PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2018/915

Date: 3 August 2018

Queensland Government

Fauna Management Plan

Flagstone
Stages 2-5 School Site

Prepared for Peet Limited
29 June 2018

Job No. 8047

PEET

Flagstone

saunders havill group

Document Control

Document: Fauna Management Plan for Flagstone – Stages 2-5 School Site, prepared by Saunders Havill Group for Peet Limited.

Document Issue

Issue	Date	Prepared By	Checked By
A	13.12.17	KG	AD
B	31.01.18	KG	AD
C	07.02.18	KG	AD
D	29.06.18	KG	AD

Prepared by
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Acronyms

CEMP	Construction Environmental Management Plan
EDQ	Economic Development Queensland (Qld)
EHP	Department of Environment and Heritage Protection (Qld)
EPBC	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
EVNT	Endangered, Vulnerable and Near Threatened (as listed in the NCWR)
FMP	Fauna Management Plan
NCA	*Nature Conservation Act 1992* (Qld)
NCWR	Nature Conservation (Wildlife) Regulation 2006 (Qld)
NESS	Natural Environment Overarching Site Strategy
PDA	Priority Development Area
PDA	Priority Development Area
VMP	Vegetation Management Plan
WHIMP	Wildlife and Habitat Impact Mitigation Plan
WPMP	Wildlife Protection and Management Plan

1. Introduction

Saunders Havill Group (SHG) was engaged by PEET Limited (PEET) to prepare a Fauna Management Plan (FMP) for the proposed school site and access roads within Stages 2-5 of the Flagstone City project (hereafter referred to as 'the site'). The site is located within the Greater Flagstone Priority Development Area (PDA). This FMP has been prepared to manage impacts and protect native animals during clearing and construction.

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

This FMP has been prepared for clearing for a school site and access roads located in Stages 2-5 of Flagstone City. Stages 2-5 also fall within approved Context Plan Area 1. Refer to Figure 1 for the site context and Figure 2 for the site aerial.

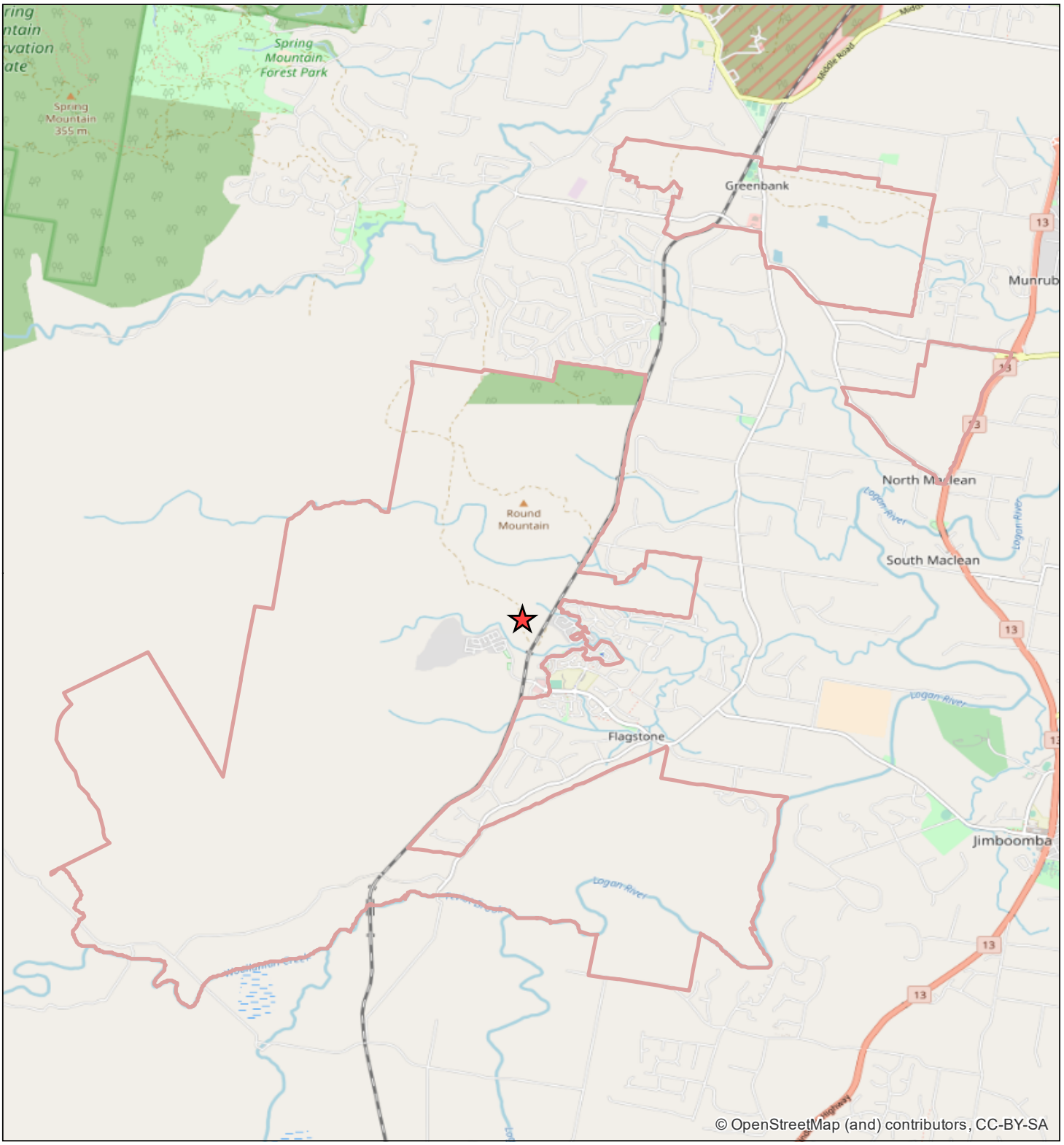
This FMP includes step by step procedures for the management of fauna prior to, during and post-vegetation clearing and construction activities to reduce potential impacts. Fauna management specifications and principles incorporated into this FMP apply generally to all native animals and focus on incorporating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

1.1. Property Summary

Key site details are provided in Table 1 below.

Table 1: Property Summary

Address	New Beith Road, Flagstone
RPD	Lot 2 on RP47120
Local Government Area	Logan City Council
Administering Authority	Economic Development Queensland
Priority Development Area	Greater Flagstone PDA
Planning Scheme	Greater Flagstone Urban Development Area Development Scheme
Area Classification / Zone	Urban Living
Existing Land Use	Vacant



Legend

Flagstone Stage 2-5 Phase 1

Greater Flagstone PDA

Figure 1

Site Context

File ref. 8047 E Figure 1 Site Context FMP 25 A
Date *24/01/2018*
Project *Flagstone City, Stage 2-5 Phase 1*

0 500 1,000 2,000 *m*

Scale (A4): 1:93,858 [GDA 1994 MGA Z56]

N

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Layer Sources QLD GIS Layers (QLD Gov. Information Service 2017)

Legend

Civil works extent

Figure 2

Site Aerial

File ref. 8047 E Figure 2 Site Aerial FMP 25 C
Date *2/07/2018*
Project *Flagstone City, Stage 2-5 Phase 1*

0 50 100 200 *m*

Scale (A4): 1:6,000 [GDA 1994 MGA Z56]

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Layer Sources QLD GIS Layers (QLD Gov. Information Service 2017), Aerial (Nearmap 2017)

2. Legislative Context

2.1. Environment Protection and Biodiversity Conservation Act 1999

The Australia 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 Online Protected Matters Search Tool. 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 5km radius of the development site. Table 2 lists a summary of these results relevant to site fauna. The complete results of this search are included in Appendix A. The Flagstone City Project retains a full approval achieved under the EPBC Act (2014/7206). Mandatory aspects of this approval are included in this FMP.

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

Wetlands of International Importance (Ramsar)		
Moreton Bay		
Threatened Ecological Communities		
Lowland Rainforest of Subtropical Australia – Critically Endangered		
Swamp Tea-tree (Melaleuca irbyana) Forest of South-east Queensland – Critically Endangered		
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland – Critically Endangered		
Threatened Species		
Scientific Name	**Common Name**	**Status**
Birds		
Anthochaera phrygia	Regent Honeyeater	Critically Endangered
Botaurus poiciloptilus	Australasian Bittern	Endangered
Calidris ferruginea	Curlew Sandpiper	Critically Endangered
Dasyornis brachypterus	Eastern Bristlebird	Endangered
Erythrotriorchis radiatus	Red Goshawk	Vulnerable
Geophaps scripta scripta	Squatter Pigeon (southern)	Vulnerable
Grantiella picta	Painted Honeyeater	Vulnerable
Lathamus discolor	Swift Parrot	Critically Endangered
Numenius madagascariensis	Eastern Curlew	Critically Endangered
Poephila cincta cincta	Black-throated Finch (southern)	Endangered
Rostratula australis	Australian Painted Snipe	Endangered
Turnix melanogaster	Black-breasted Button-quail	Vulnerable

Scientific Name	Common Name	Status
Fish		
Maccullochella mariensis	Mary River Cod	Endangered
Insects		
Argynnis hyperbius inconstans	Australian Fritillary	Critically Endangered
Mammals		
Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat	Vulnerable
Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)	Endangered
Petauroides volans	Greater Glider	Vulnerable
Petrogale penicillata	Brush-tailed Rock-wallaby	Vulnerable
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	Vulnerable
Potorous tridactylus tridactylus	Long-nosed Potoroo (SE mainland)	Vulnerable
Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable
Reptiles		
Delma torquata	Collared Delma	Vulnerable
Furina dunmalli	Dunmall's Snake	Vulnerable
Saiphos reticulatus	Three-toed Snake-tooth Skink	Vulnerable

2.2. Nature Conservation Act 1992

The *Nature Conservation Act 1992* (NCA) classifies and protects significant areas (protected areas) and protects threatened plant and animal species. The *Nature Conservation (Wildlife) Regulation 1994* (NCWR) lists plant and animal species presumed extinct, endangered, vulnerable, near threatened, least concern, international or prohibited. The schedules of this regulation were considered in this FMP using EHP's 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 Search Results (fauna)

Scientific Name	Common Name	Status
Birds		
Calyptorhynchus lathami	Glossy Black-cockatoo	Vulnerable
Mammals		
Phascolarctos cinereus (Southeast Queensland bioregion)	Koala (Southeast Queensland bioregion)	Vulnerable
Petauroides volans volans	Southern Greater Glider	Vulnerable

3. Methodology

This FMP forms the stage specific strategy for fauna management for Context Plan Area 1, inclusive of the Stages 2-5 school site and access roads. It has been developed in response to Condition 25 of the PDA Development Approval (DEV2012/209) and specifications within the NESS. Figure 3 illustrates the context in which this FMP sits as the overarching plan for native fauna management on the site. Separate FMPs will be prepared for each stage of the development.

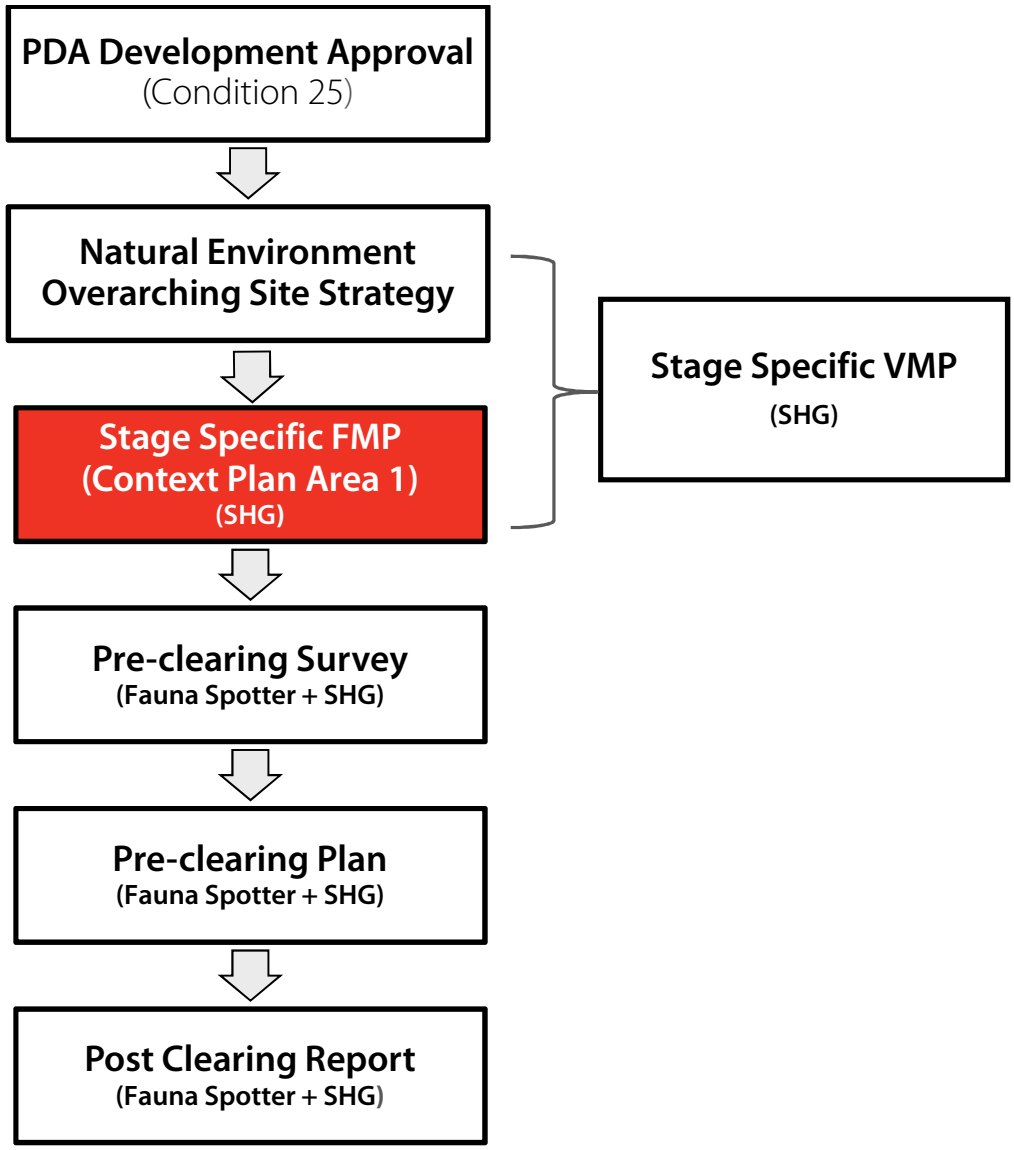


Figure 3: FMP Context and Framework

3.1. FMP Framework

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

This FMP should be read in conjunction with approved Stage 2-5 environmental management plans (to be lodged separately) including, the Stage 2-5 specific:

- Vegetation Management Plan (VMP)

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 wildlife Fauna Spotter Catcher with full registrations and licences issued by the former Department of Environment and Heritage Protection (EHP).

Action 2 – Developer to undertake Pre-clearing Survey
A pre-clearing survey will be undertaken by an EHP approved Fauna Spotter and Catcher at least 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 Code elements detailed below. Results from the pre-clearance surveys will be made available to EHP and will form part of the Post-clearing report.

3.1.2 Pre-clearing Trapping and Release Plan

Action 3 – Fauna Spotter to Prepare a Pre-clearing Trapping and Release Plan
Informed by the pre-clearing surveys, a Pre-clearing Trapping and Release Plan containing Wildlife Protection Management Plan (WPMP) and Wildlife and Habitat Impact Mitigation Plan (WHIMP) Code elements will be developed by an EHP approved Fauna Spotter and 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 Pre-clearing Trapping and Release Plan will outline the methodology for the identification, trapping and relocation of native fauna. The PTRP should include the following information:

- Description of the project with reference to impacts on wildlife or wildlife habitat;
- 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 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 personal. At the pre-start meeting, the Fauna Spotter Catcher is to outline the clearing process and the requirements of the PTRP.

Action 6 – During Construction

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

3.1.3 Post-clearing Wildlife Management Report

Action 7 – Post Works Reporting

During the course of all site works, including the pre-clearance surveys, the Fauna Spotter Catcher is to keep an accurate record of all animals encountered, captured, 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 EHP. The Post-clearing Wildlife Management Report should consist of the following 3 sections:

1. Pre-clearing Trapping and Release Plan – 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 animals 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. Detailed of disposal (GPS points of release)
    o. For released animals, location relative to point of capture

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

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

3.2. Roles and Responsibilities

The following details the key roles and responsibilities for the works.

3.2.1 Proponent

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

3.2.2 Environmental Coordinator

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

3.2.3 Administering Authority

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

3.2.4 Site Coordinator

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

3.2.5 Site Supervisor

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

3.2.6 Fauna Spotter Catcher

An EHP approved Fauna Spotter Catcher is a person who holds a rehabilitation permit with an extended authority issued by the former Department of Environment and Heritage Protection specifying the holder may take, keep or use an animal whose habitat is about to be destroyed by a human activity. An EHP 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 Pre-clearing Trapping and Release Plan. 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 'Flagstone City ULDA Context Plan 1 – Natural Environment Assessment Report, ULDA Submission Issue D, prepared by SHG, dated 23 Oct 2012', identified the presence of suitable habitat observed along waterways to be retained by the development as endorsed in the NESS (Refer to Plan 1 – Habitat Values). This FMP will outline a process for tree removal and the installation of nest boxes to replace removed hollows.

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

- Approved Vegetation Management Plan
- Approved Pre-Construction Certification of Landscape Design for Stage

Ecological features identified for protection within Greater Flagstone PDA include biodiversity corridors along Flagstone Creek and Sandy Creek and biodiversity values associated with the Flinders-Karawatha Bioregional Corridor. The site is bordered by Sandy Creek to the south, the Brisbane Sydney Rail Line to the east, a mapped watercourse to the north and cleared future stages of Flagstone City to the west. The site has been predominately cleared of vegetation.

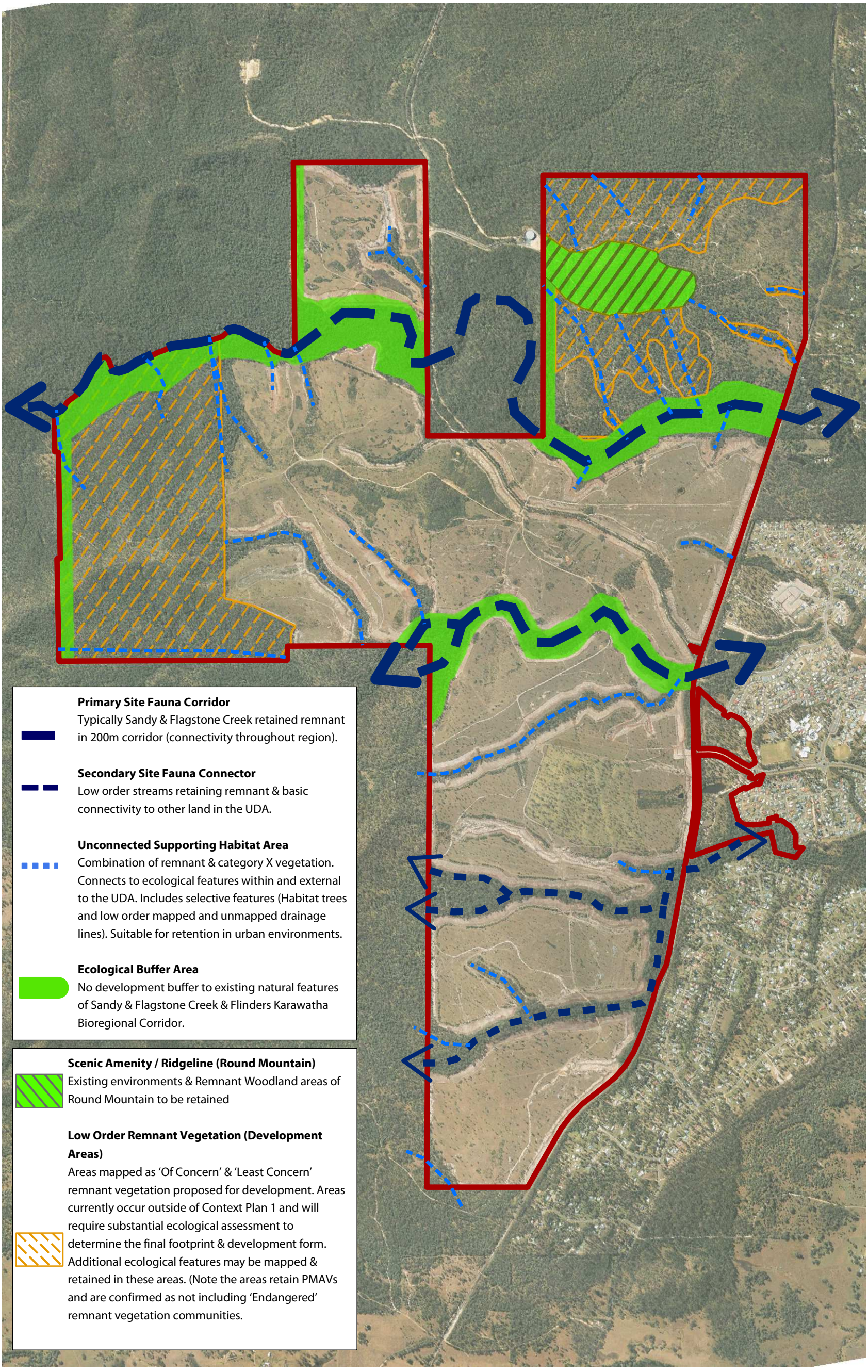
Clearing within the site is considered fairly minor by comparison to the scale of the project and volume of lots and new infrastructure created. This is primarily because of the site is located on the edge of the Flagstone City development area, within historically cleared areas and adjoining existing major infrastructure. Significant biodiversity values around watercourses, including Sandy Creek, have been retained and have informed development layouts.

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

1. Sporadically located semi mature, mature and juvenile individual tree species previously retained at approximately 100 square metres centres over the allotment area.
2. Minor removal of Category X tree clusters along the edge of remnant and other retained areas where required to support earthworks finishes, infrastructure, stormwater and open space outcomes.
3. Lineal clearing associated with the construction of an access road over Sandy Creek.
4. Minor remnant clearing associated with the new road (and separate LWIA sewer plant application).
5. Removal of regenerating saplings associated with previous clearing areas.

The vast majority of the most significant vegetation on-site is retained and protected to site open space and greenspace designations (refer to Plan 2 - Summary of Vegetation Clearing).

1. Natural Environmental Site Strategy - Habitats



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

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Legend

Flagstone City boundary

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

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

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

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

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

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

Issue	Date	Description	Drawn	Checked
A	31/01/2018	Preliminary	TC	MS

0 120 240 480 720 960 m

Transverse Mercator | GDA 1994 | Zone 56 | 1:24,000 @ A3

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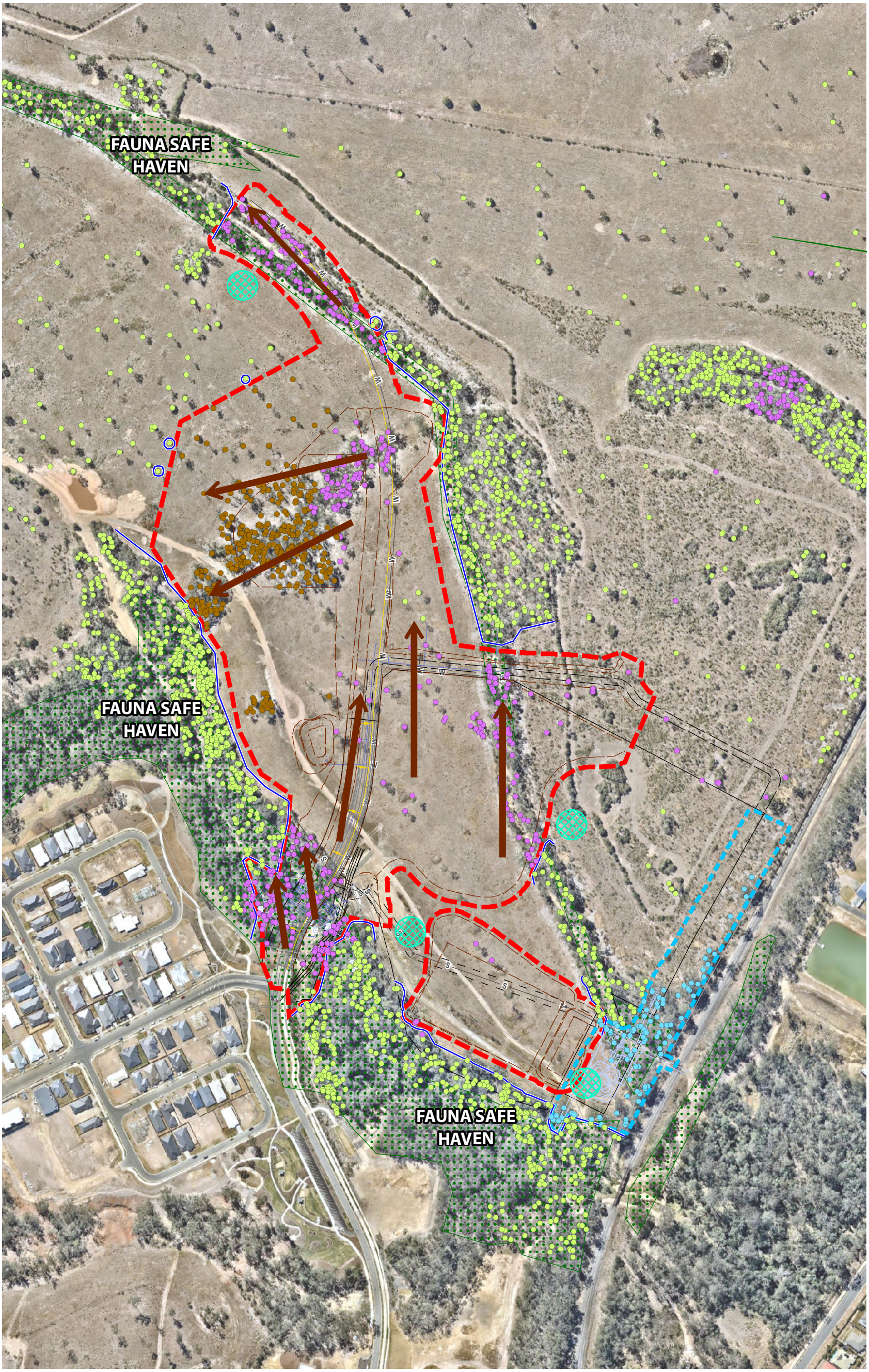
PEET

Flagstone

ADDRESS/RPD: Flagstone City *31/01/2018* *8047 E 01 NESS A*

2. Summary of Vegetation Clearing



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Legend

- Tree to retain
- Tree to remove
- Tree to remove - part of separate LWIA application (with TPZ)
- Tree to remove - Area for civil surplus fill
- Clearing direction
- Stage 2-5 phase 1 & school site works (including additional 10m vegetation clearing for construction access)
- School lot & road layout
- Road design Civil road design
- Trunk sewer
- Temporary waterway crossing track
- Civil Stormwater /culvert design
- Civil electrical/lighting design
- Batter top/toe
- Civil design contours
- Stockpile location (indicative)
- Separate application area for LWIA Sewer pump station
- Road civil design
- Tree protection fencing - to be fauna friendly design & subject to minor changes by Arborist and civil engineer
- Remnant Vegetation extent

Layer

- Existing contours (0.5m)

Issue	Date	Description	Drawn	Checked
A	31/01/2018	Preliminary	TC	MS
C	2/07/2018	Civil Surplus Fill Area	TC	AD

0 50 100 m

Transverse Mercator | GDA 1994 | Zone 56 | 1:4,000 @ A3

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

1. **Direction of Clearing Plan** – to direct clearing activities from open areas to less open areas allowing fauna to naturally seek shelter in the adjacent habitat;
2. **Fencing Management Strategy** – for the provision of permanent and temporary fencing around roads and construction areas, and
3. **Nest Box/Hollow Strategy** – for the installation of nest boxes in preserved remnant areas and the provision of hollow logs and branches to temporarily house translocated animals and provide permanent nesting sites. This is a requirement of the NESS which states "no net loss of habitat features" and provisions a 1:1 replacement of nesting features i.e. tree with hollow cleared will require at least 1 nest box replacement. Habitat features are to be determined by the Fauna Spotter Catcher and form part of the PTRP.

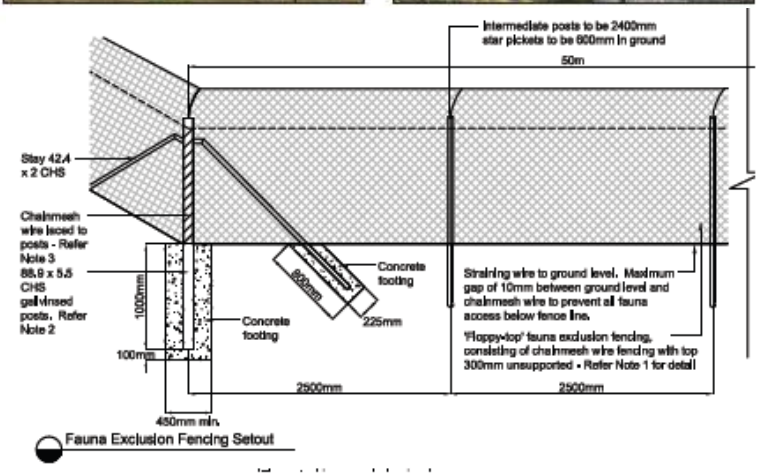
The below images reflect management strategies adopted in this FMP.

FAUNA SPOTTERS RETRIEVING FAUNA

FAUNA SIGNAGE

FAUNA SPOTTER DURING TREE CLEARING

KOALA SIGNAGE



CONSTRUCTION FENCING DETAIL

TREE PROTECTION & EROSION FENCE

SIGNIFICANT TREE PROTECTION FENCING

4.2. Road Crossing Strategies

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

The site proposes the extension of an existing road in Stage 1, to the south across Sandy Creek. Given the Sandy Creek corridor is a significant remnant connector, dedicated safe fauna passage has been provided and incorporated at detailed design for the road crossing via designated culverts and will be fitted out as per the referenced DTMR Guidelines.

4.3. Observed Fauna

A detailed fauna survey was undertaken by SHG in 2012 and 2014 and augmented during vegetation surveys in 2017 and 2018 to identify significant biodiversity values and inform the FMP.

The results of the survey identified two (2) amphibian species, fifty-six (56) bird species, nine (9) reptile species and six (6) mammal species (Refer to Table 4 – Observed Species). The majority of these species were observed around waterways which border the broader context area to the north and south. The survey did not identify the presence of EPBC and/or NCA listed threatened fauna species.

The site is identified under the Natural Environment Site Strategy (NESS) as containing vegetated areas of Koala 'Habitat' within the Context Plan 1 area for which financial obligations to clear under Guideline 17 have been settled (Refer to Appendix C – EDQ Acknowledgement). While a number of suitable Koala habitat and food trees were observed throughout the assessment area, no visible signs of Koala individuals or activity have been observed during field surveys. This is likely due to the land being primarily cleared and remaining potential habitat being highly fragmented.

Table 4: Observed Fauna Species on Site

Scientific Name	Common Name
Amphibians	
Crinia parinsignifera	Beeping Froglet
Rhinella marina	Cane Toad
Birds	
Acanthiza chrysorrhoa	Yellow-rumped Thornbill
Acanthorhynchus tenuirostris	Eastern Spinebill
Alectura lathami	Australian Brush-turkey
Anas superciliosa	Pacific Black Duck
Aquila audax	Wedge-tailed Eagle
Ardea ibis	Cattle Egret
Cacatua galerita	Sulphur-crested Cockatoo
Cacomantis flabelliformis	Fan-tailed Cuckoo
Centropus phasianinus	Pheasant Coucal
Chalcites lucidus	Shining Bronze-cuckoo

Scientific Name	Common Name
Chenonetta jubata	Australian Wood Duck
Colluricinda harmonica	Grey Shrike-thrush
Coracina novaehollandiae	Black-faced Cuckoo-shrike
Coracina tenuirostris	Cicadabird
Cormobates leucophaea	White-throated Treecreeper
Corvus orru	Torresian Crow
Coturnix ypsilophora	Brown Quail
Cracticus nigrogularis	Pied Butcherbird
Cracticus tibicen	Australian Magpie
Cracticus torquatus	Grey Butcherbird
Dacelo novaeguineae	Laughing Kookaburra
Dicrurus bracteatus	Spangled Drongo
Egretta novaehollandiae	White-faced Heron
Entomyzon cyanotis	Blue-faced Honeyeater
Eolophus roseicapillus	Galah
Eurystomus orientalis	Dollarbird
Geopelia humeralis	Bar-shouldered Dove
Geopelia striata	Peaceful Dove
Grallina cyanoleuca	Magpie Lark
Hirundo neoxena	Welcome Swallow
Lopholaimus antarcticus	Topknot Pigeon
Malurus cyaneus	Superb Fairy-wren
Malurus lamberti	Variegated Fairy-wren
Malurus melanocephalus	Red-backed Fairy-wren
Manorina melanocephala	Noisy Minor
Meliphaga lewinii	Lewin's Honeyeater
Merops ornatus	Rainbow Bee-eater
Neochmia temporalis	Red-browed Finch
Ocyphaps lophotes	Crested Pigeon
Pachycephala refiventris	Rufous Whistler
Pardalotus striatus	Striated Pardalote
Philemon corniculatus	Noisy Friarbird
Platycercus adscitus palliceps	Pale-headed Rosella
Podargus strigoides	Tawny Frogmouth
Psophodes olivaceus	Eastern Whipbird
Pyrrholaemus sagittatus	Speckled Warbler
Rhipidura albiscapa	Grey Fantail

Scientific Name	Common Name
Rhipidura leucophrys	Willie Wagtail
Strepera graculina	Pied Currawong
Taeniopygia bichenovii	Double-barred Finch
Threskiornis molucca	Australian White Ibis
Todiramphus sanctus	Sacred Kingfisher
Trichoglossus chlorolepidotus	Scaly-breasted Lorikeet
Trichoglossus haematodus moluccanus	Rainbow Lorikeet
Vanellus miles	Masked Lapwing
Zosterops lateralis	Silvereye
Mammals	
Canis lupus familiaris	Dog
Lepus ecapensis	Brown Hare
Macropus giganteus	Eastern Grey Kangaroo
Sus scrofa	Pig
Trichosurus vulpecula	Common Brushtail Possum
Wallabia bicolor	Swamp Wallaby
Reptiles	
Cryptoblepharus virgatus	Wall Skink
Ctenotus taeniolatus	Copper-tailed Skink
Dendrelaphis punctulatus	Common Tree Snake
Diporiphora australis	Tommy Roundhead Dragon
Morelia spilota	Carpet Python
Physignathus lesueurii	Eastern Water Dragon
Pogon abarbata	Bearded Dragon
Pseudechis porphyroacus	Red-bellied Black Snake
Varanus varius	Lace Monitor

4.4. Potential Fauna Species (Threatened)

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

A habitat suitability and risk assessment for significant fauna was undertaken by SHG in conjunction with the ecological surveys. The assessment focused on identifying habitat features typically associated with threatened species and native fauna groups. Six (6) significant fauna species were considered as possible occurrences on the site (refer to Table 5). Two (2) migratory species were considered known or possible occurrences within the site (refer to

Table 6). The full assessment is contained in Appendix D – Habitat Suitability and Risk Assessment.

Table 5: Threatened Species with possible suitable habitat on site

Scientific Name	Common Name	Habitat	EPBC Status	NCA Status
Calyptorhynchus lathami	Glossy Black-cockatoo	The species is uncommon although widespread throughout suitable forest and woodland habitats, from the central Queensland coast to East Gippsland in Victoria, and inland to the southern tablelands and central western plains of NSW. The Glossy Black-Cockatoo is highly dependent on the distribution of Allocasuarina species and is found in open forest and woodlands of the coast and the Great Dividing Range where stands of sheoak occur. Black Sheoak (Allocasuarina littoralis) and Forest Sheoak (A. torulosa) are important foods. Requires tree hollows for breeding.		Vulnerable
Dasyurus maculatus maculatus	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
Delma torquata	Collared Delma	In general, the species occurs on rocky hillsides on basalt and lateritic soils supporting open eucalypt and Acacia woodland with a sparse understorey of shrubs and tussocks or semi-evergreen vine thicket	Vulnerable	
Phascolarctos cinereus	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
Pteropus poliocephalus	Grey-headed Flying Fox	Species generally roosts in camps in trees adjacent to larger permanent watercourse. The Grey-headed flying fox requires foraging resources and roosting sites. It is a canopy-feeding frugivore and nectarivore, which utilises vegetation communities including rainforests, open forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands. It also feed son commercial fruit crops.	Vulnerable	
Petauroides volans	Greater Glider	The greater glider is largely restricted to eucalypt forests and woodlands. It is primarily folivorous, with a diet mostly comprising eucalypt leaves, and occasionally flowers. It is typically found in highest abundance in taller, montane, moist eucalypt forests with relatively old trees and abundant hollows.	Vulnerable	Vulnerable

Table 6: Migratory Species with possible suitable habitat on site

Scientific Name	Common Name	Habitat	Status*
Apus pacificus	Fork-tailed Swift	This is an aerial species that hunts for food over varied habitats, including coastal areas. This species may occasionally occur over the site.	M
Hirundapus caudacutus	White-throated Needletail	This is an aerial species occupying airspace over forests, woodlands, farmlands, plains, coasts and towns. This species may occasionally occur over the site.	M

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

4.5. Potential Impacts

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

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

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

- The Fauna Spotter Catcher (EHP 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 5m 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 suitable qualified fauna expert recognised by EHP. For some fauna a permit will be required.
- Any native fauna orphaned or injured by the development process must be reported to EHP.
- 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 discourage wild dogs and encourage fauna movement outside construction hours. Dogs brought onto the premises for security must be controlled and contained.

5. Fauna Management Plan Specifications

5.1. Pre-construction

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

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

- Available habitat suitable for likely fauna species,
- The presence of any fauna that is 'protected wildlife' as defined under the *Nature Conservation Act 1992* ('protected wildlife')
- The presence of any species that is a 'listed threatened species' under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) ('listed threatened species')

Section 7 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 EHP 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

NB. The EHP approved Fauna Spotter Catcher is a person who holds a rehabilitation permit with an extended authority issued by the Department of Environment and Heritage Protection specifying the holder may take, keep or use an animal whose habitat is about to be destroyed by a human activity.'

5.2. Vegetation Clearing

Management Item	Responsibility	Timing	Reporting
4.2.1 Fauna Spotter Catcher			
For all vegetation clearing: • Immediately prior to the commencement of clearing of native vegetation a daily visual inspection of the area must be carried out. • In the event of an animal being located, an area of 5m radius should be established excluding machinery from the area until the animal has relocated (usually overnight). • If any used hollows or nests are identified from inspection by the spotter catcher, the hollows and nest must be inspected with a torch and if fauna habitat is identified a cherry picker and/or tree climber must be utilised to remove hollow and divert fauna prior to the tree being lowered. • The relocating of fauna is not permitted and fauna must move off at its own accord. There is no approval to relocate fauna as part of operational works onsite, refer to Section 6 of this document for further details. • Any native fauna orphaned or injured by the development process must be immediately reported to the Queensland Parks and Wildlife Service (1300 130 372), EHP, RSPCA and the Environmental Coordinator and Proponent. • The Site Supervisor is responsible for the safe management of site fauna and implementation of these specific requirements. • All personnel on-site must undertake all works in accordance with all direction/s given by the EHP approved fauna spotter catcher. SPECIFIC KOALA MANAGEMENT NOTES An EHP approved Koala Spotter is a person who holds a tertiary qualification in Biology or Zoology, or who is demonstrably experienced in the identification and location of Koalas in their natural habitat, and has an authorisation from EHP 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.	EHP approved Fauna Spotter Catcher	Must be present for pre-start meeting, during clearing, construction and continue during the site clearing operations.	Proponent / Site Supervisor / Environmental Coordinator

Prior to the commencement and during felling operations, it is the responsibility of the EHP approved Fauna Spotter to: 1. Be present at the site of felling operations 2. Identify any tree at the site which a Koala is present, as well as any tree that has a crown which is intermeshed or overlapping with such tree; and 3. Advise the person who is authorised to conduct the felling operation, or that person's representative, of the precise location of each such tree.			
4.2.2 Direction of Clearing			
Vegetation clearing activities must be in accordance with the Direction of Clearing Plan (as shown in the approved VMP or corrected by the PTRP) which directs clearing towards vegetation to be retained.	Site Supervisor / Earthworks Contractor / Sub Contractor	As part of clearing earthworks operations	Site Supervisor / Proponent / Environmental Coordinator
4.2.3 Monitoring of Clearing/Earthworks			
Works are to be monitored to ensure on-site success of Direction of Clearing Plan and for immediate reporting of orphaned, injured, distressed, or killed native animals to EHP, RSPCA, Environmental Coordinator and Proponent.	EHP Fauna Spotter Catcher as employed by the Construction Contractor	As part of clearing/ earthworks operations	Site Supervisor / Proponent/ Environmental Coordinator
4.2.4 Timing of Clearing			
No machinery use for vegetation clearing or damage of any kind shall occur on-site between 6pm and 6am.	Site Supervisor / Earthworks Contractor / Sub Contractor	As part of clearing earthworks operations	Site Supervisor / Proponent / Environmental Coordinator

4.2.4 Relocation / Translocation

Where works will result in unacceptable risks to health and safety of fauna, a range of measures may be used by the approved Fauna Spotted Catcher to minimise risks, including the temporary removal of animals from the site with the aim or returning animals back to habitat on site at the completion of risk associated works or to suitable habitat adjacent to the site. Appropriate measures are to be determined by the approved Fauna Spotter Catcher. Note: Appropriate wildlife-proof barriers must be used between adjacent habitat and risk associated structures (i.e. roads) where translocation occurs.	EHP Fauna Spotter Catcher as employed by the Construction Contractor	As part of clearing/ earthworks operations	Site Supervisor / Proponent/ Environmental Coordinator / EDQ

5.3. Excavation, Earthworks and Access

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

5.4. Nest Box / Hollow Maintenance and Monitoring

Management Item	Responsibility	Timing	Reporting
4.4.1 Installation			
As part pre-clearance surveys and the PTRP, the engaged EHP approved Fauna Spotter Catcher will determine the number and specific location of nest boxes to be in installed in retained vegetation bordering Sandy Creek and the waterway to the south prior to the pre-start meeting. All nest box locations are be GPS recorded and coordinates provided to the Environmental Coordinator, Proponent, EDQ, EHP and Council.	Nest Box Contractor / EHP approved Fauna Spotter Catcher	Prior to the pre-start meeting	Site Supervisor / Proponent / Environmental Coordinator / EDQ
4.4.2 Maintenance and Monitoring			
Nest boxes are to be monitored throughout all vegetation clearing activities. Nest boxes are to be maintained for 12 months. Maintenance activities include, but are not limited to, the following: • The replacement of failed or damaged next boxes • The removal of invasive species • The removal of invasive species will be determined by the engaged EHP Fauna Spotter Catcher or suitably qualified person.	Nest Box Contractor	12 months	Site Supervisor / Proponent / Environmental Coordinator / EDQ
4.4.3 Reporting Schedule and Pro forma			
A reporting schedule and pro forma must be completed to report all nest box maintenance and monitoring activities throughout the construction period of the development. A copy of the reporting schedule and pro forma must be provided to the Environmental Coordinator and Proponent.	Nest Box Contractor	Throughout the construction period of the development.	Site Supervisor / Proponent / Environmental Coordinator / EDQ

5.5. Non-compliance, Monitoring and Reporting

Management Item	Responsibility	Timing	Reporting
4.5.1 Non-Compliance			
Despite the provisions in this FMP, in the unlikely event of a non-compliance or breach, where a contractor or sub-contractor witnesses or is involved in activities which do not comply with this FMP the following procedure shall be followed: • All breaches of the FMP must immediately be reported to the Proponent. • If possible, prior approval / or communication on the breach should be discussed with the Environmental Coordinator. The Environmental Coordinator is responsible for establishing additional management procedures or determining if EDQ notification should be made. • Non-compliance activities should be halted immediately and impacts rectified (fencing reinstalled, stock piling relocated, etc.). • Site staff should notify the site supervisor who is responsible for either rectifying actions or contacting the Environmental Coordinator. • All major breaches which fundamentally do not achieve the overall outcomes of the FMP and result in lost habitat or distress to native animals must be reported to the Environmental Coordinator, Proponent and applicable regulatory authorities.	Site Supervisor	On-going	Site Supervisor / Proponent / Environmental Coordinator / EDQ
4.5.2 Monitoring and Reporting			
The site shall be monitored at all times. This should include: • Daily inspections by the Site Supervisor • Weekly/fortnightly inspections by the Environmental Coordinator • Random and periodical inspections by the Proponent The Fauna Spotter Catcher employed during pre-construction and on-site works shall provide a Post-clearing Report, to be given to the Environmental Coordinator, Proponent	All Site Staff	On-going	EDQ / Environmental Coordinator / Proponent

and Environmental Coordinator no more than two (2) weeks after clearing has finished, specifying the following: • Length and time of clearing • Details of any fauna that were caught and/or signed and released and the placement of any release/s; • Location and type of nest boxes installed on-site (geographically depicted); • Inventory of species encountered during tree removal; • Rates of nest box use by fauna, details of species utilising the next boxes; • Brief summary of any fauna handling, mortalities or other relevant fauna related incidents that may have occurring during tree removal; and • Confirmation of the follow up monitoring of nesting boxes/ translocated hollow logs and branches and how they are to be maintained in future. The Fauna Spotter Catcher Post-clearing Report is to be submitted to the Environmental Coordinator, Proponent and EDQ following the completion of tree clearing activities and prior to commencement of the use of the premises.			
4.5.3 Orphaned or Injured Fauna			
All native animal fatalities must be reported immediately to the Environmental Coordinator, the Proponent and EHP. Where any site staff (contractors or sub-contractors) witnesses or locates distressed, injured or orphaned animals they should immediately contract the Environmental Coordinator, Proponent and EHP. Works within the area of the animal must cease until further instruction is provided by one of the above authorities. Refer to Section 8 for a list of key contacts.	All Site Staff	On-going	EDQ / EHP / Environmental Coordinator / Proponent

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

6. Fauna Spotter Catcher Assessment

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

Fauna Spotter Catcher required – suitable habitat present adjacent to the site	If the engaged Fauna Spotter Catcher's assessment determines that no protected wildlife or listed species are present but that native fauna may be present with suitable habitat existing adjacent to the site, the following must be submitted to EDQ with a development application for operational work (vegetation clearing): • A letter from the Fauna Spotter Catcher stating the spotter catcher's credentials and setting out a list of anticipated species; and • A Fauna Management Plan (FMP).
Fauna Spotter Catcher required – protected / listed species present and/or relocation of fauna required	If the Fauna Spotter Catcher's Assessment determines that any protected wildlife or listed species are present, and/or native fauna are to be relocated, a Fauna Translocation Management Plan (FTMP) must be prepared in accordance with the Pre-clearing Trapping and Release Plan. The FTMP must be submitted to EHP for endorsement. The following must then by submitted to EDQ with a development application for operational works (vegetation clearing): • A letter from the Fauna Spotter and Catcher stating the spotter-catcher's credentials and setting out a list of anticipated species; • A letter from EHP stating its endorsement of the proposed FTMP; and • A copy of the EHP endorsed FTMP for EDQ's approval.

The currency period of an FMP or FTMP submitted as a result of the above will be six months from the date of approval of the plan. An updated plan must be submitted to EDQ for approval if works are not substantially started within the six month period.

7. Koala Habitat

The site is not identified as within a State mapped assessable Koala habitat area, however, 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
Proponent	Costas Alexandrou PEET Limited Ph. (07) 3137 2040
Site Supervisor	*To be appointed.*
Environmental Coordinator	Andrew Davies Saunders Havill Group Ph. (07) 3251 9444
Administering Authority	Brandon Bouda Economic Development Queensland Ph. (07) 3452 7422
Council	Adam Avalos Logan City Council Ph. (07) 3412 4874
Construction Contractor	*To be appointed.*
Fauna Spotter and Catcher	*To be appointed.*
Veterinarian (in closest proximity to application site)	Jimboomba Veterinary Surgery 10 Euphemia St, Jimboomba QLD 4280 Mon-Fri: 8:00am – 6:30pm, Sat: 8:00am – 5:00pm, Sun: 9:00am–4:00pm Ph. (07) 5546 9079 / 1800 217 794
Department of Environmental and Heritage Protection	For wildlife incidents and licensing and permits: Ph. 1300 130 372
RSPCA Queensland	For reporting injured, sick or orphaned wildlife: Ph. 1300 ANIMAL (1300 264 625)

9. Appendices

Appendix A

Protected Matters Search Tool

Environment Protection and Biodiversity Conservation Act 1999

Appendix B

Wildlife Online Search

Nature Conservation Act 1992

Appendix C

Koala Habitat Acknowledgement

Appendix D

Habitat Suitability Assessment

Appendix A

Protected Matters Search Tool

Environment Protection and Biodiversity Conservation Act 1999

Australian Government
Department of the Environment and Energy

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.

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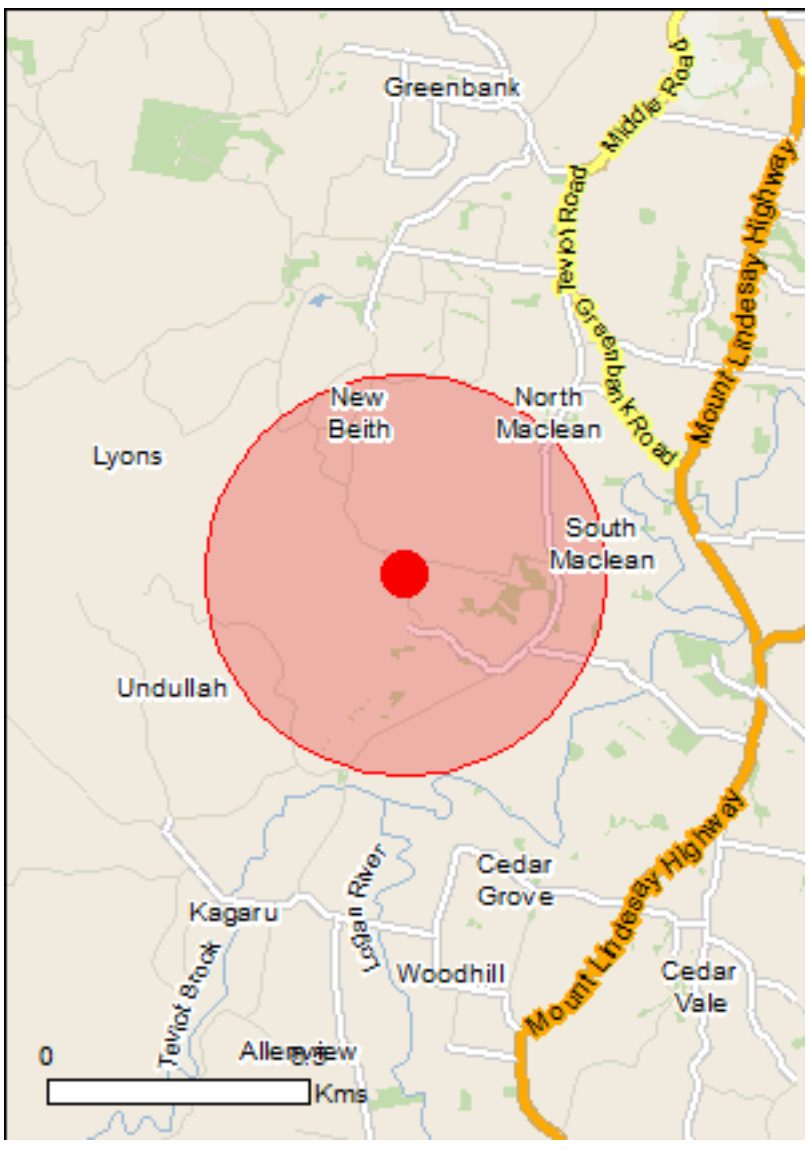

This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

Coordinates
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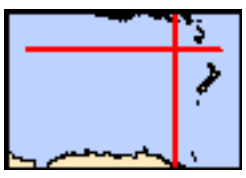

Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	34
Listed Migratory Species:	16

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	23
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	33
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar) [Resource Information]

Name	Proximity
Moreton bay	30 - 40km 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
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area
Swamp Tea-tree (Melaleuca irbyana) Forest of South-east Queensland	Critically Endangered	Community may occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community may occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat likely to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Name	Status	Type of Presence
Poephila cincta cincta		
Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area
Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Turnix melanogaster		
Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to occur within area
Fish		
Maccullochella mariensis		
Mary River Cod [83806]	Endangered	Translocated population known to occur within area
Insects		
Argynnis hyperbius inconstans		
Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area
Mammals		
Chalinolobus dwyeri		
Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus maculatus maculatus (SE mainland population)		
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area
Petauroides volans		
Greater Glider [254]	Vulnerable	Species or species habitat may occur within area
Petrogale penicillata		
Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat likely to occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)		
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Potorous tridactylus tridactylus		
Long-nosed Potoroo (SE mainland) [66645]	Vulnerable	Species or species habitat may occur within area
Pteropus poliocephalus		
Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area
Plants		
Bosistoa transversa		
Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area
Cycas ophiolitica		
[55797]	Endangered	Species or species habitat likely to occur within area
Dichanthium setosum		
bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area
Macadamia integrifolia		
Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat likely to occur within area
Macadamia tetraphylla		
Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
[Notelaea ipsviciensis](#) Cooneana Olive [81858]	Critically Endangered	Species or species habitat may occur within area
[Notelaea lloydii](#) Lloyd's Olive [15002]	Vulnerable	Species or species habitat likely to occur within area
[Phaius australis](#) Lesser Swamp-orchid [5872]	Endangered	Species or species habitat may occur within area
[Samadera bidwillii](#) Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area
[Thesium australe](#) Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
[Delma torquata](#) Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
[Furina dunmalli](#) Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area
[Saiphos reticulatus](#) Three-toed Snake-tooth Skink [88328]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species [Resource Information]

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

Name	Threatened	Type of Presence
Migratory Marine Birds		
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
[Cuculus optatus](#) Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
[Hirundapus caudacutus](#) White-throated Needletail [682]		Species or species habitat likely to occur within area
[Monarcha melanopsis](#) Black-faced Monarch [609]		Species or species habitat known to occur within area
[Monarcha trivirgatus](#) Spectacled Monarch [610]		Species or species habitat likely to occur within area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat may occur within area
[Myiagra cyanoleuca](#) Satin Flycatcher [612]		Species or species habitat known to occur within area
[Rhipidura rufifrons](#) Rufous Fantail [592]		Species or species habitat likely to occur within area
Migratory Wetlands Species		

Name	Threatened	Type of Presence
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Cuculus saturatus Oriental Cuckoo, Himalayan Cuckoo [710]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat likely to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Extra Information

Invasive Species [Resource Information]

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

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

Name	Status	Type of Presence
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		
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
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
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area
Solanum elaeagnifolium Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade,		Species or species habitat likely to occur

Name	Status	Type of Presence
Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323]		within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		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

-27.79818 152.94959

Acknowledgements

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

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

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

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

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Appendix B

Wildlife Online Search

Nature Conservation Act 1992

Queensland Government

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: -27.7978
Longitude: 152.9494
Distance: 5
Email: keiragrundy@saundershavill.com
Date submitted: Wednesday 13 Dec 2017 16:44:26
Date extracted: Wednesday 13 Dec 2017 16:50:09

The number of records retrieved = 4

Disclaimer

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

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

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

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Cacatuidae	*Calyptorhynchus lathami lathami*	glossy black-cockatoo (eastern)		V		1
animals	mammals	Phascolarctidae	*Phascolarctos cinereus*	koala		V	V	48
animals	mammals	Pseudocheiridae	*Petauroides volans volans*	southern greater glider		V	V	1/1
plants	higher dicots	Myrtaceae	*Melaleuca irbyana*			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

Koala Habitat Acknowledgement

Queensland
Government

Department of **Infrastructure, Local Government and Planning**

Our ref: DEV2012/209/7

Mr Costas Alexandrou
Development Manager
PEET
GPO Box 1114
Brisbane QLD 4001

Dear Costas,

Thank you for your letter of 14 April 2015 about the Environmental Protection and Biodiversity Act 1999 (EPBC) and Guideline 17 payment for the clearing of koala habitat area.

I can confirm that the Queensland State Department of Infrastructure, Local Government and Planning has received your cheque for $303,661.70, being the payment of the fees associated with the clearing of koala habitat in Context Plan Area 1 pursuant to EPBC approval Ref EPBC 2014/7206.

Should you have any enquiries, please do not hesitate to contact me on 3452 7422

Yours sincerely

Brandon Bouda
Principal Planner, EDQ Development Assessment

Executive Building
100 George Street Brisbane
PO Box 15009 City East
Queensland 4002 Australia
Website www.dilgp.qld.gov.au
ABN 25 166 523 889

Appendix D

Habitat Suitability Assessment

HABITAT ASSESSMENT FOR LISTED EPBC SPECIES

Matters of National Environmental Significance						
Wetlands of International Importance	Moreton Bay	RAMSAR Listed	30-40km upstream	The site is located approximately 30-40 kilometres directly east of Moreton Bay.	There will be no measurable affect to Moreton Bay.	No Risk
Listed Threatened Ecological Communities						
Name		**Status**	**Type of Presence**	**Description of Community**	**Likelihood of Occurrence**	**Risk**
Lowland rainforest of Subtropical Australia		Critically Endangered	This Threatened Ecological Community is listed as a community that may occur within the area.	Typically there is a relatively low abundance of species from the genera *Eucalyptus, Melaleuca* and *Casuarina*. Buttresses are common as is an abundance and diversity of vines. This community is usually associated Regional Ecosystems 12.3.1, 12.5.13, 12.8.3, 12.8.4, 12.8.13, 12.11.1, 12.11.10, 12.12.1, and 12.12.16.	No species representing these characteristics or vegetation communities were observed within the assessment area.	No Risk
Swamp Tea Tree (Melaleuca irbyana) forest of South- east Queensland		Critically Endangered	This Threatened Ecological Community is listed as a community that may occur within the area.	The listed swamp tea-tree forest community is based on two regional ecosystem communities including 12.9-10.11 and 12.3.3c. This community usually comprises low open to closed forest, closed scrub or thickets of Melaleuca irbyana with or without emergent tree layer of scattered Eucalypts.	No species representing these characteristics or vegetation communities were observed within the assessment area.	No Risk
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland		Critically Endangered	This Threatened Ecological Community is listed as a community that may occur within the area.	This threatened community is characterised by a species-rich understorey of native tussock grasses, herbs and scattered shrubs and the dominance of White Box, Yellow Box, or Blakely's Red gum trees. This community is usually associated with Regional Ecosystem 11.8.2a, 11.8.8, 11.9.9a, 13.3.1, 13.11.8, and 13.12.9. It can also be a small component of Regional Ecosystem 11.3.23, 12.8.16, 13.3.4, 13.11.3 and 13.11.4.	No species representing these characteristics or vegetation communities were observed within the assessment area.	No Risk

Birds						
Species	**Common Name**	**Status**	**EPBC Code**	**Description of Community / Habitat**	**Likelihood of Occurrence**	**Risk**
Anthochaera phrygia	Regent Honeyeater	Endangered	82338	Regent Honeyeaters mostly occur in dry Box-Ironbark Eucalypt woodland and dry sclerophyll forest associations in areas of low to moderate relief, wherein they prefer moister, more fertile sites. These areas are generally associated with creek flats and river valleys and foothills. These woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes. They are a generalist forager, which mainly feed on nectar from a wide range of eucalypts and mistletoes.	The site is covered in both remnant and non remnant vegetation communities dominated by eucalypt and Corymbia species however all riparian areas are highly disturbed. Very few mature large specimens remain throughout the majority of the site as a result of historical logging practices and vegetation clearing.	No Risk
Botaurus poiciloptilus	Australasian Bittern	Endangered	1001	The Australasian Bittern occurs in terrestrial wetlands and, rarely, estuarine habitats, mainly in the temperate southeast and southwest. It favours wetlands with tall dense vegetation, where it forages in still, shallow water up to 0.3 m deep, often at the edges of pools or waterways, or from platforms or mats of vegetation over deep water. It favours permanent and seasonal freshwater habitats, particularly those dominated by sedges, rushes and / or reeds or cutting grass growing over muddy or peaty substrate. The Australasian Bittern occurs in the far South-East of Queensland; it has been reported North to Baralaba and West to Wyandra, although in most years it is probably confined to a few coastal swamps. It is rarely recorded in Queensland, and possibly survives only in protected areas such as the Cooloola and Fraser regions.	No suitable habitat was observed throughout the assessment area.	No Risk
Dasyornis brachypterus	Eastern Bristlebird	Endangered	533	The Eastern Bristlebird inhabits low dense vegetation in a broad range of habitat types including sedgeland, heathland, swampland, shrubland, sclerophyll forest and woodland, and rainforest. It occurs near the coast, on tablelands and in ranges. The Eastern Bristlebird is found in habitats with a variety of species compositions, but is defined by a similar structure of low, dense, ground or understorey vegetation.	The majority of the investigation area along the waterways contain severe Lantana camara infestations. No suitable habitat was observed throughout the assessment area.	No Risk

Erythrotriorchis radiatus	Red Goshawk	Vulnerable	942	A wide ranging and highly mobile species generally observed over eucalypt habitats. This species prefers forest and woodland with a mosaic of vegetation types, large prey populations (birds) and permanent water. The vegetation types include eucalypt woodland, open forest, tall open forest, gallery rainforest, swamp sclerophyll forest and rainforest margins. Habitat has to be open enough for fast attack and manoeuvring in flight, but provide cover for ambushing of prey.	Due to a lack of records within the local area, it is unlikely that this species will occur. However, possible foraging habitat throughout the mapped remnant areas. There is no evidence of permanent residence on site and very few areas containing permanent water.	No Risk
Geophaps scripta scripta	Squatter Pigeon (southern)	Vulnerable	64440	This species inhabits open grasslands and woodlands typically with a native understorey although may occur in artificial pasture.	No confirmed local records. The species is now very rarely observed in southern Queensland. Not expected onsite and no direct impact from proposed actions.	No Risk
Grantiella picta	Painted Honeyeater	Vulnerable	470	This species inhabits Boree/ Weeping Myall (Acacia pendula), Brigalow (A. harpophylla) and Box-Gum Woodlands and Box-Ironbark Forests.	No suitable habitat was observed throughout the assessment area.	No Risk
Lathamus discolour	Swift Parrot	Endangered	744	Swift Parrots breed in Tasmania during spring to early summer. During autumn and winter the species migrates to the mainland where it follows a nomadic existence linked to the availability and timing of flowering of trees in various locations. While the species is very uncommon in south-east Queensland, its occurrence cannot be completely discounted. There are suitable winter flowing species present on the site which may attract birds during flowing (e.g. E. tereticornis).	Due to a lack of records within the local area and south east Queensland, it is highly unlikely that this species will occur.	No Risk
Numenius madagascariensis	Eastern Curlew	Critically Endangered	847	The species breeds on open mossy or transitional bogs, moss-lichen bogs and wet meadows, and on the swampy shores of small lakes; in the non-breeding season it is essentially coastal, occurring at estuaries, mangrove swamps, saltmarshes and intertidal flats, particularly those with extensive seagrass (Zosteraceae) meadows.	No suitable habitat was observed throughout the assessment area.	No Risk

Peophila cincta cincta	Black-throated Finch (southern)	Endangered	64447	The Black-throated Finch (southern) occurs mainly in grassy, open woodlands and forests, typically dominated by Eucalyptus, Corymbia and Melaleuca, and occasionally in tussock grasslands or other habitats (for example freshwater wetlands), often along or near watercourses, or in the vicinity of water. It occurs at two general locations: in the Townsville region, where it is considered to be locally common at a few sites around Townsville and Charters Towers; and at scattered sites in central-eastern Queensland (between Aramac and Great Basalt Wall National Park). It has been absent from Brisbane and its surrounds since the 1930s.	Due to a lack of records within the local area, it is highly unlikely that this species will occur.	No Risk
Rostratula australis	Australian Painted Snipe	Endangered	77037	The Australian Painted Snipe is usually found in shallow inland wetlands, either freshwater or brackish, that are either permanently or temporarily filled. The species has a scattered distribution throughout many parts of Australia, with a single record from Tasmania.	No suitable habitat was observed throughout the assessment area.	No Risk
Turnix melanogaster	Black-breasted Button-quail	Vulnerable	923	Typical habitat occurs in dry rainforest and vegetation immediately adjacent to rainforest. However the species has also been recorded in a variety of low coastal heathlands around Frazer Island and nearby mainland. Deep leaf litter in which the species can forage appears to be particularly favoured.	Habitats on the site are highly disturbed due to prior logging regimes, weed invasion and prior pastoral/grazing activities. Although this species is known to favour areas with a dense shrub layer, including thick Lantana camara patches, no evidence (i.e.: platelets) has been observed on site. Evidence of feral pigs and dogs may have also contributed to a lack of records.	No Risk
Fish						
Species	**Common Name**	**Status**	**EPBC Code**	**Description of Community / Habitat**	**Likelihood of Occurrence**	**Risk**
Maccullochella mariensis	Mary River Cod	Endangered	83806	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.	No Risk
Insect						

Species	Common Name	Status	EPBC Code	Description of Community / Habitat	Likelihood of Occurrence	Risk
Argynnis hyperbius inconstans	Australian Fritillary	Critically Endangered	88056	The Australian fritillary is restricted to areas where its larval food plant, Viola betonicifolia (the arrowhead violet), occurs (NSW Scientific Committee 2002). The arrowhead violet is widespread throughout Queensland and NSW, at both high and low altitudes. However, the Australian fritillary appears to only occupy lower altitude sites (<600m), and in these lower altitude regions there has been significant clearing for urban expansion.	No suitable habitat to support this species was observed throughout the assessment area.	No Risk
Mammals						
Species	**Common Name**	**Status**	**EPBC Code**	**Description of Community / Habitat**	**Likelihood of Occurrence**	**Risk**
Chalinolobus dwyeri	Large-eared Pied Bat	Vulnerable	183	The Large-eared Pied Bat roosts on sandstone cliffs and fertile woodland valley habitat within close proximity of each other. However in South-east Queensland habitat includes rainforest and moist eucalypt forest habitats at high elevations.	No confirmed local records of this uncommon species.	No Risk
Dasyurus maculatus maculatus	Spot-tailed Quoll	Endangered	75184	The Spot-tailed Quoll has a preference for mature wet forest habitat. Unlogged forest or forest that has been less disturbed by timber harvesting is also preferable. This predominantly nocturnal species rests during the day in dens. Habitat requirements include suitable den sites such as hollow logs, tree hollows, rock outcrops or caves. Individuals require an abundance of food such as birds and small mammals, and large areas of relatively intact vegetation through which to forage.	Although no suitable den sites were observed on broader site, it may be possible that the site could be used for foraging purposes, including Flagstone Creek which may act as a corridor for species distribution. Although no evidence has been found throughout the field assessment, consideration to this species is important.	Low Risk
Petauroides volans	Greater Glider	Vulnerable	254	The greater glider is an arboreal nocturnal marsupial, largely restricted to eucalypt forests and woodlands. It is primarily folivorous, with a diet mostly comprising eucalypt leaves, and occasionally flowers. It is typically found in highest abundance in taller, montane, moist eucalypt forests with relatively old trees and abundant hollows/	Although suitable habitat was observed on the broader site, the project area contains very few trees in relation to significant habitat areas to the west.	No Risk

Petrogale penicillata	Brush-tailed Rock-wallaby	Vulnerable	225	This species prefers rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes, cliffs, gorges and isolated rock stacks. Most populations have been found on north facing slopes but have occurred on south facing slopes. This species browse on vegetation in and adjacent to rocky areas eating grasses and forbs as well as the foliage and fruits of shrubs and trees.	No suitable habitat located on site.	No Risk
Phascolarctos cinereus	Koala	Vulnerable	85104	They are found in a range of habitats, from coastal islands and tall eucalypt forests to low woodlands inland. The species is known from the surrounding area and evidence has been recorded on-site.	Extensive searches of this species, including SAT surveys and spotlighting did not find any individual specimens. However some old scats were observed throughout the site in various locations. The site is highly disturbed with intensive logging regimes and severe infestations of Lantana camara have also reduced the quality of habitat for this species.	Medium Risk
Potorous tridactylus tridactylus	Long-nosed Potoroo	Vulnerable	66645	Species generally prefers rainforest and adjacent to wet sclerophyll forest, coastal heathlands and similar habitats with a dense understorey. Like all Potoroos, fungi are the major component of the diet and is also known to feed on invertebrates.	No suitable habitat was observed throughout the assessment area.	No Risk
Pteropus poliocephalus	Grey-headed Flying Fox	Vulnerable	186	Species generally roosts in camps in trees adjacent to larger permanent watercourse. The Grey-headed flying fox requires foraging resources and roosting sites. It is a canopy-feeding frugivore and nectarivore, which utilises vegetation communities including rainforests, open forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands. It also feed son commercial fruit crops. The primary food source is blossom from Eucalyptus and related genera.	No camps were observed throughout the assessment area however food resources cover the site. This species is highly likely to occur when the eucalypts are in flower.	Low Risk

Reptiles						
Species	**Common Name**	**Status**	**EPBC Code**	**Description of Community / Habitat**	**Likelihood of Occurrence**	**Risk**
Delma torquata	Collared Delma	Vulnerable	1656	In general, the species occurs on rocky hillsides on basalt and lateritic soils supporting open eucalypt and Acacia woodland with a sparse understorey of shrubs and tussocks or semi-evergreen vine thicket.	No suitable habitat was observed throughout the assessment area.	No Risk
Furina dunmalli	Dunmall's Snake	Vulnerable	59254	Dunmall's Snake has been found in a broad range of habitats, including forests and woodlands on black alluvial cracking clay and clay loams dominated by Brigalow other Wattles, native Cypress or Bull-oak, and various Blue Spotted Gum, Ironbark, White Cypress Pine and Bull oak open forest and woodland associations on sandstone derived soils. Dunmall's Snake occurs primarily in the Brigalow Belt region in the South-eastern interior of Queensland. Records indicate sites at elevations between 200–500 m above sea level. The snake is very rare or secretive with limited records existing. It has been recorded at 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.	No suitable habitat was observed throughout the assessment area.	No Risk
Saiphos reticulatus	Three-toed Snake-tooth Skink	Vulnerable	88328	The Three-toed Snake-tooth Skink has been found in loose, well mulched friable soil, in and under rotting logs, in forest litter, under fallen hoop pine bark and under decomposing cane mulch. In Queensland, the Three-toed Snake-tooth Skink has been recorded in rainforest, closed forest, wet sclerophyll forest, tall open Blackbutt (Eucalyptus pilularis) forest, tall layered open eucalypt forest and closed Brush Box (Lophostemon confertus) forest.	No suitable habitat was observed throughout the assessment area.	No Risk
Listed Migratory Species						
Migratory Marine Birds						
Species	**Common Name**	**Status**	**EPBC Code**	**Description of Community / Habitat**	**Likelihood of Occurrence**	**Risk**
Apus pacificus	Fork-tailed Swift	Migratory	678	This species is almost exclusively aerial and mostly occur over inland palins but sometimes above foothills or in coastal areas.	Possible as a fly over species however no impact to this species is likely to occur.	No Risk
Migratory Terrestrial Species						

Species	Common Name	Status	EPBC Code	Description of Community / Habitat	Likelihood of Occurrence	Risk
Cuculus optatus	Oriental Cuckoo	Migratory	86651	It mainly inhabits forests, occurring in coniferous, deciduous and mixed forest. It feeds mainly on insects and their larvae, foraging for them in trees and bushes as well as on the ground.	No suitable habitat was observed throughout the assessment area.	No Risk
Hirundapus caudacutus	White-throated Needle tail	Migratory	682	The White-throated needle tail is almost exclusively aerial. This species has been recorded roosting in trees in forests and woodlands, both among dense foliage in the canopy or in hollows. The species breeds in wooded lowlands and sparsely vegetated hills, as well as mountains covered with coniferous forests.	Low potential to occur on site within roosting periods.	No Risk
Monarcha melanopsis	Black-faced Monarch	Migratory	609	The Black-faced Monarch mainly occurs in rainforest ecosystems, including semi-deciduous vine thickets, complex notophyll vine forests, tropical (mesophyll) rainforest, subtropical (notophyll) rainforest, mesophyll (broadleaf) thicket/shrubland, warm temperate rainforest, dry (monsoon) rainforest and occasionally cool temperate rainforest.	No suitable habitat was observed throughout the assessment area.	No Risk
Monarcha trivirgatus	Spectacled Monarch	Migratory	610	The Spectacled Monarchs natural habitats are subtropical or tropical moist lowland forests, subtropical or tropical mangrove forests, and subtropical or tropical moist montane forests. Its preference is for thick understorey areas.	No suitable habitat was observed throughout the assessment area.	No Risk
Motacilla flava	Yellow Wagtail	Migratory	644	The yellow wagtail occurs in a variety of damp or wet habitats with low vegetation, from rushy pastures, meadows, hay fields and marshes to damp steppe and grassy tundra. Outside of the breeding season it is also found in cultivated areas. The yellow wagtail typically forages in damp grassland and on relatively bare open ground at edges of rivers, lakes and wetlands, but also feeds in dry grassland and in fields of cereal crops	No suitable habitat was observed throughout the assessment area.	No Risk
Myiagra cyanoleuca	Satin Flycatcher	Migratory	612	Satin Flycatchers inhabit heavily vegetated gullies in eucalypt dominated forests and taller woodlands, and on migration occur in coastal forests, woodlands, mangroves and drier woodlands and open forests.	No suitable habitat was observed throughout the assessment area.	No Risk
Rhipidura rufifrons	Rufous Fantail	Migratory	592	The Rufous fantail mainly inhabits wet sclerophyll forests, often in gullies dominated by Eucalypts such as Eucalyptus microcorys, Eucalyptus pilularis, Eucalyptus resinifera and a number of other Eucalyptus species.	No suitable habitat was observed throughout the assessment area.	No Risk

HABITAT ASSESSMENT FOR LISTED NCA SPECIES (6207) 10km Search

Birds					
Species	Common Name	Status	Description of Community / Habitat	Likelihood of Occurrence	Risk
Calyptorhynchus lathami	Glossy Black-cockatoo	Vulnerable	The species is uncommon although widespread throughout suitable forest and woodland habitats, from the central Queensland coast to East Gippsland in Victoria, and inland to the southern tablelands and central western plains of NSW. The Glossy Black-Cockatoo is highly dependent on the distribution of Allocasuarina species and is found in open forest and woodlands of the coast and the Great Dividing Range where stands of sheoak occur. Black Sheoak (Allocasuarina littoralis) and Forest Sheoak (A. torulosa) are important foods. Requires tree hollows for breeding.	Flora species utilised for foraging by this species were present in the areas of retained vegetation along watercourses and not within the greater extent of the landscape. Foraging of she-oak species is generally seasonal in nature with birds often returning to areas previously utilised. Limited to no signs of repeated foraging on sheoaks in the area were observed.	Low Risk
Mammals					
Species	Common Name	Status	Description of Community / Habitat	Likelihood of Occurrence	Risk
Petrogale penicillata	Brush-tailed Rock-wallaby	Vulnerable	This species prefers rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes, cliffs, gorges and isolated rock stacks. Most populations have been found on north facing slopes but have occurred on south facing slopes. This species browse on vegetation in and adjacent to rocky areas eating grasses and forbs as well as the foliage and fruits of shrubs and trees.	The site has been extensively cleared of remnant vegetation and contains a number of scattered trees. No exposed rocky habitat is located on site.	No Risk
Phascolarctos cinereus	Koala	Vulnerable	They are found in a range of habitats, from coastal islands and tall eucalypt forests to low woodlands inland. The species is known from the surrounding area and evidence has been recorded on-site.	Extensive searches of this species, including SAT surveys and spotlighting did not find any individual specimens. However some old scats were observed throughout the site in various locations. The site is highly disturbed with severe infestations of Lantana camara throughout the waterways and have also reduced the	Medium Risk

				quality of habitat for this species.	
Petauroides volans	Greater Glider	Vulnerable	The greater glider is an arboreal nocturnal marsupial, largely restricted to eucalypt forests and woodlands. It is primarily folivorous, with a diet mostly comprising eucalypt leaves, and occasionally flowers. It is typically found in highest abundance in taller, montane, moist eucalypt forests with relatively old trees and abundant hollows/	Although suitable habitat was observed on the broader site, the project area contains very few trees in relation to significant habitat areas to the west.	No Risk