

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

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Date: 11 December 2019



Fauna Management Plan

Precinct 2
Teviot Road, Greenbank

AMENDED IN RED

By: Brandon Bouda
Date: 21 November 2019



Prepared for Mirvac Queensland Pty Ltd
5 April 2019

7598 E



Document Control

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Reference Documents

The Code	<i>Code of Practice for Welfare of Wild Animals Affected by Land Clearing and Other Habitat Impacts and Wildlife Spotter /Catchers (Draft)</i> , prepared by Wildlife Warriors and Voiceless.
VMP	<i>Vegetation Management Plan (8047 E 01-78 BAL Stage 2 VMP D)</i> , prepared by SHG (dated Nov 2018).
NESS	Natural Environment Site Strategy, dated 18 April 2017 (Approved 2 June 2017 as amended in red, 27 April 2017)
BMP	Bushfire Management Plan, dated April 2019
EDQ Guideline 17:	Remnant Vegetation and Koala Habitat Obligations in Greater Flagstone and Yarrabilba PDAs, dated July 2012

Acronyms

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 Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
EVNT	Endangered, Vulnerable and Near Threatened (as listed in the NCWR)
FMP	Fauna Management Plan
FTMP	Fauna Translocation Management Plan
km	kilometres
LCC	Logan City Council
LGA	Local Government Area
m	metres
m ²	square metres
Mirvac	Mirvac Queensland Pty Ltd
MNES	Matters of National Environmental Significance
NCA	<i>Nature Conservation Act 1992</i> (Qld)
NCWR	<i>Nature Conservation (Wildlife) Regulation 2006</i> (Qld)
NESS	Natural Environment Overarching Site Strategy
PDA	Priority Development Area
PMST	Protected Matters Search Tool
PTRP	Pre-Clearing Trapping and Release Plan
PTRP	Pre-clearing Trapping and Release Plan
SHG	Saunders Havill Group
SPP	<i>State Planning Policy 2017</i>
TEC	Threatened Ecological Community
VMA	<i>Vegetation Management Act 1999</i> (Qld)
VMP	Vegetation Management Plan
WHIMP	Wildlife and Habitat Impact Mitigation Plan
WPMP	Wildlife Protection and Management Plan

1. Introduction

Saunders Havill Group (SHG) was engaged by Mirvac Queensland Pty Ltd (Mircvac) to prepare a Fauna Management Plan (FMP) for Precinct 2 of the development site at Teviot Road, Greenbank, within the Logan City Council (LCC) Local Government Area (LGA). The site is located within the Greater Flagstone Priority Development Area (PDA) where Economic Development Queensland (EDQ) is the administering authority. This FMP has been prepared to manage impacts and protect native animals during clearing and construction.

The development has the benefit of a Preliminary Approval for a Material Change of Use, generally in accordance with the Greenbank Master Plan, issued by EDQ on 9 August 2017 (DEV2016/748). Precinct 2 is located within Lots 1 and 2 on SP297192, and is shown on the Greenbank Master Plan as containing residential (standard lots and interface lots – south), and combined regional recreation and regional sports park areas (refer **Plan 1**). Importantly, as part of the Preliminary Approval, the Natural Environment Site Strategy (NESS) was approved by EDQ on 2 June 2017, which details fauna management requirements for the development. The NESS dictates subsequent environmental plans and strategies to be prepared as part of operational works applications. In accordance with the NESS, FMPs are to be developed for each stage of the development involving vegetation clearing works.

This FMP has been prepared in accordance with the approved NESS. It provides details of fauna management requirements to be carried out during clearing works associated with the development of Precinct 2.

The development is a master planned residential development located on allotments at the corner of Teviot Road and Greenbank Road within the western suburb of Greenbank (refer **Figure 1**). Precinct 2 is located within the south-western extent of the wider development site and consists of cleared area and intact vegetation (refer **Figure 2**). It is situated approximately 30 km south of Brisbane, 10 km west of Logan Village, 1.5 km south-east of Greenbank Military Training Camp and to the east of the Brisbane-Sydney Railway Line. Wearing Park immediately adjoins the site to the north and east, and Greenbank Shopping Centre and Community Centre are located opposite the site, on the western side of Teviot Road. An infrastructure easement traverses the site parallel to the northern boundary. The wider development site remains one of the last large rural properties in the immediate landscape, comprised mostly of rural residential development.

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 3** 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).

This FMP has been prepared to control and mitigate the impacts of the vegetation clearing to native fauna, specifically Koala (*Phascolarctos cinereus*). This FMP should be read in conjunction with the Precinct 2 Vegetation Management Plan (VMP), prepared by SHG (dated April 2019), which provides details of vegetation to be retained and removed.

1.1. Property Summary

Key site details are provided in **Table 1**.

Table 1: Property Summary

Address	150-168 Teviot Road, Greenbank, Queensland 4124
RPD	1/SP297192 2/SP297192
Vegetation Management Act 1999 (VMA)	Category X Category B Of Concern composite RE12.9-10.2 / 12.9-10.7
Koala Habitat Values	Medium Value Bushland Medium Value Rehabilitation Low Value Rehabilitation
LGA	Logan City Council
Administering Authority	EDQ
PDA / Planning Scheme	Greater Flagstone Priority Development Area Development Scheme
Area Classification / Zone	Urban Living
Existing Land Use	Rural
Proposed Land Use	Residential

1. Land Use Plan

This plan was prepared as a desktop assessment tool

This information was prepared as a design assessment tool. The information on this plan is not suitable for any other purpose. Property dimensions, area, numbers of lots and contours and other physical characteristics are shown for information only and may not have been verified by field survey. These may require verification if the development application is approved and development proceeds, and may change when a future development is in order to comply with the provisions of the Planning and Development Act 2005. The information on the plan for detailed design for any financial dealings involving the land Saunders Hill Group therefore declares any liability for the information on the plan to be limited to the use of the information for who or by whom the plan was prepared or for a purpose other than 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 Hill Group. It is acknowledged that the information is not to be accepted as a design assessment tool.

Layer Sources
Qld State Cadastre and Mapping layers © State of Queensland
Department of Natural Resources and Mines, 2018. Updated data available at
<http://qldspatialinformation.qld.gov.au/catalogue/>
Accessed 16 October 2018.

*This note is an integral part of this plan/data. Reproduction of this plan or any part of it without this note being included in full will render the information shown on such reproduction invalid and not suitable for use.

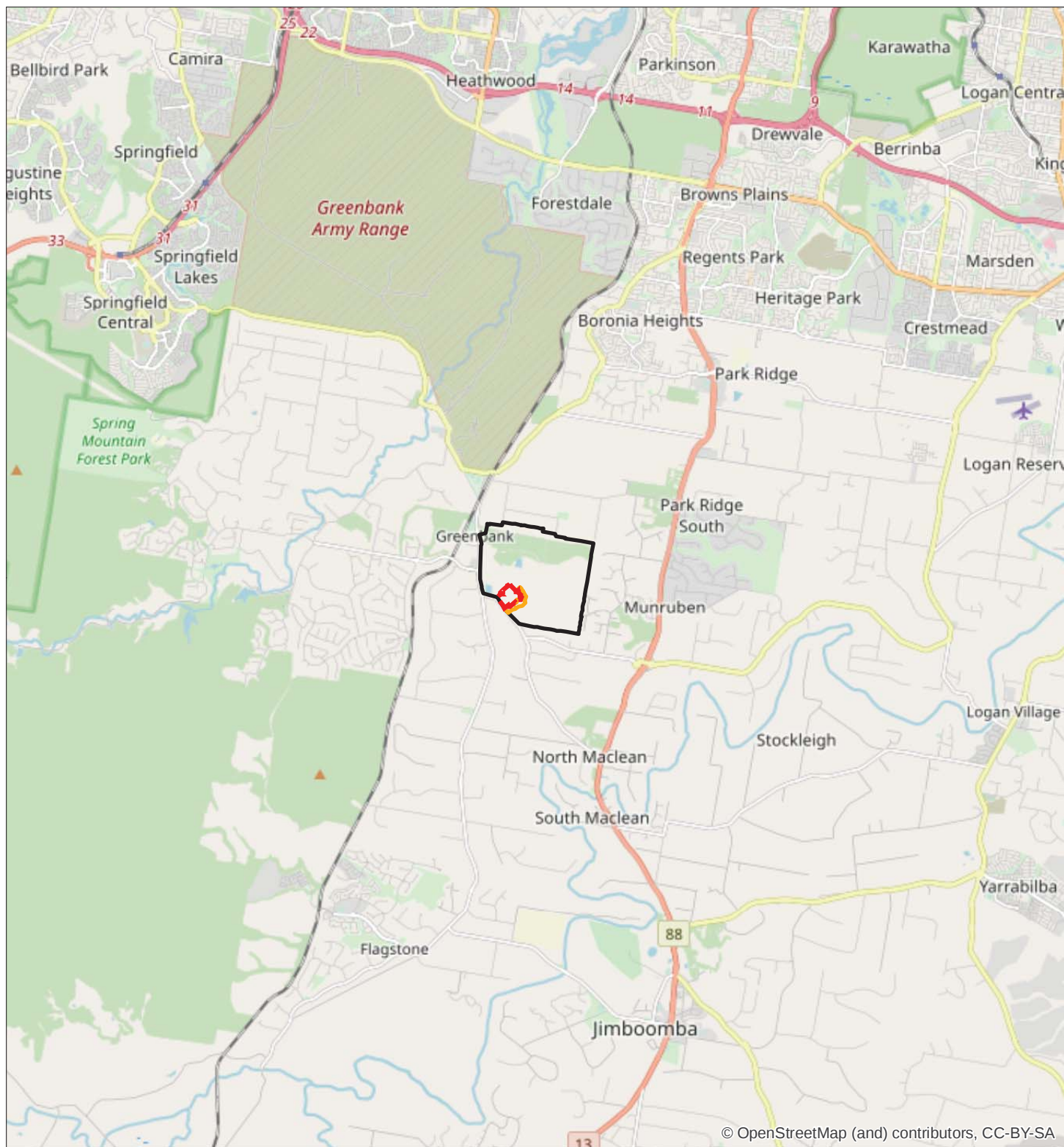
Legend

- PRECINCT 2 STAGE BOUNDARY**
BUSHFIRE MANAGEMENT AREA
SITE BOUNDARY
CADASTRE BOUNDARIES
AREA 1 BOUNDARY
GREATER FLAGSTONE UDA BOUNDARY
EXISTING EASEMENTS
RAIL CORRIDOR
POTENTIAL TRAIN STATION ¹
- Land Uses**
- RESIDENTIAL - STANDARD LOTS
 - RESIDENTIAL - INTERFACE LOTS - NORTH
 - RESIDENTIAL - INTERFACE LOTS - SOUTH
 - NEIGHBOURHOOD CENTRE
 - DISTRICT CENTRE (EXTERNAL) ¹
 - COMBINED REGIONAL RECREATION AND REGIONAL SPORTS PARK
 - INDICATIVE LOCATIONS OF MAJOR LINEAR PARKS
 - CONSERVATION PARKLAND
 - FUTURE ECO LOT PRECINCT (SUBJECT TO FURTHER ASSESSMENT)
 - INDICATIVE LOCATIONS OF NEIGHBOURHOOD PARKS
 - INDICATIVE LOCATION OF STATE PRIMARY SCHOOL
 - COMMUNITY FACILITY



Issue	Date	Description	Drawn	Checked
A	3/04/2019	Preliminary	MP	AD





Legend

-  Site DCDB
-  Precinct 2 stage boundary
-  Bushfire management area

Figure 1

Site Context

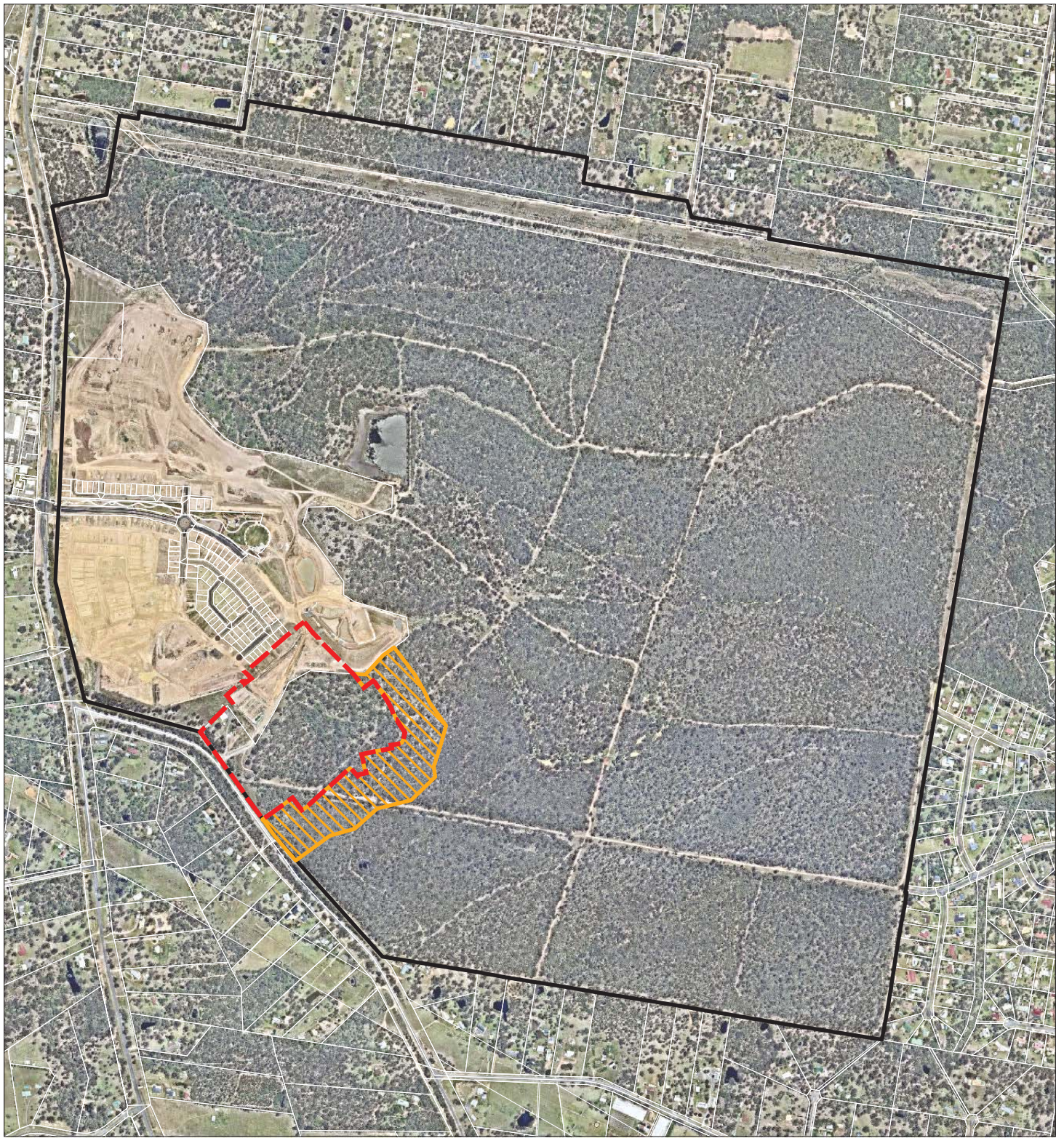
File ref. 7598 E Figure 1 Site Context A
Date 3/04/2019
Project Precinct 2 - Greenbank Road, Greenbank

0 0.5 1 2 km

Scale (A4): 1:125,000 [GDA 1994 MGA Z56]



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Legend

-  Site DCDB
-  Precinct 2 stage boundary
-  Bushfire management area
-  Qld DCDB

Figure 2

Site Aerial

File ref. 7598 E Figure 2 Site Aerial A
Date 3/04/2019
Project Precinct 2 - Greenbank Road, Greenbank

0250 100150200 m

Scale (A4): 1:14,792 [GDA 1994 MGA Z56]



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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 (TECs) and threatened species which have the potential to temporarily or permanently be located within a 5 km radius of a central point of the development site. A summary of the fauna findings provided by the PMST are presented in **Table 2**. The complete results of this search are included in **Appendix A**.

Table 2: EPBC Act PMST results

Wetlands of International Importance (RAMSAR)		
Moreton Bay – 20-30 km upstream		
Threatened Ecological Communities		
Coastal Swamp Oak (<i>Casuarina glauca</i>) Forest of New South Wales and South East Queensland ecological community – Endangered (Community may occur within area)		
Lowland Rainforest of Subtropical Australia – Critically Endangered (Community may occur within area)		
Swamp Tea-tree (<i>Melaleuca irbyana</i>) Forest of South-east Queensland – Critically Endangered (Community likely to occur within area)		
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland – Critically Endangered (Community may occur within area)		
Threatened Species		
Scientific Name	Common Name	Status
Birds		
<i>Anthochaera phrygia</i>	Regent Honeyeater	Critically Endangered
<i>Botaurus poiciloptilus</i>	Australasian Bittern	Endangered
<i>Calidris ferruginea</i>	Curlew Sandpiper	Critically Endangered
<i>Dasyornis brachypterus</i>	Eastern Bristlebird	Endangered
<i>Erythroriorchis radiatus</i>	Red Goshawk	Vulnerable
<i>Geophaps scripta scripta</i>	Squatter Pigeon (southern)	Vulnerable
<i>Grantiella picta</i>	Painted Honeyeater	Vulnerable

Threatened Species		
Scientific Name	Common Name	Status
<i>Lathamus discolor</i>	Swift Parrot	Critically Endangered
<i>Numenius madagascariensis</i>	Eastern Curlew	Critically Endangered
<i>Poephila cincta cincta</i>	Black-throated Finch (southern)	Endangered
<i>Rostratula australis</i>	Australian Painted Snipe	Endangered
<i>Turnix melanogaster</i>	Black-breasted Button-quail	Vulnerable
Fish		
<i>Maccullochella mariensis</i>	Mary River Cod	Endangered
Insects		
<i>Argynnis hyperbius inconstans</i>	Australian Fritillary	Critically Endangered
Mammals		
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat, Large Pied Bat	Vulnerable
<i>Dasyurus maculatus maculatus</i> (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)	Endangered
<i>Petauroides volans</i>	Greater Glider	Vulnerable
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	Vulnerable
<i>Phascolarctos cinereus</i> (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	Vulnerable
<i>Potorous tridactylus tridactylus</i>	Long-nosed Potoroo (SE mainland)	Vulnerable
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Vulnerable
Reptiles		
<i>Delma torquata</i>	Collared Delma	Vulnerable
<i>Furina dunmalli</i>	Dunmall's Snake	Vulnerable
<i>Saiphos reticulatus</i>	Three-toed Snake-tooth Skink	Vulnerable

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 (Wildlife) Regulation 1994* (NCWR) 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 from a central point. Fauna species listed under the NCWR 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
Amphibians		
<i>Adelotus brevis</i>	Tusked Frog	Vulnerable
Mammals		
<i>Dasyurus maculatus maculatus</i>	Spotted-tailed Quoll (southern subspecies)	Vulnerable
<i>Phascolarctos cinereus</i> (Southeast Queensland bioregion)	Koala (Southeast Queensland bioregion)	Vulnerable
<i>Petauroides volans volans</i>	Southern Greater Glider	Vulnerable

3. Methodology

This FMP forms the stage specific strategy for fauna management in relation to Precinct 2 and access roads. It has been developed in response to Condition 4 of the PDA Preliminary Approval (DEV2016/748) 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.

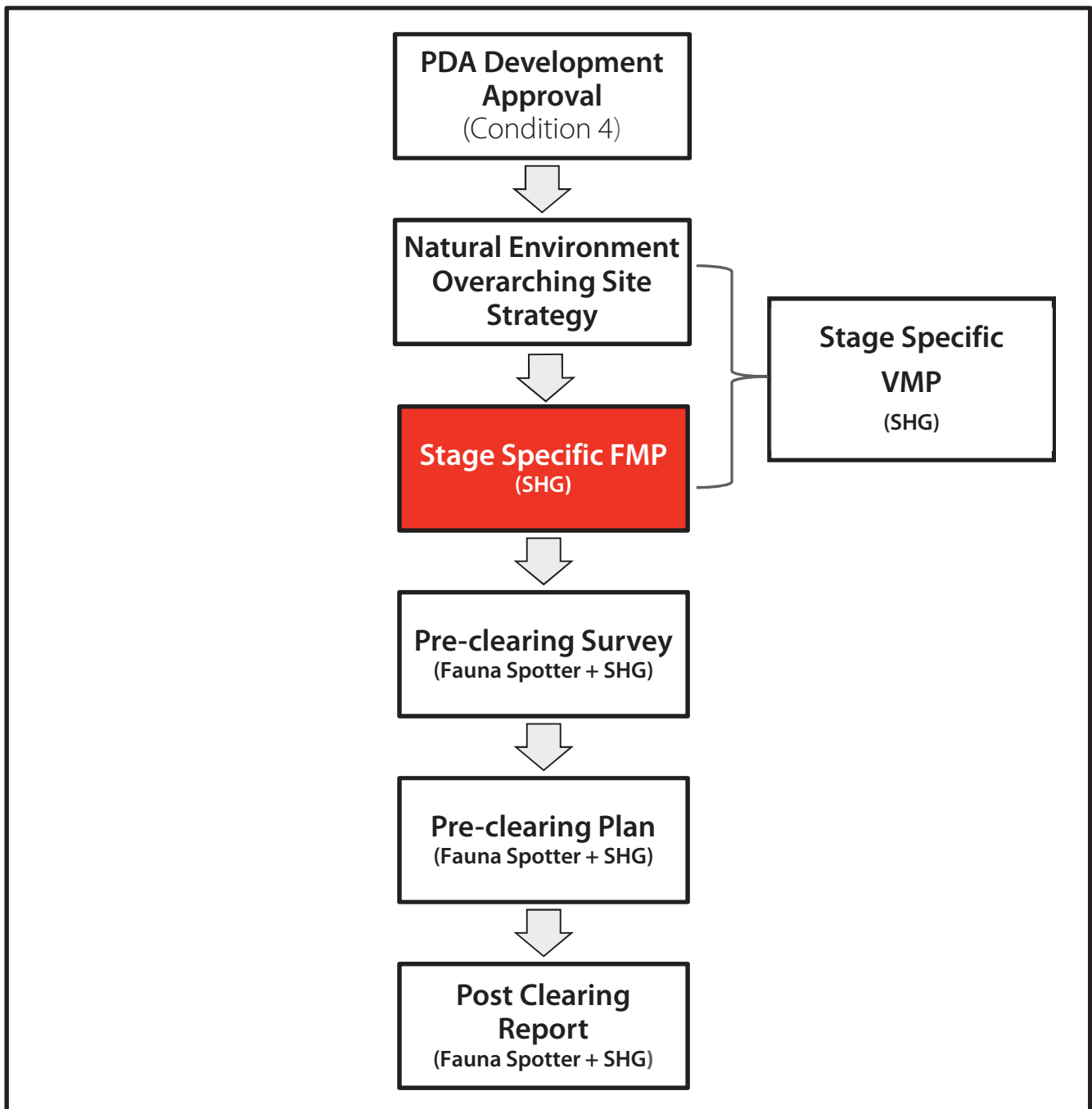


Figure 3: FMP Context and Framework

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, as prepared by the Wildlife Warriors and Voiceless. Under the Code, the procedural guide detailed in **Sections 3.1.1 – 3.1.3** will be 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 NCA.

This FMP should be read in conjunction with the Precinct 2 specific VMP (separate).

Fauna management and mitigation strategies are discussed in further detail in **Section 4**.

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 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. 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~~ ^{Suitable Qualified Person} to prepare a Pre-Clearing Trapping and Release Plan

Informed by the pre-clearing surveys, a PTRP containing 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;

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By: ¹⁵ Brandon Bouda

Date: 21 November 2019



- 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 the Fauna Spotter Catcher to make any necessary adjustments to the approved VMP and the WPMP to cater for any specific issues encountered during the clearing works. Should an animal be 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 and Environmental Coordinator no more than two (2) weeks after clearing activities have ceased.

3.2. Roles and Responsibilities

The following subsection details the key roles and responsibilities associated with Precinct 2 works.

3.2.1 Proponent

Mirvac is the Proponent for the works.

3.2.2 Environmental Coordinator

SHG is the Environmental Coordinator for the project and is responsible for the development of this 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

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 (now DES) 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, and draws on the Technical Ecological Assessment Report (Implementation Guidelines 14 and 17 Response), prepared by SHG, dated 31 March 2016 and submitted as part of the PA application. These findings are considered to represent fauna results for the wider development area and demonstrate that the majority of fauna habitat features and values are located outside of Precinct 2, largely within the eastern extent of the site. 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 site does not contain ecologically valuable features as identified under the Greater Flagstone PDA Development Scheme.

Clearing within the site is considered fairly minor by comparison to the scale of the project and volume of lots and new infrastructure created. This is primarily because the site is located within an area that has partly undergone historically clearing, surrounded by roads and is exposed to significant edge effects (*i.e.*, surrounding construction activities, weed invasion, exposed habitat). No fauna habitat features of high ecological significance were observed within Precinct 2 area.

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.

Images reflecting management strategies that may be adopted in this FMP are provided in **Plate 1**.



FAUNA SPOTTERS RETRIEVING FAUNA



FAUNA EXCLUSION FENCING



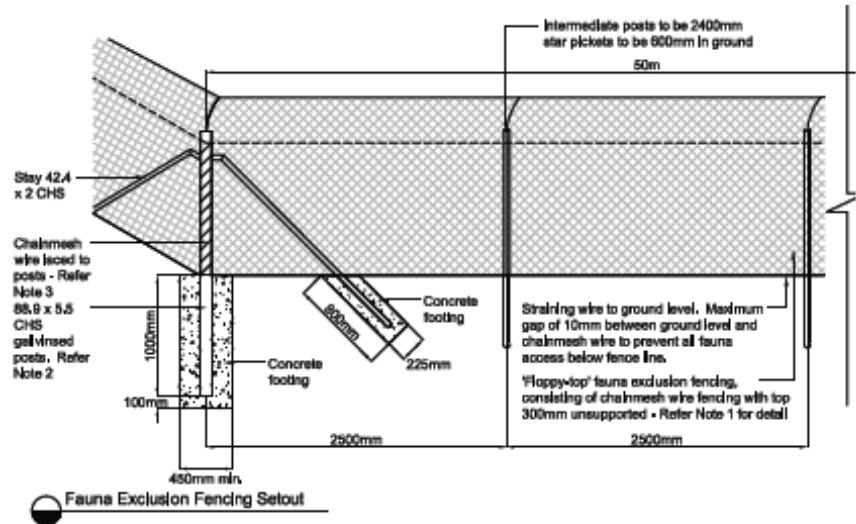
FAUNA SIGNAGE



FAUNA SPOTTER DURING TREE CLEARING



KOALA SIGNAGE



CONSTRUCTION FENCING DETAIL



TREE PROTECTION & EROSION FENCE



SIGNIFICANT TREE PROTECTION FENCING

Plate 1: FMP management strategies

4.2. Observed Fauna

Overall, 70 fauna species were recorded across the site, including three amphibians, 49 birds, nine mammals and 9 reptiles (refer **Table 4**). These were primarily common local species, with the exception of the listed species mentioned above (Koala and Grey-headed Flying-fox).

Contextually, the project site is surrounded by rural and rural residential development and adjoins Greenbank Road to the south. While the wider site is fragmented by surrounding development, a large portion of vegetation remains (both remnant and regrowth vegetation) and the wider site adjoins Wearing Park, a Council reserve, to the east. Norris Creek enters the wider site from the east, where associated tributaries present on-site have been defined as drainage features under the *Water Act 2000*.

Rocky outcrops were largely non-existent on-site, and exposed rock areas were thoroughly searched and found to have no noteworthy habitat value due to the absence of suitable overhangs, crevices or hollows.

The site's ability to support listed threatened fauna species, which are generally highly sensitive, specialised and require particular habitat features, is highly unlikely for the majority of the listed EPBC Act or NCA species. Overall, optimal habitat features were largely absent from the site due to the lack of undisturbed environments, rocky outcrops suitable for dens or diverse vegetation communities.

Feral species, such as *Canis lupus* (Dog/Dingo), *Bos taurus* (European Cattle) and *Vulpes vulpes* (Red Fox) were also recorded on-site. Dogs, Dingos and Foxes are considered threats to the Koala and other native species. Further, the noxious amphibian *Rhinella marina* (Cane Toad) was very common on-site and is considered a significant threat to Spot-tailed Quoll survival as they prey on the poisonous species.

Table 4: Observed Fauna Species on Site

Scientific Name	Common Name
Amphibians	
<i>Litoria caerulea</i>	Common Green Treefrog
<i>Litoria fallax</i>	Eastern Sedgefrog
<i>Rhinella marina</i>	Cane Toad
Birds	
<i>Alcedo azurea</i>	Azure Kingfisher
<i>Alectura lathami</i>	Australian Brush-turkey
<i>Anas superciliosa</i>	Pacific Black Duck
<i>Apus pacificus</i>	Fork-tailed Swift
<i>Aquila audax</i>	Wedge-tailed Eagle
<i>Ardea ibis</i>	Cattle Egret
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo
<i>Ardea intermedia</i>	Intermediate Egret

Scientific Name	Common Name
<i>Ardea pacifica</i>	White-necked Heron
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo
<i>Centropus phasianinus</i>	Pheasant Coucal
<i>Chenonetta jubata</i>	Australian Wood Duck
<i>Climacteris picumnus</i>	Brown Treecreeper
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike
<i>Corvus orru</i>	Torresian Crow
<i>Coturnix ypsilophora</i>	Brown Quail
<i>Cracticus nigrogularis</i>	Pied Butcherbird
<i>Dacelo novaeguineae</i>	Laughing Kookaburra
<i>Dicrurus bracteatus</i>	Spangled Drongo
<i>Egretta novaehollandiae</i>	White-faced Heron
<i>Eolophus roseicapilla</i>	Galah
<i>Ephippiorhynchus asiaticus</i>	Black-necked Stalk
<i>Gallinula tenebrosa</i>	Dusky Moorhen
<i>Geopelia cuneata</i>	Diamond Dove
<i>Grallina cyanoleuca</i>	Magpie Lark
<i>Gymnorhina tibicen</i>	Australian Magpie
<i>Haliaeetus leucogaster</i>	White-bellied Sea-eagle
<i>Malurus melanocephalus</i>	Red-backed Fairy-wren
<i>Manorina melanocephala</i>	Noisy Minor
<i>Meliphaga lewinii</i>	Lewin's Honeyeater
<i>Merops ornatus</i>	Rainbow Bee-eater
<i>Milvus migrans</i>	Black Kite
<i>Ocyphaps lophotes</i>	Crested Pigeon
<i>Pardalotus striatus</i>	Striated Pardalote
<i>Pavo cristatus</i>	Indian Peafowl
<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant
<i>Phaps chalcoptera</i>	Common Bronzewing
<i>Philemon corniculatus</i>	Noisy Friarbird
<i>Platycercus adscitus palliceps</i>	Pale-headed Rosella
<i>Podargus strigoides</i>	Tawny Frogmouth
<i>Psophodes olivaceus</i>	Eastern Whipbird
<i>Rhipidura fuliginosa</i>	Grey Fantail

Scientific Name	Common Name
<i>Rhipidura leucophrys</i>	Willie Wagtail
<i>Smicrornis brevirostris</i>	Weebill
<i>Taeniopygia bichenovii</i>	Double-barred Finch
<i>Threskiornis molucca</i>	Australian White Ibis
<i>Threskiornis spinicollis</i>	Straw-necked Ibis
<i>Trichoglossus chlorolepidotus</i>	Scaly-breasted Lorikeet
<i>Trichoglossus haematodus moluccanus</i>	Rainbow Lorikeet
<i>Vanellus miles</i>	Masked Lapwing
Mammals	
<i>Bos Taurus</i>	European Cattle
<i>Canis lupus familiaris</i>	Dog
<i>Lepus europaeus</i>	European Brown Hare
<i>Macropus giganteus</i>	Eastern Grey Kangaroo
<i>Phascolarctos cinereus</i>	Koala
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox
<i>Trichosurus vulpecula</i>	Common Brushtail Possum
<i>Vulpes vulpes</i>	Red Fox
<i>Wallabia bicolor</i>	Swamp Wallaby
Reptiles	
<i>Cryptoblepharus virgatus</i>	Wall Skink
<i>Dendrelaphis punctulatus</i>	Green Tree Snake
<i>Elseya latisternum</i>	Saw-shelled Turtle
<i>Intellagama lesueurii</i>	Eastern Water Dragon
<i>Lampropholis delicata</i>	Garden Skink
<i>Pogona barbata</i>	Bearded Dragon
<i>Pseudechis porphyriacus</i>	Red-bellied Black Snake
<i>Tiliqua scincoides</i>	Eastern Blue-tongued Lizard
<i>Varanus varius</i>	Lace Monitor

4.3. 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**). One (1) migratory species were considered known or possible occurrences within the site (refer to **Table 6**). A Likelihood of Occurrence assessment for the greater development area is located in **Appendix C**.

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

Scientific Name	Common Name	Habitat	EPBC Status	NCA Status
<i>Lathamus discolor</i>	Swift Parrot	Swift Parrots breed 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. While the species is very uncommon in south-east Queensland, its occurrence cannot be completely discounted. There are suitable winter flowering species present on the site which may attract birds during flowing (e.g. <i>E. tereticornis</i>).	Endangered	
<i>Dasyurus maculatus maculatus</i>	Spot-tailed Quoll	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. 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.	Endangered	Vulnerable
<i>Delma torquata</i>	Collared Delma	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	Vulnerable	
<i>Phascolarctos cinereus</i>	Koala	Koalas are found in a range of habitats, from coastal islands and tall eucalypt forests to low woodlands inland. The species is known from the surrounding area and evidence has been recorded on-site.	Vulnerable	Vulnerable
<i>Pteropus poliocephalus</i>	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	Vulnerable	

Scientific Name	Common Name	Habitat	EPBC Status	NCA Status
		forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands. It also feed son commercial fruit crops.		
<i>Petauroides volans</i>	Greater Glider	The greater glider is largely restricted to eucalypt forests and woodlands. It is primarily folivorous, with a diet mostly comprising eucalypt leaves, and occasionally flowers. It is typically found in highest abundance in taller, montane, moist eucalypt forests with relatively old trees and abundant hollows.	Vulnerable	Vulnerable

Table 6: Migratory Species with possible suitable habitat on site

Scientific Name	Common Name	Habitat	Status*
<i>Apus pacificus</i>	Fork-tailed Swift	This is an aerial species that hunts for food over varied habitats, including coastal areas. This species may occasionally occur over the site.	M

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

At the Commonwealth level, *Phascolarctos cinereus* (Koala) and *Pteropus poliocephalus* (Grey-headed Flying-fox) were the only threatened species recorded that are considered Matters of National Environmental Significance (MNES) under the EPBC Act recorded on site.

- Four (4) Koalas (two pairs of mother and joey) were recorded within non-remnant areas within the central portion of the site and along the northern boundary. In addition, surveys recorded evidence of Koala activity in the form of scats as well as species considered Koala food trees throughout much of the vegetation suggesting the species utilises the site as part of a broader home range. Koala habitat and usage assessments as per EPBC Act Guidelines found evidence of Koala usage ranged from Low to High use categories. Preferred habitat for the Koala appears to be associated with remnant vegetation and drainage lines within the eastern portion of the site.
- Two (2) Grey-headed Flying-foxes (*Pteropus poliocephalus*) were recorded foraging within vegetation adjacent the central constructed dam (single recording made). While no roost sites were observed within or are known to occur in close proximity to the site, suitable foraging habitat for the species is considered consistent with preferred habitat for Koala.
- Despite extensive searches, no evidence of or suitable habitat for *Dasyurus maculatus maculatus* (Spot-tailed Quoll), *Delma torquata* (Collared delma) nor *Lathamus discolor* (Swift Parrot) was recorded on-site.
- While EPBC Act listed migratory species, *Rainbow Bee-eater* (*Merops ornatus*) and *Cattle Egret* (*Ardea ibis*) were recorded on-site, ideal habitat for these species was lacking. *Apus pacificus* (Fork-tailed swift), listed as migratory, was observed as a flyover species. It is unlikely that the species would

directly utilise the site as it is almost exclusively aerial, and hence works associated with Precinct 2 are unlikely to impact the species.

- No TECs or other EPBC listed flora species were considered to occur on or adjacent to the project site.

Of NCA protected fauna, only the Koala was recorded on-site or is considered likely to occur. Despite extensive searches, no evidence of or suitable habitat for *Adelotus brevis* (Tusked Frog) was recorded on-site.

4.4. Potential Impacts

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

- Construction 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.
- Operational impacts:
 - 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 intact vegetation to the east. - 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.

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.

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.
- The presence of any fauna that is 'protected wildlife' as defined under the NCA (protected wildlife).

Prior to the commencement of construction and as part of the site induction for new staff and sub-contractors.

Site Supervisor / Proponent.

Site Supervisor

No more than two weeks prior to clearing works commencing on site.

Site Supervisor / Proponent.

Site Supervisor / Environmental Coordinator

- The presence of any species that is a 'listed threatened species' under the EPBC Act (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	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
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. - In the event of a koala being located, an area of 5 m radius should be established excluding machinery from the area until the animal has relocated (usually overnight). - 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. - 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 on-site, 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.			



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 or corrected by the WPMP) which directs clearing towards vegetation to be retained.

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 or corrected by the WPMP) and for immediate reporting of orphaned, injured, distressed, or killed native animals to DES, RSPCA, Environmental Coordinator and Proponent.

4.2.4 Timing of Clearing

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
	DES Fauna Spotter Catcher as employed by the Construction Contractor.	As part of clearing/ earthworks operations.	Site Supervisor / Proponent/ Environmental Coordinator
	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 of 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.	DES Fauna Spotter Catcher as employed by the Construction Contractor.	As part of clearing/ earthworks operations.	Site Supervisor / Proponent/ Environmental Coordinator / EDQ
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Note: Appropriate wildlife-proof barriers must be used between adjacent habitat and risk associated structures (i.e. roads) where translocation occurs.

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 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.	Site Supervisor	On-going	Site Supervisor / Proponent / Environmental Coordinator
Note: If during the inspection injured wildlife or entrapped native fauna is observed the Site Supervisor is to contact the Fauna Spotter Catcher immediately.			
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.	Site Supervisor	On-going	Site Supervisor / Proponent / Environmental Coordinator

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.

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	Prior to or concurrent with clearing activities	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:	Nest Box Contractor	12 months	Site Supervisor / Proponent / Environmental Coordinator / EDQ
• The replacement of failed or damaged nest 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.			
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 accidental 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: • Non-compliance breaches must be halted immediately. • Site staff should notify the site supervisor who is responsible for either rectifying actions or contacting the Environmental Coordinator. • 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. • All breaches of the FMP must be immediately reported to 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
4.5.2 Monitoring and Reporting The site shall be monitored at all times. This should include: • Daily inspections by the Site Supervisor. • Random and periodical inspections by the Environmental Coordinator and/or 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	Environmental Coordinator / Proponent

- 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 and Proponent 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.	All Site Staff	On-going	EDQ / DES / Environmental Coordinator / Proponent
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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.

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, Mirvac 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 on land to the north and east of the site. Specifically for protected/threatened species present on-site, and hence may require relocation of fauna. **Table 7** details the actions to be taken in these events.

Table 7: Role of Fauna Spotter Catcher

Scenario	Action
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 required to be systematically relocated from the site, a Fauna Translocation Management Plan (FTMP) must be prepared in accordance with the PTRP. The FTMP must be submitted to DES for endorsement. The following must then be submitted to EDQ: • Fauna Spotter Catcher credentials and for handling of anticipated protected species • A list of anticipated species; and • DES endorsement of the proposed FTMP; and • A copy of the DES endorsed FTMP.

7. Koala Habitat

The site is not identified as within a State mapped assessable Koala habitat area, however, does include Koala habitat mapped under the *State Planning Policy 2017* (SPP). The following should be adhered to as part of this FMP to ensure safe removal of any Koalas encountered on-site:

- Each construction phase adopts measures to ensure construction works do not increase the risk of death or injury to Koala, as specified in this FMP.
- Sequential clearing of native vegetation is undertaken under the guidance of a Koala spotter where native vegetation consists of non-juvenile Koala habitat trees.
- Provision of food, shelter and movement opportunities for Koala continue and are consistent with the site design.

8. Site Contacts

Role	Contact Details
Proponent	Mark Clancy (Development Manager) Mirvac Queensland Pty Ltd Level 17, 123 Eagle Street, Brisbane, Qld 4000 (07) 3859 5305
Site Supervisor	<i>To be appointed.</i>
Environmental Coordinator	Andrew Davies (Principal Environmental Scientist) Saunders Havill Group 9 Thompson Street, Bowen Hills, Qld 4006 Ph. (07) 3251 9425
Administering Authority	Brandon Bouda (Manager) Economic Development Queensland Level 13, 1 William Street, Brisbane, Qld 4000 (07) 3452 7422
Council	Adam Avalos (Major Developments Program Leader) Logan City Council 150 Wembley Road, Logan Central, Qld 4114 (07) 3412 4874
Construction Contractor	<i>To be appointed.</i>
Fauna Spotter and Catcher	<i>To be appointed.</i>
Veterinarian (in closest proximity to application site)	The Bloomin' Vet 15 Pub Lane, Greenbank, Qld 4124 (07) 3297 6666 (all hours) Monday to Friday – 8 am to 6 pm Saturday – 9 am to 5 pm Sunday – 9 am to 2 pm
Department of Environmental and Heritage Protection	For wildlife incidents and licensing and permits: 1300 130 372
RSPCA Queensland	For reporting injured, sick or orphaned wildlife: 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

Habitat Suitability Assessment

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.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 02/04/19 11:02:09

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

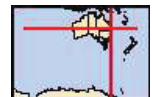
[Acknowledgements](#)



This map may contain data which are
©Commonwealth of Australia
(Geoscience Australia), ©PSMA 2010

[Coordinates](#)

Buffer: 5.0Km



Summary

Matters of National Environmental 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:	2
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	36
Listed Migratory Species:	16

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 <http://www.environment.gov.au/heritage>

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

Commonwealth Land:	1
Commonwealth Heritage Places:	1
Listed Marine Species:	22
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

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

State and Territory Reserves:	2
Regional Forest Agreements:	None
Invasive Species:	42
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)		[Resource Information]
Name		Proximity
Moreton bay		20 - 30km upstream
Moreton bay		20 - 30km upstream

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.	

Name	Status	Type of Presence
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community may occur within area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area
Swamp Tea-tree (Melaleuca irbyana) Forest of South-east Queensland	Critically Endangered	Community likely to occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community may occur within area

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Anthochaera phrygia		
Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area
Botaurus poiciloptilus		
Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Dasyornis brachypterus		
Eastern Bristlebird [533]	Endangered	Species or species habitat likely to occur within area
Erythrorchis radiatus		
Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Geophaps scripta scripta		
Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area
Grantiella picta		
Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor		
Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area

Name	Status	Type of Presence
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Poephila cincta cincta Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to occur within area
Fish		
Maccullochella mariensis Mary River Cod [83806]	Endangered	Translocated population known to occur within area
Insects		
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area
Mammals		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat likely to occur within area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Potorous tridactylus tridactylus Long-nosed Potoroo (SE mainland) [66645]	Vulnerable	Species or species habitat may occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Plants		
Arthraxon hispidus Hairy-joint Grass [9338]	Vulnerable	Species or species habitat may occur within area
Bosistoa transversa Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area
Cycas ophiolitica [55797]	Endangered	Species or species habitat likely to occur within area
Dichanthium setosum bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
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
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
Notelaea ipsviciensis Cooneana Olive [81858]	Critically Endangered	Species or species habitat may occur within area
Notelaea lloydii Lloyd's Olive [15002]	Vulnerable	Species or species habitat likely to occur within area
Phaius australis Lesser Swamp-orchid [5872]	Endangered	Species or species habitat likely to occur within area
Plectranthus habrophyllus [64589]	Endangered	Species or species habitat likely to occur within area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area

Reptiles

Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
Furina dunmalli Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area
Saiphos reticulatus Three-toed Snake-tooth Skink [88328]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species

[[Resource Information](#)]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

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

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

Name
Defence - GREENBANK TRAINING AREA

Commonwealth Heritage Places [\[Resource Information \]](#)

Name	State	Status
Natural		
Greenbank Military Training Area (part)	QLD	Listed place

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

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		

Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
--	--	--

Anseranas semipalmata Magpie Goose [978]		Species or species
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Name	Threatened	Type of Presence
Apus pacificus Fork-tailed Swift [678]		habitat may occur within area Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat likely to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur

Name	Threatened	Type of Presence
Rostratula benghalensis (sensu lato)		within area
Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
A and T Koala Billabong	QLD
Koolena	QLD

Invasive Species	[Resource Information]
------------------	--

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat known to occur within area
Mammals		

Name	Status	Type of Presence
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Equus caballus Horse [5]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Alternanthera philoxeroides Alligator Weed [11620]		Species or species habitat likely to occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus africanus Climbing Asparagus, Climbing Asparagus Fern [66907]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Cabomba caroliniana Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. rotundata Bitou Bush [16332]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Cryptostegia grandiflora Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913] Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Hymenachne amplexicaulis Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]		Species or species habitat likely to occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large- leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892] Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area
Solanum elaeagnifolium Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area
Ramphotyphlops braminus Flowerpot Blind Snake, Brahminy Blind Snake, Cacing Besi [1258]		Species or species habitat likely to occur within area

Nationally Important Wetlands		[Resource Information]
Name		State
Greenbank Army Training Area C		QLD

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

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.

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

Where very little information is available for 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 reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

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

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

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

Coordinates

-27.7372 152.9987

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.

Appendix B

Wildlife Online Search

Nature Conservation Act 1992



Queensland Government

Wildlife Online Extract

Search Criteria: Species List for a Specified Point

Species: All

Type: All

Status: Rare and threatened species

Records: Confirmed

Date: Since 1980

Latitude: -27.7372

Longitude: 152.9987

Distance: 5

Email: hannahsilcox@saundershavill.com

Date submitted: Tuesday 02 Apr 2019 10:19:37

Date extracted: Tuesday 02 Apr 2019 10:20:20

The number of records retrieved = 5

Disclaimer

As the DSITIA is still in a process of collating and vetting data, it is possible the information given is not complete. The information provided should only be used for the project for which it was requested and it should be appropriately acknowledged as being derived from Wildlife Online when it is used.

The State of Queensland does not invite reliance upon, nor accept responsibility for this information. Persons should satisfy themselves through independent means as to the accuracy and completeness of this information.

No statements, representations or warranties are made about the accuracy or completeness of this information. The State of Queensland disclaims all responsibility for this information and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Limnodynastidae	<i>Adelotus brevis</i>	tusked frog		V		1
animals	mammals	Dasyuridae	<i>Dasyurus maculatus maculatus</i>	spotted-tailed quoll (southern subspecies)		V	E	1
animals	mammals	Phascolarctidae	<i>Phascolarctos cinereus</i>	koala		V	V	125
animals	mammals	Pseudocheiridae	<i>Petauroides volans volans</i>	southern greater glider		V	V	1/1
plants	Equisetopsida	Myrtaceae	<i>Melaleuca irbyana</i>			E		1/1

CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*. The codes are Extinct in the Wild (PE), Endangered (E), Vulnerable (V), Near Threatened (NT), Least Concern (C) or Not Protected ().

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*. The values of EPBC are Conservation Dependent (CD), Critically Endangered (CE), Endangered (E), Extinct (EX), Extinct in the Wild (XW) and Vulnerable (V).

Records – The first number indicates the total number of records of the taxon for the record option selected (i.e. All, Confirmed or Specimens).

This number is output as 99999 if it equals or exceeds this value. The second number located after the / indicates the number of specimen records for the taxon.

This number is output as 999 if it equals or exceeds this value.

Appendix C

Habitat Suitability Assessment

HABITAT ASSESSMENT FOR SPECIES LISTED UNDER THE EPBC ACT

Matters of National Environmental Significance				
Wetlands of International Importance	Moreton Bay	RAMSAR Listed	20-30 km upstream	The site is located approximately 20-30 km directly west of Moreton Bay.
No Risk				
Listed Threatened Ecological Communities				
Name	Status	Type of Presence	Description of Community	Analysis
<i>Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community</i>	Endangered	This Threatened Ecological Community is listed as a community that may occur within the area.	In Queensland, this ecological community coincides with two RE communities including Of Concern RE12.1.1 (<i>Casuarina glauca</i> +/- mangroves woodland) as well as areas where the canopy is dominated by <i>Casuarina glauca</i> within RE12.3.20 (<i>Melaleuca quinquenervia</i> , <i>Casuarina glauca</i> +/- <i>Eucalyptus tereticornis</i> , <i>Eucalyptus siderophloia</i> open forest on low coastal alluvial plains).	No species representing these characteristics or vegetation communities were observed within the assessment area.
<i>Lowland rainforest of Critically Endangered Subtropical Australia</i>	Critically Endangered	This Threatened Ecological Community is listed as a community that may occur within the area.	Typically there is a relatively low abundance of species from the genera <i>Eucalyptus</i> , <i>Melaleuca</i> and <i>Casuarina</i> . Buttresses are common as is an abundance and diversity of vines. 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 12.12.16.	No species representing these characteristics or vegetation communities were observed within the assessment area.
<i>Swamp Tea Tree (Melaleuca irbyana) forest of South-east Queensland</i>	Critically Endangered	This Threatened Ecological Community is listed as a community that is likely to occur within the area.	The listed swamp tea-tree forest community is based on two regional ecosystem communities including 12.9-10.11 and 12.3.3c. This community usually comprises low open to closed forest, closed scrub or thickets of <i>Melaleuca irbyana</i> with or without emergent tree layer of scattered <i>Eucalypts</i> .	No species representing these characteristics or vegetation communities were observed within the assessment area.
<i>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</i>	Critically Endangered	This Threatened Ecological Community is listed as a community that may occur within the area.	This threatened community is characterised by a species-rich understorey of native tussock grasses, herbs and scattered shrubs and the dominance of White Box, Yellow Box, or Blakely's Red gum trees. This community is usually associated with Regional Ecosystem 11.8.2a, 11.8.8, 11.9.9a, 13.3.1, 13.11.8, and 13.12.9. It can also be a small component of Regional Ecosystem 11.3.23, 12.8.16, 13.3.4, 13.11.3 and 13.11.4.	No species representing these characteristics or vegetation communities were observed within the assessment area.

Species	Common Name	Status	EPBC Code	Description of Community / Habitat	Likelihood of Occurrence	Site
Birds						
<i>Anthochaera phrygia</i>	Regent Honeyeater	Endangered	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.	The Regent Honeyeater has been recorded at 15 sites across Queensland, primarily south of the Sunshine Coast and Chinchilla. These records have been on Bribie Island and in the Granite Belt. Regular records in the Gore-Karara area suggest a small breeding population may have been present in the mid-1990s. The Regent Honeyeater is also known as a visitor to the Sundown National Park. Given the disturbed nature of the site and the lack of specific recordings of the species in the surrounding area, it is unlikely to occur on site. The species is unlikely to occur.	Not observed
<i>Botaurus poiciloptilus</i>	Australasian Bittern	Endangered	1001	The Australasian Bittern occurs in terrestrial wetlands and, rarely, estuarine habitats, mainly in the temperate southeast and southwest. 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 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	No suitable habitat was observed throughout the assessment area. Species is unlikely to occur.	Not observed

Species	Common Name	Status	EPBC Code	Description of Community / Habitat	Likelihood of Occurrence	Site
<i>Calidris ferruginea</i>	Curlew Sandpiper	Critically Endangered	856	possibly survives only in protected areas such as the Cooloolo and Fraser regions.	No suitable habitat was observed on-site.	Not observed
				The Curlew Sandpiper occurs in littoral and estuarine habitats, and is mainly found in intertidal mudflats of sheltered coasts. It sometimes occurs in non-tidal swamps, lakes and lagoons on the coast and inland. It roosts on shingle, shells or sand beaches; spits or islets on the coast or in wetlands.	Species is unlikely to occur.	
<i>Dasyornis brachypterus</i>	Eastern Bristlebird	Endangered	533	The Eastern Bristlebird inhabits low dense vegetation in a broad range of habitat types including sedgeland, heathland, swampland, shrubland, sclerophyll forest and woodland, and rainforest. It occurs near the coast, on tablelands and in ranges. The Eastern Bristlebird is found in habitats with a variety of species compositions, but is defined by a similar structure of low, dense, ground or understorey vegetation.	No suitable habitat was observed throughout the assessment area.	Not observed
				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.	Species is unlikely to occur.	
<i>Erythrorhynchus radiatus</i>	Red Goshawk	Vulnerable	942	While some aspects of its habitat occurs on site not all requirements to be considered critical habitat for the species were identified. The species was not recorded during field surveys.		Not observed
<i>Geophaps scripta scripta</i>	Squatter Pigeon (southern)	Vulnerable	64440	This species inhabits open grasslands and woodlands typically with a native understorey although may occur in artificial pasture.	No confirmed local records. The species is now very rarely observed in southern Queensland. Not expected onsite and no direct impact from proposed actions.	Not observed

Species	Common Name	Status	EPBC Code	Description of Community / Habitat	Likelihood of Occurrence	Site
Species is unlikely to occur.						
<i>Grantiella picta</i>	Painted Honeyeater	Vulnerable	470	This species inhabits Boree/ Weeping Myall (Acacia pendula), Brigalow (A. harpophylla) and Box-Gum Woodlands and Box-Ironbark Forests.	No suitable habitat was observed throughout the assessment area.	Not observed
Species is unlikely to occur.						
<i>Lathamus discolor</i>	Swift Parrot	Endangered	744	Swift Parrots breed 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. While the species is very uncommon in south-east Queensland, its occurrence cannot be completely discounted. There are suitable winter-flowing species present on the site which may attract birds during flowering (e.g. E. tereticornis).	Site trees provide some aspects of required critical habitat for the species, particularly during flowering and fruiting events. No local records were identified and the species were not recorded during site surveys.	Not observed
Species has potential to occur.						
<i>Numenius madagascariensis</i>	Eastern Curlew	Critically Endangered	847	The species breeds on open mossy or transitional bogs, moss-lichen bogs and wet meadows, and on the swampy shores of small lakes; in the non-breeding season it is essentially coastal, occurring at estuaries, mangrove swamps, saltmarshes and intertidal flats, particularly those with extensive seagrass (Zosteraceae) meadows.	No suitable habitat was observed throughout the assessment area.	Not observed
Species is unlikely to occur.						

Species	Common Name	Status	EPBC Code	Description of Community / Habitat	Likelihood of Occurrence	Site
<i>Peophila cincta cincta</i>	Black-throated Finch (southern)	Endangered	64447	The Black-throated Finch (southern) occurs mainly in grassy, open woodlands and forests, typically dominated by Eucalyptus, Corymbia and Melaleuca, and occasionally in tussock grasslands or other habitats (for example freshwater wetlands), often along or near watercourses, or in the vicinity of water. It occurs at two general locations: in the Townsville region, where it is considered to be locally common at a few sites around Townsville and Charters Towers; and at scattered sites in central-eastern Queensland (between Aramac and Great Basalt Wall National Park). It has been absent from Brisbane and its surrounds since the 1930s.	Due to a lack of records within the local area, it is unlikely that this species will occur. Species is unlikely to occur.	Not observed
<i>Rostratula australis</i>	Australian Painted Snipe	Endangered	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.	While some aspects of its habitat occurs on site not all requirements to be considered critical habitat for the species were identified. The species was not recorded during field surveys. Species is unlikely to occur.	Not observed
<i>Turnix melanogaster</i>	Black-breasted Button-quail	Vulnerable	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 Frazer Island and nearby mainland. Deep leaf litter in which the species can forage appears to be particularly favoured.	Little to no suitable habitat for this species occurs and it has not been recorded in the area. Species is unlikely to occur.	Not observed
<i>Maccullochella mariensis</i>	Mary River Cod	Endangered	83806	The Mary River Cod occurs mainly in pools within relatively undisturbed tributaries. They prefer relatively	No suitable habitat or evidence was observed throughout the assessment area.	Not observed

Species	Common Name	Status	EPBC Code	Description of Community / Habitat	Likelihood of Occurrence	Site
Insects						
<i>Argynnis hyperbius inconstans</i>	Australian Fritillary	Critically Endangered	88056	The Australian fritillary is restricted to areas where its larval food plant, <i>Viola betonicifolia</i> (the arrowhead violet), occurs (NSW Scientific Committee 2002). The arrowhead violet is widespread throughout Queensland and NSW, at both high and low altitudes. However, the Australian fritillary appears to only occupy lower altitude sites (<600m), and in these lower altitude regions there has been significant clearing for urban expansion.	Species was not observed or recorded in historical or contemporary field surveys. Species is unlikely to occur.	Not observed
Mammals						
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	Vulnerable	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 confirmed local records of this uncommon species. Inhabits mesic vegetation and the species was not recorded in any of the site surveys. Not expected to occur and no impact expected. Species is unlikely to occur.	Not observed
<i>Dasyurus maculatus maculatus</i>	Spot-tailed Quoll	Endangered	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	While the site contains a large amount of disturbances and lack of suitable rocky outcrops, and no suitable habitat was observed throughout the assessment area, due to known recordings of the species in the North McLean area, there is potential for the species to occur on site.	Not observed

Species	Common Name	Status	EPBC Code	Description of Community / Habitat	Likelihood of Occurrence	Site
birds and small mammals, and large areas of relatively intact vegetation through which to forage.						
Species has potential to occur.						
<i>Petauroides volans</i>	Greater Glider	Vulnerable	254	The greater glider is an arboreal nocturnal marsupial, largely restricted to eucalypt forests and woodlands. It is primarily folivorous, with a diet mostly comprising eucalypt leaves, and occasionally flowers. It is typically found in highest abundance in taller, montane, moist eucalypt forests with relatively old trees and abundant hollows/	Although suitable habitat was observed on the broader site, the project area contains very few trees in relation to significant habitat areas to the south-west.	Not observed
Species has potential to occur.						
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	Vulnerable	225	This species prefers rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes, cliffs, gorges and isolated rock stacks. Most populations have been found on north facing slopes but have occurred on south facing slopes. This species browse on vegetation in and adjacent to rocky areas eating grasses and forbs as well as the foliage and fruits of shrubs and trees.	No suitable habitat or evidence was observed throughout the assessment area. Species was not observed or recorded in historical or contemporary field surveys.	Not observed
Species is unlikely to occur.						
<i>Phascolarctos cinereus</i>	Koala	Vulnerable	85104	They are found in a range of habitats, from coastal islands and tall eucalypt forests to low woodlands inland. The species is known from the surrounding area and evidence has been recorded on-site.	The species is known to occur in broader Logan area. Recent survey confirmed the presence of koalas on site as well as evidence of scats across the referral area.	Evidence of Koalas in the form of sighted individuals and of scats was observed.
Species confirmed.						
<i>Potorous tridactylus</i>	Long-nosed Potoroo	Vulnerable	66645	Species generally prefers rainforest and adjacent to wet sclerophyll forest, coastal heathlands and similar habitats with a dense understorey. Like all Potoroos, fungi are the major component of the diet and is also known to feed on invertebrates.	No suitable habitat was observed throughout the assessment area.	Not observed
Species unlikely to occur.						

Species	Common Name	Status	EPBC Code	Description of Community / Habitat	Likelihood of Occurrence	Site
<i>Pteropus poliocephalus</i>	Grey-headed Flying Fox	Vulnerable	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 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.	No individuals or roosting camps were observed utilising habitat on-site. However, observations of flyover individuals were recorded. Suitable feeding and roosting habitat was recorded on-site. This species is highly likely to occur when the Eucalypts are in flower.	Observed as flyover only
Species has potential to occur.						
Reptiles						
<i>Delma torquata</i>	Collared Delma	Vulnerable	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.	Important populations of the species are associated with important habitats found in the Brigalow Belt (Bioregion 11). Larger population records of the species west of Brisbane include Kenmore, Pinjarra Hills, Anstead, Mt Crosby, Lake Manchester and Karana Downs. The species has not been recorded on, or in close proximity to the site.	Not observed
Species has potential to occur.						

Species	Common Name	Status	EPBC Code	Description of Community / Habitat	Likelihood of Occurrence	Site
<i>Furina dunmalli</i>	Dunmall's Snake	Vulnerable	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 level. The snake is very rare or secretive with limited records existing. It has been recorded at Archokoorra, 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.	No suitable habitat was observed throughout the assessment area. Species is unlikely to occur.	Not observed
<i>Saiphos reticulatus</i>	Three-toed Snake-tooth Skink	Vulnerable	88328	The Three-toed Snake-tooth Skink has been found in loose, well mulched friable soil, in and under rotting logs, in forest litter, under fallen hoop pine bark and under decomposing cane mulch. In Queensland, the Three-toed Snake-tooth Skink has been recorded in rainforest, closed forest, wet sclerophyll forest, tall open Blackbutt (Eucalyptus pilularis) forest, tall layered open eucalypt forest and closed Brush Box (Lophostemon confertus) forest.	No suitable habitat was observed throughout the assessment area. Species is unlikely to occur.	Not observed

LISTED MIGRATORY SPECIES

Migratory Marine Birds

<i>Apus pacificus</i>	Fork-tailed Swift	Migratory	678	This species is almost exclusively aerial and mostly occur over inland plains but sometimes above foothills or in coastal areas.	Possible as a flyover species however no impact to this species is likely to occur.	Observed as flyover species
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Species	Common Name	Status	EPBC Code	Description of Community / Habitat	Likelihood of Occurrence	Site
Migratory Terrestrial Species						
<i>Cuculus optatus</i>	Oriental Cuckoo	Migratory	86651	It mainly inhabits forests, occurring in coniferous, deciduous and mixed forest. It feeds mainly on insects and their larvae, foraging for them in trees and bushes as well as on the ground.	No suitable habitat was observed throughout the assessment area.	Not observed
<i>Hirundapus caudacutus</i>	White-throated Needle tail	Migratory	682	The White-throated needle tail is almost exclusively aerial. This species has been recorded roosting in trees in forests and woodlands, both among dense foliage in the canopy or in hollows. The species breeds in wooded lowlands and sparsely vegetated hills, as well as mountains covered with coniferous forests.	No suitable habitat was observed throughout the assessment area.	Not observed
<i>Monarcha melanopsis</i>	Black-faced Monarch	Migratory	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 was observed throughout the assessment area.	Not observed
<i>Monarcha trivirgatus</i>	Spectacled Monarch	Migratory	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 was observed throughout the assessment area.	Not observed
<i>Motacilla flava</i>	Yellow Wagtail	Migratory	644	The yellow wagtail occurs in a variety of damp or wet habitats with low vegetation, from rushy pastures, meadows, hay fields and marshes to damp steppe and grassy tundra. Outside of the breeding season it is also found in cultivated areas. The yellow wagtail typically forages in damp grassland and on relatively bare open	No suitable habitat was observed throughout the assessment area.	Not observed

Species	Common Name	Status	EPBC Code	Description of Community / Habitat	Likelihood of Occurrence	Site
				ground at edges of rivers, lakes and wetlands, but also feeds in dry grassland and in fields of cereal crops.		
<i>Myiagra cyanoleuca</i>	Satin Flycatcher	Migratory	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 was observed throughout the assessment area.	Not observed
<i>Rhipidura rufifrons</i>	Rufous Fantail	Migratory	592	The Rufousfantail 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.	No suitable habitat was observed throughout the assessment area.	Not observed
HABITAT ASSESSMENT FOR SPECIES LISTED UNDER THE NCA						
Species	Common Name	Status	Description of Community / Habitat		Analysis	Likelihood of Occurrence
Amphibians						
<i>Adelotus brevis</i>	Tusked Frog	Vulnerable	The Tusked Frog inhabits wet eucalypt forest, rainforest, and sometimes dry eucalypt forest, where it can be found in close proximity to suitable breeding habitat such as ponds and slow-moving sections of streams		No suitable habitat to support this species occurs on-site.	Unlikely – not observed
Mammals						
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	Vulnerable	Refer EPBC Act assessment table			
<i>Phascolarctos cinereus</i>	Koala	Vulnerable	Refer EPBC Act assessment table			
<i>Petauroides volans</i>	Greater Glider	Vulnerable	Refer EPBC Act assessment table			