



# Fauna Management Plan

Everleigh - Proposed School Site  
432-520 Greenbank Road, Greenbank Qld 4124

Prepared for Mirvac Queensland Pty Ltd  
2 October 2019

Job No. 7598



# Document Control

Document: Fauna Management Plan for Everleigh (proposed School Site)– 432-520 Greenbank Road, Greenbank (Issue A), prepared by Saunders Havill Group for Mirvac Queensland Pty Ltd.

## Document Issue

Issue	Date	Prepared By	Checked By
A	17.07.19	KG	AD
B	02.10.19	KG	AD

Prepared by

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# Acronyms and Abbreviations

CEMP	Construction Environmental Management Plan
DAF	Department of Agriculture and Fisheries (Qld)
DES	Department of Environment and Science (Qld)
EDQ	Economic Development Queensland (Qld)
EHP	Department of Environment and Heritage Protection (Qld) (former, now DES)
EPBC	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
EVNT	Endangered, Vulnerable and Near Threatened (as listed in the NCWR)
FTMP	Fauna Translocation Management Plan
NCA	<i>Nature Conservation Act 1992</i> (Qld)
NCWR	Nature Conservation (Wildlife) Regulation 2006 (Qld)
NESS	Natural Environment Overarching Site Strategy
PDA	Priority Development Area
PMST	Protected Matters Search Tool
PTRP	Pre-clearing Trapping and Release Plan
SHG	Saunders Havill Group
WHIMP	Wildlife and Habitat Impact Mitigation Plan
WPMP	Wildlife Protection and Management Plan
WWBW	Waterway Barrier Works

# Reference Documents

ADR	<i>Acceptable Development Requirements for operational work that is constructing or raising waterway barrier works</i> , prepared by Queensland Government (dated 3 July 2017)
FSRDM	<i>Fauna Sensitive Road Design Manual: Volume 2- Preferred Practices</i> , prepared by the Department of Transport and Main Roads (dated June 2010).
NESS	Natural Environment Site Strategy, dated 18 April 2017 (Approved 2 June 2017 as amended in red, 27 April 2017)
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 (9245 School Site)</i> , prepared by SHG (dated July 2019).

# 1. Introduction

Saunders Havill Group (SHG) was engaged by Mirvac Queensland Pty Ltd (Mircvac) to prepare a Fauna Management Plan (FMP) for proposed clearing on the Everleigh project site associated a proposed state school for the Department of Education. The site is located on land described as 432-520 Greenbank Road, Greenbank and falls within the Greater Flagstone Priority Development Area (PDA) where Economic Development Queensland (EDQ) are the administering authority. Refer to **Figure 1** for Site Context and **Figure 2** for Site Aerial.

The project has the benefit of a Preliminary Approval (PA) for a Material Change of Use generally in accordance with the Greenbank Master Plan, issued by EDQ on 9 August 2017 (DEV2016/748). As part of the Preliminary Approval, the Natural Environment Site Strategy (NESS) (prepared by SHG, amended in red 27 April 2017) was approved by EDQ on 2 June 2017, which details fauna management requirements for the development. In accordance with the NESS, FMPs are to be developed for each stage of development involving vegetation clearing works.

This FMP has been prepared to support a development application to Economic Development Queensland (EDQ) to manage fauna requirements for vegetation clearing associated with the proposed school. The purpose of this FMP is to manage impacts associated with the project and protect native animals, specifically *Phascolarctos cinereus* (Koala) and *Pteropus poliocephalus* (Grey-headed Flying-fox) during clearing and construction.

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. This FMP adopts best practice 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 should be read in conjunction with the School Site Vegetation Management Plan (VMP), prepared by SHG (dated July 2019), which provides details of vegetation to be retained and removed.

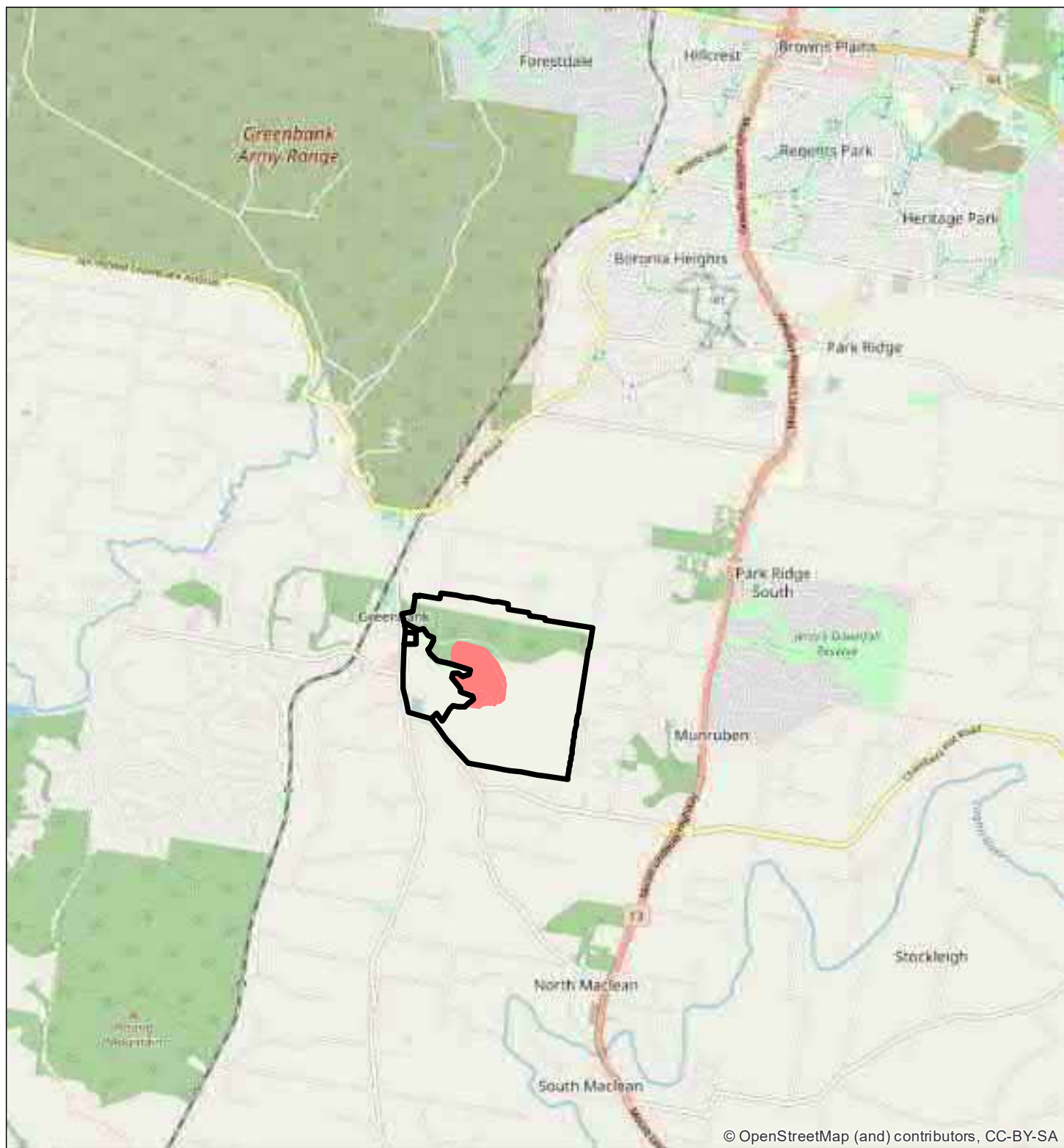
## 1.1. Property Summary

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

**Table 1: Property Summary**

<b>Address</b>	432-520 Greenbank Road,
<b>RPD</b>	Lot 1 on SP297192
<b>Local Government Area</b>	Logan City Council
<b>Administering Authority</b>	Economic Development Queensland
<b>Priority Development Area</b>	Greater Flagstone PDA
<b>Planning Scheme</b>	Greater Flagstone Urban Development Area Development Scheme
<b>Area Classification / Zone</b>	Urban Living
<b>Existing Land Use</b>	Vacant





#### Legend

-  Site DCDB
-  Clearing area

#### Figure 1

#### Site Context

**File ref.** 7598 E Figure 1 School Site Context B

**Date** 19/09/2019

**Project** Everleigh

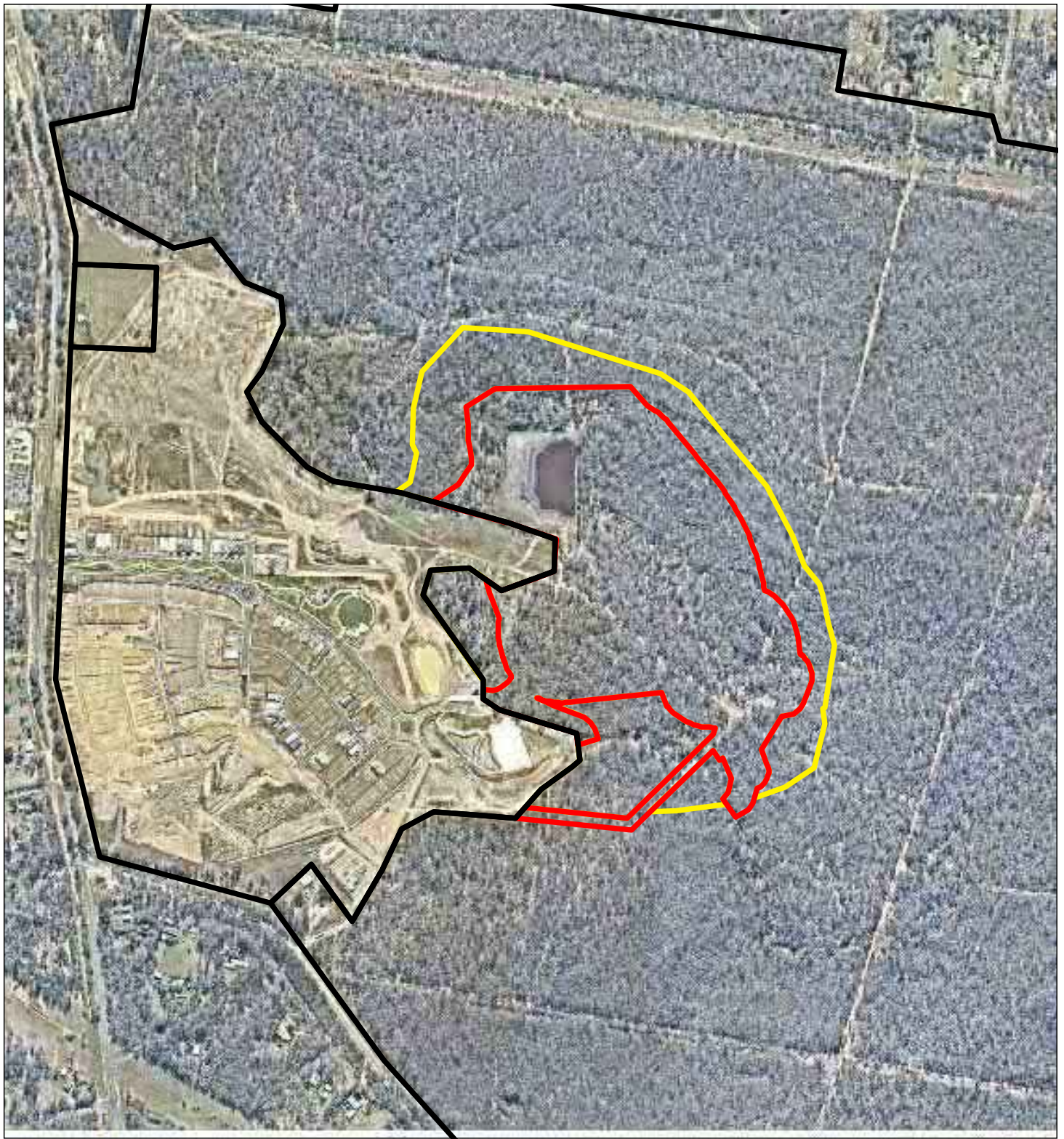
0 0.5 1 2 km

Scale (A4): 1:75,000 [GDA 1994 MGA Z56]



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#### Legend

-  Site DCDB
-  Phase 1 civil works extent
-  Phase 2

#### Figure 2

#### Site Aerial

**File ref.** 7598 E Figure 2 School Site Aerial B

**Date** 19/09/2019

**Project** Everleigh

0 50 100 200 300 400 m

Scale (A4): 1:10,000 [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 and threatened species which have the potential to be temporarily or permanently located within a 5 kilometre (km) radius of the development site. **Table 2** lists a summary of these results relevant to site fauna. The complete results of this search are included in **Appendix A**.

**Table 2: EPBC Act PMST Fauna Search Results**

<b>Wetlands of International Importance (Ramsar)</b>		
Moreton Bay – 20-30km upstream		
<b>Listed Threatened Ecological Communities</b>		
<b>Coastal Swamp Oak (<i>Casuarina glauca</i>) Forest of New South Wales and South East Queensland</b> – Endangered (community may occur within area)		
<b>Lowland Rainforest of Subtropical Australia</b> – Critically Endangered (community may occur within area)		
<b>Swamp Tea-tree (<i>Melaleuca irbyana</i>) Forest of South-east Queensland</b> - Critically Endangered (community may occur within area)		
<b>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</b> – Critically Endangered (community may occur within area)		
<b>Threatened Species</b>		
<b>Scientific Name</b>	<b>Common Name</b>	<b>Status</b>
<b>Birds</b>		
<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
<i>Hirundapus caudacutus</i>	White-throated Needletail	Vulnerable
<i>Lathamus discolor</i>	Swift Parrot	Critically Endangered
<i>Numenius madagascariensis</i>	Eastern Curlew	Critically Endangered

Threatened Species		
Scientific Name	Common Name	Status
<i>Poephila cincta</i>	Southern Black-throated Finch	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>Cahlinolobus dwyeri</i>	Large-eared Pied Bat	Vulnerable
<i>Dasyurus maculatus maculatus</i>	Spot-tailed Quoll	Endangered
<i>Petauroides volans</i>	Greater Glider	Vulnerable
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	Vulnerable
<i>Phascolarctos cinereus</i>	Koala	Vulnerable
<i>Potorous tridactylus tridactylus</i>	Long-nosed Potoroo	Vulnerable
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Vulnerable
Plants		
<i>Arthraxon hispidus</i>	Hairy-joint Grass	Vulnerable
<i>Bosistoa transversa</i>	Three-leaved Bosistoa	Vulnerable
<i>Cycas ophiolitica</i>	-	Endangered
<i>Dichanthium setosum</i>	Bluegrass	Vulnerable
<i>Macadamia integrifolia</i>	Macadamia Nut	Vulnerable
<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	Vulnerable
<i>Notelaea ipsviciensis</i>	Cooneana Olive	Critically Endangered
<i>Notelaea lloydii</i>	Lloyd's Olive	Vulnerable
<i>Phaius australis</i>	Lesser Swamp-orchid	Endangered
<i>Plectranthus habrophyllus</i>	-	Endangered
<i>Samadera bidwillii</i>	Quassia	Vulnerable
<i>Thesium australe</i>	Austral Toadflax	Vulnerable
Reptiles		
<i>Delma torquata</i>	Adorned Delma	Vulnerable
<i>Furina dunmalli</i>	Dunmall's Snake	Vulnerable

Threatened Species		
Scientific Name	Common Name	Status
<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 2006 (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 the DES Wildlife Online database search for a 5 km radius of the site. 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 Fauna Search Results**

Scientific Name	Common Name	Status
<i>Adelotus brevis</i>	Tusked Frog	Vulnerable
<i>Calyptorhynchus lathami lathami</i>	Glossy Black-cockatoo	Vulnerable
<i>Dasyurus maculatus maculatus</i>	Spotted-tailed quoll (southern subspecies)	Vulnerable
<i>Phascolarctos cinereus</i>	Koala	Vulnerable
<i>Petauroides volans volans</i>	Southern Greater Glider	Vulnerable



## 3. 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 the project. To assist in achieving a leading practice model for fauna management prior to, during and post the completion of the construction works for the site, all land clearing will be managed generally in accordance with the *Code of Practice for Welfare of Animals effected by Land Clearing and Other Habitat Impacts and Wildlife Spotter/Catchers (Draft)*, as prepared by the Wildlife Warriors and Voiceless (the Code). 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 *Nature Conservation Act 1992*.

This FMP has been informed by the *Natural Environment Site Strategy, dated 18 April 2017 (Approved 2 June 2017 as amended in red, 27 April 2017)* (NESS) and should be read in conjunction with that report and the *Vegetation Management Plan (7598 School Site), prepared by SHG, dated July 2008 (VMP)*, lodged separately.

Fauna management and mitigation strategies are discussed in further detail in Section 4 – Fauna Management Plan Specifications.

### 3.1.1 Pre-Clearing Survey

#### **Action 1 – Developer to Engage a Fauna Spotter Catcher**

Action 1 requires that the developer engage a Fauna Spotter Catcher with full registrations and licences issued by the Queensland Department of Environment and Science (DES).

#### **Action 2 – Developer to Undertake Pre-Clearing Survey**

A pre-clearing survey will be undertaken by a DES approved Fauna Spotter Catcher no more than two (2) weeks prior to the commencement of clearing activities at each stage. This survey must include a fauna assessment of the site, particularly for Koalas and animals using hollows, including bats. This survey will inform the Pre-Clearing Trapping and Release Plan (PTRP) containing elements from the Code, as detailed in Section 3.1.2. Results from the pre-clearance surveys will be made available to DES and will form part of the Post-clearing report.

### 3.1.2 Pre-clearing Trapping and Release Plan

#### **Action 3 – Fauna Spotter Catcher to Prepare a Pre-Clearing Trapping and Release Plan**

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

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

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

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

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

#### **Action 6 – During Construction**

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

### **3.1.3 Post-clearing Wildlife Management Report**

#### **Action 7 – Post Works Reporting**

During the course of all site works, including the pre-clearance surveys, the Fauna Spotter Catcher is to keep an accurate record of all animals encountered and/or captured, and all incidents and disposals for each stage of the project. The records should form part of the Post-Clearing Wildlife Management Report to be issued under licence requirements to DES. The Post-Clearing Wildlife Management Report should consist of the following three (3) 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 and no more than two (2) weeks after clearing activities have ceased

## 3.2. Roles and Responsibilities

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

### 3.2.1 Proponent

Mirvac Queensland Pty Ltd (Mirvac) is the Proponent for the works.

### 3.2.2 Environmental Coordinator

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

### 3.2.3 Administering Authority

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

### 3.2.4 Site Coordinator

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

### 3.2.5 Site Supervisor

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

### 3.2.6 Fauna Spotter Catcher

The Fauna Spotter Catcher must be a person who holds a rehabilitation permit with an extended authority issued by DES, to 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 7.



## 4. Fauna Summary

### 4.1. Fauna Habitat Areas and Opportunities

The purpose of this FMP is to control the impacts of clearing activities on-site and to the surrounding area's fauna communities. The NESS, identified the presence of suitable habitat observed along waterways to be retained as ecological corridors under the development proposal (refer **Plan 1**). The NESS also identified a significant portion of land to the east, outside the School Site area, to be retained as Conservation Parkland. 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:

- Vegetation Management Plan (7598 School Site), prepared by SHG, dated July 2019 (VMP)
- Natural Environment Site Strategy, dated 18 April 2017 (Approved 2 June 2017 as amended in red, 27 April 2017) (NESS)

Ecological features identified on-site included vegetation on site which provided suitable habitat for native fauna species, including the Koala and Grey-headed Flying-fox, as well aquatic values associated with waterways which traverse the site from the east. The site is not identified as including significant biodiversity corridors or biodiversity values under the Greater Flagstone PDA. The site is bound by Teviot Road to the west, Greenbank Road to the south and existing residential to the north and east. The proposed School Site adjoins existing cleared land in the west developed as Precinct 1.

No clearing within areas of Significant Biodiversity Value as identified by the NESS is to occur as part of the School site proposal. Clearing is contained to predominately non-remnant (Category X) vegetation, within minor encroachment within areas of Low Order Remnant Vegetation comprised of Least Concern RE. The School site does not involve encroachment within Confirmed Waterway Areas. It is noted that a Site Farm Dam formally occupied the proposal site, however has since been dewatered (under EDQ approvals) and infilled (refer **Plan 1**).

Two pockets of vegetation will be retained where clearing for construction access roads will occur. The northernmost road will form the future school site access. Appropriate controls with respect to the direction of clearing to appropriately flush fauna and not trap animals within this area must be addressed as part of the WPMP and WIMP prepared by the appointed Fauna Spotter Catcher, and the shown within the VMP.

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 and salvaged hollows 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.

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



FAUNA SPOTTERS RETRIEVING FAUNA



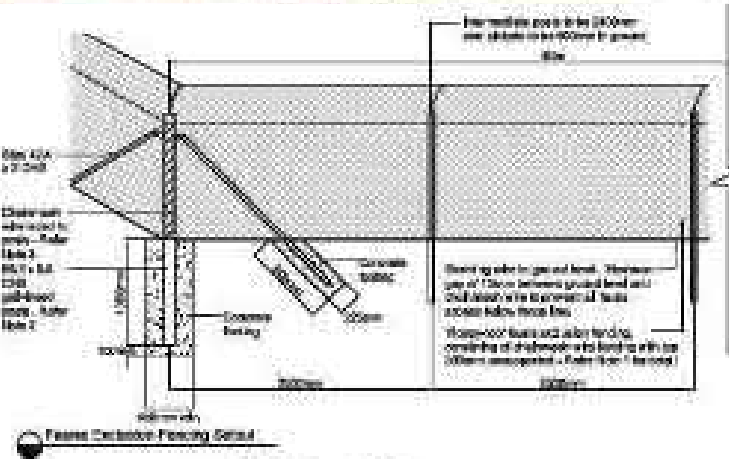
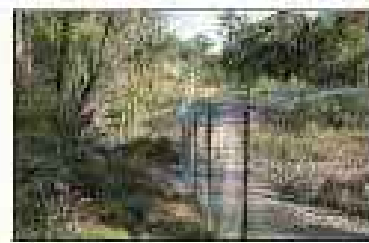
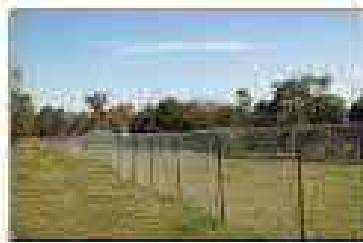
FAUNA SIGNAGE



FAUNA SPOTTER DURING TREE CLEARING



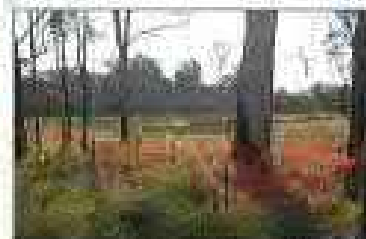
KOALA SIGNAGE



CONSTRUCTION FENCING DETAIL



TREE PROTECTION & EROSION FENCE



SIGNIFICANT TREE PROTECTION FENCING



1. Field Survey Areas



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

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Significant Biodiversity Values

Confirmed Areas of Remnant Vegetation Containing Endangered Regional Ecosystems

Areas proposed and confirmed through Property Map of Assessable Vegetation application as retaining remnant vegetation of an Endangered Regional Ecosystem type (82.49 hectares)

Confirmed Waterway Areas

Areas confirmed through field survey. As retaining features consistent with a watercourse within the extent of the Project Site (3.43 hectares)

Other Biodiversity Values

Low Order Remnant Vegetation

Of Concern and Least Concern Regional Ecosystem type areas (125.97 hectares)

Waterway Buffer Areas

Areas of preferred buffer extent to Project Site watercourses (13.71 hectares)

Other Drainage Features & Watercourses

Areas within the site conveying current hydrology flow paths - varying quality (0.39 hectares)

Project Site Farm Dams

Locations of artificially created farm dams (6.84 hectares)

Areas of Juvenile Native Vegetation

Areas of Project Site retaining varying degrees of native regeneration vegetation (154.0 hectares)

Issue	Date	Description	Drawn	Checked
B	19/09/2019	Phases amend.	TC	AD

0 30 60 120 180 240 m

Transverse Mercator | GDA 1994 | Zone 56 | 17,000 @ A3



## 4.2. Observed Fauna

Ecological surveys were undertaken by SHG over 2015 and 2016 to inform the NESS. Full details are provided in the *Technical Ecological Assessment Report – Implementation Guideline 14 & 17 Response for Teviot Road, Greenbank, prepared by SHG (March 2016)*. Refer to Plan 2-Field Survey Effort of the Technical EAR for further detail. Plan 3-Site Survey Zones of the Technical EAR shows that the proposed School Site is located predominately within 'Area 2 – Non-remnant Vegetation' and contains patches of 'Area 4- Remnant Vegetation' and an 'Area 3 -Waterway and Dam'.

A number of detailed fauna surveys were conducted in conjunction with detailed vegetation assessments over the application site. The purpose of these surveys was to identify habitat opportunities, observations of species presence and activity, and undertake targeted searches for actual usage by threatened and significant fauna species. Fauna surveys of the subject site comprised of extensive trapping and recording techniques.

Overall, seventy (70) fauna species made up of three (3) amphibians, forty-nine (49) birds, nine (9) mammals and nine (9) reptiles were recorded (refer **Table 4**). These were primarily common species local to the area, with the exception of two (2) Commonwealth and State listed species, Koala (*Phascolarctos cinereus*) and *Pteropus poliocephalus* (Grey-headed Flying-fox).

The assessment of the sites habitat values resulted in the vast majority of these listed species as having no optimal habitat on site as they are generally associated with less disturbed environments, topography that contains greater areas of rocky outcrops suitable for dens or vegetation communities dominated by rainforest species. Subsequently, 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 protected species.

**Table 4: Observed fauna species on-site**

Species	Common Name
<b>Birds</b>	
<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>Ardea intermedia</i>	Intermediate Egret
<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 Butchbird

Species	Common Name
<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</i>	Pale-headed Rosella
<i>Podargus strigoides</i>	Tawny Frogmouth
<i>Psophodes olivaceus</i>	Eastern Whipbird
<i>Rhipidura fuliginosa</i>	Grey Fantail
<i>Rhipidura leucophrys</i>	Willie Wagtail
<i>Smicrornis brevirostris</i>	Weebill
<i>Taeniopygia bichenovii</i>	Bouble-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</i>	Rainbow Lorikeet
<i>Vanellus miles</i>	Masked Lapwing
<b>Amphibians</b>	
<i>Litoria caerulea</i>	Common Green Treefrog
<i>Litoria fallax</i>	Eastern Sedgefrog
<i>Rhinella marina</i>	Cane Toad

Species	Common Name
<b>Mammals</b>	
<i>Bos taurus</i>	European Cattle
<i>Canis lupus familiaris</i>	Dog
<i>Lepus europaeus</i>	European Brown Hare
<i>Macropus gigantea</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
<b>Reptiles</b>	
<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** list endangered, vulnerable and near threatened (EVNT) species which may occur within the general proximity (5 km) of the development site (refer to **Appendices A & B** for full search results). These species have been identified through the EPBC Act's online PMST and the NCA Wildlife Online database search (discussed in **Section 2**).

Targeted searches were undertaken for Koala (*Phascolarctos cinereus*), *Delma torquata* (Collared delma), *Pteropus poliocephalus* (Grey-headed Flying-fox) and *Lathamus discolor* (Swift Parrot) as they were identified as

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. Five (5) significant fauna species were considered as possible occurrences on the site, due to habitat features or recorded presence in the area (refer to **Table 5**) and were subsequently targeted for fauna survey. As a result of the Habitat Suitability and Risk Assessment analysis (**Appendix C**), no migratory species were considered to be at risk from impacts of the proposed development. This is because no suitable habitat was identified on-site as the majority of the species were described as occurring within coastal environments, moist rainforest or lowland forests, or were strictly aerial during their migratory period over the subject area (refer **Appendix C** for detailed analysis).



**Table 5: Threatened species with possible suitable habitat on-site**

Scientific Name	Common Name	Habitat	EPBC Status	NCA Status
<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 stony lithosol soils supporting open eucalypt and Acacia woodland with a sparse understorey of shrubs and tussocks or semi-evergreen vine thicket. The ground cover is predominantly native grasses such as Kangaroo Grass, Barbed-wire Grass, Wiregrass and Lomandra.	Vulnerable	Vulnerable
<i>Lathamus discolor</i>	Swift Parrot	This species has been recorded within woodland and forest patches containing <i>Eucalyptus crebra</i> (Narrow Leaf Ironbark), <i>Eucalyptus tereticornis</i> (Forest Red Gum) as well as yellow box forests and feeds mostly on nectar and mainly from eucalypts.	Endangered	Endangered
<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 forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands. It also feed on commercial fruit crops.	Vulnerable	-

## 4.4. Potential Impacts

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

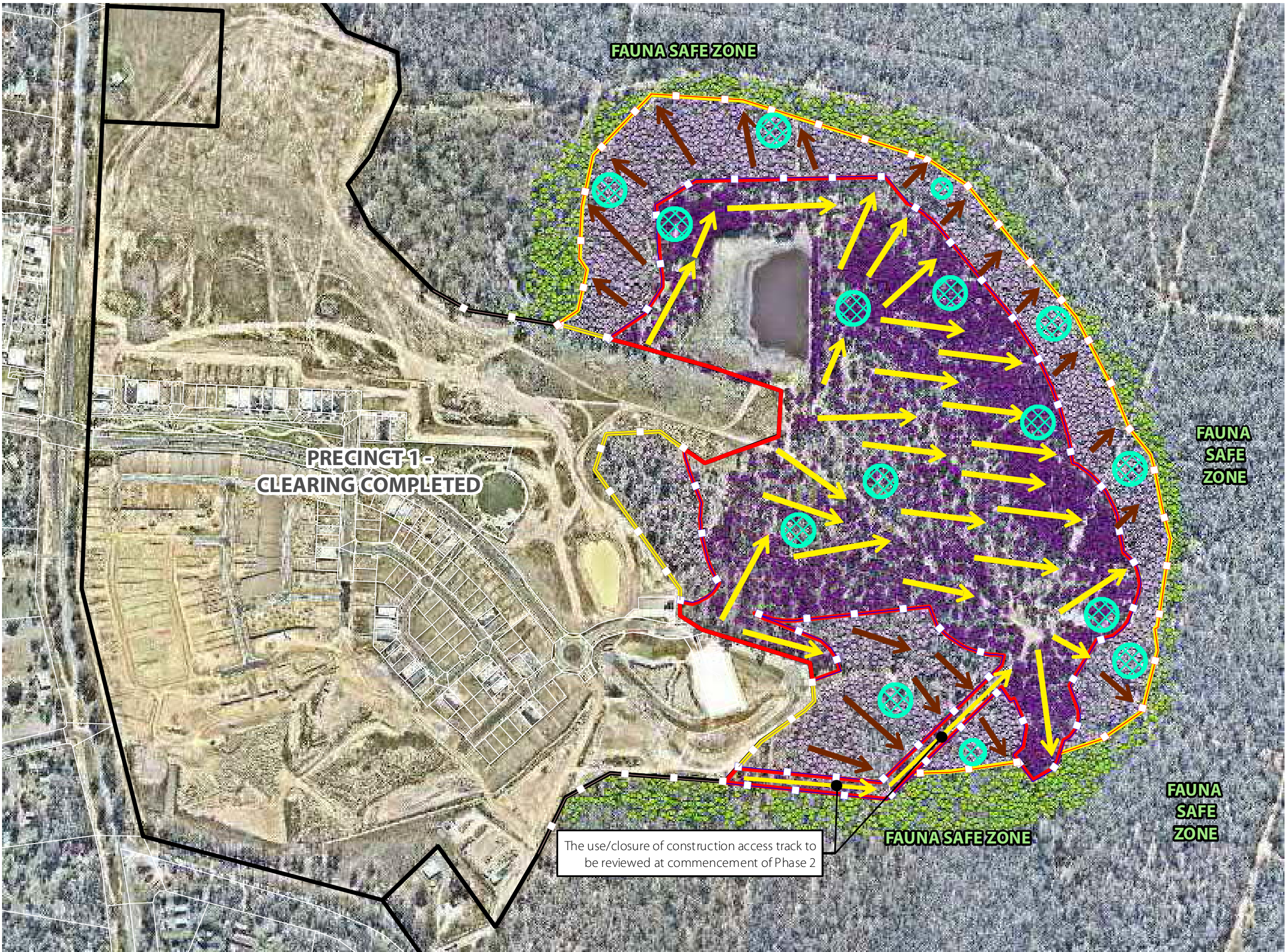
CONSTRUCTION IMPACTS	OPERATIONAL IMPACTS
<ul style="list-style-type: none"> <li>- Direct removal of site vegetation</li> <li>- Loss of habitat</li> <li>- Loss of food sources</li> <li>- Excavation / compaction/ changes in existing ground levels</li> <li>- Altering of hydrological flows</li> <li>- Noise, vibration and dust</li> <li>- Fragmentation of habitat</li> <li>- Erosion and sedimentation</li> <li>- Threats associated with open cuts etc. and fauna entrapment</li> </ul>	<ul style="list-style-type: none"> <li>- Weed introduction (garden escapees)</li> <li>- Increased hydrology with increased hardstand</li> <li>- Altering of run-off chemical and nutrient components (quality)</li> <li>- Barriers to fauna movement</li> <li>- Vehicle and pedestrian movement and trespass</li> <li>- Introduction of domestic and predatory species</li> </ul>

Generally, most impacts for developments are associated directly with vegetation clearing. **Plan 2** provides a development assessment plan showing the vegetation clearing over the proposed footprint.

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.

# 2. Summary Clearing Plan



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

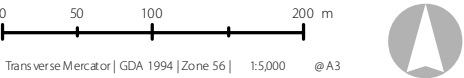
Layer Sources  
Old State Cadastre and Mapping layers © State of Queensland (Department of Natural Resources and Mines) 2019. Updated data available at <http://qldspatial.information.qld.gov.au/catalogue/>  
Aerial Imagery © Naamap, 2019

\* 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**

- Site DCDB
- Old DCDB
- Phase 1 civil works extent
- Phase 2
- Phase 1 - Tree to remove
- Phase 2 - Tree to remove
- Tree to retain
- Phase 1 tree protection/fauna friendly fencing during clearing works. To be made exclusion fencing post clearing works
- Tree protection/fauna exclusion fencing (retain Precinct 1 fencing)
- Tree protection/fauna friendly fencing (revised locations of fence when Phase 2 commences) To be made exclusion fencing post clearing works
- Phase 1 Clearing direction
- Phase 2 Clearing direction
- Vegetation stockpiling location (indicative)

Issue	Date	Description	Drawn	Checked
B	19/09/2019	Phases amend.	TC	AD



## 5. Fauna Management Plan Specifications

### 5.1. Pre-Construction

Management Item	Responsibility	Timing	Reporting
<b>4.1.1 Temporary Fencing</b>			
<p>Prior to the commencement of clearing activities, the applicant must fence the limits of vegetation strips and install fauna exclusive 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.</p> <ul style="list-style-type: none"> <li>Fencing shall be fauna friendly and erected to direct fauna towards vegetation retained within the balance land to the east.</li> <li>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.</li> <li>Once terrestrial fauna have safely moved out of the area, temporary fauna exclusion fencing will then be erected for the two polygons of retained vegetation (identified as future sports ovals) to ensure animals do not re-enter these areas and become trapped.</li> <li>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.</li> <li>Only approved weed management, landscape and revegetation works are to occur beyond the temporary protection fencing.</li> <li>Fencing shall be reinstated immediately if damaged or knocked down.</li> <li>Fencing shall remain until the completion of all bulk earthworks and removed just prior to practical completion.</li> </ul>	Site Supervisor	No more than two weeks prior to clearing works commencing on-site.	Inspected by Proponent, the Environmental Coordinator, or Site Supervisor.



Management Item	Responsibility	Timing	Reporting
<b>4.1.2 Contractor Education and Awareness</b>			
<p>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 CEMP but as a minimum will include:</p> <ul style="list-style-type: none"> <li>• A copy of this FMP kept on site (Site Office).</li> <li>• 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.</li> <li>• A list of relevant contact numbers as listed in Section 8 kept in a visible and accessible location in the site office.</li> </ul>	Site Supervisor / Proponent.	Prior to the commencement of construction and as part of the site induction for new staff and sub-contractors.	Site Supervisor
<b>4.1.3 Fauna Spotter Catcher</b>			
<p>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.</p> <p>In addition, the Fauna Spotter Catcher must assess the site for:</p> <ul style="list-style-type: none"> <li>• The presence of native fauna and/or supporting habitat on-site.</li> <li>• Available habitat suitable for likely fauna species.</li> <li>• The presence of any fauna that is 'protected wildlife' as defined under the <i>Nature Conservation Act 1992</i> (protected wildlife).</li> </ul>	Site Supervisor / Proponent.	No more than two weeks prior to clearing works commencing on site.	Site Supervisor / Environmental Coordinator



Management Item	Responsibility	Timing	Reporting
<ul style="list-style-type: none"> <li>The presence of any species that is a 'listed threatened species' under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth) (listed threatened species).</li> </ul>			

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
<b>4.2.1 Fauna Spotter Catcher</b>			
<p>For all vegetation clearing:</p> <ul style="list-style-type: none"> <li>Immediately prior to the commencement of clearing of native vegetation a daily visual inspection of the area must be carried out.</li> <li>A Fauna Spotter Catcher must be present during all clearing activities and inspect trees continuously ahead of clearing for Koalas.</li> <li>In the event of an animal being located, an area within a minimum 5 m radius should be established excluding machinery from the area until the animal has relocated (usually overnight). The no go zone should be determined by the Fauna Spotter Catcher dependant on the species.</li> <li>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.</li> <li>Translocation of threatened fauna is not permitted and fauna must move off at its own accord. There is no approval to translocate threatened fauna as part of operational works onsite, refer to Section 6 of this document for further details.</li> <li>Any native fauna orphaned or injured by the development process must be immediately reported to DES, RSPCA and the Environmental Coordinator and Proponent.</li> <li>The Site Supervisor is responsible for the safe management of site fauna and implementation of these specific requirements.</li> <li>All personnel on-site must undertake all works in accordance with all direction/s given by the DES approved Fauna Spotter Catcher.</li> </ul>	Fauna Spotter Catcher.	Must be present for pre-start meeting and during all onsite clearing.	Proponent / Site Supervisor / Environmental Coordinator

### 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

Management Item	Responsibility	Timing	Reporting
<p>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.</p> <p>Prior to the commencement and during felling operations, it is the responsibility of the DES approved Fauna Spotter to:</p> <ol style="list-style-type: none"> <li>1. Be present at the site of felling operations;</li> <li>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</li> <li>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.</li> </ol>			
<b>4.2.2 Direction of Clearing</b>			
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.	Site Supervisor / Earthworks Contractor / Sub Contractor.	As part of clearing earthworks operations.	Site Supervisor / Proponent / Environmental Coordinator
<b>4.2.3 Monitoring of Clearing/Earthworks</b>			
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.	DES Fauna Spotter Catcher as employed by the Construction Contractor.	As part of clearing/ earthworks operations.	Site Supervisor / Proponent/ Environmental Coordinator
<b>4.2.4 Timing of Clearing</b>			
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

Management Item	Responsibility	Timing	Reporting
<b>4.2.4 Relocation</b>			
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

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
<b>4.3.1 Minimise Entrapment</b>			
Trenches, manholes, excavation for footings, etc. pose threats to native animal entrapment when left open and should be backfilled as soon as possible. In some locations barriers may be required overnight to eliminate the accidental capture of animals moving through the site.	Site Supervisor / Earthworks Contractor / Sub Contractor.	As part of site earthworks.	Site Supervisor / Proponent / Environmental Coordinator
When trenches are not backfilled they are to be inspected at the commencement of each day for trapped or injured wildlife.	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.			
<b>4.3.2 Regular and Defined Access</b>			
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.
<b>4.3.3 Stockpile and Rubbish Locations</b>			
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
<b>4.4.1 Installation</b>			
As part of the VMP the Environmental Coordinator will determine the number of lost habitat values (hollows) that will require replacement. The specific location of nest boxes to be installed in retained vegetation bordering along the waterways and as directed in the VMP prepared by the Environmental Coordinator. The VMP will require that all nest box locations are to be GPS recorded and coordinates provided to the Environmental Coordinator, Proponent and EDQ.	Environmental Coordinator	Nest boxes and salvaged hollows installed commensurate with clearing progression.	Site Supervisor / Proponent / Environmental Coordinator / EDQ
<b>4.4.2 Maintenance and Monitoring</b>			
Nest boxes are to be monitored and maintained for 12 months. Maintenance activities include, but are not limited to, the following: <ul style="list-style-type: none"> <li>The replacement of failed or damaged nest boxes</li> <li>The removal of invasive species</li> <li>The removal of invasive species will be determined by the engaged DES Fauna Spotter Catcher or suitably qualified person.</li> </ul>	Nest Box Contractor	12 months	Site Supervisor / Proponent / Environmental Coordinator / EDQ
<b>4.4.3 Reporting Schedule and Pro forma</b>			
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
<b>4.5.1 Non-Compliance</b>			
Despite the provisions in this FMP, in the unlikely event of a non-compliance or breach, where a contractor or sub-contractor witnesses or is involved in activities which do not comply with this FMP the following procedure shall be followed:	Site Supervisor	On-going	Site Supervisor / Proponent / Environmental Coordinator / EDQ
<ul style="list-style-type: none"> <li>All breaches of the FMP must immediately be reported to the Proponent.</li> <li>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.</li> <li>Non-compliance activities should be halted immediately and impacts rectified (fencing reinstalled, stock piling relocated, etc.).</li> <li>Site staff should notify the site supervisor who is responsible for either rectifying actions or contacting the Environmental Coordinator.</li> <li>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.</li> </ul>			
<b>4.5.2 Monitoring and Reporting</b>			
The site shall be monitored at all times. This should include:	All Site Staff	On-going	EDQ / Environmental Coordinator / Proponent
<ul style="list-style-type: none"> <li>Daily inspections by the Site Supervisor.</li> <li>Periodical inspections by the Environmental Coordinator.</li> <li>Random and periodical inspections by the Proponent.</li> </ul>			
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 and Proponent no more than two (2) weeks after clearing has finished, specifying the following:			

## ■ Fauna Management Plan

- Length and time of clearing;
- Details of any fauna that were caught and/or released and the placement of any release/s;
- Inventory of species encountered during tree removal;
- Brief summary of any fauna handling, mortalities or other relevant fauna related incidents that may have occurring during tree removal; and

The Fauna Spotter Catcher Post-clearing Report is to be submitted to the Environmental Coordinator, Proponent and EDQ following the completion of tree clearing activities and prior to commencement of the use of the premises.

### 4.5.3 Orphaned or Injured Fauna

All native animal fatalities must be reported immediately to the Environmental Coordinator, All Site Staff the Proponent and DES.

On-going

EDQ / DES /  
Environmental  
Coordinator /  
Proponent

Where any site staff (contractors or sub-contractors) witnesses or locates distressed, injured or orphaned animals they should immediately contact the Environmental Coordinator and Proponent. 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, the Proponent 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 adjacent land for protected/listed species present on the site and/or the requirement for relocation of threatened fauna. The following table details the actions to be taken in these events.

Fauna Spotter Catcher required – threatened species and their habitat present adjacent to the site	<p>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:</p> <ul style="list-style-type: none"> <li>• Fauna Spotter Catcher credentials and for handling of anticipated protected species</li> <li>• A list of anticipated species; and</li> <li>• A Wildlife Protection Management Plan (WPMP) and Wildlife Habitat Impact Mitigation Plan (WHIMP)</li> </ul>
Fauna Spotter Catcher required – threatened species present and/or relocation required	<p>If the Fauna Spotter Catcher’s Assessment determines that any protected wildlife or listed species are present, and/or threatened fauna are to be systematically relocated, a Fauna Translocation Management Plan (FTMP) 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 with a development application for operational works (vegetation clearing):</p> <ul style="list-style-type: none"> <li>• Fauna Spotter Catcher credentials and for handling of anticipated protected species</li> <li>• A list of anticipated species; and</li> <li>• DES endorsement of the proposed FTMP; and</li> <li>• A copy of the DES endorsed FTMP.</li> </ul>



## 7. Koala Habitat

The site is not identified as within a State mapped assessable Koala habitat area, however, does include Koala habitat mapped under State planning Policy and the following should be complied with as part of this FMP to ensure safe removal should any Koalas be encountered on site:

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

## 8. Site Contacts

Role	Contact Details
<b>Proponent</b>	Mark Clancy (Development Manager) Mirvac Queensland Pty Ltd (07) 38295305
<b>Site Supervisor</b>	<i>To be appointed.</i>
<b>Environmental Coordinator</b>	Andrew Davies Saunders Havill Group Ph. (07) 3251 9444
<b>Administering Authority</b>	Brandon Bouda Economic Development Queensland Ph. (07) 3452 7422
<b>Council</b>	Adam Avalos Logan City Council Ph. (07) 3412 4874
<b>Construction Contractor</b>	<i>To be appointed.</i>
<b>Fauna Spotter and Catcher</b>	<i>To be appointed.</i>
<b>Veterinarian (in closest proximity to application site)</b>	The Bloomin' Vet 15 Pub Lane Greenbank QLD 4124 (07) 3297 6666 (all hours) Monday-Friday, 8am-6pm Saturday, 9am-5pm Sunday, 9am-2pm  <i>After Hours (24 Hours &amp; Public Holidays)</i> Animal Emergency Services 1 Lexington Road Underwood QLD 4119 (07) 3423 1888
<b>Department of Environmental and Science</b>	For wildlife incidents and licensing and permits: Ph. 1300 130 372
<b>RSPCA Queensland</b>	For reporting injured, sick or orphaned wildlife: Ph. 1300 ANIMAL (1300 264 625)

## 9. Appendices

### Appendix A

Protected Matters Search Tool

*Environment Protection and Biodiversity Conservation Act 1999*

### Appendix B

Wildlife Online Search

*Nature Conservation Act 1992*

### Appendix C

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: 17/07/19 17:18:47

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



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[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](#).

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Wetlands of International Importance:</a>	2
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	4
<a href="#">Listed Threatened Species:</a>	37
<a href="#">Listed Migratory Species:</a>	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.

<a href="#">Commonwealth Land:</a>	1
<a href="#">Commonwealth Heritage Places:</a>	1
<a href="#">Listed Marine Species:</a>	22
<a href="#">Whales and Other Cetaceans:</a>	None
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None

## Extra Information

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

<a href="#">State and Territory Reserves:</a>	2
<a href="#">Regional Forest Agreements:</a>	None
<a href="#">Invasive Species:</a>	42
<a href="#">Nationally Important Wetlands:</a>	1
<a href="#">Key Ecological Features (Marine)</a>	None

# Details

## Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)		[ Resource Information ]
Name	Proximity	
<a href="#">Moreton bay</a>	20 - 30km upstream	
<a href="#">Moreton bay</a>	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	
<a href="#">Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community</a>	Endangered	Community may occur within area	
<a href="#">Lowland Rainforest of Subtropical Australia</a>	Critically Endangered	Community may occur within area	
<a href="#">Swamp Tea-tree (Melaleuca irbyana) Forest of South-east Queensland</a>	Critically Endangered	Community likely to occur within area	
<a href="#">White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</a>	Critically Endangered	Community may occur within area	

Listed Threatened Species		[ Resource Information ]
Name	Status	Type of Presence
Birds		
<a href="#">Anthochaera phrygia</a> Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Dasyornis brachypterus</a> Eastern Bristlebird [533]	Endangered	Species or species habitat likely to occur within area
<a href="#">Erythrotriorchis radiatus</a> Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Geophaps scripta scripta</a> Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area
<a href="#">Grantiella picta</a> Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area

Name	Status	Type of Presence
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Poephila cincta cincta</a> Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area
<a href="#">Rostratula australis</a> Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
<a href="#">Turnix melanogaster</a> Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to occur within area
Fish		
<a href="#">Maccullochella mariensis</a> Mary River Cod [83806]	Endangered	Translocated population known to occur within area
Insects		
<a href="#">Argynnis hyperbius inconstans</a> Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area
Mammals		
<a href="#">Chalinolobus dwyeri</a> Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Dasyurus maculatus maculatus (SE mainland population)</a> Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
<a href="#">Petauroides volans</a> Greater Glider [254]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Petrogale penicillata</a> Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area
<a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a> Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Potorous tridactylus tridactylus</a> Long-nosed Potoroo (SE Mainland) [66645]	Vulnerable	Species or species habitat may occur within area
<a href="#">Pteropus poliocephalus</a> Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Plants		
<a href="#">Arthraxon hispidus</a> Hairy-joint Grass [9338]	Vulnerable	Species or species habitat may occur within area
<a href="#">Bosistoa transversa</a> Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Cycas ophiolitica</a> [55797]	Endangered	Species or species habitat likely to occur within area



Name	Status	Type of Presence
<a href="#">Dichanthium setosum</a> bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Macadamia integrifolia</a> Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Macadamia tetraphylla</a> Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]	Vulnerable	Species or species habitat may occur within area
<a href="#">Notelaea ipsviciensis</a> Cooneana Olive [81858]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Notelaea lloydii</a> Lloyd's Olive [15002]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Phaius australis</a> Lesser Swamp-orchid [5872]	Endangered	Species or species habitat likely to occur within area
<a href="#">Plectranthus habrophyllus</a> [64589]	Endangered	Species or species habitat likely to occur within area
<a href="#">Samadera bidwillii</a> Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Thesium australe</a> Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area

Reptiles		
<a href="#">Delma torquata</a> Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
<a href="#">Furina dunmalli</a> Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area
<a href="#">Saiphos reticulatus</a> 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		
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
<a href="#">Cuculus optatus</a> Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
<a href="#">Monarcha trivirgatus</a> Spectacled Monarch [610]		Species or species habitat likely to occur within area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat may occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land		[ <a href="#">Resource Information</a> ]
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		[ <a href="#">Resource Information</a> ]
Name	State	Status
Natural		
<a href="#">Greenbank Military Training Area (part)</a>	QLD	Listed place
Listed Marine Species		[ <a href="#">Resource Information</a> ]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species

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

Name	Threatened	Type of Presence
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		area  Species or species habitat known to occur within area
<a href="#">Rostratula benghalensis (sensu lato)</a> Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

### Extra Information

State and Territory Reserves	[ <a href="#">Resource Information</a> ]
Name	State
A and T Koala Billabong	QLD
Koolena	QLD

Invasive Species	[ <a href="#">Resource Information</a> ]
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





# 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

-27.73849 152.99634

# 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: All

Date: All

Latitude: -27.7392

Longitude: 152.9965

Distance: 5

Email: keiragrundy@saundershavill.com

Date submitted: Wednesday 17 Jul 2019 17:20:20

Date extracted: Wednesday 17 Jul 2019 17:30:02

The number of records retrieved = 6

### **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.

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Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Limnodynastidae	<i>Adelotus brevis</i>	tusked frog		V		2
animals	birds	Cacatuidae	<i>Calyptorhynchus lathamii lathamii</i>	glossy black-cockatoo (eastern)		V		1
animals	mammals	Dasyuridae	<i>Dasyurus maculatus maculatus</i>	spotted-tailed quoll (southern subspecies)		V	E	8
animals	mammals	Phascolarctidae	<i>Phascolarctos cinereus</i>	koala		V	V	183
animals	mammals	Pseudocheiridae	<i>Petauroides volans volans</i>	southern greater glider		V	V	3/1
plants	Equisetopsida	Myrtaceae	<i>Melaleuca irbyana</i>			E		2/2

#### CODES

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

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*. The codes are Extinct 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

Scientific Name	Common Name	Habitat/ Impact	EPBC Status	NCA Status	Potential to occur
<i>Adelotus brevis</i>	Tusked Frog	Wet eucalypt forest, rainforest, and sometimes dry eucalypt forest, where it can be found in close proximity to suitable breeding habitat ie ponds and slow-moving sections of creeks. Also found in cleared, open country.		Vulnerable	Unlikely
<i>Anthochaera phrygia</i>	Regent Honeyeater	Regent Honeyeaters mostly occur in dry Box-Ironbark Eucalypt woodland and dry sclerophyll forest associations in areas of low to moderate relief, wherein they prefer moister, more fertile sites. These areas are generally associated with creek flats and river valleys and foothills. These woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes (for feeding). Areas containing the aforementioned habitat features are limited across the site.	Critically Endangered		Unlikely
<i>Botaurus poeciloptilus</i>	Australasian Bittern	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 possibly survives only in protected areas such as the Cooloola and Fraser regions.	Endangered		Unlikely
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat, Large Pied Bat	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. Absence of suitable habitat requirements from site.	Vulnerable		Unlikely
<i>Crinia tinnula</i>	Wallum Froglet	Restricted to freshwater swamps in lowland coastal areas and is found in associated vegetation communities such as heath, sedgeland and woodland on nutrient-poor sandy soils. Acidic swamps and lakes in these areas provide essential breeding habitat for wallum-dependent frog species. The wallum froglet has also been observed in disturbed heath habitat.		Vulnerable	Unlikely
<i>Cyclopsitta diophthalma coxeni</i>	Coxen's parrot	The Coxen's fig Parrot occurs in rainforest habitats including subtropical rainforest, dry rainforest, littoral and developing littoral rainforest, and vine forest. Food is mainly taken from figs however other species fruit have been recorded in their diet including <i>Elaeocarpus grandis</i> , <i>Syzygium corynanthum</i> , <i>Litsea reticulata</i> and <i>Grevillea robusta</i> . No rainforest habitat occurs at this site.	Endangered		Unlikely
<i>Dasyornis brachypterus</i>	Eastern Bristlebird	The Eastern Bristlebird inhabits low dense vegetation in a broad range of habitat types including sedge land, heathland, swampland, shrub land, 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—which is observed to be limited at this site.	Endangered		Unlikely
<i>Dasyurus hallucatus</i>	Northern Quoll	lives in a range of open woodland and open forest types preferring rocky areas. Northern quolls have also been recorded in vineforest, mangroves, sugarcane farms and urban areas. Their greatest breeding	Endangered		Unlikely

Scientific Name	Common Name	Habitat/ Impact	EPBC Status	NCA Status	Potential to occur
		success is known to occur at sites near water. Present distribution in Queensland is fragmented into a number of populations, with the highest densities found in Cape York, the Atherton Tablelands and the Mackay-Whitsunday area. Occasionally there are records of northern quolls as far south as Maleny.			
<i>Dasyurus maculatus maculatus mainland</i>	Spotted-tail Quoll, Tiger Quoll (SE mainland population)	Preference for mature wet forest habitat. Unlogged forest or forest that has been less disturbed by timber harvesting is also preferable. This predominantly nocturnal species rests during the day in dens. Habitat requirements include suitable den sites such as hollow logs, tree hollows, rock outcrops or caves. Individuals require an abundance of food such as birds and small mammals, and large areas of relatively intact vegetation through which to forage. Suitable habitat on site is limited.	Endangered		Unlikely
<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. Suitable habitat on site is limited.	Vulnerable		Unlikely
<i>Erythroriorchis radiatus</i>	Red Goshawk	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.	Vulnerable		Possible visitor
<i>Furina dunmali</i>	Dunmall's Snake	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 Archokoora, Oakey, Miles, Glenmorgan, Wallaville, Gladstone, Lake Broadwater, Mount Archer, Exhibition Range National Park, roadside reserves between Inglewood and Texas, Rosedale, Yeppoon and Lake Broadwater Conservation Park.	Vulnerable		Unlikely
<i>Geophaps scripta scripta</i>	Squatter Pigeon (southern)	This species inhabits open grasslands and woodlands typically with a native understorey although may occur in artificial pasture.	Vulnerable		Unlikely
<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. No habitat opportunities observed on site.	Endangered		Unlikely

Scientific Name	Common Name	Habitat/ Impact	EPBC Status	NCA Status	Potential to occur
<i>Maccullochella mariensis</i>	Mary River Cod	The Mary River Cod occurs mainly in pools within relatively undisturbed tributaries. They prefer relatively large and deep shaded pools with abundant, slowly flowing water. No suitable habitat to support this species was observed throughout the assessment area.	Endangered		Unlikely
<i>Mixophyes iteratus</i>	Giant Barred Frog	The Giant Barred Frog occurs in rainforests and wet sclerophyll forests in upper to lower catchment areas. This species has been observed to prefer a closed forest canopy with a relatively light cover of vegetation at ground level. No habitat opportunities observed on site.	Endangered	Endangered	Unlikely
<i>Nannoperca oxleyana</i>	Oxleyan Pygmy Perch	Prefers slow flowing or still waters. It appears only to be found in slightly acidic and tannin-stained water including swamps, streams and dune lakes that lie in the lowland, coastal 'wallum' heaths. It shelters near or within emergent vegetation or among the roots of riparian plants that grow into the water from undercut or vertical banks. It has a restricted and patchy distribution that runs along the coast from Tin Can Bay, just north of the Noosa River drainage system to the Richmond River in northern New South Wales. No habitat opportunities observed on site.	Endangered	Vulnerable	Unlikely
<i>Numenius madagascariensis</i>	Eastern Curlew	The species is most commonly associated with sheltered coasts, especially estuaries, bays, harbours, inlets and coastal lagoons, with large intertidal mudflats or sandflats, often with beds of seagrass. Occasionally, the species occurs on ocean beaches (often near estuaries), and coral reefs, rock platforms, or rocky islets. The birds are often recorded among saltmarsh and on mudflats fringed by mangroves, and sometimes use the mangroves. No habitat opportunities observed on site.	Critically Endangered	Vulnerable	Unlikely
<i>Phascolarctos cinereus</i>	Koala	They are found in a range of habitats, from coastal islands and tall eucalypt forests to low woodlands inland. The species is known to occur within 5 kilometres of the site.	Vulnerable	Vulnerable	Possible
<i>Phyllodes imperialis smithersi</i>	Phyllodes imperialis smithersi	The Pink Underwing Moth is found below the altitude of 600m in undisturbed, subtropical rainforest. It occurs in association with the vine Carronia multisepalea. No suitable habitat to support this species was observed throughout site.	Endangered		Unlikely
<i>Poephila cincta</i>	Black-throated Finch (southern)	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.	Endangered		Unlikely
<i>Potorous tridactylus tridactylus</i>	Long-nosed Potoroo (SE mainland)	Occurs in a range of vegetation types from subtropical and warm temperate rainforest through tall open forest with dense understory to dense coastal heaths. Its main requirement is thick groundcover, which it needs for protection and nesting material. It also prefers light soils that are easy to dig in for the underground roots and fungi that it eats. The home range size of the long-nosed potoroo varies from 2-5 ha, and it is often influenced by habitat quality. It has a patchy distribution from Queensland to south-east South Australia. In Queensland there are scattered populations that extend from south-east Queensland to northern New South Wales. There is limited thick groundcover over the site to provide protection and nesting material for the species.	Vulnerable		Unlikely



Scientific Name	Common Name	Habitat/ Impact	EPBC Status	NCA Status	Potential to occur
<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 forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands. It also feed son commercial fruit crops. No individuals or roosting camps were observed throughout the assessment area. Suitable feeding habitat and possible roosting habitat was recorded on site. This species is highly likely to occur when the Eucalypts are in flower.	Vulnerable	-	Likely (during flowering)
<i>Rostratula australis</i>	Rostratula australis	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.	Endangered		Unlikely
<i>Turnix melanogaster</i>	Black-breasted Button-quail	Typical habitat occurs in dry rainforest and vegetation immediately adjacent to rainforest. However the species has also been recorded in a variety of low coastal heathlands around Fraser Island and nearby mainland. Deep leaf litter in which the species can forage appears to be particularly favoured.	Vulnerable		Unlikely
<i>Xeromys myoides</i>	Water Mouse	In south-east Queensland Water Mouse habitat includes the upper tidal areas on the shoreward side of the mangrove zone often support sedgelands or salt meadows, comprised of <i>Juncus kraussii</i> , <i>Baumea juncea</i> , <i>B. rubiginosa</i> , <i>Fimbristylis ferruginea</i> and <i>Sporobolus virginicus</i> . The adjacent terrestrial communities are typically freshwater wetland, coastal woodland or wet heathland dominated variously by species such as <i>Melaleuca quinquenervia</i> , <i>Corymbia intermedia</i> , <i>Casuarina glauca</i> , <i>Eucalyptus robusta</i> , <i>Leptospermum liversidgei</i> , <i>Gahnia sieberiana</i> and <i>Caustis blakei</i> .	Vulnerable		Unlikely