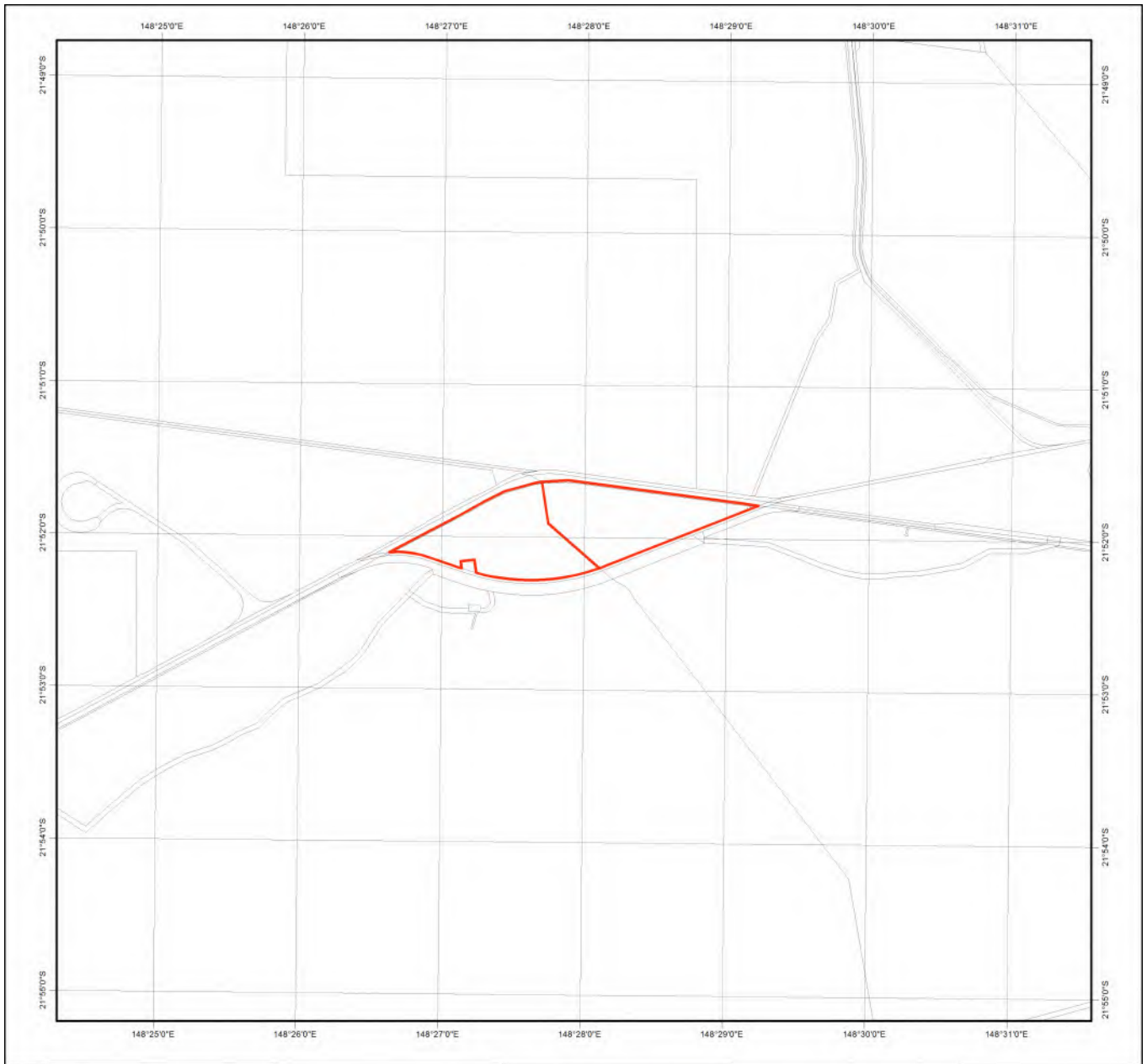
Earthstar Geographics

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### Map of Great Barrier Reef Wetland Protection Areas

-  Selected Lot and Plan
-  Cadastral Boundary
-  Wetland in a wetland protection area
-  Great Barrier Reef wetland protection area



**Note:**  
 This map shows the location of wetland protection areas which are defined under the Environmental Protection Regulation 2008. Within wetland protection areas, certain types of development involving high impact earthworks are made assessable under Schedule 3 of the Sustainable Planning Regulation 2009.

The Department of State Development, Manufacturing, Infrastructure and Planning is the State Assessment Referral Agency (SARA) under Schedule 7 of the Sustainable Planning Regulation 2009 for assessable development involving high impact earthworks within wetland protection areas. The Department of Environment and Science is a technical agency.

The policy outcome and assessment criteria for assessing these applications are described in the State Development Assessment Provisions (SDAP) *State Code 9 : Great Barrier Reef Wetland Protection Areas*.

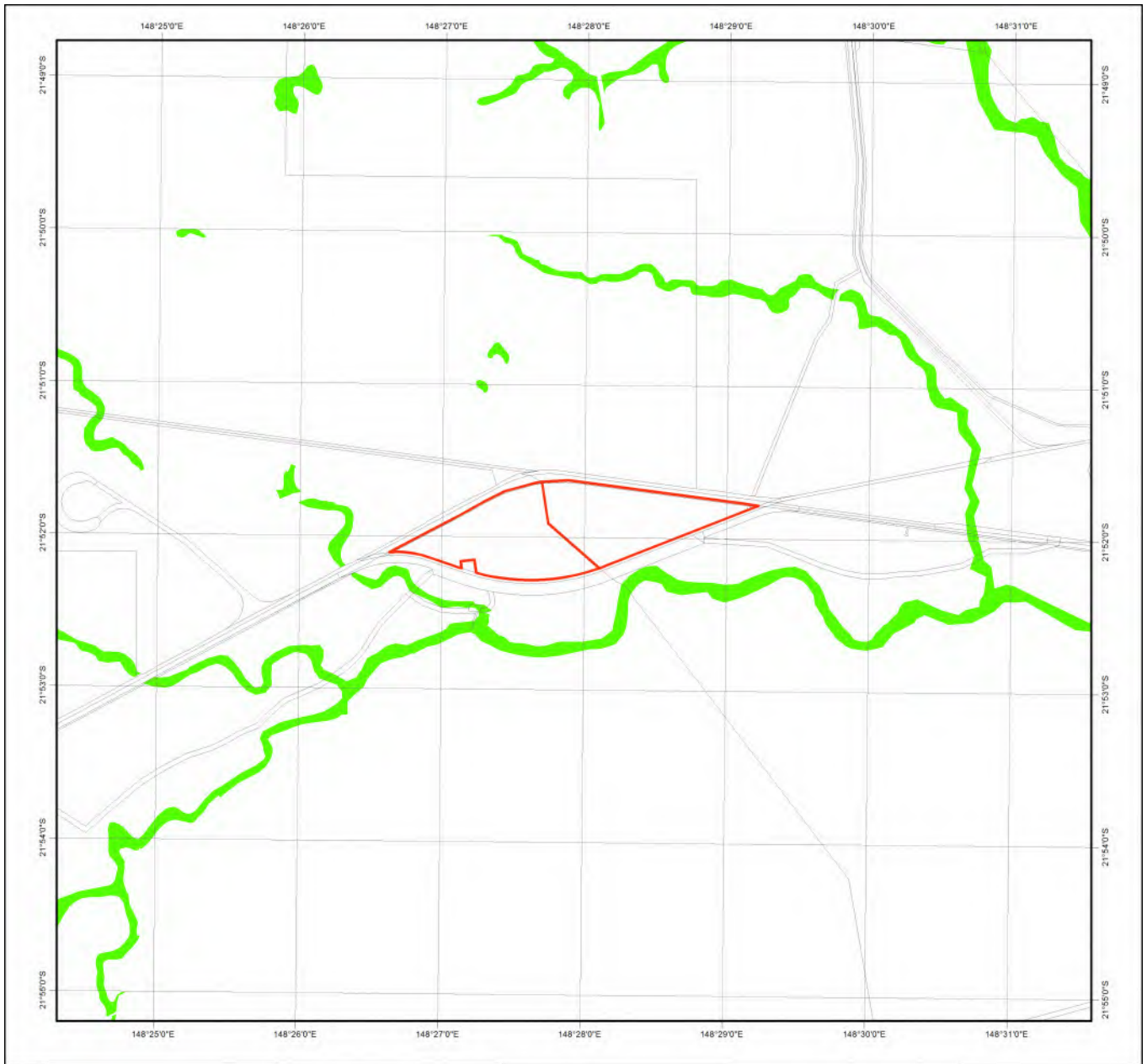
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For further information or assistance with interpretation of this product, please contact the Department of Environment and Science, email [planning.support@des.qld.gov.au](mailto:planning.support@des.qld.gov.au).

This product is projected into GDA 1994 MGA Zone 55

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### Map of Queensland Wetland Environmental Values

- Selected Lot and Plan
- Cadastral Boundary
- High ecological values waters management intent
- 
- Wetlands assessed under section 7
- GBR wetland of high ecological significance
- Wetland of high ecological significance
- Wetland of general ecological significance

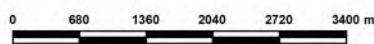


**Note:**  
 This map shows the location of wetlands on the Map of Queensland Wetland Environmental Values under the Environmental Protection (Wetland and Water Biodiversity) Policy 2019. The map also shows high ecological value waters management intent under Schedule 2 of the Environmental Protection (Water and Wetland Biodiversity) Policy 2019.

Wetlands are assessed for ecological significance using the environmental values for wetlands in section 7 of the Environmental Protection (Wetland and Water Biodiversity) Policy 2019. Wetlands are considered either High Ecological Significance (HES) or of General Ecological Significance (GES) for the purposes of the environmental values.

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## Appendix B Likelihood of Occurrence Assessment



# Threatened ecological communities

Community name	EPBC Act status	Habitat preference	Desktop assessment results	Likelihood of occurrence
Brigalow ( <i>Acacia harpophylla</i> dominant and co-dominant)	Endangered	<p>Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant) (Brigalow TEC) is a woodland ecological community that contains <i>Acacia harpophylla</i> as either a dominant or co-dominant species in the canopy. The Brigalow TEC extends from Charter Towers in northern Queensland to Narrabri in northern New South Wales. The community is usually characterised by an open forest or open woodland structure with a mixture of eucalypts, acacia and casuarina species in the canopy. REs within the brigalow belt bioregion considered analogous to this TEC include; 11.3.1, 11.4.3, 11.4.7, 11.4.8, 11.4.9, 11.4.10, 11.5.16, 11.9.1, 11.9.5, 11.9.6, 11.11.14, and 11.12.21.</p> <p>The vegetation types that make up the Brigalow ecological community tend to occur on acidic and salty clay soils (Butler, 2007); mostly on deep cracking clay soils with a microrelief pattern referred to as gilgai or melon holes, which intermittently fill with water. In Qld, the soils are predominantly cracking clays where <i>Acacia harpophylla</i> is dominant, but texture contrast soils are common where Eucalyptus species are co-dominant. In NSW, brigalow woodlands are typically associated with red, brown and grey clays; red and grey earths; and, red-brown earths.</p>	<p>Patches of remnant RE 11.5.16 and remnant and regrowth RE 11.4.9 &gt;0.5 ha meeting or likely to meet the diagnostic criteria for Brigalow TEC have been previously mapped within the Study Area.</p> <p>29.36 ha of Brigalow TEC was mapped on MLs 20384-387 and ML70164, some of this within the Study Area (McCollum Environmental Management Services, 2011).</p>	<p><b>Known to occur</b></p> <p>144 ha of Brigalow TEC was ground-truthed in the Disturbance footprint and 95.75 ha within the Study Area.</p>



Community name	EPBC Act status	Habitat preference	Desktop assessment results	Likelihood of occurrence
Natural Grasslands of the Queensland Central Highlands and northern Fitzroy Basin	Endangered	<p>Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin (Natural Grasslands TEC) are predominately composed of perennial grass species on fine textured cracking clays and typically contain <i>Dichanthium</i> spp., <i>Aristida</i> spp., <i>Astrebla</i> spp. and a large diversity of herbs and forbs (DoE, 2023b). REs considered analogous to this TEC include; 11.3.21, 11.4.4, 11.4.11, 11.8.11, 11.9.3, 11.9.12, and 11.11.17.</p> <p>The community is distributed from Collinsville (near Bowen) to Carnarvon National Park in the south (DoE, 2023b). They are found on soils that are fine textured (often cracking clays) derived from either basalt or fine-grained sedimentary rocks, on flat or gently undulating rises. These grasslands occur in areas with relatively high summer rainfall and a tree canopy usually absent, but when present projective crown cover is no more than 10% (DEWHA, 2008a).</p>	<p>No mapped grasslands occur within the Study Area and surrounds (Queensland Herbarium, 2023a). No grasslands were identified in previous surveys (McCollum Environmental Management Services, 2011; Wormington, 2015).</p>	<p><b>Unlikely to occur</b> No grasslands were identified in the Study Area during this survey.</p>
Poplar Box Grassy Woodland on Alluvial	Endangered	<p>The ecological community typically occurs on paleo and recent depositional soils in flat terrain and occasionally along watercourses in undulating country. The woodland is mainly associated with active and depositional plains and flats including back plains, higher terraces, levees along rivers particularly in Queensland. The Poplar Box Grassy Woodland is sometimes found in close proximity to ephemeral watercourses and depressions. The soils in these watercourses are considered alluvial and the regularity of flow after heavy rain curtails shrub growth (DEE, 2019). REs considered analogous to this TEC include; 11.3.2, 11.3.17, 11.4.7, 11.4.12, and 12.3.10.</p>	<p>Study area contains BVG17a, however does not contain any analogous REs (Queensland Herbarium, 2023a). Poplar box woodland on site has been ground-truthed as 11.5.3. No analogous REs have been identified in previous surveys (McCollum Environmental Management Services, 2011; Wormington, 2015).</p>	<p><b>Unlikely to occur</b> This TEC was not identified in the Study Area during this survey. Areas of poplar box woodland within the Study Area were ground-truthed as sandy undulating plains (RE 11.5.3).</p>



Community name	EPBC Act status	Habitat preference	Desktop assessment results	Likelihood of occurrence
Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions	Endangered	Semi-Evergreen Vine Thickets of the Brigalow Belt (North and South) and Nandewar Bioregions (SEVT TEC) is a community composed of dry seasonal subtropical rainforest. The community is distributed from Townsville down to just south of the NSW border. In Queensland remnant vine thicket patches are mostly scattered from coastal dunes and river deltas in the vicinity of Townsville and Ayr through to the south-eastern part of the bioregion between Jandowae and Killarney on the Queensland/New South Wales border. The community is generally floristically diverse, usually consisting of semi-deciduous and microphyll species associated with dry rainforests as well as a diversity of lianas. Fluctuations in the composition and diversity of species can be based on the amount of rainfall received (DoE, 2023c). REs considered analogous to this TEC include; 11.2.3, 11.3.11, 11.4.1, 11.5.15, 11.8.3, 11.8.6, 11.8.13, 11.9.4, 11.9.8, 11.11.18,	No semi-evergreen vine thickets are mapped or documented within the Study Area and adjacent surrounds (Queensland Herbarium, 2023a). This TEC has not been identified in previous surveys (McCollum Environmental Management Services, 2011; Wormington, 2015).	<p><b>Unlikely to occur</b></p> <p>This TEC was not identified in the Study Area. No analogous REs were ground-truthed in the Study Area during the survey.</p>



# Fauna

Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
<b>Birds</b>					
Australian painted snipe <i>(Rostratula australis)</i>	E; Marine	<p>Generally inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans. They also use inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage farms and bore drains. The species has been recorded to utilise areas lined with trees, or that have some scattered fallen or washed-up timber. Breeding occurs in shallow wetlands with areas of bare wet mud and both upper and canopy cover nearby, typically from or near small islands in freshwater wetlands (DCCEEW, 2022a).</p> <p>This species occurs in all states of Australia but is most common in eastern Australia (DCCEEW, 2022a). Well-known from the Murray-Darling basin. Other sightings include the Channel Country and the Fitzroy basin, and recently from the floodwater plains of coastal central and north Qld. Suspected to be regular migrants to coastal floodwater plains, in autumn and winter.</p>	<p>This species has been recorded within 20 km of the Study Area (ALA, 2023).</p>	<p>No optimal survey period specified (DEWHA, 2010).</p>	<p><b>Possibly occurring</b></p> <p>This species was not identified during the field survey but ephemeral foraging habitat ground-truthed as 11.3.9 which is limited in extent (1.53 ha) is present within the Study Area. This habitat is unlikely to provide resources to support a population to persist in the area.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Black-faced monarch <i>(Monarcha melanopsis)</i>	Marine; Migratory (Bonn)	<p>The species mainly occurs in rainforest ecosystems, including semi-deciduous vine-thickets, tropical rainforest, subtropical rainforest and cool temperate rainforest (DCCEEW, 2023b). Also known from gullies in mountain areas or coastal foothills, softwood scrub dominated by <i>Acacia harpophylla</i>, coastal scrub dominated by <i>Banksia integrifolia</i> and occasionally among mangroves. Sometimes occurs in suburban parks and gardens, and selectively logged, 20–30 year old regrowth rainforest (DCCEEW, 2023b).</p> <p>In Queensland, it is widespread from the islands of the Torres Strait and on Cape York Peninsula, south along the coasts (occasionally including offshore islands) and the eastern slopes of the Great Divide, to the New South Wales border. The species also occasionally occurs further inland, for example, at Forty Mile Scrub in April 1976, and Eight Mile Plain in October 1991; a single vagrant was recorded at Windorah, south-western Queensland in March 1989. Specific locations where breeding has been recorded include: the Atherton Region in Queensland (Wet Tropics) - Julatten south to the Paluma Range and inland to the Atherton Tableland; and from 26° S in south-eastern Queensland to near Lakes Entrance, Victoria (DCCEEW, 2023b).</p>	This species has been recorded within 20 km of the Study Area (ALA, 2023).	No optimal survey period specified (DCCEEW, 2023b). In Queensland, the species migrates north between February and May to north-east Queensland and Papua New Guinea for the winter (DCCEEW, 2023a).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey and suitable habitat was not identified in the Study Area. This species is more commonly associated with coastal mesic environments east of the Great Diving Range.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Common greenshank ( <i>Tringa nebularia</i> )	E; Marine; Migratory (Bonn, CAMBA, JAMBA, ROKAMBA); SLC	<p>The species occurs in all types of wetlands. Typical habitat for this species a wide variety of inland wetlands and sheltered coastal habitats of varying salinity, including sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass, both permanent and ephemeral terrestrial wetlands, including swamps, lakes, dams, rivers, creeks, billabongs, waterholes and inundated floodplains, claypans and saltflats (DoE, 2015a).</p> <p>The Common Greenshank is found along all coastlines of Australia, including several wetland areas inland, the widest distribution of any shorebird in Australia. However it does not breed in Australia. Within Queensland, sites of international importance include the south-east of the Gulf of Carpentaria, and within the Great Sandy Strait (DCCEEW, 2023b).</p>	This species has not been recorded within 20 km of the Study Area (ALA, 2023).	No optimal survey period specified (DoE, 2023a).	<p><b>Possibly occurring</b></p> <p>This species was not identified during the survey, and no records exist within 20km of the study area. However, the species is highly mobile and low quality habitat does occur in the form of creeks and ephemeral wetlands.</p>
Common sandpiper ( <i>Actitis hypoleucos</i> )	Marine; Migratory (Bonn, CAMBA, JAMBA, ROKAMBA)	<p>The species has been recorded from a wide range of wetland habitats, of varying levels of salinity. The species typically forages in shallow water and on bare soft mud at the edges of wetlands (DoE, 2023a).</p> <p>The Common Sandpiper is found along all coastlines of Australia, including several areas inland, but is concentrated to northern and western Australia. In Queensland, areas of national importance occur in southeastern Gulf of Carpentaria and the Cairns foreshore. The south-eastern Gulf of Carpentaria is also a site of international importance (DoE, 2023a).</p>	This species has not been recorded within 20 km of the Study Area (ALA, 2023).	No optimal survey period specified (DoE, 2023a).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey and no suitable habitat was identified in the Study Area.</p>





Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Curlew sandpiper <i>(Calidris ferruginea)</i>	CE; Marine; Migratory (Bonn, CAMBA, JAMBA, ROKAMBA)	<p>This species usually forages and roosts in 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 (DoE, 2015).</p> <p>Curlew Sandpipers commonly occur around the Australian coastline. Queensland records indicate that this species is more widespread in coastal areas south of Cairns. In Queensland, scattered records occur in the Gulf of Carpentaria also. There are sparsely scattered records inland (DoE, 2015).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	August - March (DoE, 2015).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey and no suitable habitat was identified in the Study Area.</p>
Diamond firetail <i>(Stagonopleura guttata)</i>	V	<p>Occurs in eucalypt, acacia or casuarina woodlands and open forests. They are also found in farmlands, grasslands with scattered trees or other lightly timbered habitats. Habitat critical to the survival of the diamond firetail includes areas of eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats, low tree density, few large logs, and little litter cover but high grass cover for foraging, roosting and breeding and Drooping she-oak (<i>Allocasuarina verticillata</i>) within the Mt Lofty Ranges (DCCEEW, 2023b).</p> <p>The species is found on the south-east mainland of Australia from south-east Queensland to Eyre Peninsula, South Australia and 300km inland from coastal areas. Formerly extending to north Queensland, their range has greatly retracted and they now occur only in the very south of the state (DCCEEW, 2023b).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	No optimal survey period specified (DCCEEW, 2023b).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey and the Study Area is outside the species' current known distribution.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Fork-tailed swift ( <i>Apus pacificus</i> )	Marine; Migratory (CAMBA, JA MBA, ROKA MBA)	<p>The species is predominantly aerial and occurs over inland areas and occasionally above the foothills in coastal areas with dry and open habitat. The species can also occur over low scrub, heathland, saltmarsh and riparian woodlands and are associated with low pressure systems that favour the occurrence of insect prey (DoE, 2023a).</p> <p>The Fork-tailed Swift is a non-breeding visitor to all states and territories of Australia. Scattered records in the Gulf Country, and a few records on Cape York Peninsula. In the north-east region there are many records east of the Great Divide, from near Cooktown and south to Townsville. They are also widespread but scattered in coastal areas from 20° S, south to Brisbane and in much of the south south-eastern region. They are more widespread west of the Great Divide and are commonly found west of the line joining Chinchilla and Hughenden. They are found to the west between Richmond and Winton, Longreach, Gowan Range, Maraila National Park and Dirranbandi. They are rarely found further west to Windorah and Thargomindah (DoE, 2023a).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	October - mid-April (DoE, 2023a).	<p><b>Known to occur</b></p> <p>A flock of 20-40 fork-tailed swifts was observed high in the airspace above the Study Area during the field survey at Humbug Gully.</p>
Grey falcon ( <i>Falco hypoleucos</i> )	V	<p>Habitat for the species is generally timbered lowland plains that are crossed by tree-lined watercourses, and adjacent to treeless areas, grasslands and open woodlands that are used for foraging. Key habitat is identified as Acacia shrublands that are crossed by tree-lined watercourses (Garnett et al., 2011).</p> <p>The Grey Falcon is poorly known and is considered to be Australia's rarest falcon and rarest Falco species in the world (Schoenjahn, 2013). Resident or nomadic visitor to inland parts of all mainland states. Also recorded from most of Australia except Cape York Peninsula and Southeast Qld. Mainly occurs where annual rainfall is &lt;500 mm (Garnett et al., 2011). Can occur in the Murray-Darling Basin, Eyre Basin, and central Australia.</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	No optimal survey period specified (TSSC, 2020).	<p><b>Unlikely to occur</b></p> <p>Grey Falcon was not identified during the survey. This species is associated with more arid environments and is considered a rare vagrant to areas of central eastern Queensland.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Latham's snipe, Japanese snipe ( <i>Gallinago hardwickii</i> )	V; Marine; Migratory (Bonn, JAM BA, ROKAM BA)	<p>In Australia the species typically 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 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. Various other freshwater habitats can be used including bogs, waterholes, billabongs, lagoons, lakes, creek or river margins, river pools and floodplains (DoE, 2022e).</p> <p>Known from all east coast areas. Extends inland over the eastern tablelands in south-eastern Queensland (and occasionally from Rockhampton in the north), and to west of the Great Dividing Range in New South Wales. Occasionally recorded in south-western Queensland (DoE, 2022e).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	October - February (DoE, 2022e).	<p><b>Possibly occurring</b></p> <p>This species was not identified during the field survey but ephemeral foraging habitat ground-truthed as 11.3.9 which is limited in extent (1.53 ha) is present within the Study Area. This habitat is marginal and unlikely to provide resources to support a population to persist in the area.</p>
Oriental cuckoo, Horsfield's cuckoo ( <i>Cuculus optatus</i> )	Marine; Migratory (CAMBA, JAMBA, ROKA MBA)	<p>Inhabits monsoon forest, rainforest edges, isolated trees in paddocks, river flats, roadsides, mangroves, islands (Pizzey &amp; Knight, 2007). Also occurs in woodlands and open forest associated with riparian areas.</p> <p>The species is a regular nonbreeding migrant to coastal northern and eastern Australia (Pizzey &amp; Knight, 2007). The species occurs in the Gulf of Carpentaria and Cape York Peninsular to the QLD-NSW border, including inland areas of eastern Queensland.</p>	The species has been recorded within 20 km of the Study Area (ALA, 2023).	September-May (DoE 2015).	<p><b>Possibly occurring</b></p> <p>This species was not identified during the survey but suitable habitat was identified in the Study Area. However, this species is more commonly associated with coastal mesic environments east of the Great Dividing Range.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Osprey ( <i>Pandion haliaetus cristatus</i> )	Marine; Migratory (EPBC, Bonn)	<p>The species inhabits littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands (DotE 2015). The species has been recorded within a variety of wetland habitats including swamps and marshes; margins of rivers and lakes; damp or flooded grasslands, pastures or agricultural lands; reservoirs; sewage treatment ponds; drainage channels; salt pans and salt lakes; salt marshes; estuarine mudflats, tidal streams; mangrove swamps; coastal lagoons; and offshore reefs (DotE 2015a).</p> <p>The species occurs along the coast around the entirety of Australia, with the breeding range extending from the south-west coast of Western Australia, up and around through Queensland, ending at to Lake Macquarie in NSW (DCCEEW 2023b).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	No optimal survey period specified (DCCEEW, 2023b).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the field survey but ephemeral foraging habitat ground-truthed as 11.3.9 which is limited in extent (1.53 ha) is present within the Study Area. This habitat is unlikely to provide resources to support a population to persist in the area.</p>
Pectoral sandpiper ( <i>Calidris melanotos</i> )	Marine; Migratory (Bonn, JAM BA, ROKAM BA)	<p>Typical habitat for the species comprises shallow fresh to saline wetlands, including coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands. The species is usually found in coastal or near coastal habitat but occasionally further inland. Also recorded in swamp overgrown with lignum (DoE, 2023b).</p> <p>In Queensland, most records for the Pectoral Sandpiper occur around Cairns. There are scattered records elsewhere, mainly from east of the Great Divide between Townsville and Yeppoon. Records also exist in the south-east of the state as well as a few inland records at Mount Isa, Longreach and Oakey (DoE, 2023b).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	September to June (DoE, 2023b).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the field survey but ephemeral foraging habitat ground-truthed as 11.3.9 which is limited in extent (1.53 ha) is present within the Study Area. This habitat is unlikely to provide resources to support a population to persist in the area.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Red goshawk ( <i>Erythrotriorchis radiatus</i> )	V	<p>The species prefers landscapes containing a mosaic of habitats including coastal and sub-coastal tall open forest, woodland and rainforest edges. Forests of intermediate density are particularly favoured, as are ecotones between variably dense habitats. Habitat utilisation is influenced by the location of large populations of birds (primary prey). It is rarely encountered over agricultural land as it avoids open habitats. Nesting occurs in tall trees within one kilometre of permanent water, generally in open, biologically rich forest or woodland. The species is sparsely dispersed across 15% of coastal and sub-coastal Australia (DoE, 2022b). The species prefers a large intact woodland or forest landscape to support the species (DCCEEW, 2023a).</p> <p>The range of the Red Goshawk has significantly retracted in recent years towards northern Australia and is now considered locally extinct in Southern Queensland and NSW. It appears the species is no longer present or is present at critically low levels in Brigalow Tropical Savannah ecoregions in coastal and sub-coastal eastern Australia (MacColl et al., 2023). Recent records in Queensland suggest that the species is existing in National Parks or State forests with a stronghold in north-east Queensland and eastern Cape York Peninsula (DERM, 2012).</p>	There are no contemporary records within 20 km of the Study Area (ALA, 2023).	No optimal survey period specified (DEWHA, 2010).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey and no suitable habitat was identified in the Study Area. The species is thought to be absent or at critically low levels in this region.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Rufous fantail ( <i>Rhipidura rufifrons</i> )	Marine; Migratory (Bonn);	<p>In east and south-east Australia, the species usually inhabits wet sclerophyll forests usually with a dense shrubby understorey often including ferns. It can also be found in subtropical and temperate rainforests, and occasionally in drier sclerophyll forests during migration. In the north, it occurs in tropical rainforest and monsoon rainforests, including semi-evergreen mesophyll vine forests, semi-deciduous vine thickets or thickets of Paperbarks (<i>Melaleuca</i> spp.). They occasionally occur in secondary regrowth, following logging or disturbance in forests or rainforests (DotE 2015a).</p> <p>The species occurs in and near coastal areas of northern and eastern Australia, with breeding populations present in Queensland east of the Great Divide, all the way from the NSW border to north of Cairns.</p>	The species has been recorded within 20 km of the Study Area (ALA, 2023).	September - November (DCCEEW 2023b)	<p><b>Possibly occurring</b></p> <p>This species was not identified during the survey and the Study Area is outside of the mapped distribution area. However, records do exist within the 20 km search area, and marginal habitat exists in the form of dry eucalypt woodland that may be utilised during transit to areas of suitable or preferred habitat.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Satin flycatcher ( <i>Myiagra cyanoleuca</i> )	Marine; Migratory (Bonn)	<p>The species mainly inhabit eucalypt forests, often near wetlands or watercourses. They generally occur in moister, taller forests than the leaden flycatcher, often occurring in gullies. They also occur in eucalypt woodlands with open understorey and grass ground cover and are generally absent from rainforest (DoE, 2023g).</p> <p>The species is widespread in eastern Australia. In Queensland, it is widespread but scattered in the east, being recorded on passage on a few islands in the western Torres Strait. It is patchily recorded on Cape York Peninsula, from the Cape south to a line between Aurukun and Coen. The species is more widespread farther south, though still scattered, from Musgrave Station south to c. 24°S, mostly in coastal areas, but also on the Great Divide, and occasionally further west. Satin Flycatchers are widespread in south-eastern Queensland, in the area from Fraser Island, west to Goombi and south to the NSW border (DoE, 2023g).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	May-September (DoE 2015).	<p><b>Possibly occurring</b></p> <p>This species was not identified during the survey but suitable habitat was identified in the Study Area. This species is mostly associated with more coastal mesic environments.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Sharp-tailed sandpiper <i>(Calidris acuminata)</i>	V; Marine; Migratory (Bonn, CAM BA, JAMBA, ROKAMBA)	<p>The species typically inhabits 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 pools near the coast, and dams, waterholes, soaks, bore drains and bore swamps, saltpans and hypersaline salt-lakes inland. The species may use flooded paddocks, sedgelands and other ephemeral wetlands, but vacate these habitats during dry conditions. Marine habitats for the species include intertidal mudflats in sheltered bays, inlets, estuaries or seashores, and also swamps and creeks lined with mangroves. Sometimes occur on rocky shores and rarely on exposed reefs (DoE, 2023a).</p> <p>In Queensland, they are recorded in most regions, being widespread along much of the coast and are very sparsely scattered inland, particularly in central and south-western regions (Higgins &amp; Davies, 1996). There are 39 international important sites across Australia, four of which are in Queensland: south-east Gulf of Carpentaria, Lake Machattie, Lake Yamma Yamma, and Lake Numalla (DoE, 2023a).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	September - April (DoE, 2023a).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey and no suitable habitat was identified in the Study Area. Ephemeral foraging habitat mapped as RE 11.3.9 within the Study Area is of poor suitability for the species due to the lack of mud for foraging.</p>





Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Southern black-throated finch ( <i>Poephila cincta cincta</i> )	E	<p>Occurs mainly in grassy, open woodlands and forests, typically dominated by <i>Eucalyptus</i>, <i>Corymbia</i> and <i>Melaleuca</i>, and occasionally in tussock grasslands or other habitats (for example freshwater wetlands), often along or near watercourses, or in the vicinity of water (DCCEEW, 2022d). Almost all recent records of the finch from south of the tropics have been in riparian habitat (Black-throated Finch Recovery Team, 2004). The subspecies is thought to require a mosaic of different habitats in which it can find seed during the wet season (DCCEEW, 2022d).</p> <p>This subspecies historically contacted the northern subspecies near Mareeba. The current distribution of the Black-throated Finch (southern) has now largely contracted and is only locally common in Queensland at sites near Townsville and Charters Towers, with small flocks scattered throughout the Brigalow Belt North and Desert Uplands bioregions (Black-throated Finch Recovery Team et al., 2007). Very few records occur south of Rockhampton after the 1970s. No populations are known to occur on conservation reserves. There are no modern records (since 2000) in the Northern Bowen Basin (DCCEEW, 2023a).</p>	This species has not been recorded within 20 km of the Study Area (ALA, 2023).	Late dry season (DEWHA, 2010).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey and the Study Area is outside the species current known distribution.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Squatter pigeon (southern) <i>(Geophaps scripta)</i>	V	<p>The species is locally abundant within the northern part of its range (i.e. Brigalow Belt (North) and Desert Uplands Bioregions). It is considered to be common in grazing country north of the Tropic of Capricorn. The species occurs in a wide range of habitats wherever there is a grassy understorey of an open eucalypt woodland (and less often savannas). It is often found within close proximity of water bodies (DoE, 2022c).</p> <p>Potential distribution extends south from the Burdekin-Lynd divide in the southern region of Cape York Peninsula to south-east Queensland, south-west to Stanthorpe, near the Queensland-NSW border, south to the NSW border, and north-westwards through Goondiwindi and the Brigalow Belt in Queensland to Charleville. Extends from the east coast to Hughenden, Longreach and Charleville. Known distribution is estimated to occur within the latitudes, 17° to 30° S, and the longitudes, 141° to 153° 30' E. Known to occur within the following natural resource management regions: Desert Channels, Burdekin, Mackay Whitsunday, Fitzroy, Burnett Mary, South East Queensland, Condamine, Border Rivers and Maranoa-Balonne and South West Queensland (DoE, 2022c).</p>	<p>Six squatter pigeons were observed within Mining Lease 70164 in 2015 outside the current Study Area (Wormington, 2015). 16 sightings have been recorded within approximately 20 km of the Study Area (DES, 2023).</p>	<p>May to October (DCCEEW 2023d).</p>	<p><b>Known to occur</b></p> <p>One squatter pigeon was observed in the Study Area in Harrybrandt Creek during the survey. A further seven squatter pigeons were observed adjacent to the Study Area, approximately 200 - 1500 m to the west of Harrybrandt Creek during the survey.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Star finch (eastern), Star finch (southern) ( <i>Neochmia ruficauda ruficauda</i> )	E	<p>The species occurs mainly in grasslands and grassy woodlands that are located close to bodies of fresh water. It also occurs in cleared or suburban areas such as along roadsides and in towns (DoE, 2023h).</p> <p>The distribution of the star finch is poorly known but is thought to only occur in central Queensland. The distribution is thought to be from Bowen in the north, to Winton in the west and Wowan in the south. It is possible that the distribution extends farther north to Mount Surprise and the Cloncurry-Mount Isa region, but records from these locations could relate to the subspecies <i>N. r. subclarescens</i> (DoE, 2023h). Recent studies estimate the total population at 50 individuals or as being possibly extinct (DEWHA, 2008b).</p>	There are no contemporary records of this species within 20 km of the Study Area (ALA, 2023).	No optimal survey period specified (DEWHA, 2010).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey and no suitable habitat was identified in the Study Area. This species has not been sighted in this region in recent history.</p>
White-throated needletail ( <i>Hirundapus caudacutus</i> )	V; Marine; Migratory (CAMBA, JA MBA, ROKA MBA)	<p>The species is almost exclusively aerial in Australia. It breeds in Siberia from April to August. In the non-breeding season, the species can occur over most habitat types. The species is most often recorded above wooded areas including open forest, closed forest and rainforest. The species is recorded from ground level up to 1000m. The species is commonly observed high on storm fronts feeding exclusively on insects. The species has been recorded roosting in hollows in Australia. Roosting habitat has been recorded as hollow-bearing trees on cliffs, ridges, edges of clearing areas and emergents (DCCEEW, 2023).</p>	The species has been recorded within 20 km of the Study Area (ALA, 2023).	October and April (DoE 2015).	<p><b>Likely occurring</b></p> <p>This species was not identified in the Study Area during the survey, however suitable foraging habitat exists above the Study Area. Potential roosting habitat in the Study Area is limited to distinct edges of woodland adjacent to open, cleared areas.</p>
Yellow wagtail ( <i>Motacilla flava</i> )	Marine; Migratory (CAMBA, JA MBA, ROKA MBA)	<p>The species typically inhabits short grass and bare ground; swamp margins, sewage ponds, saltmarshes, playing fields, airfields, ploughed land and town lawns. The species is regularly recorded as a summer migrant to coastal northern Australia (Pizzey &amp; Knight, 2007).</p> <p>Eastern populations of the species mainly migrate to South Asia with some moving to Africa (BirdLife International, 2019).</p>	There are no contemporary records within 20 km of the Study Area (ALA, 2023).	No optimal survey period specified (DoE, 2023b).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey and no suitable habitat was identified in the Study Area. The species is considered a rare vagrant to Queensland.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
<b>Mammals</b>					
Corben's long-eared bat, South-eastern long-eared bat ( <i>Nyctophilus corbeni</i> )	V	<p>The species is found in a wide range of inland woodland vegetation types, these include box/ironbark/cypress pine woodlands, Buloke woodlands, Brigalow woodland, Belah woodland, smooth-barked apple woodland, river red gum forest, black box woodland, and various types of tree mallee. The species is more abundant in extensive stands of vegetation in comparison to smaller woodland patches. Studies have found that the south-eastern long-eared bat roosts solitarily, mainly in dead trees or dead spouts of live trees (TSSC, 2015).</p> <p>The south-eastern long-eared bat is found in southern central Queensland, central western New South Wales, north-western Victoria and eastern South Australia, where it is patchily distributed, with most of its range in the Murray Darling Basin. Most records are from inland of the Great Dividing Range. The species is uncommon within this distribution and is rarely recorded, except in some areas including the Nandewar and Brigalow Belt South bioregions in New South Wales and Queensland (TSSC, 2015).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	No optimal survey period specified (TSSC, 2015).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey and the Study Area is outside the species current known distribution.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Ghost bat ( <i>Macroderma gigas</i> )	V	<p>The species occurs across a range of habitats, from arid Pilbara to tropical savanna woodlands and rainforests. During the daytime they roost in caves, rock crevices and old mines. Roost sites used permanently are generally deep natural caves or disused mines with a relatively stable temperature of 23°–28°C and a moderate to high relative humidity of 50–100 percent. The average foraging distance is approximately 2 km from the daytime roost (TSSC, 2016b).</p> <p>The species' current range is discontinuous, with geographically disjunct colonies occurring in the Pilbara, Kimberley (including several islands), northern Northern Territory (including Groote Eylandt), the Gulf of Carpentaria, coastal and near coastal eastern Queensland from Cape York to near Rockhampton, and western Queensland (including Riversleigh and Cammoweal districts (TSSC, 2016b).</p>	<p>This species has not been recorded within 20 km of the Study Area (ALA, 2023). There are no contemporary records of the species in the area.</p>	<p>No optimal survey period specified (TSSC, 2016b).</p>	<p><b>Unlikely to occur</b> This species was not identified during the survey and no suitable roosting habitat was identified in the Study Area.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Greater glider (southern and central) <i>(Petauroides volans/ Petauroides armillatus)</i>	E	<p>The greater glider (southern and central) is an arboreal nocturnal marsupial, predominantly solitary and largely restricted to eucalypt forests and woodlands of eastern Australia. The distribution may be patchy even in continuous areas of habitat. The probability of occurrence of the species is positively correlated with the availability of tree hollows, which is a key limiting resource. Greater Gliders (southern and central) can be found in regrowth forest provided sufficient hollows are present, and conversely are absent when there are insufficient hollows. In southern Qld, the species appears to require at least 2-4 live den trees for every 2 ha of suitable forest habitat (DCCEEW, 2022). In central and eastern Queensland they are often reliably found along watercourses dominated by <i>Eucalyptus tereticornis</i> and <i>Eucalyptus camaldulensis</i>.</p> <p>The greater glider (southern and central) occurs in eastern Australia, where it has a broad distribution from around Proserpine in Qld, south through NSW and the ACT, to Wombat State Forest in central Victoria. It occurs across an elevational range of 0–1200 m above sea level (DCCEEW, 2022).</p>	There are 59 sightings within approximately 20 km of the Study Area (DES 2023b).	No optimal survey period specified (DCCEEW, 2022).	<b>Known to occur</b> 16 observations of greater glider were recorded within the Study Area during nocturnal spotlighting surveys along Humbug Gully, Harrybrandt Creek and in eucalypt woodland RE 11.5.3 and 11.5.8c.



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Koala ( <i>Phascolarctos cinereus</i> )	E	<p>Koalas in Queensland inhabit the moist coastal forests, southern and central western subhumid woodlands, and a number of eucalypt woodlands adjacent to waterbodies in the semi-arid western parts of the state. In many locations, koala populations are of low density, widespread and fragmented. Surveys in north-western Queensland found that koalas were patchily distributed, associated with creek-lines, areas of higher tree species richness, with higher abundance correlating with leaf-moisture content. Koalas are reported to utilise more than 400 different species of tree for their food and habitat requirements with different tree species varying by habitat type and location across their range. Primary food species differ across habitats and may be as few as two at a particular location (DAWE, 2022a).</p> <p>The listed population of the koala has a wide but patchy distribution that spans the coastal and inland areas of Queensland north to the Herberton area, extending westwards into hotter and dryer semi-arid climates of central Queensland, New South Wales and the Australian Capital Territory. Koalas are widespread across Queensland, occurring in patchy and often low-density populations across the different bioregions. They occur as far north as the Einasleigh Uplands and Wet Tropics bioregions with records to the south and west in the Desert Uplands, Central Mackay Coast, Mitchell Grass Downs, Mulga Lands, Brigalow Belt North, Brigalow Belt South, and South Eastern Queensland where they are most frequently sighted (DAWE, 2022a).</p>	<p>A survey at the Coppabella Coal Mine reported koala scratches on trees in Humbug Gully within the current Study Area (Wormington, 2015). 47 sightings records are reported within approximately 20 km of the site (DES, 2023).</p>	<p>No optimal survey period specified (DAWE, 2022a).</p>	<p><b>Known to occur</b> 9 koala sightings were recorded in the Study Area along Harrybrandt Creek and Humbug Gully during diurnal and nocturnal surveys. Tree scratches, scats and koala calls were also recorded in riparian areas within the Study Area.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Northern quoll ( <i>Dasyurus hallucatus</i> )	E	<p>The species diverse range of habitats includes eucalypt forest and woodlands, rainforests, sandy lowlands and beaches, shrubland, grasslands and desert. The species is also known to occupy non-rocky lowland habitats such as beachscrub communities in central Queensland. Northern quoll habitat generally encompasses some form of rocky area for denning purposes with surrounding vegetated habitats used for foraging and dispersal. Rocky habitats are usually of high relief, often rugged and dissected but can also include tor fields or caves in low lying areas. Eucalypt forest or woodland habitats usually have a high structural diversity containing large diameter trees, termite mounds or hollow logs for denning purposes. Dens are made in rock crevices, tree holes or occasionally termite mounds (DoE, 2023).</p> <p>The northern quoll occurs in five regional populations across northern Australia, including Queensland, the Northern Territory, Western Australia and offshore islands. In Queensland, the Northern Quoll is known to occur as far south as Gracemere and Mt Morgan, south of Rockhampton, as far north as Weipa in Queensland and extends as far west into central Queensland to the vicinity of Carnarvon Range National Park. There are occasionally records as far south in Queensland as Maleny. Recent records in central Queensland come from around Proserpine, Midge Point, Eungella and Cape Upstart. In northern Queensland recent records exist from Mareeba, Mount Carbine, Tolga, Weipa and around Cooktown (DoE, 2023).</p>	This species has not been recorded within 20 km of the Study Area (ALA, 2023).	No optimal survey period specified for reconnaissance survey (DoE, 2023).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey. No denning habitat was identified within the Study Area. No adjacent areas of suitable denning habitat were identified during desktop and field assessments.</p>





Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
<b>Reptiles</b>					
Allan's slider ( <i>Lerista allanae</i> )	E	<p>Found in association with <i>Eucalyptus orgadophila</i>/<i>E. erythrophloia</i> open woodlands and <i>Melaleuca bracteata</i>. It is currently associated with altered landscapes that have areas with leaf litter and friable surface soils beneath trees and shrubs. These sites were characterised by dark chocolate non-cracking clay-based soils which are mapped as Regional Ecosystem 11.8.5 and 11.8.11 (DoE, 2023f).</p> <p>Allan's slider is only known from black soil downs in the Brigalow Belt North Bioregion in Queensland, between Clermont and Capella (DoE, 2023f).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	Late September - late March (DSEWPC, 2011).	<p><b>Unlikely to occur</b></p> <p>This species was not identified in the Study Area. The Study Area is outside the species' current known distribution.</p>
Dunmall's snake ( <i>Furina dunmalli</i> )	V	<p>The species range of habitats includes forests and woodlands on black alluvial cracking clay and clay loams dominated by <i>Acacia harpophylla</i> (brigalow), other wattles (<i>A. burowii</i>, <i>A. deanii</i>, <i>A. leiocalyx</i>), <i>Callitris spp.</i> or <i>Allocasuarina luehmannii</i>; and <i>Corymbia citriodora</i>, <i>Eucalyptus crebra</i>, <i>E. melanophloia</i>, <i>Callitris glaucophylla</i> and bullock open forest and woodland associations on sandstone derived soils (DoE, 2023e).</p> <p>Dunmall's snake is found from near the Queensland border throughout the Brigalow Belt South and Nandewar bioregions, and as far south as Ashford in New South Wales. In Queensland, it occurs primarily in the Brigalow Belt region in the south-eastern interior. The snake is very rare or secretive with limited records existing. It has been recorded at Archokoora, Oakey, Miles, Glenmorgan, Wallaville, Gladstone, Lake Broadwater, Mount Archer, Tarong Power Station, Exhibition Range National Park, roadside reserves between Inglewood and Texas, Rosedale, Yeppoon and Lake Broadwater Conservation Park (DoE, 2023e).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	Late September - late March (DSEWPC, 2011).	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey in the Study Area. The Study Area is outside the species' current known distribution.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Grey snake ( <i>Hemiaspis damelii</i> )	E	<p>The grey snake favours woodlands (typically <i>Acacia harpophylla</i> and <i>Casuarina cristata</i>), usually on heavier, cracking clay soils, particularly in association with water bodies or in areas with small gullies and ditches. It shelters under rocks, logs and other debris as well as in soil cracks (DCCEEW, 2022).</p> <p>Grey snake distribution extends from central inland New South Wales, north to several isolated populations near Rockhampton in Queensland. Within Queensland, records are known from near Goondiwindi and the adjacent Darling-Riverine Plain, from the Darling Downs and from the Lockyer Valley. The core area is in the Brigalow Belt south of the Great Dividing Range, between Dalby and Glenmorgan. Grey Snakes occur in Lake Broadwater Conservation Park, Southwood National Park, Currawinya National Park, and Erringibba National Park (DCCEEW, 2022). A single reliable record (captured, no specimen collected) is known from Currawinya National Park in western Queensland.</p>	<p>The species has not been recorded within 20 km of the Study Area (ALA, 2023).</p>	<p>January - March (Rowland, 2012).</p>	<p><b>Unlikely to occur</b> This species was not identified during the survey. The Study Area is outside the species' current known distribution.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Ornamental snake ( <i>Denisonia maculata</i> )	V	<p>The species is known to prefer woodlands and open forests associated with moist areas, particularly gilgai (melon-hole) mounds and depressions in Queensland RE land zone 4, but also lake margins and wetlands. Gilgai formations are found where deep-cracking alluvial soils with high clay contents occur (DoE, 2023c).</p> <p>Ornamental Snake is only known from the Brigalow Belt North, and parts of the Brigalow Belt South Bioregions. The stronghold of this species is within the Fitzroy and Dawson River catchments, particularly in the area surrounding Moranbah (DoE, 2023c).</p>	<p>An ornamental snake was sighted during nocturnal surveys within the Study Area in poplar box woodland in RE 11.5.3 adjacent to Humbug Gully on Mining Lease 70384 (McCollum Environmental Management Services, 2011). 7 sightings within approximately 20 km of the Study Area have been reported (DES, 2023b). The snake has been observed within close proximity to Coppabella Mine in RE 11.3.4 and RE 11.5.16 (Wormington, 2015).</p>	<p>January to mid-March (DoE, 2023c).</p>	<p><b>Known to occur</b></p> <p>One ornamental snake was observed in the Study Area during nocturnal spotlighting surveys in RE 11.3.25. Suitable habitat was observed in the Study Area in Humbug Gully comprising REs 11.3.25, 11.3.4 and 11.5.16, as well as some non-remnant areas.</p>



Fauna species	EPBC Act Status	Habitat and distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Yakka skink ( <i>Egernia rugosa</i> )	V	<p>The species is known to occur in open dry sclerophyll forest, woodland and scrub, including on Land Zones 3, 4, 5, 7, 9 and 10 (DoE 2023d). Common woodland and open forest types include <i>Acacia harpophylla</i>, <i>A. aneura</i>, <i>A. catenulata</i>, <i>A. shirleyi</i>, <i>Casuarina cristata</i>, <i>Eucalyptus populnea</i>, <i>Eucalyptus spp.</i> and <i>Callitris glaucophylla</i> (DoE, 2023d). This species will often take refuge among dense ground vegetation, large hollow logs, cavities in soil-bound root systems of fallen trees and beneath rocks (DoE, 2014). The species also utilises coarse woody debris and rabbit warrens (DoE, 2023d).</p> <p>Yakka skink is endemic to Queensland where its distribution is patchy. Isolated populations occur throughout subhumid areas in the interior of Queensland from St George in the south, to Coen and Cape York in the north. In the southern half of the Brigalow Belt it occurs near Rockhampton, south to St George and west to Chesterton Range National Park (DoE, 2014).</p>	<p>The species has not been recorded within 20 km of the Study Area (ALA, 2023). A previous ecological survey at Coppabella Mine reported no sighting of the species during targeted surveys and a lack of suitable habitat (Wormington, 2015). Another survey also did not detect this species during targeted surveys but reported moderate areas of suitable habitat (McCollum Environmental Management Services, 2011).</p>	<p>Late September - late March (DSEWPC, 2011).</p>	<p><b>Unlikely to occur</b></p> <p>This species and signs of this species was not observed during the survey. Limited shelter opportunities are available in the Study Area due to the low density of large hollow logs, rocks, coarse woody debris and rabbit warrens.</p>

CE - critically endangered, E - endangered, V - vulnerable

\* Aquatic species including *Elseya albagula* and *Rheodytes leukops* are considered in the aquatic ecology report.



# Flora

Flora Species	EPBC Act Status	Habitat & Distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Black iron box <i>(Eucalyptus raveretiana)</i>	V	<p>This species grows along watercourses and occasionally on river flats. It occurs in open forest or woodland communities. The species prefers sites with moderately fertile soil and adequate sub-soil moisture. The alluvial soils in which it grows are sands, loams, light clays or cracking clays (DES, 2022).</p> <p>This species occurs in scattered and disjunct populations in central coastal and sub-coastal Queensland, from Charters Towers and Ayr, and south to Rockhampton (DEWHA, 2008).</p>	<p>The species has been recorded within 20 km of the Study Area (ALA, 2023). The species has not been recorded in previous targeted surveys at the mine (McCollum Environmental Management Services, 2011; Wormington, 2015). However, these surveys targeted limited riparian habitat.</p>	<p>No optimal survey period is specified as this is a perennial species.</p>	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey. Due to the abundance at which this species occurs, suitable habitat within the Study Area was sufficiently searched to deem this species as unlikely to occur.</p>



Flora Species	EPBC Act Status	Habitat & Distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
Bluegrass ( <i>Dichanthium setosum</i> )	V	<p>This species is associated with heavy basaltic black soils and red-brown loams with clay subsoil. Associated species include <i>Eucalyptus melanophloia</i>, <i>Myoporum debile</i>, <i>Aristida ramosa</i>, <i>Themeda triandra</i>, <i>Bothriochloa decipiens</i>, <i>Medicago minima</i>, <i>Ajuga australis</i>, and <i>Calotis hispidula</i>. This species is often found in moderately disturbed areas such as cleared woodland, grassy roadside remnants and highly disturbed pasture. It is often collected from disturbed open grassy woodlands on the northern tablelands, where the habitat has been variously grazed, nutrient-enriched and water-enriched (DoE, 2023h).</p> <p>This species occurs in inland NSW and Queensland, as well as in Western Australia and Tasmania. In Queensland, it has been reported from the Leichhardt, Morton, North Kennedy and Port Curtis regions, and in the Mistake Range, in Main Range National Park, and possibly on Glen Rock Regional Park, adjacent to the national park (DoE, 2023h).</p>	<p>The species has not been recorded within 20 km of the Study Area (ALA, 2023). The species has not been recorded in a previous survey (Wormington, 2015).</p>	<p>Summer when flowering (DoE, 2023h).</p>	<p><b>Unlikely to occur</b></p> <p>This species was not identified during the survey and basaltic black soils or red-brown loams with clay subsoil was not identified in the Study Area.</p>



Flora Species	EPBC Act Status	Habitat & Distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
King blue-grass ( <i>Dichanthium queenslandicum</i> )	E	<p>This species occurs on black cracking clay in tussock grasslands mainly in association with other species of blue grasses (<i>Dichanthium</i> spp. and <i>Bothriochloa</i> spp.). It is mostly confined to natural grassland on the heavy black clay soils (basalt downs, basalt cracking clay, open downs) on undulating plains. Other communities where <i>Dichanthium queenslandicum</i> can be found include <i>Acacia salicina</i> thickets in grassland and eucalypt woodlands (i.e. <i>Corymbia dallachiana</i>, <i>C. erythrophloia</i>, <i>E. orgadophila</i>) (DES, 2022a).</p> <p>This species occurs from near Dalby north to about 90 km north of Hughenden and west as far as Clermont. The main concentration of populations in central Queensland in the Emerald region. It is found in Gemini Peaks National Park north-east of Clermont and Alpinia National Park near Rolleston (DES, 2022a).</p>	<p>Two sightings have been recorded within 20 km of the Study Area (DES, 2023b). Previous ecological surveys found suitable habitat is not present at Coppabella Mine (McCollum Environmental Management Services, 2011; Wormington, 2015).</p>	<p>Flowering from March (DES, 2022a).</p>	<p><b>Unlikely to occur</b> This species was not identified during the survey and black clay soil was not identified in the Study Area.</p>
Large-fruited denhamia ( <i>Denhamia megacarpa</i> )	E	<p>The species is known from three subpopulations that occur on tablelands in association with 11.5.9b and 11.7.2. These subpopulations are on the Mackenzie tableland, the Junee tableland and the Newlands tableland.</p> <p>The habitat for the species is only known from a few sandy and gravelly sites mentioned above that support open eucalypt woodland or acacia forest (11.5.9b and 11.7.2).</p>	<p>No records of the species occur within 20 km of the Study Area.</p>	<p>No optimal survey period is described. The species is easily identifiable in the field from vegetative structures (DCCEEW, 2022).</p>	<p><b>Unlikely to occur</b> The species was not identified during the survey, the Study Area does not support habitat associated with this species and the Study Area does not occur near any known populations</p>



Flora Species	EPBC Act Status	Habitat & Distribution	Desktop assessment results	Optimal survey timing	Likelihood of occurrence
<i>Omphalea celata</i>	V	<p><i>Omphalea celata</i> is known from three sites in central east Queensland. Locations include Hazlewood Gorge, near Eungella; Gloucester Island, near Bowen; and Cooper Creek in the Homevale Station area, north-west of Nebo (DEWHA, 2008c).</p> <p>At Hazelwood gorge, habitat for this species includes fragmented semi-evergreen vine thicket along a watercourse on weathered metamorphics in a steep-sided gorge at an altitude of 560 m (Forster, 1995). On Gloucester Island, plants grow in a rocky granitic gully near Araucaria microphyll vineforest (Batianoff cited in Forster, 1995). At Cooper Creek, plants grow in the creek bed and adjacent bank (BRI collection records, n.d.).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	No optimal survey period is specified as this is a perennial species. The species flowers from June to December and fruiting from December to February (DEWHA, 2008c).	<b>Unlikely to occur</b> This species was not identified during the survey. Suitable habitat for this species was sufficiently searched to determine this species is unlikely to occur within the Study Area. This species does not require flowering or fruiting to be identified.
Quassia ( <i>Samadera bidwillii</i> )	V	<p>The species commonly occurs in lowland rainforest often with <i>Araucaria cunninghamii</i> or on rainforest margins, but it can also be found in other forest types, such as open forest and woodland, it is commonly found in areas adjacent to both temporary and permanent watercourses up to 510 m altitude (DES 2022b). Commonly associated trees in the open forest and woodlands include <i>Corymbia citriodora</i>, <i>Eucalyptus propinqua</i>, <i>E. acmenoides</i>, <i>E. tereticornis</i>, <i>C. intermedia</i>, <i>E. siderophloia</i>, <i>E. moluccana</i>, <i>E. cloeziana</i> and <i>E. fibrosa</i> (DEWHA, 2008). Quassia is endemic to Queensland and is currently known to occur in several localities between Scawfell Island, near Mackay, and Goomboorian, north of Gympie (DEWHA, 2008).</p>	The species has not been recorded within 20 km of the Study Area (ALA, 2023).	No optimal survey period is specified as this is a perennial species.	<b>Unlikely to occur</b> This species was not identified during the survey. Suitable habitat for this species was sufficiently searched to determine this species is unlikely to occur within the Study Area. This species does not require flowering or fruiting to be identified.

E - endangered, V - vulnerable







## Appendix C Significant Impact Assessments

## C.1 EPBC Act MNES Significant Impact self-assessment

### Definitions and terminology

Term	Definition under the EPBC Act
<b>Important population</b>	<p>a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:</p> <ul style="list-style-type: none"> <li>• key source populations either for breeding or dispersal</li> <li>• populations that are necessary for maintaining genetic diversity, and/or</li> <li>• populations that are near the limit of the species range.</li> </ul>
<b>Habitat critical to the survival of the species</b>	<p>Areas that are necessary:</p> <ul style="list-style-type: none"> <li>• for activities such as foraging, breeding, roosting, or dispersal</li> <li>• for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)</li> <li>• to maintain genetic diversity and long term evolutionary development, or</li> <li>• for the reintroduction of populations or recovery of the species, or ecological community.</li> </ul> <p>Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.</p>
<b>Invasive species</b>	<p>an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.</p>



## Brigalow TEC

To determine if the Project is likely to have a significant impact on the Brigalow TEC, an assessment in accordance with the EPBC Act MNES Referral Guidelines (DotE, 2013b) is required. The assessment is contained within the table below and determined that a significant impact is likely to occur.

Significant Impact Guideline Criteria for Endangered MNES	Response
Reduce the extent of an ecological community	<p><b>Significant impact likely</b></p> <p>The Project will result in the direct removal of 10.69 ha of Brigalow TEC, and therefore it is likely to reduce the extent of the ecological community.</p>
Fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines	<p><b>Significant impact unlikely</b></p> <p>Brigalow TEC within the Study Area exists as a matrix of patches within a largely remnant landscape. Based on the proposed Disturbance Footprint within ML70236, all patches of Brigalow TEC impacted by this portion of the Project will be completely removed such that no fragmentation will occur (i.e. no intersection of patches, no increase in isolation and no reduction of patch size is proposed). One Brigalow TEC polygon will be impacted by Stage 3 of the creek diversion, with a portion of this polygon proposed for removal such that patch size will be reduced. However, no other Brigalow TEC patches occur in proximity to the impacted polygon such that no significant impacts to the Brigalow TEC in the local landscape are anticipated to occur as a result of fragmentation.</p>
Adversely affect habitat critical to the survival of an ecological community (Critical Habitat)	<p><b>Significant impact likely</b></p> <p>The Approved Conservation Advice for the Brigalow ecological community (DotE, 2013a) outlines that areas critical to the survival of the community include all patches that meet the key diagnostic characteristics and condition thresholds for the TEC, together with buffer zones. As described in Section 4.4.1, the Brigalow patches within the Study Area meet the key diagnostic characteristics and condition thresholds of the TEC, such that they constitute habitat critical to survival of the TEC.</p> <p>The Project will result in the direct removal of 10.69 ha of Brigalow TEC, and is therefore likely to adversely affect habitat critical to the survival of the ecological community. Adverse impacts on remaining areas of Brigalow TEC may also occur via weed infestation, dust and/or contamination in the absence of management controls.</p>
Modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns	<p><b>Significant impact possible</b></p> <p>All patches of Brigalow TEC impacted by the portion of the Project within ML70236 will be completely removed, such that assessment of modification of abiotic factors is not relevant. No modification of abiotic factors of the remaining Brigalow TEC polygon directly adjoining the Stage 3 creek diversion portion of the Project is anticipated to occur. However, the proposed creek diversion will redirect water away from Humbug Gully downstream of the diversion, noting that Humbug Gully currently passes through several patches of Brigalow TEC. Accordingly, the creek diversion may alter hydrological characteristics in these areas such that modification of abiotic factors (i.e. water) is anticipated to occur. Further investigation will be required to assess and estimate this hydrological impact.</p>



Significant Impact Guideline Criteria for Endangered MNES	Response
<p>Cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting</p>	<p><b>Significant impact possible</b></p> <p>All patches of Brigalow TEC impacted by the portion of the Project within ML70236 will be completely removed. No substantial change in composition is anticipated in relation to the Brigalow TEC that will be directly impacted by the Stage 3 of the creek diversion, although localised weed infestation due to edge effects may occur in the absence of environmental management controls. However, the proposed creek diversion will redirect water away from Humbug Gully downstream of the diversion, noting that Humbug Gully passes through several patches of Brigalow TEC. Accordingly, the creek diversion has the potential to alter hydrological characteristics of these areas and, in turn, this modification of abiotic factors has the potential to cause a change in the species composition on the TEC. Further investigation will be required to assess and estimate this hydrological impact.</p>
<p>Cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to:</p> <ul style="list-style-type: none"> <li>• assisting invasive species, that are harmful to the listed ecological community, to become established, or</li> <li>• causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community</li> </ul>	<p><b>Significant impact possible</b></p> <p>All patches of Brigalow TEC impacted by the portion of the Project within ML70236 will be completely removed. One Brigalow TEC polygon will be partially removed by the Stage 3 creek diversion, such that a reduction in habitat quality may be experienced in the remaining portion of the polygon (e.g. weed infestation due to edge effects) in the absence of appropriate environmental controls.</p> <p>Furthermore, the proposed creek diversion will redirect water away from Humbug Gully downstream of the diversion. Given that Humbug Gully passes through several patches of Brigalow TEC, the creek diversion has the potential to alter hydrological characteristics of these areas. In turn, this modification of abiotic factors has the potential to reduce the quality or integrity of the TEC. Further investigation will be required to assess and estimate this hydrological impact.</p>



Significant Impact Guideline Criteria for Endangered MNES	Response
Interfere with the recovery of an ecological community	<p><b>Significant impact likely</b></p> <p>The Approved Conservation Advice for the Brigalow ecological community ((Department of the Environment (DotE), 2013a) outlines several priorities for the recovery and threat abatement of the TEC, including:</p> <ul style="list-style-type: none"> <li>• protecting and conserving remnant and regrowth of the ecological community, including buffer zones and connecting corridors</li> <li>• mitigating the severity of impacts where clearance is unavoidable</li> <li>• managing areas of the Brigalow ecological community to reduce threats including weeds, feral animals, and fire management.</li> </ul> <p>The Project would require clearing of 10.69 ha Brigalow TEC within a current landscape of contiguous vegetation. Therefore, the Project does not align with the above priorities and has the potential to interfere with the recovery of the ecological community.</p>
<b>Outcome</b>	<b>The Project is likely to result in a significant impact on the Brigalow TEC</b>



## Koala

To determine if the Project is likely to have a significant impact on koala, an assessment in accordance with the EPBC Act MNES Referral Guidelines (DotE, 2013b) is required. The assessment is contained within the table below and determined that a significant impact is likely to occur.

MNES Significant Impact Guideline Criteria for Endangered Species	Response
<p>The action is likely to lead to a long-term decrease in the size of a population</p>	<p><b>Significant impact likely</b></p> <p>The Project will result in the direct loss of 20.10 ha of preferred and 213.57 ha of suitable habitat for the species within the Disturbance Footprint. This includes habitat with high densities of shelter trees and riparian vegetation with high moisture, nutrient-dense leaves. The removal of the preferred riparian vegetation is likely to limit areas the koala population would utilise in times of stress as well as connection to upstream resource.</p> <p>Additionally, there is also potential for indirect impacts to occur as a result of the proposed creek diversion. The diversion will redirect water away from an extended area of riparian vegetation downstream of the diversion which acts as both connectivity and a significant foraging resource for the species. Further investigation will be required to assess and estimate this hydrological impact.</p> <p>Due to the potential to impact a primary source of nutrition, shelter and habitat connectivity, it is deemed likely that the Project may lead to a long-term decrease in the size of a population.</p>
<p>Reduce the area of occupancy of the species</p>	<p><b>Significant impact unlikely</b></p> <p>The Project will result in the direct loss of 20.10 ha of preferred habitat and 213.57 ha of suitable habitat that includes suitable shelter trees and foraging trees. The Project also has the potential to result in the indirect loss of preferred foraging and dispersal habitat along the downstream watercourses that may be impacted by the proposed creek diversion. Given the area of occupancy of the species is currently estimated at 19,428 km<sup>2</sup> [DAWE, 2022a], the total Project impact represents &lt;0.1% of the known occupancy. Part D of the Threatened Species Scientific Committee Guidelines for assessing the conservation status of native species according to the EPBC Act and Environment Protection and Biodiversity Conservation Regulations 2000 provides guidance on determining the area of occupancy. This document recommends standardisation of estimates by applying a 2 x 2 km grid to occurrence data. Given that the Project will not result in loss of koala habitat across a 2 x 2 km area (i.e. 400 ha), it is therefore unlikely that the Project will reduce the area of occupancy of the species.</p>



MNES Significant Impact Guideline Criteria for Endangered Species	Response
Fragment an existing population into two or more populations	<p><b>Significant impact unlikely</b></p> <p>Due to the configuration of the Disturbance Footprint, koala habitat will not be fragmented by direct clearing. Instead, remaining areas of habitat are part of large contiguous tracts of koala habitat that persist in the landscape such that the local koala population will not be fragmented into two or more populations.</p> <p>Indirect impacts have the potential to cause alteration or dieback of riparian vegetation downstream of the proposed diversion. However, this is not anticipated to result in a barrier to koala movement. Accordingly, indirect impacts are not anticipated to fragment the local koala population into two or more populations.</p>
Adversely affect habitat critical to the survival of the species	<p><b>Significant impact likely</b></p> <p>According to the National Recovery Plan for the Koala (DAWE, 2022b), when determining whether habitat is critical to survival, one must consider:</p> <ul style="list-style-type: none"> <li>• whether the habitat is used during periods of stress (examples flood, drought or fire)</li> <li>• whether the habitat is used to meet essential life cycle requirements (e.g. foraging, breeding, social behaviour, dispersal)</li> <li>• the extent to which the habitat is used by important populations</li> <li>• whether the habitat is necessary to maintain genetic diversity and long-term evolutionary development</li> <li>• whether the habitat is necessary for use as corridors to allow the species to move freely between sites used to meet essential life cycle requirements</li> <li>• whether the habitat is necessary to ensure the long-term future of the species or ecological community through reintroduction or re-colonisation</li> <li>• any other way in which habitat may be critical to the survival of a listed threatened species or a listed threatened ecological community.</li> </ul> <p>Based on the habitat characteristics together with the extent and condition, it is likely that habitat within the Disturbance Footprint meets essential life cycle requirements via supporting foraging, breeding, social behaviour and/or dispersal. Accordingly, the Project is likely to adversely affect 233.7 ha of habitat critical to the survival of koala, including 20.10 ha of preferred habitat and 213.57 ha of suitable habitat.</p> <p>Adverse impacts on remaining areas of koala habitat may also occur via weed infestation, light, dust, noise, injury and/or contamination in the absence of management controls.</p>
Disrupt the breeding cycle of a population	<p><b>Significant impact likely</b></p> <p>The Project will result in the direct loss of 20.10 ha of preferred koala habitat and 213.57 ha of suitable habitat, including potential shelter and feeding trees. This has the potential to reduce the capacity for the habitat to support a population, thereby potentially disrupting the breeding cycle.</p>



MNES Significant Impact Guideline Criteria for Endangered Species	Response
<p>Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline</p>	<p><b>Significant impact likely</b></p> <p>The Project will result in the direct removal of 20.10 ha of preferred habitat and 213.57 ha of suitable habitat, which has the potential to cause a decline in the local abundance of the species. Furthermore, the proposed creek diversion will redirect water away from Humbug Gully downstream of the diversion, such that modification of additional koala habitat may occur. Further investigation will be required to assess and estimate this hydrological impact.</p>
<p>Result in invasive species that are harmful to an Endangered species becoming established in the species habitat</p>	<p><b>Significant impact unlikely</b></p> <p>The Project is unlikely to result in the establishment of invasive species that are harmful to the koala, as invasive species that are considered a threat (i.e. feral cats and dogs (DCCEEW, 2022)), have already been confirmed within the surrounding landscape during the field survey. No increase in invasive species abundance is anticipated to occur as a result of the Project.</p>
<p>Introduce disease that may cause the species to decline</p>	<p><b>Significant impact possible</b></p> <p>It is not known whether the local koala population is currently impacted by disease. Accordingly, a conservative approach was adopted and it has been assumed that, in the absence of management measures, the Project has the potential to introduce disease to the local landscape.</p>
<p>Interfere substantially with the recovery of the species</p>	<p><b>Significant impact likely</b></p> <p>The National Recovery Plan for the Koala (DAWE, 2022b) outlines several activities that should be avoided in order to halt decline and promote recovery of the koala. including:</p> <ul style="list-style-type: none"> <li>• clearing of habitat used by Koalas for feeding and resting</li> <li>• reducing connectivity between patches of habitat used by Koalas for feeding, resting, commuting and dispersing (either by clearing of vegetation or by the erection of barriers to passage)</li> <li>• clearing of habitat used by Koalas during extreme events (heat waves, drought/fire refuge)</li> <li>• activities that will expose Koalas to additional threats (e.g. dogs, cars) in places where Koalas must use the ground to move between resting and feeding trees.</li> </ul> <p>The Project will result in the loss of 20.10 ha of preferred habitat and 213.57 ha of suitable habitat, including foraging, resting, dispersal, and breeding habitat for the koala, such that the above are not achieved. Accordingly, the Project has the potential to interfere substantially with the recovery of the species.</p>
<p><b>Outcome</b></p>	<p><b>The Project is likely to result in a significant impact on the koala.</b></p>





## Greater glider (central and southern)

To determine if the Project is likely to have a significant impact on greater glider, an assessment in accordance with the EPBC Act MNES Referral Guidelines (DotE, 2013b) is required. The assessment is contained within the table below and determined that a significant impact is likely to occur.

MNES Significant Impact Guideline Criteria for Endangered Species	Response
<p>Lead to a long-term decrease in the size of a population.</p>	<p><b>Significant impact likely</b></p> <p>The Project will result in the direct loss of 20.10 ha of preferred and 199.09 ha of suitable habitat for the species within the Disturbance Footprint. This includes habitat with high densities of den trees and riparian vegetation with high moisture, nutrient-dense leaves. The removal of the preferred riparian vegetation is likely to limit areas the greater glider population would utilise in times of stress as well as connection to upstream resource.</p> <p>Additionally, there is also potential for indirect impacts to occur as a result of the proposed creek diversion. The diversion will redirect water away from an extended area of riparian vegetation downstream of the diversion. This may result in the loss of riparian vegetation which acts as both connectivity and a significant foraging resource for the species. Further investigation will be required to assess and estimate this hydrological impact.</p> <p>Due to the potential to impact a primary source of nutrition, shelter and habitat connectivity, it is deemed likely that the Project may lead to a long-term decrease in the size of a population.</p>
<p>Reduce the area of occupancy of the species.</p>	<p><b>Significant impact unlikely</b></p> <p>The Project will result in the direct loss of 20.10 ha of preferred habitat and 199.09 ha of suitable habitat that includes suitable shelter trees and foraging trees. The Project also has the potential to result in the indirect loss of preferred foraging and dispersal habitat along the downstream watercourses that may be impacted by the proposed creek diversion. Given the area of occupancy of the species is currently estimated at 5,316 km<sup>2</sup> [DAWE, 2022a], the total potential impact represents &lt;0.1% of the known occupancy. Part D of the Threatened Species Scientific Committee Guidelines for assessing the conservation status of native species according to the EPBC Act and Environment Protection and Biodiversity Conservation Regulations 2000 provides guidance on determining the area of occupancy. This document recommends standardisation of estimates by applying a 2 x 2 km grid to occurrence data. Given that the Project will not result in loss of greater glider habitat across a 2 x 2 km area (i.e. 400 ha), it is therefore unlikely that the Project will reduce the area of occupancy of the species.</p>



MNES Significant Impact Guideline Criteria for Endangered Species	Response
<p>Fragment an existing population into two or more populations.</p>	<p><b>Significant impact unlikely</b></p> <p>Due to the configuration of the Disturbance Footprint, greater glider habitat will not be fragmented by direct clearing. Instead, remaining areas of habitat are part of large contiguous tracts of greater glider habitat that persist in the landscape such that the local greater glider population will not be fragmented into two or more populations.</p> <p>Indirect impacts have the potential to cause alteration or dieback of riparian vegetation downstream of the proposed diversion. However, this is not anticipated to result in a barrier to greater glider movement. Accordingly, indirect impacts are not anticipated to fragment the local greater glider population into two or more populations.</p>
<p>Adversely affect habitat critical to the survival of a species.</p>	<p><b>Significant impact likely</b></p> <p>Habitat critical to survival for the greater glider (southern and central) includes:</p> <ul style="list-style-type: none"> <li>• <i>large contiguous areas of eucalypt forest, which contain mature hollow-bearing trees and a diverse range of the species' preferred food species in a particular region; and</i></li> <li>• <i>cool microclimate forest/woodland areas (e.g. protected gullies, sheltered high elevation areas, coastal lowland areas, southern slopes) (Department of the Environment (DotE), 2016).</i></li> </ul> <p>Habitat within the Disturbance Footprint meets the first dot-point above. Accordingly, the Project is likely to have a direct adverse impact on 219.19 ha of habitat critical to the survival of greater glider including 20.10 ha of preferred habitat and 199.09 ha of suitable habitat.</p> <p>Adverse impacts on remaining areas of koala habitat may also occur via weed infestation, light, dust, noise, injury and/or contamination in the absence of management controls.</p>
<p>Disrupt the breeding cycle of a population.</p>	<p><b>Significant impact likely</b></p> <p>The Project will result in the direct loss of 20.10 ha of preferred greater glider habitat and 199.09 ha of suitable habitat, including potential den and feeding trees. This has the potential to reduce the capacity for the habitat to support a population, thereby potentially disrupting the breeding cycle.</p> <p>The Project will result in the direct loss of 20.10 ha of preferred koala habitat and 199.09 ha of suitable habitat, including potential shelter and feeding trees. This has the potential to reduce the capacity for the habitat to support a population, thereby potentially disrupting the breeding cycle.</p>
<p>Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.</p>	<p><b>Significant impact likely</b></p> <p>The Project will result in the direct removal of 20.10 ha of preferred habitat and 199.09 ha of suitable habitat, which has the potential to cause a decline in the local abundance of the species. Furthermore, the proposed creek diversion will redirect water away from Humbug Gully downstream of the diversion, such that modification of additional greater glider habitat may occur. Further investigation will be required to assess and estimate this hydrological impact.</p>



MNES Significant Impact Guideline Criteria for Endangered Species	Response
<p>Result in invasive species that are harmful to an Endangered species becoming established in the species' habitat.</p>	<p><b>Significant impact unlikely</b></p> <p>The Project is unlikely to result in the establishment of invasive species that are harmful to the greater glider, as invasive species that are considered a threat (i.e. feral cats and dogs (DCCEEW, 2022), have already been confirmed within the surrounding landscape during the field survey. No increase in invasive species abundance is anticipated to occur as a result of the Project.</p>
<p>Introduce disease that may cause the species to decline.</p>	<p><b>Significant impact unlikely</b></p> <p>Disease is not documented as a threat to greater glider. The Project is unlikely to introduce a disease that may cause the species to decline.</p>
<p>Interfere substantially with the recovery of the species.</p>	<p><b>Significant Impact Likely</b></p> <p>The loss of preferred habitat for the greater glider (southern), including the loss of potential den trees, within the Disturbance Footprint runs counter to recovery actions identified in the Conservation Advice notice for the species (DCCEEW, 2022), which include:</p> <ul style="list-style-type: none"> <li>• the protection of hollow-bearing trees on private property, roadside reserves, and along the edges of roads/tracks; and</li> <li>• the protection and maintenance of areas of suitable habitat, including denning and foraging resources and habitat connectivity, to sustain viable subpopulations throughout the species' range.</li> </ul> <p>Accordingly, the Project has potential to interfere substantially with the recovery of the species.</p>
<p><b>Outcome</b></p>	<p><b>The Project is likely to result in a significant impact on the greater glider (central and southern).</b></p>



## Ornamental snake

To determine if the Project is likely to have a significant impact on ornamental snake, an assessment in accordance with the EPBC Act MNES Referral Guidelines (DotE, 2013b) is required. The assessment is contained within the table below and determined that a significant impact is likely to occur.

Many of the criteria apply specifically to an important population, as defined in the EPBC Act MNES Referral Guidelines (DotE, 2013b). Under the Draft referral guidelines for the nationally listed Brigalow Belt reptiles (SEWPC, 2011), important habitat for the ornamental snake is a surrogate for an important population for the species. Important habitat for ornamental snake includes areas with gilgai depressions and mounds, or habitat that functions as connectivity between such areas (SEWPC, 2011). Given that the Disturbance Footprint provides connectivity between gilgai habitats associated with RE 11.5.16, the habitat and population impacted by the Project are deemed to be important.

MNES Significant Impact Guideline Criteria for Vulnerable Species	Response
Lead to a long-term decrease in the size of an important population	<p><b>Significant impact likely</b></p> <p>The Project will result in the direct clearing of 29.48 ha of preferred habitat for ornamental snake, including areas known to be occupied by the species. In accordance with the Draft referral guidelines for the nationally listed Brigalow Belt reptiles (SEWPC, 2011), clearing more than 2 ha of important habitat is considered likely to result in significant impact to the population. Accordingly, clearing 29.48 ha of preferred habitat is likely to result in a long-term decrease in the size of local populations of the species.</p>
Reduce the area of occupancy of an important population	<p><b>Significant impact unlikely</b></p> <p>The Project will result in the direct clearing of 29.48 ha of preferred habitat for ornamental snake including areas known to be occupied by the species. Part D of the Threatened Species Scientific Committee Guidelines for assessing the conservation status of native species according to the EPBC Act and Environment Protection and Biodiversity Conservation Regulations 2000 provides guidance on determining the area of occupancy. This document recommends standardisation of estimates by applying a 2 x 2 km grid to occurrence data. Given that the Project will not result in loss of ornamental snake habitat across a 2 x 2 km (i.e. 400 ha), it is unlikely to reduce the area of occupancy of the species.</p>
Fragment an existing important population into two or more populations	<p><b>Significant impact likely</b></p> <p>Ornamental snake habitat within the Study Area exists as a matrix of patches within a largely remnant landscape. Based on the proposed Disturbance Footprint within ML70236, all patches of ornamental snake habitat impacted by this portion of the Project will be completely removed such that no fragmentation will occur (i.e. no intersection of patches, no increase in isolation and no reduction of patch size is proposed). However, loss of this habitat will potentially fragment adjoining upstream habitat from the downstream habitat along Humbug Gully. Accordingly, the Project has the potential to fragment the ornamental snake population. Furthermore, two ornamental snake polygons will be impacted by Stage 3 of the creek diversion, such that patch size of both polygons will be reduced and isolation between the patches will be increased.</p>



MNES Significant Impact Guideline Criteria for Vulnerable Species	Response
Adversely affect habitat critical to the survival of a species	<p><b>Significant impact likely</b></p> <p>The Project will result in the direct clearing of 29.48 ha of preferred habitat for ornamental snake. Under the Draft referral guidelines for the nationally listed Brigalow Belt reptiles (SEWPC, 2011), important habitat for the ornamental snake includes areas with gilgai depressions and mounds, or habitat that functions as connectivity between such areas (SEWPC, 2011). Habitat within the Disturbance Footprint meets this definition, such that the Project has the potential to adversely affect habitat critical to the survival of ornamental snake.</p>
Disrupt the breeding cycle of an important population	<p><b>Significant impact likely</b></p> <p>The Project will result in the direct clearing of 29.48 ha of preferred habitat for ornamental snake. As clearing for the Project has the potential to fragment an existing population (see above), there is potential that the Project may disrupt the breeding cycle of the species.</p>
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that species is likely to decline	<p><b>Significant impact likely</b></p> <p>The Project will result in the direct clearing of 29.48 ha of preferred habitat for ornamental snake, including habitat recorded to be occupied by the species. In accordance with the Draft referral guidelines for the nationally listed Brigalow Belt reptiles (SEWPC, 2011), clearing more than 2 ha of important habitat is considered likely to result in significant impact to the population.</p> <p>Furthermore, the proposed creek diversion will redirect water away from Humbug Gully downstream of the diversion, such that modification of additional ornamental snake habitat may occur. This will likely have a negative effect upon those existing watercourses' capacity to support amphibians, thereby decreasing food availability for ornamental snake.</p> <p>As such, the Project is likely to destroy and modify the availability or quality of habitat to the extent that ornamental snake is likely to decline.</p>
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	<p><b>Significant impact unlikely</b></p> <p>Invasive species that present threats to ornamental snake include cane toads via direct competition for food (i.e. frogs), and destruction of habitat for both the snake and it's food source by feral pigs. Both these pest species were identified within the Study Area, and the Project is unlikely to increase the abundance of these species. As such, the Project is considered unlikely to result in invasive species harmful to ornamental snake spreading or becoming established in retained habitat.</p>



MNES Significant Impact Guideline Criteria for Vulnerable Species	Response
Introduce disease that may cause the species to decline	<p><b>Significant impact possible</b></p> <p>While disease is not documented as a threat to ornamental snake, their prey (frogs) are susceptible to chytrid fungus. Accordingly, this disease has the potential to cause a decline in ornamental snake as a result of reduced food availability. The presence of chytrid fungus in the local landscape is not known. Accordingly, a conservative approach was adopted and it has been assumed that, in the absence of management measures, the Project has the potential to introduce disease to the local landscape that has the potential to cause a decline in ornamental snake.</p>
Interfere with the recovery of the species	<p><b>Significant impact likely</b></p> <p>Although there is no current recovery plan for ornamental snake, priority actions are identified within the conservation advice (DotE, 2014). Actions outlined in the conservation advice include reducing habitat loss and disturbance, controlling fauna pests (particularly cane toads) and raising awareness with the community (DotE, 2014).</p> <p>The Project will result in the direct loss of 29.48 ha of preferred habitat for ornamental snake. As a result, the Project is considered likely to interfere with the recovery of the species.</p>
<b>Conclusion</b>	The Project is <b>likely to result in a significant impact</b> on for ornamental snake.



## Squatter Pigeon

To determine if the Project is likely to have a significant impact on squatter pigeon, an assessment in accordance with the EPBC Act MNES Referral Guidelines (DotE, 2013b) is required. The assessment is contained within the table below and determined that a significant impact is unlikely to occur.

Many of the criteria apply specifically to an important population, as defined in the EPBC Act MNES Referral Guidelines (DotE, 2013b), including:

- populations identified as important in recovery plans
- key source populations either for breeding or dispersal
- populations that are necessary for maintaining genetic diversity; and/or
- populations that are near the limit of the species range.

The approved conservation advice for the species notes that populations south of the Carnarvon Ranges in Queensland are deemed to be important populations (DotE, 2015b). In this regard, the Study Area is located north of this divide. Furthermore, the Study Area is not near the limit of the species' range, and it is not expected to be a key source population for breeding, dispersal or genetic diversity. As such, it has been determined that the population of southern squatter pigeon within the Study Area is not part of an important population.

MNES Significant Impact Guideline Criteria for Vulnerable Species	Response
Lead to a long-term decrease in the size of an important population of a species.	<b>Significant Impact unlikely</b> As per above, the population of squatter pigeon (southern) within the Study Area is not considered to be an important population. Furthermore, extensive tracts of habitat for the species are available in the local landscape. As such, the Project 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.	<b>Significant Impact unlikely</b> As per above, the population of squatter pigeon (southern) within the Study Area is not considered to be an important population. Furthermore, the Project will not result in loss of squatter pigeon (southern) habitat across a 2 x 2 km (i.e. 400 ha) which is the recommended scale for assessment of area of occupancy. As such, it is considered that the Project is unlikely to reduce the area of occupancy of an important population.
Fragment an existing important population into two or more populations.	<b>Significant Impact unlikely</b> As per above, the population of squatter pigeon (southern) within the Study Area is not considered to be an important population. Furthermore, based on the configuration of proposed clearing and the availability of habitat within the local landscape, works within the Disturbance Footprint and any indirect impacts will not lead to fragmentation of the population. As such, it is unlikely that the Project would result in the fragmentation of squatter pigeon (southern) population into two or more populations.
Adversely affect habitat critical to the survival of a species.	<b>Significant Impact unlikely</b> The Project would require the clearing of approximately 42.63 ha of preferred habitat and 175.51 ha of suitable habitat. No habitat critical to the survival of the species has been identified in the conservation advice. Given the expansive habitat available in the local landscape, the habitat



MNES Significant Impact Guideline Criteria for Vulnerable Species	Response
	<p>proposed for removal is not considered to be critical to the survival as it is not important:</p> <ul style="list-style-type: none"> <li>• for the long-term maintenance of the species</li> <li>• to maintain genetic diversity and long term evolutionary development, or</li> <li>• for the reintroduction of populations or recovery of the species or ecological community.</li> </ul> <p>Accordingly, the Project is not anticipated to adversely affect habitat critical to the survival of the species.</p>
<p>Disrupt the breeding cycle of an important population.</p>	<p><b>Significant Impact unlikely</b></p> <p>As per above, the population of squatter pigeon (southern) within the Study Area and surrounds is not considered to be an important population. Furthermore, given the mobility of the species and the availability of extensive habitat in the surrounding landscape, no impact on the breeding cycle is anticipated to occur as a result of the Project. As such, it is considered that the Project is unlikely to disrupt the breeding cycle of an important population.</p>
<p>Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline</p>	<p><b>Significant Impact unlikely</b></p> <p>The Project would require the clearing of approximately 42.63 ha of preferred habitat and 175.51 ha of suitable habitat. It is considered unlikely that the project will modify destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline, given:</p> <ul style="list-style-type: none"> <li>• the small extent of the habitat clearing relative to the expansive habitat available in the surrounding environment, and</li> <li>• the high mobility of the species.</li> </ul>
<p>Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat</p>	<p><b>Significant impact unlikely</b></p> <p>Feral cats and dogs have been identified within the Study Area and present a threat to the species. The Project is unlikely to increase the abundance of invasive predator species (i.e., feral dogs, cats and foxes) above their current levels or result in the introduction of new invasive species.</p>
<p>Introduce disease that may cause the species to decline</p>	<p><b>Significant impact unlikely</b></p> <p>Disease is not documented as a threat to squatter pigeon (southern).</p>
<p>Interfere substantially with the recovery of the species</p>	<p><b>Significant impact unlikely</b></p> <p>Although there is currently no national recovery plan developed for the species, key threat abatement and recovery objectives are provided within the approved listing advice (DotE, 2015b) and include:</p> <ul style="list-style-type: none"> <li>• determining the population size and distribution of the squatter pigeon (southern) in southern Queensland and New South Wales and assess the pigeon's conservation status and requirements</li> </ul>





MNES Significant Impact Guideline Criteria for Vulnerable Species	Response
	<ul style="list-style-type: none"><li>• undertaking studies in North and Central Queensland to determine the relationship between pigeon abundance, tree density and stocking rates</li><li>• establish sites for sub-population monitoring. If possible, these sites should be established with the cooperation of local land-owners and/or conservation organisations</li><li>• protect and rehabilitate areas of vegetation that support important sub-populations</li><li>• establish control measures for predators (especially cats and foxes) at important sites; and</li><li>• establish conservation measures to protect grassy woodlands and forests.</li></ul> <p>Given the population is not considered to be an important population, it is unlikely that the Project will significantly interfere with the recovery actions identified for the species.</p>
<b>Conclusion</b>	<b>Overall, the Project is unlikely to result in a significant impact on the squatter pigeon (southern)</b>



## White-throated needletail

To determine if the Project is likely to have a significant impact on white-throated needletail, an assessment in accordance with the EPBC Act MNES Referral Guidelines (DotE, 2013b) is required. The assessment is contained within the table below and determined that a significant impact is unlikely to occur.

Many of the criteria apply specifically to an important population, as defined in the EPBC Act MNES Referral Guidelines (DotE, 2013b), including:

- populations identified as important in recovery plans
- key source populations either for breeding or dispersal
- populations that are necessary for maintaining genetic diversity; and/or
- populations that are near the limit of the species range.

Given the lack of knowledge surrounding the total population of the species, for the purposes of the current assessment, all white-throated needletail overwintering in Australia (including any birds utilising the Study Area) are considered part of the same important population.

MNES Significant Impact Guideline Criteria for Vulnerable Species	Response
Lead to a long-term decrease in the size of an important population of a species	<p><b>Significant impact unlikely</b></p> <p>In Australia, the species is a wide-ranging nomadic species that is almost exclusively aerial (DCCEEW, 2023d). As such, the aerial space above the Study Area is considered to comprise foraging habitat (general) for the species. The clearing of vegetation is considered largely inconsequential to the species, as the species is almost exclusively aerial and is known to occur over a wide range of habitats, including cleared habitats (DCCEEW, 2023d).</p> <p>The disturbance area includes 253.10 ha of marginal foraging habitat. Expansive areas of vegetation above which white-throated needletail can forage will persist in the landscape. Therefore, the Project is considered unlikely to lead to a long-term decrease in the size of an important population.</p>



MNES Significant Impact Guideline Criteria for Vulnerable Species	Response
Reduce the area of occupancy of an important population	<p><b>Significant impact unlikely</b></p> <p>The species is a wide-ranging nomadic species that is almost exclusively aerial in Australia (DCCEEW, 2023d). The clearing of 253.10 ha of vegetation is considered largely inconsequential to the species, as the species is almost exclusively aerial and is known to occur over a wide range of habitats, including cleared habitats (DCCEEW, 2023d).</p> <p>Part D of the Threatened Species Scientific Committee Guidelines for assessing the conservation status of native species according to the EPBC Act and Environment Protection and Biodiversity Conservation Regulations 2000 provides guidance on determining the area of occupancy. This document recommends standardisation of estimates by applying a 2 x 2 km grid to occurrence data. Given that the Project will not result in loss of ornamental snake habitat across a 2 x 2 km (i.e. 400 ha), it is unlikely to reduce the area of occupancy of the species.</p>
Fragment an existing important population into two or more populations	<p><b>Significant impact unlikely</b></p> <p>The species is a wide-ranging nomadic species that is almost exclusively aerial in Australia (DCCEEW, 2023d). The clearing of vegetation is considered largely inconsequential to the species, as the species is almost exclusively aerial and is known to occur over a wide range of habitats, including cleared habitats (DCCEEW, 2023d). Due to the mobile nature of the species (i.e. aerial), the Project is unlikely to fragment an important population of the species into two or more populations.</p>
Adversely affect habitat critical to the survival of a species	<p><b>Significant impact unlikely</b></p> <p>While the species migrates to the northern hemisphere during the breeding season, within Australia the species is known to forage aerially. As such, the aerial space would be considered habitat critical to the survival of the species. The clearing of vegetation is considered largely inconsequential to the species, as the species is almost exclusively aerial and is known to occur over a wide range of habitats, including cleared habitats (DCCEEW, 2023d). Consequently, the Project is considered unlikely to affect habitat critical to the survival of the species.</p>
Disrupt the breeding cycle of an important population	<p><b>Significant impact unlikely</b></p> <p>The species breeds in the northern hemisphere (DCCEEW, 2023d). As such, the Project is considered unlikely to disrupt the breeding cycle of an important population.</p>
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	<p><b>Significant impact unlikely</b></p> <p>The species is a wide-ranging nomadic species that is almost exclusively aerial in Australia (DCCEEW, 2022b). As the species is known to occur over a wide range of habitats, including cleared habitats, clearing of vegetation within the Project is considered unlikely to modify, destroy, remove, isolate or decrease the availability of habitat to the extent that the species is likely to decline.</p>



MNES Significant Impact Guideline Criteria for Vulnerable Species	Response
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	<p><b>Significant impact unlikely</b></p> <p>No invasive species are currently identified as a threat to the species (TSSC, 2019). Furthermore, given the aerial nature of white-throated needletail, the Project is unlikely to result in the introduction or spread of invasive species that may be harmful to the species.</p>
Introduce disease that may cause the species to decline	<p><b>Significant impact unlikely</b></p> <p>No diseases are currently identified as a threat to the species (DCCEEW, 2023d). Furthermore, given the aerial nature of white-throated needletail, the Project is unlikely to result in the introduction or spread of a disease that may cause the species to decline.</p>
Interfere substantially with the recovery of the species	<p><b>Significant impact unlikely</b></p> <p>Due to the limited threats to the species in Australia and its mobility, there are currently no threat abatement or recovery actions in place or for the species (DCCEEW, 2023d). As the species is known to occur over a wide range of habitats, including cleared habitats, clearing of vegetation for the Project is considered unlikely to interfere substantially with the recovery of the species.</p>
<b>Conclusion</b>	<p>The Project is <b>unlikely to result in a significant impact</b> on the white-throated needletail.</p>



## Fork-tailed swift

To determine if the Project is likely to have a significant impact on the fork-tailed swift, an assessment in accordance with the EPBC Act MNES Referral Guidelines (DotE, 2013b) is required. The assessment is contained within the table below and determined that a significant impact is unlikely to occur.

MNES Significant Impact Guideline Criteria for Migratory Species	Response
Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species.	<p><b>Significant impact unlikely</b></p> <p>Fork-tailed swift is almost exclusively aerial and will only occupy airspace above the Study Area (DCCEEW, 2023a). The aerial space above the Study Area is considered to comprise marginal foraging habitat (general) for the species. The clearing of 253.10 ha of marginal foraging habitat is considered largely inconsequential to the species and is therefore unlikely to modify, destroy, remove or isolate or decrease the availability or quality of habitat for the fork-tailed swift to the extent that the species is likely to decline.</p>
Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species.	<p><b>Significant impact unlikely</b></p> <p>No invasive species are currently identified as a threat to the species. Furthermore, given the aerial nature of fork-tailed swift, the Project is unlikely to result in the introduction or spread of invasive species that may be harmful to the species.</p>
Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.	<p><b>Significant impact unlikely</b></p> <p>Fork-tailed swift does not breed in Australia (DCCEEW, 2023a), as such the Project is unlikely to disrupt the breeding cycle of the species.</p>
<b>Outcome</b>	<b>The Project is unlikely to result in a significant impact on the fork-tailed swift.</b>

