Fauna Management Plan

Flagstone
Context Area 3 (CA3) South

Prepared for PEET Limited
18 March 2024

Job No. 9850

Document Control

Document: Fauna Management Plan for Flagstone – CA3 South, prepared by Saunders Havill Group for PEET Limited.

Document Issue

Issue	Date	Prepared By	Checked By
A	08.01.2024	JG	AD
B	15.03.2024	JG	AD
C	18.03.2024	TC	AD

Prepared by

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Reports and plans by others may be included in this document.

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Acronyms

CA3	Context Area 3
CEMP	Construction Environmental Management Plan
DES	Department of Environment and Science (Qld)
EDQ	Economic Development Queensland (Qld)
EHP	Department of Environment and Heritage Protection (Qld) (former, now DES)
EPBC	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
EVNT	Endangered, Vulnerable and Near Threatened (as listed in the NCAR and NCPR)
FMP	Fauna Management Plan
FTMP	Fauna Translocation Management Plan
KPA	Koala Priority Area
NCA	*Nature Conservation Act 1992* (Qld)
NCAR	*Nature Conservation (Animals) Regulation 2020 (Qld)*
NCPR	*Nature Conservation (Plants) Regulation 2020 (Qld)*
NESS	Natural Environment Overarching Site Strategy
PDA	Priority Development Area
PMST	Protected Matters Search Tool
PTRP	Pre-clearing Trapping and Release Plan
SHG	Saunders Havill Group
WHIMP	Wildlife and Habitat Impact Mitigation Plan
WPMP	Wildlife Protection and Management Plan

Reference Documents

FSRDM	*Fauna Sensitive Road Design Manual: Volume 2- Preferred Practices*, prepared by the Department of Transport and Main Roads (dated June 2010).
The Code	*Code of Practice for Welfare of Wild Animals Affected by Land Clearing and Other Habitat Impacts and Wildlife Spotter /Catchers (Draft)*, prepared by Wildlife Warriors and Voiceless.
VMP	*Vegetation Management Plan (9850 CA3 VMP),* prepared by SHG (dated Mar 2024).

1. Introduction

Saunders Havill Group (SHG) was engaged by PEET Limited (PEET) to prepare a Fauna Management Plan (FMP) for Flagstone West Context Area 3 (CA3) of the Flagstone City project (hereafter referred to as 'the site'). The site is located within the Greater Flagstone Priority Development Area (PDA). This FMP has been prepared to manage impacts and protect native animals during clearing and construction.

Condition 25 of the PDA Development Approval dated 19th October 2012 (DEV2012/209) required a Natural Environment Overarching Site Strategy to be prepared for Flagstone City to provide for the strategic management of environmental features. The *Flagstone City Natural Environment Site Strategy*, version 1.3, prepared by SHG (dated August 2015), as amended in red by Economic Development Queensland (EDQ) (dated 22 December 2015) (NESS) was endorsed by EDQ on 22 December 2015 (DEV2012/402/10; DEV201012/209/6/4). The NESS dictates subsequent environmental plans and strategies to be prepared as part of operational works applications. The NESS requires an FMP to be prepared for each stage of development involving vegetation clearing.

This FMP has been prepared for clearing within CA3 of Flagstone City. Refer to **Figure 1** for Site Context and **Figure 2** for Site Aerial.

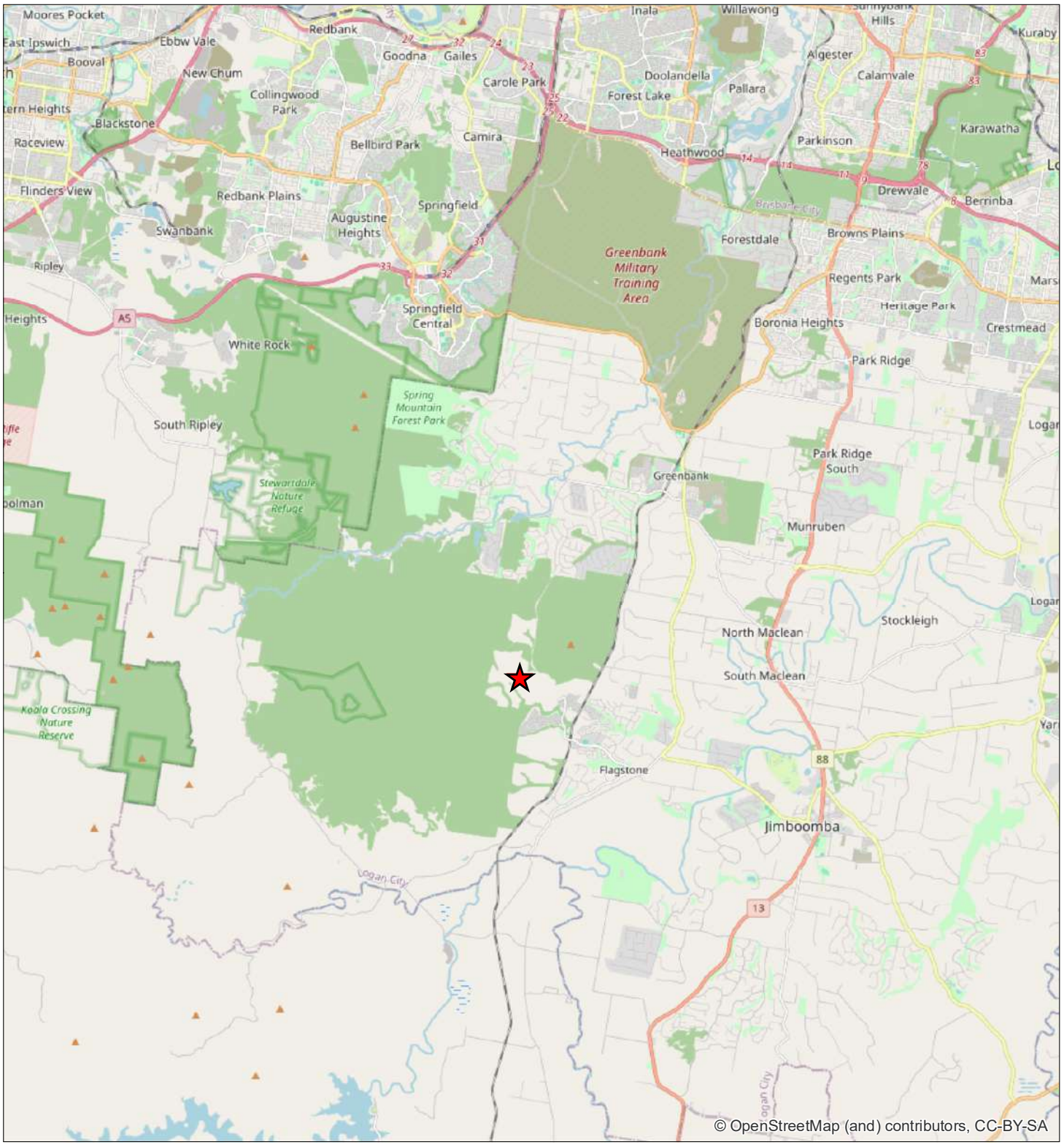
This FMP includes step by step procedures for the management of fauna prior to, during and post-vegetation clearing and construction activities to reduce potential impacts. Fauna management specifications and principles incorporated into this FMP apply generally to all native animals and focus on incorporating measures to minimise disturbance and avoid conflicts. Compliance with this FMP is compulsory and incorporates the use of expert consultants, including a registered and Department of Environment and Science (DES) approved Fauna Spotter Catcher. Section 2 outlines the methodology and content for this FMP. In accordance with the stretch target espoused within the NESS, this FMP adopts aspects of the *Code of Practice for Welfare of Wild Animals Affected by Land Clearing and Other Habitat Impacts and Wildlife Spotter /Catchers (Draft)* (the Code).

1.1. Property Summary

Key site details are provided in Table 1 below.

Table 1: Property Summary

Address	Flagstone City, Flagstone West, Queensland 4280
RPD	Lot 989 on RP854074, Lot 988 on CP85784, Lot 5 on S312569, Lot 9 on S312569, Lot 1 on RP35155, Lot 10 on SL6002, partial area of Lot 911 on SP303089 and Lot 908 on SP311428
Local Government Area	Logan City Council
Administering Authority	Economic Development Queensland
Priority Development Area	Greater Flagstone PDA
Planning Scheme	Greater Flagstone Urban Development Area Development Scheme
Area Classification / Zone	Urban Living, Environmental Protection
Existing Land Use	Rural



Legend

Context Plan 3 area south

Figure 1

Site Context

File ref. 9850 E Figure 1 CA3 FMP Site Context A
Date 10/01/2024
Project Flagstone City - Context Area 3 South

0 1 2 3 4 5 km

N

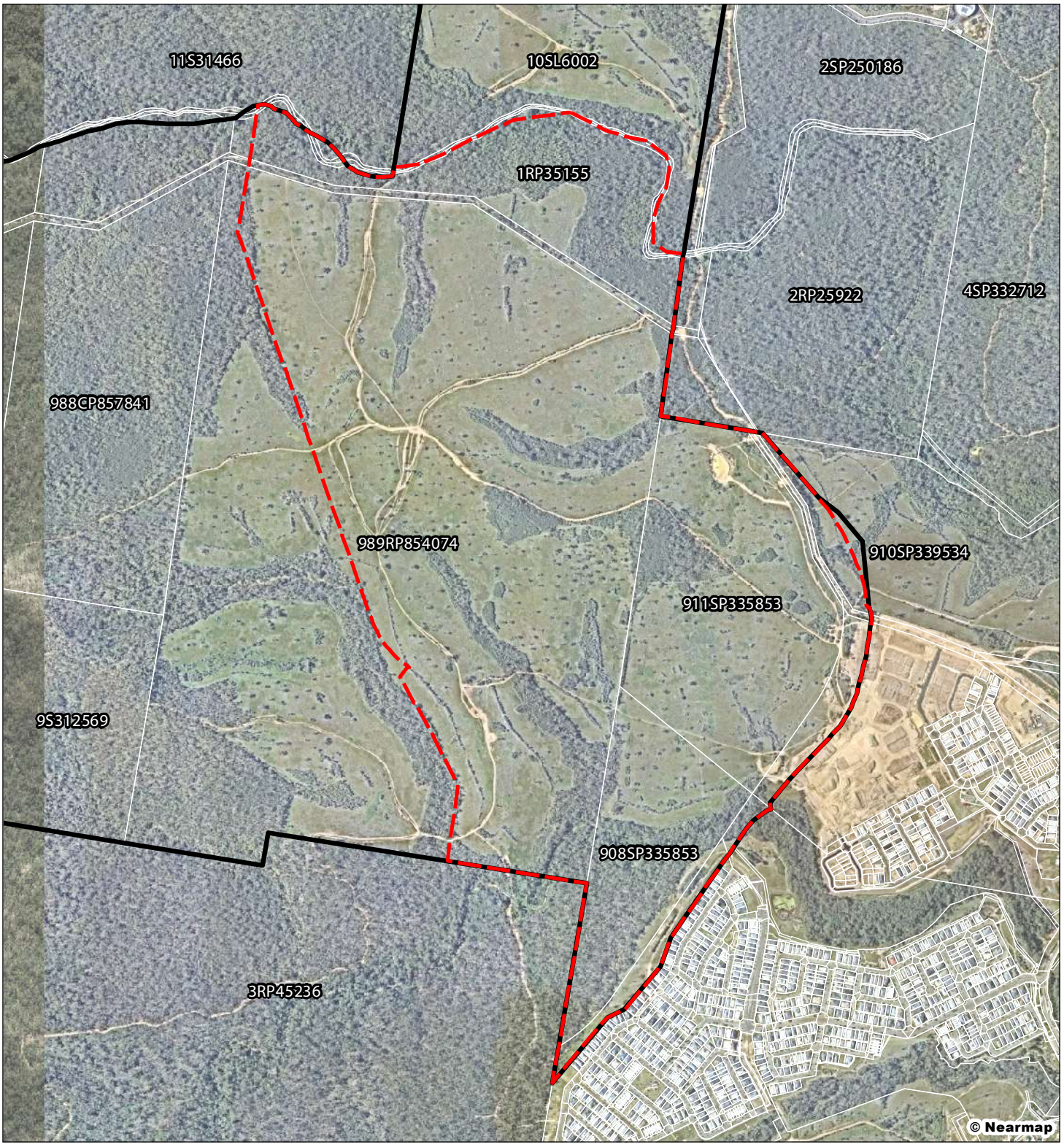
Scale (A4): 1:175,000 [GDA 1994 MGA Z56]

PEET

Flagstone

saunders havill group

Layer Source: © State of Queensland 2024



Legend

- Qld DCDB
- Context Plan 3 Area
- Context Plan 3 South area

Figure 2

Site Aerial

PEET

Flagstone

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File ref. 9850 E Figure 2 CA3 FMP Site Aerial A
Date 15/03/2024
Project Flagstone City - Context Area 3 South

0 100 200 300 400 500 m

N

Scale (A4): 1:15,000 [GDA 1994 MGA Z56]

Layer Source: © State of Queensland 2024

2. Legislative Context

2.1. Environment Protection and Biodiversity Conservation Act 1999

The Australian Government's key piece of environmental legislation is the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act aims to protect and manage matters of environmental significance which include nationally and internationally important flora, fauna, ecological communities and heritage places.

A Protected Matters Search for the allotment was undertaken through the EPBC Act's online Protected Matters Search Tool (PMST). The search provides a list of wetlands of international significance, threatened ecological communities and threatened species which have the potential to be temporarily or permanently located within a 5 kilometre (km) radius of the development site. **Table 2** lists a summary of these results relevant to site fauna. The complete results of this search are included in **Appendix A**. The Flagstone City Project retains a full approval achieved under the EPBC Act (2014/7206). Mandatory aspects of this approval are included in this FMP.

Table 2: EPBC Act Protected Matters Search Tool Results (Fauna)

Wetlands of International Importance (RAMSAR)		
Moreton Bay – 20-30km upstream		
Threatened Ecological Communities		
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland – Endangered		
Lowland Rainforest of Subtropical Australia – Critically Endangered		
Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions -- Endangered		
Grey box-grey gum wet forest of subtropical eastern Australia – Endangered		
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland – Critically Endangered		
Swamp Tea-tree (*Melaleuca irbyana*) Forest of South-east Queensland – Critically Endangered		
Poplar Box Grassy Woodland on Alluvial Plains – Endangered		
Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland ecological community – Endangered		
Threatened Species		
Scientific Name	**Common Name**	**Status**
Birds		
Anthochaera phrygia	Regent Honeyeater	Critically Endangered
Botaurus poiciloptilus	Australasian Bittern	Endangered
Calidris ferruginea	Curlew Sandpiper	Critically Endangered
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	Vulnerable
Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover	Vulnerable
Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)	Vulnerable
Cyclopsitta diophthalma coxeni	Coxen's Fig-Parrot	Critically Endangered

Erythrotriorchis radiatus	Red Goshawk	Endangered
Falco hypoleucos	Grey Falcon	Vulnerable
Geophaps scripta scripta	Squatter Pigeon (southern)	Vulnerable
Grantiella picta	Painted Honeyeater	Vulnerable
Hirundapus caudacutus	White-throated Needletail	Vulnerable
Lathamus discolor	Swift Parrot	Critically Endangered
Rostratula australis	Australian Painted Snipe	Endangered
Stagonopleura guttata	Diamond Firetail	Vulnerable
Turnix melanogaster	Black-breasted Button-quail	Vulnerable
Fish		
Maccullochella mariensis	Mary River Cod	Endangered
Insects		
Argynnis hyperbius inconstans	Australian Fritillary	Critically Endangered
Mammals		
Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat	Endangered
Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)	Endangered
Macroderma gigas	Ghost Bat	Vulnerable
Petauroides volans	Greater Glider (southern and central)	Endangered
Petaurus australis australis	Yellow-bellied Glider (south-eastern)	Vulnerable
Petrogale penicillata	Brush-tailed Rock-wallaby	Vulnerable
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	Endangered
Potorous tridactylus tridactylus	Long-nosed Potoroo (northern)	Vulnerable
Pseudomys novaehollandiae	New Holland Mouse, Pookila	Vulnerable
Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable
Reptiles		
Coeranoscincus reticulatus	Three-toed Snake-tooth Skink	Vulnerable
Delma torquata	Adorned Delma, Collared Delma	Vulnerable
Furina dunmalli	Dunmall's Snake	Vulnerable
Hemiaspis damelii	Grey Snake	Endangered

2.2. Nature Conservation Act 1992

The *Nature Conservation Act 1992* (NCA) classifies and protects significant areas (protected areas) and protects threatened plant and animal species. The *Nature Conservation (Animals) Regulation 2020* (NCAR) and the *Nature Conservation (Plants) Regulation 2020* (NCPR) lists plant and animal species presumed extinct, endangered, vulnerable, near threatened, least

concern, international or prohibited. The schedules of this regulation were considered in this FMP using DES's Wildlife Online database search for a 5 km radius of the site. Fauna species listed under the NCAR with the potential to occur around the subject site are shown in **Table 3**. The complete results of this search are included **Appendix B**.

Table 3: NCA Wildlife Online Search Results (fauna)

Scientific Name	Common Name	Status
Birds		
Calyptorhynchus lathami	Glossy Black-cockatoo	Vulnerable
Hirundapus caudacutus	White-throated Needletail	Vulnerable
Ninox strenua	Powerful Owl	Vulnerable
Mammals		
Phascolarctos cinereus	Koala	Endangered
Petaurus australis australis	Yellow-bellied Glider (southern subspecies)	Vulnerable

3. Methodology

This FMP forms the stage specific strategy for fauna management inclusive of CA3. It has been developed in response to Condition 25 of the PDA Development Approval (DEV2012/209) and specifications within the NESS. Figure 3 illustrates the context in which this FMP sits as the overarching plan for native fauna management on the site. Separate FMPs will be prepared for each stage of the development.

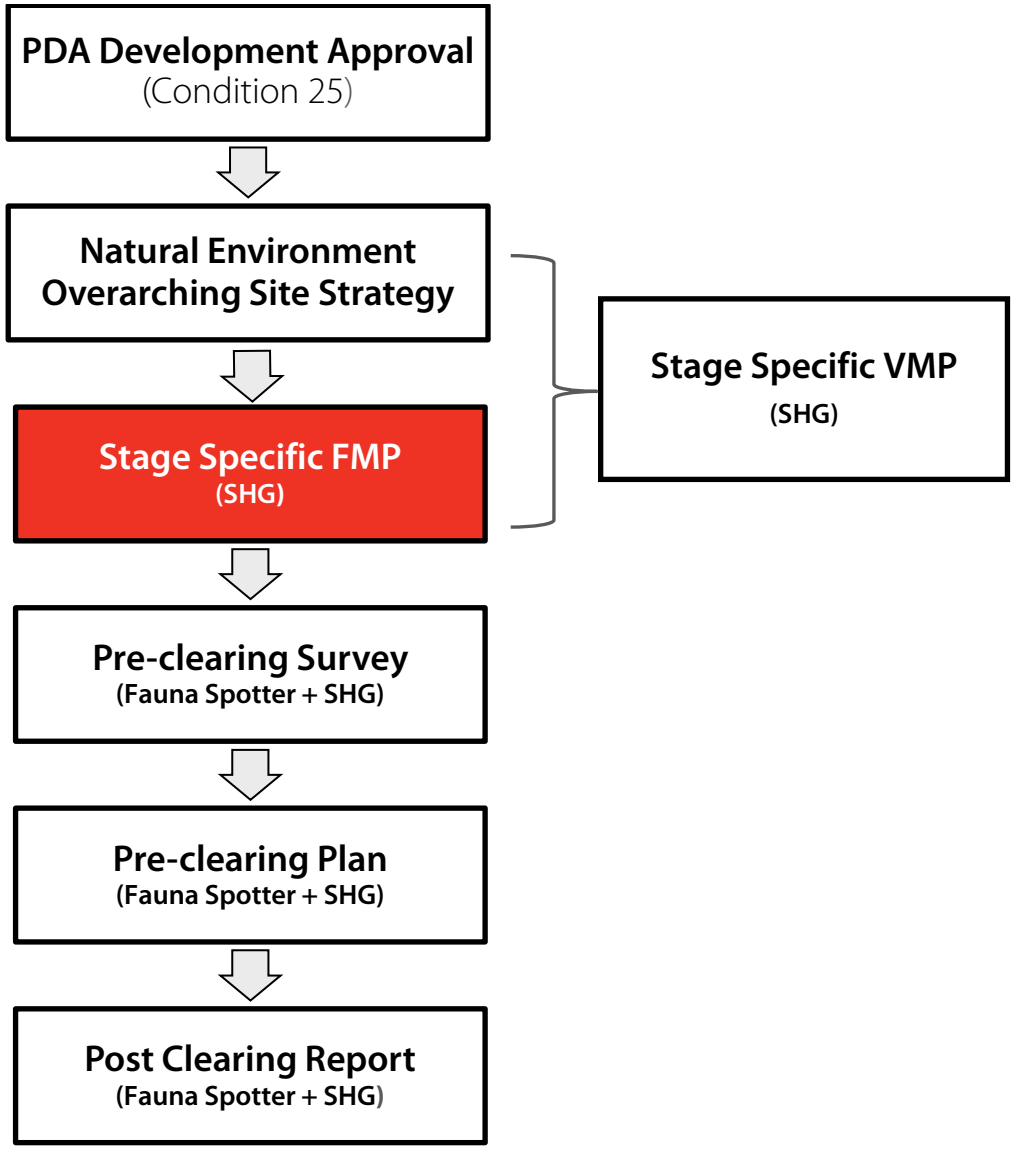


Figure 3: **FMP Context and Framework**

3.1. FMP Framework

This FMP provides a framework for fauna management within the site. This FMP should form part of the Construction Environmental Management Plan (CEMP) for this stage of works. To assist in achieving a leading practice model for fauna management prior to, during and post the completion of the construction works for the site, all land clearing will be managed generally in accordance with the *Code of Practice for Welfare of Animals effected by Land Clearing and Other Habitat Impacts and Wildlife Spotter/Catchers (Draft)*, as prepared by the Wildlife Warriors and Voiceless. Under the Code, the procedural guide detailed in Sections 3.1.1 – 3.1.3 will been used to inform the framework for clearing works. Consideration should be given to the survey for and management of permit requirements for tampering with animal breeding places under the Nature Conservation Act (NCA).

This FMP should be read in conjunction with approved CA3 environmental management plans (to be lodged separately), including the CA3 specific Vegetation Management Plan (VMP).

Fauna management and mitigation strategies are discussed in further detail in **Section 5** – Fauna Management Plan Specifications.

3.1.1 Pre-Clearing Survey

Action 1 – Developer to Engage a Fauna Spotter Catcher
Action 1 requires that the developer engage a Fauna Spotter Catcher with full registrations and licences issued by the former Department of Environment and Heritage Protection (EHP), now Department of Environment and Science (DES).

Action 2 – Developer to Undertake Pre-Clearing Survey
A pre-clearing survey will be undertaken by a DES approved Fauna Spotter Catcher within two (2) weeks prior to the commencement of clearing activities at each stage. This survey must include a fauna assessment of the site, particularly for Koalas and animals using hollows, including bats. This survey will inform the Pre-Clearing Trapping and Release Plan (PTRP) containing elements from the Code, as detailed in Section 3.1.2. Results from the pre-clearance surveys will be made available to DES and will form part of the post-clearing report.

3.1.2 Pre-clearing Trapping and Release Plan

Action 3 – Fauna Spotter Catcher to Prepare a Pre-Clearing Trapping and Release Plan
Informed by the pre-clearing surveys, a PTRP containing a Wildlife Protection Management Plan (WPMP) and Wildlife and Habitat Impact Mitigation Plan (WHIMP) Code elements will be developed by a DES approved Fauna Spotter Catcher a maximum of two (2) weeks prior to the commencement of any clearing activities. This report will provide extensive detail of the fauna likely to be impacted by the clearing works.

The PTRP will outline the methodology for the identification, trapping and relocation of native fauna. The PTRP should include the following information:

- a description of the project with reference to impacts on wildlife and/or wildlife habitat;
- a pre-development plan of the site showing habitat areas including nests and hollows, features, corridors, riparian habitats and adjacent areas;
- results of any fauna surveys including pre-clearance surveys;
- contact details of the nearest veterinarian and agencies to be notified of injured wildlife;
- a wildlife and habitat impact assessment based on the proposed development works; and
- confirmation of the release area.

Action 4 – Fauna Spotter Catcher Role at Pre-Start Meeting

Prior to the commencement of any construction works, a pre-start meeting is to be held between the Proponent, Site Supervisor, Environmental Coordinator, Fauna Spotter Catcher and other key project personnel. At the pre-start meeting, the Fauna Spotter Catcher is to outline the clearing process and the requirements of the PTRP.

Action 6 – During Construction

The Fauna Spotter Catcher is to be on-site during all phases of construction which involve potential impacts on wildlife or habitat. This will enable to the Fauna Spotter Catcher to make any necessary adjustments to the approved VMP and the PTRP to cater for any specific issues encountered during the clearing works. Should an animal encountered during vegetation clearing, clearing will cease immediately until the animal preferably moves away of its own accord.

3.1.3 Post-clearing Wildlife Management Report

Action 7 – Post Works Reporting

During the course of all site works, including the pre-clearance surveys, the Fauna Spotter Catcher is to keep an accurate record of all animals encountered and/or captured, and all incidents and disposals for each stage of the project. The records should form part of the Post-Clearing Wildlife Management Report to be issued under licence requirements to DES. The Post-Clearing Wildlife Management Report should consist of the following three sections:

1. PTRP – Aspects of the planning, design, construction, and ongoing operation of the project in which risks to wildlife have been identified. This plan should also include recommendations and outline the type, frequency, and timeframes for monitoring, as well as updates to describe measures taken to address an incident.

2. Wildlife Capture and Disposal Plan – Should contain details of any animal/s that were caught and/or sighted and released, and the placement of any release/s as well as details of any animals that were destroyed due to injury, given to wildlife rescue groups etc. The following details for each captured animal should be included in the Wildlife Capture and Disposal Plan:

    a. Species.
    b. Identification name or number.
    c. Sex (M, F or unknown).
    d. Approximate Age or Age Class (neonate, juvenile, sub-adult, adult).
    e. Time and date of capture.
    f. Method of capture.
    g. Exact point of capture (GPS coordinates).
    h. State of health.
    i. Incidents associated with capture likely to affect health.
    j. Veterinary intervention or treatments.
    k. Time held in captivity.
    l. Disposal method (euthanasia, translocation, re-release).
    m. Date and time of disposal.
    n. Details of disposal (GPS points of release).
    o. For released animals, location relative to point of capture.

3. Animal Injury and Euthanasia Report – similar details for the Wildlife Capture and Disposal Plan should be included in this report.

The Post-Clearing Wildlife Management Report will be provided to the Proponent, Environmental Coordinator and EDQ no more than two (2) weeks after clearing activities have ceased.

3.2. Roles and Responsibilities

This section details the key roles and responsibilities for the works.

3.2.1 Proponent

PEET Limited (PEET) is the Proponent for the works.

3.2.2 Environmental Coordinator

Saunders Havill Group (SHG) is the Environmental Coordinator for the project and is responsible for the development of this overarching FMP and documentation for overarching environmental management. SHG will be responsible for managing non-compliance by appointed contractors and sub-contractors, including establishing additional management procedures and determining if EDQ notification should be made.

3.2.3 Administering Authority

Economic Development Queensland (EDQ) is the government approval authority for this project.

3.2.4 Site Coordinator

The Site Coordinator is a representative of the project team (typically the project engineer) and is responsible for coordinating the project consultants and construction contractor.

3.2.5 Site Supervisor

The Site Supervisor is a representative of the Construction Contractor (to be appointed) and responsible for overseeing all pre-clearing, clearing and construction activities are undertaken in accordance with the approved FMP, PTRP and subsequent environmental management documentation. The Site Contractor will be responsible for engaging and the commission of the DES approved Fauna Spotter Catcher.

3.2.6 Fauna Spotter Catcher

A DES approved Fauna Spotter Catcher is a person who holds a rehabilitation permit with an extended authority issued by the former Department of Environment and Heritage Protection specifying the holder may take, keep or use an animal whose habitat is about to be destroyed by a human activity. A DES approved Fauna Spotter Catcher will be engaged by the proponent for pre-construction and construction stages of the project. It is noted that the Fauna Spotter Catcher must hold a Rehabilitation Permit and a copy of this permit along with their contact details will be passed on to EDQ and the Environmental Coordinator. The engaged Fauna Spotter Catcher will be responsible for undertaking pre-clearing surveys of the site and developing the PTRP. The Fauna Spotter Catcher must be present on site during all clearing activities and is responsible for the relocation of native fauna. A list of key contacts for the project is contained in **Section 8**.

4. Fauna Summary

4.1. Fauna Habitat Areas and Opportunities

The purpose of this FMP is to control the impacts of clearing activities on-site and to the surrounding area's fauna communities. The '9850 Flagstone West Context Area 3 - Significant Biodiversity Assessment Report (SBAR), Issue B, prepared by SHG dated 17 Oct 2022, identified the presence of suitable habitat observed along waterways to be retained by the development as endorsed in the NESS (Refer to **Plan 1–** Habitat Values). This FMP will outline the process for tree removal and the strategy for installation of nest boxes to replace removed hollows.

This FMP should be read in conjunction with the following documents, to be lodged separately:

- Approved Vegetation Management Plan

Ecological features identified for protection within Greater Flagstone PDA include biodiversity corridors along Flagstone Creek and Sandy Creek and biodiversity values associated with the Flinders-Karawatha Bioregional Corridor. The subject site is located within the Flagstone West Context Area 3 and accounts for approximately 593 hectares of the Flagstone City site. The site does not currently adjoin any developed areas. To the immediate east of the site is Flagstone West Context Area 1 which currently consists of cleared paddock and scattered trees adjoining ongoing residential development through Precinct 1 and Stages 2 to 5. The site abuts the Flinders-Karawatha Corridor to the west.

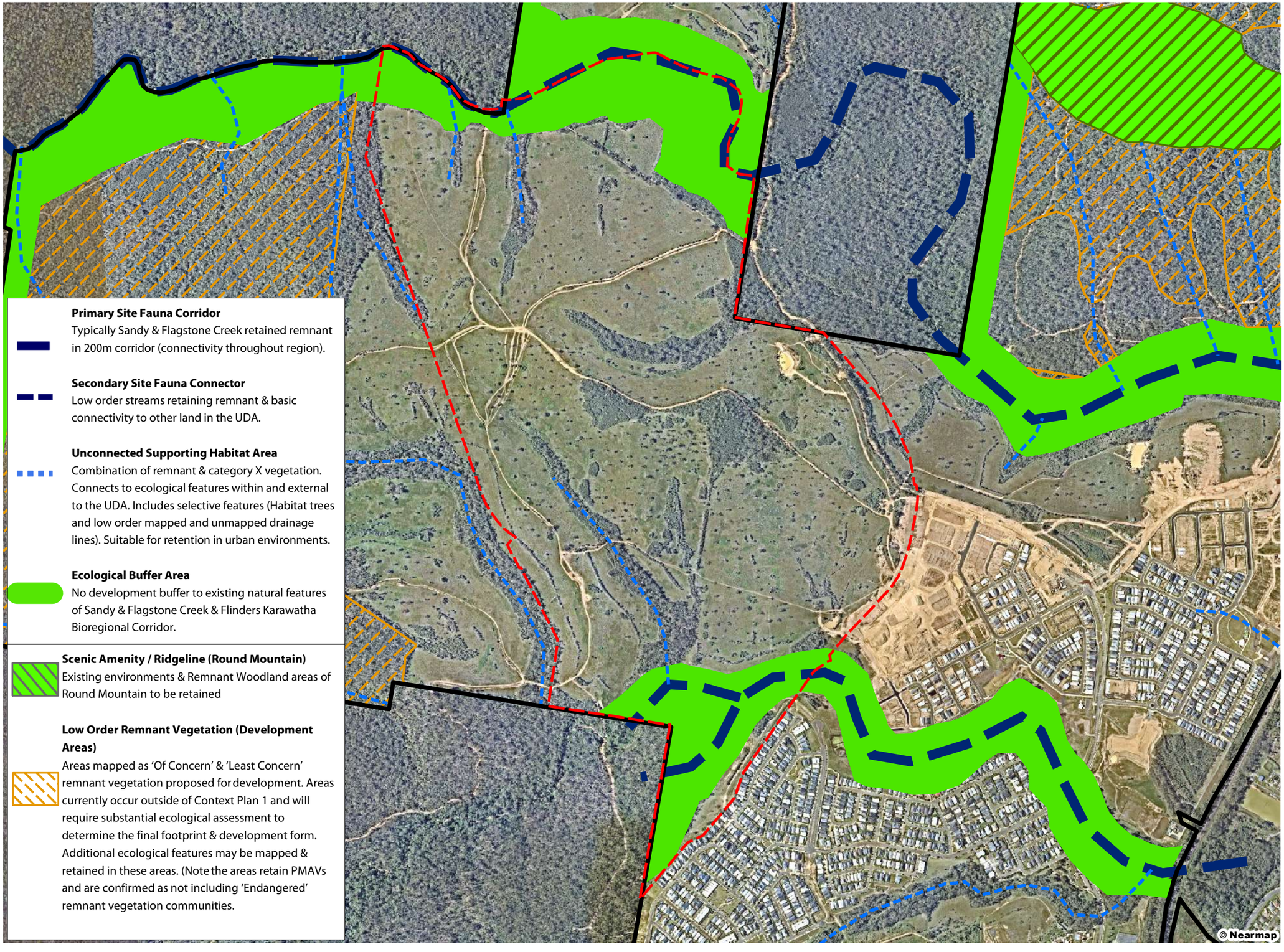
The site has been subject to extensive modification in the form of thinning and clearing activities. These have mostly occurred in the eastern portion of the site; however, aerial imagery indicates some modification has occurred through the remnant vegetation in the western portion of the site. The eastern portion of the site is mostly cleared and devoid of noteworthy vegetation, retaining minimal ecological values. The proposed development will result in the removal of regulated vegetation mapping present in the western portion of the site, however, will retain vegetation in the form of environmental corridors within the associated rectified waterways and buffers.

Broadly the areas to be cleared and thus the subsequent habitat features affected are described as the following:

1. Sporadically located semi-mature, mature and juvenile individual tree species previously retained over the allotment area.
2. Minor removal of Category X tree clusters along the edge of remnant and other retained areas where required.
3. Minor lineal clearing associated with the construction of road linkages over Flagstone Creek and other WWBW.
4. Remnant clearing outside conservation corridors in the western portion of the site.
5. Removal of regenerating saplings associated with previous clearing areas.

The majority of the most significant vegetation on-site is retained and protected in designated open space and greenspace areas within the site (refer to **Plan 2** - Summary of Vegetation Clearing).

1. Natural Environmental Site Strategy - Habitats



Primary Site Fauna Corridor
Typically Sandy & Flagstone Creek retained remnant in 200m corridor (connectivity throughout region).

Secondary Site Fauna Connector
Low order streams retaining remnant & basic connectivity to other land in the UDA.

Unconnected Supporting Habitat Area
Combination of remnant & category X vegetation. Connects to ecological features within and external to the UDA. Includes selective features (Habitat trees and low order mapped and unmapped drainage lines). Suitable for retention in urban environments.

Ecological Buffer Area
No development buffer to existing natural features of Sandy & Flagstone Creek & Flinders Karawatha Bioregional Corridor.

Scenic Amenity / Ridgeline (Round Mountain)
Existing environments & Remnant Woodland areas of Round Mountain to be retained

Low Order Remnant Vegetation (Development Areas)
Areas mapped as 'Of Concern' & 'Least Concern' remnant vegetation proposed for development. Areas currently occur outside of Context Plan 1 and will require substantial ecological assessment to determine the final footprint & development form. Additional ecological features may be mapped & retained in these areas. (Note the areas retain PMAVs and are confirmed as not including 'Endangered' remnant vegetation communities.

Notes:
This plan was prepared as a desktop assessment tool. The information on this plan is not suitable for any other purpose. Property dimensions, areas, numbers of lots and contours and other physical features shown have been compiled from existing information and may not have been verified by field survey. These may need verification if the development application is approved and development proceeds, and may change when a full survey is undertaken or in order to comply with development approval conditions. No reliance should be placed on the information on this plan for detailed design or for any financial dealings involving the land. Saunders Havill Group therefore disclaims any liability for any loss or damage whatsoever or howsoever incurred, arising from any party using or relying upon this plan for any purpose other than as a document prepared for the sole purpose of accompanying a development application and which may be subject to alteration beyond the control of the Saunders Havill Group. Unless a development approval states otherwise, this is not an approved plan.

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Legend

Flagstone Project Boundary

Context Plan 3 South area

Issue	Date	Description	Drawn	Checked
A	10/01/2024	Preliminary	TC	JG

0 100 200 300 400 m

Transverse Mercator | GDA 1994 | Zone 56 | 1:11,890 @ A3

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PEET

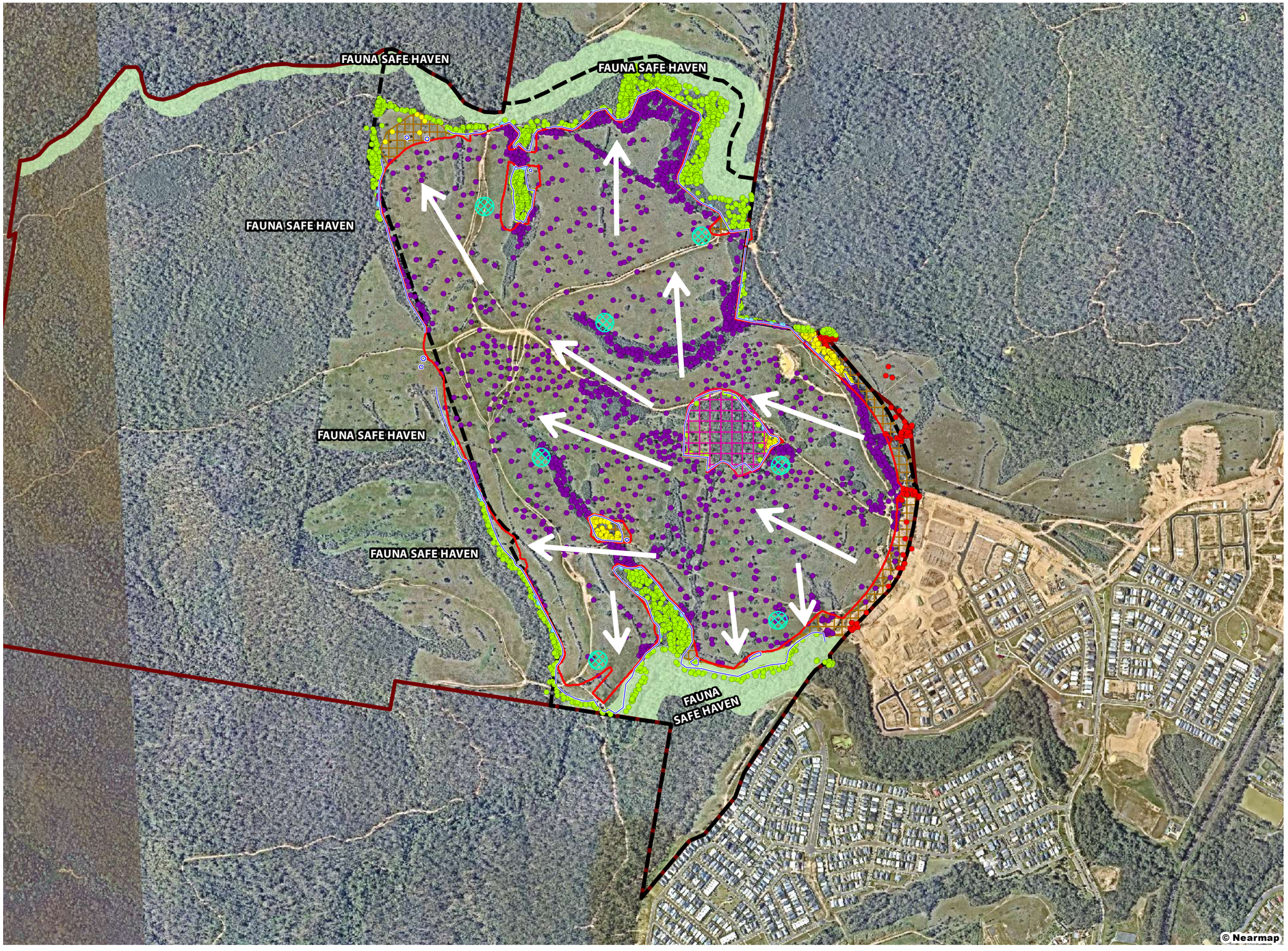
Flagstone

Flagstone City - Context Area 3 South

Address / RPD: Flagstone City - Context Area 3 South

10/01/2024 | 9850 E 01 CA3 FMP NESS A

2. Vegetation Clearing Assessment



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Layer Sources
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Updated data available at
http://qldspatial.information.qld.gov.au/catalogue/

Legend

- Context Plan 3 boundary
- Context Plan 3 Area Phase 1 boundary
- Context Plan 3 Phase 1 bulk earthworks extent
- Tree to retain
- Tree to remove in bulk earthworks extent
- Tree retention subject to arborist and civil engineer's assessment
- Tree retention subject to future detail design of services/basins/ parks development areas
- Tree approved to remove in CP1 Stages 2-5 VMP
- Additional development areas of Context Area 3 Concept Plan. Tree retention to be confirmed at detail design stages.
- Clearing subject to detailed landscape design
- Clearing direction
- Tree protection fencing - to be fauna friendly design & subject to minor changes by Arborist and civil engineer
- Stockpile location (indicative)
- Ecological core corridor

Issue	Date	Description	Drawn	Checked
A	18/03/2024	Preliminary	TC	JG

0 100 200 300 400 m

Transverse Mercator | GDA 1994 | Zone 56 | 1:12,000 @ A3

saunders havill group

PEET

Flagstone

Flagstone City - Context Area 3 Phase 1

Address / RPD: Flagstone City - Context Area 3 South

18/03/2024 | 9850 E 02 CA3 P1 FMP Clearing A

The following strategies have been developed as part of this FMP to mitigate the adverse impacts of development on native fauna and provide habitat enhancement and informed the VMP (to be lodged under a separate cover):

1. **Direction of Clearing Plan** – to direct clearing activities from open areas to less open areas allowing fauna to naturally seek shelter in the adjacent habitat;
2. **Fencing Management Strategy** – for the provision of permanent and temporary fencing around roads and construction areas, and
3. **Nest Box/Hollow Strategy** – for the installation of nest boxes in mature native trees in retained environmental corridors and the provision of hollow logs and branches to temporarily house translocated animals and provide permanent nesting sites. Habitat features are to be determined by the Environmental Coordinator as part of the VMP and Rehabilitation Plans prepared for the environmental corridor.

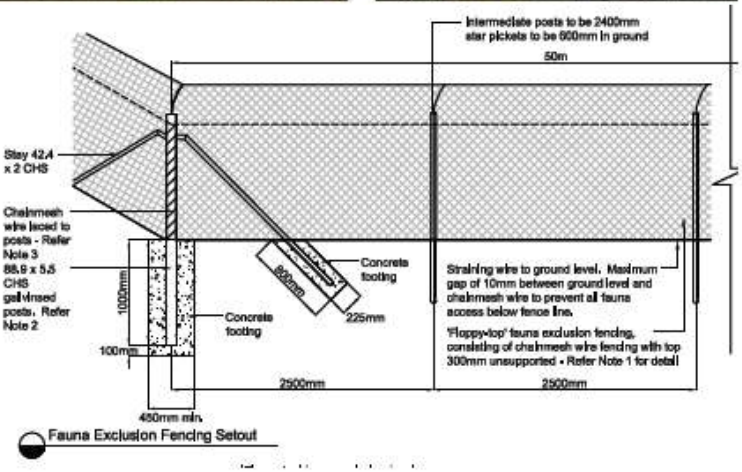
The below images reflect management strategies that may be adopted in this FMP.

FAUNA SPOTTERS RETRIEVING FAUNA

FAUNA SIGNAGE

FAUNA SPOTTER DURING TREE CLEARING

KOALA SIGNAGE



CONSTRUCTION FENCING DETAIL

TREE PROTECTION & EROSION FENCE

SIGNIFICANT TREE PROTECTION FENCING

4.2. Road Crossing Strategies

There are a number of road crossings intersecting waterways, gully lines and watercourses through the Flagstone City project. Where these crossings traverse major ecological corridors (such as Sandy and Flagstone Creeks) they are required to provide a fauna responsive design structure in accordance with the *Fauna Sensitive Road Design Manual: Volume 2- Preferred Practices*, prepared by the Department of Transport and Main Roads (dated June 2010).

The site proposes minor road linkages across Fisheries waterways for WWBW including the establishment of a road crossing over Flagstone Creek. Given the Flagstone Creek corridor is a significant remnant connector, dedicated safe fauna passage will be provided and incorporated at detailed design for the road crossings via designated culverts and will be fitted out as per the referenced DTMR Guidelines with appropriate designs selected to suit the habitats affected, target species, risk identification and conservation importance.

4.3. Observed Fauna

A detailed fauna survey was undertaken by SHG in August 2021 to identify significant biodiversity values and inform the FMP.

The results of the survey identified five (5) amphibian species, forty-seven (47) bird species, nine (9) reptile species and fifteen (15) mammal species (refer to **Table 4**). The majority of these species were observed around waterways including the Flagstone Creek and Sandy Creek Biodiversity Corridors which will be retained and buffered as part of an ecological open space network, preserving connectivity values. Notably, three significant fauna species were recorded on-site being the Koala, listed Endangered under the EPBC Act and NCA, the Rufous Fantail listed migratory / marine under the EPBC Act and the Grey-headed Flying Fox, listed Vulnerable under the EPBC Act and NCA.

The site is identified under the NESS as containing vegetated areas of Koala Habitat. Impacts on Koala Habitat will be managed through the conditions of the EPBC Act approval. Therefore, a response to PDA Guideline No. 17 (Remnant vegetation and Koala habitat obligations in Greater Flagstone and Yarrabilba PDAs) is not required.

Table 4: Observed Fauna Species on Site

Scientific Name	Common Name
Amphibians	
Crinia parinsignifera	Beeping Froglet
Lymnodynastes peronii	Striped Marsh Frog
Litoria fallax	Eastern Sedgefrog
Pseudophryne raveni	Copper-backed broodfrog
Rhinella marina	Cane Toad
Birds	
Alectura lathami	Australian Brush Turkey
Alisterus scapularis	Australian King-Parrot
Aquila audax	Wedge-tailed Eagle
Cacatua galerita	Sulphur-crested Cockatoo
Cacatua sanguinea	Little Corella
Cacomantis flabelliformis	Fan-tailed Cuckoo

Scientific Name	Common Name
Chalcites basalis	Horsfield's bronze-Cuckoo
Climacteris picumnus	Brown Treecreeper
Colluricincla harmonica	Grey shrike thrush
Coracina novaehollandiae	Black-faced Cuckoo-shrike
Cormobates leucophaea	White-throated Treecreeper
Corvus orru	Torresian Crow
Coturnix ypsilophora	Brown Quail
Cracticus torquatus	Grey Butcherbird
Dacelo novaeguineae	Laughing Kookaburra
Dicaeum hirundinaceum	Mistletoe Bird
Eopsaltria australis	Eastern Yellow Robin
Geopelia humeralis	Bar shouldered dove
Geopelia placida	Peaceful Dove
Gerygone olivacea	White-throated Gerygone
Grallina cyanoleuca	Magpie-lark
Gymnorhina tibicen	Australian Magpie
Hirundo neoxena	Welcome Swallow
Lichenostomus chrysops	Yellow-faced Honeyeater
Malurus melanocephalus	Red-backed Fairy Wren
Manorina melanocephala	Noisy Miner
Meliphaga lewinii	Lewin's Honeyeater
Melithreptus albogularis	White-throated honeyeater
Merops ornatus	Rainbow Bee-eater
Neochmia temporalis	Red browed Finch
Oriolus sagittatus	Olive-backed Oriole
Pachycephala pectoralis	Golden Whistler
Pachycephala rufiventris	Rufous Whistler
Pardalotus striatus	Striated Pardalote
Phaps chalcoptera	Common Bronzewing
Philemon corniculatus	Noisy Friarbird
Platycercus adscitus	Pale-headed Rosella
Psophodes olivaceus	Eastern Whipbird
Rhipidura fuliginosa	Grey Fantail
Rhipidura leucophrys	Willie Wagtail
Rhipidura rufifrons	Rufous Fantail
Strepera graculina	Pied Currawong
Taeniopygia bichenovii	Double-barred finch

Scientific Name	Common Name
Trichoglossus chlorolepidotus	Scaly-breasted Lorikeet
Trichoglossus haematodus moluccanus	Rainbow Lorikeet
Tyto alba	Barn Owl
Vanellus miles	Masked Lapwing
Mammals	
Antechinus flavipes	Yellow-footed Antechinus
Canis familiaris	Feral Dog
Isoodon macrourus	Northern brown bandicoot
Macropus giganteus	Eastern Grey Kangaroo
Macropus rufogriseus	Red-necked Wallaby
Macropod sp.	
Mus musculus	House Mouse
Phascolarctos cinereus	Koala
Pseudocheirus peregrinus	Common Ring-tail Possum
Pteropus poliocephalus	Grey-headed Flying Fox
Rattus fuscipes	Bush Rat
Rattus rattus	Black Rat
Sus scrofa	Feral Pig
Sminthopsis murina	Common Dunnart
Trichosurus vulpecula	Common Brush-tail Possum
Vulpes vulpes	Red Fox
Reptiles	
Calia vivax	Lively rainbow skink
Cryptoplepharus pulcher	Elegant Snake-eyed Skink
Diporiphora australis	Tommy Roundhead
Lampropholis delicata	Grass Skink
Lampropholis guichenoti	Common Garden skink
Morethia teniopleura	Eastern Fire-tailed skink
Pogona barbata	Eastern bearded dragon
Pseudechis porphyriacus	Red-bellied Black Snake
Varanus varius	Lace Monitor

4.4. Potential Fauna Species (Threatened)

Table 2 and **Table 3** (refer to **Appendices A & B** for full search results) list endangered, vulnerable and near threatened (EVNT) species which may occur within the general proximity (5 km) of the development site. These species have been identified through the EPBC Act's online PMST and the NCA Wildlife Online database search (discussed in Section 2).

A habitat suitability and risk assessment for significant fauna was undertaken by SHG in conjunction with the ecological surveys. The assessment focused on identifying habitat features typically associated with threatened species and native fauna groups. Six (6) significant fauna species were considered as possible occurrences on the site (refer to **Table 5**Table 5).

Two (2) migratory species were considered known or possible occurrences within the site (refer to **Table 6**). The full assessment is contained in **Appendix C** – Likelihood of Occurrence Assessment.

Table 5: Threatened Species with possible suitable habitat on site.

Scientific Name	Common Name	Habitat	EPBC Status	NCA Status
Anthochaera phyrgia	Regent Honeyeater	Regent Honeyeaters mostly occur in dry Box-Ironbark Eucalypt woodland and dry sclerophyll forest associations in areas of low to moderate relief, wherein they prefer moister, more fertile sites. These areas are generally associated with creek flats and river valleys and foothills. These woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes. They are a generalist forager, which mainly feed on nectar from a wide range of eucalypts and mistletoes.	Critically Endangered	Critically Endangered
Falco hypoleucos	Grey Falcon	The Grey Falcon is a medium-sized, compact, pale falcon with a heavy, thick-set, deep-chested appearance. Usually restricted to shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast. Also occurs near wetlands where surface water attracts prey. Preys primarily on birds, especially parrots and pigeons, using high-speed chases and stoops; reptiles and mammals are also taken. Like other falcons it utilises old nests of other birds of prey and ravens, usually high in a living eucalypt near water or a watercourse; peak laying season is in late winter and early spring; two or three eggs are laid. The nests chosen are usually in the tallest trees along watercourses, particularly River Red Gum (*Eucalyptus camaldulensis*) and Coolibah (*E. coolabah*).	Vulnerable	Vulnerable
Hirundapus caudacutus	White-throated Needletail	Although they occur over most types of habitat, they are probably recorded most often above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy, but they are less commonly recorded flying above woodland. They also commonly occur over heathland, but less often over treeless areas, such as grassland or swamps.	Vulnerable	Vulnerable
Lathamus discolor	Swift Parrot	The Swift Parrot breeds in Tasmania during spring to early summer. During autumn and winter the species migrates to the mainland where it follows a nomadic existence linked to the availability and timing of flowering of trees in various locations.	Critically Endangered	Endangered
Phascolarctos cinereus	Koala	Koalas are found in a range of habitats, from coastal islands and tall eucalypt forests to low woodlands inland. This species is known on-site.	Endangered	Endangered

Scientific Name	Common Name	Habitat	EPBC Status	NCA Status
Pteropus poliocephalus	Grey-headed Flying Fox	Species generally roosts in camps in trees adjacent to larger permanent watercourse. The Grey-headed flying fox requires foraging resources and roosting sites. It is a canopy-feeding frugivore and nectarivore, which utilises vegetation communities including rainforests, open forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands. It also feed son commercial fruit crops. The primary food source is blossom from Eucalyptus and related genera. This species is known on-site.	Vulnerable	

Table 6: Migratory Species with possible suitable habitat on site

Scientific Name	Common Name	Habitat	Status*
Myiagra cyanoleuca	Satin Flycatcher	Satin Flycatchers inhabit heavily vegetated gullies in eucalypt dominated forests and taller woodlands, and on migration occur in coastal forests, woodlands, mangroves and drier woodlands and open forests.	M
Rhipidura rufifrons	Rufous Fantail	The Rufous fantail mainly inhabits wet sclerophyll forests, often in gullies dominated by Eucalypts such as *Eucalyptus microcorys*, *Eucalyptus pilularis*, *Eucalyptus resinifera* and a number of other Eucalyptus species. This species is known on-site.	M

*M: Migratory species are those species that are listed under an international agreement such as *JAMBA, CAMBA* and *Bonn Convention*.

4.5. Potential Impacts

Impacts of the proposed development can generally be summarised as the following:

CONSTRUCTION IMPACTS	OPERATIONAL IMPACTS
- Direct removal of site vegetation - Loss of habitat - Loss of food sources - Excavation / compaction/ changes in existing ground levels - Altering of hydrological flows - Noise, vibration and dust - Fragmentation of habitat - Erosion and sedimentation - Threats associated with open cuts etc. and fauna entrapment	- Weed introduction (garden escapees) - Increased hydrology with increased hardstand - Altering of run-off chemical and nutrient components (quality) - Barriers to fauna movement - Vehicle and pedestrian movement and trespass - Introduction of domestic and predatory species

Generally, most impacts for developments are associated directly with vegetation clearing. The VMP will provide provisions for wildlife management to mitigate potential impacts during vegetation clearing and comply with legislative requirements and approval conditions. These will include:

- The Fauna Spotter Catcher (DES approved) must remain on site during all clearing works to undertake pre-clearing inspection, direct clearing activities and relocate fauna.
- Immediately prior to the commencement of clearing of native vegetation, a daily visual inspection of the area must be carried out by a qualified Fauna Spotter Catcher.
- In the event of an animal being located an area of 5 m radius should be established around the tree excluding machinery from the area until the animal has relocated (usually overnight) or, if an animal requires relocating this must be undertaken by a suitably qualified and permitted fauna expert recognised by DES.
- Any native fauna orphaned or injured by the development process must be reported to DES.
- The site supervisor is responsible for the safe management of site fauna and implementation of these specific fauna requirements.
- Dogs will be restricted on-site during construction activities to encourage fauna movement outside construction hours. Dogs brought onto the premises for security must be controlled and contained.

5. Fauna Management Plan Specifications

5.1. Pre-Construction

Management Item	Responsibility	Timing	Reporting
4.1.1 Temporary Fencing			
Prior to the commencement of clearing activities, the applicant must fence the limits of vegetation strips and install fauna fencing. This fencing shall be inspected by the Environmental Coordinator. Fencing shall be in accordance with the specifications shown in the approved VMP and if modified by the WPMP. • Fencing shall be fauna friendly and erected to direct fauna towards vegetation associated with Sandy Creek to the south and Flagstone Creek to the north. • Fencing shall be erected prior to the commencement of clearing activities and shall be removed in accordance with the WPMP to enable animals to safely move to refuge areas. • Within the tree protection zone, the following activities are not permitted: storage and mixing of materials, vehicle parking, liquid disposal, machinery repairs and/or refuelling, construction of site office or shed, combustion of any material, stockpiling of soil, rubble or debris, any filling or excavation including trenching, topsoil skimming and/or surface excavation, unless otherwise approved. • Only approved weed management, landscape and revegetation works are to occur beyond the temporary protection fencing. • Fencing shall be reinstated immediately if damaged or knocked down. • Fencing shall remain until the completion of all bulk earthworks and removed just prior to practical completion.	Site Supervisor.	No more than two weeks prior to clearing works commencing on-site.	Inspected by Proponent, the Environmental Coordinator, or Site Supervisor.

Management Item	Responsibility	Timing	Reporting
4.1.2 Contractor Education and Awareness			
All site contractors and sub-contractors will be made aware of their responsibilities to protect native fauna. The Construction Contractor will be responsible for the commissioning of the PTRP. This FMP is provided as a working document to assist on-site management and protection of native animals. This FMP will generally form part of education and training in a broader Construction Environmental Management Plan but as a minimum will include: • A copy of this FMP kept on site (Site Office). • General education and awareness notification of contractors and sub-contractors involved in activities potentially impacting native animals as part of site induction – contractors must know the location of the FMP, key phone numbers including the nominated Fauna Spotter Catcher and DES, and who to report to if potential breaches of the FMP occur. • A list of relevant contact numbers as listed in **Section 8** kept in a visible and accessible location in the site office.	Site Supervisor / Proponent.	Prior to the commencement of construction and as part of the site induction for new staff and sub-contractors.	Site Supervisor.
4.1.3 Fauna Spotter and Catcher			
A DES approved Fauna Spotter Catcher shall inspect the site no more than two (2) weeks prior to clearing works commencing on-site and prepare a PTRP. The report must include a full list of fauna species encountered during the site survey, as well as the marking and identification of significant habitat trees. The report shall be sent to the Environmental Coordinator and Proponent prior to the pre-start meeting, for approval and inspection by the Environmental Coordinator. In addition, the DES approved Fauna Spotter Catcher must assess the site for: • The presence of native fauna and/or supporting habitat on-site. • Available habitat suitable for likely fauna species.	Site Supervisor / Proponent.	No more than two weeks prior to clearing works commencing on site.	Site Supervisor / Environmental Coordinator.

Management Item	Responsibility	Timing	Reporting
• The presence of any fauna that is 'protected wildlife' as defined under the *Nature Conservation Act 1992* (protected wildlife). • The presence of any species that is a 'listed threatened species' under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (listed threatened species). **Section 6** details the documentation and actions to be taken if the assessment finds suitable habitat present adjacent to the site or protected/listed species present and/or if the relocation of fauna is required. The DES approved Fauna Spotter Catcher must be present during the pre-start meeting to identify all fauna habitat trees prior to the commencement of works to ensure wildlife is unharmed at the time of tree clearing operations. Note. The DES approved Fauna Spotter Catcher is a person who holds a rehabilitation permit with an extended authority issued by the Department of Environment and Science specifying the holder may take, keep or use an animal whose habitat is about to be destroyed by a human activity.			

5.2. Vegetation Clearing

Management Item	Responsibility	Timing	Reporting
4.2.1 Fauna Spotter Catcher			
For all vegetation clearing: • Immediately prior to the commencement of clearing of native vegetation a daily visual inspection of the area must be carried out. • A Fauna Spotter Catcher must be present during all clearing activities and inspect trees continuously ahead of clearing for Koalas. • In the event of an animal being located, an area within a minimum 5 m radius should be established excluding machinery from the area until the animal has relocated (usually overnight). The no go zone should be determined by the Fauna Spotter Catcher dependant on the species. • If any used hollows or nests are identified from inspection by the Fauna Spotter Catcher, the hollows and nest must be removed by an experienced machinery operator and carefully lowered for inspection and fauna removal by the Fauna Spotter Catcher. • The relocating of fauna is only permitted where necessary as per the Rehabilitation Permit held by the Fauna Spotter. There is no approval to relocate fauna as part of operational works onsite, refer to **Section 6** of this document for further details. • Any native fauna orphaned or injured by the development process must be immediately reported to the Queensland Parks and Wildlife Service (1300 130 372), DES, RSPCA and the Environmental Coordinator and Proponent. • The Site Supervisor is responsible for the safe management of site fauna and implementation of these specific requirements. • All personnel on-site must undertake all works in accordance with all direction/s given by the DES approved Fauna Spotter Catcher.	DES approved Fauna Spotter Catcher.	Must be present for pre-start meeting, during clearing, construction and continue during the site clearing operations.	Proponent / Site Supervisor / Environmental Coordinator.

Management Item	Responsibility	Timing	Reporting
SPECIFIC KOALA MANAGEMENT NOTES A DES approved Koala Spotter is a person who holds a tertiary qualification in Biology or Zoology, or who is demonstrably experienced in the identification and location of Koalas in their natural habitat, and has an authorisation from DES to conduct such activities. For example, demonstrably experienced may include a Koala keeper employed by a licenced Wildlife exhibitor (i.e. a zoo) may be capable of demonstrating competence in location Koalas. Prior to the commencement and during felling operations, it is the responsibility of the DES approved Fauna Spotter to: 1. Be present at the site of felling operations; 2. Identify any tree at the site which a Koala is present, as well as any tree that has a crown which is intermeshed or overlapping with such tree; and 3. Advise the person who is authorised to conduct the felling operation, or that person's representative, of the precise location of each such tree.			
4.2.2 Direction of Clearing			
Vegetation clearing activities must be in accordance with the Direction of Clearing Plan (as shown in the approved VMP, Plan 2 or corrected by the WPMP) which directs clearing towards vegetation to be retained.	Site Supervisor / Earthworks Contractor / Sub Contractor.	As part of clearing earthworks operations.	Site Supervisor / Proponent / Environmental Coordinator.
4.2.3 Monitoring of Clearing/Earthworks			
Works are to be monitored to ensure on-site success of Direction of Clearing Plan (as shown in the approved VMP, Plan 2 or corrected by the WPMP) and for immediate reporting of orphaned, injured, distressed, or killed native animals to DES, RSPCA, Environmental Coordinator and Proponent.	DES Fauna Spotter Catcher as employed by the Construction Contractor.	As part of clearing/ earthworks operations.	Site Supervisor / Proponent / Environmental Coordinator.
4.2.4 Timing of Clearing			

Management Item	Responsibility	Timing	Reporting
No machinery use for vegetation clearing or damage of any kind shall occur on-site between 6 pm and 6 am.	Site Supervisor / Earthworks Contractor / Sub Contractor.	As part of clearing earthworks operations.	Site Supervisor / Proponent / Environmental Coordinator.
4.2.4 Relocation / Translocation			
Where works will result in unacceptable risks to health and safety of fauna, a range of measures may be used by the approved Fauna Spotted Catcher to minimise risks, including the temporary removal of animals from the site with the aim or returning animals back to habitat on site at the completion of risk associated works or to suitable habitat adjacent to the site. Appropriate measures are to be determined by the approved Fauna Spotter Catcher. Note: Appropriate wildlife-proof barriers must be used between adjacent habitat and risk associated structures (i.e. roads) where translocation occurs.	DES Fauna Spotter Catcher as employed by the Construction Contractor.	As part of clearing/ earthworks operations.	Site Supervisor / Proponent/ Environmental Coordinator / EDQ.

5.3. Excavation, Earthworks and Access

Management Item	Responsibility	Timing	Reporting
4.3.1 Minimise Entrapment			
Trenches, manholes, excavation for footings, etc. pose threats to native animal entrapment when left open and should be backfilled as soon as possible. In some locations barriers may be required overnight to eliminate the accidental capture of animals moving through the site.	Site Supervisor / Earthworks Contractor / Sub Contractor.	As part of site earthworks.	Site Supervisor / Proponent / Environmental Coordinator.
When trenches are not backfilled they are to be inspected at the commencement of each day for trapped or injured wildlife. Note: If during the inspection injured wildlife or entrapped native fauna is observed the Site Supervisor is to contact the Fauna Spotter Catcher immediately.	Site Supervisor.	On-going.	Site Supervisor / Proponent / Environmental Coordinator.
4.3.2 Regular and Defined Access			
To minimise impacts and conflicts between native animals, vehicular movement and access during construction and site access should be controlled via minimal entry and exit points.	Site Supervisor.	On-going.	Site Supervisor / Proponent / Environmental Coordinator / EDQ.
4.3.3 Stockpile and Rubbish Locations			
Stockpiled vegetation, topsoil and other materials can quickly become temporary habitat for animals displaced during the actual clearing and earthworks. Rubbish, waste and litter provides opportunistic food source for native and exotic animals alike and often encourages predatory and feral species. Locations for stockpiles, designated rubbish points etc. should occur in cleared sections of the site, away from retained areas, limiting interaction between these areas and core retention areas.	Site Supervisor.	On-going.	Site Supervisor / Proponent / Environmental Coordinator.

5.4. Nest Box / Hollow Maintenance and Monitoring

Management Item	Responsibility	Timing	Reporting
4.4.1 Installation			
As part of the VMP and pre-clearance reporting, the Environmental Coordinator will determine the number of lost habitat values (hollows) that will require replacement. The specific location of nest boxes to be in installed in retained vegetation bordering along the waterways and will be directed in the Rehabilitation Plan prepared by the Environmental Coordinator. The Nest Box Management Plan will require that all nest box locations are to be GPS recorded and coordinates provided to the Environmental Coordinator, Proponent and EDQ.	Environmental Coordinator.	As per the approval conditions and Nest Box Offset Strategy.	Site Supervisor / Proponent / Environmental Coordinator / EDQ.
4.4.2 Maintenance and Monitoring			
Nest boxes are to be monitored and maintained for 12 months. Maintenance activities include, but are not limited to, the following: • The replacement of failed or damaged next boxes • The removal of invasive species • The removal of invasive species will be determined by the engaged DES Fauna Spotter Catcher or suitably qualified person.	Nest Box Contractor.	12 months.	Site Supervisor / Proponent / Environmental Coordinator / EDQ.
4.4.3 Reporting Schedule and Pro forma			
A reporting schedule and pro forma must be completed to report all nest box maintenance and monitoring activities throughout the construction period of the development. A copy of the reporting schedule and pro forma must be provided to the Environmental Coordinator and Proponent.	Nest Box Contractor.	Throughout the construction period of the development.	Site Supervisor / Proponent / Environmental Coordinator / EDQ.

5.5. Non-compliance, Monitoring and Reporting

Management Item	Responsibility	Timing	Reporting
4.5.1 Non-Compliance			
Despite the provisions in this FMP, in the unlikely event of a non-compliance or breach, where a contractor or sub-contractor witnesses or is involved in activities which do not comply with this FMP the following procedure shall be followed: • All breaches of the FMP must immediately be reported to the Proponent. • If possible, prior approval / or communication on the breach should be discussed with the Environmental Coordinator. The Environmental Coordinator is responsible for establishing additional management procedures or determining if EDQ notification should be made. • Non-compliance activities should be halted immediately and impacts rectified (fencing reinstalled, stock piling relocated, etc.). • Site staff should notify the site supervisor who is responsible for either rectifying actions or contacting the Environmental Coordinator. • All major breaches which fundamentally do not achieve the overall outcomes of the FMP and result in lost habitat or distress to native animals must be reported to the Environmental Coordinator, Proponent and applicable regulatory authorities.	Site Supervisor.	On-going.	Site Supervisor / Proponent / Environmental Coordinator / EDQ.
4.5.2 Monitoring and Reporting			
The site shall be monitored at all times. This should include: • Daily inspections by the Site Supervisor. • Weekly/fortnightly inspections by the Environmental Coordinator. • Random and periodical inspections by the Proponent. The Fauna Spotter Catcher employed during pre-construction and on-site works shall provide a Post-clearing Report, to be given to the Environmental Coordinator, Proponent and Environmental Coordinator no more than two (2) weeks after clearing has finished, specifying the following:	All Site Staff.	On-going.	EDQ / Environmental Coordinator / Proponent.

Management Item	Responsibility	Timing	Reporting
• Length and time of clearing; • Details of any fauna that were caught and/or released and the placement of any release/s; • Inventory of species encountered during tree removal; • Brief summary of any fauna handling, mortalities or other relevant fauna related incidents that may have occurring during tree removal; and The Fauna Spotter Catcher Post-clearing Report is to be submitted to the Environmental Coordinator, Proponent and EDQ following the completion of tree clearing activities and prior to commencement of the use of the premises.			
4.5.3 Orphaned or Injured Fauna			
All native animal fatalities must be reported immediately to the Environmental Coordinator, the Proponent and DES. Where any site staff (contractors or sub-contractors) witnesses or locates distressed, injured or orphaned animals they should immediately contact the Environmental Coordinator, Proponent and DES. Works within the area of the animal must cease until further instruction is provided by one of the above authorities. Refer to **Section 8** for a list of key contacts.	All Site Staff.	On-going.	EDQ / DES / Environmental Coordinator / Proponent.

Refer to **Section 8** for the contact details of responsible entities. The Environmental Coordinator's role has been to prepare this FMP and liaise with EDQ, PEET and the approved Fauna Spotter Catcher (to be appointed) and the Construction Contractor (to be appointed) to achieve the outcomes of this plan.

6. Fauna Spotter Catcher Assessment

The Fauna Spotter Catcher assessment as part of the pre-clearing surveys and PTRP may reveal suitable fauna habitat adjacent on land within the Flinders-Karawatha Bioregional Corridor for protected/listed species present on the site and/or the requirement for relocation of fauna. The following table details the actions to be taken in these events.

Fauna Spotter Catcher required – suitable habitat present adjacent to the site	If the engaged Fauna Spotter Catcher's assessment determines that no protected wildlife or listed species are present but such threatened fauna may be present within suitable habitat existing adjacent to the site, the following must be included in the PTRP: • Fauna Spotter Catcher credentials and for handling of anticipated protected species • A list of anticipated species; and • A Wildlife Protection Management Plan (WPMP) and Wildlife Habitat Impact Mitigation Plan (WHIMP)
Fauna Spotter Catcher required – protected / listed species present and/or relocation of fauna required	If the Fauna Spotter Catcher's Assessment determines that any protected wildlife or listed species are present, and/or threatened fauna are to be systematically relocated, a Fauna Translocation Management Plan (FTMP) or Species Management Program (SMP) if applicable must be prepared in accordance with the PTRP. The FTMP must be submitted to DES for endorsement. The following must then by submitted to EDQ with a development application for operational works (vegetation clearing): • Fauna Spotter Catcher credentials and for handling of anticipated protected species • A list of anticipated species; and • DES endorsement of the proposed FTMP or SMP; and • A copy of the DES endorsed plans.

7. Koala Habitat

The site contains Koala habitat mapped under State Planning Policy and the following should be complied with as part of this FMP to ensure safe removal should any Koalas be encountered on site:

- During construction phases measures are taken in construction practices to not increase the risk of death or injuries to Koalas as specified within this FMP.
- Native vegetation clearing is undertaken as sequential clearing under the guidance of a Koala spotter where the native vegetation is a non-juvenile Koala habitat tree.
- Landscape activities provide food, shelter and movement opportunities for Koala consistent with the site design.

8. Site Contacts

Role	Contact Details
Proponent	Brad Gates PEET Limited Ph. (07) 3137 2040
Site Supervisor	*To be appointed.*
Environmental Coordinator	Andrew Davies Saunders Havill Group Ph. (07) 3251 9444
Administering Authority	Brandon Bouda Economic Development Queensland Ph. (07) 3452 7422
Council	Adam Avalos Logan City Council Ph. (07) 3412 4874
Construction Contractor	*To be appointed.*
Fauna Spotter and Catcher	*To be appointed.*
Veterinarian (in closest proximity to application site)	Jimboomba Veterinary Surgery 13 Euphemia St, Jimboomba QLD 4280 Mon-Fri: 8:00am – 6:00pm, Sat: 8:00am – 5:00pm, Sun: 9:00am–1:00pm Ph. (07) 5546 9540
Department of Environmental and Science	For wildlife incidents and licensing and permits: Ph. 1300 130 372
RSPCA Queensland	For reporting injured, sick or orphaned wildlife: Ph. 1300 ANIMAL (1300 264 625)

9. Appendices

Appendix A

Protected Matters Search Tool

Environment Protection and Biodiversity Conservation Act 1999

Appendix B

Wildlife Online Search

Nature Conservation Act 1992

Appendix C

9850 Flagstone West Context Area 3 - Significant Biodiversity Assessment Report (SBAR)

SHG 2022

Appendix A

Protected Matters Search Tool

Environment Protection and Biodiversity Conservation Act 1999

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: 19-Dec-2023

Summary

Matters of National Environment Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	8
Listed Threatened Species:	51
Listed Migratory Species:	15

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.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	22
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	27
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands) [Resource Information]

Ramsar Site Name	Proximity	Buffer Status
Moreton bay	20 - 30km upstream from Ramsar site	In feature area

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community may occur within area	In feature area
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	Endangered	Community likely to occur within area	In feature area
Grey box-grey gum wet forest of subtropical eastern Australia	Endangered	Community likely to occur within area	In feature area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area	In feature area
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community may occur within area	In feature area
Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions	Endangered	Community likely to occur within area	In feature area
Swamp Tea-tree (Melaleuca irbyana) Forest of South-east Queensland	Critically Endangered	Community likely to occur within area	In buffer area only
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically 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

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area
Cyclopsitta diophthalma coxeni Coxen's Fig-Parrot [59714]	Critically Endangered	Species or species habitat may occur within area	In feature area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundapus caudacutus			
White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor			
Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Rostratula australis			
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata			
Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area
Turnix melanogaster			
Black-breasted Button-quail [923]	Vulnerable	Species or species habitat known to occur within area	In feature area
FISH			
Maccullochella mariensis			
Mary River Cod [83806]	Endangered	Translocated population known to occur within area	In buffer area only
INSECT			
Argynnis hyperbius inconstans			
Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area	In feature area
MAMMAL			
Chalinolobus dwyeri			
Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat may occur within area	In feature area
Dasyurus maculatus maculatus (SE mainland population)			
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat likely to occur within area	In feature area
Macroderma gigas			
Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area	In feature area
Petauroides volans			
Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Petaurus australis australis			
Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat known to occur within area	In feature area
Petrogale penicillata			
Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area	In feature area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)			
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
Potorous tridactylus tridactylus			
Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pseudomys novaehollandiae			
New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pteropus poliocephalus			
Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area	In feature area
PLANT			
Arthraxon hispidus			
Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Bosistoa transversa			
Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Coleus habrophyllus listed as Plectranthus habrophyllus			
[91378]	Endangered	Species or species habitat known to occur within area	In feature area
Cryptostylis hunteriana			
Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Cupaniopsis shirleyana			
Wedge-leaf Tuckeroo [3205]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Cupaniopsis tomentella](#) Boonah Tuckeroo [3322]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Dichanthium setosum](#) bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Fontainea venosa](#) [24040]	Vulnerable	Species or species habitat may occur within area	In feature area
[Macadamia integrifolia](#) Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Macadamia tetraphylla](#) Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]	Vulnerable	Species or species habitat may occur within area	In feature area
[Notelaea lloydii](#) Lloyd's Olive [15002]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Notelaea x ipsviciensis listed as Notelaea ipsviciensis](#) Cooneana Olive [93460]	Critically Endangered	Species or species habitat may occur within area	In feature area
[Picris evae](#) Hawkweed [10839]	Vulnerable	Species or species habitat may occur within area	In feature area
[Planchonella eerwah](#) Shiny-leaved Condoo, Black Plum, Wild Apple [17340]	Endangered	Species or species habitat likely to occur within area	In feature area
[Rhaponticum australe](#) Austral Cornflower, Native Thistle [22647]	Vulnerable	Species or species habitat may occur within area	In feature area
[Rhodamnia rubescens](#) Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rhodomyrtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat may occur within area	In feature area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area	In feature area
REPTILE			
Coeranoscincus reticulatus Three-toed Snake-tooth Skink [59628]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area	In feature area
Furina dunmalli Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area	In feature area
Hemiaspis damelii Grey Snake [1179]	Endangered	Species or species habitat likely to occur within area	In feature area

Listed Migratory Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Monarcha melanopsis](#) Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
[Myiagra cyanoleuca](#) Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
[Rhipidura rufifrons](#) Rufous Fantail [592]		Species or species habitat likely to occur within area	In feature area
[Symposiachrus trivirgatus as Monarcha trivirgatus](#) Spectacled Monarch [83946]		Species or species habitat likely to occur within area	In feature area
Migratory Wetlands Species			
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area	In feature area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
[Charadrius leschenaultii](#) Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In feature area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Tringa nebularia](#) Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
[Anseranas semipalmata](#) Magpie Goose [978]		Species or species habitat may occur within area overfly marine area	In feature area
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
[Bubulcus ibis as Ardea ibis](#) Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area	In feature area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
[Charadrius leschenaultii](#) Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In feature area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area overfly marine area	In feature area
[Haliaeetus leucogaster](#) White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
[Hirundapus caudacutus](#) White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
[Lathamus discolor](#) Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
[Merops ornatus](#) Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
[Monarcha melanopsis](#) Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
[Myiagra cyanoleuca](#) Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pterodroma cervicalis White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Sterna striata White-fronted Tern [799]		Migration route may occur within area	In buffer area only
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat likely to occur within area overfly marine area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Undullah	Nature Refuge	QLD	In buffer area only

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
DT0018 Matt Court Wastewater Conveyance	2023/09529		Assessment	In buffer area only
Kagaru to Acacia Ridge and Bromelton Inland Rail Project	2021/8927		Completed	In feature area
New Beith Road Upgrade	2023/09505		Assessment	In feature area

Controlled action

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
130 Tully Road New Beith Residential Development v2	2021/8904	Controlled Action	Assessment Approach	In buffer area only
Bushman Drive Residential Development, Jimboomba, Qld	2018/8376	Controlled Action	Further Information Request	In buffer area only
Casino Ipswich Pipeline	2007/3877	Controlled Action	Completed	In feature area
Cedar Grove Connector Pipeline	2011/6013	Controlled Action	Completed	In buffer area only
Crowson Lane Road Upgrade	2021/9084	Controlled Action	Assessment Approach	In buffer area only
Flagstone West Urban Development Project, QLD	2014/7206	Controlled Action	Post-Approval	In feature area
Flinders Residential Development, Undullah Road, Undullah, Qld	2017/8109	Controlled Action	Further Information Request	In buffer area only
Greater Flagstone master planned residential development, Undullah, Qld	2015/7530	Controlled Action	Post-Approval	In feature area
Inland Rail Calvert to Kagaru Project	2017/7944	Controlled Action	Assessment Approach	In buffer area only
Residential Development, Lot 4 RP45728, New Beith, Qld	2019/8398	Controlled Action	Further Information Request	In buffer area only
Residential development, Lots 3, 200 and 1, approx 6.5km SW Undullah, Qld	2016/7772	Controlled Action	Further Information Request	In buffer area only
Residential development, Teviot Road, north Beaudesert, Qld	2016/7724	Controlled Action	Post-Approval	In buffer area only
Residential Development (Lot30, SP309195) Mountain Ridge Rd, South Maclean, Qld	2019/8408	Controlled Action	Post-Approval	In buffer area only
Southern Regional Water Pipeline	2006/2593	Controlled Action	Post-Approval	In buffer area only
Tarnbrae Greater Flagstone Residential Development, New Beith, QLD	2019/8412	Controlled Action	Further Information Request	In feature area
Not controlled action				
Cedar Grove Weir	2006/2731	Not Controlled Action	Completed	In buffer area only
Construction and upgrade of approximately 7km of external	2014/7319	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
road corridor, Flagstone, Qld				
Flagstone Central to Cedar Grove WWTP Conveyance Pipeline	2018/8190	Not Controlled Action	Completed	In feature area
Greenbank to Flagstone Central Conveyance Pipeline Project, Qld	2018/8344	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
South West Pipeline and Wyaralong Tanks Project, Qld	2018/8320	Not Controlled Action	Completed	In buffer area only
Spring Mountain Park rural residential estate, stages 15-18, Greenbank/New Beith, Qld	2013/7030	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
Construction & Operation 275/330kV Transmission Line	2006/2820	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Referral decision				
130 Tully Road, New Beith, Residential Development	2020/8848	Referral Decision	Referral Publication	In buffer area only

Bioregional Assessments

SubRegion	BioRegion	Website	Buffer Status
Clarence-Moreton	Clarence-Moreton	BA website	In feature area

Caveat

1 PURPOSE

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

The report contains the mapped locations of:

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

2 DISCLAIMER

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

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

3 DATA SOURCES

Threatened ecological communities

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

Threatened, migratory and marine species

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

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

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

4 LIMITATIONS

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

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

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

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

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

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

Acknowledgements

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

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

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

Please feel free to provide feedback via the Contact us page.

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Appendix B

Wildlife Online Search

Nature Conservation Act 1992

Queensland Government

WildNet species list

Search Criteria: Species List for a Specified Point
Species: All
Type: Native
Queensland status: Rare and threatened species
Records: Confirmed
Date: Since 1980
Latitude: -27.7884
Longitude: 152.9246
Distance: 5
Email: josephinegeffen@saundershavill.com
Date submitted: Tuesday 19 Dec 2023 13:29:30
Date extracted: Tuesday 19 Dec 2023 13:30:03

The number of records retrieved = 7

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Apodidae	*Hirundapus caudacutus*	white-throated needletail		V	V	1
animals	birds	Cacatuidae	*Calyptorhynchus lathami lathami*	glossy black-cockatoo (eastern)		V	V	1
animals	birds	Strigidae	*Ninox strenua*	powerful owl		V		3
animals	mammals	Petauridae	*Petaurus australis australis*	yellow-bellied glider (southern subspecies)		V	V	1
animals	mammals	Phascolarctidae	*Phascolarctos cinereus*	koala		E	E	38
plants	land plants	Lamiaceae	*Coleus habrophyllus*			E	E	3/3
plants	land plants	Myrtaceae	*Melaleuca irbyana*			E		2

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.

Appendix C

Likelihood of Occurrence Assessment

Likelihood of occurrence assessment

Likelihood of occurrence	Assessment criteria
Unlikely	No previous records of the species within the locality and one or more of the following criteria is met: • Not previously recorded on the referral area and surrounds and the referral area is beyond the current known geographic range; or • Dependent on specific habitat types or resources that are not present on the referral area; or • Considered extinct in the wild.
Low	No previous records of the species within the locality and one or more of the following criteria is met: • Site and local connectivity contains marginal habitat excluding suitable/critical habitat attributes; • Lack of recent records exist in a regional context (use 1980 as a delineation); or • Potential for vagrant or individual of the species to survive short-term;
Moderate	Species previously recorded within the locality and one or more of the following criteria is met: • Previously recorded in proximity to the referral area (*i.e.,* vagrant individuals); or • Potential habitat typologies or resources are present on the referral area.
High	Species previously recorded within the locality and one or more of the following criteria is met: • Previously recorded on the referral area; • Dependent on habitats or habitat resources that are available on the referral area; or • Suitable habitats are available on the referral area that are capable of supporting a resident population or individuals of the species.
Known	Flora species or ecological community positively identified during field surveys within the referral area. Fauna species positively recorded during field surveys within the referral area or adjacent habitats.

Matters of National Environmental Significance						
Name	**Status**	**Type of presence**	**Description of the community/preferred habitat**	**Likelihood of Occurrence Analysis**	**Desktop Likelihood of occurrence (on-site)**	**Field Survey Confirmed Likelihood of occurrence (on-site)**
Wetlands of International Importance (Ramsar)						
Moreton Bay			The site is located approximately 20 - 30 kilometres upstream from the RAMSAR site.	There will be no measurable affect to Moreton Bay.	Unlikely	Unlikely
Threatened Ecological Communities						
Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland ecological community	E	Community may occur within area	In Queensland, this ecological community coincides with two regional ecosystem communities including Of Concern RE12.1.1 (*Casuarina glauca* +/- mangroves woodland) as well as areas where the canopy is dominated by *Casuarina glauca* within 12.3.20 (*Melaleuca quinquenervia, Casuarina glauca +/- Eucalyptus tereticornis, Eucalyptus siderophloia* open forest on low coastal alluvial plains).	Desktop analysis and field surveys confirmed that regional ecosystem 12.1.1 and 12.3.20 do not occur on-site.	Unlikely	Unlikely
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	E	Community likely to occur within area	The Coastal Swamp Sclerophyll Forests of South-eastern Australia is a type of forest or scrub associated with freshwater (to brackish) wetlands on low-lying coastal areas. Several regional ecosystem communities coincide with this TEC, including Least Concern RE 12.2.7 (*Melaleuca quinquenervia* or rarely *M. dealbata* open forest on sand plains), Of Concern RE 12.3.4/12.3.4a (*Melaleuca quinquenervia*, *Eucalyptus robusta* woodland on coastal alluvium/*Eucalyptus bancroftii* open woodland often with *Melaleuca quinquenervia*), Least Concern RE 12.3.5 (*Melaleuca quinquenervia* open forest on coastal alluvium), Least Concern RE 12.3.6 (*Melaleuca quinquenervia* +/- *Eucalyptus tereticornis, Lophostemon suaveolens, Corymbia*	Desktop analysis and field surveys confirmed that regional ecosystems 12.2.7, 12.3.4/12.3.4a, 12.3.5, 12.3.6 and 12.3.20 do not occur on-site.	Unlikely	Unlikely

			intermedia open forest on coastal alluvial plain) and Endangered RE 12.3.20 (*Melaleuca quinquenervia, Casuarina glauca* +/- *Eucalyptus tereticornis, E. siderophloia* open forest on low coastal alluvial plain).			
Grey box-grey gum wet forest of subtropical eastern Australia	E	Community likely to occur within area	The ecological community is limited to the New South Wales north coast and south eastern Queensland IBRA Bioregions from near Coffs Harbour in NSW to the southern areas of south-east Queensland. Within these areas it occurs in the Moreton Basin, Scenic Rim, Woodenbong, Cataract, Rocky River Gorge, Washpool, Dalmorton, Clarence Sandstones and Chaelundi IBRA subregions. The ecological community typically occurs on escarpment slopes and foothills, on inland hills and ranges between 100m and 600m altitude. This ecological community coincides with regional ecosystems including Of Concern RE12.9-10.3 and Least Concern 12.8.14a.	Desktop analysis and field surveys confirmed that regional ecosystem 12.9-10.3 and 12.8.14a do not occur on-site.	Unlikely	Unlikely
Lowland rainforest of subtropical Australia	CE	Community may occur within area	This TEC occurs mainly on basalt and alluvial soils and is characteristic of a low abundance of *Eucalyptus, Melaleuca* and *Casuarina* species. Specimens with buttress roots and a diversity of vines are common throughout this TEC. This community is usually associated Regional Ecosystems 12.3.1, 12.5.13, 12.8.3, 12.8.4, 12.8.13, 12.11.1, 12.11.10, 12.12.1, and 12.12.1.	Desktop analysis and detailed field surveys confirmed that this TEC does not occur on-site or adjacent to the site. The Regional Ecosystems associated with this TEC were confirmed to be absent on-site.	Unlikely	Unlikely
Poplar Box Grassy Woodland on Alluvial Plains	E	Community may occur within area	The Poplar Box Grassy Woodland on Alluvial Plains ecological community is typically a grassy woodland with a canopy dominated by *Eucalyptus populnea* and understorey mostly of grasses and other herbs. The ecological community mostly occurs in gently undulating to flat landscapes and occasionally on gentle slopes on a wide range of soil types of alluvial and depositional origin. In Queensland, this TEC corresponds with 11.3.2, 11.3.17, 11.3.7, 11.4.12 and 12.3.10.	Desktop analysis and detailed field surveys confirmed that this TES does not occur on-site or adjacent to the site. Regional ecosystems 11.3.2, 11.3.17, 11.3.7, 11.4.12 and 12.3.10 do not occur on-site.	Unlikely	Unlikely
Subtropical eucalypt floodplain forest and woodland of	E	Community likely to occur within area	The structure of the ecological community, in its undisturbed state, varies from tall open forest to woodland, although partial clearing may have reduced the canopy to scattered trees in	Desktop analysis and field surveys confirm the Of Concern RE12.3.11 occurs onsite. This RE	Low	Moderate

the New South Wales North Coast and South East Queensland Bioregions			some areas. The tree canopy is dominated by eucalypts and/or other myrtaceous trees (specifically from the Angophora, Corymbia, *Lophostemon* and *Syncarpia* genera), often as a mixture of species. A mid-layer or sub-canopy of small trees may be present – with scattered to dense shrubs. For example, *Melaleuca*, *Leptospermum* and related genera may form dense thickets beneath the main canopy, or in gaps between canopy trees. The mid-layer may be sparser in lower rainfall areas, or where partially cleared, grazed or frequently burnt. The ecological community often has climbers extending into the mid-layer and canopy. The ecological community generally has a more diverse and abundant groundcover than ecological communities on locally adjoining slopes. Its groundcover typically includes grasses, forbs, ferns, sedges and scramblers. The ecological community typically forms 'mosaics' with other floodplain forest communities, lowland woodlands and treeless wetlands. The following Regional Ecosystems form part of or align with the TEC: 12.3.2, 12.3.2a, 12.3.3, 12.3.3a, 12.3.3b, 12.3.3d, 12.3.4a, 12.3.7, 12.3.7c, 12.3.7d 12.3.10, 12.3.11, 12.3.11a, 12.3.11b, 12.3.12, 12.3.14a, 12.3.15, 12.3.19.	was found to be associated with retained creek areas on the broader site. These matters are retained and buffered and not part of the EPBC approval conditions.		
Swamp Tea-tree (Melaleuca irbyana) Forest of south-east Queensland	CE	Community likely to occur within area	Low open forest dominated by dense thickets of Swamp Teatree, usually growing to about 8-12 m high. In south-east Queensland, Swamp Tea-tree occurs in monotypic stands uniquely linked to Tea Tree Clay soils which drain slowly after heavy rains, becoming waterlogged and forming temporary ponds. This ecological community comprises Queensland regional ecosystems 12.9-10.11 and 12.9-10.11a (more recently mapped as RE 12.3.27) (Land Zone 9-10) and 12.3.3c (more recently remapped as RE12.3.18 (Land Zone 3) which are listed as endangered under the VMA.	Desktop analysis and field surveys confirmed that regional ecosystem 12.9-10.11, 12.9-10.27 and 12.3.18 do not occur on-site.	Unlikely	Unlikely
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and	CE	Community likely to occur within area	Box – Gum Grassy Woodlands and Derived Grasslands are characterised by a species-rich understorey of native tussock grasses, herbs and scattered shrubs, and the dominance, or prior dominance, of White Box, Yellow Box or Blakely's Red Gum trees.	Desktop analysis and field surveys confirmed that regional ecosystems 11.8.2a, 11.8.8, 11.9.9a, 13.3.1, 13.11.8, 13.12.8	Unlikely	Unlikely

Derived Native Grassland	In Queensland the ecological community is a primary component of the following Regional Ecosystems: 11.8.2a, 11.8.8, 11.9.9a, 13.3.1, 13.11.8, 13.12.8 and 13.12.9. It can also be a smaller component of the following regional ecosystems: 11.3.23, 12.8.16 (only at the far western edge of the bioregion), 13.3.4, 13.11.3 and 13.11.4. These regional ecosystems range in conservation status from 'not of concern at present' to 'endangered'.	and 13.12.9, 11.3.23, 12.8.16, 13.3.4, 13.11.3 and 13.11.4 do not occur on-site.

Scientific name	**Common name**	**Listing Status***		**EPBC code**	**Habitat and Distribution**	**Microhabitat keywords**	**Likelihood of Occurrence Analysis**	**Desktop Likelihood of occurrence (on-site)**	**Field Survey Confirmed Likelihood of occurrence (on-site)**
		EPBC Act	**NC Act**						
Birds									
Anthochaera phrygia	Regent Honeyeater	CE	E	82338	Regent Honeyeaters mostly occur in dry Box-Ironbark Eucalypt woodland and dry sclerophyll forest associations in areas of low to moderate relief, wherein they prefer moister, more fertile sites. These areas are generally associated with creek flats and river valleys and foothills. These woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes. They are a generalist forager, which mainly feed on nectar from a wide range of eucalypts and mistletoes.	*Corymbia citriodora* forest	The site is not dominated by box and ironbark eucalypts, although *Eucalyptus siderophloia* (Grey Ironbark) was recorded during field surveys. Mistletoe species were observed within the referral area but predominately associated with *Alphitonia excelsa* (Soap Tree) and were sparse. Bushland west of the site shows a record of the Regent Honeyeater within 5 km south-west of the referral area according to Atlas of Living Australia (ALA).	Low	Low (potential foraging habitat)
Botaurus poiciloptilus	Australasian Bittern	E	-	1001	The Australasian Bittern occurs in terrestrial wetlands and, rarely, estuarine habitats, mainly in the temperate south-east and south-west. It favours wetlands with tall dense vegetation, where it forages in still, shallow water up to 0.3 m deep, often at the edges of pools or	Wetlands, permanent water, freshwater dam	The regional ecosystems associated with the site include Least Concern RE 12.9-10.2, Of Concern composite RE 12.3.11 / 12.3.7 and Of Concern RE12.9-10.7. This site does not contain any terrestrial wetlands or swamps with tall dense vegetation.	Unlikely	Unlikely

Scientific name	Common name	Listing Status*		EPBC code	Habitat and Distribution	Microhabitat keywords	Likelihood of Occurrence Analysis	Desktop Likelihood of occurrence (on-site)	Field Survey Confirmed Likelihood of occurrence (on-site)
		EPBC Act	NC Act						
					waterways, or from platforms or mats of vegetation over deep water. It favours permanent and seasonal freshwater habitats, particularly those dominated by sedges, rushes and / or reeds or cutting grass growing over muddy or peaty substrate. The Australasian Bittern occurs in the far south-east of Queensland; it has been reported North to Baralaba and West to Wyandra, although in most years it is probably confined to a few coastal swamps. It is rarely recorded in Queensland, and possibly survives only in protected areas such as the Cooloola and Fraser regions.		No recent records of the Australasian Bittern within 10 km of the referral area according to ALA and BioMaps.		
Calidris ferruginea	Curlew Sandpiper	CE	E	856	Curlew Sandpipers mainly occur on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. They are also recorded inland, though less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand. They occur in both fresh and		No suitable foraging or breeding habitat in the form of wetlands and mudflats occurs on-site.	Unlikely	Unlikely

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					brackish waters. In Queensland, scattered records occur in the Gulf of Carpentaria, with widespread records along the coast south of Cairns.				
Calyptorhynchus lathami lathami	South-eastern Glossy Black-cockatoo	V	V	67036	This species prefers woodland areas dominated by she-oak *Allocasuarina*, or open sclerophyll forests and woodlands with a stratum of *Allocasuarina* beneath Eucalyptus, Corymbia or Angophora. Glossy black-cockatoos have also been observed in mixed *Allocasaurina*, *Casuarina*, cypress *Callitris* and brigalow *Acacia harpophylla* woodland assemblages. In SEQ west of the Great Dividing Range, they have been observed feeding in remnant belah Casuarina cristata and bulloak *Allocasuarina luehmannii* forests. This species is also known to utilise appropriate remnant woodlands, and individual or small pockets of *Allocasuarina* and *Casuarina* feed trees in urban areas	*Allocasuarina, Casuarina*	Field surveys located scattered isolated black sheoak (*A. littoralis*) in areas of the remnant vegetation adjacent to and within the site. Records of the species approximately 8 km west were recorded in 2021 on BioMaps. Suitable foraging and breeding habitat for this species suggests a moderate likelihood of occurrence on site.	Medium	Medium-Low
Charadrius lechenaultii	Greater Sand Plover	V	V	877	In the non-breeding grounds in Australasia, the Greater Sand Plover is almost entirely coastal, inhabiting littoral and estuarine habitats. They mainly occur		No suitable foraging or breeding habitat occurs on-site.	Unlikely	Unlikely

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		EPBC Act	NC Act						
					on sheltered sandy, shelly or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine lagoons. They seldom occur at shallow freshwater wetlands.				
Climacteris picumunus victoriae	Brown Treecreeper (south-eastern)	V	-	67062	Brown treecreepers (south-eastern) occupy dry open eucalypt forests and woodlands dominated by stringybarks or other rough-barked eucalypts, usually with an open grassy understorey, sometimes with one or more shrub species. They also occur in mallee, forests and woodlands subject to periodic inundation. The subspecies is not usually found in woodlands with a dense shrub layer.		No suitable foraging or breeding habitat occurs on-site.	Unlikely	Unlikely
Cyclopsitta diophthalma coxeni	Coxen's Fig Parrot	E	E	59714	The Coxen's Fig Parrot occurs in rainforest habitats including subtropical rainforest, dry rainforest, littoral and developing littoral rainforest, and vine forest. Food is mainly taken from figs however other species fruit have been recorded in their diet including *Elaeocarpus grandis, Syzygium corynanthum, Litsea reticulata* and *Grevillea robusta*.		Preferred foraging vegetation including figs and *Elaeocarpus grandis*, *Syzygium corynanthum* and *Litsea reticulata* were not recorded within the referral area during field surveys, although isolated *Grevillea robusta* species were found within the broader site. No rainforest habitat is present within the assessment area or adjacent	Unlikely	Low

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		EPBC Act	NC Act						
							vegetation therefore it is considered unlikely this species will occur within the proposed impact area.		
Erythrotriorchis radiatus	Red Goshawk	V	V	942	A wide ranging and highly mobile species generally observed over eucalypt habitats. This species prefers forest and woodland with a mosaic of vegetation types, large prey populations (birds) and permanent water. The vegetation types include eucalypt woodland, open forest, tall open forest, gallery rainforest, swamp sclerophyll forest and rainforest margins. Habitat has to be open enough for fast attack and manoeuvring in flight, but provide cover for ambushing of prey.		Eucalypt woodland and open forest vegetation types are present within the site. However, there is no evidence of permanent residence, and due to the scarcity of this species and lack of local records, its occurrence is low.	Low	Low
Falco hypoleucos	Grey Falcon	V	V	929	The Grey Falcon is a medium-sized, compact, pale falcon with a heavy, thick-set, deep-chested appearance. Usually restricted to shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast. Also occurs near wetlands where surface water attracts prey. Preys primarily on birds, especially parrots and pigeons, using high-speed chases and stoops;		Scattered large trees and marginal open woodland are present within the site, however, the majority of the site is heavily disturbed from vehicle use and adjacent rural landscapes. Field surveys did not observe any large nests within the present tall trees which could indicate the presence of a large raptor bird such as the Grey Falcon.	Moderate	Low

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		EPBC Act	NC Act						
					reptiles and mammals are also taken. Like other falcons it utilises old nests of other birds of prey and ravens, usually high in a living eucalypt near water or a watercourse; peak laying season is in late winter and early spring; two or three eggs are laid. The nests chosen are usually in the tallest trees along watercourses, particularly River Red Gum (*Eucalyptus camaldulensis*) and Coolibah (*E. coolabah*).		Furthermore, a review of ALA indicates no records of the species within the region. For these reasons it is unlikely that this species would occur.		
Geophaps scripta scripta	Squatter Pigeon (southern)	V	V	64440	This species inhabits open grasslands and woodlands typically with a native understorey although may occur in artificial pasture.		This site does not contain suitable habitat, with the majority of the area largely modified with a limited native understorey. In addition, the species is very rarely observed in southern Queensland, and thus this species is not expected to occur onsite.	Low	Unlikely
Hirundapus caudacutus	White-throated Needletail	V	V	682	Although they occur over most types of habitat, they are probably recorded most often above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy, but they are less commonly recorded flying above woodland. They also commonly occur over heathland, but		While some areas of remnant vegetation remain, large areas of the site and adjacent rural and residential areas represent heavily modified open space with scattered larger trees. This environment is the less preferred of the White-throated Needletail and therefore it is	Moderate	Low

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					less often over treeless areas, such as grassland or swamps.		unlikely the species would find the site as a suitable roosting area. The species was not observed onsite during survey works. The lack of recent local records suggests a low likelihood this species would occur onsite.		
Lathamus discolor	Swift Parrot	CE	E	744	The Swift Parrot breeds in Tasmania during spring to early summer. During autumn and winter the species migrates to the mainland where it follows a nomadic existence linked to the availability and timing of flowering of trees in various locations.		Most of the referral area is mapped as non-remnant Category X vegetation under the Queensland *Vegetation Management Act 1999*. There are no records of the species within 5 km of the site on Atlas of Living Australia and the species was not recorded during survey work. Overall, due to the highly disturbed state of the site, the limited area of foraging habitat, and presence of more suitable foraging habitat within the broader landscape, there is considered to be low potential that the Swift Parrot would utilize the vegetation on-site and in the adjoining vegetation. Any occurrence would be limited to	Low	Low (potential foraging habitat)

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		EPBC Act	NC Act						
							opportunistic foraging and the vegetation would be unlikely to be critical foraging habitat.		
Rostratula australis	Australian Painted-snipe	E	V	77037	The Australian Painted Snipe is usually found in shallow inland wetlands, either freshwater or brackish, that are either permanently or temporarily filled. The species has a scattered distribution throughout many parts of Australia, with a single record from Tasmania.		No suitable wetlands occur on-site. It is unlikely that this species will occur.	Unlikely	Unlikely
Stagonopleura guttata	Diamond Firetail	V	V	59398	Diamond firetails occur in eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats, including farmland and grassland with scattered trees. They prefer areas with relatively low tree density, few large logs, and little litter cover but high grass cover. They feed predominantly at ground level, on ripe and partly-ripe grass and herb seeds and green leaves, and on insects.		No sightings of the species have been recorded in site locality and field surveys confirmed that suitable foraging habitat was absent from the site.	Unlikely	Unlikely
Turnix melanogaster	Black-breasted Button Quail	V	V	923	Typical habitat occurs in dry rainforest and vegetation immediately adjacent to rainforest. However the species has also been recorded in a variety of low coastal heathlands around Fraser Island and		The site does not contain dry rainforest or vegetation immediately adjacent to rainforest, and no heathlands are present. Deep leaf litter is also absent over	Unlikely	Unlikely

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		EPBC Act	NC Act						
					nearby mainland. Deep leaf litter in which the species can forage appears to be particularly favoured.		the majority of the site. It is unlikely that this species will occur.		
Fish									
Maccullochella mariensis	Mary River Cod	E	-	83806	Found in southeast Queensland in the Mary River system, their ideal habitat is described as deep, shaded, slow flowing pools with plenty of snags and log-piles.		No river system is present within the assessment area. Several waterways traverse or border the site, however these contain lower water levels, stagnant water and lack of significant habitat features able to support this species.	Unlikely	Unlikely
Insects									
Argynnis hyperbius inconstans	Australian Fritillary	CE	E	88056	Most specimens have been collected from river estuaries or swampy coastal areas at or near sea level. The Australian fritillary butterfly is restricted to open, swampy, coastal areas where the larval food plant, *Viola betonicifolia*, grows as a small, insignificant ground herb in association with *Lomandra longifolia* (Long Leaved Matrush) and grasses, especially the grass *Imperata cylindrica* (Bladey Grass). This habitat is called *Melaleuca* wetlands, although the larval food plant does not		No suitable coastal habitat was observed throughout the assessment area.	Unlikely	Unlikely

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					occur in all sub-types of this plant community.				
Mammals									
Chalinolobus dwyeri	Large-eared Pied Bat	V	V	183	The Large-eared Pied Bat roosts on sandstone cliffs and fertile woodland valley habitat within close proximity of each other. However, in South East Queensland habitat includes rainforest and moist eucalypt forest habitats at high elevations.		No suitable high elevation habitat nor rainforest vegetation to support this species occurs on-site.	Low	Unlikely
Dasyurus maculatus maculatus	Spot-tailed Quoll	E	V	75184	The Spot-tailed Quoll has a preference for mature wet forest habitat. Unlogged forest or forest that has been less disturbed by timber harvesting is also preferable. This predominantly nocturnal species rests during the day in dens. Habitat requirements include suitable den sites such as hollow logs, tree hollows, rock outcrops or caves. Individuals require an abundance of food such as birds and small mammals, and large areas of relatively intact vegetation through which to forage.		The site has been subjected to high levels of disturbance with areas adjacent to the site historically cleared and continuously modified through the years. No suitable denning habitat was observed during field surveys. Due to the lack of suitable habitat, it is unlikely that this species would occur.	Low	Unlikely
Macroderma gigas	Ghost Bat	V	E	174	Ghost Bats have been recorded in both arid regions (Pilbara region) and rainforest areas (north Queensland). *Macroderma*		No suitable foraging or roosting habitat to support this species	Low	Unlikely

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		EPBC Act	NC Act						
					gigas roost in caves, old mine tunnels and in deep cracks in rocks. This species is distributed widely however patchily across the northern half of Australia, being found in a variety of tropical habitats.		occurs on-site, or in the nearby vicinity.		
Petauroides volans	Greater Glider	E	V	254	The Greater Glider is an arboreal nocturnal marsupial that is mostly restricted to eucalypt forests and woodlands, although it occurs in highest abundance in taller, montane, moist eucalypt forests with abundant (large) hollow-bearing trees for shelter and a variety of eucalypt species for feeding. Diet consists of eucalypt leaves, and occasionally flowers. Small home ranges and a poor ability to disperse make this species sensitive to clearing and fragmentation, with low persistence in small forest fragments.		A variety of eucalypt species occur within and adjacent to the site, however ,some areas of Category X vegetation are highly disturbed and represent historical clearing with only scattered mature trees remaining. Field surveys confirmed the presence of hollow bearing trees scattered within adjacent remnant bushland. No individuals were recorded during field surveys. Records of this species have been recorded within 15 km of the site, in Flinders Peak Conservation Park. Due to the high disturbance with vehicle use and other illegal uses, and the modification of surrounding habitat it is considered	Low	Low

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		EPBC Act	NC Act						
							a moderate likelihood this species would occur onsite.		
Petaurus australis australis	Yellow-bellied Glider	V	V	87600	The Yellow-bellied Glider largely occurs in tall mature eucalypt forest generally in areas with high rainfall and nutrient rich soils. Forest type preferences vary with latitude and elevation; mixed coastal forests to dry escarpment forests in the north; moist coastal gullies and creek flats to tall montane forests in the south. Denning occurs within hollows of large trees, with the species preferring to live in family groups of two to six individuals. This species is very mobile and occupy large home ranges of 20 to 85 ha to encompass dispersed and seasonally available food resources.		Eucalypt forest was identified onsite, although the vegetation is not within a high rainfall area and the soils are considered nutrient poor. Large portions of adjacent vegetation have been modified or cleared for agricultural purposes. Hollows were identified during field surveys within scattered mature eucalypt species on site. No individuals were observed during field surveys and no feeding marks typical of the species were recorded. Records of the species have been recorded within 15 km north-east of the site in 2015. Although the site comprises high levels of disturbance, due to presence of suitable habitat and recent local records, there is a low likelihood this species would occur onsite.	Low	Low

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		EPBC Act	NC Act						
Petrogale penicillata	Brush-tailed Rock Wallaby	V	V	225	This species prefers rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes, cliffs, gorges and isolated rock stacks. It also utilises tree limbs. While it appears that most Brush-tailed Rock-wallaby colonies are on north-facing slopes and cliff lines, colonies have been found on south-facing cliffs in Kangaroo Valley, in the Macleay River Gorge, in the Warrumbungles and at Mt Kaputar, although usually in lower densities.		Suitable habitat in the form of rocky habitats, rocky outcrops, steep rocky slopes, cliffs and gorges does not occur on-site. Recent, local records for this species are lacking.	Unlikely	Unlikely
Phascolarctos cinereus	Koala	V	V	85104	The Koala is found in a range of habitats, from coastal islands and tall eucalypt forests to low woodlands inland.		Portions of the site extent and surrounding vegetation are mapped as Category X (non-remnant) but it also contains vegetation mapped as Category B (remnant) under the *Vegetation Management Act 1999* (QLD). Desktop investigations found Koala Habitat Areas are mapped on-site however it does not fall within a Queensland Government mapped Koala Priority Area.	Moderate	Moderate-Low

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							Field surveys of the Eucalypt dominated areas found the northern and eastern patches to contain retained mature canopy trees with a fairly intact understorey. Vegetation in the centre has been cleared, with very few mature canopy trees remaining and a modified ground and understorey layer of maintained grass. This area experiences high levels of disturbance from vehicle and motorbike uses. Vegetation in the south contains scattered mature canopy trees with a dense understorey of *Acacia sp.* and weeds. Connectivity to vegetation is limited with residential areas to the north and cleared modified areas in the south and southwest. Vegetation associated with Flagstone Creek remains a form of connectivity of Koala habitat from vegetation in the east to larger intact bushland in the west.		

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Potorous tridactylus tridactylus	Long-nosed Potoroo	V	V	66645	The Long-nosed Potoroo inhabits coastal heaths and dry and wet sclerophyll forests. Dense understorey with occasional open areas is an essential part of habitat, and may consist of grass-trees, sedges, ferns or heath, or of low shrub of tea-trees or *Melaleucas*. A sandy loam soil is also a common feature.		No suitable habitat in the form of coastal heath or wet sclerophyll forest is present on-site. Additionally, the wooded areas on-site were not reflective of the dense understory with occasional open areas this species requires for habitat.	Unlikely	Unlikely
Pseudomys novaehollandiae	New Holland Mouse	V	V	96	Across the species' range the New Holland Mouse is known to inhabit open heathlands, open woodlands with a heathland understorey and vegetated sand dunes. The New Holland Mouse is a social animal, living predominantly in burrows shared with other individuals. The home range of the New Holland Mouse ranges from 0.44 ha to 1.4 ha. The species peaks in abundance during early to mid stages of vegetation succession typically induced by fire.		No suitable habitat on site.	Unlikely	Unlikely
Pteropus poliocephalus	Grey-headed Flying-fox	V	-	186	Species generally roosts in camps in trees adjacent to larger permanent watercourse. The Grey-headed flying fox requires foraging resources and roosting sites. It is a canopy-feeding frugivore and		Large areas of the site are mapped as Category X (non-remnant) but it also contains vegetation mapped as Category B (remnant) under the	Moderate	Low (potential foraging habitat)

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		EPBC Act	NC Act						
					nectarivore, which utilises vegetation communities including rainforests, open forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands. It also feeds on commercial fruit crops. The primary food source is blossom from *Eucalyptus* and related genera.		*Vegetation Management Act 1999* (Qld). Field surveys confirmed the presence of potential habitat for the GHFF on-site in the form of eucalypt woodland within the north, south and further west. Species included *Eucalyptus tereticornis* (Forest Red Gum), *Corymbia intermedia* (Pink Bloodwood) and *Eucalyptus siderophloia (*Grey Ironbark). In addition, suitable foraging vegetation occurs on-site with scattered *Melaleuca quinquenervia* species throughout the waterways, however the species the species was not seen utilising this vegetation during spotlighting surveys. There are no observed roosts on-site, with the nearest roost located approximately 5 km south-east of the site at Homestead Drive (464), with the latest survey in August 2013. Flowering *Eucalypts* were		

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							present during spotlighting activities although the Grey-headed Flying-fox was not recorded. Foraging habitat for the species was recorded on the site although there is higher quality habitat adjacent to the site. There is a moderate likelihood that the species may opportunistically forage on-site.		
Plants									
Arthraxon hispidus	Hairy-joint Grass	V	V	9338	Hairy-joint grass is found in or on the edges of rainforest and in wet eucalypt forest, often near creeks or swamps, as well as woodland.	rainforest; swamp	The vegetation within this area does not represent the habitat preferred by this species and is heavily disturbed. As habitat to support this species does not occur on-site and there are no records of this species within the locality, it is unlikely that this species would occur on-site. The species was not recorded on site during survey works.	Low	Unlikely
Bosistoa transversa	Three-leaved Bosistoa	V	-	16091	The Three-leaved Bosistoa is conserved within Mt Warning National Park, Numbinbah Nature Reserve, Limpinwood Nature Reserve and Whian Whian State Forest. While population information is		Rainforest/wet forest and the species that the Three-leaved Bosistoa is commonly associated with were not located on site. Unlikely to occur on-site due to lack	Low	Unlikely

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					unavailable, it is thought to be common in its range. It generally grows in wet sclerophyll forest, dry sclerophyll forest and rainforest up to 3oo metres in altitude. It is commonly associated with *Argyrodendron trifoliolatum, Syzygium hodgkinsoniae, Endiandra pubens, Dendrocnide photinophylla, Acmena ingens, Diploglottis australis and Diospyros mabacea.*		of suitable habitat and local records. The species was not recorded on site during survey works.		
Coleus habrophyllus	-	E	E	64589	Plants have been recorded growing on chert or sandstone outcrops, in open woodlands often in shaded situations near vine forest. Seven populations are known including: Oxley Creek, Greenbank; Opposum Creek, Springfield; Woogaroo Creek, Goodna; three populations within White Rock Conservation Park, incorporating Six Mile Creek and near Ormeau (south of Beenleigh).		Suitable habitat to support the growth and success of this species was not observed within the assessment area. The lack of associated species and heavy disturbance of the site suggests it's unlikely this species would be supported within the assessment area. The species was not recorded on site during survey works.	Unlikely	Unlikely
Cryptostylis hunteriana	Leafless Tongue-orchid	V	SL	3205	Leafless tongue-orchid habitats include wet heath, sedgeland, grasstree plains and in woodland with scribbly gum, silvertop ash, red bloodwood and black she-oak.		Suitable habitat to support the growth and success of this species was not observed within the assessment area. The lack of associated species and heavy disturbance of the site suggests it's	Low	Unlikely

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							unlikely this species would be supported within the assessment area. The species was not recorded on site during survey works.		
Cupaniopsis shirleyana	Wedge-leaf Tuckeroo	V	V	3205	The Wedge-leaf Tuckeroo occurs in a variety of dry rainforest vegetation types, including vine thicket communities on hillsides, stream beds and along riverbanks at altitudes up to 550 m above sea level. This species is also likely to occur on the margins of native vegetation in scrubby urbanised areas. Predominately found on dark brown sandy loams and sandy clay loams (pH 5-7.5) and rocky scree slopes. Generally, these soils have formed from volcanic parent materials (mainly granites and granodiorites, basalt and andesitic flows, and pyroclastics).		Preferred habitat in the form of dry rainforest is not present on-site. There are no local records within the ALA sightings data therefore it is unlikely that it would occur on-site. The species was not recorded on site during survey works.	Low	Unlikely
Cupaniopsis tomentella	Boonah Tuckeroo	V	V	3322	Boonah Tuckeroo is known only from an area between Boonah and Ipswich in south-eastern Queensland. It grows in vine thickets predominantly on fertile clay soils. These areas have been extensively cleared for agriculture and close settlement over the last 150 years, and the only seven known occurrences are		Preferred habitat in the form of vine thickets is not present onsite. There are no recent records of the species within the vicinity of the site (last recorded in 1990).	Low	Unlikely

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					confined to small, isolated remnants on scree slopes and roadsides.				
Dichanthium setosum	Bluegrass	V	-	14159	In Queensland, bluegrass has been reported from the Leichhardt, Morton, North Kennedy and Port Curtis regions. *Dichanthium setosum* is associated with heavy basaltic black soils and stony red-brown hardsetting loam with clay. It can be found in moderately disturbed areas such as cleared woodland, grassy roadside remnants, grazed land and highly disturbed pasture. The extent to which this species tolerates disturbance is unknown.		There are no local records of this species within the Queensland Wildlife Online sightings data, with the closest sighting in the Toowoomba and surrounds. This species is unlikely to occur on-site due to lack of suitable conditions.	Unlikely	Unlikely
Fontainea venosa		V	V	24040	Occurs in notophyll vine forest and vine thicket with a mean annual rainfall of 1000-1100 mm on soils derived from and containing abundant andesitic rocks, often on rocky outcrops or along creeks.		No suitable habitat or associated species are present within the referral area.	Unlikely	Unlikely
Macadamia integrifolia	Macadamia Bush	V	V	7326	The Macadamia Nut grows in remnant rainforest. It prefers to grow in mild frost-free areas with reasonably high rainfall. Vegetation communities range from notophyll mixed forest, extremely tall closed forest, simple notophyll mixed very tall closed forest to simple microphyll-notophyll mixed mid-high closed forest		Preferred habitat in the form of dry rainforest is not present on-site. There are no local records within the BioMaps sightings data therefore it is unlikely that it would occur on-site. The species was not recorded on site during survey works.	Unlikely	Unlikely

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					with Araucaria and Argyrodendron emergents.				
Macadamia tetraphylla	Rough-shelled Bush Nut	V	V	6581	This species generally occurs in subtropical rainforest and complex notophyll vineforest, at the margins of the forests and mixed sclerophyll forest. It occurs in restricted habitat, growing on moderate to steep hillslopes on alluvial soils at well drained sites.		Preferred habitat in the form of dry rainforest is not present on-site. There are no local records within the BioMaps sightings data therefore it is unlikely that it would occur on-site. The species was not recorded on site during survey works.	Unlikely	Unlikely
Notelaea ipsviciensis	Cooneana Olive	CE	E	81858	The Cooneana Olive survives as an understorey plant in degraded, eucalypt dominated dry sclerophyll vegetation communities. Soils in the area are of low fertility, depauperate and sandstone-based. This species prefers open woodland communities with open canopies. The known population is adjacent to subdivided, modified and developed land.		Suitable eucalypt dominated dry sclerophyll vegetation communities are present within the site and adjoining vegetation. There are no local records within the BioMaps sightings data therefore there is a low likelihood that it would occur on-site. The species was not recorded on site during survey works.	Low	Low
Notelaea lloydii	Lloyd's Olive	V	V	15002	The species occurs on undulating to hilly terrain either in moist gullies or on gentle to steep dry slopes, but is rarely found on rocky outcrops. Soil types are mostly shallow, well drained and stony to very rocky in texture. Found in the ecotone		Suitable habitat in the form of moist gullies and gentle to steep dry slopes are present in adjoining remnant vegetation adjoining the site. A recent record on BioMaps in 2020 shows the species observed	Low	Low

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					between eucalypt open forests and vine thickets at 80-480 m above sea level (asl).		approximately 13 km west of the site.		
Picris evae	Hawkweed	V	V	10839	Hawkweed occurs in Eucalyptus open woodland with a grassy understorey composed of *Dichanthium spp*. Upper stratum species include *Eucalyptus melliodora*, *E. crebra*, *E. populnea*, *E. albens*, *Angophora subvelutina*, *Allocasuarina torulosa*, and *Casuarina cunninghamiana*.		Suitable Eucalypt woodland is present within the site, however the associated species did not occur onsite. The species was not recorded on site during survey works.	Low	Unlikely
Planchonella eerwah	Shiny-leaved Condoo	E	E		The species prefers subtropical rainforest, dry rainforest and *Araucaria cunninghamii* vine scrub.		Suitable habitat to support the growth and success of this species was not observed within the assessment area. The lack of associated species and heavy disturbance of the site suggests it's unlikely this species would be supported within the assessment area. The species was not recorded on site during survey works.	Low	Unlikely
Rhaponticum australe	Austral Cornflower	V	V	22647	Austral Cornflower is known from Mt Moffat to Gatton in Queensland, a distance of 600 km. Austral Cornflower grows in eucalypt open forest with grassy understory on roadsides and on road reserves with *Chloris gayana*, *Cirsium*		The species has not been observed on site.	Unlikely	Unlikely

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					vulgare, *Eucalyptus tereticornis* and *Angophora floribunda* on black clay soil.				
Rhodamnia rubescens	Scrub Turpentine	CE	CE	15763	Found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest usually on volcanic and sedimentary soils.		Preferred habitat in the form of rainforest is not present on-site. In addition, there are no records of this species within the locality, so it is unlikely that this species would occur on-site. The species was not recorded on site during survey works.	Unlikely	Unlikely
Rhodomyrtus psidioides	Native Guava	CE	CE	19162	Pioneer species found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest often near creeks and drainage lines.		Preferred habitat in the form of rainforest and wet sclerophyll forest is not present on-site. Several waterways and drainage lines occur around the site. There are no records on ALA of this species within 5 km of this site however further west, a record of the species occurs within the intact bushland associated with Flagstone Creek. The species was not recorded on site during survey works.	Low	Low
Samadera bidwillii	Quassia	V	V	29708	Quassia commonly occurs in lowland rainforest or on rainforest margins, but it can also be found in other forest types, such as open forest and woodland.		This species favours lowland rainforest or rainforest margins which are absent from the site and the surrounding environment.	Low	Unlikely

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					Quassia is commonly found in areas adjacent to both temporary and permanent watercourses in locations up to 510 m altitude. The species occurs on lithosols, skeletal soils, loam soils, sands, silts and sands with clay subsoils.		Furthermore, no local records exist, therefore indicating it is unlikely the species would occur on-site. The species was not recorded on site during survey works.		
Thesium australe	Austral Toadflax	V	V		Austral Toadflax is semi-parasitic on the roots of a range of grass species, notably *Themeda triandra* (Kangaroo Grass). It occurs in shrubland, grassland or woodland, often on damp sites.		The open paddock environment towards the centre of the site is heavily modified and dominated by invasive grass and forb species which have inhibited the growth of native flora. On-going disturbance has limited the potential for threatened species to reside within the area. Although the associated species *Themeda triandra* (Kangaroo Grass) was recorded on-site, there are no local records ALA sightings data therefore it is unlikely that it would occur on-site. The species was not recorded on site during survey works.	Low	Low
Reptiles									
Coeranoscincus reticulatus	Three-toed Snake-tooth Skink	V	LC	59628	Three-toed Snake-tooth Skins have been found in loose, well mulched, friable soils, in and under rotting logs, in forest litter,		Preferred habitat for this species is considered absent from the referral area. In addition, there are no	Low	Unlikely

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					under fallen hoop pine bark and under decomposing cane mulch. Projected foliage cover was estimated at 70-80% at two research sites.		records of this species within the locality, so it is unlikely that this species would occur on-site. The species was not recorded on site during survey works.		
Delma torquata	Collared Delma	V	V	1656	In general, the species occurs on rocky hillsides on basalt and lateritic soils supporting open eucalypt and Acacia woodland with a sparse understorey of shrubs and tussocks or semi-evergreen vine thicket.		Preferred habitat for this species is considered absent from the referral area. In addition, there are no records of this species within the locality, so it is unlikely that this species would occur on-site. The species was not recorded on site during survey works.	Low	Unlikely
Furina dunmalli	Dunmall's Snake	V	V	59254	Dunmall's Snake has been found in a broad range of habitats, including forests and woodlands on black alluvial cracking clay and clay loams dominated by Brigalow other Wattles, native Cypress or Bull-oak, and various Blue Spotted Gum, Ironbark, White Cypress Pine and Bull oak open forest and woodland associations on sandstone derived soils. Dunmall's Snake occurs primarily in the Brigalow Belt region in the south-eastern interior of Queensland. Records indicate sites at elevations between 200–500 m above sea		Preferred habitat for this species is considered absent from the referral area. In addition, there are no records of this species within the locality, so it is unlikely that this species would occur on-site. The species was not recorded on site during survey works.	Low	Unlikely

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					level. 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, Exhibition Range National Park, roadside reserves between Inglewood and Texas, Rosedale, Yeppoon and Lake Broadwater Conservation Park.				
Hemiaspis damelii	Grey Snake	E	E	1179	Distributed throughout the eastern interior, from central inland New South Wales, north to coastal areas near Rockhampton in Queensland (Cogger 2000; Hobson 2003; Wilson and Swan 2010; Hobson 2012). 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 for the grey snake in the Brigalow Belt is south of the Great Dividing Range between Dalby and Glenmorgan (Hobson 2003; 2012). Hemiaspis damelii favours woodlands (typically brigalow Acacia harpophylla and belah Casuarina cristata), usually on heavier, cracking clay soils, particularly in		Preferred habitat for this species is considered absent from the referral area. In addition, there are no records of this species within the locality, so it is unlikely that this species would occur on-site. The species was not recorded on site during survey works.	Low	Unlikely

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					association with water bodies or in areas with small gullies and ditches (gilgais) (Wilson and Swan 2010; Hobson 2012).				

**Status abbreviations are as follows: CE = Critically Endangered, E = Endangered, V = Vulnerable, NT = Near Threatened, C = Least Concern, SL = Special Least Concern, - = Not Listed.*

Listed migratory species (not listed above)

Scientific name	**Common name**	**EPBC code**	**Habitat and Distribution**	**Microhabitat keywords**	**Likelihood of Occurrence Analysis**	**Desktop Likelihood of Occurrence (on-site)**	**Field Survey Confirmed Likelihood of Occurrence (on-site)**
Migratory marine birds							
Apus pacificus	Fork-tailed Swift	678	This species is almost exclusively aerial and mostly occur over inland plains but sometimes above foothills or in coastal areas.		No suitable habitat to support this species occurs on-site.	Low	Unlikely
Migratory terrestrial species							
Cuculus optatus	Oriental Cuckoo	86651	Non-breeding habitat only: monsoonal rainforest, vine thickets, wet sclerophyll forest or open Casuarina, Acacia or Eucalyptus woodlands. Frequently at edges or ecotones between habitat types		No suitable habitat to support this species occurs on-site.	Low	Unlikely
Monarcha melanopsis	Black-faced Monarch	609	The Black-faced Monarch mainly occurs in rainforest ecosystems, including semi-deciduous vine thickets, complex notophyll vine forests, tropical (mesophyll) rainforest, subtropical (notophyll) rainforest, mesophyll (broadleaf) thicket/shrubland, warm temperate rainforest, dry (monsoon) rainforest and occasionally cool temperate rainforest.		No suitable habitat to support this species occurs on-site.	Low	Unlikely
Motacilla flava	Yellow Wagtail	644	This species occupies a range of damp or wet habitats with low vegetation, from damp meadows, marshes, waterside pastures, sewage farms and bogs to damp steppe and grassy tundra.		No suitable habitat to support this species occurs on-site.	Low	Unlikely

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Myiagra cyanoleuca	Satin Flycatcher	612	Satin Flycatchers inhabit heavily vegetated gullies in eucalypt dominated forests and taller woodlands, and on migration occur in coastal forests, woodlands, mangroves and drier woodlands and open forests.		No suitable habitat to support this species occurs on-site. Records of the species do not occur within 5 km of the site. The species was not recorded on site during survey works.	Low	Unlikely
Rhipidura rufifrons	Rufous Fantail	592	The Rufous fantail mainly inhabits wet sclerophyll forests, often in gullies dominated by Eucalypts such as *Eucalyptus microcorys*, *Eucalyptus pilularis*, *Eucalyptus resinifera* and a number of other Eucalyptus species.		Records of the species do not occur within 5 km of the site. The species was not recorded on site during survey works.	Low	Low
Symposiachrus trivirgatus	Spectacled Monarch	610	The Spectacled Monarchs natural habitats are subtropical or tropical moist lowland forests, subtropical or tropical mangrove forests, and subtropical or tropical moist montane forests. Its preference is for thick understorey areas.		No suitable habitat to support this species occurs on-site.	Low	Unlikely
Migratory wetland species							
Actitis hypoleucos	Common Sandpiper	59309	The Common Sandpiper utilises a wide range of coastal wetlands and some inland wetlands, including estuaries and deltas of streams, banks farther upstream; around lakes, pools, billabongs, reservoirs, dams and clay pans, and occasionally piers and jetties. They are mostly found in shallow water, around muddy margins or rocky shores and sometimes in muddy areas littered with rocks or		No suitable foraging or breeding habitat occurs on-site.	Unlikely	Unlikely

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			snags. The species commonly utilises mangroves for foraging and roosting but is rarely seen on mudflats.				
Calidris acuminata	Sharp-tailed Sandpiper	874	In Australia, the Sharp-tailed Sandpiper prefers muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh, and beach cast algae / seaweed 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. They also occur in salt works and sewage farms. They use flooded paddocks, sedgelands and other ephemeral wetlands, but leave when they dry. They use intertidal mudflats in sheltered bays, inlets, estuaries or seashores, and also swamps and creeks lined with mangroves.		No suitable foraging or breeding habitat occurs on-site.	Unlikely	Unlikely
Calidris ferruginea	Curlew Sandpiper	856	Curlew Sandpipers mainly occur on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. They are also recorded inland, though less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand. They occur in both fresh and brackish waters. In Queensland, scattered records		No suitable foraging or breeding habitat occurs on-site.	Unlikely	Unlikely

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			occur in the Gulf of Carpentaria, with widespread records along the coast south of Cairns.				
Calidris melanotos	Pectoral Sandpiper	858	The Pectoral Sandpiper prefers shallow fresh to saline wetlands. The species is found at coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands. Occasionally found further inland.		No suitable foraging or breeding habitat occurs on-site.	Unlikely	Unlikely
Charadrius lechenaultii	Greater Sand Plover	877	In the non-breeding grounds in Australasia, the Greater Sand Plover is almost entirely coastal, inhabiting littoral and estuarine habitats. They mainly occur on sheltered sandy, shelly or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine lagoons. They seldom occur at shallow freshwater wetlands.		No suitable foraging or breeding habitat occurs on-site.	Unlikely	Unlikely
Gallinago hardwickii	Latham's Snipe	863	Latham's Snipe occurs in permanent and ephemeral wetlands. They usually inhabit open, freshwater wetlands with low, dense vegetation.		No suitable foraging or breeding habitat occurs on-site.	Unlikely	Unlikely
Tringa nebularia	Common Greenshank	832	The Common Greenshank is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. The species is known to forage at the edges of wetlands in soft mud or mudflats.		No suitable foraging or breeding habitat occurs on-site.	Unlikely	Unlikely