Species Management Program

Gunsynd Solar Farm

Prepared for Metis Energy

Prepared by:

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Document Records - Quality

TITLE	Species Management Plan for Gunsynd Solar Farm
FILED AS	PR23189_SMP_Gunsynd Solar Farm

Revision	Date	Revision Details	Prepared by (name/title)	Reviewed by (name/ title)	Approved by (name/title)
Version A	07/09/2023	Draft Report	ED, Ecologist	JA, Environmental Manager	Client
Version B	17/10/2023	Final Report	ED, Ecologist	JA, Environmental Manager	Client
Version B1	23/11/2023	Final Report	ED, Ecologist	JA, Environmental Manager	Client

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FIGURES

1 Introduction

1.1 Project Description

Table 1 Project description

Project name	Gunsynd Solar Farm, Goondiwindi
Proponent	Metis Energy as proponent/project owner PCL Constructors Pacific Rim Pty Ltd as EPC contractor
Construction start	February 2024 (January 2024 for council road works on Scudamores Road)
Duration	26 months, practical completion expected in October 2025
Project contact	Thomas Wilson, twilson@pcl.com 0417 429 947
Local Government Authority (LGA)	Goondiwindi Regional Council LGA
Location	Refer **Figure 2**
Address	'Glenoe', Jacksons Road, Goondiwindi Lot 51 MH115
Applicant	PCL Constructors Pacific Rim Pty Ltd
Contact Details	Contact: Kelly Matthews Address: 21 Peterson Road, MORAYFIELD QLD
ABN / ACN	20 162 130 627 / 162 130 627
Principal	Kelly Matthews
Person in Charge	PCL – Construction manager

1.2 Background

Green Tape Solutions was commissioned by Metis Energy to prepare this High-Risk Species Management Program (SMP) for the site located at Gunsynd Solar Farm. Refer to Table 3 for the

Authorised Species Management Actions with Respect to Animal Breeding Places. A high-risk species management plan is a comprehensive strategy designed to protect and conserve endangered native species and control or mitigate the impact of invasive species that threaten the environment, agriculture, or human activities. These plans are legally mandated and encompass objectives for research, monitoring, control measures, conservation efforts, public education, and collaboration among various stakeholders. Regular evaluation and adaptation of the plan are essential to ensure its effectiveness in safeguarding both wildlife and human interests.

The project is situated in the Goondiwindi Regional Council's Local Government Area (LGA), as depicted in Figure 1. It involves the development of a large-scale solar photovoltaic facility with battery storage capabilities, encompassing an area of approximately 185 hectares and a potential generation capacity of up to 111 MW peak/ 95 MW AC. The final facility size and layout will be determined during the detailed design phases.

The project will be linked to the existing Ergon Energy 132kV electricity transmission line, specifically the Ergon Energy 132kV Bulli Creek – Waggamba feeder, which traverses the proposed project site from the northeast boundary to the southwest boundary.

Its primary objectives include providing a renewable energy source for the local community, connecting to the National Electricity Market (NEM), and contributing to the attainment of greenhouse gas reduction goals in both Queensland and Australia.

It is expected that the stationary solar panel array can be situated within the currently cleared sections of the property, specifically avoiding the vegetated creek line and boundary fences. This approach would eliminate the need for extensive clearing of valuable regrowth vegetation. However, a minor portion of vegetation to the property's north will need to be cleared to establish an access track connecting the project site to the access road.

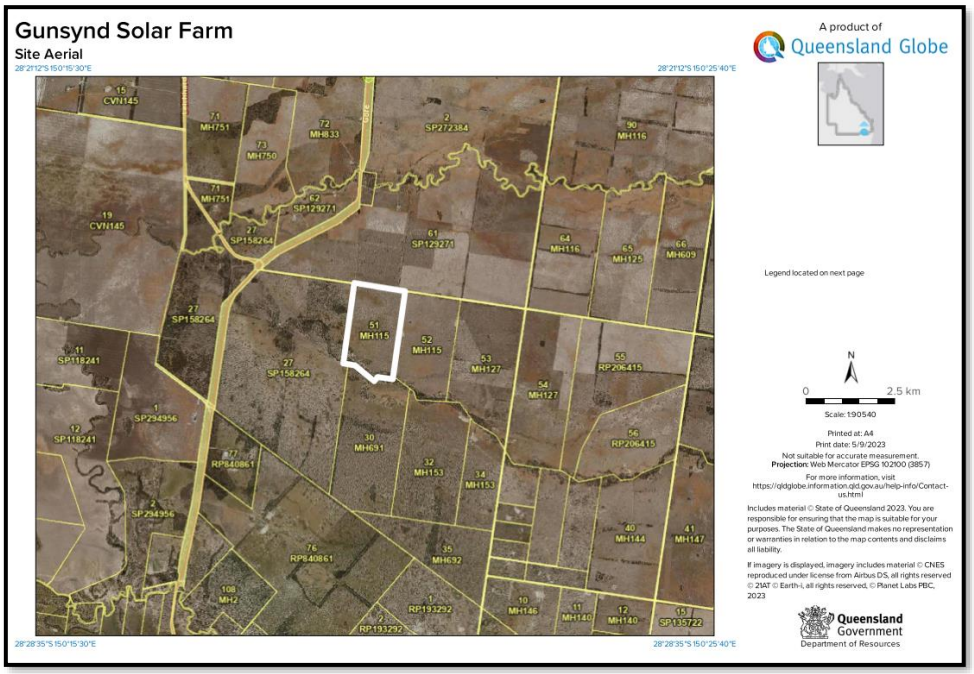


Figure 1: Aerial Image of the Properties (Source: QLD Globe)

1.3 Scope of works

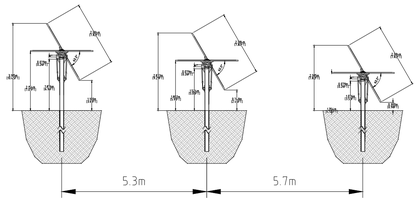
This SMP addresses the project site as shown on Figure 1.

The objective of this report is to identify fauna specific management measures to minimise potential impacts to Queensland listed native fauna (low risk and high risk species – as described by the Nature Conservation (Animals) Regulation 2020) associated with the proposed solar farm development and likely to utilise the site for breeding purposes. The specific scope of this Plan is to:

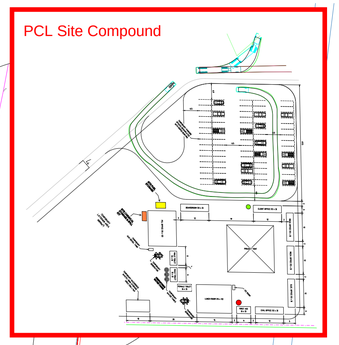
- Outline potential impacts and management strategies for significant ecological values e.g., EVNT (endangered, vulnerable, near threatened; an EVNT species is a high-risk species) species habitat within the Project (if any);
- Identify management measures to minimise impacts to animal breeding places for Least Concern species (refer to Appendix 4) under the *Nature Conservation Act 1992* (NC Act); and,
- Identify monitoring and reporting requirements (if any).

As a requirement of Department of Environment and Sciences (DES), the SMP must provide a working arrangement for activities that may be required in relation to the tampering with animal breeding places, to satisfy the legislative requirements of the NC Act.

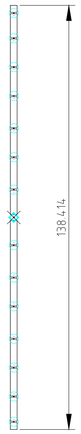
Koalas are not included in this SMP, as koalas do not use a habitual breeding place. The clearing of vegetation in which koalas are present is viewed as clearing of koala habitat rather than clearing of a koala breeding place. Special requirements apply to the disturbance of koala habitat. Where koalas are found on site, further correspondence with DES will be required and an EPBC referral will also be triggered.



TRACKER PITCH DISTANCE
NTS

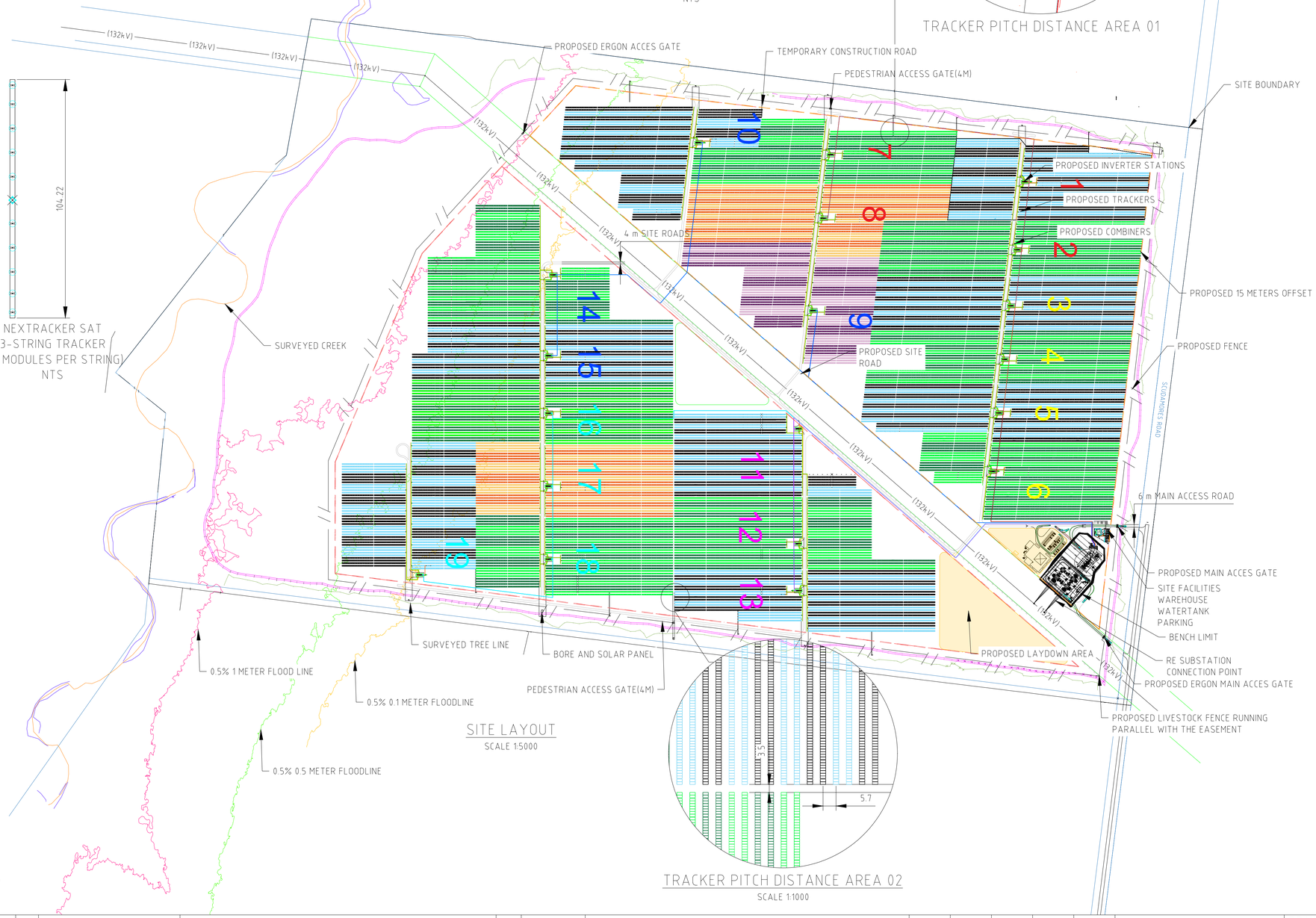


TRACKER PITCH DISTANCE AREA 01



NEXTRACKER SAT
4-STRING TRACKER
(29 MODULES PER STRING)
NTS

NEXTRACKER SAT
3-STRING TRACKER
(29 MODULES PER STRING)
NTS



SITE LAYOUT
SCALE 1:5000

TRACKER PITCH DISTANCE AREA 02
SCALE 1:1000

LEGEND:

- PCU
- PV MODULE
- GATE
- ACCESS ROAD
- 132kV TRANSMISSION LINE
- PROPOSED FENCE
- EASEMENT
- 15 m OFFSET BOUNDARY
- CADASTRAL BOUNDARY
- DC TRENCH
- HV CABLE
- COMBINER BOX (CBX)
- LAYDOWN AREA
- FLOOD ZONE HIGH RISK 0.5% <0.1M
- FLOOD ZONE HIGH RISK 0.5% 0.5M
- FLOOD ZONE HIGH RISK 0.5% 1M
- PROPOSED LIVESTOCK FENCE
- 5.3METER PITCH DISTANCE AREA 01
- 5.7METER PITCH DISTANCE AREA 02
- SAFETY STATION
- MUSTER POINT
- SITE FUEL STORAGE
- SITE CHEMICAL STORAGE

SYSTEM SPECIFICATION SUMMARY

ITEM	VALUE
DC CAPACITY	111 MW
AC CAPACITY	94 MW
EFFECTIVE DC/AC RATIO	1.18
STRINGS (EA)	6559
NXT 4-STRING TRACKERS (EA)	1531
NXT 3-STRING TRACKERS (EA)	145
PV MODULES PER STRING (EA)	29
TRINA PV MODULES - TSM-VERTEX_NEG19RC.20 - 585W	28507
TRINA PV MODULES - TSM-VERTEX_NEG19RC.20 - 580W	161704
TRINA PV MODULES (EA)	190211
COMBINER BOXES (EA)	425
INGETEAM PCS (EA) - FSK6560	18
INGETEAM PCS (EA) - FSK4920	1
PROPOSED ACCESS GATE (EA)	2
PITCH	5.3 m/5.7 m
DC TRENCH	~18760 m
HV TRENCH	~9380 m
ACCESS ROAD	~ 7235 m
FENCE	~ 6585m
STOCK FENCE	~2000m

0 10 20 40 60
Full Size 1:1000 ; Half Reduction 1:2000
SCALE (m)

0 50 100 200 300
Full Size 1:5000 ; Half Reduction 1:10000
SCALE (m)

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

psdenergy

PCL CONSTRUCTION

DO NOT SCALE

REFERENCE DRAWINGS

DWG NO	TITLE

NO	DATE	TITLE	DRN	CHKD	ENG	QA	APPRV
D	05.12.2023	ISSUED FOR REVIEW (80% PCL REVIEW)	M.S	S.S	M.S		
C	19.09.2023	RE-ISSUED FOR REVIEW (30% SUBMISSION)	M.S	S.S	M.S	X.D	C.V
B	06.09.2023	ISSUED FOR REVIEW (30% SUBMISSION)	M.S	S.S	MS	X.D	C.V
A	18.08.2023	FIRST ISSUE	M.S	S.S	M.S	X.D	S.S

REVISIONS

metis ENERGY

METIS ENERGY DRAWING No
GUSF-SFPV-PSD-ELE-DWG-0067

DRAWN:	M.SYED	18.08.2023
CHKD:	S.SWANEPOEL	05.09.2023
ENG:	M.SYED	18.08.2023
Q.A.:	X.DAI	05.09.2023
APPRV:	C.VENTER	06.09.2023
PRJ NO:	PSD1967	

GUNSYND SOLAR FARM PROJECT

ELECTRICAL SITE LAYOUT

OVERALL SITE LAYOUT

SCALE	PSD DRAWING No	REVISION
1:5000	PSD1967-500-01	D

CADFILE N:\GUSF-SFPV-PSD-ELE-DWG-0067-RD.DWG

A1SHEET

2 Tampering with High-risk Species Breeding Places

Measures for tampering with the breeding places of protected species, those species which are listed as special least concern, migratory or are threatened (EVNT) species listed under the *Nature Conservation (Animals) Regulation 2020.* These arrangements also apply to Matters listed under the EPBC Act. **Table 1** below describes the information to be provided should there be potential for tampering of Significant Species breeding places. “Special least concern” species is an echidna (Tachyglossus aculeatus); a platypus (Ornithorhynchus anatinus); or a least concern bird to which any agreement applies listed in the DES information sheet (Appendix 5).

Table 1: Additional information required for SMP high risk of impacts

Item	Information required	Assessment Consideration	Section
Application details			
1. Application	Applicant details	The applicant has provided name, address, phone number, and the following: • Registered legal entity name (not a business trading name) • Trading name (if applicable) • Contact details including registered business address (not a post office box), including permanent Queensland address. • ABN/ACN, or title and section of legislation under which corporation has legal status • Name of principal of corporation •Details of nominated person in charge where the approved activity is to be undertaken.	Section 1
	Location details	The applicant has provided the items listed: • A map or plan of the proposed impact area including scale. • A description of the location including address and registered lot and plan details. Any other relevant project documentation.	Figures 1 & 2 Section 1

	Approved *agents*	Applicant specifies the agents approved to operate under the program including suitably qualified and experienced persons, *authorised wildlife carer* and veterinarian.	GTS Wildlife care organisations
Terms			
1. Terms of approval	Duration	Applicant specifies the approval period for the SMP. The term must be relevant to the activity being undertaken and allow for a periodic review of the program. The standard term for a SMP is three years.	Term – 3 years
Assessment of impacts to animal breeding places			
1. Desktop assessment	Desktop assessment undertaken prior to field assessment	The applicant has undertaken a desktop assessment to research and evaluate the potential for an animal breeding place to be present on a works site using a variety of resources including but not limited to: • WildNet records • Museum records • Atlas of Living Australia • Essential habitat mapping • Legislative requirements and listings (State and Federal • Governments) • SMPs previously approved by the department	Appendices 1 – 4.
2. Field assessment	Survey conducted by a suitably qualified and experienced person.	The animal breeding place survey was undertaken by a suitably qualified and experienced person who meets one or more of the following criteria: • An ecological consultant with experience in conducting surveys for animal breeding places; • A person who possesses a degree in natural science or similar with experience in conducting fauna surveys; • A person who is a spotter-catcher under a rehabilitation permit issued under the Act.	Green Tape Solutions Ecologists. CVs provided in Appendix 6

		A statement to justify the suitability and qualifications of the person undertaking the animal breeding place survey is required.	
3. Assessment report.	Report requirements	The applicant submitted an animal breeding place survey report including: • A list of all animal breeding places identified within the impact area, including conservation status. • A statement to justify the suitability and qualifications of the person undertaking the animal breeding place survey. • Justification of the timing of the survey and detail of any limitations and assumptions associated with the timing of the survey. • A map or plan of the proposed impact area indicating the locations of identified animal breeding places. • A description of the location.	Survey findings included in Section 4
Impact management plan			
1. Plan	Impact management plan has been submitted	The applicant has submitted an impact management plan with the SMP application that includes the following sections: • The nature of impact • The proposed management of impacts (if any)	Section 5
2. Impact management strategies	Avoid and minimise interference with animal breeding place.	The applicant has provided evidence that alternative options were thoroughly considered. Examples may include: • Avoidance through the design phase • Avoidance through works period • Avoidance through adaptive management • Consideration of seasonal factors e.g. completing works outside of breeding season • Sequential clearing • Rehabilitation of animal breeding habitat • Replacement or translocation of breeding structure • Use of authorised spotter catchers, licensed wildlife carer and veterinarian • Staff training and procedures	Section 6

	Nature of impact	The applicant has provided the following information: a) The applicant has identified the area (Ha) and number of particular animal breeding places to be tampered with, and the conservation status of the species. b) Information has been provided on the population dynamics of the species. c) Information has been provided about the ecology of the species. d) The applicant has accounted for all impacts, both direct and indirect, on an animal breeding place, where tampering is required.	Section 5
	Management of impact	The applicant has provided the following information: a) The applicant has listed appropriate impact management solutions to account for all EVNT, special least concern or colonial breeding places identified in the animal breeding place survey report. b) The applicant has provided a list of rehabilitation methods to be used in impact management for animal breeding places.	Section 6
	Contingency planning	The applicant has outlined the process to be followed in the event of unexpected impacts on animal breeding places and other protected animals (e.g. will a Damage Mitigation Permit (culling and dispersal of wildlife) be required?). If a DMP is proposed, has the applicant demonstrated what impacts, if any, may occur upon the broader species population?	Section 6
3. Supporting information	The applicant has demonstrated proposed impact management measures are appropriate for the applicable species.	The applicant demonstrates how the proposed impact management measures are appropriate for the animal breeding places identified and will ensure the animals survival in the wild through the following: a) Written advice obtained from a suitably qualified person or expert regarding impact management strategies b) Reference to scientific papers which discuss the success of proposed mitigation strategies to the specific animal breeding place or that of a comparable species has been made c) SMP documents and reports previously approved by the department were referred to	Section 6

		d) The expected success rate of the proposed impact management and any serious limitations or potential threats associated with the impact management have been identified. e) Identified how limitations or threats to the success of the impact management will be overcome.	

Source: DES Species Management Program—requirements for tampering with a protected animal breeding place in Queensland.

3 Legislative Framework

The following section outlines the applicable environmental legislation that will be triggered by the proposed development at the Federal and State level. Key environmental legislation relating to SMP includes the following:

State:

- *Nature Conservation Act 1992;*
- *Nature Conservation (Animals) Regulation 2020*; and

Commonwealth:

- *Environment Protection and Biodiversity Conservation Act 1999*

3.1 Queensland Legislation

The primary purpose of the NC Act is to conserve biodiversity by creating and managing protected areas, managing and protecting native wildlife, and managing the spread of non-native wildlife. Unless authorised, it is an offence under the NC Act to take, keep, use, or move protected flora and fauna for commercial, recreational or other purposes. Where a proposed development will result in such impacts to flora and/or fauna protected under the NC Act, authorisation from DES is required.

This SMP is intended to meet the requirements of section 335 of the *Nature Conservation (Animals) Regulation 2020.* It applies to activities that propose to or are likely to tamper with animal breeding places with respect to:

a) Protected animals prescribed as extinct in the wild, endangered, vulnerable, near threatened, or a special least concern animal under the Animals Regulation; or

b) Least concern animals that are colonial breeders; or

c) Least concern animals where proposed tampering with a breeding place may have impacts on the broader population of the species.

3.2 Commonwealth Legislation

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is administered by the Commonwealth Department of Agriculture, Water and the Environment (DAWE). Under the EPBC Act, if the Minister determines that an action is a 'controlled action' which would have or is likely to have a significant impact on a Matter of National Environmental Significance (MNES) or Commonwealth land, then the action may not be undertaken without prior approval of the Minster.

The EPBC Act identifies the following nine MNES:

- World Heritage properties.
- National heritage places.
- Ramsar wetlands of international significance.
- EVNT species and ecological communities.
- Migratory species.

- Commonwealth marine areas.
- The Great Barrier Reef Marine Park.
- Nuclear actions (including uranium mining).
- Water resources (in relation to coal seam gas development and large coal mining development).

Actions that adversely affect these matters may be deemed to be a ‘controlled action’ under the Act.

4 Fauna and Species Habitat

This SMP applies to all native fauna species that occur within the study area.

Common Fauna Species (NC Act Least Concern Species)

Fauna studies conducted on site resulted in 35 species of fauna being recorded. In summary, the total number for each fauna group included:

- 25 bird species;
- 6 species of mammals;
- 2 species of reptile; and,
- 2 insects.

Common birds found on site included noisy miner *(Manorina melanocephala),* Torresian Crow (*Corvus orru*), crested pigion *(Ocyphaps lophotes),* apostlebird *(Struthidea cinerea),* superb fairy-wren *(Malurus cyaneus),* and grey-crowned babbler *(Pomatostomus temporalis).* Colonial breeding species such as Welcome Swallows (*Hirundo neoxena*) and Fairy Martins (*Petrochelidon ariel*) where not seen during the site survey and are not recorded within 10km of the site. However, they are common and can occur across Queensland and may nest under the solar panels once constructed.

The six mammals recorded on site included three macropods, red-necked wallaby (*Notamacropus rufogriseus*), red kangaroo *(Osphranter rufus)* and eastern grey kangaroo (*Macropus giganteus*). Three species were introduced, the European red fox (*Vulpes vulpes*) whose tracks were found, wild cat *(Felis silvestris),* and pig *(Sus domesticus).*

The two reptiles found on site included the patternless delma *(Delma inornata)* and the bearded dragon *(Pogona barbata)*. Other reptiles not recorded that are expected to occur on site include eastern blue tongued skinks (*Tiliqua scincoides scincoides*), eastern bearded dragons (*Pogona barbata*), eastern brown snakes (*Pseudonaja textilis*), and iridescent litter skinks (*Lygisaurus foliorum*).

No amphibians were recorded on site however the survey was conducted during daylight hours and not after significant rainfall. It is expected a selection of amphibian species potentially including greenstripe frog *(Cyclorana alboguttata),* eastern snapping frog *(Cyclorana novaehollandiae),* broad palmed rocketfrog *(Litoria latopalmata),* barking frog *(Limnodynastes fletcheri),* and spotted grassfrog *(Limnodynastes tasmaniensis)* occurs on site, likely associated with the watercourse in the south.

The recommendations in this report have been outlined to ensure that the impact of the proposed development on fauna are minimised as far as possible and that least concern and EVNT species and their habitat is protected in the long term.

Significant Fauna Species

No significantly listed fauna species were recorded on site during the site survey in September 2023. It is possible the southern whiteface *(Aphelocephala leucopsis),* occurs on site at least periodically. The site contains habitat and feeding sources for this vulnerably listed species and is recorded within 10km of the site under the WildNet database. Koala habitat trees are present on site. Non-juvenile koala

habitat trees are in abundance around the perimeters of the site within both the brigalow open forest and waterway woodland community. Special requirements apply to the disturbance of koala habitat. Koalas are and their habitat are managed separately under the Nature Conservation (Koala) Conservation Plan 2017, and Nature Conservation and Other Legislation (Koala Protection) Amendment Regulation 2020. Management actions for koala and their habitat require an offset management plan for the development of Gunsynd Solar Farm.

Habitat along the watercourse in the south of the property provides the opportunity for greater glider (Petauroides volans*)* inhabitants. Large remnant eucalyptus trees within this area contain large hollows for denning and opportunities for food source. The waterway corridor connects to the west and east, providing a large area for home range for the species. Feeding trees (Casuarina spp.) for Glossy-black cockatoos were discovered in abundance on site, making the site a potential foraging location for Glossy-black cockatoos. Large hollow-bearing trees also provide this species with breeding habitat. Marginal habitat occurs on site for the black-eared cuckoo *(Chalcites osulans),* red goshawk *(Erythrotriorc his radiatus),* and grey falcon *(Falco hypoleucos).*

No migratory or marine species listed under the EPBC Act were found to be present on site. It is likely the site would see white-throated needletail *(Hirundapus caudacutus),* fork-tailed swift *(Apus pacificus),* and satin flycatcher *(Myiagra cyanoleuca).*

Grey headed flying foxes (*Pteropus poliocephalus*) were not confirmed to be present on site but are considered likely to occur. The grey headed flying fox is listed as Vulnerable under the EPBC Act. They are Australia's largest flying fox and feed on fruit and nectar while they are actively foraging at night. During the day they congregate in camps with their own species or a mixture with other flying foxes. No camps were found within the site, but the area will be used as foraging habitat when the trees are in flower and season is appropriate. As flying foxes stay in their camp colonies during the day, it is unlikely that the clearing will directly impact the species through disturbance, injury or death from the tree felling. Disturbance of a flying-fox roost is dealt with specifically under section 88C of the NC Act and section 41A of the *Nature Conservation (Animals) Regulation 2020*. This SMP does not seek an authorisation for disturbance of a flying-fox roost. The DES will be contacted to discuss any proposed activity relating to flying-foxes and flying-fox roosts.

No microbats were recorded on site; however, no microbat surveys were undertaken due to the low probability of EVNT species occurrence. Microbats potentially affected on site will be hollow occupying and highly susceptible to injury during tree felling. Where remnant vegetation is to be removed, it is highly likely that microbat's roost will be found during the vegetation clearing.

Appendix 4 assesses the likelihood of fauna species occurring on the site.

4.1 Habitat Values

Habitat features of the site for native fauna consist of resources (e.g. foraging and breeding niches) of varying quality and condition. Regarding native fauna, the site provides the following habitat resources:

- Foraging resources in the form of acacia, casuarina and eucalypts species;
- Hollow-bearing trees with a range of hollow sizes from small to large;

- Stick nests;
- Woody debris including hollow logs;
- Watercourses; and,
- Abundant dry grass and leaf litter across the site.

The project area broadly consists of the following four main habitat types.

- Open forest and regrowth vegetation: This habitat type consists of regrowth and remnant vegetation communities. The canopy cover is dominated by Eucalypt, Acacia and Casuarina species with a sparse shrub layer. This habitat type provides habitat for a range of different species including woodland birds, arboreal mammals and reptiles. It includes both arboreal habitat in the form of nests and hollows and terrestrial habitat in the form of logs, leaf litter and grass cover.
- Grazing land: This is a highly degraded and modified habitat type. This area consists of pasture grasses with sparse canopy trees and shrubs. It is generally devoid of any significant habitat features including arboreal and terrestrial habitat. Species found in this habitat type are generalists with the ability to adapt to modified landscapes. This includes grazing species and those that prefer open habitat.
- Waterways: A tributary that connects to Macintyre River runs through the site along the southern boundary. This watercourse is permanent with a constant pool of water from the main river source. This watercourse contains good quality habitat for fauna and is connected to a larger patch of waterway corridor vegetation to the west and east of the site. It's expected that the watercourses will provide habitat for aquatic birds, common frog species, and semi aquatic reptiles. Pale-headed rosellas and red-rumped parrots were seen nesting within hollow trees along the bank of the watercourse. Erosion lines are also being used as nesting habitat for burrow nesting birds.
- Farm dam: Farm dams are in the southern of the site. These features provide habitat for aquatic species. Aquatic birds were recorded during the surveys, but it is expected that turtles, common frogs and semi aquatic reptiles will also use these features. In addition to the physical habitat, these features also provide important water resources for fauna across the site.
- Solar panels: Solar panels can provide shelter and housing opportunities for fauna, particularly colonial breeding species such as microbats and birds. Some reptiles, particularly geckoes, may also use the panels for shelter and housing. Depending on the design of the panels, this use may cause maintenance and durability problems with the introduction of mud nests, waste and other materials used by the respective species.

4.2 Impacts to Fauna Species

Impacts to fauna and their habitats that may occur during construction of the project include:

- Habitat clearance for construction. The consequences of this impact are likely to include:
    - Tampering with a protected animal breeding place;
    - Direct loss of native flora and fauna habitat;
    - Injury and mortality to fauna during clearing of fauna habitat, including hollow-bearing trees, bird nests, and ground-dwelling fauna denning sites;
    - Injury and mortality to fauna due to impermeable fencing, including the entrapment of emus and kangaroos;
    - Disturbance to fallen timber, dead wood and bush rock, including removal of breeding sites;
    - Removal of foraging habitat causing long-term impacts to surrounding fauna;
    - Provision of additional shelter and habitat for some species such as colonial breeding species and geckoes,
    - Displacement of fauna causing over population and mortality in surrounding habitats; and,
    - Orphaning and abandonment of the dependant young of fauna through disturbance and clearing activities.
- Fauna collisions with construction vehicles; and,
- Light, noise and vibration which may disturb nesting and migratory fauna.

The construction impacts to native fauna and their habitats will be minimised as much as possible through the implementation of the management and mitigation measures outlined in this report.

5 Implementation of the SMP

On approval of this SMP the holder shall maintain an Animal Breeding Place register. These records will include animal breeding places known or suspected to have been tampered with (including destroyed) by the holder at the end of each day that tampering occurs.

The register must be made available to DES on request and provided within 6 months of the interaction with the high-risk impacts SMP species, and the complete register within 10 business days after the expiry of this approved SMP.

For construction works, prior to commencement of works, the holder will undertake an assessment, including a field survey, to determine the presence or absence of animal breeding places. Where breeding places are identified, the holder will comply with the actions identified within Table 2 and this SMP and will record details of the animal breeding place in the register.

For maintenance activities, an assessment for animal breeding places is not required. However, where new or likely animal breeding places are identified, the holder will comply with the actions identified within Table 2 and this SMP and will record details of the animal breeding place in the register.

5.1 Mitigation Measures

Efforts will be made to minimise potential ecological impacts by means of:

- Clearly surveying and marking the extent of vegetation clearing prior to clearing works to protect vegetation that is to be retained. Marking can be through the placement of survey pegs by surveyor. Brightly coloured and evenly spaced flagging tape, temporary fencing or high-visibility bunting/flagging may also be used. Clearing will preferably be undertaken with machines using an accurate a Geographic Positioning System (GPS). All contractors are to be made aware of the location of no-go areas i.e. retained vegetation and habitat areas and any activities prohibited in these areas;
- Fencing is required to exclude feral animals (including pigs) out of the site. This means there is a risk to native fauna entrapment. To mitigate this risk all macropods and emus will need to be out of the site prior to fence closure. The removal of these species will require specialist support and help. The procedure will require the removal of all standing water on site, and the addition of water availability near the site (approximately 500m away from site). Attractive food resource for a short time will be provided which would encourage kangaroos and emus to leave the site. Once confident the macropods and emus are out of the site a suitably qualified person must close the site off with fencing thereby preventing entrapment within the site for fauna;
- No stockpiling, storage of equipment or vehicle movements is to occur within proximity of retained vegetation and habitat areas;
- Restrict vehicle and machinery access to designated tracks within the site to prevent any unintentional additional clearing and/or disturbance to retained vegetation;
- Where appropriate and possible, hollow logs and trees will be retained and translocated to the retained vegetation area outside of the clearing boundary;
- Reducing speed limits near vegetated areas and avoiding driving at dawn and dusk wherever possible to prevent collision with native wildlife; and

- Specific fauna spotter catcher requirements are described in detail in the section below.

Further details are provided below in **Table 2**.

Table 2: Further details on proposed mitigation measures

Construction Activities	Details / Effectiveness
Pre-clearance activities	An experienced fauna spotter will be engaged to check vegetation for the presence of fauna prior to its clearing. Pre-clearing surveys will be undertaken to identify the presence of fauna species within the Project disturbance footprint, and important habitat features such as hollow-bearing trees and stags.
Erosion and sediment control	Prior to and during construction, the Construction Contractor will implement erosion and sediment control procedures. Refer to the Stormwater Management Plan and Erosion Sediment Control Plan (Topo, 2023) for further details of measures.
Clearing activities	An experienced and licensed fauna spotter will be always on-site to work alongside the Construction Contractor, during clearing activities. If any fauna is found, it will be relocated prior to removal of habitat. Refer to **Section 5.1** for further details on the fauna spotter activity and assessment to be undertaken within the site.
	Notify local wildlife carers at least 2 weeks before clearing is to commence.
	Site induction must be provided prior to commencing the work. Induction must include training in the following: • Impairment or killing of native fauna may incur penalties. • The protection of fauna that have potential to be encountered across the site. Only designated and trained personnel (such as a fauna spotter catcher) are allowed to handle and remove fauna. Contractors must be supplied with a construction protocol regarding clearing restrictions through a work site induction program. Adaptive management and monitoring will be employed for the life of the development to respond to fauna issues that are identified. Prior to delivery to site, all equipment and materials are to be deemed free of pests (rodents, toads, fire ants, etc.). Use excavators or similar machines to clear habitat trees to reduce fauna mortality.

Construction Activities	Details / Effectiveness
	Excavators will gently fell habitat trees by placing their ripper, bucket or grabs on the base of the tree as it is falling. Trees will not be pushed and allowed to fall under their own weight. The excavator shall lower the tree to the ground.
	Sensitive clearing techniques will be implemented, this will include sequential and staged clearing.
Domestic animals	No domestic animals will be allowed onto the construction site.

Operational phase	Monitoring of fauna activity within the solar farm post construction:
	• monitoring of macro fauna (kangaroos, emus etc,) which become trapped within the solar farm;
	• monitoring of colonial breeding species and reptiles using the solar panels as shelter;
	• monitoring of pest species occurring within the solar farm.
	
	Management of fauna activity within the solar farm which is deleterious to either the fauna or solar farm assets, or both;
	• should fauna become trapped within the solar farm area, undertake removal of the fauna in accordance with the procedures established during construction. Note that driving kangaroos and emus is difficult and can lead to injury to the animals. QUALIFIED AND EXPERIENCED PERSONNEL must be engaged for this activity;
	• if colonial breeders are found to be using the solar panels for housing and breeding the following protocol shall be applied:
	  ○ assess the impact to the solar farm assets from the use, if no impact to the asset is occurring then there is no further response required;
	  ○ if impact is occurring and where breeding is taking place, allow the species to complete its breeding until young are capable and self-supporting and leave the nest, the nests can then be removed. Note that advice from a suitably qualified and experienced person must be sought before removal of an animal breeding place (e.g. mud nests) is undertaken. Additional authorisation from the Department
	
	Recording of interaction and management actions taken in accordance with this SMP as described in **Table 5**.

Construction Activities	Details / Effectiveness
Education and Training	Environmental awareness will be included in the site induction, which all staff are required to complete. This will include information on the employee's responsibility for complying with environmental regulations and Project requirements. This is to ensure that employees are aware of their surroundings and the conservation significance of fauna species within the area whilst they are working.

5.2 Pre-Clearance Assessment

Prior to clearing works commencing on site, vegetation to be cleared will be inspected by an appropriately qualified fauna spotter with relevant experience in surveying, monitoring and rescuing fauna species. The purpose of the pre-clearing assessment is to search for the presence of fauna and/ or fauna habitat features (i.e. nests, dreys, termite nests, hollows etc).

Breeding habitat sites will be recorded and documented in the breeding habitat survey report that will be appended to this SMP for use during operational works.

Fauna habitat features are to be clearly marked, preferably with flagging tape or pink spray marking paint, in order to identify those which should be inspected immediately prior to clearing and be felled with care. Habitat trees are trees that provide or potentially provide resources for fauna foraging, housing and / or breeding places and may include:

- Hollows, fissures or cracks;
- Hollow logs on ground;
- Stags;
- Trees with Diameter at Breast Height (DBH) >400 mm;
- Large canopy spread; and
- Significant foraging resources for fauna.

In areas with surface rocks and timber, the fauna spotter will spend time turning over these habitat features to search for terrestrial reptiles and mammals.

Following the pre-clearing, at the commencement of the clearing works, the fauna spotter shall inform the Construction Contractor of their duties and responsibilities in relation to fauna management. This generally involves instructing drivers to be aware of fauna, and to cease clearing and inform the fauna spotter if fauna is sighted. This information is expected to be communicated through toolbox talks.

All vegetation clearing and habitat feature removal within the site will be undertaken in the presence of the fauna spotter with a minimum of one fauna spotter per work front. This includes:

- Grass stripping and riling by bulldozers or graders and subsoil stripping until the fauna spotter is satisfied that no fauna will be recovered;
- Removal or impacts to rocky areas;

- Impacts to any other habitat feature that a fauna spotter considers are likely to contain fauna.

Inspections by the fauna spotter are to be conducted directly after any habitat tree or feature is cleared. During clearing operations, if wildlife is found to be present within any tree to be removed, all work shall cease until the animal/s have moved on naturally or have been captured for subsequent relocation, if necessary. Fauna spotters have the authority to request for standing trees to remain overnight if fauna is spotted in the tree. This is to allow fauna to self-relocate overnight.

In accordance with DES Information Sheet for tampering with breeding animal places (DES, 2016), the approved fauna spotter must:

- Prior to clearing, assess whether tampering is likely to occur under Section 335 of the *Nature Conservation (Animals) Regulation 2020* and notify DES if required;
- Encourage and monitor compliance with the SMP conditions provided in this document to ensure protected wildlife and their respective breeding places are appropriately managed during clearing operations;
- Work with the Construction Contractor to achieve procedural uniformity in terms of understanding and implementation of the SMP;
- Assist the Construction Contractor with incorporating the SMP into contract documentation; and
- Use their discretion to consult with DES where they identify potential tampering of breeding places of species EVNT and/or migratory, and/or special least concern species listed under the NC Act and/or EPBC Act.

5.3 Vegetation Clearing and Habitat feature removal

5.3.1 Timing

If possible, vegetation clearing activities should be timed to minimise potential impacts on animal breeding where possible. It is recommended that as much clearing as possible takes place outside of the spring months. This will greatly reduce the likelihood of tampering with an animal's breeding place, which may result in increased rates of mortality of juvenile fauna and long-term care for juvenile fauna. Works are scheduled to commence December 2023, subject to change. A section of vegetation to the north of the property will require clearing for the installation of an access track to connect the project site to the access road, refer to the EMP (Redleaf, 2023). This clearing includes NJKHT's, this is further assessed in the EMP.

5.3.2 Self-Dispersal

Trees should be cleared in a sequence that enables fauna residing in, or near the clearing site, sufficient time to vacate the area without human involvement. The clearing sequence aims to maintain habitat links within the clearing site, and to adjoining areas, where possible, allowing fauna to move more securely from the site being cleared to adjacent woodland areas. The direction of clearing will also ensure that fauna species are directed away from threats such as roads and developed areas.

5.3.3 Tree Felling

Hollow-bearing trees will be felled in a manner which reduces potential for fauna mortality. Trees may be tapped before felling to allow for fauna to self-relocate. It is up to the discretion of the fauna spotter to decide whether tapping is appropriate. Gentle felling of the habitat trees will consist of the trees being felled with an excavator using its boom to slow the tree's fall. Trees are not to be pushed and allowed to fall under their own weight. Directly after felling, potential habitat trees should be inspected by a fauna spotter to determine if any animals are present. Fauna spotters will capture and safely contain any fauna present. Fauna spotters may request habitat trees to remain unmoved overnight to allow animals to move of their own volition. Felled habitat trees can be gently moved outside of the clearing impact boundaries.

5.3.4 Terrestrial Habitat Features

Smaller rocks and logs will be inspected by the fauna spotter during the pre-clearance survey. Larger rocks and logs will be rolled using the excavator to search for potentially occurring fauna. During grass or soil stripping, the fauna spotter will follow the bulldozer or grader and capture and relocate any uncovered fauna. The fauna spotter will continue to supervise soil stripping until they are satisfied that no further fauna will be uncovered.

5.3.5 General Measures

Management measures will be adopted to minimise impacts to fauna from dust, noise, vibration and lighting.

Habitat features will be enhanced throughout the site where possible. This includes using any fallen logs from cleared vegetation as habitat for native fauna within surrounding bushland areas.

5.3.6 Fauna spotter activities

Where likely or new animal breeding places are identified, the approved fauna spotter should comply with the actions identified within Table 2 below and details of the breeding place/s should be appropriately recorded in daily / weekly checklist.

- Consideration will be given to fauna movement where exclusion fencing is necessary for clearing and worker safety requirements.
- Consider mechanisms to facilitate fauna movement away from clearing activities.
- The fauna spotter must educate staff and the Construction Contractor, regarding the potential risks of fauna injury and deaths and how to best manage animals that may become injured or displaced, including those species listed as EVNT and/or migratory under the NC Act and/or EPBC Act.
- Table 3 (below) details relevant species management practices to be considered, and where practicable be applied to all fauna spotter activities to minimise potential disturbances to breeding animals and/or their young. Where the removal of eggs/animals is required, the fauna spotter must engage a suitably qualified and licensed wildlife carer/facility to incubate all viable

eggs removed and to raise young animals, and adequately store the eggs/animals until the wildlife carer's arrival.

Table 3: Authorised Species Management Actions with Respect to Animal Breeding Places

Species group	Breeding place status	Management action
Least concern – special least concern or colonial breeding	All	Apply for use of this SMP – high risk impact (all protected wildlife, including special least concern animals and colonial breeders). Animal breeding place survey report and impact management plan required as per Table 1 above^.
Extinct in the wild, endangered, vulnerable and near threatened animals (EVNT)	All	Animal breeding place survey report and impact management plan required as per Table 1 above^. Approval for take must be authorised under another approval.
Other least concern animals	Contains young or eggs	Avoidance of unnecessary disturbance; or suitably qualified and experienced person removes animal breeding place and eggs and/or young rehabilitated by authorised wildlife carer * It is preferable to allow eggs to hatch and/or young to mature before moving them away from a breeding place. As a last resort, eggs may be destroyed by an authorised person under a damage mitigation permit.
Other least concern animals	No eggs or young	Proceed with caution. Remove breeding place (if applicable).

Source: (DES, 2020)

[1]Where the removal or translocation of wildlife is required, the 'take' must be facilitated by a suitably licensed and experienced person.

There are two acceptable methods for destroying or terminating eggs: quickly breaking and crushing its contents; or reducing the temperature of the egg to less than 4 degrees Celsius for at least 4 hours.

^ Document titled 'Information Sheet – Requirements for tampering with a protected animal breeding place in Queensland under a Species Management Program.'

* Where rehabilitation of protected wildlife is required, rehabilitation must be undertaken in accordance with the Code of Practice – Care of Sick, Injured or Orphaned Protected Animals in Queensland.

- Where the destruction of a breeding structure may impact on the future breeding success of an animal (for instance, a breeding season will be foregone while a large nest is reconstructed, or no or limited potential breeding structures exist in the vicinity), the fauna spotter must provide the necessary support to allow for the relocation of the breeding structure.
- The fauna spotter must maintain a register to document any tampering with animal breeding places (checklist). The checklist must record the number of obvious animal breeding places destroyed and/or relocated and a description of each. Where the SMP does not apply, DES's authority is required for tampering with breeding places of species. Furthermore, the register must be made available to DES upon their request.

5.4 Wildlife Carers

Licensed and qualified wildlife carers will be contacted at least 2 weeks before the commencement of clearing to prepare for a potential influx of fauna. As wildlife carers are self-funded, any expenses relating to the care of injured or orphaned fauna off the project site (or that were injured in relation to the project) will be covered by the client. These costs will include, but are not limited to, travel costs, medication, wildlife food, holding facilities and pouches.

If no wildlife carer or transport volunteer can transport viably injured or orphaned fauna to a carer or vet, a fauna spotter or ecologist will need to transport the wildlife. Injured or orphaned wildlife cannot be kept on site during the day without appropriate care being provided by suitably licensed and experienced persons. Transport should be arranged as soon as possible. A list of wildlife carer within the locality is provided in **Table 4.**

Table 4: Vet and wildlife carer details for the local region

Name	Phone	Location/Address	Bats (Y/N?)
Koala Action Group	(07)3833 4031	South-east Queensland	No
Wildcare	5527 2444	South-east Queensland	No
Reptile Rehabilitation Queensland	1300 878 903	South-east Queensland	No
Bat Conservation And Rescue Queensland	0488 228 134	South-east Queensland	Yes
RSPCA Wildlife Rescue Hotline	1300 264 625	Queensland	Yes

5.5 Threatened Species

The mitigation measures stated above generally cover a sensitive and best practice clearing technique for increasing fauna survival and allowing for successful relocation. More specific mitigation measures are provided below:

- If EVNT species are recovered during the pre-clearance or clearance stages, the clearing methodology may have to change to reduce potential risks. Changes to the clearing

methodology in response to new threatened species will be discussed with the state or federal government.

- Should an EVNT species be recorded on site, this SMP will be revised to address the needs of that species and further specific management plan/s will be required.

5.6 Monitoring and Reporting

Table 5 below outlines the monitoring and reporting requirements for the Project.

Table 5: Summary of Fauna Management Strategies

Performance Objectives Indicators	Retain a viable fauna population on the site; Sensitive clearing techniques are employed; Limit injuries to native fauna; and No degradation of habitat adjacent to the development footprint.
Monitoring Requirements	Undertaking pre clearance surveys; and The fauna spotter shall monitor all operational works involving vegetation and habitat feature removal until satisfied that all fauna species have suitably relocated.
Reporting Responsibility	Site Manager to keep a log of clearing activities and monitoring undertaken in accordance with the EMP. This data is to be made available to Council or other government agencies upon request. This includes breaches to any exclusion areas as outlined in the non-conformance response of site EMP (Redleaf, 2023) and methods undertaken to correct breach; The project manager is required to submit an Animal Breeding Place Register to DES annually from the registered date for low-risk species and within 6 months of interaction with high risk of impact SMP species and upon expiry of the SMP; Attendance records for site induction and pre-start meetings to be completed and submitted to Project Manager; Fauna spotter to submit report to DES within one-month post-clearing; Fauna spotter to report any injuries or deaths to HSE Advisor who will notify Principal's representative as per the incident notification protocol. Notification to DES is required within 48 hours; Fauna spotter to maintain a register documenting tampering with animal breeding places. This register is to be provided to DES upon request; All incidents of non-compliance with this SMP to be recorded; and Responsible Personnel: Site manager/supervisor; Contractors; and Fauna spotter.

Corrective Action	Fauna spotter to re-induct site project personnel, as required; Site manager to re-train contractors, if considered necessary; Contractor to implement control measures; and Injured fauna species are to be placed in an adequately ventilated box in a quiet and shady location and taken to a registered wildlife carer for treatment (refer contacts below and Table 3 above).
Contacts	Queensland Environment and Science (DES): 1300 130 372

6 Roles and Responsibilities

Table 6: Roles and responsibilities

Title	Roles	Responsibilities
Project Manager	Overall responsibility to ensure that the land clearing occurs as per required protocols, while adhering to statutory requirements.	• Authorising and ensuring that the SMP is made available to all staff, contractors and regulatory authorities; • Review of SMP and becoming familiar with specific details and regulatory requirements; • Being wholly responsible for land clearing activities on the site, including the compliance and implementation of the SMP; • Allocation of resources for land clearing and training in the requirements of the SMP; • Reporting to relevant authorities in response to the mortality of any EVNT and/or migratory species that is listed under the NC Act and/or EPBC Act; and • Verify the approved boundaries for clearing are correct and properly marked in the field so contractors stay within bounds.
Construction Supervisor / Site Engineer	Oversees the clearing and construction activities.	• Direct and coordinate all machinery and truck operators and movements; • Arrange and attend site inspections and meetings with fauna spotter and regulatory authorities if required; • Ensure that all land clearing is in accordance with SMP and other relevant guidelines; • Regular liaison with fauna spotter and when required, with relevant regulatory authorities; • Undertake regular inspections of land clearing activities to identify areas for improvement; • Prepare and collate any necessary reporting for the site e.g. environmental incidents, fauna mortality and progress reports, and subsequently submit to HSE Advisor; • Ensure that non-compliances in relation to the SMP are appropriately reported and corrective actions are undertaken; and • Ensure that all staff and contractors fulfil their environmental obligations.

Fauna Spotter	Undertake pre-clearance activities and supervise clearing activities	• Monitor and evaluate any rescued fauna; • Regular liaison with the Construction Supervisor; • Induct all land clearing staff and contractors in the requirements of the SMP's land clearing procedures; • Pre-clearance assessment of vegetation to be cleared, for the presence of fauna; • Monitoring of vegetation clearing activities; • Capture and release during clearing stages; • Prepare and collate all necessary data into the checklist or Environmental Management Plan (Redleaf, 2023) logbook of fauna records; • Transporting injured animals to be assessed by a Vet; • Report any fauna mortality to the HSE Advisor, e specially involving EVNT and/or migratory species listed under the NC Act and / or EPBC Act; and • Report as required to DES.
Construction Contractors	Conduct Clearing activities	• Ensure that all construction/clearing personnel are inducted in the requirements of the SMP; • Clear vegetation in accordance with the SMP; and • Report any sightings, injury or mortality of fauna whilst undertaking clearing activities, to the HSE Advisor.

7 Conclusion

Construction of Gunsynd Solar Farm will require the clearing of potential fauna habitat and animal breeding places. The site provides limited habitat and breeding values for fauna other the vegetation on the site boundaries. A section of vegetation to the north of the property will require clearing for the installation of a track to connect the project site to the access road. These habitats will take a variety of forms including hollow bearing trees, arboreal bird's nests, hollow logs, NJKHT's, rocks and subterranean. This SMP identifies key measures to reduce the impact to these breeding places. Notable measures include avoiding clearing in spring, the provision of fauna spotters, pre-clearance surveys, clearing with excavators and reimbursing wildlife carers. Although these general mitigation measures cover a best practice approach, specific mitigation measures for EVNT species will be developed if they are found on site.

By implementing the key recommended actions designed to minimise impacts during the construction phase of this Project, the project will aim to reduce its direct and indirect impact to fauna in the local area. The retained vegetation area will continue to provide foraging and nesting opportunities, shelter, water resources and habitat resources (including timber, shedding bark and leaf litter) for some wildlife.

8 References

ALA (2014). "Atlas of Living Australia Database." from Available online at: http://spatial.ala.org.au/.

DES (2019). Flora Survey Guidelines - Protected Plants – Nature Conservation Act 1992. Department of Environment and Heritage Protection (Ver 2.01).

DNRME (2019). Regional Ecosystem Descriptions. . Department of Natural Resources, Mines and Energy.

DNRME (2019). Vegetation management report

DCCEEW (2023). "EPBC Protected Matters Search Tool." from http://www.environment.gov.au/epbc/pmst/index.html.

DES (2019). Environmental Reports - Regional Ecosystems - Biodiversity Status

DES (2019). Environmental Reports - Matters of State Environmetnal Significance

DES (2019). Environmental Reports - Biodiversity and Conservation Values - Biodiversity Planning Assessments and Aquatic Conservation Assessments

DES (2022). Information sheet Species Management Program Requirements for tampering with a rotected animal breeding place in Queensland

DES (2020). Species management program **(SMP)** for tampering with animal breeding places (**H**igh risk of impacts) - Template.

DES (2019). Wildnet Records Pest List 2023

DES (2019). WetlandMaps Report 2023.

DSDMIP (2019) - DA Mapping System

Appendix 1

EPBC Act Protected Matters Search

EPBC Act Protected Matters Report

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

Report created: 06-Sep-2023

Summary

Matters of National Environment Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	3
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	5
Listed Threatened Species:	30
Listed Migratory Species:	9

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	17
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	3
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)		[Resource Information]
Ramsar Site Name	Proximity	Buffer Status
Banrock station wetland complex	1100 - 1200km upstream from Ramsar site	In feature area
Riverland	1000 - 1100km upstream from Ramsar site	In feature area
The coorong, and lakes alexandrina and albert wetland	1200 - 1300km upstream from Ramsar site	In feature area

Listed Threatened Ecological Communities			[Resource Information]

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

Community Name	Threatened Category	Presence Text	Buffer Status
Brigalow (Acacia harpophylla dominant and co-dominant)	Endangered	Community known to occur within area	In feature area
Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions	Endangered	Community may occur within area	In feature area
Natural grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland	Critically Endangered	Community may occur within area	In buffer area only
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community likely to occur within area	In feature area
Weeping Myall Woodlands	Endangered	Community likely to occur within area	In feature area

Listed Threatened Species			[Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat known to occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Melanodryas cucullata cucullata			
South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat may occur within area	In buffer area only
Neophema chrysostoma			
Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area	In feature area
Rostratula australis			
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata			
Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area
FISH			
Maccullochella peelii			
Murray Cod [66633]	Vulnerable	Species or species habitat may occur within area	In buffer area only
MAMMAL			
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	In buffer area only
Nyctophilus corbeni			
Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Petauroides volans			
Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area	In feature area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)			
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat likely to occur within area	In feature area
PLANT			
Cadellia pentastylis			
Ooline [9828]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Dichanthium setosum bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Lepidium monoplocoides Winged Pepper-cress [9190]	Endangered	Species or species habitat may occur within area	In feature area
Swainsona murrayana Slender Darling-pea, Slender Swainson, Murray Swainson-pea [6765]	Vulnerable	Species or species habitat may occur within area	In feature area
Westringia parvifolia [4822]	Vulnerable	Species or species habitat likely to occur within area	In feature area
REPTILE			
Anomalopus mackayi Five-clawed Worm-skink, Long-legged Worm-skink [25934]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area	In feature area
Egernia rugosa Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area	In feature area
Furina dunmalli Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area	In feature area
Hemiaspis damelii Grey Snake [1179]	Endangered	Species or species habitat likely to occur within area	In feature area
Listed Migratory Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundapus caudacutus			
White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Motacilla flava			
Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca			
Satin Flycatcher [612]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos			
Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Gallinago hardwickii			
Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
[Bubulcus ibis as Ardea ibis](#) Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
[Chalcites osculans as Chrysococcyx osculans](#) Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area	In feature area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area overfly marine area	In feature area
[Haliaeetus leucogaster](#) White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
[Hirundapus caudacutus](#) White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area overfly marine area	In feature area
[Lathamus discolor](#) Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat may occur within area overfly marine area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
Pterodroma cervicalis White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area

Extra Information

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Leichhardt Hwy upgrade	2006/2532	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
132kV transmission line	2003/1024	Not Controlled Action (Particular Manner)	Post-Approval	In feature area

Bioregional Assessments

SubRegion	BioRegion	Website	Buffer Status
Maranoa-Balonne-Condamine	Northern Inland Catchments	BA website	In feature area

Caveat

1 PURPOSE

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

The report contains the mapped locations of:

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

2 DISCLAIMER

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

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

3 DATA SOURCES

Threatened ecological communities

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

Threatened, migratory and marine species

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

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

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

4 LIMITATIONS

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

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

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

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

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

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

Acknowledgements

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

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

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

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

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Appendix 2

Wildlife Online Database

Queensland Government

WildNet species list

Search Criteria: Species List for a Specified Point
Species: All
Type: Native
Queensland status: All
Records: All
Date: All
Latitude: -28.4072
Longitude: 150.3429
Distance: 10
Email: emily.dayman@greentapesolutions.com.au
Date submitted: Tuesday 05 Sep 2023 13:32:45
Date extracted: Tuesday 05 Sep 2023 13:40:06

The number of records retrieved = 124

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Hylidae	*Cyclorana alboguttata*	greenstripe frog		C		3/3
animals	amphibians	Hylidae	*Cyclorana novaehollandiae*	eastern snapping frog		C		5/4
animals	amphibians	Hylidae	*Litoria latopalmata*	broad palmed rocketfrog		C		3/2
animals	amphibians	Hylidae	*Litoria rubella*	ruddy treefrog		C		1
animals	amphibians	Limnodynastidae	*Limnodynastes fletcheri*	barking frog		C		2/2
animals	amphibians	Limnodynastidae	*Limnodynastes tasmaniensis*	spotted grassfrog		C		2
animals	amphibians	Myobatrachidae	*Crinia parinsignifera*	beeping froglet		C		1
animals	birds	Acanthizidae	*Acanthiza chrysorrhoa*	yellow-rumped thornbill		C		1
animals	birds	Acanthizidae	*Aphelocephala leucopsis*	southern whiteface		V	V	1
animals	birds	Acanthizidae	*Gerygone olivacea*	white-throated gerygone		C		1
animals	birds	Accipitridae	*Haliaeetus leucogaster*	white-bellied sea-eagle		C		1
animals	birds	Accipitridae	*Haliastur sphenurus*	whistling kite		C		1
animals	birds	Accipitridae	*Milvus migrans*	black kite		C		1
animals	birds	Alcedinidae	*Dacelo novaeguineae*	laughing kookaburra		C		1
animals	birds	Anatidae	*Anas gracilis*	grey teal		C		3
animals	birds	Anatidae	*Anas superciliosa*	Pacific black duck		C		1
animals	birds	Anatidae	*Chenonetta jubata*	Australian wood duck		C		1
animals	birds	Anatidae	*Dendrocygna eytoni*	plumed whistling-duck		C		2
animals	birds	Ardeidae	*Ardea pacifica*	white-necked heron		C		3
animals	birds	Ardeidae	*Egretta novaehollandiae*	white-faced heron		C		1
animals	birds	Artamidae	*Artamus superciliosus*	white-browed woodswallow		C		1
animals	birds	Artamidae	*Cracticus nigrogularis*	pied butcherbird		C		3
animals	birds	Artamidae	*Cracticus torquatus*	grey butcherbird		C		2
animals	birds	Artamidae	*Gymnorhina tibicen*	Australian magpie		C		4
animals	birds	Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo		C		1
animals	birds	Cacatuidae	*Eolophus roseicapilla*	galah		C		5
animals	birds	Cacatuidae	*Nymphicus hollandicus*	cockatiel		C		4
animals	birds	Charadriidae	*Vanellus miles novaehollandiae*	masked lapwing (southern subspecies)		C		1
animals	birds	Columbidae	*Ocyphaps lophotes*	crested pigeon		C		4
animals	birds	Corcoracidae	*Struthidea cinerea*	apostlebird		C		2
animals	birds	Corvidae	*Corvus coronoides*	Australian raven		C		1
animals	birds	Corvidae	*Corvus orru*	Torresian crow		C		2
animals	birds	Corvidae	*Corvus sp.*			C		1
animals	birds	Cuculidae	*Scythrops novaehollandiae*	channel-billed cuckoo		C		1
animals	birds	Dicaeidae	*Dicaeum hirundinaceum*	mistletoebird		C		2
animals	birds	Estrildidae	*Taeniopygia bichenovii*	double-barred finch		C		1
animals	birds	Falconidae	*Falco cenchroides*	nankeen kestrel		C		1
animals	birds	Maluridae	*Malurus cyaneus*	superb fairy-wren		C		1
animals	birds	Maluridae	*Malurus leucopterus*	white-winged fairy-wren		C		1
animals	birds	Meliphagidae	*Acanthagenys rufogularis*	spiny-cheeked honeyeater		C		2
animals	birds	Meliphagidae	*Lichmera indistincta*	brown honeyeater		C		1
animals	birds	Meliphagidae	*Manorina flavigula*	yellow-throated miner		C		1
animals	birds	Meliphagidae	*Manorina melanocephala*	noisy miner		C		3
animals	birds	Meliphagidae	*Plectorhyncha lanceolata*	striped honeyeater		C		1
animals	birds	Meliphagidae	*Ptilotula penicillata*	white-plumed honeyeater		C		1
animals	birds	Monarchidae	*Grallina cyanoleuca*	magpie-lark		C		7

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Pachycephalidae	*Pachycephala rufiventris*	rufous whistler		C		1
animals	birds	Pardalotidae	*Pardalotus striatus*	striated pardalote		C		1
animals	birds	Petroicidae	*Eopsaltria australis*	eastern yellow robin		C		1
animals	birds	Pomatostomidae	*Pomatostomus temporalis*	grey-crowned babbler		C		1
animals	birds	Psittaculidae	*Northiella haematogaster*	blue bonnet		C		1
animals	birds	Psittaculidae	*Psephotus haematonotus*	red-rumped parrot		C		1
animals	birds	Rhipiduridae	*Rhipidura albiscapa*	grey fantail		C		1
animals	birds	Rhipiduridae	*Rhipidura leucophrys*	willie wagtail		C		4
animals	birds	Threskiornithidae	*Platalea flavipes*	yellow-billed spoonbill		C		1
animals	birds	Threskiornithidae	*Platalea regia*	royal spoonbill		C		1
animals	birds	Threskiornithidae	*Threskiornis molucca*	Australian white ibis		C		1
animals	birds	Threskiornithidae	*Threskiornis spinicollis*	straw-necked ibis		C		1
animals	ray-finned fishes	Percichthyidae	*Macquaria ambigua*	golden perch				1
fungi	eurotiomycetes	Verrucariaceae	*Endocarpon aridum*			C		1/1
fungi	eurotiomycetes	Verrucariaceae	*Endocarpon pusillum*			C		1/1
fungi	eurotiomycetes	Verrucariaceae	*Endocarpon simplicatum*			C		1/1
fungi	lecanoromycetes	Collemataceae	*Enchylium coccophorum*			C		1/1
fungi	lecanoromycetes	Lecideaceae	*Lecidea ochroleuca*			C		1/1
fungi	lichinomycetes	Peltulaceae	*Peltula patellata*			C		1/1
plants	land plants	Acanthaceae	*Brunoniella australis*	blue trumpet		C		1/1
plants	land plants	Aizoaceae	*Tetragonia tetragonoides*	New Zealand spinach		C		1/1
plants	land plants	Alismataceae	*Damasonium minus*	starfruit		SL		1/1
plants	land plants	Amaranthaceae	*Alternanthera denticulata*	lesser joyweed		C		1/1
plants	land plants	Asteraceae	*Calotis cuneata*			C		1/1
plants	land plants	Asteraceae	*Eclipta platyglossa subsp. platyglossa*			C		1/1
plants	land plants	Asteraceae	*Leiocarpa panaetioides*			C		1/1
plants	land plants	Asteraceae	*Minuria integerrima*	smooth minuria		C		3/3
plants	land plants	Asteraceae	*Olearia pimeleoides*			C		1/1
plants	land plants	Asteraceae	*Pycnosorus chrysanthus*	golden billy buttons		C		1/1
plants	land plants	Asteraceae	*Sigesbeckia orientalis*	Indian weed		C		1/1
plants	land plants	Asteraceae	*Vittadinia sulcata*	native daisy		C		1/1
plants	land plants	Brassicaceae	*Rorippa dietrichiana*			C		1/1
plants	land plants	Campanulaceae	*Wahlenbergia capillaris*			SL		1/1
plants	land plants	Chenopodiaceae	*Atriplex leptocarpa*	slender fruit saltbush		C		1/1
plants	land plants	Chenopodiaceae	*Enchylaena tomentosa*			C		1/1
plants	land plants	Chenopodiaceae	*Sclerolaena anisacanthoides*	yellow burr		C		1/1
plants	land plants	Chenopodiaceae	*Sclerolaena birchii*	galvanised burr		C		1/1
plants	land plants	Chenopodiaceae	*Sclerolaena muricata var. villosa*			C		1/1
plants	land plants	Chenopodiaceae	*Sclerolaena tricuspis*	giant red burr		C		1/1
plants	land plants	Commelinaceae	*Commelina lanceolata*			C		1/1
plants	land plants	Cyperaceae	*Carex inversa*	knob sedge		C		1/1
plants	land plants	Cyperaceae	*Cyperus concinnus*			C		1/1
plants	land plants	Elatinaceae	*Elatine gratioloides*	waterwort		C		1/1
plants	land plants	Lamiaceae	*Coleus australis*			C		1/1
plants	land plants	Lamiaceae	*Teucrium junceum*			C		1/1
plants	land plants	Laxmanniaceae	*Lomandra leucocephala subsp. leucocephala*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Leguminosae	*Acacia decora*	pretty wattle		C		1/1
plants	land plants	Leguminosae	*Acacia harpophylla*	brigalow		C		1/1
plants	land plants	Leguminosae	*Acacia oswaldii*	miljee		C		1/1
plants	land plants	Leguminosae	*Indigofera australis subsp. australis*			C		1/1
plants	land plants	Leguminosae	*Sesbania cannabina var. cannabina*			C		1/1
plants	land plants	Lythraceae	*Ammannia multiflora*	jerry-jerry		C		1/1
plants	land plants	Malvaceae	*Abutilon oxycarpum var. incanum*			C		1/1
plants	land plants	Myrtaceae	*Eucalyptus largiflorens*	black box		C		4/4
plants	land plants	Phrymaceae	*Glossostigma diandrum*			C		1/1
plants	land plants	Poaceae	*Astrebla lappacea*	curly mitchell grass		C		1/1
plants	land plants	Poaceae	*Chloris truncata*			C		1/1
plants	land plants	Poaceae	*Dactyloctenium radulans*	button grass		C		1/1
plants	land plants	Poaceae	*Dinebra decipiens var. peacockii*			C		1/1
plants	land plants	Poaceae	*Dinebra divaricatissima*			C		2/2
plants	land plants	Poaceae	*Dinebra ligulata*			C		3/3
plants	land plants	Poaceae	*Enteropogon acicularis*	curly windmill grass		C		1/1
plants	land plants	Poaceae	*Eragrostis parviflora*	weeping lovegrass		C		1/1
plants	land plants	Poaceae	*Eriochloa crebra*	spring grass		C		1/1
plants	land plants	Poaceae	*Leptochloa digitata*			C		1/1
plants	land plants	Poaceae	*Paspalidium constrictum*			C		1/1
plants	land plants	Poaceae	*Paspalidium jubiflorum*	warrego grass		C		1/1
plants	land plants	Poaceae	*Sporobolus caroli*	fairy grass		C		1/1
plants	land plants	Poaceae	*Sporobolus mitchellii*	rat's tail couch		C		2/2
plants	land plants	Polygonaceae	*Persicaria attenuata*			C		1/1
plants	land plants	Portulacaceae	*Calandrinia pickeringii*			C		1/1
plants	land plants	Sapindaceae	*Atalaya hemiglauca*			C		1/1
plants	land plants	Scrophulariaceae	*Eremophila mitchellii*			C		1/1
plants	land plants	Solanaceae	*Nicotiana megalosiphon*			C		1/1
plants	land plants	Solanaceae	*Solanum ellipticum*	potato bush		C		1/1
plants	land plants	Solanaceae	*Solanum parvifolium subsp. parvifolium*			C		1/1
plants	land plants	Typhaceae	*Typha domingensis*			C		1/1
plants	land plants	Zygophyllaceae	*Roepera apiculata*			C		1/1

CODES

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

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992.*
The codes are Extinct (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C).

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

Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).
This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.
This number is output as 999 if it equals or exceeds this value.

Appendix 3

Threatened Flora and Fauna Species Assessment of Likelihood

(Note – Aquatic and marine species were not included in the table due to the limited impact of the development on aquatic environment).

Species	Common Name	NC Act Status	EPBC Act Status	Habitat	Likelihood of Occurrence
Birds					
Aphelocephala leucopsis	Southern Whiteface	V	V	Southern whitefaces live in a wide range of open woodlands and shrublands where there is an understorey of grasses or shrubs, or both. These areas are usually in habitats dominated by acacias or eucalypts on ranges, foothills and lowlands, and plains (Higgins & Peter 2002).	Possible – the site survey found areas of suitable habitat for this species. Recorded by WildNet within 10km of the site. No specific surveys were undertaken for this species.
Botaurus poiciloptilus	Australasian Bittern	E	E	The Australasian Bittern occurs mainly in freshwater wetlands and, rarely, in estuaries or tidal wetlands (Marchant & Higgins 1990). 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. The species nests adjacent to relatively deep, densely vegetated freshwater swamps and pools, building its nests under dense cover over shallow water (Marchant & Higgins 1990).	Unlikely – the site investigation determined that this site does not support suitable habitat for this species.
Calidris ferruginea	Curlew Sandpiper	E	CE, MW, M	Tidal mudflats, saltmarsh, saltfields; fresh, brackish or saline wetlands; sewage ponds (Pizzey and Knight, 2007).	Unlikely – the site investigation determined that this site does not support suitable habitat for this species.

Species	Common Name	NC Act Status	EPBC Act Status	Habitat	Likelihood of Occurrence
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	V	V	South-eastern glossy black cockatoos feed almost exclusively on the seeds of sheoaks (Allocasuarina spp. and Casuarina spp.), usually relying on one or two species within a region (Higgins 1999). South-eastern glossy black cockatoos are hollow nesters, utilising large hollows in both living and dead eucalypt trees (Higgins 1999).	Possible – the site survey found areas of suitable habitat for this species. No specific surveys were undertaken for this species.
Climacteris picumnus victoriae	Brown Treecreeper	V	V	The brown treecreeper is found in diverse Australian habitats, including eucalypt forests, woodlands, and scrublands. They rely on mature trees, especially those with loose bark, for nesting and foraging, making these environments crucial for their survival.	Unlikely – the site investigation determined that this site does not support suitable habitat for this species.
Erythrotriorchis radiatus	Red Goshawk	E	E	The red goshawk primarily occupies remote regions of northern and eastern Australia. Their habitat includes dense woodlands, rainforests, and riparian areas, often near water bodies, with tall trees for nesting and hunting. Conservation efforts focus on preserving these vital habitats.	Possible - marginal habitat occurs on site for this species.
Falco hypoleucos	Grey Falcon		V	Inhabits remote and arid regions of Australia, favouring sparse woodlands, grasslands, and desert habitats. Its habitat often includes areas with low vegetation, which provides suitable hunting grounds for its primary prey, other birds.	Possible - marginal habitat occurs on site for this species.
Geophaps scripta scripta	Squatter Pigeon	V	V	Squatter Pigeon (southern) habitat is generally defined as open-forests to sparse, open-woodlands and scrub	Unlikely – the site investigation determined that this site does not

Species	Common Name	NC Act Status	EPBC Act Status	Habitat	Likelihood of Occurrence
					support preferred habitat for this species.
Grantiella picta	Painted Honeyeater	V	V	Habitat includes mistletoes in Eucalyptus forests, Box Ironbark/Yellow Gum woodlands, Paperbarks, Casuarinas, Mulgas/Acacias (Birds Australia, 2010; Pizzey and Knight, 2007). Rare migrant/nomad with range extending across eastern Australia (Pizzey and Knight, 2007).	Unlikely – the site investigation determined that this site does not support preferred habitat for this species.
Hirundapus caudacutus	White-throated Needletail	V	V	The White-throated Needletail is almost exclusively aerial, from heights of less than 1 m up to more than 1000m above the ground.	Possible – may fly over the site.
Lathamus discolor	Swift Parrot	E	CE	The Swift Parrot inhabits dry sclerophyll eucalypt forests and woodlands and occasionally in wet sclerophyll forests.	Unlikely – the site investigation determined that this site does not support preferred habitat for this species.
Melanodryas cucullata cucullata	South-eastern Hooded Robin	E	E	The South-eastern Hooded Robin inhabits southeastern Australia, favouring open woodlands, heathlands, and scrubby areas with low shrubs and grasses. These habitats offer suitable foraging grounds and nesting sites for this small, insect-eating bird.	Possible – the site survey found areas of suitable habitat for this species. No specific surveys were undertaken for this species.

Species	Common Name	NC Act Status	EPBC Act Status	Habitat	Likelihood of Occurrence
Neophema chrysostoma	Blue-winged Parrot	V	V	The Blue-winged Parrot is found in various habitats across Australia, including grasslands, woodlands, and coastal heathlands. They prefer areas with suitable nesting sites, water sources, and food availability.	Possible – the site survey found areas of suitable habitat for this species. No specific surveys were undertaken for this species.
Rostratula australis	Australian Painted Snipe	E	E	Inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans.	Unlikely – the site investigation determined that this site does not support suitable habitat for this species.
Stagonopleura guttata	Diamond Firetail	V	V	Thrives in southeastern Australia's grassy woodlands, shrublands, and open forest areas. They require tall grasses for nesting and feed on seeds.	Unlikely – the site investigation determined that this site does not support suitable habitat for this species.
Reptiles					
Anomalopus mackayi	Five-clawed Worm-skink	E	V	Inhabits the rainforests and wet sclerophyll forests of eastern Australia, particularly Queensland. These secretive lizards burrow in the leaf litter, relying on moist, forested environments for their habitat and prey.	Possible – the site survey found areas of suitable habitat for this species. No specific surveys were undertaken for this species.
Delma torquata	Collared Delma	V	V	The Collared Delma normally inhabits eucalypt-dominated woodlands and open-forests on RE Land Zones 3, 9 and 10 with	Unlikely – the site investigation determined that this site does not

Species	Common Name	NC Act Status	EPBC Act Status	Habitat	Likelihood of Occurrence
				the presence of rocks, logs, bark and other coarse woody debris, and mats of leaf litter.	support suitable habitat for this species.
Egernia rugosa	Yakka Skink	V	V	Thrives in arid and semi-arid regions, including open woodlands, rocky outcrops, and desert environments. These skinks seek shelter in crevices and burrows, requiring access to rocks and sunny basking spots.	Unlikely – the site investigation determined that this site does not support suitable habitat for this species.
Furina dunmalli	Dunmall's Snake		V	Open forest and woodland, particularly brigalow (*Acacia harpophylla*) forest and woodland growing on floodplains of deep-cracking black clay and clay loam soils. Occurs in the south eastern interior of Queensland, especially the Darling Downs.	Possible – the site survey found areas of suitable habitat for this species. No specific surveys were undertaken for this species.
Hemiaspis damelii	Grey Snake	E	E	Inhabits a range of ecosystems, including woodlands, grasslands, and coastal areas. It prefers habitats with suitable hiding spots and prey availability	Possible – the site survey found areas of suitable habitat for this species. No specific surveys were undertaken for this species.
Mammals					
Dasyurus maculatus maculatus (SE mainland population)	Spotted-tailed Quoll	V	E	Forest and woodland including rainforest, and wet and dry sclerophyll forest and woodland.	Unlikely – the site investigation determined that this site does not support suitable habitat for this species.

Species	Common Name	NC Act Status	EPBC Act Status	Habitat	Likelihood of Occurrence
Nyctophilus corbeni	Corben's Long-eared Bat	V	V	Roosts in tree hollows, caves, and buildings, favouring a variety of habitats, including forests, woodlands, and urban areas. These bats require access to suitable roosting sites and forage for insects in their chosen habitats.	Unlikely – the site investigation determined that this site does not support suitable habitat for this species.
Petauroides volans	Greater glider	E	E	Found in open old growth Eucalypt or Corymbia woodland. Highly reliant on many large hollows in sizeable or highly connected habitat areas.	Possible – the site survey found areas of suitable habitat for this species. No specific surveys were undertaken for this species.
Phascolarctos cinereus	Koala (combined populations of QLD, NSW and the ACT)	E	E	Inhabits a range of arid, temperate, sub-tropical and tropical forest and woodland communities dominated by species from the *Eucalyptus* genus.	Possible – the site survey found areas of suitable habitat for this species. No specific surveys were undertaken for this species.
Pteropus poliocephalus	Grey-headed flying fox	-	V	Occurs in a range of habitats including subtropical and temperate rainforests, dry and wet sclerophyll forests, Banksia woodland, heaths and Melaleuca swamps.	Possible - the site survey found areas of suitable foraging habitat for this species during appropriate seasons. No specific surveys were undertaken for this species.
Fish					

Species	Common Name	NC Act Status	EPBC Act Status	Habitat	Likelihood of Occurrence
Maccullochella peelii	Murray Cod		V	Inhabits the Murray-Darling Basin's rivers and waterways. These fish thrive in slow-moving or still waters, such as rivers, lakes, and dams, with abundant submerged vegetation and rocky structures for shelter.	Unlikely – the site investigation determined that this site does not support suitable habitat for this species.

***Sources:** DoE (2016), DEHP (2016b) and OEH (2012).

Status: E: Endangered, **V**: Vulnerable, **NT**: Near Threatened, **MM**: Migratory Marine, **MT**: Migratory Terrestrial, **MW**: Migratory Wetland, **M**: Marine.

Likelihood of Occurrence: **Unlikely** – no suitable habitat present, **Possible** – suitable species habitat present, **Likely** – suitable species habitat present and has previously been recorded within 5km, **Known** – species recorded during field survey

Appendix 4

Flora and Fauna Species List

Scientific Name	Common Name
Flora Species	
spiny rush	*Juncus acutus*
bur clover	*Medicago polymorpha*
black roly-poly	*Sclerolaena muricata*
common dandelion	*Taraxacum officinale*
African boxthorn*	*Lycium ferocissimum*
common sowthistle	*Sonchus oleraceus*
yellow buttons	*Chrysocephalum apiculatum*
spear thistle*	*Cirsium vulgara*
barrier saltbush	*Enchylaena tomentosa*
harrisia cactus*	*Harrisia martini*
prickly pear*	*Opuntia stricta*
mother of millions*	*Bryophyllum delagoense*
brigalow	*Acacia harpophylla*
belah	*Casuarina cristata*
river red gum	*Eucalyptus camaldulensis*
coolabah	*Eucalyptus coolabah*
poplar box	*Eucalyptus populnea*
flaxleaf fleabane*	*Conyza bonariensis*
galvanised burr	*Sclerolaena birchii*
goathead burr	*Sclerolaena bicornis*
Alkali Sacaton*	*Sporobolus airoides*
mayne's pest*	*Verbena aristigera*
prickly pademelon	*Cucumis myriocarpus*
blady grass	*Imperata cylindrica*
wilga	*Geijera parviflora*
wiry panic	*Entolasia stricta*
feathertop*	*Pennisetum villosum*
buffel grass*	*Cenchrus ciliaris*
windmill grass	*Chloris truncata*
mother-of-millions	*Bryophyllum delagoense*
thorny saltbush	*Rhagodia spinescens*
bastard sandalwood	*Eremophila mitchellii*
button grass	*Dactyloctenium radulans*
bear grass	*Eryngium yuccifolium*
white sour bush	*Choretrum candollei*
prickly pademelon*	*Cucumis myriocarpus*
milk weed	*Sonchus oleraceus*
lesser swinecress	*Lepidium didymum*

pigweed*	*Portulaca oleracea*
common mugwart	*Artemisia vulgaris*
cheeseweed mallow	*Malva Parviflora*
spotted emubush	*Eremophila maculata*
caustic vine	*Cynanchum viminale*
copperburrs	*Sclerolaena sp*
Fauna species	
Australian magpie	*Gymnorhina tibicen*
torresian crow	*Corvus orru*
red-rumped parrot	*Psephotus haematonotus*
noisy miner	*Manorina melanocephala*
crested pigeon	*Ocyphaps lophotes*
willie wagtail	*Rhipidura leucophrys*
pied currawong	*Strepera graculina*
magpie-lark	*Grallina cyanoleuca*
peaceful dove	*Geopelia placida*
apostlebird	*Struthidea cinerea*
nankeen kestrel	*Falco cenchroides*
galah	*Eolophus roseicapilla*
superb fairy-wren	*Malurus cyaneus*
common myna*	*Acridotheres tristis*
pale-headed rosella	*Platycercus adscitus*
black-faced cuckoo-shrike	*Coracina novaehollandiae*
variegated fairy-wren	*Malurus lamberti*
Australian bustard	*Ardeotis australis*
blue-faced honeyeater	*Entomyzon cyanotis*
Australian wood duck	*Chenonetta jubata*
white-necked heron	*Ardea pacifica*
pacific black duck	*Anas superciliosa*
grey-crowned babbler	*Pomatostomus temporalis*
spiny-cheeked honeyeater	*Acanthagenys rufogularis*
pied butcherbird	*Cracticus nigrogularis*
caper white	*Belenois java teutonia*
monarch	*Danaus plexippus*
red-necked wallaby	*Notamacropus rufogriseus*
red kangaroo	*Osphranter rufus*
pig*	*Sus scrofa*
eastern grey kangaroo	*Macropus giganteus*
European red fox*	*Vulpes vulpes*
wild cat*	*Felis silvestris*

patternless delma	*Delma inornata*
bearded dragon	*Pogona barbata*

* Invasive species

Appendix 5

DES Species Management Program Information Sheet

Information sheet

Species Management Program

Requirements for tampering with a protected animal breeding place in Queensland

This document has been developed by the Department of Environment and Science (DES) and describes the minimum requirements for the development of a Species Management Program (SMP) as an 'approved species management program' under the Nature Conservation (Animals) Regulation 2020.

ABN 46 640 294 485

1. Purpose

This information sheet explains the expected protocols for tampering with *animal breeding places* for environmental consultants and proponents. The use of an *approved species management program* (SMP) is described and the standard requirements are outlined to achieve a consistent approach in the consideration of the impact of proposals on all identified animal breeding places.

This document also provides the details required to ensure that species management programs are presented to the Department of Environment and Science (DES) in an appropriate format for assessment.

2. Background

The object of the *Nature Conservation Act 1992* (NCA) is the conservation of nature, which is to be achieved through the protection of wildlife and its habitat, and the ecological sustainability of any use of *protected wildlife*.

For any proposed activity that will impact on breeding places of protected animals that are classified as *extinct in the wild*, critically endangered, *endangered*, *vulnerable*, *near threatened* (EVNT), *special least concern*, *colonial breeder* or *least concern*, an SMP for that species will be required. Animal breeding places include obvious structures such as bird nests and tree hollows, as well as more cryptic places such as amphibian or reptile habitat where breeding takes place.

The purpose of an SMP is to:

- assess the threats to native animal breeding places resulting from a planned activity
- incorporate management actions that will avoid or minimise both the immediate and the long term impact of removing or altering an animal breeding place
- set monitoring and reporting requirements that demonstrate the management actions in the SMP are effectively implemented and produce the intended results.

SMPs do not give authority for a planned activity such as clearing or removal of habitat (excluding animal breeding places), as these are potentially addressed under other approval systems such as the *Planning Act 2016,* the *Vegetation Management Act 1999 a*nd the NCA (for example, clearing of protected plants).

An SMP is only required where an animal breeding place, as defined under section 335 of the Nature Conservation (Animals) Regulation 2020, has been identified and activities are proposed that would tamper with the breeding place.

There are generally two types of SMP's approved under the Animals Regulation, Low-risk and a High-risk

A High-Risk SMP is to be used for:

- Least concern animals that are colonial breeders, and therefore whose broader populations are at greater risk from the impacts of events at a single location
- Special least concern animals (as prescribed in the Nature Conservation (Animals) Regulation 2020 (the Animals Regulation)
- Near threatened, Vulnerable, Endangered, Critically Endangered, or Extinct in the Wild Animals (as prescribed in the Animals Regulation)

A Low Risk SMP is to be used for

- Least concern animals (that aren't colonial breeders)

3. Legislative requirements

3.1 Queensland Government requirements

3.1.1 *Nature Conservation Act 1992*

Under section 88 of the Act, a person must not take, keep or use a protected animal unless authorised, such as by the grant of a licence or permit or under the authority of a conservation plan, unless:

(a) the taking happened in the course of a lawful activity that was not directed towards the taking; and

(b) the taking could not have been reasonably avoided.

Maximum penalty—3000 penalty units or 2 years imprisonment.

Note: The taking of a protected animal is not authorised under an SMP. Under the NCA, a separate wildlife authority such as a damage mitigation permit (culling and dispersal of wildlife) is required.

3.1.2 Nature Conservation (Animals) Regulation 2020

The Animals Regulation prohibits tampering with an animal breeding place except under specific conditions which include the activity being part of an approved SMP.

Section 335 of the Animals Regulation states:

(1) A person must not, without a reasonable excuse, tamper with an animal breeding place that is being used by a protected animal to incubate or rear the animal's offspring.

Maximum penalty—165 penalty units.

(2) For subsection (1), an animal breeding place is being used by a protected animal to incubate or rear the animal's offspring if—

- the animal is preparing, or has prepared, the place for incubating or rearing the animal's offspring; or
- the animal is breeding, or is about to breed, and is physically occupying the place; or
- the animal and the animal's offspring are physically occupying the place, even if the occupation is only periodical; or
- the animal has used the place to incubate or rear the animal's offspring and is of a species generally known to return to the same place to incubate or rear offspring in each breeding season for the animal.

(3) Subsection (1) does not apply if—

(a) the person is an authorised person; or

(b) the removal or tampering by the person is—

(i) authorised under the Act; or

(ii) reasonably necessary for the person to carry out an activity authorised under the Act; or (c) the removal or tampering is part of an approved species management program for the animal.

Also, subsection (1) does not apply to a person removing or otherwise tampering with the breeding place if—

- the removal or tampering is part of an approved species management program for animals of the same species; or

- the person holds a damage mitigation permit for the animal and the permit authorises the removal or tampering.

3.1.3 Koala habitat

Koalas are not included in SMP documentation, as koalas do not use a habitual breeding place (e,.g. a nest or tree hollow). The clearing of vegetation in which koalas are present should be viewed as clearing of koala habitat rather than clearing of a koala breeding place. Special requirements apply to the disturbance of koala habitat, such as sequential clearing, having a koala spotter in attendance and limits on the area of habitat that can be cleared at any one time. Refer to the following documents:

- South East Queensland Koala Conservation Strategy 2020-2025
- Nature Conservation (Koala) Conservation Plan 2017.

3.1.4 Flying-fox roosts

Disturbance of a flying-fox roost (genus *Pteropus*) is dealt with sepereately under section 88C of the Act and section 61 of the Animals Regulation. An SMP does not authorise a person to destroy, drive away, attempt to drive away or disturb a flying-fox roost. DES must be contacted directly to discuss any proposed activity relating to flying-foxes and flying-fox roosts.

4. Survey Requirements

A survey for an animal breeding places is recommended prior to disturbance/clearing of a natural area to prevent the unintended tampering with breeding places. If a survey isn't conducted, there is a risk of committing an offence against section 335 of the Animals Regulation. The ideal extent and approach of the survey will vary based on the conditions at the site and the nature of the disturbance.

5. Species Management Program Requirements

For any activity that will impact on an animal breeding place, an entity must apply in writing to DES for the approval of an SMP to tamper with an animal breeding place.

5.1 Approved species management program

5.1.1 Standard SMP documents

The department has standard documents which form the conditions of approval to tamper with an animal breeding place. An entity can request approval to use these standard documents prior to any works being undertaken on a project site.

Depending on the species, proponents may use one of the following SMP documents:

1. Species management program for tampering with animal breeding places - low risk of impacts - least concern animals (excluding special least concern or colonial breeders). Generally the only additional information required to be supplied is a map or plan of the proposed impact area.

2. Species Management Program for tampering with animal breeding places - high risk of impacts - all other protected animals including special least concern animals and colonial breeders, and near threatened and threatened species. Additional information tailored for the identified species will be required (refer to section 5.1.2).

Refer to the Department's website at https://environment.des.qld.gov.au/licences-permits/plants-animals/species-management-program to view the terms and conditions of these documents prior to making an application to the department for the approval of an SMP.

5.1.2 Additional requirements for SMP – high risk of impact

An additional report must be provided as an appendix to the template SMP - high risk of impacts (all protected animals, other than least concern animals but including special least concern animals and colonial breeders).

Information required in the report is detailed in Table 1 below.

Table 1: Additional information required for SMP high risk of impacts

Item	Information required	Assessment Consideration	Yes / No
Application details			
1. Application	Applicant details	The applicant has provided name, address, phone number, as well as the following: • Registered legal entity name (not a business trading name) • Trading name (if applicable) • Contact details including registered business address (not a post office box), including permanent Queensland address. • ABN/ACN, or title and section of legislation under which corporation has legal status • Name of principal of corporation • Details of nominated person in charge where the approved activity is to be undertaken.	
	Location details	The applicant has provided the items listed: • A map or plan of the proposed impact area including scale. • A description of the location including address and registered lot and plan details. Any other relevant project documentation.	
	Approved *agents*	Applicant specifies the agents approved to operate under the program including suitably qualified and experienced persons, *authorised wildlife carer* and veterinarian.	
Terms			
1. Terms of approval	Duration	Applicant specifies the approval period for the SMP. The term must be relevant to the activity being undertaken and allow for a periodic review of the program. The standard term for a SMP is three years.	
Assessment of impacts to animal breeding places			
1. Desktop assessment	Desktop assessment undertaken prior to field assessment	The applicant has undertaken a desktop assessment to research and evaluate the potential for an animal breeding place to be present on a works site using a variety of resources including but not limited to: • WildNet records • Museum records • Atlas of Living Australia • Essential habitat mapping • Legislative requirements and listings (State and Federal Governments) • SMPs previously approved by the department	
2. Field assessment	Survey conducted by a suitably qualified and experienced person.	The animal breeding place survey was undertaken by a suitably qualified and experienced person, for example:	

		• An ecological consultant with experience in conducting surveys for animal breeding places; • A person who possesses a degree in natural science or similar with experience in conducting fauna surveys; • A person who is a spotter-catcher under a rehabilitation permit issued under the Act. A statement to justify the suitability and qualifications of the person undertaking the animal breeding place survey is required.	
3. Assessment report.	Report requirements	The applicant submitted an animal breeding place survey report including: • A list of all animal breeding places identified within the impact area, including conservation status. • A statement to justify the suitability and qualifications of the person undertaking the animal breeding place survey. • Justification of the timing of the survey and detail of any limitations and assumptions associated with the timing of the survey. • A map or plan of the proposed impact area indicating the locations of identified animal breeding places. • A description of the location.	
Impact management plan			
1. Plan	Impact management plan has been submitted	The applicant has submitted an impact management plan with the SMP application that includes the following sections: • The nature of impact • The proposed management of impacts (if any)	
2. Impact management strategies	Avoid and minimise interference with animal breeding place.	The applicant has provided evidence that alternative options were thoroughly considered. Examples may include: • Avoidance through the design phase • Avoidance through works period • Avoidance through adaptive management • Consideration of seasonal factors e.g. completing works outside of breeding season • Sequential clearing • Rehabilitation of animal breeding habitat • Replacement or translocation of breeding structure • Use of authorised spotter catchers, licensed wildlife carer and veterinarian • Staff training and procedures	
	Nature of impact	The applicant has provided the following information: a) The applicant has identified the area (Ha) and number of particular animal breeding places to be tampered with, and the conservation status of the species. b) Information has been provided on the population dynamics of the species. c) Information has been provided about the ecology of the species. d) The applicant has accounted for all impacts, both direct and indirect, on an animal breeding place, where tampering is required.	
	Management of impact	The applicant has provided the following information: a) The applicant has listed appropriate impact management solutions to account for all EVNT, special least concern or colonial breeding places identified in the animal breeding place survey report. b) The applicant has provided a list of rehabilitation methods to be	

		used in impact management for animal breeding places.	
	Contingency planning	The applicant has outlined the process to be followed in the event of unexpected impacts on animal breeding places and other protected animals (e.g. will a Damage Mitigation Permit (culling and dispersal of wildlife) be required?). If a DMP is proposed, has the applicant demonstrated what impacts, if any, may occur upon the broader species population?	
3. Supporting information	The applicant has demonstrated proposed impact management measures are appropriate for the applicable species.	The applicant demonstrates how the proposed impact management measures are appropriate for the animal breeding places identified and will ensure the animals survival in the wild through the following: a) Written advice obtained from a suitably qualified person or expert regarding impact management strategies b) Reference to scientific papers which discuss the success of proposed mitigation strategies to the specific animal breeding place or that of a comparable species has been made c) SMP documents and reports previously approved by the department were referred to d) The expected success rate of the proposed impact management and any serious limitations or potential threats associated with the impact management have been identified. e) Identified how limitations or threats to the success of the impact management will be overcome.	

5.2 Application

Entities wishing to operate under the conditions of the DES species management program must notify the Department of their intent to use an SMP.

5.2.1 Department contact details

Correspondence should be directed to:

wildlife@des.qld.gov.au

Wildlife and Threatened Species Operations Branch

Department of Environment and Science

GPO Box 2454

BRISBANE QLD 4001

5.2.2 Notification requirements

Written notification to use an SMP should include the following information:

- A signed and dated statement of intention:

I _____ [name of Chief Executive Officer (if applicable)] on behalf of _____[applicant, person or other legal entity] accept the species management program offered by the Department of Environment and

Science under section 335 of the Nature Conservation (Animals) Regulation 1992 in its current form and agree to abide by the conditions of approval.

- Registered legal entity name (not a business trading name)
- Trading name (if applicable)
- Contact details including registered business address (not a post office box), including permanent Queensland address.
- ABN/ACN or title and section of legislation under which corporation has legal status
- Name of principal of corporation
- Details of nominated person in charge where the approved activity is to be undertaken.
- Landholder consent (if applicable)
- Nature of activities resulting in tampering with an animal breeding place
- A description of the location including project name, address and registered lot and plan details
- A map or plan of the proposed impact area including scale.

In addition, for an SMP for all protected animals (other than least concern animals but including special least concern animals and colonial breeders), the following is required:

- Animal breeding place assessment report; and
- Impact management plan.

5.3 Approval

Upon approval, an entity will receive the following documents:

- Approval letter from the Director, Wildlife Operations.
- Species Management Program containing entities name and authorisation expiry date.
- Access to an electronic register for tampering with animal breeding places, via the DES website.

An entities details and approval and expiry dates will be registered by DES.

Interference with an animal breeding place may not commence until written approval has been obtained.

5.4 Updates to approvals

It may be necessary for an approved SMP to be amended to address minor changes or issues that have arisen during its implementation. For example –

- change in methodology due to issues arising during program implementation (including updated versions)
- greater geographic extent to that originally provided
- new species that have been identified during implementation
- a greater number of species tampered with or impacted by the activity than originally assessed (this could impact upon the broader species population)
- a new nominated person in charge.

The holder of an approved SMP must discuss any proposed amendment of the document with DES.

Requests should be made as per standard approval requests.

It should be noted that the requested changes could be considered by the Director, Wildlife Management, to be major, requiring submission to DES of a new Species Management Program for consideration.

6. Reporting requirements

An entity must keep an electronic register concerning tampering with animal breeding places while operating under an approved SMP. Please refer to the Animal Breeding Place register provided with the approval documentation or available from the department's website. Details of other authority holders related to the activity must be included such a licenced DMP – removal and relocation or a rehabilitation permit.

For a *Low Risk of impacts SMP*, a copy of the electronic register for tampering with animal breeding places must be submitted to DES annually from the date of approval and upon expiry of the approved SMP at wildlife@des.qld.gov.au.

For a *High Risk of impacts SMP,* a copy of the electronic register for tampering with animal breeding places must be submitted to DES within 6 months of the interactions with the high risk of impacts SMP species at wildlife@des.qld.go.au. The complete electronic register must also be supplied to DES upon expiry of the approved SMP.

7. Key definitions

For the purpose of this document:

agents includes—

> Contractors and sub-contractors.

animal breeding place means—

> A bower, burrow, cave, hollow, nest or other thing that is commonly used by the animal to incubate or rear the animal's offspring'.

approved species management program means—

> For a species of animal, means a program about managing the population and habitat of the species of animal that is approved by the chief executive, Department of Environment and Science.

colonial breeders means—

> A group of animals of the same kind, that co-exist in close association for breeding purposes, e.g. birds that construct large numbers of nests in close proximity and hatch and rear young at the same time.

critically endangered wildlife means –

> Protected wildlife prescribed in section 15 of the Animals Regulation as endangered wildlife.

endangered wildlife means –

> Protected wildlife prescribed in section 16 of the Animals Regulation as endangered wildlife.

extinct in the wild means –

> Protected wildlife prescribed in section 14 of the Animals Regulation as extinct in the wild wildlife.

keep in relation to wildlife includes –

Have in possession, or under control, in any place (whether for the use or benefit of the person in relation to whom the term is used or another person), even though another person has the actual possession or custody.

least concern wildlife means –

Protected wildlife prescribed in section 19 of the Animals Regulation as least concern wildlife.

authorised wildlife carer means—

A person qualified to take and keep protected wildlife under a current rehabilitation permit in accordance with the Nature Conservation (Wildlife Management) Regulation 2006.

native wildlife means –

Any taxon or species of wildlife indigenous to Australia

near threatened wildlife means –

Protected wildlife prescribed in section 18 of the Animals Regulation as near threatened wildlife

person includes –

A body of persons, whether incorporated or unincorporated.

protected animal means –

An animal that is prescribed under the NCA as threatened, near threatened or least concern wildlife, but does not include a processed product.

protected wildlife means native wildlife prescribed under the Act as—

(a) extinct in the wild wildlife; or

(b) endangered wildlife; or

(c) vulnerable wildlife; or

(d) near threatened wildlife; or

(e) least concern wildlife.

special least concern animal under the Animals Regulation means the following—

(a) an echidna (*Tachyglossus aculeatus*);

(b) a platypus (*Ornithorhynchus anatinus*);

(c) a least concern bird to which any of the following agreements apply—

(i) the agreement called 'Agreement Between the

Government of Australia and the Government of Japan for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment', signed at Tokyo on 6 February 1974;

(ii) the agreement called 'Agreement Between the Government of Australia and the Government of the People's Republic of China for the Protection of Migratory Birds and their Environment', signed at Canberra on 20 October 1986;

(iii) the agreement called 'Agreement Between the Government of Australia and the Government of the Republic of Korea on the Protection of Migratory Birds and Exchange of Notes', signed at Canberra on 6 December 2006;

(iv) the convention called 'Convention on the Conservation of Migratory Species of Wild Animals', signed at Bonn on 23 June 1979.**species management program (SMP) - low risk of impacts** means –

A program about managing the population and habitat of protected animals prescribed as least concern animals where the impacts are unlikely to affect broader population and excludes least concern wildlife that are colonial breeders and wildlife prescribed as extinct in the wild, endangered, vulnerable, near threatened, or a special least concern animal under the Nature Conservation (Animals) Regulation 2020 (Animals Regulation).

species management program (SMP)- high risk of impacts means –

A program about managing the population and habitat of protected animals prescribed by Animals Regulation or breeding type (e.g. least concern colonial breeders), where the broader population is at a greater risk from impacts and includes least concern animals that are colonial breeders and animals prescribed as extinct in the wild, endangered, vulnerable, near threatened, or a special least concern animal under the Nature Conservation (Animals) Regulation 2020.

suitably qualified and experienced person means—

A person with formal qualifications and/or experience in fauna identification and life ecology and environmental management. A person is considered to be suitably qualified and experienced if they meet one or more of the following criteria:

- An ecological consultant with experience in conducting surveys for animal breeding places;
- A person who possesses a degree in natural science or similar with experience in conducting surveys for animal breeding places;
- A person who is a spotter-catcher under a rehabilitation permit issued under the Act.

spotter-catcher means—

A person qualified to take and keep protected wildlife under a current rehabilitation permit granted under the Nature Conservation (Animals) Regulation 2020 (or previous regulations to authorise the take, keep or use of an animal whose habitat is about to be destroyed by human activity .

tamper with an animal breeding place means—

Damage, destroy, mark, move or dig up the breeding place.

take includes—

(a) in relation to an animal -

(i) hunt, shoot, wound, kill, skin, poison, net, snare, spear, trap, catch, dredge for, bring ashore or aboard a boat, pursue, lure, injure or harm the animal; or

(ii) attempt to do an act mentioned in subparagraph (i).

use, in relation to wildlife includes –

Buy, sell, give away, process, move or gain any benefit from the resource or wildlife.

vulnerable animal means –

A protected animal that is prescribed in section 17 of the Animals Regulation as vulnerable wildlife.

Disclaimer

Approved:

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Version history:

Version	Effective date	Comments
1.00	03 May 2016	Approved by: L Delzoppo, Acting Executive Director, Nature Conservation Services
1.01	18 May 2016	Section 6. Reporting requirement corrected
1.02	09 June 2016	Office use only – added attach documents. Wording in Table 1 changed.
1.03	07 July 2016	Wording changes throughout the document to make it clearer. High risk reporting changed to 6 months.
1.04	24/08/2017	Email address updated to wildlife@des.qld.gov.au
1.05	23/07/2018	Inserted sample templates for High and Low Risk SMP.
1.06	26/08/2020	Changed references from Wildlife Regulations to Animals Regulation