Appendix J Bird and Bat Utilisation Study

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BIRD AND BAT UTILISATION SURVEY REPORT

Tarong West Wind Farm

Final Report

December 2024

TARONG WEST PROJECT CO PTY LTD

Glossary, acronyms and abbreviations

ALA	Atlas of Living Australia
BACI	Before – After – Control – Impact (experimental design)
BBUS	Bird and bat utilisation survey
CRI	Collision Risk Index
CRM	Collision risk model
DAWE	Commonwealth Department of Agriculture, Water and the Environment (now DCCEEW)
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water
DETSI	Queensland Department of Environment, Tourism, Science and Industry
DoR	Queensland Department of Resources
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)
HVR	High value regrowth
NC Act	*Nature Conservation Act 1992* (Queensland)
PMST	Protected matters search tool (Commonwealth)
RE	Regional ecosystem
RSA	Rotor swept area
SEVT	Semi-evergreen vine thickets
SLC	Special least concern
Threatened	Critically endangered, endangered or vulnerable
TNT	Threatened or near threatened
WTG	Wind turbine generator

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1 Introduction

1.1 Background and scope

Tarong West Project Co Pty Ltd (the Proponent) engaged Ecosure Pty Ltd (Ecosure) to conduct a Bird and Bat Utilisation Survey (BBUS) across the site of the proposed Tarong West Wind Farm (the project site).

This report addresses operational bird and bat potential impacts for the proposed development and should be read in conjunction with all other ecological reports, which address both the construction and operational potential impacts of the project:

- Assessment of Matters of National Environmental Significance for Tarong West Wind Farm, Ironpot, Queensland (Ecosure, 2023)
- Addendum Assessment of Matters of National Environmental Significance for Tarong West Wind Farm (Ecosure, 2025a)
- Bird and Bat Management Plan Tarong West Wind Farm (Ecosure, 2025b)
- Fauna Management Plan Tarong West Wind Farm(Ecosure, 2025c).

To support the application for a new wind farm development, an assessment of the potential impacts on bird and bats is required to address the performance outcomes of State code 23: Wind farm development under the Queensland *Planning Act 2016* (DSDILGP, 2022b). Brett Lane & Associates and Aria Professional Services (2005) recommends a hierarchical approach with three levels of investigation, where the outcome of each level determines if the assessment is required to move to the next level of investigation.

The Level One Investigation aims to:

1. provide a preliminary risk assessment of significant impacts to birds and bats
2. determine if proposed mitigation measures are likely to minimise risk of all bird and bats to "low risk"
3. determine if further Level Two Investigations are required
4. identify target bird and bat groups or species to be considered during any subsequent site surveys or monitoring.

The report prioritises occurrence and susceptibility of species of national and state conservation significance.

The objectives of this report are to:

- compile bird and bat data for the project site including:
  - species diversity
  - occurrence of conservation significant species

  - critical fauna resource habitats within turbine footprints and adjacent areas
- assess risk to birds and bats including:
  - species susceptible to collision
  - qualitative and semi-quantitative estimate of risk
- recommended risk mitigation measures
- recommended further investigations and monitoring.

This report has considered the following:

- State code 23: Wind farm development planning guideline (DSDILGP, 2022a)
- *Onshore Wind Farm Guidance: Best practice approaches when seeking approval under Australia's national environment law*, draft for consultation May 2024 (DCCEEW, 2024c)
- *Onshore Wind Farms – interim guidance on bird and bat management*, Department of Agriculture, Water and the Environment, Canberra (DAWE, 2021b)
- *EPBC Act Policy Statement 2.3 – Wind Farm Industry*. Department of the Environment, Water, Heritage and the Arts, Canberra (DEWHA, 2009)
- Wind Farms and Birds: Interim Standards for Risk Assessment, Australian Wind Energy Association Report No. 2003.35 (2.2) (Brett Lane & Associates & Aria Professional Services, 2005)
- Best Practice Guidelines for Implementation of Wind Energy Projects in Australia (Clean Energy Council, 2018).

1.2 Report conventions

The following conventions are used throughout the report:

- The project site comprises 15 properties with an approximate combined area of 17,500 ha (including reserves and easements). The project boundary defines the outer perimeter of the project site.
- The proposed development comprises the spatial data presented in the shapefiles provided by the Proponent in October 2024.
- The planning corridor is the area for all infrastructure and development to occur within the project site and contains the clearing footprint.
- The clearing footprint represents the maximum disturbance footprint of the project, with flexibility to micro site infrastructure within the planning corridor.
- The study area used in desktop searches comprises the project site and a buffer around the site. This is discussed in more detail in the supporting Assessment of Matters of National Environmental Significance report (Ecosure, 2023). Two buffer distances were used:
  - a 10 km buffer which contains similar vegetation and habitat to the project site

  - a 20 km buffer which contains a greater area of similar vegetation and habitat to the project site, but which also includes the Bunya Mountains, which contains high altitude rainforest habitat not occurring within the project site.
- Conservation significant species include flora and fauna species that are listed as:
  - threatened (critically endangered, endangered or vulnerable) and/or migratory under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
  - threatened or near threatened (TNT) or special least concern (SLC) under the Queensland *Nature Conservation Act 1992* (NC Act).
- Common and scientific names of flora and fauna species follow the Department of Environment, Science and Industry (DETSI) WildNet database (DETSI, 2024).
- Introduced species are denoted by an asterisk (*).

1.3 Site description

1.3.1 Site locality

The site is located within the South Burnett Regional Council area and lies approximately 30 km west of Kingaroy and approximately 85 km east of Chinchilla. It is currently used for cattle grazing with areas of cleared paddocks and standing vegetation. Access to the site is via Ironpot Road.

1.3.2 Watercourses and wetlands

The project site occurs within the Boyne-Auburn Rivers drainage sub-basin in the Burnett drainage basin, which drains to the Great Barrier Reef lagoon.

One major mapped watercourse flows generally south to north within the site. The Boyne River begins as a second order stream in the south of the site, becomes a third order stream near Ironpot Road on Lot 68 on RP800291, a fourth order stream at its junction with Middle Creek on Lot 62 on BO188, and a fifth order watercourse at its junction with Mannuem Creek on Lot 60 on BO188, before exiting the site along the north-western boundary of Lot 4 on RP890694. The Boyne River feeds into Boondooma Lake and the Burnett River before discharging at Bargara near Bundaberg.

Other large streams that flow into Boyne River, either within or north of the site, include Mannuem Creek on the eastern boundary, Middle Creek in the south-eastern portion, Jumma Creek in the central portion, Boughyard Creek in the western portion and Ironpot Creek in the north-western portion of the site. Natural wetlands do not occur within the site. Landholders have constructed numerous farm dams throughout the site.

1.3.3 Landforms, geology and soils

The site is located on the southern border of the Brigalow Belt (South) bioregion in the Banana-Auburn Ranges subregion. The southern edge of the site overlaps into the South East

Queensland bioregion in the South Burnett subregion, in Lot 68 on RP800291 and in Lot 10 on SP168643. Landforms are primarily undulating plains and hillslopes.

The site predominantly occurs on the Chahpingah Meta-igneous Complex, which is a granite dominated geology. The Evergreen Formation (comprising sandstone, mudstone and siltstone) dominates the southern portion of the site around the upper reaches of the Boyne River along with a small intrusion in the north-western portion. Quaternary alluvium occurs around the Boyne River and other larger watercourses in the northern portion of the site.

1.3.4 Climate

The Brigalow Belt South bioregion features a predominantly subtropical climate with hot summers and mild winters. Rainfall is summer-dominant but varies significantly across the region, ranging from approximately 590 mm annually in the north to 400 mm in the southwest, and increasing to about 1,200 mm near the coast (QPWS, 2013). Climate change poses several threats to this bioregion's ecosystems. Increased temperatures and altered rainfall patterns could exacerbate land degradation, reduce water availability, and stress native vegetation and wildlife. While historical averages for temperature and rainfall have been used for this assessment, it is recognized that climate change creates uncertainties in how local ecosystems (including bird populations and their habitats) will adapt over time.

Average maximum temperatures range from 19.6°C in July to 30.9°C in January (Bureau of Meteorology [BoM], Kingaroy Airport Station 040922, approximately 30 km east of the site). The average annual rainfall is 663.3 mm (BoM, 2023).

1.3.5 Habitat types

Detailed vegetation and fauna habitat surveys were conducted to assess the potential for the site to provide habitat for birds and bats (Ecosure, 2023). Habitat types present within the site include:

- Cleared grassland – the main habitat type within the site, which is primarily utilised for cattle grazing. Isolated trees provide limited food, roosting and nesting/denning resources.
- Non-remnant woodland – previously cleared land containing various stages of regrowth of eucalypt woodland. Some areas contain remnant mature trees which contain small or large hollows, and also provides seasonal nectar resources.
- Remnant eucalypt woodland/forest – generally dominated by *Eucalyptus crebra* or *Corymbia citriodora*, provides large and small hollows suitable for nesting or denning and seasonal nectar resources. Most communities are in average to good condition, with some areas degraded by clearing, weed invasion, fire, or grazing.
- Riparian forest/grassland – occurring on riparian soils along major watercourses, has been substantially modified by clearing, fire, and weed invasion. Typically present as a narrow band of trees along the watercourse bank, and provides hollows and seasonal nectar resources.

- Vine thicket – recorded in one small patch on the south-western edge of the site which is outside of the project planning corridor, though some areas of eucalypt forest have a developing mid storey of vine thicket species. Contains a sparse to dense canopy of trees and shrubs that provide shelter as well as seasonal fruit and nectar resources.
- Farm dams – scattered throughout the site, providing drinking water. Dense fringing vegetation on some dams provides shelter and food resources for wetland birds.

Most of the site has been previously cleared (only 9.4% of the site retains remnant vegetation) and supports non-remnant woodland and grassland. Non-remnant woodland includes varying regrowth stages of the original eucalypt woodland communities within the site. Tree cover is variable in density and age and similar to the remnant habitat patches is generally dominated by *Eucalyptus crebra* or *Corymbia citriodora*. Some areas of regrowth contain remnant mature individual trees that contain numerous small hollows suitable for nesting or denning by small arboreal fauna and occasionally large hollows that may be suitable for larger arboreal mammals (e.g. greater gliders) and large birds (e.g. glossy black-cockatoo). These mature trees may also provide important seasonal nectar resources. Most non-remnant woodland communities were in poor to average condition, caused by:

- clearing leading to habitat fragmentation and the loss of large hollow-bearing trees and mature trees
- weed invasion, especially *Eragrostis curvula** and *Glandularia aristigera**
- some areas of intense fires resulting in tree death and increased weed invasion and erosion
- heavy grazing, especially close to farm dams and other sources of water.

1.4 Project description

1.4.1 Wind farm design

Key components

The proposed development is the construction and operation of a wind farm located at Ironpot, near Kingaroy in south east Queensland (Figure 1). The wind farm will have up to 97 WTGs connected by access tracks and supported by other infrastructure. The development and construction of the site will involve significant ground disturbing work and will include the construction of the following key components:

- up to 97 wind turbine generators (WTGs)
- wind turbine foundations and hardstand areas
- three permanent and four temporary (during construction period only) meteorological masts
- internal electrical reticulation consisting of overhead lines and underground cabling

- access tracks including widening sections of Ironpot Road
- planning corridor containing a maximum clearing footprint of 871.87 ha. The planning corridor allows scope for minor micro-siting project infrastructure within the clearing footprint
- on-site connection to existing 275 kilovolt (kV) transmission line
- electrical substations to facilitate connection of the project to the grid
- construction compounds and laydown areas
- site compounds
- operations and maintenance facilities
- batching plant
- borrow pits
- washdown areas
- helipad.

WTG design specifications have developed over the course of the BBUS survey design and assessment. A candidate WTG was selected for the purposes of informing the BBUS design (Figure 2), with final WTG specifications accounted for in the collision risk modelling (CRM). The candidate WTG was based on the following minimum assumptions:

- up to 90 m turbine blades
- up to 180 m rotor diameter
- up to 26,015 m² rotor swept area (RSA)
- up to 190 m hub height.

Ecological risk assessments have been carried out using the following turbine envelope assumptions:

- maximum upper tip height of 280 m above ground level
- minimum lower tip height of 65 m above ground level.

Figure 1 shows the proposed planning corridor and clearing footprint to accommodate WTGs, access tracks and other associated infrastructure. The clearing footprint represents the maximum proposed clearing area (as provided by the Proponent in October 2024) and may be reduced by ongoing refinement during the detailed design phase. In the planning corridor presented in this report, no WTGs or hardstands are proposed to be placed in ecologically significant areas (e.g. areas of remnant vegetation).

The project is currently planned to be constructed in a single stage with construction proposed to start in the fourth quarter of 2025 and last approximately 30 months.

Construction

The construction methodology will generally include:

- marking out areas for infrastructure installation
- clearing the areas of vegetation
- scraping off the topsoil and stockpiling for later use in rehabilitation
- construction of access tracks
- widening sections of Ironpot Road to allow transport of turbine components
- creating a level pad for infrastructure construction
- installing the infrastructure
- rehabilitating disturbed surfaces that are not required for operations.

Operation

The project is expected to have an operational life of at least 30 years excluding construction and decommissioning. The operational parameters of the project have not been finalised at this stage. However, it has been assumed that all WTGs will be operating continuously when wind speeds are suitable, apart from occasional shut-down periods for maintenance.

Decommissioning

Decommissioning or repowering of the site is expected to occur at the end of the project's useful life. If decommissioning occurs, the process is expected to take approximately 24 months and be undertaken in accordance with all relevant approval conditions and best practice methods at the time of decommissioning. If repowering occurs it will be undertaken in accordance with all relevant approval conditions and any changes to the Project design or configuration will be submitted for assessment by all relevant regulatory bodies, as required.

1.4.2 Design development

During project development between 2018 to 2024, the size and scope of Tarong West Wind Farm has changed in response to various constraints, with a focus on avoidance of ecological impacts where possible.

Changes made throughout the development include an overall reduction in number of turbines as follows:

- 151 WTGs in 2018
- down to 128 WTGs in 2022
- down to 97 WTGs in 2023/2024 layout assessed in this BBUS.

Other changes made involve the exclusion of particular properties to avoid ecological impact, and changes in the scope and configuration of required supporting infrastructure (Table 1).

Significant changes include removal of two properties containing significant areas of remnant vegetation, including Lot 42 on FTZ37338 (1,219.8 ha), which contains two patches of potential semi-evergreen vine thicket (SEVT) threatened ecological community and Lot 65 on BO190 (418.3 ha). Project design changes have influenced the methods and coverage of subsequent field surveys throughout the project's development.

This BBUS has considered and assessed the 97 WTG layout provided by the Proponent in October 2024 and will require modification if the design evolves to impact areas outside of the planning corridor.

Table 1 Design iterations for Tarong West Wind Farm

Date	Description	WTGs proposed	Project site (ha)	Proposed clearing footprint (impact area, ha)	Comments
May 2020	151 WTG layout	151	19,000.41	1,965.43	Initial layout in early development.
May 2022	128 WTG layout	128	17,496.23	1,615.47	Infrastructure refined based on reduction of WTGs. Site boundary changed to exclude large areas of remnant vegetation from the project site and areas of high glider prevalence along Kingaroy Burrandowan Road (37 greater glider sightings occurred in vegetation adjacent to the project site area along Kingaroy Burrandowan Road and in properties now excluded from the project site).
July 2023	97 WTG layout	97	17,496.23	1,062.14	Infrastructure refined based on reduction of WTGs and a reduced clearing footprint. Minimising impacts to areas of remnant vegetation and modelled fauna habitat, particularly koala habitat which reduced by approximately 50% since initial design.
October 2024	97 WTG layout	97	17,496.23	871.87	Clearing footprint refined through to 30% design. Minimising clearing impacts to remnant vegetation and non-remnant woodland areas.

1.4.3 Design limitations

Project designs will be refined as the project progresses including through construction, based on geotechnical surveys, final turbine selection and other technical requirements. The clearing footprint presented in this assessment represents the maximum footprint for disturbance, and any design changes are anticipated to occur within the planning corridor presented here.

Additionally, any changes to turbine design and selection are anticipated to comply with the defined turbine envelope. Such changes may include:

- micro-siting of WTGs and adjustment of construction hardstand dimensions

- adjustment of turbine blade length and hub height, which will affect RSA and minimum and maximum tip heights (remaining within the defined turbine envelope for the candidate turbine, refer 1.4.1)
- creation of new tracks and realignment of existing tracks
- adjustment of track dimensions (including reduced width in sensitive areas and increased width on some corners to accommodate long vehicles)
- realignment of riparian crossings
- adjustment of the location and dimensions of other infrastructure.

Changes of this nature, being changes occurring within the project planning corridor and within the maximum clearing footprint and candidate turbine parameters, are minor in nature and within the assessment scope of this report.

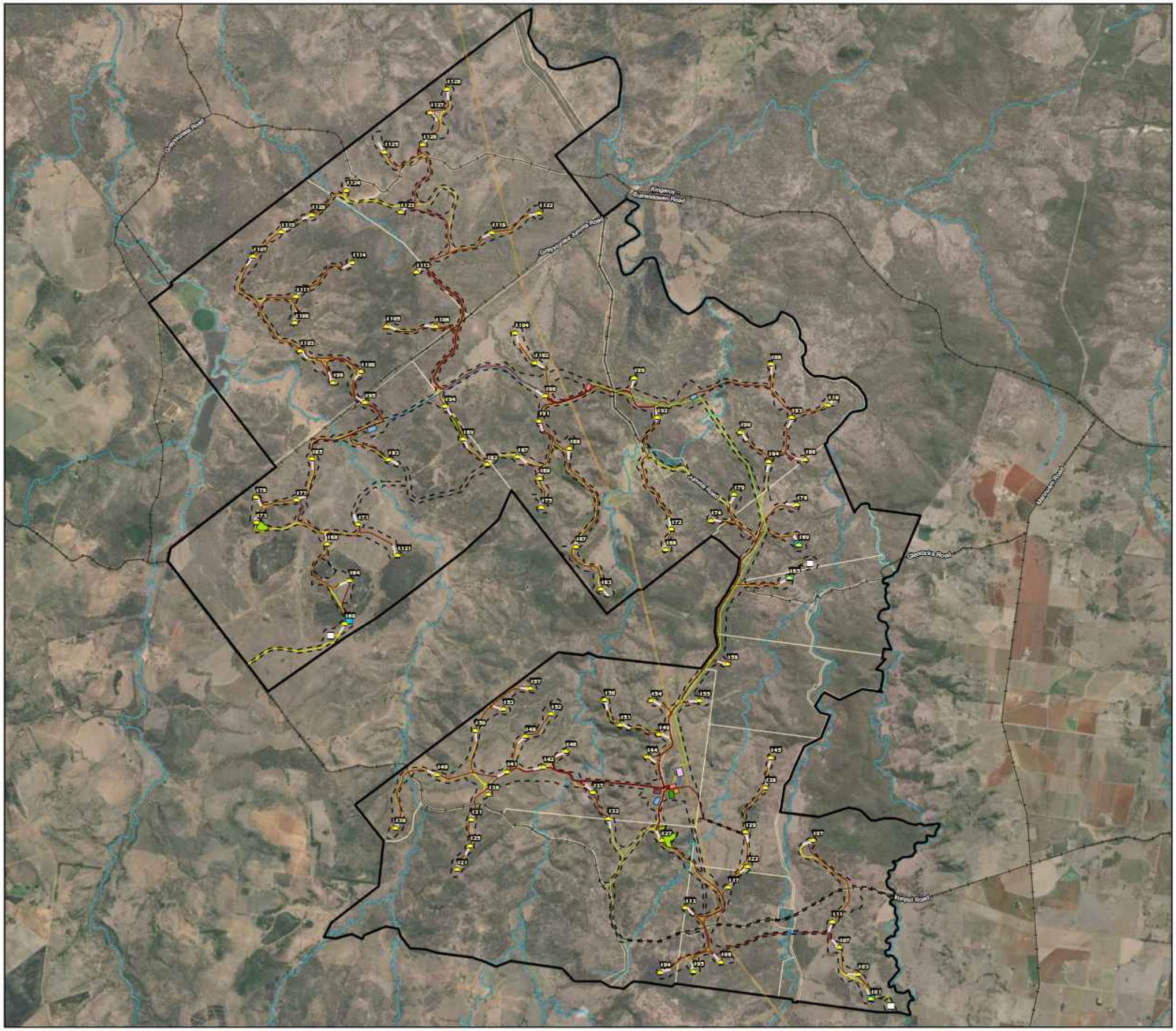

Figure 1: WTGs concept layout across the site

Legend

- WTG
- Mast (permanent)
- Mast (temporary)
- Turbine hardstand
- Cables - overhead 275kV
- Cables - overhead 33kV
- Cables - underground
- Existing 275kV transmission line
- Access track
- Watercourse
- Road
- Batch plant
- Borrow pit
- Helipad
- Laydown
- Operations and maintenance building
- Site compound
- Substation
- Switching station
- Planning corridor
- Project boundary
- Land parcel

Tarong West Project Co Pty Ltd

Bird and Bat Utlisation Survey Report for Tarong West Wind Farm

0 1 2 4
Kilometers

Job number: PR6944
Revision: 0
Author: KF
Date: 12/4/2024

GDA 1994 MGA Zone 56
Projection: Transverse Mercator
Datum: GDA 1994
Units: Meter

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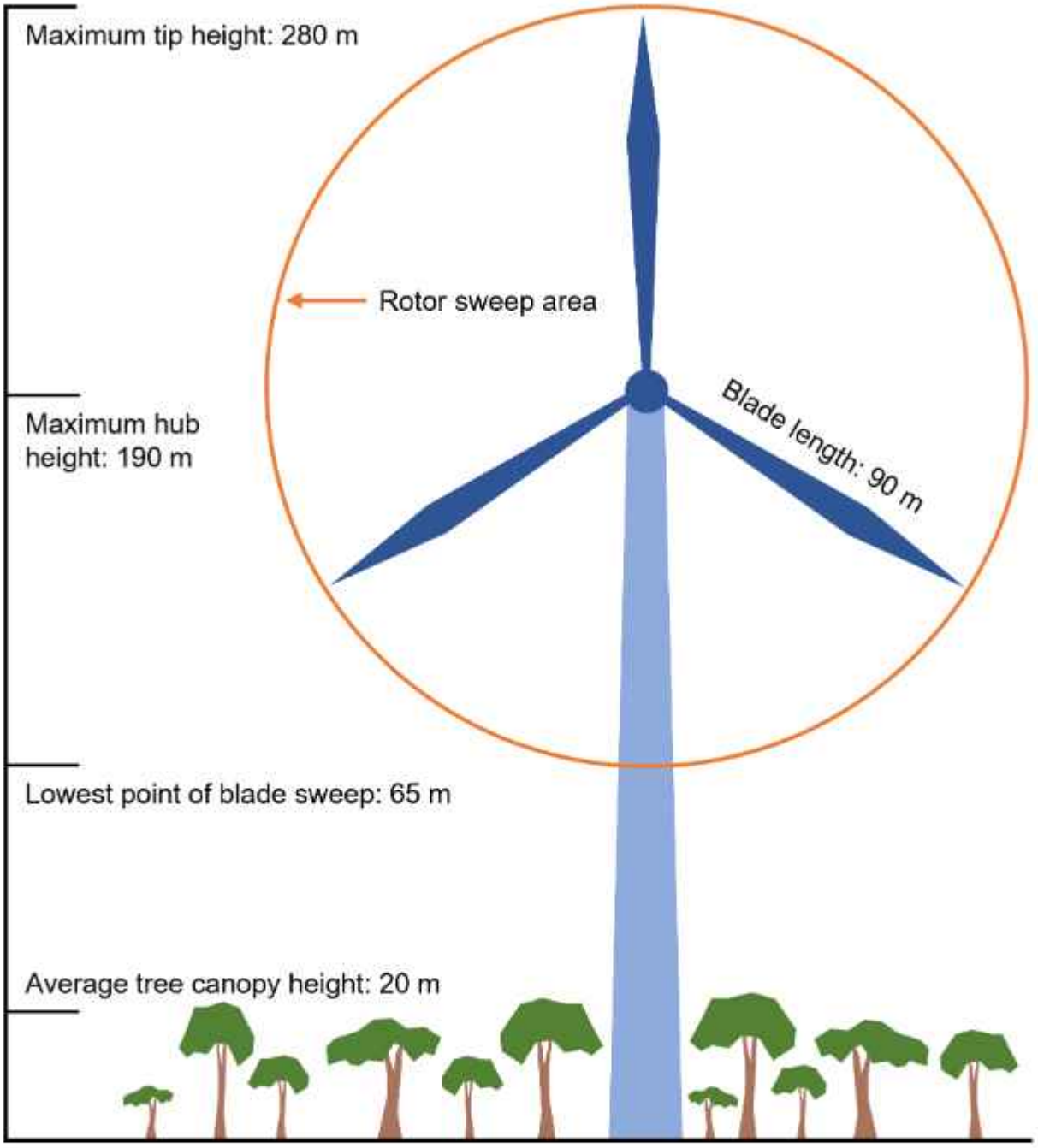

Figure 2 Schematic representation of WTG rotor swept area

2 Methods

2.1 Desktop assessment

A desktop analysis was completed as part of this BBUS to provide data on bird and bat species known or likely to be present, along with the threatened or listed species that may be affected by the development. The desktop assessment also identified known significant bird and bat aggregations and mapped available habitats within the area. The following information sources were reviewed as part of the desktop assessment:

- the Department of Climate Change, Energy, the Environment and Water (DCCEEW) EPBC Act protected matters search tool (PMST) for a 10 km buffer surrounding the project site (represented as a 20 km buffer around the central point -26.5941, 151.52069) (DCCEEW, 2024d)
- DETSI Wildnet database (Wildnet) for a 10 km and 20 km buffer surrounding the project site (represented as 20 km and 30 km buffer around the central point -26.5941, 151.52069) (DETSI, 2024)
- the Atlas of Living Australia (ALA, 2022) database for locations of conservation significant species within a 10 km radius surrounding the project site
- the State Planning Policy Interactive Mapping System (DSDILGP, 2022c) identifying matters of state environmental significance areas
- vegetation management mapping maintained by Department of Resources, (DoR), including remnant and pre-clear regional ecosystem (RE) map (version 12.02) regulated vegetation management map (version 6.04), vegetation management watercourse and drainage feature map (version 6.0), vegetation management wetland map (version 8.0) and essential habitat map (version 11.0) (DoR, 2022)
- Biodiversity Planning Assessment maps identifying significant fauna corridors and areas of state, regional and local biodiversity significance in the Brigalow Belt bioregion (DES, 2018) and Southeast Queensland bioregion (DEHP, 2016).

2.1.1 Likelihood of occurrence assessment

Each significant species return in database searches was assessed for its likelihood of occurrence based on:

- records in the local area (ALA, 2022; DETSI, 2024)
- presence of suitable habitat (determined using both desktop and field-verified data)
- presence of essential habitat (DoR, 2022)
- species abundance, distribution and behaviour (sourced from published field guides, DCCEEW species profiles and threats database and scientific journal articles).

The likelihood of occurrence was determined based on the following rules and classified into

four categories:

- confirmed – the species or signs of their presence were observed during the field survey
- likely – the project site contains habitat that is suitable for the species and Wildnet has recent records of the species (i.e. since 1980) within 10 km of the project site
- possible – the project site contains habitat that is suitable for the species but Wildnet has no recent records of the species within 10 km of the project site; or the project site contains marginal / low quality habitat for the species and Wildnet has recent records of the species within 10 km of the project site
- unlikely – the project site does not contain habitat for the species and Wildnet has no recent records of the species within 10 km of the project site.

Likelihood assessments were based on Wildnet records within a 10 km buffer from the project boundary as the South Burnett region has been well surveyed and has a relatively high density of species records (refer Figure 3 in Ecosure, 2023). Also, a larger 20 km buffer includes the Bunya Mountains, which contains high altitude rainforest habitat that is not present within the project site and is therefore not relevant to the assessment of the bird and bat fauna assemblages likely to be present at the project site.

Marine species were excluded from the table, but migratory species were included where relevant.

Note that the final likelihood assessment (presented in Appendix 2 and Table 8) was refined by field surveys that included targeted searches for possible and likely species and ground-truthing of suitable habitat for these species.

2.2 Field survey

2.2.1 Survey timing

Bird and bat surveys in the initial stages of ecological assessment were completed during assessments for terrestrial flora and fauna. Fauna surveys included:

- 2018 spring survey completed by one team of two ecologists over twelve days from 29 October 2018 to 9 November 2018
- 2019 autumn survey completed by two teams of two ecologists over eleven days from 25 March to 5 April 2019 (one team conducted general fauna surveys that included targeted bat surveys and the other team conducted fixed point count bird surveys for the bird utilisation survey)
- 2020 spring survey completed by two teams of two ecologists over six days from 23 November to 28 November 2020 (one team conducted general fauna surveys that included targeted bat surveys and the other team conducted fixed point count bird surveys for the bird utilisation survey)
- 2021 spring survey completed by one team of two ecologists over 13 days from 25 October to 7 November 2021 (excluding 31 October).

Quarterly pre-construction surveys were conducted throughout 2022 and 2023, and included fixed count bird utilisation surveys, incidental observations, and spotlighting for flying-foxes:

- summer 2022 survey completed by one team of two ecologists over eight days from 21 to 26 February 2022 and again from 15 to 17 March 2022 (storms and heavy rainfall necessitated delaying the remaining surveys from February until March)
- autumn 2022 survey completed by one team of two ecologists over six days from 22 to 27 June 2022 (rainfall and site access issues delayed the start of the survey)
- winter 2022 survey completed by one team of two ecologists over six days from 16 to 21 August 2022
- spring 2022 survey completed by one team of two ecologists over six days from 6 to 11 November 2022
- summer 2023 survey completed by one team of two ecologists over six days from 30 January to 4 February 2023 (weather impacted collection of data at three sites, but the majority of surveys were completed)
- autumn 2023 survey completed by one team of two ecologists over six days from 2 to 7 May 2023
- winter 2023 survey completed by one team of two ecologists over six days from 10 to 15 August 2023
- spring 2023 survey completed by one team of two ecologists over six days from 30 October to 4 November 2023.

2.2.2 Bird utilisation surveys

The survey design was based on the Standard Bird Management Guideline for the Australian Wind Energy Association for initial site risk assessment, Level One Investigation (Brett Lane & Associates & Aria Professional Services, 2005). These guidelines outline a 'Before – After – Control – Impact' ('BACI') experimental design as the best method to assess bird potential impacts at windfarms. The surveys presented in this BBUS are the first step in a BACI design to quantitatively assess the bird use at the project site before the impact happens, both at the project site (impact site) and at reference sites (control sites) in the surrounding areas.

The bird utilisation surveys targeted:

- resident threatened aerial species
- resident raptor species
- nomadic and migratory species that are likely to fly over the project site.

The species, number, location, habitat, altitude, behaviour and flight paths (vectors) were recorded for all birds seen at each bird utilisation survey location.

Species were ranked according to their abundance at varying heights, including at the turbine RSA height. For the purposes of this assessment, the proposed RSA impact area is for the turbine dimensions detailed in section 1.4.1.

2.2.2.1 Survey design and locations

Bird survey types included:

- roaming surveys
- fixed point counts
- targeted searches for species listed as threatened under the EPBC Act or TNT under the NC Act and/or species listed as migratory species under the EPBC Act or SLC species under the NC Act
- opportunistic observations while traversing the project site and surrounding areas.

Bat survey types included:

- acoustic recording (Anabat and Songmeter)
- harp trapping
- spotlighting for flying-fox (*Pteropus*) species
- targeted observational searches in areas of suitable habitat.

Roaming surveys

The 2018 roaming survey consisted of three transects of approximately similar lengths (approximately 11.5 km) carried out concurrently on the project site over three days (Figure

5). The roaming surveys were non-standardised and designed to familiarise ecologists with the site, record species numbers, location and behaviour, and further inform and refine the plan for the standardised point counts.

Fixed point count surveys

Fixed point count locations were selected by dividing the project site into 800 m grid squares and using a random number generator to assign survey points by grid reference (Table 2, Figure 3). Survey locations were visually assessed to ensure they were accessible and distributed across the project site to maximise coverage throughout the proposed turbine footprint. Within each grid reference, survey locations were chosen to provide clear visual access in all directions. Spatial coverage of fixed-point count survey locations for was designed to ensure representative sampling across the study area's habitats, land uses, and environmental gradients. Distribution of survey locations allows for capturing variations in bird communities influenced by a range of factors including vegetation type, elevation, proximity to water sources and human disturbance.

Initially, within the project boundary provided in 2018, thirty fixed point count locations were selected including:

- twenty-five impact point count locations within the project boundary
- five reference point count locations outside the project boundary (Table 2 and Figure 3).

As project design has progressed, the project boundary has been refined and the number of turbines reduced, this has resulted in some areas which were initially proposed to be impact areas now being outside of the project boundary. Some impact sites that are located outside the current project boundary have been treated as reference points for the purposes of future statistical analysis of impacts. Sufficient spatial coverage and habitat type representation was maintained by the remaining impact sites and this change has been assessed to ensure the BACI design is maintained.

Fixed point count surveys were completed across ten days in spring 2018, eleven days in autumn 2019, six days in spring 2020, and 13 days in spring 2021. The spring 2018 surveys visited each of the 30 fixed point locations during the morning (sunrise to noon) and during the afternoon (noon to sunset). The autumn 2019 surveys visited each of the 30 fixed point locations three times per day: beginning of daylight plus two hours, solar transit plus or minus one hour and end of daylight minus two hours. Surveying three times per day accounted for diurnal variations in bird activity.

The spring 2020, spring 2021, and 2022/2023 pre-construction surveys were refined from 30 fixed point count locations down to 15 locations (Table 2, Figure 4). Sites were chosen from the initial 30 locations based on their proximity to WTGs and the proposed infrastructure corridor to improve survey efficiencies, while maintaining sufficient coverage of the impact and reference point locations. Fixed point count locations were surveyed three times per day in accordance with the 2018 and 2019 surveys. The 15 refined fixed point count locations included:

- 11 impact point count locations within the proposed turbine footprint area
- 4 reference point count locations outside the footprint.

The following data were recorded for each bird observed within an 800 m radius of each fixed point count location:

- species
- number
- location
- habitat
- altitude (above ground level, to the nearest 20 m)
- behaviour
- flight direction (to the nearest 45 degrees).

Data at each fixed point count location was collected for 30 minutes per survey.

Table 2 Fixed point count survey locations and survey periods

Fixed point ID	Latitude	Longitude	Fixed point count location habitat description	2018 Spring	2019 Autumn	2020 Spring	2021 Spring	2022 / 2023
60	-26.55896241	151.450532	Impact site located along a farm track on the western side of the project site. The location is dominated by non-remnant grassland / farm paddock habitat with sparse trees dominates this landscape. A dry stream bed lined with trees is directly to the north.	✓	✓	✓	✓	✓
65	-26.59714421	151.4590906	Impact site located along a farm track on the western side of the project site. Non-remnant grassland / farm paddock habitat with sparse trees dominates this landscape. To the west and south west the least concern remnant RE eucalypt / woodland forest habitat of 11.11.15. 11.11.15 is defined by narrow-leaved ironbark woodland on deformed and metamorphosed sediments and interbedded volcanics.	✓	✓	✓	✓	✓
68	-26.61369625	151.453868	Impact site located along a farm track next to a dam along the western side of the project site. Non-remnant grassland / farm paddock habitat with sparse trees dominates this landscape.	✓	✓			
153	-26.67185684	151.4764479	Impact site located on the south west edge of project site along Red Tank Road. The site extends to the north and is dominated by hilly, non-remnant grassland / farm paddock habitat with scattered groups of trees, verging on high value regrowth (HVR). Directly to the east is the least concern remnant RE eucalypt / woodland forest habitat of 11.11.15 / 11.3.25. 11.11.15 is defined by narrow-leaved ironbark woodland on deformed and metamorphosed sediments and interbedded volcanics. 11.3.25 is defined as Queensland blue gum or river red gum *E. camaldulensis* woodland fringing drainage lines.	✓	✓			
166	-26.57273191	151.4878593	Impact site located on farm track in the north west section of the project site. Surrounded by a relatively flat, non-remnant grassland / farm paddock habitat with sparse tree patches nearby.	✓	✓	✓	✓	✓
177	-26.65052363	151.48682	Impact site located directly to the south of Ironpot Road on the south side of the project site. Surrounded by a relatively flat, non-remnant grassland / farm paddock habitat with tree patches. A dry stream bed lined with trees and thick vegetation is directly to the south. To the south west is the least concern remnant RE eucalypt / woodland forest habitat of 11.11.15 / 11.3.25. 11.11.15 is defined by narrow-leaved ironbark woodland on deformed and metamorphosed sediments and interbedded volcanics. 11.3.25 is defined as Queensland blue gum or river red gum *E. camaldulensis* woodland fringing drainage lines.	✓	✓	✓	✓	✓

Fixed point ID	Latitude	Longitude	Fixed point count location habitat description	2018 Spring	2019 Autumn	2020 Spring	2021 Spring	2022 / 2023
191	-26.56550386	151.4963489	Impact site located on farm track central to the project site. Surrounded by a relatively flat, non-remnant grassland / farm paddock habitat with sparse tree patches nearby. A dry stream bed lined with trees is directly to the west.	✓	✓			
195	-26.59143025	151.4966989	Impact site located along a farm road central to the project site. Surrounded by a hilly, non-remnant grassland / farm paddock habitat with tree patches, verging on HVR, and directly to the south is the least concern remnant RE eucalypt / woodland forest habitat of 11.11.15 / 11.3.25. 11.11.15 is defined by narrow-leaved ironbark woodland on deformed and metamorphosed sediments and interbedded volcanics. 11.3.25 is defined as Queensland blue gum or river red gum *E. camaldulensis* woodland fringing drainage lines.	✓	✓			
214	-26.54443633	151.5041199	Impact site located to the north of the project site near a farm road. Surrounded by non-remnant grassland / farm paddock with sparse trees scattered throughout the landscape.	✓	✓	✓	✓	✓
238	-26.53186781	151.5134409	Impact site located to the north of the project site along the north side of Kingaroy-Burrandowan Road. Surrounded by non-remnant hilly grassland / farm paddock habitat with tree patches nearby.	✓	✓			
246	-26.58599875	151.4993747	Impact site located central to the project site on a hilltop vantage point. Surrounded by non-remnant grassland / farm paddock habitat with tree patches nearby.	✓	✓	✓	✓	✓
266	-26.5467485	151.5203372	Impact site located to the west of Jumna Road to the north of the project site. Surrounded by a relatively flat, non-remnant grassland / farm paddock habitat with several tree patches nearby. A dry stream bed lined with trees is directly to the west.	✓	✓			
322	-26.57579614	151.5295871	Impact site located near Jumna Road central to the project site. Surrounded by a hilly, non-remnant grassland / farm paddock habitat with scattered trees throughout.	✓	✓	✓	✓	✓
333	-26.65334545	151.5329583	Impact site located along the south end of Jumna Road on the south of the project site. Surrounded by a hilly, non-remnant grassland / farm paddock habitat with scattered trees throughout.	✓	✓	✓	✓	✓
336	-26.67494748	151.5331789	Impact site located along Ironpot Road to the south of the project site. Is a relatively flat, non-remnant grassland / farm paddock habitat with scattered tree patches.	✓	✓			

Fixed point ID	Latitude	Longitude	Fixed point count location habitat description	2018 Spring	2019 Autumn	2020 Spring	2021 Spring	2022 / 2023
362	-26.67470833	151.54222	Impact site located directly to the south of Ironpot Road to the south east of the project site. Surrounded by a relatively flat, non-remnant grassland / farm paddock habitat with scattered tree patches.	✓	✓			
379	-26.60920467	151.5517154	Impact site located along Glenrocks Road to the east of the project site. Surrounding the site is a hilly, non-remnant grassland / farm paddock habitat with tree patches.	✓	✓	✓	✓	✓
431	-26.61084707	151.5683407	Impact site located along Glenrocks Road to the east of the project site. Surrounded by a hilly, non-remnant grassland / farm paddock habitat with tree patches, verging on HVR, and to the south is the least concern remnant RE eucalypt / woodland forest habitat of 11.12.3 / 11.7.6. 11.12.3 is defined by narrow-leaved ironbark, Queensland blue gum, rusty gum *Angophora leiocarpa* woodland on igneous rocks especially granite. 11.7.6 is defined by lemon-scented gum *Corymbia citriodora* or narrow-leaved ironbark woodland on Cainozoic lateritic duricrust.	✓	✓			
438	-26.66131853	151.5676386	Impact site located on a farm track on to the south east side of the project site. Surrounded by non-remnant grassland / farm paddock habitat with scattered trees. To the north is least concern remnant RE 11.12.6 which consists of lemon-scented gum open forest on igneous rocks (granite).	✓	✓	✓	✓	✓
455	-26.59741433	151.5756038	Impact site located on a farm track on the east side of the project site. Surrounded by non-remnant grassland / farm paddock habitat with trees, verging on HVR.	✓	✓			
457	-26.61000054	151.5738828	Impact site located along Glenrock Road to the east of the project site. Surrounded by non-remnant grassland / farm paddock habitat with trees, verging on HVR, and to the east / south is the least concern remnant RE eucalypt / woodland forest habitat of 11.12.3 / 11.7.6. 11.12.3 is defined by narrow-leaved ironbark, Queensland blue gum, rusty gum *Angophora leiocarpa* woodland on igneous rocks especially granite. 11.7.6 is defined by lemon-scented gum *Corymbia citriodora* or narrow-leaved ironbark woodland on Cainozoic lateritic duricrust.	✓	✓	✓	✓	✓

Fixed point ID	Latitude	Longitude	Fixed point count location habitat description	2018 Spring	2019 Autumn	2020 Spring	2021 Spring	2022 / 2023
476	-26.55798325	151.583635	Reference site located on a farm track along the north eastern edge of the project site. Originally selected as an impact site, changes to the project boundary mean point 476 is now outside of the project area. Surrounded by non-remnant grassland / farm paddock habitat with trees, verging on HVR, and immediately to the east is the least concern remnant RE eucalypt / woodland forest habitat of 11.12.6 / 11.11.4. 11.12.6 is defined by lemon-scented gum open forest on igneous rocks (granite).11.11.4 is defined by narrow-leaved ironbark woodland on old sedimentary rocks with varying degrees of metamorphism and folding. Coastal ranges.	✓	✓	✓	✓	✓
477	-26.56780151	151.5862394	Reference site located on a farm track to the north east of the project site. Originally selected as an impact site, changes to the project boundary mean point 477 is now outside of the project area. Surrounded by non-remnant grassland / farm paddock habitat with trees, verging on HVR, and to the east is the least concern remnant RE eucalypt / woodland forest habitat of 11.12.3 / 11.7.6. 11.12.3 is defined by narrow-leaved ironbark, Queensland blue gum, rusty gum *Angophora leiocarpa* woodland on igneous rocks especially granite. 11.7.6 is defined by lemon-scented gum *Corymbia citriodora* or narrow-leaved ironbark woodland on Cainozoic lateritic duricrust.	✓	✓			
479	-26.58170967	151.5841885	Reference site located on a farm track to the north east of the project site. Originally selected as an impact site, changes to the project boundary mean point 479 is now outside of the project area. To the west is non-remnant grassland / farm paddock habitat with trees, verging on HVR, and to the east is the least concern remnant RE eucalypt / woodland forest habitat of 11.12.3 / 11.7.6. 11.12.3 is defined by narrow-leaved ironbark, Queensland blue gum, rusty gum *Angophora leiocarpa* woodland on igneous rocks especially granite. 11.7.6 is defined by lemon-scented gum *Corymbia citriodora* or narrow-leaved ironbark woodland on Cainozoic lateritic duricrust.	✓	✓			
482	-26.60279792	151.5847327	Impact site located near the eastern project site boundary off Glenrock Road. The non-remnant hilltop habitat is dominated by grassland / farm paddock to the east with scattered trees on the verge of HVR to the west.	✓	✓			

Fixed point ID	Latitude	Longitude	Fixed point count location habitat description	2018 Spring	2019 Autumn	2020 Spring	2021 Spring	2022 / 2023
NT1	-26.58707422	151.5399488	Reference site located towards the center of the project site close to Jumma Road. The non-remnant hilly habitat is dominated by grassland / farm paddock, with scattered trees on the verge of HVR. This location was originally chosen as it was outside the proposed planning corridor. However, the current planning corridor now encompasses this location. This location should be considered an impact site in future analysis of survey data.	✓	✓			
NT2	-26.60303265	151.6003254	Reference site located east of the project site along Glenrock Road, dominated by a flat, open grassland / farm paddock to the north and patches of remnant RE eucalypt / woodland with a thick shrub understory to the south.	✓	✓	✓	✓	✓
NT3	-26.60246457	151.4118928	Reference site located west of the project site along Ironpot Road, dominated by flat, open grassland / farm paddock habitat with scattered trees present.	✓	✓			
NT4*	-26.52626345	151.3464726	Reference site located northwest of the project site along Ironpot Road, dominated by a flat, open grassland / farm paddock with scattered trees verging towards HVR.	✓				
NT5	-26.64216921	151.4751131	Reference site located southwest of the project site along Ironpot Road, dominated by a hilly, open grassland / farm paddock to scattered trees.	✓	✓	✓	✓	✓
NT6**	-26.59735497	151.4296477	Reference site located west of the project site along Greystonlea Road, dominated by remnant RE eucalypt / woodland forest of least concern and of HVR nearby. Located on the upslope of a hill.		✓	✓	✓	✓

*This reference site was only visited during the spring 2018 survey period, and a more suitable fixed point (NT6) was chosen for the following autumn 2019 season.

**This reference site was only visited during the autumn 2019, spring 2020, spring 2021, and 2022/2023 survey periods, replacing NT4 from the previous spring 2018 survey period.

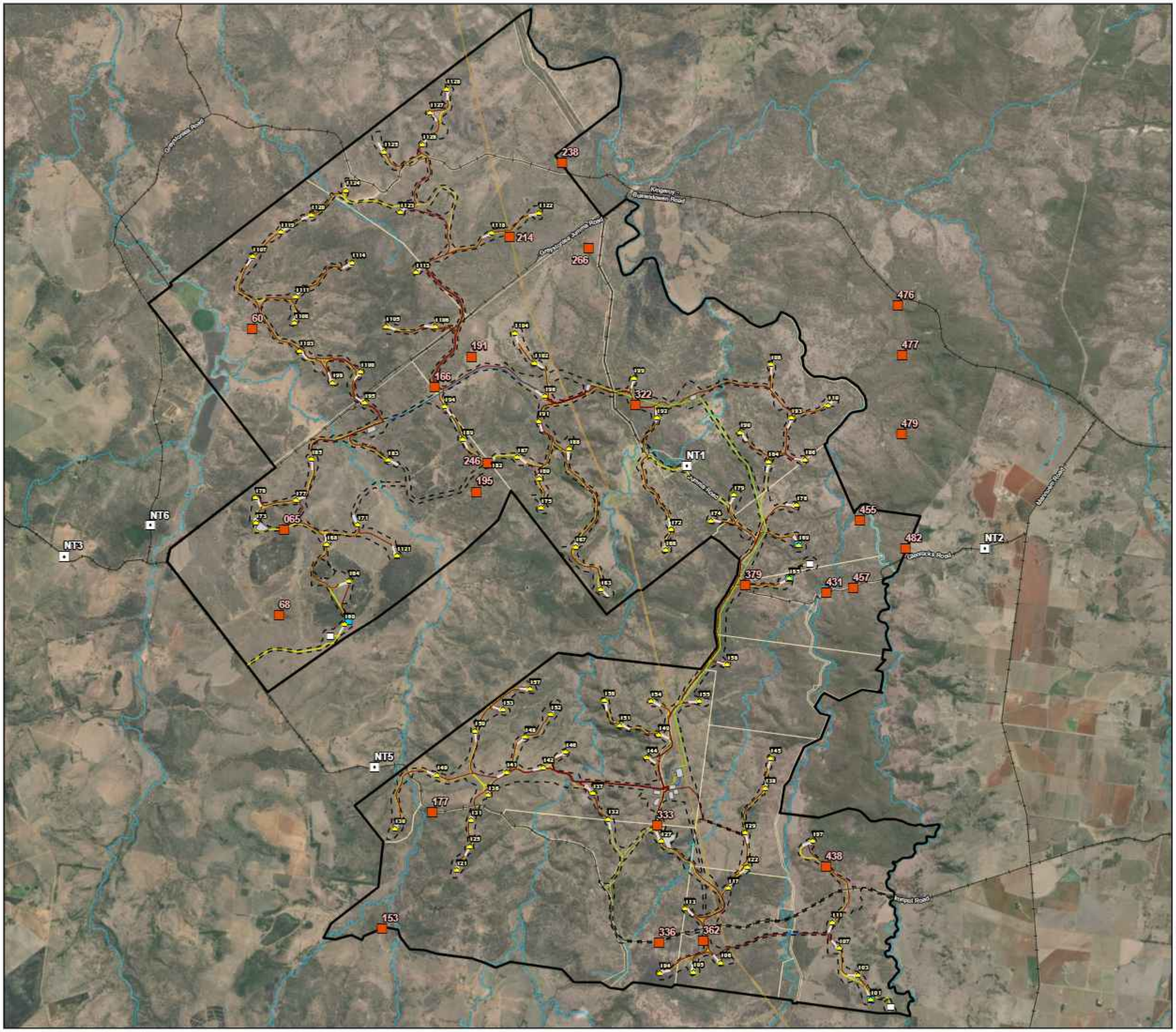

Figure 3: Fixed point count bird survey locations (2018 - 2019) and proposed turbine layout

Legend

- Bird point count surveys (reference site)
- Bird point count surveys (impact site)
- WTG
- Mast (permanent)
- Mast (temporary)
- Turbine hardstand
- Cables - overhead 275kV
- Cables - overhead 33kV
- Cables - underground
- Existing 275kV transmission line
- Access track
- Watercourse
- Road
- Infrastructure
- Planning corridor
- Project boundary
- Land parcel

Tarong West Project Co Pty Ltd

Bird and Bat Utlisation Survey Report for Tarong West Wind Farm

0 1 2 4
Kilometers

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Revision: 0
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GDA 1994 MGA Zone 56
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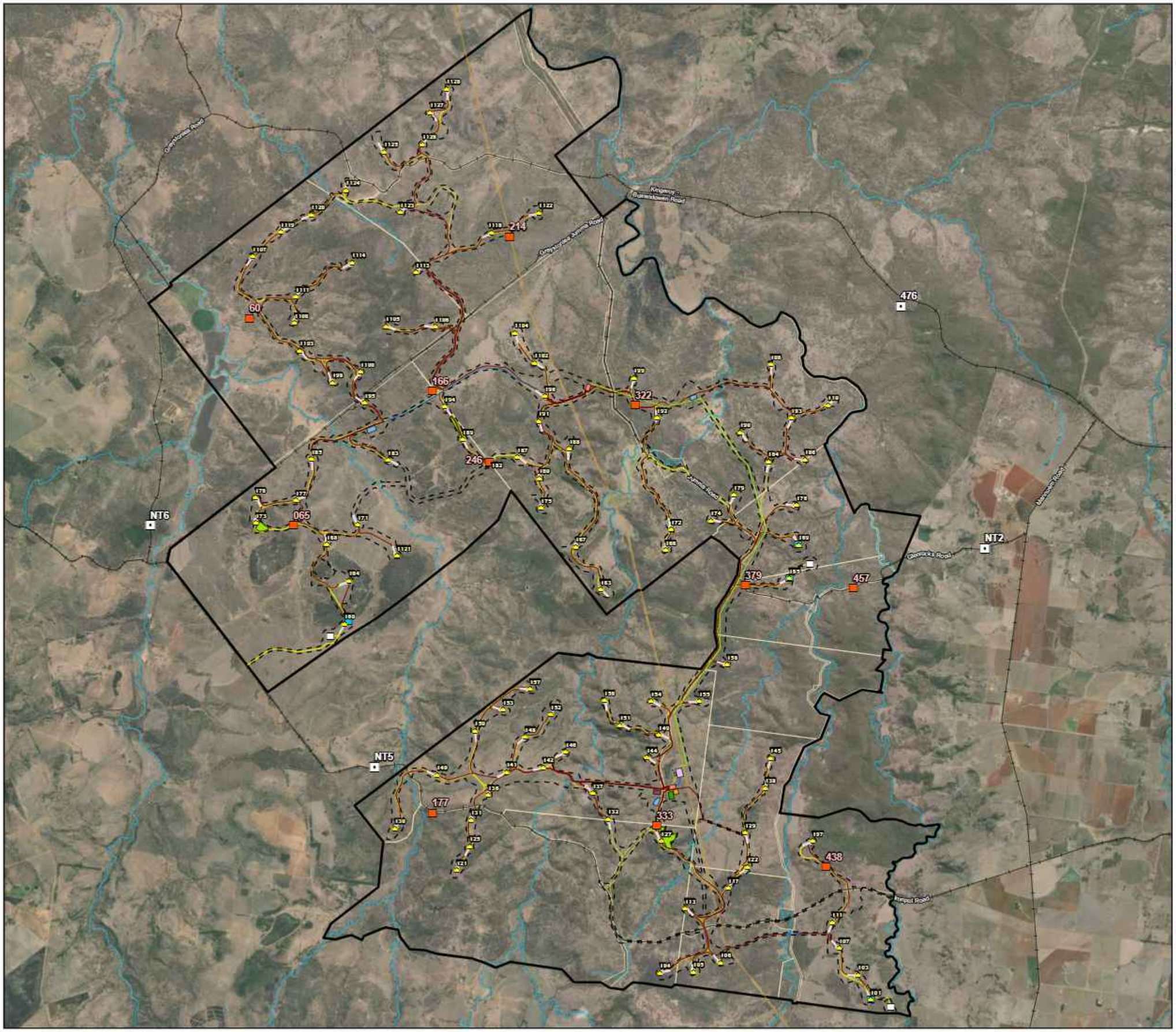

Figure 4: Fixed point count bird survey locations (2020 - 2023) and proposed turbine layout

Legend

- Bird point count survey (reference site)
- Bird point count surveys (impact site)
- WTG
- Mast (permanent)
- Mast (temporary)
- Planning corridor
- Turbine hardstand

Infrastructure_Areas_20241011

Label

- Batch plant
- Borrow pit
- Helipad
- Laydown
- Operations and maintenance building
- Site compound
- Substation
- Switching station
- Cables - overhead 275kV
- Cables - overhead 33kV
- Cables - underground
- Existing 275kV transmission line
- Access track
- Watercourse
- Road
- Project boundary
- Land parcel

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Targeted searches

TNT and migratory species were surveyed in areas of suitable habitat (i.e. vegetated areas and waterbodies). Targeted searches included spotlighting and call playback for nocturnal species such as owls and bats, acoustic recording and harp trapping for bats, and searching for feeding and nesting signs (birds and bats) (Table 3, Table 32, Figure 5, Figure 6, Figure 7). All waterbodies within and immediately adjacent to the project site were surveyed for waterbirds via binoculars during the autumn 2019 and spring 2020 surveys. Opportunistic observations were recorded while travelling within the project site during the fixed point count, roaming survey and terrestrial fauna surveys.

Opportunistic observations

Additional species were detected opportunistically during other fauna surveys and while travelling across the project site. Opportunistic observations identified birds that were on the project site or in the vicinity of the project site. Four methods contributed to the opportunistic bird data, including incidental sightings, water bird counts at dams, camera traps which were installed as part of general fauna surveys and nocturnal sightings during standardised spotlighting surveys.

2.2.2.2 Survey effort

The overall survey effort is summarised in Table 3 and Table 32. Locations of bird and bat surveys are shown on Figure 5, Figure 6, Figure 7, and Figure 8. Locations of fixed point count surveys specifically are shown on Figure 3 and Figure 4.

A further survey was completed by SLR in Autumn 2025 (SLR 2025) targeting grey-headed flying-fox and glossy black-cockatoo. The results of these surveys have been incorporated into the BBUS for these species.

Table 3 Bird and bat survey methods employed during field surveys

	Spring 2018		Autumn 2019		Spring 2020		Spring 2021		Summer 2022		Autumn 2022		Winter 2022		Spring 2022		Summer 2023		Autumn 2023		Winter 2023		Spring 2023		Total	
Survey method	No. sites	Survey effort	No. sites	Survey effort	No. sites	Survey effort	No. sites	Survey effort	No. sites	Survey effort	No. sites	Survey effort	No. sites	Survey effort	No. sites	Survey effort	No. sites	Survey effort	No. sites	Survey effort	No. sites	Survey effort	No. sites	Survey effort	No. sites	Survey effort
Habitat assessment	30	8 hrs x 2 personnel	34	17 hrs x 2 personnel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64	25 hrs x 2 personnel
Nocturnal spotlighting	-	-	23	34.5 hrs over 9 nights x 2 personnel	18	24 hrs over 6 nights x 2 personnel	41	24 hrs over 6 nights x 2 personnel	10	12 hrs over 6 nights x 2 personnel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92	94.5 hrs over 27 nights x 2 personnel
Microbat call recording	6	48 detection nights	9	27 detection nights	6	12 detection nights	8	15 detection nights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	102 detection nights
Microbat harp trapping	-	-	9	18 trap nights x 4 traps	9	18 trap nights x 4 traps	8	15 trap nights x 4 traps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	51 trap nights x 4 traps
Remote camera trapping for quoll	10	80 trap nights	20	88 trap nights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	168 trap nights
Black-breasted button-quail call playback	-	-	15	1.25 hrs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	1.25 hrs
Black-breasted button-quail active searches	7	1.75 hrs x 2 personnel	4	2 hrs x 2 personnel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	3.75 hrs x 2 personnel
Fixed point count bird surveys	30	30 hrs x 2 personnel	30	45 hrs x 2 personnel	15	22.5 hrs x 2 personnel	15	22.5 hrs x 2 personnel	15	22.5 hrs x 2 personnel	15	22.5 hrs x 2 personnel	15	22.5 hr x 2 personnel	15	22.5 hrs x 2 personnel	15	22.5 hrs x 2 personnel	15	22.5 hrs x 2 personnel	15	22.5 hrs x 2 personnel	15	22.5 hrs x 2 personnel	210	300 hrs x 2 personnel
Roaming surveys	3	6.75 hrs x 2 personnel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	6.75 hrs x 2 personnel
Dam waterbird searches	-	-	6	3 hrs x 2 personnel	13	3.25 hrs x 2 personnel	20	4.75 hrs x 2 personnel	11	2 hrs x 2 personnel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	13 hrs x 2 personnel
glossy black-cockatoo active searches	-	1.5 hrs x 2 personnel	34	11.5 hrs x 2 personnel	8	2 hrs x 2 personnel	7	1.75 hrs x 2 personnel	2	0.5 hrs x 2 personnel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	17.25 hrs x 2 personnel
Powerful owl call playback	7	0.25 hrs per site	15	0.25 hrs per site	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	5.5 hrs

Figure 5: Spring 2018 fauna survey sites and ground-truthed habitat

Legend

- Bird point count survey (reference site)
- Bird point count surveys (impact site)
- Anabat call recording
- Black-breasted button-quail active search
- Camera trap
- Glossy black-cockatoo active search
- Spotlighting and call playback
- WTG
- Mast (permanent)
- Mast (temporary)
- Roaming survey
- Turbine hardstand
- Cables - overhead 275kV
- Cables - overhead 33kV
- Cables - underground
- Existing 275kV transmission line
- Access track
- Road
- Infrastructure
- Planning corridor
- Project boundary
- Previous project boundary
- High value regrowth

Habitat type

- Eucalypt woodland / forest
- Riparian woodland / grassland
- Vine thicket
- Grassland

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Figure 6: Autumn 2019 fauna survey sites and ground-truthed habitat

Legend

- Bird point count surveys (reference site)
- Bird point count surveys (impact site)
- Anabat call recording
- Black-breasted button-quail active search
- Camera trap
- Dam survey
- Glossy black-cockatoo active search
- Habitat assessment
- Harp trapping
- Herpetofauna, active search
- Nocturnal call playback
- Spotlighting
- WTG
- Mast (permanent)
- Mast (temporary)
- Turbine hardstand
- Cables - overhead 275kV
- Cables - overhead 33kV
- Cables - underground
- Existing 275kV transmission line
- Access track
- Road
- Infrastructure
- Planning corridor
- Project boundary
- Previous project boundary
- High value regrowth

Habitat type

- Eucalypt woodland / forest
- Riparian woodland / grassland
- Vine thicket
- Grassland

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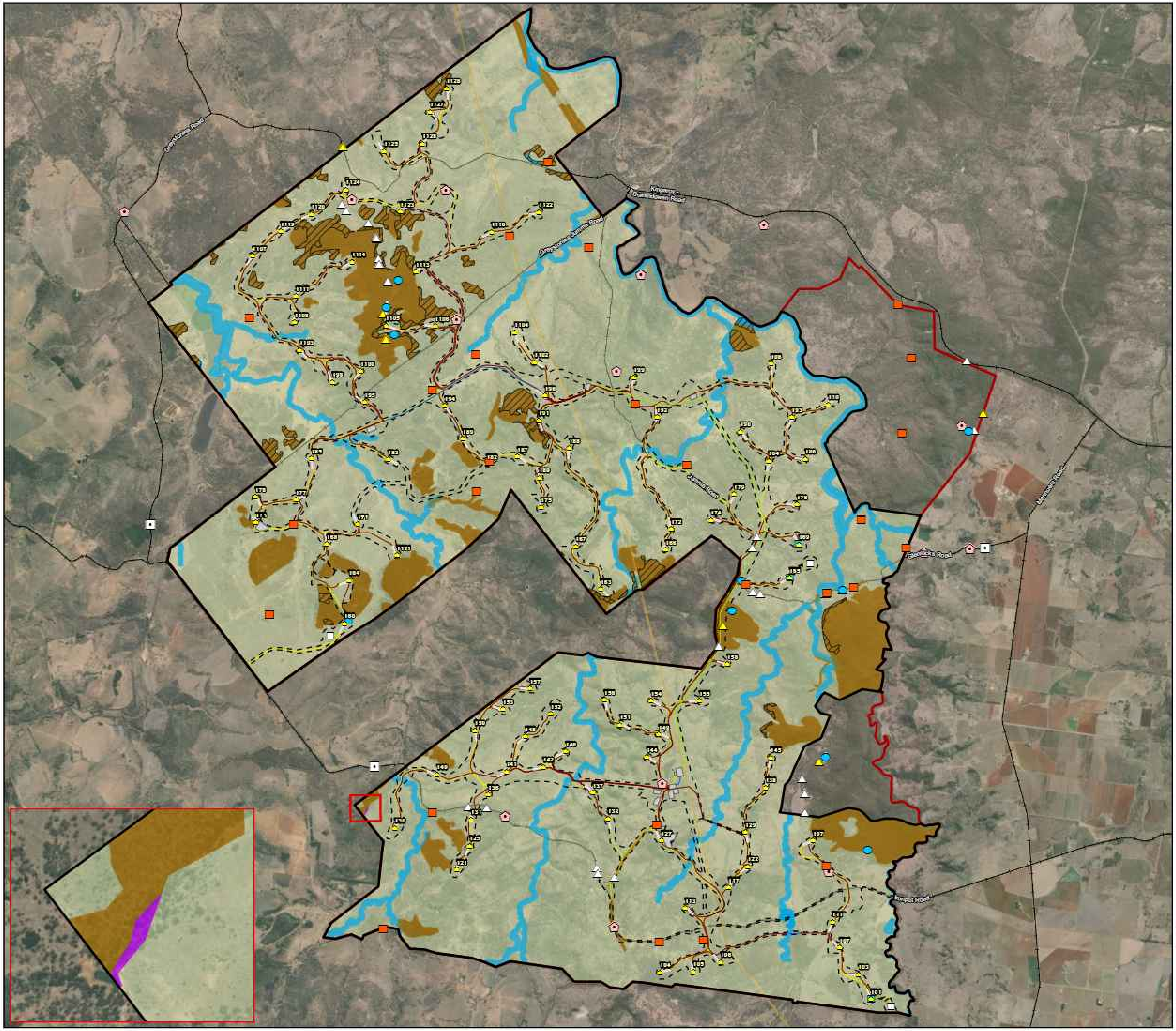

Figure 7: Spring 2020 fauna survey sites and ground-truthed habitat

Legend

- Bird point count survey (reference site)
- Bird point count surveys (impact site)
- Anabat call recording and harp trapping
- Dam survey
- Nocturnal call playback
- Spotlighting
- WTG
- Mast (permanent)
- Mast (temporary)
- Turbine hardstand
- Cables - overhead 275kV
- Cables - overhead 33kV
- Cables - underground
- Existing 275kV transmission line
- Access track
- Road
- Infrastructure
- Planning corridor
- Project boundary
- Previous project boundary
- High value regrowth

Habitat type

- Eucalypt woodland / forest
- Riparian woodland / grassland
- Vine thicket
- Grassland

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Figure 8: Spring 2021 fauna survey sites and ground-truthed habitat

Legend

- Bird point count survey (reference site)
- Bird point count surveys (impact site)
- Dam survey
- Anabat call recording and harp trapping
- Harp trapping
- Nocturnal call payback
- Spotlighting
- Glossy black-cockatoo active search
- WTG
- Mast (permanent)
- Mast (temporary)
- Turbine hardstand
- Cables - overhead 275kV
- Cables - overhead 33kV
- Cables - underground
- Existing 275kV transmission line
- Access track
- Road
- Infrastructure
- Planning corridor
- Project boundary
- Previous project boundary
- High value regrowth

Habitat type

- Eucalypt woodland / forest
- Riparian woodland / grassland
- Vine thicket
- Grassland

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2.3 Level one risk assessment

The level one risk assessment is a qualitative assessment based on the following elements:

1. Regional overview - identify species presence in the area and any threatened or listed species that may be affected, significant bird and bat aggregations, and habitats known to occur in the area.
2. Roaming surveys and fixed point counts.
3. Targeted surveys.

The probability (likelihood) of an impact for a species was based on the likelihood of occurrence at the project site and the height at which a species is known to fly. Table 4 provides a probability scoring matrix (high, medium, low) based on species occurrence and flight height criteria.

Table 4 Probability matrix for risk of collision

Probability	Occurrence	Flight height
High	Reside / regularly traverse site	Regularly fly at RSA height
Medium	Reside / regularly traverse site	Occasionally fly at RSA height
	Rarely traverse site	Regularly fly at RSA height
Low	Reside / regularly traverse site	Rarely to never fly at RSA height
	Unlikely to occur	Not applicable

A semi-quantitative risk assessment was completed for species that were recorded most commonly during surveys. The assessment at this level also considered the number of individuals of the species recorded flying between 40 m and 305 m above ground level (to be conservative, at the upper limit, and a lower tip height and consider potential barotrauma impacts).

The consequence of WTG collision to an individual bird or bat is considered equal, resulting in death. However, the consequence to the species is dependent on population size. For example, the loss of one individual would be greater for a TNT species or species where the local population is low in numbers.

2.3.1 Survey limitations

The field surveys assessed the project site based on the boundaries and proposed infrastructure locations provided to Ecosure prior to each survey. Through the refinement of project design, some properties which were surveyed have now been excluded from the project site. For consistency of survey design the data from these areas is included in the analysis. Additionally, proposed WTG locations and the planning corridor have been iteratively designed. The risk assessment is based on the current layout provided in July 2023.

To ensure adequate representation of the project site, a modified seasonal survey design was employed whereby roaming surveys were undertaken during the 2018 spring survey and the subsequent surveys from 2019 to 2023 targeted TNT and migratory species, instead of seasonal roaming surveys.

Data from the DCCEEW PMST are based on a combination of actual records, primarily from state government databases, supplemented with modelled distributions of species according to their ecological requirements and site characteristics. Species and communities identified by this search may occur in the search area but require further investigation to confirm their presence.

Targeted surveys can confirm the presence of a particular fauna species from a given area but cannot confirm the absence of a species. Species detectability may be affected by factors outside the control of survey design, such as climate, cyclical variations in species abundance and disturbances such as grazing and fire.

This assessment included targeted field searches for conservation significant species using currently accepted methods, comprehensive knowledge of their ecological requirements, and surveys in two critical seasonal periods (pre-wet spring season and post-wet autumn season). Surveying during both pre-wet and post-wet environmental conditions is important as fauna have different activity patterns and flora have different growth patterns and levels of detectability during these periods. However, it cannot entirely rule out the presence of a species in areas containing suitable habitat for the species, based on existing knowledge of the species' ecological requirements. The likelihood of occurrence can be further refined by conducting more targeted surveys within suitable habitat areas. However, targeted surveys were considered appropriate to meet the guideline survey requirements for all species with respect to the available habitat on site (refer Table 30 and Table 32).

Data collected in the fixed point count surveys are intended to be used to estimate risk of collision by taking into account species flight behaviours and air space usage within the project site. Sightings of birds recorded over the course of each survey give a general indication of bird utilisation and abundance and frequency of occurrence of each species. The total number of sightings does not necessarily equal an equivalent number of individual birds, as repeated sightings of the same individuals may occur particularly if nests are present or food is abundant. Repeated sightings are valuable for understanding bird utilisation in the project site, but must be kept in mind when considering estimates of the number of individual birds which may experience impacts from the project.

2.4 Mathematical collision risk modelling

To complement qualitative and semi-quantitative assessment of collision risk, an estimate of the number of birds potentially impacted by WTG strike was assessed using mathematical collision risk modelling. A number of models for assessing collision risk have been put forward in the scientific literature and in wind farm ecological assessments. As each model has its own assumptions and limitations, three different models were chosen to provide a relative assessment of collision risk for species of concern:

- StochLab R package (Humphries et al., 2022), based on the Band model for offshore wind farms (Band, 2012)
- Uungula wind farm collision risk estimate (CWP Renewables, 2020a), based in part on the Band model for offshore wind farms (Band, 2012)
- Ironpot Wind Farm Collision Risk Index (CRI), presented in the Ecological Impact Assessment for Ironpot Wind Farm (Golder Associates, 2018).

The conservation significant species of concern considered in collision risk assessment are the white-throated needletail and fork-tailed swift. Additionally, the wedge-tailed eagle is considered for collision risk model (while not conservation significant it is the most commonly sighted raptor on site). The glossy black-cockatoo was unable to be assessed using collision risk model as few sightings of individuals in flight were made (n = 7) and all were outside of the RSA (maximum 20 m flight height). Grey-headed flying-foxes were also unable to be assessed as they were not sighted in flight during site surveys, only observed foraging at night.

2.4.1 StochLab (Band model)

StochLab (Humphries et al., 2022) is an R package developed to formalise the Band model for assessing bird collision risk at offshore wind farms (Band, 2012), and takes into account features of the wind farm site, the physical and behavioural characteristics of the species (e.g., species size, flight speed and flight type), and estimates of species occurrence on the project site derived from field surveys. Variables for the current anticipated turbine specification have been considered in the collision risk model. Any changes in final turbine specifications will be minor in nature, fit within the assessment scope of this report and within the modelled turbine envelope using these variables, which include:

- number of turbines (97)
- rotor radius (83 m)
- blade pitch (average of 5 degrees)
- blade chord profile (approximately 4.3 m at the widest, Table)
- number of blades (3)
- rotation speed (average of 7 rpm based on operational range of wind speeds)
- hub height (166 m)
- operational wind availability (as determined by indicative turbine specifications and measurements of wind speed in the project area, Table).

The species-specific parameters used in analysis are presented in Table 5. These parameters were input to the *mig_stoch_crm* function of the StochLab R package (which uses an estimate of the population per migratory season) for white-throated needletail and fork-tailed swift. For wedge-tailed eagle, the species-specific parameters were input to the *band_crm* function of the StochLab R package using model option 4 to estimate the number of expected collisions per month for a single species. The *mig_stoch_crm* function is based on an estimated population number passing through the project area during a migratory season rather than

bird density (as used in the *band_crm* function), and is comparable to the population-based collision risk model presented for white-throated needletail in environmental investigations for Mount Hopeful Wind Farm (Umwelt, 2023).

Table 5 Species-specific model parameters

Parameter	White-throated needletail	Fork-tailed swift	Wedge-tailed eagle
Flight speed (m/s)	27 m/s (Australian Museum, 2020)	27 m/s No species-specific information, assumed to be similar to the white-throated needletail.	17 m/s (North Barker Ecosystem Services, 2024)
Body length (m)	0.2 m (Threatened Species Scientific Committee, 2019)	0.21 m (DCCEEW, 2023a)	1.0 m (North Barker Ecosystem Services, 2024)
Wing span (m)	0.5 m (OEH, 2024b)	0.42 m (DCCEEW, 2023a)	2.1 m (Australian Museum, 2023)
Flight type	Flapping	Flapping	Gliding
Proportion of birds at collision risk height	100% (from site field survey)	100% (from site field survey)	96% (from site field survey)
Proportion of flights upwind	Assumed 50%	Assumed 50%	Assumed 50%
Avoidance rate range (%)	95 – 99% assumed based on species behaviour and previous collision risk assessment (CWP Renewables, 2020a; Neoen, 2023)	95 – 99% assumed based on highly similar physical and behavioural characteristics of the species to white-throated needletails.	80 – 90% based on a study of avoidance rates in Tasmanian wind farms (Hull et al., 2013a; Smales et al., 2013)
Daytime/nighttime activity levels	-	-	100% of day, 0% of night
Monthly bird density (birds observed per survey divided by project area [175 km^2], and averaged per month)	-	-	Ranges from 0.0001 birds per km^2 - 0.0017 birds per km^2 (based on site-specific field survey, Table)
Site population estimate (*mig_stoch_crm* only)	Mean: 1,000 individuals and Standard deviation: 250 individuals Scenario 2: Mean 500 and standard deviation 125 individuals	Scenario 1: Mean 1,000 and standard deviation 250 individuals Scenario 2: Mean 500 and standard deviation 125 individuals	-
Season specification (*mig_stoch_crm* only)	Migratory season in Australia considered from September to February inclusive.	Migratory season in Australia considered from September to February inclusive.	-
Turbine downtime (*mig_stoch_crm* only)	Percentage of downtime for each turbine (assumed to be an average of 22 hours per month with 2 hours per month standard deviation)	Percentage of downtime for each turbine (assumed to be an average of 22 hours per month with 2 hours per month standard deviation)	-

Parameter	White-throated needletail	Fork-tailed swift	Wedge-tailed eagle
Wind availability (*mig_stoch_crm* only)	Operational wind availability based on site-based wind monitoring and turbine specifications.	Operational wind availability based on site-based wind monitoring and turbine specifications.	-

The population of white-throated needletail in Australia is estimated at approximately 41,000 (range 20,000 – 61,000; (Tarburton & Garnett, 2021)), and in total across all survey types approximately 364 individuals were sighted during surveys from 2018 to 2023. As such assuming a site population estimate (per migratory season) of 1,000 individuals is considered to be a conservative estimate for inclusion in the collision risk model.

2.4.2 Uungula Wind Farm

This method was presented to model collision risk for white-throated needletail and wedge-tailed eagle at Uungula Wind Farm in New South Wales (CWP Renewables, 2020b), and is based in part on the same Band model used in StochLab. This method uses the Band model to calculate the average probability of collision for each individual bird passing through the RSA, then uses wind farm turbine and layout parameters as well as data from field surveys to estimate the number of expected collisions per month. Given the known seasonality of white-throated needletail and fork-tailed swift occurrence in Australia, in the assessment for Tarong West Wind Farm, minor alteration was made to estimate the number of collisions expected per season, rather than per month. For each species of concern, the calculation uses the following parameters presented in Table 6.

Table 6 Parameters / values from Tarong West Wind Farm used in the Uungula Wind Farm collision risk assessment model

Parameter	Value / equation
Average probability of collision	Using function *get_avg_prob_collision* from the StochLab R package, species-specific parameters and turbine parameters detailed in section 2.4.1
Number of surveys in season	70 fixed point count surveys in summer, 152 in autumn, 140 in winter, and 238 in spring
Active hours per day	13.5 hours for white-throated needletail, 24 hours for fork-tailed swift, 12 hours for wedge-tailed eagle
Total birds sighted in season	Species-specific data presented in Table
Birds per survey (30 minute survey)	$\frac{total\ birds\ sighted\ in\ season}{number\ of\ surveys\ in\ season}$
Birds per season	$birds\ per\ survey \times 2\ (to\ obtain\ number\ of\ birds\ per\ hour) \times active\ hours\ per\ day \times 91.2\ (average\ number\ of\ days\ per\ season)$
Risk window	$wind\ farm\ width\ (20\ km) \times highest\ tip\ height\ (0.249\ km)$
Total rotor area	$number\ of\ turbines\ (97) \times area\ of\ one\ turbine\ (0.0216\ km^2)$
Area risk window	$\frac{total\ rotor\ area}{risk\ window}$
Impact rate	$1 - avoidance\ rate\ (e.g.\ 0.98\ for\ 98\%\ avoidance)$

The calculation to determine the number of expected collisions for each species per season is:

$$collisions\ per\ season = birds\ per\ season \times area\ risk\ window \times impact\ rate$$

2.4.3 Ironpot Wind Farm

The model presented in the ecological assessment for Ironpot Wind Farm relies entirely on information about flight height and species composition gained from site-specific surveys. It assigns a CRI to each species, which is a relative measure of collision risk compared to other species observed on site (i.e. which species is more likely to strike) and does not provide a definite value of risk probability. Additionally, this model does not provide absolute numbers of expected mortalities. For each species, the calculation uses the parameters detailed in Table 7.

Table 7 Parameters used in the CRI calculation

Parameter	Value / equation
RSA (m above ground)	Turbine A: 83 - 249 m Turbine B: 77 - 243 m
total survey events	70 fixed point count surveys in summer, 152 in autumn, 140 in winter, and 238 in spring
mean use	$\frac{birds\ observed}{total\ survey\ events}$
frequency	$\frac{sum\ of\ survey\ events\ with\ occurrence\ of\ species}{sum\ of\ survey\ events}$
percent birds flying	$\frac{number\ of\ airborne\ birds}{total\ number\ of\ birds}$
percent in RSA	$\frac{sum\ of\ birds\ flying\ in\ RSA}{number\ of\ airborne\ birds}$

For each species, the CRI calculation was conducted as follows:

$$collision\ risk\ index = mean\ use \times frequency \times percent\ birds\ flying \times percent\ in\ RSA$$

2.4.4 Assumptions and uncertainties

Major assumptions and sources of uncertainty inherent in mathematical collision risk model include:

- The assumption of avoidance rates for species for which avoidance rate is not known. Avoidance rates for wedge-tailed eagles are supported by a field study which observed their flight paths in currently operating wind farms (Hull et al., 2013a). No such data exists for the white-throated needletail and fork-tailed swift. The rate at which species actively anticipate and avoid collisions with wind turbines is not well known for most species and typically has to be assumed based on knowledge of the behaviour of the species (Band, 2012; Smales et al., 2013). Avoidance rates of 95 –

99% have been used nominally in previous collision risk assessments for white-throated needletails, and while they may display high vigilance and manoeuvrability during clear day conditions, how weather conditions, night flight, or roosting on the wing may affect their avoidance rate is unknown. The CRI model used in the Ironpot Wind Farm Ecological Assessment is not affected by this assumption, however the Band model is affected.

- Estimates of the occurrence of each species on site are informed by field surveys, which represent a snapshot in time at each survey site. Particularly for migratory species which only occur seasonally, species densities may be over- or under-estimated in any one season depending on field survey conditions and the behaviour of the species itself. The draft *Onshore Wind Farm Guidance* (DCCEEW, 2024c) recommends at least 24 months of seasonal surveys (corresponding to 8 survey events) be completed before a wind farm can be assessed and an approval decision made. The seasonal span of surveys conducted for Tarong West Wind Farm (5 spring surveys, 3 autumn surveys, 2 summer surveys and 2 winter surveys across 6 years) exceeds that recommended by DCCEEW and is considered sufficient to account for seasonal variability and provide a reasonable estimate of bird occurrence.
- Estimates of bird abundance (which directly influences estimates of the number of heights at risk) differ between the methods. The StochLab *band_crm* function uses a density-based estimate of bird abundance, whereas the Uungula Wind Farm method uses a time-based estimate of bird abundance. The StochLab *mig_stoch_crm* function does not rely on an estimate of bird density, rather using an estimate of total population size.
- The Band model was developed based on offshore wind farms, where seabirds typically fly in one direction for extended periods of time. The behaviour of birds flying over inland sites often differs, with white-throated needletails in particular foraging in flocks which do not move in one general direction, rather moving backwards and forwards over the landscape. This may affect estimates of species density on site, and subsequently the number of flights at risk. Further assumptions specific to the Band model of collision risk are detailed in Band (2012).

3 Level one investigation results

3.1 Desktop assessment

3.1.1 Matters of national environmental significance

Listed threatened and migratory species

The PMST (DCCEEW, 2024d) identified 16 bird species and three bat species listed as threatened under the EPBC Act and potentially occurring within 10 km of the site boundary, based on the presence of modelled habitat. An additional 14 migratory EPBC Act-listed species potentially occur within 10 km of the site boundary (Appendix 1).

Wetlands of international importance

The PMST identified the following Ramsar wetlands:

- Banrock Station wetland complex (1,300 to 1,400 km away)
- Narran Lake nature reserve (500 to 600 km upstream of site)
- Riverland (1,200 to 1,300 km away)
- The Coorong, and lakes Alexandrina and Albert wetland (1,400 to 1,500 km away).

However, the site does not occur within a drainage basin that drains to any of these Ramsar wetlands.

3.1.2 Matters of state environmental significance

WildNet search results identified no NC Act listed bird or bat species have been recorded within 10 km of the site boundary.

3.1.3 Likelihood of occurrence assessment

The preferred habitat for each TNT species and the likelihood of occurrence of these species are described in Appendix 2. The likelihood of occurrence has been revised based on the results of the field surveys and available habitat present on site.

In the initial desktop assessment of the site, Corben's long-eared bat (*Nyctophilus corbeni*) was considered possible to occur. The results of habitat assessment and targeted microbat surveys in the field resulted in the revision of the likelihood of this species occurring in the project site to unlikely. The results of these surveys are discussed in detail in section 3.2.7. An additional six TNT bird species, one NC Act listed species and five EPBC Act and NC Act listed species, were considered possible to occur based on the revised likelihood assessment, including:

- regent honeyeater (*Anthochaera Phrygia*), listed as critically endangered under EPBC Act and NC Act
- Australasian bittern (*Botaurus poiciloptilus*), listed as endangered under EPBC Act and NC Act
- black-breasted button-quail (*Turnix melanogaster)*, listed as vulnerable under EPBC Act and NC Act
- diamond firetail (*Stagonopleura guttata*), listed as vulnerable under the EPBC Act and NC Act
- powerful owl (*Ninox strenua*), listed as vulnerable under NC Act
- squatter pigeon (*Geophaps scripta scripta*), listed as vulnerable under EPBC Act and NC Act.

Two additional species listed as SLC/migratory were considered possible to occur within the site, including:

- oriental cuckoo (*Cuculus optatus*)
- glossy ibis (*Plegadis falcinellus*).

Three threatened/TNT bird or bat species were confirmed during field surveys (2018 – 2023) to occur in the project area (Table 8), including:

- white-throated needletail (*Hirundapus caudacutus*), listed as vulnerable under NC Act and vulnerable and migratory under EPBC Act
- glossy black-cockatoo (*Calyptorhynchus lathami lathami*), listed as vulnerable under NC Act and EPBC Act
- grey-headed flying-fox (*Pteropus poliocephalus*), listed as vulnerable under EPBC Act.

Two SLC/migratory species were also confirmed to occur in the project area (Table 8):

- fork-tailed swift (*Apus pacificus*)
- white-throated needletail (also listed as threatened/TNT).

No species were determined to meet the likelihood of occurrence criteria to be classified as likely to occur.

Table 8 Results of surveys for EPBC Act listed bird and bat species

Name	NC Act	EPBC Act	Survey results
grey-headed flying-fox	-	V	**Recorded during spring 2021 surveys** Observed foraging within the site during the spring 2021 surveys when food species were in flower, although no habitats are considered to be critical food sources for this species. Nearest known grey-headed flying-fox camp is near Cooyar (38 km south-east of site) and is a nationally important camp containing 10,000 – 16,000 bats in 2018. Grey-headed flying-foxes are known to roost with other species of flying-fox, including little red flying-foxes (*Pteropus scapularis*) and black flying-foxes (*Pteropus alecto*) (Timmiss et al., 2020). Little red flying-foxes were detected during the survey and a camp is reported to occur to the south of the site (landholder pers. comm.). However, the specific location and species composition of the camp is not known. Likely to forage in site when ironbarks and lemon-scented gums are flowering.flying-fox
black-breasted button-quail	V	V	**Not detected** Suitable habitat exists within one small patch of RE 11.8.3 in the south-western corner of the site and no records within 10 km, but records present within 20 km of the site at the Bunya Mountains. Not detected during targeted surveys. Possible in small patches of vine thicket on western edge of site. Unlikely elsewhere in site. No further surveys recommended as no development is proposed in or adjacent to vine thicket habitats.
Corben's long-eared bat	V	V	**Not detected** Species or species habitat may occur within project site (DCCEEW, 2024d) but no records within 20 km. Harp trapping took place in remnant REs across the project site, including: 11.11.15/11.3.25, 11.12.6/11.11.4 and 11.12.6. Calls of a *Nyctophilus* species were recorded, but probably from *N. geoffroyi* or *N. gouldi* (both common species recorded within 10 km of the project site). Three *N. geoffroyi* individuals were captured at two locations during spring 2021 surveys. Habitat surveys recorded very limited suitable habitat (forest with intact canopy and distinct dense mid stratum). Unlikely to occur within project site. No further acoustic surveys recommended.
white-throated needle-tail	V	V	**Recorded during spring and summer surveys from 2018 to 2023** This species is almost entirely aerial and rarely lands. It does not breed in Australia. Suitable habitat exists on site. White-throated needle-tail fly above most habitats, although they are most common above wooded areas. 364 detections from 2018 to 2023, observed foraging aerially ahead of storm fronts. Not observed roosting within the project site. Forage above most habitats and on occasion roost in dense foliage or tree hollows. Seasonal surveys recommended as part of BACI survey design.
glossy black-cockatoo	V	V	**Recorded during 2019, 2020, 2021, 2022, and 2023 surveys** Suitable foraging habitat exists in small patches amongst forest and woodland communities across the site. A total of seven glossy black-cockatoo individuals were observed, two adjacent to a dam and five in a forested area adjacent to the project site. Signs of chewings (orts) have been observed in patches of woodland containing *Allocasuarina torulosa*, *A. littoralis*, *A. luehmannii* and *Casuarina cunninghamiana*. Habitat assessments recorded large hollow-bearing trees in remnant REs, which may provide denning resources. Pre-clear nesting surveys during clearing recommended.
fork-tailed swift	SLC	Mi	**Recorded during summer and spring 2023 bird surveys** Non-breeding habitat only. Three individuals in total recorded foraging aerially with two flocks of white-throated needletails. Found across a range of habitats, from inland open plains to wooded areas, where it is exclusively

Name	NC Act	EPBC Act	Survey results
			aerial. (DoE, 2015) considers 1,000 individuals to be an internationally significant proportion of the population and 100 individuals to be a nationally significant proportion of the population.
regent honeyeater	CR	CR	**Not detected** Suitable habitat exists within eucalypt woodlands. Not detected during bird surveys or opportunistic sightings. No records within 20 km of the site. Possible in areas dominated by eucalypt species, unlikely elsewhere. No further surveys recommended.
Australasian bittern	E	E	**Not detected** Limited suitable habitat within riparian areas and farm dams. Not detected during bird surveys or opportunistic sightings. No records within 10 km but one Wildnet record within 20 km to the north adjacent to Gordonbrook Dam 1984 Possible in areas with vegetation in water, unlikely elsewhere. No further surveys recommended.
diamond firetail	V	V	**Not detected** Suitable habitat exists within grassy eucalypt woodlands within the project site. No records within 20 km of the project site. Possible in areas dominated by grassy eucalypt woodlands, unlikely elsewhere. No further surveys recommended.
squatter pigeon	V	V	**Not detected** Suitable habitat within the project site as this species occurs in a wide range of habitats wherever there is a grassy understory in open forests dominated by eucalypts. Not detected during bird surveys or opportunistic sightings. No Wildnet records within 10 or 20 km. Possible in areas dominated by grassy eucalypt woodlands. No further surveys recommended.
oriental cuckoo	SLC	Mi	**Not detected** Suitable habitat within the project site. This species is present in a wide range of habitats. No detections during dam surveys, bird surveys or opportunistic sightings. No Wildnet records within the 10 or 20 km. Possible habitat is present within the site. No further surveys recommended.
glossy ibis	SLC	Mi	**Not detected** Limited suitable habitat around farm dams. Not detected during bird surveys or opportunistic sightings. No records within 10 km but three Wildnet records within 20 km. Possible in areas surrounding farm dams, unlikely elsewhere. No further surveys recommended.

NC Act status - conservation status under NC Act.

CR – Critically Endangered, E – Endangered, V = Vulnerable, NT = Near Threatened, LC = Least Concern, SLC = Special Least Concern

EPBC Act status - conservation status under EPBC Act.

CR = Critically Endangered, E = Endangered, V= Vulnerable, Mi = Migratory Species

Other non-listed species that may occur within the site based on the available habitat include:

- Wetland species which are likely to be restricted to farm dams and where habitat may be present after large rainfall events that produce flooded pastures and other

temporary waterbodies. These species generally fly above the canopy level when migrating between wetlands and are likely to occur at RSA heights.

- Non-migratory terrestrial species are likely to be restricted to large, connected habitat patches along the eastern boundary and along larger watercourses such as the Boyne River and Jumma Creek. They are likely to move between remnant patches but generally fly below the canopy level.

3.2 Field survey

3.2.1 Survey conditions

3.2.1.1 Spring 2018

The spring 2018 survey was completed over two weeks from 29 October to 9 November 2018. Weather data during the spring 2018 survey from the Kingaroy Airport station (BoM, 2023) is shown in Table 9. A total of 107 mm of rain fell in the two weeks prior to the field survey commencing.

Table 9 Weather conditions during the spring 2018 survey period

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
29 Oct 2018	17.4	20.7	0	30
30 Oct 2018	15.3	24.9	0.2	28
31 Oct 2018	11.1	27.3	0	24
1 Nov 2018	11.6	28.9	0	31
2 Nov 2018	10.8	28.1	0	33
3 Nov 2018	10.1	30.0	0	37
4 Nov 2018	14.4	34.7	0	33
5 Nov 2018	16.2	36.5	0	35
6 Nov 2018	18.7	35.5	0	37
7 Nov 2018	18.5	32.6	0	41
8 Nov 2018	13.9	22.2	0.6	54
9 Nov 2018	10.1	25.6	0	44

3.2.1.2 Autumn 2019

The autumn 2019 survey was completed over two weeks from 25 March to 5 April 2019, with no surveys undertaken on 31 March 2019. Weather data during the autumn 2019 survey from the Kingaroy Airport station (BoM, 2023) is shown in Table 10. Approximately 40 mm was recorded at Passchendaele Farm (which is nearer to the site than Kingaroy) between 27 and 31 March 2019, limiting access to some areas of the site during this period. Surveys were

reassigned to accessible sites during this period with no impact to the bird surveys. A total of 3 mm of rain fell in the two weeks prior to the field survey.

Heavy rain on the night of 30 March 2019 prevented spotlighting and impacted the recording of acoustic bat data. Other surveys were not significantly impacted by this rainfall event.

Table 10 Weather conditions during the autumn 2019 survey period

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
25 Mar 2019	18.9	31.6	0	28
26 Mar 2019	19.2	29.9	0	31
27 Mar 2019	20.2	-	0.2	43
28 Mar 2019	-	23.6	-	-
29 Mar 2019	18.4	25.5	0	31
30 Mar 2019	20.2	23.2	5.8	41
31 Mar 2019	9.7	23.6	7.8	43
1 Apr 2019	7.9	24.5	0.2	35
2 Apr 2019	9.9	25.9	0	39
3 Apr 2019	16.0	24.9	0	41
4 Apr 2019	15.0	25.3	0	35
5 Apr 2019	12.1	25.0	0.4	33

3.2.1.3 Spring 2020

The spring 2020 survey was completed over six days from 23 to 28 November 2020. Weather data from the Kingaroy Airport station (BoM, 2023) for this survey period is shown in Table 11. On the evening of the 25 November a storm passed over the site, however surveys were able to proceed after the storm passed. No rain fell in the two weeks prior to the spring 2020 field survey commencing.

Table 11 Weather conditions during the spring 2020 survey period

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
23 Nov 2020	13.9	33.4	0	24.2
24 Nov 2020	16.2	35.7	0	24.3
25 Nov 2020	16.0	28.0	29.0	20.9
26 Nov 2020	15.8	32.4	0	23.3
27 Nov 2020	16.3	31.4	0	24.8
28 Nov 2020	14.0	32.5	0	23.3

3.2.1.4 Spring 2021

The spring 2021 survey was completed over two weeks from 25 October to 7 November 2021. Weather data during the spring 2021 survey from the Kingaroy Airport station (BoM, 2023) is shown in Table 12. A total of 13 mm of rain fell in the two weeks prior to surveys commencing.

Table 12 Weather conditions during the spring 2021 survey period

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
25 Oct 2021	15.4	27.3	0	46
26 Oct 2021	15	28	14.2	48
27 Oct 2021	14.7	29.3	16.8	26
28 Oct 2021	18	30.6	0	43
29 Oct 2021	17.2	24.7	11	41
30 Oct 2021	17.9	31.2	0.6	46
1 Nov 2021	12.3	24.1	0	3
2 Nov 2021	12.3	24.5	0	31
3 Nov 2021	11	25.3	0	39
4 Nov 2021	8.3	26.3	0	31
5 Nov 2021	13.7	25.2	0	33
6 Nov 2021	11.3	26.6	0	33
7 Nov 2021	16.9	26.3	0	33

3.2.1.5 Summer 2022

The summer 2022 survey was completed over two time periods as there was exceptional rainfall in southeast Queensland in late February 2022 and the survey team was unable to access the site safely. The summer 2022 survey was completed from 21 to 26 February 2022 and again 15 to 17 March 2022 to complete the sites unable to be accessed during weather events. Weather data for these periods from the Kingaroy Airport station (BoM, 2023) is shown in Table 13. Minimum temperatures during the survey period were between 15.2 – 20.0 °C and maximum temperature were between 23.7 – 30.6 ºC. A total of 3.8 mm of rain fell in the 2 weeks prior to the first field survey, and 36.0 mm of rain was recorded in the two weeks prior to the second survey.

Table 13 Weather conditions during the summer 2022 survey period

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
21 Feb	16.5	30.2	0.2	39
22 Feb	17.4	30.6	0.2	46
23 Feb	19.2	28.7	0	43

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
24 Feb	20.0	27.4	1.4	37
25 Feb	18.0	23.7	54.0	41
26 Feb	18.3	24.7	28.8	41
-	-	-	-	-
15 Mar	17.3	27.7	0	22
16 Mar	15.2	26.0	0	17
17 Mar	16.3	26.9	0	35

3.2.1.6 Autumn 2022

The autumn 2022 survey was completed over one week from 22 to 27 June 2022. Weather data during the autumn survey from the Kingaroy Airport station (BoM, 2023) is shown in Table 14. Minimum temperatures during the survey period were between -1.7 – 3.3 ºC and maximum temperatures were between 19.5 – 21.7 ºC. No rainfall was recorded in the two weeks prior to the survey.

Table 14 Weather conditions during the autumn 2022 survey period

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
22 Jun	2.0	21.4	0	31
23 Jun	1.8	21.5	0	20
24 Jun	1.3	21.7	0	26
25 Jun	-1.7	21.4	0	17
26 Jun	0.8	20.1	0	19
27 Jun	3.3	19.5	0	43

3.2.1.7 Winter 2022

The winter 2022 survey was completed over one week from 16 to 21 August 2022. Weather data during the winter survey from the Kingaroy Airport station (BoM, 2023) is shown in Table 15. Minimum temperatures during the survey period were between 0.2 and 5.0°C and maximum temperatures were between 18.8 and 25.3 °C. A total of 16.4 mm of rain fell in the two weeks prior to the field survey.

Table 15 Weather conditions during the winter 2022 survey period

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
16 Aug	0.2	19.9	0	46
17 Aug	5.0	18.8	0	35
18 Aug	0.7	22.0	0	24
19 Aug	1.9	25.3	0	35
20 Aug	3.0	22.8	0	30
21 Aug	1.5	20.3	0	30

3.2.1.8 Spring 2022

The spring 2022 survey was completed over one week from 6 to 11 November 2022. Weather data during the spring survey from the Kingaroy Airport station (BoM, 2023) is shown in Table 16. Minimum temperatures during the survey period were between 8.2 and 11.6°C and maximum temperatures were between 23.0 and 26.0 °C. A total of 40.4 mm of rain fell in the two weeks prior to the field survey.

Table 16 Weather conditions during the spring 2022 survey period

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
6 Nov	10.0	24.6	0	37
7 Nov	10.9	23.0	0	39
8 Nov	9.2	24.5	0	35
9 Nov	9.6	23.8	0	33
10 Nov	11.6	24.5	0	44
11 Nov	8.2	26.0	0	22

3.2.1.9 Summer 2023

The summer 2023 survey was completed over one week from 30 January to 4 February 2023. Weather data during the summer survey from the Kingaroy Airport station (BoM, 2023) is shown in Table 17. Rain on the last day of survey (4 February 2023) limited access to three sites. For 12 survey sites, data was collected for morning, midday, and afternoon surveys. For the three weather-impacted sites, afternoon surveys were conducted at all three sites and morning surveys conducted at two sites. Minimum temperatures during the survey period were between 20.4 and 22.1 °C and maximum temperatures were between 27.2 and 33.5 °C. A total of 21.2 mm of rain fell in the two weeks prior to the field survey.

Table 17 Weather conditions during the summer 2023 survey period

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
30 Jan	21.4	32.8	0	31
31 Jan	20.4	32.8	7.2	39
1 Feb	21.3	33.1	6.8	-
2 Feb	22.1	31.2	-	50
3 Feb	20.3	33.5	22.6	43
4 Feb	22.0	27.2	0.6	30

3.2.1.10 Autumn 2023

The autumn 2023 survey was completed over one week from 2 to 7 May 2023 (Table 18). In the seven day period prior to surveys 20.6 mm of rainfall was recorded at Kingaroy Airport (BoM, 2023), although conversations with landowners indicated that the rainfall received at the project site was much lower (approximately 3 mm on 30 April compared to 16.4 mm recorded at Kingaroy Airport). No rainfall was recorded during the survey period (BoM, 2023). All sites were accessible and surveyed during each time period (morning, midday, afternoon).

Table 18 Weather conditions during the autumn 2023 survey period

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
2 May	1.7	22.6	0	26
3 May	4.9	24.8	0	30
4 May	3.8	25.5	0	33
5 May	4.7	24.9	0	37
6 May	6.7	24.9	0	19
7 May	9.5	24.7	0	35

3.2.1.11 Winter 2023

The winter 2023 survey was completed over one week from 10 to 15 August 2023 (Table 19). In the seven day period prior to surveys no rainfall was recorded at Kingaroy Airport, and 0.2 mm of rain was recorded during the survey period (BoM, 2023). The average daily maximum temperature during the survey period was 25.6°C and the average daily minimum was 3.2°C. All sites were accessible and surveyed during each time period (morning, midday, afternoon).

Table 19 Weather conditions during the winter 2023 survey period

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
10 August	2.8	22.1	0.2	24
11 August	2.2	24.9	0	31
12 August	2.1	25.2	0	31
13 August	5.9	26.3	0	31
14 August	1.7	27.7	0	37
15 August	4.2	27.3	0	37

3.2.1.12 Spring 2023

The spring 2023 survey was conducted over one week from 30 October to 4 November 2023 (Table 20). In the seven day period prior to surveys no rainfall was recorded at Kingaroy Airport, and 6.8 mm of rain was recorded during the survey period (BoM, 2023). The average daily maximum temperature during the survey period was 29.8°C and the average daily minimum was 11.7°C. All sites were accessible and were surveyed during each time period (morning, midday, afternoon).

Table 20 Weather conditions during the spring 2023 survey period

Date	Min temp (°C)	Max temp (°C)	Rainfall (mm)	Max wind gust (km/h)
30 October	8.0	29.5	0	30
31 October	10.8	34.8	0	35
1 November	13.7	31.8	0	46
2 November	10.9	28.1	0	41
3 November	11.3	27.1	0	46
4 November	15.7	27.2	6.8	37

3.2.2 Habitat overview

The project site generally contains non-remnant vegetation with remnant and HVR vegetation occurring in small to large, isolated patches. Mapped corridors are limited to larger watercourses and a state significant corridor is mapped to the south of the project site. However, there is potential for bird species to traverse between remnant patches, predominantly within the eastern portion of the project site.

Extensive vegetation along the eastern boundary forms a corridor that traverses north-south. The project infrastructure has been designed to avoid remnant vegetation, with no WTGs located within ground-truthed areas of remnant vegetation. The nearest WTG to this eastern

boundary corridor is T97, located on the edge of one of the corridor's remnant patches in the south of the project site. A patch of remnant vegetation in the north west of the project site, has some WTGs adjacent but not within the remnant vegetation. This includes, T105, which is located in non-remnant vegetation within a cleared space between remnant patches. There are several other WTGs located adjacent to smaller patches of remnant vegetation, but not within remnant habitat.

The project site contains many farm dams that may provide habitat for a variety of wetland birds and waterfowl. There are also temporary wetlands to the north and north-west of site, including one palustrine wetland within 6 km north of T128 and a lacustrine wetland 2.5 km north-west of T107. Wetland birds have the potential to traverse between farm dams, particularly when temporary wetlands and ponded pastures form after rainfall. WTGs have been generally sited away from farm dams although some occur within 500 m.

3.2.3 Field survey summary

Field surveys detected 192 identified bird species (189 native species and 3 introduced species) and 19 identified bat species, plus an additional 15 unidentified bird species (by sighting or call) and five unidentified bat species (by acoustic recording).

The field surveys detected two threatened or TNT species, white-throated needletail (n = 364) and glossy black-cockatoo (n = 7), and three migratory species, rufous fantail (n = 3), satin flycatcher (n = 3), and fork-tailed swift (n = 3) (Figure 9). The glossy black-cockatoo was further detected via chewed cones (orts) underneath their preferred *Allocasuarina* feed trees during targeted feeding and habitat searches across the site (21 ort detections) (Figure 10).

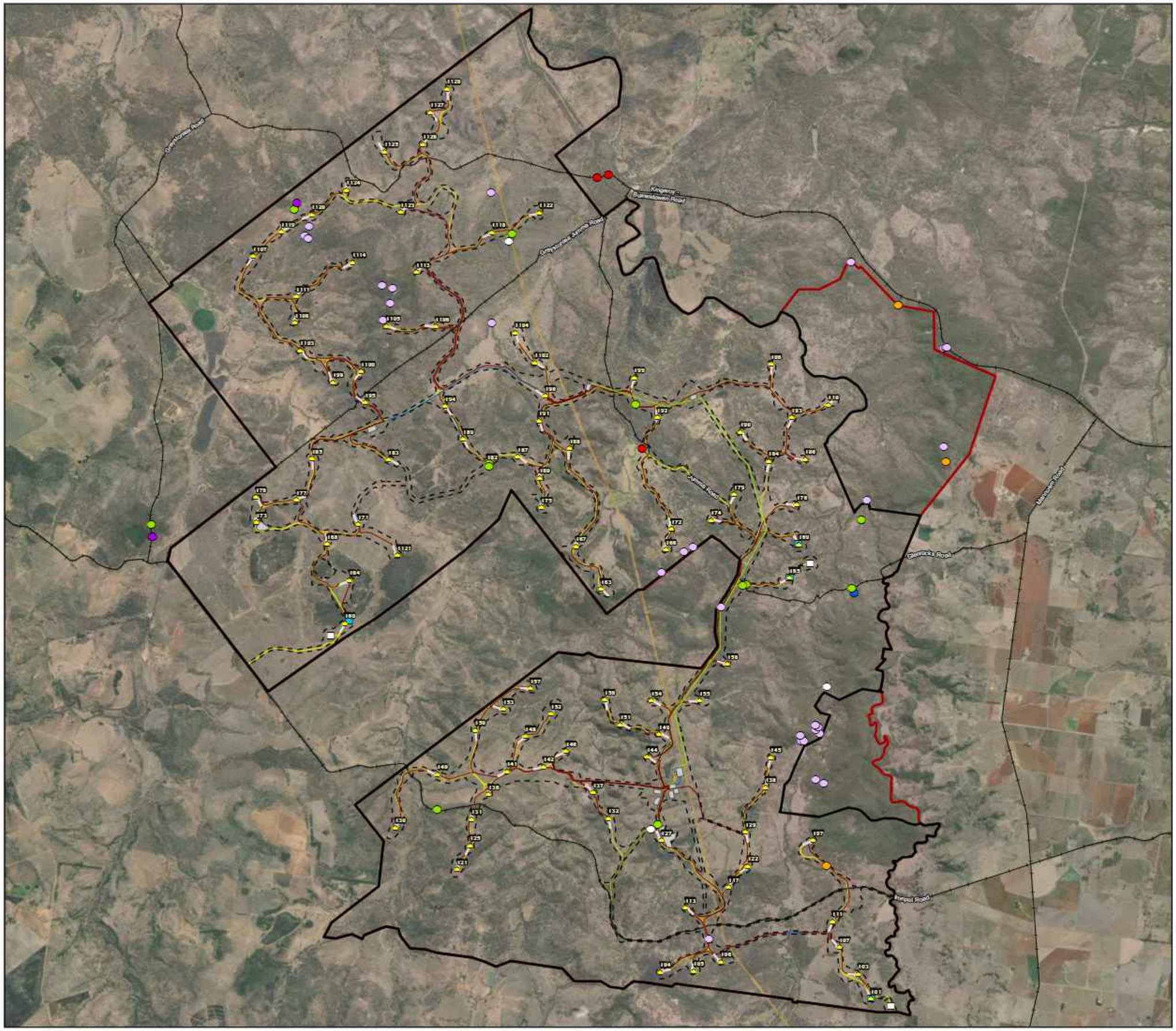

Figure 9: Threatened and migratory species sightings

Legend

- Glossy black-cockatoo (sighting)
- Glossy black-cockatoo (orts)
- Grey-headed flying-fox (sighting)
- Satin flycatcher (sighting)
- Rufous fantail (sighting)
- White-throated needletail (sighting)
- Fork-tailed swift (sighting)
- WTG
- Mast (permanent)
- Mast (temporary)
- Turbine hardstand
- Cables - overhead 275kV
- Cables - overhead 33kV
- Cables - underground
- Existing 275kV transmission line
- Access track
- Road
- Infrastructure
- Planning corridor
- Project boundary
- Previous project boundary

Tarong West Project Co Pty Ltd

Bird and Bat Utlisation Survey Report for Tarong West Wind Farm

0 1 2 4

Kilometers

Job number: PR6944
Revision: 00
Author: KF
Date: 12/12/2024

GDA 1994 MGA Zone 56
Projection: Transverse Mercator
Datum: GDA 1994
Units: Meter

ecosure
improving ecosystems

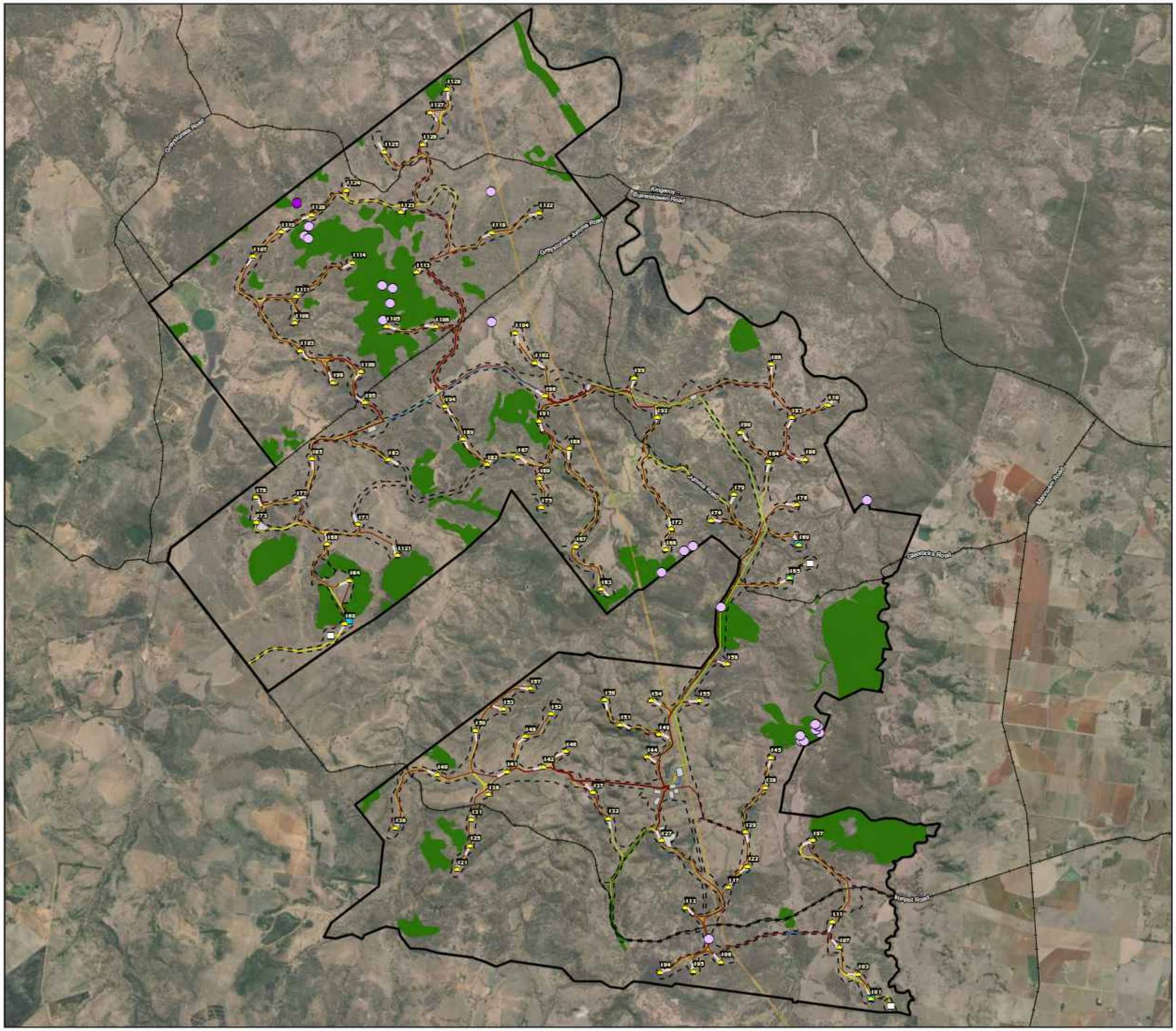

Figure 10: Glossy black-cockatoo survey records and potential habitat

Legend

- Glossy black-cockatoo (sighting)
- Glossy black-cockatoo (orts)
- WTG
- Mast (permanent)
- Mast (temporary)
- Turbine hardstand
- Cables - overhead 275kV
- Cables - overhead 33kV
- Cables - underground
- Existing 275kV transmission line
- Access track
- Road
- Infrastructure
- Planning corridor
- Project boundary
- Potential habitat

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3.2.3.1 Spring 2018

The spring 2018 survey observed three species in large numbers, including 86 woodswallows (unidentified species), 75 rainbow lorikeets (*Trichoglossus haematodus*) and 35 galahs (*Eolophus roseicapilla*), which are all listed as least concern under the NC Act (all woodswallow species potentially occurring at the site are listed as least concern). The unidentified woodswallows were observed hunting insect prey at 150 m above ground level (i.e. within the RSA). They were recorded within the vicinity of T51, T58 and T60, but are likely to occur across the project site. Rainbow lorikeets and galahs were observed below canopy level, however both species are known to fly at height, potentially within the RSA.

3.2.3.2 Autumn 2019

The autumn 2019 survey observed six bird species in large numbers, including 74 sulphur-crested cockatoos (*Cacatua galerita*), 50 crested pigeons (*Ocyphaps lophotes*), 46 Torresian crows (*Corvus orru*), 42 Australian wood ducks (*Chenonetta jubata*), 39 galahs (*Eolophus roseicapilla*) and 31 red-tailed black-cockatoos (*Calyptorhynchus banksia*). These species are listed as least concern under the NC Act. The sulphur-crested cockatoos and galahs were observed at a flying height of 45 m and 35 m respectively, which is below the RSA, but these species (and the red-tailed black-cockatoos, which were observed opportunistically) may fly at heights within the RSA. The other three species, crested pigeon, Torresian crow and Australian wood duck were observed on the ground to upwards of 15 m, well below the RSA. Both Torresian crow and Australian wood duck are also known to fly at heights within the RSA, while crested pigeon will fly at canopy height or just below so is likely to remain below the RSA.

3.2.3.3 Spring 2020

Spring 2020 surveys observed four species in high numbers, including 60 grey teals, 20 Australian wood ducks, 10 black-fronted dotterels and 9 galahs. The three wetland species (grey teal, Australian wood duck and black-fronted dotterel) were recorded at ground level within wetlands or dams during opportunistic and dam surveys, and the galahs were observed flying at 35 m. All four species are known to fly at RSA height.

3.2.3.4 Spring 2021

The largest group numbers for birds seen in the spring 2021 survey were 26 masked lapwings (*Vanellus miles miles*) observed at ground level, 22 apostlebirds (*Struthidea cinerea*) sighted incidentally (height not recorded), 19 little corellas (*Cacatua sanguinea*) observed flying at 70 m, and 18 rainbow lorikeets sighted incidentally (height not recorded). The masked lapwing is at medium risk of colliding with WTG, the apostlebird and rainbow lorikeet are at low risk, and the little corella is at high risk. Four species in total were observed flying at or near to RSA height during the spring 2021 fixed point count survey: sulphur-crested cockatoo, Torresian crow, rainbow lorikeet, and white-winged chough (*Corcorax melanorhamphos*). The rainbow lorikeet, white-winged chough and Torresian crow, while known to fly within the RSA, are considered low risk of WTG collision owing to their moderate vigilance and tendency to fly between vegetated patches below the RSA. The sulphur-crested cockatoo is considered high

risk of WTG collision owing to their low vigilance. All of these species are listed as least concern under the NC Act.

3.2.3.5 Summer 2022

The most common birds sighted were the noisy miner (n = 122), Torresian crow (n = 84), rainbow lorikeet (n = 69), apostlebird (n = 63), sulphur-crested cockatoo (n = 60), Australian magpie (n = 57), and galah (n = 57). Together, these sightings represent 37% of birds recorded during the summer 2022 surveys. Based on the "qualitative assessment of collision" criteria for species present at Tarong West, the sulphur-crested cockatoo and galah have a high probability of turbine collision owing to their low vigilance and tendency to fly at RSA height when moving between roosts and feed sources. The remaining common species are woodland birds which generally fly below RSA height between habitat patches, have a higher level of vigilance, and are at low risk of turbine collision. Though no exceptionally large groups of birds were observed the largest groups of individuals recorded were from the apostlebird (n = 15), red-tailed black-cockatoo (n = 15), and noisy miner (n = 13).

3.2.3.6 Autumn 2022

The most common birds sighted were the noisy miner (n = 416), Australian raven (n = 300), little corella (n = 275), striated pardalote (n = 128), pied currawong (n = 120), weebill (n = 113), galah (n = 112), and laughing kookaburra (n = 108). Together, these sightings represent 57% of birds recorded during the autumn 2022 surveys. Based on the "qualitative assessment of collision" criteria for species present at Tarong West, the galah has a high probability of turbine collision owing to its low vigilance and tendency to fly at RSA height when moving between roosts and feed sources. The remaining common species are woodland birds which generally fly below RSA height between habitat patches, have a higher level of vigilance, and are at low risk of turbine collision.

Two large groups of birds were observed, both at the same site and of the same species. At control site NT2, large groups of little corellas were observed in both the midday (n = 60) and afternoon (n = 200) surveys on the 24th and 25th of June respectively. This is likely due to the presence of a grain lot and dam in the paddock immediately to the north of the fixed-point location for this site.

3.2.3.7 Winter 2022

The most common birds sighted were the Torresian crow (n = 455), noisy miner (n = 235), little corella (n =164), galah (n = 148), apostlebird (n = 84), and sulphur-crested cockatoo (n = 80). Together, these sightings represent 49% of birds recorded during the winter 2022 surveys. The little corella, galah, and sulphur-crested cockatoo have a high probability of turbine collision owing to their low vigilance and tendency to fly at RSA height when moving between roosts and feed sources. The remaining commonly sighted species are woodland birds which generally fly below RSA height between habitat patches, have a higher level of vigilance, and are at low risk of turbine collision.

Three large groups of birds were observed at control site NT2. Two separate little corella flocks

(n = 75 and n = 30) were observed in the afternoon and midday surveys on the same day (18th August 2022), respectively. One flock of little black cormorants (n = 50) was observed during the morning survey on the following day (19th August 2022). This is likely due to the presence of a grain lot and dam in the paddock immediately to the north of the fixed-point location for this site.

3.2.3.8 Spring 2022

The most common birds sighted were the noisy miner (n = 302), Australian raven (n = 125), rainbow lorikeet (n = 124), noisy friarbird (n = 121), galah (n = 107), and weebill (n = 94). Together, these represent 38% of birds recorded during the spring 2022 surveys. The galah is the only species with a high probability of turbine collision, all other species are woodland birds which generally fly below RSA height. The largest single group of birds observed during the spring survey was a group of white-throated needletails (n = 20) foraging at site 379.

3.2.3.9 Summer 2023

The most commonly sighted bird species were the noisy miner (n = 243), white-throated needletail (n = 191), Torresian crow (n = 102), noisy friarbird (n = 98), Australian magpie (n = 93), and sulphur-crested cockatoo (n = 77). Together, these sightings represent 42% of recorded birds during the summer 2023 surveys. Based on the "qualitative assessment of collision" criteria for species present at Tarong West, the white-throated needletail and sulphur-crested cockatoo have a high probability of turbine collision. The remaining common species are woodland birds which generally fly below RSA height between habitat patches, have a higher level of vigilance, and are at low risk of turbine collision.

Flocks of white-throated needletails comprised the largest groups observed during the summer 2023 surveys. Five flocks of 12, 31, 40, 43, and 50 birds were observed foraging during surveys. Other large groups of birds include sulphur-crested cockatoo (n = 18), noisy miner (n = 10), and scaly-breasted lorikeet (n = 10).

3.2.3.10 Autumn 2023

Noisy miners (n = 461), Torresian crows (n = 400), pied currawongs (n = 109), sulphur-crested cockatoos (n = 106), and Australian magpies (n = 102) were the most commonly sighted species during autumn 2023 surveys. Together, these sightings represent 46% of all birds recorded during the surveys. The largest groups of birds observed include flocks of sulphur-crested cockatoo (n = 34), cockatiel (n = 17), Torresian crow or Australian raven (n = 17), and little corella (n = 16).

3.2.3.11 Winter 2023

The most commonly sighted birds were the little corella (n = 872), noisy miner (n = 438), Torresian crow (n = 182), Australian raven (n = 152), galah, (n = 150), and noisy friarbird (n = 123). Together, these sightings represent 60% of all birds recorded during the winter 2023 surveys. The largest groups of birds observed were several large flocks of little corellas (n = 400, n = 200) observed at site NT2, which is adjacent to a feed lot and has previously

attracted large groups of corellas. At other survey sites, the largest bird groups observed included flocks of noisy miner (n = 15), Torresian crow/Australian raven (n = 15), blue-faced honeyeater (n = 14), and apostlebird (n = 13).

3.2.3.12 Spring 2023

The most commonly sighted birds were the little corella (n = 246), noisy miner (n = 244), Torresian crow (n = 226), rainbow lorikeet (n = 133), white-throated needletail (n = 132), galah (n = 122), and little friarbird (n = 121). Collectively, these sightings represent 55% of all birds recorded during the spring 2023 surveys. The largest groups of birds observed were the little corella (n = 200) observed at site NT2 which is adjacent to a feed lot.

3.2.4 Roaming surveys

The three roaming surveys in spring 2018 detected 44 species comprising 363 individuals (Table 21). Rainbow lorikeets were the most frequently detected species (n = 62), followed by noisy miner (n = 27), sulphur-crested cockatoo (n = 26) and Torresian crow (n = 25).

Table 21 Results of spring 2018 roaming surveys

Bird species	Roaming 1	Roaming 2	Roaming 3	Total count
rainbow lorikeet		present	present	62
noisy miner		present	present	27
sulphur-crested cockatoo		present	present	26
Torresian crow		present	present	25
rainbow bee-eater		present	present	20
galah		present	present	16
straw-necked ibis	present			15
pied currawong		present	present	14
apostlebird		present		11
Australian wood duck	present	present		11
double-barred finch		present		11
magpie-lark	present	present		11
white-breasted woodswallow		present		11
Pacific black duck	present	present		10
Australian magpie		present	present	9
willie wagtail		present	present	9
noisy friarbird		present	present	7
brown gerygone		present		6
Australasian pipit		present		5
grey teal	present	present		5
common myna		present		4
dollarbird		present	present	4
grey-crowned babbler			present	4

Bird species	Roaming 1	Roaming 2	Roaming 3	Total count
pale-headed rosella		present	present	4
Australasian grebe		present		3
common bronzewing		present		3
varied sittella		present		3
white-browed woodswallow		present		3
brown honeyeater		present		2
brown treecreeper		present		2
hardhead		present		2
little friarbird			present	2
masked lapwing			present	2
plumed whistling-duck	present			2
red-backed fairy-wren		present		2
red-winged parrot		present		2
Australian hobby			present	1
blue-faced honeyeater		present		1
laughing kookaburra		present		1
little corella		present		1
pied butcherbird		present		1
white-necked heron		present		1
rufous songlark			present	1
striated pardalote	present			1
Total	-	-	-	**363**

3.2.5 Fixed point count surveys

Fixed point count surveys recorded a total of 173 identified and 13 unidentified species. Table 22 provides the number of species recorded per survey period.

Table 22 Number of species recorded during fixed point count bird surveys

Survey	Number of species
Spring 2018	94
Autumn 2019	76
Spring 2020	55
Spring 2021	74
Summer 2022	77
Autumn 2022	89
Winter 2022	89

Survey	Number of species
Spring 2022	97
Summer 2023	93
Autumn 2023	87
Winter 2023	82
Spring 2023	94

A total of 24,526 individual birds were detected during fixed point count surveys, which represent 300 hours of survey on and adjacent to the project site from 2018 to 2023. This comprises 173 identified species and 13 which could not be identified to species level. Out of the 186 species observed (including identified and unidentified species), 28 comprised 80% of the total number of birds observed during these surveys. One of the 28 most commonly observed species (white-throated needletail) is listed as vulnerable under the EPBC Act and NC Act, and migratory under the EPBC Act. The remaining 27 most common species are not listed under the EPBC Act, are least concern under the NC Act, and are typically common in agricultural landscapes.

The most common species observed were noisy miners (n = 2830), Torresian crows (n = 2,309), little corellas (n = 1775), galahs (n = 1,472) and pied currawongs (n = 929). Together, these five most commonly sighted species account for approximately 38% of all birds observed in fixed point count surveys. Torresian crows (low probability), little corellas (high probability) and galahs (high probability) may occasionally fly at hub height, but usually fly just above canopy level as they traverse the project site for food or transitioning to or from their roosting trees. Noisy miners are woodland birds and are known to fly just above or below the canopy as they forage and move between habitats. The average height on the project site of these five species is well below the RSA at 65 m, with noisy miners at 10.5 m, Torresian crows at 34.6 m, galahs at 28.9 m, and little corellas at 38 m, and pied currawongs at 22.1 m.

White-throated needletails were 17th most common species observed during fixed point count surveys often in flocks, with a total of approximately 363 individuals sighted from 2018 - 2023 (n.b. one other individual was sighted opportunistically). Large individual groups of bird sightings included:

- several large groups of little corellas ranging in size from approximately 150 to approximately 400, observed at reference site NT2, which is adjacent to an agricultural feed lot
- several groups of white-throated needletails, the largest group containing approximately 100 individuals
- approximately 100 common mynas observed perched in a tree opportunistically adjacent to reference site NT2
- 86 unidentified woodswallows that were predating on flying insects above the canopy level at site 214 near T118 and T122

- 75 rainbow lorikeets, 74 sulphur-crested cockatoos and 35 galahs during morning surveys at site 60 (between T107 and T103)
- one flock of crested pigeons (n=50), one flock of Australian wood ducks (n=42) and two flocks of Torresian crows (n=46 and n = 40) at site 68.

Figure 11 shows the cumulative species curve for all species detected during fixed point count surveys between 2018 and 2023 (589 surveys in total). The curve has levelled out, with the last 16% of surveys only detecting three new species, corresponding to 1.7% of all species identified during fixed point count surveys. Additional species were also detected opportunistically, but for the purposes of standardising survey effort for comparison only the fixed point count surveys (conducted over fixed amount of time) are included in the species accumulation curve.

The relative abundance of birds detected within the project site during all fixed point count surveys is shown in Appendix 4.

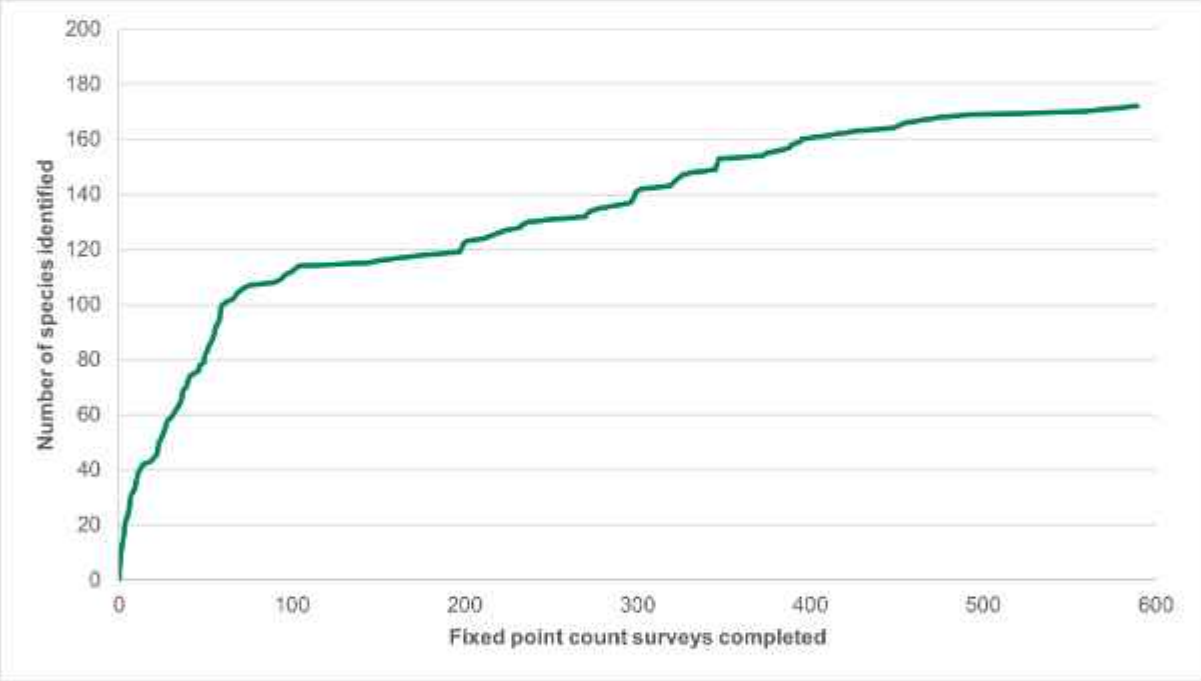

Figure 11 Cumulative species curve for all fixed point count survey data

3.2.6 Opportunistic detections

A total of 134 identified species were sighted opportunistically during surveys. Of these species, 20 were not recorded via any other survey method, but only during opportunistic sightings (including incidental sightings, dam surveys, camera surveys and nocturnal surveys; Table 23). Two species of conservation status were recorded both opportunistically and in fixed point count surveys. One satin flycatcher (migratory under the EPBC Act and SLC under the NC Act) was recorded opportunistically (n = 1) and two individuals were observed during fixed point count surveys (n = 2). One white-throated needletail (listed as vulnerable and migratory under the EPBC Act and vulnerable under the NC Act) was detected opportunistically (n = 1) during a dam survey and another 363 were recorded during fixed point count surveys.

Table 23 Birds observed opportunistically during 2018, 2019, 2020, 2021, 2022, and 2023 surveys

Common name	2018	2019	2020	2021	2022	2023	Opportunistic only (Y/N)
apostlebird	1	-	38	57	8	-	N
Australasian darter	-	-	1	-	-	-	Y
Australasian figbird	-	-	2	2	-	-	N
Australasian grebe	1	2	9	12	-	-	N
Australasian pipit	1	2	1	5	8	-	N
Australian brush-turkey	3	7	-	-	-	-	N
Australian bustard	1	1	1	6	4	1	N
Australian king-parrot	-	-	-	2	-	-	N
Australian magpie	3	8	1	16	-	-	N
Australian owlet-nightjar	-	2	-	3	-	-	N
Australian wood duck	4	58	39	67	-	-	N
bar-shouldered dove	1	-	-	1	-	-	N
black kite	-	-	-	2	-	-	Y
black-breasted buzzard	-	-	-	1	-	-	Y
black-faced cuckoo-shrike	-	-	2	8	3	-	N
black-fronted dotterel	-	-	10	-	-	-	N
black-shouldered kite	-	-	-	1	3	-	N
black-winged stilt	1	-	6	2	-	-	N
blue-faced honeyeater	-	5	-	1	-	-	N
blue-winged kookaburra	-	-	-	1	-	-	Y
brown cuckoo-dove	-	-	-	-	3	-	N
brown falcon	1	2	1	2	-	-	N
brown goshawk	-	-	-	1	-	-	N
brown honeyeater	-	-	2	6	-	-	N
brown quail	-	15	-	4	-	-	N
brown thornbill	-	2	-	1	-	-	N

Common name	2018	2019	2020	2021	2022	2023	Opportunistic only (Y/N)
brown-headed honeyeater	-	-	-	1	1	-	N
brush cuckoo	-	-	-	3	-	-	N
channel-billed cuckoo	-	-	1	3	-	-	N
chestnut-breasted mannikin	-	-	-	-	1	-	Y
chestnut teal	1	-	-	-	-	-	Y
cockatiel	-	-	2	-	-	-	N
collared sparrowhawk	-	1	-	-	-	-	Y
common bronzewing	-	11	1	6	1	-	N
common cicadabird	-	-	-	1	-	-	N
common myna	1	2	-	-	6	100	N
crested pigeon	1	-	4	-	5	-	N
diamond dove	-	-	-	1	-	-	N
dollarbird	-	-	-	3	-	-	N
double-barred finch	-	5	2	13	7	-	N
dusky moorhen	-	2	-	2	-	-	Y
dusky woodswallow	-	-	1	-	4	-	N
eastern barn owl	2	-	2	4	-	-	Y
eastern koel	-	-	2	1	-	-	N
emu	-	7	-	-	1	-	Y
eastern yellow robin	-	-	-	1	-	-	N
fairy martin	1	-	-	-	-	-	N
forest kingfisher	1	1	1	2	-	-	N
galah	-	-	8	25	2	-	N
golden-headed cisticola	-	-	-	1	1	-	N
greater bluebonnet	-	-	-	-	10	-	Y
grey butcherbird	-	49	-	1	-	-	N
grey shrike-thrush	1	-	-	-	-	-	N
grey teal	-	11	132	5	-	-	N
grey-crowned babbler	-	7	1	9	3	-	N
jacky winter	-	2	-	1	2	-	N
laughing kookaburra	1	20	2	9	2	-	N
leaden flycatcher	1	1	-	3	-	-	N
little black cormorant	-	-	-	9	-	-	N
little bronze-cuckoo	-	-	-	2	-	-	N
little corella	-	-	2	13	-	-	N
little friarbird	-	-	-	1	2	-	N
little pied cormorant	-	-	2	-	-	-	N
little shrike-thrush	-	-	-	1	-	-	N

Common name	2018	2019	2020	2021	2022	2023	Opportunistic only (Y/N)
magpie-lark	1	2	5	14	-	-	N
masked lapwing	3	1	8	2	3	-	N
mistletoebird	1	-	-	3	-	-	N
nankeen kestrel	-	3	-	4	5	-	N
nankeen night-heron	-	-	-	1	-	-	Y
noisy friarbird	-	1	5	12	1	-	N
noisy miner	-	3	8	27	3	-	N
olive-backed oriole	-	-	2	-	-	-	N
Pacific black duck	1	13	15	7	-	-	N
painted button-quail	-	-	-	2	-	-	Y
pale-headed rosella	1	-	2	13	11	-	N
peaceful dove	-	9	1	1	-	-	N
peregrine falcon	2	-	-	-	-	-	Y
pheasant coucal	-	1	3	1	1	-	N
pied butcherbird	-	49	3	2	-	-	N
pied cormorant	-	2	-	-	-	-	N
pied currawong	1	48	4	13	-	-	N
plum-headed finch	-	21	-	7	-	-	N
plumed whistling-duck	-	-	-	9	-	-	N
rainbow bee-eater	2	-	10	31	17	-	N
rainbow lorikeet	-	-	10	23	-	-	N
red-backed fairy-wren	1	-	-	12	12	-	N
red-rumped parrot	2	2	5	8	2	-	N
red-tailed black-cockatoo	1	40	-	-	7	-	N
red-winged parrot	1	-	2	5	2	-	N
restless flycatcher	-	1	-	2	-	-	N
rufous songlark	-	-	-	2	2	-	N
rufous whistler	-	-	1	7	1	-	N
sacred kingfisher	1	-	5	6	-	-	N
satin flycatcher	-	-	1	-	-	-	N
scaly-breasted lorikeet	1	-	-	-	2	-	N
scarlet honeyeater	-	-	-	4	-	-	N
southern boobook	-	4	3	4	1	-	N
spangled drongo	-	1	-	-	-	-	N
speckled warbler	-	1	-	-	-	-	N
spotted pardalote	-	-	-	1	-	-	N
straw-necked ibis	-	6	-	14	-	-	N
striated pardalote	-	-	1	16	-	-	N
sulphur-crested	-	-	5	10	1	-	N

Common name	2018	2019	2020	2021	2022	2023	Opportunistic only (Y/N)
cockatoo							
superb fairy-wren	-	-	3	1	-	-	N
tawny frogmouth	2	7	6	6	4	-	N
topknot pigeon	-	-	-	3	-	-	Y
Torresian crow	5	257	14	12	-	-	N
tree martin	-	12	-	3	-	-	N
turquoise parrot	-	-	-	-	-	4	Y
unknown quail species	-	-	-	4	-	-	Y
varied sittella	-	-	-	12	-	-	N
varied triller	-	-	-	3	-	-	N
variegated fairy-wren	-	-	-	-	1	-	N
wandering whistling duck	-	-	-	6	-	-	Y
wedge-tailed eagle	4	3	-	3	1	2	N
weebill	-	-	-	2	-	-	N
welcome swallow	-	-	5	6	-	-	N
whistling kite	-	1	-	-	-	-	N
white-bellied cuckoo-shrike	-	-	-	-	2	-	N
white-breasted woodswallow	-	1	-	-	-	-	N
white-faced heron	2	3	2	3	2	-	N
white-necked heron	-	2	6	-	-	-	N
white-throated gerygone	-	2	1	14	1	-	N
white-throated honeyeater	-	-	-	6	1	-	N
white-throated needletail	-	-	-	1	-	-	N
white-throated nightjar	-	-	2	2	-	-	Y
white-throated treecreeper	-	1	-	3	-	-	N
white-winged chough	1	4	20	1	17	-	N
white-winged triller	-	-	-	6	-	-	N
willie wagtail	1	1	3	19	3	-	N
yellow thornbill	-	-	-	2	-	-	N
yellow-faced honeyeater	-	-	1	5	-	-	N
yellow-rumped thornbill	-	3	-	5	-	-	N
yellow-tailed black-cockatoo	-	5	-	-	-	-	Y
Grand Total	**61**	**733**	**438**	**713**	**181**	**107**	**20**

3.2.6.1 Dam surveys

From the opportunistic sightings, dam survey results included birds observed at dams within,

and bordering, the project site. Table 24 shows the 87 species of birds observed during dam surveys. One TNT species, the white-throated needletail, was sighted in 2021 (n = 1), and all other species are of least concern under the NC Act.

Table 24 Dam opportunistic observations

Common name	Estimated number of individuals			
	2019	2020	2021	2022
apostlebird	-	37	30	29
Australasian figbird	-	-	2	-
Australasian darter	-	1	-	-
Australasian grebe	-	8	12	9
Australasian pipit	-	-	1	-
Australian magpie	-	-	10	7
Australian wood duck	46	15	45	10
bar-shouldered dove	-	-	1	-
black-faced cuckoo-shrike	-	-	7	1
black fronted dotterel	-	10	-	-
black-winged stilt	-	1	2	-
blue-faced honeyeater	5	-	1	-
brown falcon	-	-	-	1
brown honeyeater	-	-	5	-
brown quail	-	-	1	-
brown thornbill	-	-	1	-
brush cuckoo	-	-	3	-
cicadabird	-	-	-	1
common bronzewing	-	-	1	1
common myna*	-	-	-	1
dollarbird	-	-	1	
crested pigeon	-	-	-	3
double-barred finch	-	-	5	3
dusky moorhen	-	-	2	-
dusky woodswallow	-	-	-	5
eastern barn owl	-	-	2	-
eastern yellow robin	-	-	1	-
forest kingfisher	-	-	1	-
galah	-	-	19	15

Common name	Estimated number of individuals			
	2019	2020	2021	2022
golden-headed cisticola	-	-	1	-
grey butcherbird	-	-	-	5
grey teal	11	69	5	-
grey-crowned babbler	1	-	6	-
laughing kookaburra	1	-	2	2
leaden flycatcher	-	-	1	1
little black cormorant	-	-	9	-
little bronze-cuckoo	-	-	1	-
little corella	-	-	10	1
little friarbird	-	-	1	2
little lorikeet	-	-	-	2
little pied cormorant	-	1	-	-
magpie-lark	2	4	9	9
masked lapwing	1	6	2	5
mistletoebird	-	-	2	-
nankeen kestrel	-	-	1	-
noisy friarbird	1	-	5	4
noisy miner	3	-	22	21
pacific black duck	13	10	6	7
pale-headed rosella	-	-	11	-
pallid cuckoo	-	-	-	1
peaceful dove	-	-	1	1
pheasant coucal	-	-	1	-
pied butcherbird	-	-	1	3
pied currawong	1	3	6	4
plumed whistling-duck	-	-	4	-
rainbow bee-eater	-	-	12	3
rainbow lorikeet	-	-	23	12
red-rumped parrot	2	2	2	-
red-tailed black-cockatoo	-	-	-	15
red-winged parrot	-	-	4	-
rufous whistler	-	-	5	1
restless flycatcher	1	-	-	-

Common name	Estimated number of individuals			
	2019	2020	2021	2022
sacred kingfisher	-	3	1	-
scaly-breasted lorikeet	-	-	-	1
scarlet honeyeater	-	-	1	-
straw-necked ibis	-	-	4	-
striated pardalote	-	-	13	11
sulphur-crested cockatoo	-	-	4	-
superb fairy-wren	-	-	1	2
topknot pigeon	-	-	3	-
Torresian crow	2	-	12	10
tree martin	-	-	3	10
varied sittella	-	-	5	-
wandering whistling-duck	-	-	-	17
wedge-tailed eagle	-	-	3	-
welcome swallows	-	3	-	-
white-faced heron	3	-	2	-
white-necked heron	1	4	-	-
white-throated gerygone	-	-	11	2
white-throated honeyeater	-	-	2	3
white-throated needletail	-	-	1	-
white-throated treecreeper	-	-	1	-
white-winged chough	-	-	1	1
white-winged triller	-	-	1	-
willie wagtail	-	-	16	6
yellow-faced honeyeater	-	-	4	-
yellow thornbill	-	-	-	1
TOTAL	94	177	399	249

3.2.6.2 Nocturnal spotlight surveys

Birds recorded and counted during systematic nocturnal fauna spotlight surveys in various habitat types across the project site are presented in Table 25. There were 19 species and 70 individual birds sighted during spotlight surveys. All species were of least concern under the NC Act.

Table 25 Birds detected during spotlight surveys

Common name	Total number of individuals				
	2018	2019	2020	2021	2022
Australian magpie	-	-	-	1	-
Australian owlet-nightjar	-	2	-	3	-
bare-shouldered dove	1	-	-	-	-
barking owl	-	-	-	-	2
black-faced cuckoo-shrike	-	-	-	1	-
eastern barn owl	2	-	1	1	-
forest kingfisher	-	1	-	-	-
laughing kookaburra	-	-	-	6	-
noisy friarbird	-	-	-	1	-
painted button-quail	-	-	-	2	-
plumed whistling-duck	-	-	-	5	-
restless flycatcher	-	-	-	1	-
sacred kingfisher	-	-	-	1	-
southern boobook	-	3	2	2	-
tawny frogmouth	2	4	5	4	2
wandering whistling duck	-	-	-	6	-
white-faced heron	-	-	-	1	-
white-throated nightjar	-	-	1	1	-
yellow-tailed black-cockatoo	-	5	-	-	-
TOTAL	5	15	9	37	4

3.2.6.3 Camera surveys

Ten bird species were identified during camera trap surveys conducted in 2018 and 2019 (Table 26), all of which are least concern under the NC Act and not listed under the EPBC Act.

Table 26 Birds observed during camera trap surveys

Common name	Total number of individuals	
	2018	2019
Australian brush-turkey	1	6
Australian magpie	1	7
Australian wood duck	2	-
grey butcherbird	-	48
laughing kookaburra	-	19
pied butcherbird	-	47
pied currawong	-	47

Common name	Total number of individuals	
	2018	2019
Torresian crow	4	252
white-winged chough	-	4
willie wagtail	-	1
Total	8	431

3.2.7 Microbat and flying-fox surveys

Acoustic recording and harp trapping surveys detected 16 confirmed microbat species and an additional six possible microbat species (Table 27 and Table 28). Nocturnal and opportunistic surveys recorded three flying-fox species, including the EPBC Act-listed grey-headed flying-fox (Table 29).

Acoustic bat recorders detected a possible 17 species across the site (Table 27). Harp traps captured five species, including three additional species not recorded acoustically (Table 28).

A survey program designed to detect target conservation significant bat species and meet the minimum requirements for NC Act and EPBC Act survey guidelines is described in Table 30. No species listed as conservation significant under the NC Act were positively confirmed during surveys. One EPBC Act listed species (grey-headed flying-fox; vulnerable) was detected during nocturnal spotlighting surveys (Table 30), but there is currently no data on the flight paths and heights of bats for the site. During targeted surveys, megabats were only observed foraging in the canopy during targeted surveys, not in flight and so flight height was not observed. Microbats were surveyed via acoustic recording and harp trapping, which provides an indication of the species present, but does not provide information on flight heights. It is difficult to identify the species and flight heights of microbats during crepuscular or nocturnal field conditions, particularly for species which fly at RSA height. For microbat risk assessment, published information on the known flight heights of these species are considered.

Although *Nyctophilus* species were acoustically detected during surveys (Figure 12), individual species within this genus cannot be distinguished by call. Harp trapping in 2021 (Table 30) captured several lesser long-eared bats (*Nyctophilus geoffroyi*), a species which is not listed under the EPBC Act or NC Act. (Table 28).

Table 27 Bat species detected acoustically for survey periods in which Anabats were deployed

Species name	Common name	Spring 2018	Autumn 2019	Spring 2020	Spring 2021
Austronomus australis	white-striped freetail bat	1	16	4	20
Chalinolobus gouldii	Gould's wattled bat	1	17	5	58
Chalinolobus morio	chocolate wattled bat	1	11	2	16
Chalinolobus picatus	little pied bat	1	19	6	72
Miniopterus australis	little bentwing bat	1	8	1	10
Miniopterus orianae	eastern bentwing bat	1	16	1	4

Species name	Common name	Spring 2018	Autumn 2019	Spring 2020	Spring 2021
Mormopterus lumsdenae	northern free-tailed bat	-	2	2	6
Mormopterus ridei	eastern free-tailed bat	1	17	6	260
Nyctophilus spp.	long-eared bats	1	12	3	10
Saccolaimus flaviventris	yellow-bellied sheathtail bat	1	13	6	665
Scotorepens greyii	little broad-nosed bat	1	20	6	107
Vespadelus troughtoni	eastern cave bat	1	13	2	51
Vespadelus vulturnus	little forest bat	-	13	6	83
Unconfirmed detections					
Chalinolobus nigrogriseus	hoary wattled bat	-	1	-	-
Chalinolobus gouldii/Mormopterus ridei	Gould's wattled bat/eastern free-tailed bat	-	-	-	107
Chalinolobus morio/Vespadelus spp.	chocolate wattled bat/*Vespadelus* spp.	-	-	-	46
Chalinolobus pictatus/Scotorepens greyii	little pied bat/little broad-nosed bat	-	-	-	88
Chalinolobus pictatus/Vespadelus baverstocki	little pied bat/inland forest bat	-	-	-	22
Miniopterus orianae/Vespadelus spp.	eastern bentwing bat/*Vespadelus* spp.	-	-	-	22
Mormopterus ridei/Scoteanax rueppellii	eastern free-tailed bat/greater broad-nosed bat	-	-	-	6
Scotorepens balstoni	inland broad-nosed bat	-	2	-	-
Vespadelus baverstocki (or possibly *C. picatus*)	inland forest bat (or possibly little pied bat)	-	-	5	-
Vespadelus troughtoni/Vespadelus vulturnus	eastern cave bat/little forest bat	-	-	-	7

Table 28 Bat species captured in harp traps for seasons in which harp trapping was conducted

Species name	Common name	Autumn 2019	Spring 2020	Spring 2021
Chalinolobus picatus	little pied bat	-	-	1
Nyctophilus geoffroyi	lesser long-eared bat	-	-	3
Scotorepens greyii	little broad-nosed bat	2	6	-
Scotorepens orion	eastern broad-nosed bat	-	-	2
Vespadelaus darlingtoni	large forest bat	1	-	-
Vespadelus pumilus	eastern forest bat	-	2	-
Vespadelus troughtoni	eastern cave bat	1	-	-
Vespadelus vulturnus	little forest bat	-	-	6

Table 29 Bat species detected opportunistically or during nocturnal surveys

Species name	Common name	Spring 2018	Autumn 2019	Spring 2020	Spring 2021
Austronomus australis	white-striped freetail bat	-	-	-	8
Pteropus alecto	black flying-fox	1	-	-	1
Pteropus poliocephalus	grey-headed flying-fox	-	-	-	12*
Pteropus scapulatus	little red flying-fox	-	1	1	-
Saccolaimus flaviventris	yellow-bellied sheathtail bat	-	-	-	22

*During one sighting, numerous individuals were heard

Table 30 Targeted searches for TNT bat species

Name	Commonwealth survey guidelines / EPBC Act referral guidelines	Queensland survey guidelines	Effort and method carried out by Ecosure	Survey limitations
Nyctophilus corbeni Corben's long-eared bat	Survey techniques include harp traps and mistnets. Surveys most successful during warmer nights from October to April. For large scale projects traps and nets should be distributed across landscape to provide a good representation of habitat types. Equipment should be situated in open fly-ways and within cluttered vegetation. Project areas of <50 ha: A minimum of 5 surveying nights is recommended. A total effort of 20 trap nights when harp trapping and 20 mist-net nights is recommended. However, trapping effort may need to be altered depending on survey locations (DEWHA 2010b). There are no referral guidelines for this species.	No species-specific guidelines.	Spring 2018: Bat recording devices at 6 locations for 48 detection nights. Autumn 2019: Harp trapping at 9 locations for 18 total trapping nights using 4 traps each night. Bat recording devices at 9 locations for a total of 27 detection nights. Spring 2020: Harp trapping at 9 locations for 18 total trapping nights using 4 traps each night. Bat recording devices at 6 locations for a total of 12 detection nights. Spring 2021: Harp trapping at 8 locations for 15 total trapping nights using 4 traps each night. Bat recording devices at 8 locations for a total of 15 detection nights. **Total survey effort = 102 nights of call recording and 204 harp trapping nights.**	Spring 2018 – No harp trapping was undertaken during surveys. 2019 - Heavy rain over 2 nights reduced the number of successful harp trapping nights from the recommended 20 nights to 18 nights. 2020 – An additional 18 trapping nights were completed and 15 in spring 2021 increased total effort to 51 harp trapping nights using 4 harp traps giving a total of 204 single harp trap nights across 26 locations. Effort sufficient to detect least concern *Nyctophilus* species (*N. geoffroyi*) during harp trapping.
Pteropus poliocephalus grey-headed flying-fox	Daytime field surveys for camps (DEWHA 2010b). Surveys of vegetation communities and food plants (DEWHA 2010b). Night time surveys walking transects (100 m apart), may include night-time audio recordings (DEWHA 2010b). There are no referral guidelines for this species.	No species-specific guidelines. General survey requirements for mammals that would be relevant are (Eyre et al. 2018): Searches for flying-fox camps (Eyre et al. 2018). - Habitat assessment (plant food trees) (Eyre et al. 2018). - Spotlighting – two 30 person minute spotlight search within 100 x 100 m	Spring 2018: 30 habitat assessment sites were visited over 8 hours by two personnel, where searches for flying-fox camps occurred. Total 16 person hrs. Autumn 2019: 34 habitat assessment sites were visited over 17 hours by two personnel, where searches for flying-fox camps occurred. 23 nocturnal spotlight surveys over nine nights by two personnel. Total 103 person hrs. Spring 2020: 24 hours of nocturnal spotlight and call playback surveys over six nights by two personnel. Total 103 person hrs. Spring 2021: Spotlighting for 24 hours	Methods employed were sufficient to detect grey-headed flying-fox foraging within the site during the spring 2021 surveys.

Name	Commonwealth survey guidelines / EPBC Act referral guidelines	Queensland survey guidelines	Effort and method carried out by Ecosure	Survey limitations
		survey site (Eyre et al. 2018).	over 6 nights by two personnel. Total 48 person hrs. Summer 2022: 12 hrs over six nights by two personnel. Total 24 person hrs. Autumn 2025: 12.45 hrs nocturnal spotlight surveys over four nights by two personnel. Total 24.9 person hrs. Incidental observations during all field survey periods over six years. **Total survey effort = 263.9 hrs.**	

One TNT bat species was observed during nocturnal spotlighting surveys, the grey-headed flying-fox (*Pteropus poliocephalus*; Table 31, Figure 13). Sightings all occurred during the spring 2021 surveys, with four observations occurring on three separate days. Two sightings occurred within the project boundary and two occurred approximately 250 m outside of the project boundary. During one sighting, two grey-headed flying-foxes were observed feeding. Two other sightings occurred with small groups of grey-headed flying-foxes (n = 4 and n = 5), and in the final sighting numerous grey-headed flying-foxes were heard. The species is considered high risk of collision owing to their tendency to congregate around feeding sources and ability to fly at RSA height.

Table 31 TNT bat species detected

TNT species	Conservation status[1]		Spring 2018	Autumn 2019	Spring 2020	Spring 2021	Summer 2022	Autumn 2025	Total
	NC Act	EPBC Act							
grey-headed flying-fox	LC	V	-	-	-	At least 12*	-	-	**At least 12 observed in total, 2 observed feeding**

*During one sighting, numerous individuals were heard

[1] Conservation status: NC Act: LC – Least Concern; EPBC Act status: V – Vulnerable

Figure 12: *Nyctophilus* species detections compared to targeted survey effort across the site

Legend

- *Nyctophilus* sp. recorded
- Harp trapping
- Anabat call recording
- WTG
- Mast (permanent)
- Mast (temporary)
- Turbine hardstand
- Cables - overhead 275kV
- Cables - overhead 33kV
- Cables - underground
- Existing 275kV transmission line
- Access track
- Road
- Infrastructure
- Planning corridor
- Project boundary
- Potential habitat

Tarong West Project Co Pty Ltd

Bird and Bat Utlisation Survey Report for Tarong West Wind Farm

0 1 2 4

Kilometers

Job number: PR6944
Revision: 00
Author: KF
Date: 12/12/2024

GDA 1994 MGA Zone 56
Projection: Transverse Mercator
Datum: GDA 1994
Units: Meter

ecosure
improving ecosystems

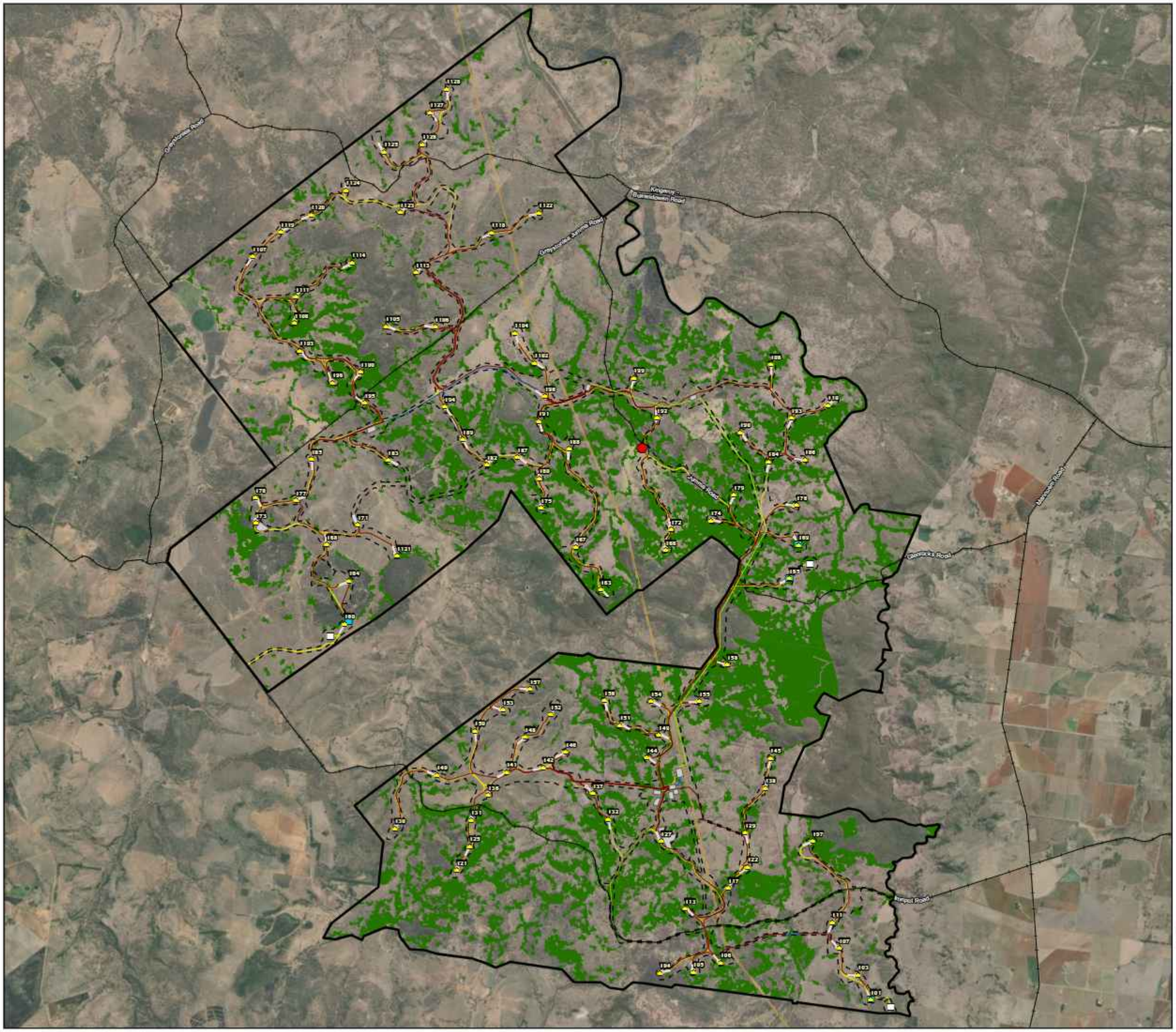

Figure 13: Grey-headed flying-fox survey records and potential foraging habitat

Legend

- Grey-headed flying-fox (sighting)
- WTG
- Mast (permanent)
- Mast (temporary)
- Turbine hardstand
- Cables - overhead 275kV
- Cables - overhead 33kV
- Cables - underground
- Existing 275kV transmission line
- Access track
- Road
- Infrastructure
- Planning corridor
- Project boundary
- Potential foraging habitat

Tarong West Project Co Pty Ltd

Bird and Bat Utlisation Survey Report for Tarong West Wind Farm

0 1 2 4
Kilometers

Job number: PR3713
Revision: 00
Author: KF
Date: 12/12/2024

GDA 1994 MGA Zone 56
Projection: Transverse Mercator
Datum: GDA 1994
Units: Meter

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3.2.8 Targeted surveys for conservation significant species

A survey program designed to detect target conservation significant bird species and meet the minimum requirements for NC Act and EPBC Act survey guidelines is described in Table 32. One threatened mammal species, two threatened / TNT bird species, and three SLC (NC Act) / migratory (EPBC Act) bird species were detected over the three survey periods (Table 33).

The presence of orts at 22 of 54 search locations across the project site and the observation of two adult birds indicates that glossy black-cockatoos utilise the site for feeding habitat. There are several remnant patches and non-remnant areas of vegetation supporting *Allocasuarina* (Figure 10). Habitat for glossy black-cockatoo occurs within numerous vegetation communities, including REs 11.5.20, 11.11.4, 11.11.15, 11.12.3, 11.12.6 and 12.8.23 (Figure 10). Vegetation surveys recorded suitable *Allocasuarina* food trees scattered throughout these remnant habitats and throughout areas identified as non-remnant habitat. While all sightings of glossy black-cockatoo in flight have observed the species flying at canopy height, glossy black-cockatoos have been known to fly at the RSA height and may be considered a risk to collision impact for the project.

Other than the species listed in Table 32, all other conservation significant bird species considered possible to occur as listed in Table 8 did not have targeted specialist surveys and were surveyed via roaming surveys, fixed point count, dam surveys and habitat assessments, the results of which are detailed in the sections above.

Table 32 Targeted searches for TNT bird species

Name	Commonwealth survey guidelines / EPBC Act referral guidelines	Queensland survey guidelines	Effort and method carried out	Survey limitations
Calyptorhynchus lathami glossy black-cockatoo	This species is not in the Commonwealth survey guidelines for threatened birds. There are no referral guidelines for this species.	Diurnal bird survey involving a land based transect search through areas characteristic of she-oak *Allocasuarina* and *Casuarina* trees, with presence of suitable water bodies for drinking and also large hollow bearing eucalypts, used by this species during their breeding season. Targeted search for foraging and nesting signs. The colour of the chewed she-oak cone can determine how recent/old the feeding activity was. Sound detection of feeding e.g. the clicking sound of the bird's mandible can be heard as well as falling cones/branches to the ground (Hourigan, 2012). Proposed effort is 20-person hours over 4 days. Calls are also made from begging young (Cameron, 2006). The birds are most active in the first and last two hours of daylight and although their calls are infrequent, they are most likely to be heard at these times. Peak breeding season occurs from March to August in SEQ (Glossy Black Conservancy, 2010).	*Active searches for signs:* Spring 2018: Active searches for habitat signs were conducted by two personnel over 1.5 hrs. Total 3 person hrs. Autumn 2019: 34 patches of vegetation containing she-oak were searched for orts by two personnel over 11.5 hrs. Total 23 person hrs. Spring 2020: 8 patches of vegetation containing she-oak were searched for orts by two personnel over 2 hrs. Total 4 person hrs. Spring 2021: 7 patches of vegetation containing she-oak were searched for orts by two personnel over 1.75 hrs. 2 adults birds observed incidentally. Total 3.5 person hrs. Summer 2022: 2 patches of vegetation containing she-oak were searched for orts by two personnel over 0.5 hrs. Total 1 person hrs. Autumn 2025: Survey for 0.25 hrs by 2 personnel for one patch of she-oak searched for orts. Total 0.5 person hrs. **Total active search for signs survey effort = 34 person hrs.** *Active targeted bird searches:* Spring 2018: Survey for 30 hrs by 2 experienced personnel, using fixed point bird count techniques. Roaming surveys for 6.75 hrs by 2 personnel. Total 73.5 person hrs. Autumn 2019: Survey for 45 hrs by 2 experienced personnel using fixed point bird count techniques. Total 90 person hrs. Spring 2020: Survey for 22.5 hrs by 2 experienced personnel using fixed point bird count techniques. Total 45 person hrs.	Methods employed were sufficient to confirm the presence of glossy-black cockatoo at the site.

Name	Commonwealth survey guidelines / EPBC Act referral guidelines	Queensland survey guidelines	Effort and method carried out	Survey limitations
			Spring 2021: Survey for 22.5 hrs by 2 experienced personnel using fixed point bird count techniques. Total 45 person hrs. Summer 2022: Survey for 22.5 hrs by 2 experienced personnel using fixed point bird count techniques. Total 45 person hrs. Autumn 2022: Survey for 22.5 hrs by 2 experienced personnel using fixed point bird count techniques. Total 45 person hrs. Winter 2022: Survey for 22.5 hrs by 2 experienced personnel using fixed point bird count techniques. Total 45 person hrs. Spring 2022: Survey for 22.5 hrs by 2 experienced personnel using fixed point bird count techniques. Total 45 person hrs. Summer 2023: Survey for 22.5 hrs by 2 experienced personnel using fixed point bird count techniques. Total 45 person hrs. Autumn 2023: Survey for 22.5 hrs by 2 experienced personnel using fixed point bird count techniques. Total 45 person hrs. Winter 2023: Survey for 22.5 hrs by 2 experienced personnel using fixed point bird count techniques. Total 45 person hrs. Spring 2023: Survey for 22.5 hrs by 2 experienced personnel using fixed point bird count techniques. Total 45 person hrs. **Total targeted bird search survey effort = 613.5 person hrs.**	

Name	Commonwealth survey guidelines / EPBC Act referral guidelines	Queensland survey guidelines	Effort and method carried out	Survey limitations
Ninox strenua powerful owl	There are no referral guidelines for this species	No species-specific guideline. However, this species readily responds to call playback.	Spring 2018: 15 minutes call playback at 7 sites (1.75 hours total). Autumn 2019: 15 minutes call playback at 15 sites (3.75 hours total), and 34.5 hours of nocturnal spotlighting with 2 personnel. Spring 2020: 24 hours of nocturnal spotlight with 2 personnel and 1.5 hours of call playback surveys over six nights. Spring 2021: 24 hours of nocturnal spotlighting with 2 personnel and 2 hours of call playback surveys over 10 nights. Summer 2022: 12 hours of nocturnal spotlighting with 2 personnel. **Total survey effort = 209 person hrs.**	None identified
Turnix melanogaster black-breasted button-quail	Land based transect search (15 hours/3 days) in areas of less than 50 ha for suitable habitat, flushing birds, platelets and sounds of foraging. (DEWHA 2010a). No evidence of seasonal movement (Marchant & Higgins 1993). Breeding season occurs from September to Feb/March (Hughes & Hughes 1991; Smyth & Young 1996). There are no referral guidelines for this species.	No species-specific guideline but searches for platelets and call playback are effective survey methods.	Spring 2018: Survey for 1.75 hours by 2 personnel, searching for birds and platelets in suitable habitat. Survey completed within known breeding season. Total 3.5 person hrs. Autumn 2019: Four active habitat searches were conducted in SEVT patches for platelet sign by two personnel over two hours. 15 call playback surveys were conducted by two personnel for five minutes per site for total of 1.25 hours. Total 5.25 person hrs. **Total survey effort = 8.75 person hrs**	Only 8.75 person hrs of targeted surveys for black-breasted button quail were completed when 15 hours/3 days is recommended. However, due to the small area of potential habitat available within the project site for this species (0.63 ha), and the complete avoidance of this area in the planning corridor, it is considered that a reasonable survey effort for this species has been achieved.

Table 33 TNT and SLC fauna results for all surveys

Species	EPBC status	NC status	Spring 2018	Autumn 2019	Spring 2020	Spring 2021	Summer 2022	Autumn 2022	Winter 2022	Spring 2022	Summer 2023	Autumn 2023	Winter 2023	Spring 2023	Autumn 2025 (SLR 2025)	Total
grey-headed flying-fox	V	-	0 detections	0 detections	0 detections	12 observed or heard	0 detections	0 detections	0 detections	0 detections	0 detections	0 detections	0 detections	0 detections	0 detections	**12 sightings**
white-throated needletail	V, Mi	V	2 sightings during fixed point count surveys	0 detections	0 detections	1 sighting during a dam survey	12 individuals sighted during fixed point count surveys	0 detections	0 detections	26 individuals sighted during fixed point count surveys	191 individuals sighted during fixed point count surveys	0 detections	0 detections	132 individuals sighted during fixed point count surveys	0 detections	**364 sightings**
glossy black-cockatoo	V	V	0 detections	Orts detected at 18 locations	Orts detected in 2 locations	2 sightings during dam surveys. Orts detected at 1 location	No targeted surveys undertaken	No targeted surveys undertaken	0 detections, no targeted surveys undertaken	2 sightings during fixed point count surveys	0 detections, no targeted surveys undertaken	0 detections, no targeted surveys undertaken	0 detections, no targeted surveys undertaken	3 sightings during fixed point count surveys	Orts detected in 1 location (at a known feeding location)	**7 sightings, 21 other detections**
fork-tailed swift	Mi	SLC	0 detections	0 detections	0 detections	0 detections	0 detections	0 detections	0 detections	0 detections	2 detections during fixed point count surveys	0 detections	0 detections	1 detection	0 detections	**3 sightings**

Conservation status: NC Act: V – Vulnerable, SLC – Special Least Concern;
EPBC Act status: V – Vulnerable, Mi – Migratory

4 Risk assessment

4.1 Qualitative assessment of collision

A probability of collision for bird and bat groups based on species' known flight behaviour (e.g. flight height, flight distance, vigilance), heights, and preferred habitat has been completed for species known or considered likely to use the project site, including microbats and flying-foxes (Table 34). Each group has been assigned a qualitative risk category of high, medium, or low probability of collision with project infrastructure, including WTG blades.

The concept WTG design allows for a candidate turbine up to 190 m tall (hub height) with up to 90 m blades (Figure 2). The RSA is therefore approximately 26,015 m^2 in area. Blades will sweep a diameter of approximately 180 m with a minimum height of 65 m and maximum height of 280 m above ground level. Given that vegetation within the project site has a canopy height of up to 20 m (generally 16-18 m), there will be approximately 45 m of unencumbered airspace between the canopy and the blades. The final turbine specifications will be selected during the detailed design phase and may have a smaller overall envelope than those described here.

Birds (and bats) will be at risk when flying:

- within the RSA from 65 m to 280 m above ground level.
- within an additional barotrauma area generated by the blades.

As the WTG design and speed is currently unknown this barotrauma area cannot be calculated. Although barotrauma effects are not explicitly assessed in the qualitative assessment table, they are incorporated into the risk assessment by including a 25 m buffer around the upper (280 m) and lower (65 m) blade swept heights (assessment between 40 m and 305 m).

The probability of collision with a turbine is higher for those species that fly well above the canopy level and those species that soar across all levels of airspace. If the operation of WTG results in bird mortality, scavenger species (e.g. wedge-tailed eagles, black-breasted buzzard, etc.) may potentially be drawn to the animal carcasses at the base of WTGs. This scavenging behaviour has the potential to increase the risk of injury or mortality from blade strike.

Table 34 Probability of bird and bat species colliding with WTGs

Species group	Species	Behaviour	RSA probability
Raptors	- Australian hobby - Australian pelican - black kite - black-breasted buzzard - black-shouldered kite - brown falcon - brown goshawk - collared sparrowhawk - nankeen kestrel - peregrine falcon - wedge-tailed eagle - whistling kite	- soaring above canopy level to hundreds of metres above ground level - searching for carrion - actively hunting prey above canopy level - includes territorial and nomadic species - occur within forests/woodlands and open plains - low vigilance	**High probability** - species may fly at RSA height - territorial species at greater risk of blade strike - occur above ridgelines where air currents are favourable for soaring - species may be attracted to carcasses at base of WTGs
Aerial foragers	- dusky woodswallow - fairy martin - tree martin - white-backed swallow - white-breasted woodswallow - white-browed woodswallow - **white-throated needletail (EPBC Act: V and Mi, NC Act: V)** - welcome swallow - woodswallow species - **fork-tailed swift (EPBC Act: Mi, NC Act: SLC)**	- soaring above canopy level to hundreds of metres above ground level - includes territorial and migratory species - moderate vigilance	**High probability** - species may fly at RSA height
Cockatoos (excluding glossy black-cockatoo)	- little corella - galah - red-tailed black-cockatoo - sulphur-crested cockatoo	- fly from hub height to ground level, within forests/woodlands and open plains - locally nomadic - low vigilance	**High probability** - do not soar - may fly at RSA height when moving between roosts and food sources

Species group	Species	Behaviour	RSA probability
	- yellow-tailed black-cockatoo		
Wetland birds	- Australian pelican - Australian wood duck - black-necked stork - brolga - Caspian tern - chestnut teal - eastern great egret - grey teal - hardhead - intermediate egret - Nankeen night heron - Pacific black duck - plumed whistling-duck - wandering whistling-duck - white-faced heron - white-necked heron	- soaring above canopy level to hundreds of metres above ground level while moving between wetland areas - may fly between temporary ponded pastures and wetlands after rainfall events - generally nomadic - low vigilance	**High probability** - species may fly at hub height and within the RSA - large mass species (e.g. Australian pelican) can damage turbine blades if struck
Microbats (above canopy foragers)	- eastern bentwing bat - white-striped freetail bat - northern freetail bat - yellow-bellied sheathtail bat	- fly from above canopy level to many tens of metres above canopy height - fast-flying, with limited manoeuvrability	**High probability** - do not soar, fly between roosts or actively hunting flying insect prey - if operational lighting is considered, then higher risk of barotrauma when microbats are hunting insects
Flying-fox species	- black flying-fox - **grey-headed flying-fox (EPBC Act: V)** - little red flying-fox	- fly from hub height to below canopy level, within forests/woodlands and open plains - flying-foxes follow food sources and may congregate if major flowering event occurs - moderate vigilance	**High probability** - do not soar, species may fly at RSA height between camps and food sources - many flying-foxes could be attracted to site if major flowering event occurs

Species group	Species	Behaviour	RSA probability
Owls and other species	- Australian owlet-nightjar - eastern barn owl - **glossy black-cockatoo (EPBC Act: V, NC Act: V)** - masked lapwing - Pacific baza - pied cormorant - **powerful owl (NC Act: V)** - straw-necked ibis - southern boobook - tawny frogmouth - other owl species	- fly from hub height to ground level, within forests/woodlands and open plains - occasionally fly at hub height - includes territorial and locally nomadic species - moderate vigilance	**Medium probability** - do not soar, generally fly between roosts and food sources - moderate vigilance - territorial species at greater risk of blade strike
Microbats (below canopy foragers)	- chocolate wattled bat - eastern cave bat - eastern forest bat - Gould's wattled bat - hoary wattled bat - inland broad-nosed bat - inland forest bat - large forest bat - little bent-wing bat - little forest bat - little broad-nosed bat - little pied bat - long-eared bats - northern freetail bat - eastern free-tailed bat	- generally occur below canopy - moderate vigilance	**Low probability** - generally fly below hub height - generally fly between vegetated patches
Migratory forest/ woodland/ grassland birds	- apostlebird - **Australasian bittern (EPBC Act: E, NC Act: E)**	- includes territorial and migratory species - generally occur below canopy	**Low probability** - generally fly below hub height

Species group	Species	Behaviour	RSA probability
	- Australasian pipit - Australian brush turkey - Australian bustard - Australian grebe - Australian king-parrot - Australian magpie - Australian raven - banded lapwing - bar-shouldered dove - **black-breasted button-quail (EPBC Act: V, NC Act: V)** - black-eared cuckoo - black-faced cuckoo-shrike - **black-faced monarch (EPBC Act: Mi, NC Act: SLC)** - black-winged stilt - blue-faced honeyeater - blue-winged kookaburra - brown gerygone - brown honeyeater - brown quail - brown thornbill - brown treecreeper - brown-headed honeyeater - brush cuckoo - channel-billed cuckoo - cicadabird - cockatiel - common bronzewing - crested pigeon - diamond dove	- moderate vigilance - black-breasted button-quail rarely flies	- generally fly between vegetated patches

Species group	Species	Behaviour	RSA probability
	- **diamond firetail (EPBC Act: V, NC Act: V)** - double-barred finch - dusky honeyeater - dusky moorhen - eastern koel - eastern whipbird - eastern yellow robin - emu - fan-tailed cuckoo - **glossy ibis (EPBC Act: Mi, NC Act: SLC)** - golden-headed cisticola - grey butcherbird - grey fantail - grey shrike-thrush - grey-crowned babbler - hooded robin - common myna - jacky winter - large-billed scrubwren - laughing kookaburra - leaden flycatcher - Lewin's honeyeater - little bronze-cuckoo - little friarbird - little shrike-thrush - little lorikeet - magpie-lark - mistletoe bird - noisy friarbird		

Species group	Species	Behaviour	RSA probability
	- noisy miner - olive-backed oriole - **oriental cuckoo (EPBC Act: Mi, NC Act: sLC)** - oriental dollarbird - painted button-quail - pale-headed rosella - pallid cuckoo - peaceful dove - pheasant coucal - pied butcherbird - pied currawong - plum-headed finch - rainbow bee-eater - rainbow lorikeet - red-backed fairy-wren - red-browed finch - red-rumped parrot - red-winged parrot - **regent honeyeater (EPBC Act: CR, NC Act: CR)** - restless flycatcher - rufous fantail - rufous songlark - rufous whistler - sacred kingfisher - satin flycatcher - scaly-breasted lorikeet - scarlet honeyeater - silvereye - singing bushlark		

Species group	Species	Behaviour	RSA probability
	- spangled drongo - speckled warbler - spotted pardalote - **squatter pigeon (EPBC Act: V, NC Act: V)** - striated pardalote - striated thornbill - striped honeyeater - superb fairy-wren - topknot pigeon - Torresian crow - varied sitella - varied triller - variegated fairy-wren - weebill - white-bellied cuckoo-shrike - white-browed scrubwren - white-throated honeyeater - white-throated gerygone - white-throated treecreeper - white-winged chough - white-winged triller - willie wagtail - yellow thornbill - yellow-faced honeyeater - yellow-rumped thornbill - yellow-throated scrubwren		

Conservation significant species are in **Bold.**

Conservation status: CR – Critically Endangered, E – Endangered, V – Vulnerable, SLC – Special Least Concern, Mi – Migratory Species.

4.2 Semi-quantitative assessment of collision

The consequence to all species is considered equal and will be significant resulting in death.

During fixed point count surveys, 37% (n = 69) of all species recorded (n = 186) were observed flying within the RSA and 25 m buffer (40 – 305 m). Table 35 summarises the flight behaviour data for species recorded flying at a minimum of 40 m height throughout all fixed point count surveys. This includes the total number of individuals and number of groups observed (i.e. number of occasions that individuals or flocks of birds were observed) at RSA height for each of these species. The qualitative assessment of collision (Table 34) is also included, and combined with the flight height information provides a semi-quantitative assessment of each species' probability of collision with WTG blades. The ten species that were most commonly observed within the RSA based on fixed point count surveys were (in order of number of individuals observed in the RSA), the Torresian crow (n = 556), galah (n = 396), white-throated needletail (n = 363; listed as vulnerable and migratory under the EPBC Act and vulnerable under the NC Act), sulphur-crested cockatoo (n = 328), little corella (n = 285), Australian raven (n = 220), rainbow lorikeet (n = 185), Torresian crow/Australian raven (n = 182), pied currawong (n = 109), and unknown wood swallow species (n = 86).

Two species of conservation significance were observed flying within the RSA during fixed point count surveys, the white-throated needletail (listed as vulnerable and migratory under the EPBC Act and vulnerable under the NCT Act) and fork-tailed swift (listed as migratory under the EPBC Act and SLC under the NC Act). Both species were observed flying within the RSA and 25 m buffer (40 – 305 m) in all sightings, which is concordant with their known behaviours of foraging aerially at height. The species differed considerably in the total number of individual sightings however, with two groups of fork-tailed swifts sighted comprising three individuals, indicating that the project site is only rarely utilised by the species for foraging. The white-throated needletail was observed on a greater number of occasions (approximately 363 individuals sighted across 24 different groups), indicating that the project site is used semi-regularly by the species for foraging and the species may be at greater risk of WTG collision. The two separate sightings were made during the summer and spring 2023 surveys, which is when the species is known to be present in Australia (DCCEEW, 2023a).

Figure 14 and Figure 15 show the flight direction of conservation significant bird species and large raptor species recorded during fixed point count surveys. The results of these flight path do not present a defined flight path across the project site and highlight that the project site is used variably by both conservation significant and raptor species. These data are unable to highlight turbines that are of high-risk.

During targeted surveys, megabats were only observed foraging in the canopy during targeted surveys, not in flight and so flight height was not observed and semi-quantitative risk assessment was unable to be conducted for the grey-headed flying-fox. Microbats were surveyed via acoustic recording and harp trapping, which provides an indication of the species present, but does not provide information on flight heights. It is difficult to identify the species and flight heights of microbats during crepuscular or nocturnal field conditions, particularly for species which fly at RSA height, and so likewise microbats have not been considered for semi-

quantitative risk assessment. For microbat and flying-fox risk assessment, published information on the known flight heights of these species are considered.

Table 35 Flight summary data for species recorded at or above the RSA risk assessment area (40 – 305 m) in fixed point count surveys, organised by average height in descending order

Species	EPBC Act	NC Act	Average flight height (m)	Maximum observed height (m)	Number of individuals in RSA	Total number of individuals	Number of groups in RSA	Total number of groups	Percentage of group occurrence in RSA	Qualitative RSA probability
†falcon species	-	LC	150	150	1	1	1	1	100%	High
†wood swallow species*	-	LC	150	150	86	86	1	21	5%	High
brolga	-	LC	150	150	1	1	1	1	100%	High
whistling kite	-	LC	150	150	1	1	1	1	100%	High
Australian pelican	-	LC	145	200	6	6	2	2	100%	High
wedge-tailed eagle	-	LC	141	300	71	95	54	71	76%	High
great cormorant	-	LC	120	200	6	6	2	2	100%	High
white-throated needletail	V, Mi	V	115	200	363	363	24	24	100%	High
fork-tailed swift	Mi	SLC	80	100	3	3	2	2	100%	High
Australian hobby	-	LC	78	80	3	3	2	2	100%	High
nankeen kestrel	-	LC	78	150	12	17	11	16	69%	High
†martin species	-	LC	73	100	15	21	2	4	50%	High
†raptor species	-	LC	70	70	1	1	1	1	100%	High
musk lorikeet	-	LC	70	70	4	4	1	1	100%	Low
pied cormorant	-	LC	70	120	1	3	1	3	33%	Medium
fairy martin	-	LC	66	120	12	14	7	9	78%	High
eastern great egret	-	LC	65	100	1	2	1	2	50%	High
little lorikeet	-	LC	63	200	3	11	1	7	14%	Low
brown falcon	-	LC	55	100	8	21	8	18	44%	High
little pied cormorant	-	LC	55	60	2	2	2	2	100%	Medium
white-necked heron	-	LC	55	100	1	2	1	2	50%	Medium

Species	EPBC Act	NC Act	Average flight height (m)	Maximum observed height (m)	Number of individuals in RSA	Total number of individuals	Number of groups in RSA	Total number of groups	Percentage of group occurrence in RSA	Qualitative RSA probability
straw-necked ibis	-	LC	54	150	12	43	3	9	33%	Medium
brown goshawk	-	LC	53	100	5	6	3	4	75%	High
tree martin	-	LC	52	200	3	41	3	9	33%	High
Australian raven	-	LC	42	300	220	694	92	393	23%	Low
black-fronted dotterel	-	LC	40	40	2	3	1	2	50%	Medium
Torresian crow/Australian raven	-	LC	40	400	182	353	84	194	43%	Low
white-browed woodswallow	-	LC	40	40	1	1	1	1	100%	High
little corella	-	LC	38	200	285	1775	43	161	27%	High
sulphur-crested cockatoo	-	LC	36	200	328	884	107	408	26%	High
†unknown species	-	-	35	90	1	4	1	4	25%	-
dusky woodswallow	-	LC	35	80	4	8	2	4	50%	High
Torresian crow	-	LC	35	300	556	2309	238	1056	23%	Low
channel-billed cuckoo	-	LC	30	100	4	35	2	28	7%	Low
rainbow lorikeet	-	LC	30	200	185	909	71	370	19%	Low
galah	-	LC	29	200	396	1472	133	535	25%	High
scaly-breasted lorikeet	-	LC	29	100	60	275	22	115	19%	Low
little black cormorant	-	LC	28	40	57	58	2	3	67%	Medium
red-rumped parrot	-	LC	27	50	5	49	3	18	17%	Low
white-faced heron	-	LC	27	50	2	17	2	14	14%	High
cockatiel	-	LC	26	100	27	90	5	29	17%	Low
dollarbird	-	LC	26	60	6	36	5	33	15%	Low
†passerine species	-	LC	25	100	17	58	2	14	14%	-

Species	EPBC Act	NC Act	Average flight height (m)	Maximum observed height (m)	Number of individuals in RSA	Total number of individuals	Number of groups in RSA	Total number of groups	Percentage of group occurrence in RSA	Qualitative RSA probability
rainbow bee-eater	-	LC	25	100	9	160	4	86	5%	Low
pied currawong	-	LC	22	120	109	929	47	653	7%	Low
Australasian figbird	-	LC	21	40	3	23	2	12	17%	Low
Australian bustard	-	LC	21	40	1	15	1	9	11%	Low
common myna	-	LC	21	50	14	79	3	37	8%	Low
Pacific black duck	-	LC	21	60	2	30	2	14	14%	High
red-winged parrot	-	LC	20	100	21	173	9	98	9%	Low
grey butcherbird	-	LC	19	200	3	310	3	269	1%	Low
Australian magpie	-	LC	17	360	38	875	25	614	4%	Low
black-faced cuckoo-shrike	-	LC	17	60	6	209	5	167	3%	Low
welcome swallow	-	LC	16	50	1	10	1	6	17%	High
white-throated gerygone	-	LC	14	40	1	135	1	124	1%	Low
grey-crowned babbler	-	LC	13	50	5	120	1	48	2%	Low
noisy friarbird	-	LC	13	70	19	682	9	426	2%	Low
white-winged chough	-	LC	13	60	1	279	1	64	2%	Low
blue-faced honeyeater	-	LC	12	50	3	218	2	112	2%	Low
little friarbird	-	LC	12	100	2	441	1	312	0%	Low
magpie-lark	-	LC	12	50	1	261	1	172	1%	Low
pale-headed rosella	-	LC	12	100	4	360	2	204	1%	Low
pied butcherbird	-	LC	12	70	5	486	3	367	1%	Low
rufous whistler	-	LC	12	200	2	315	2	281	1%	Low
laughing kookaburra	-	LC	11	50	5	410	3	272	1%	Low

Species	EPBC Act	NC Act	Average flight height (m)	Maximum observed height (m)	Number of individuals in RSA	Total number of individuals	Number of groups in RSA	Total number of groups	Percentage of group occurrence in RSA	Qualitative RSA probability
noisy miner	-	LC	11	50	7	2830	5	1247	0%	Low
weebill	-	LC	11	50	4	469	2	340	1%	Low
apostlebird	-	LC	10	50	20	594	2	104	2%	Low
white-plumed honeyeater	-	LC	9	40	1	75	1	52	2%	Low

†birds which could not be identified to species level

*total number of group occurrences calculated from all woodswallow species observed

Conservation status: NC Act: V – Vulnerable, SLC – Special Least Concern;

EPBC Act status: V – Vulnerable, Mi – Migratory Species.

Figure 14: WTNT and fork-tail swift flight direction recorded during fixed point count surveys

Legend

Direction of travel

- Fork-tailed swift
- White throated needletail
- WTG
- Watercourse
- Road
- Planning corridor
- Project boundary

Tarong West Project Co Pty Ltd

Bird and Bat Utlisation Survey Report for Tarong West Wind Farm

0 1 2 4

Kilometers

Job number: PR6944
Revision: 0
Author: KF
Date: 23-May-2025

GDA 1994 MGA Zone 56
Projection: Transverse Mercator
Datum: GDA 1994
Units: Meter

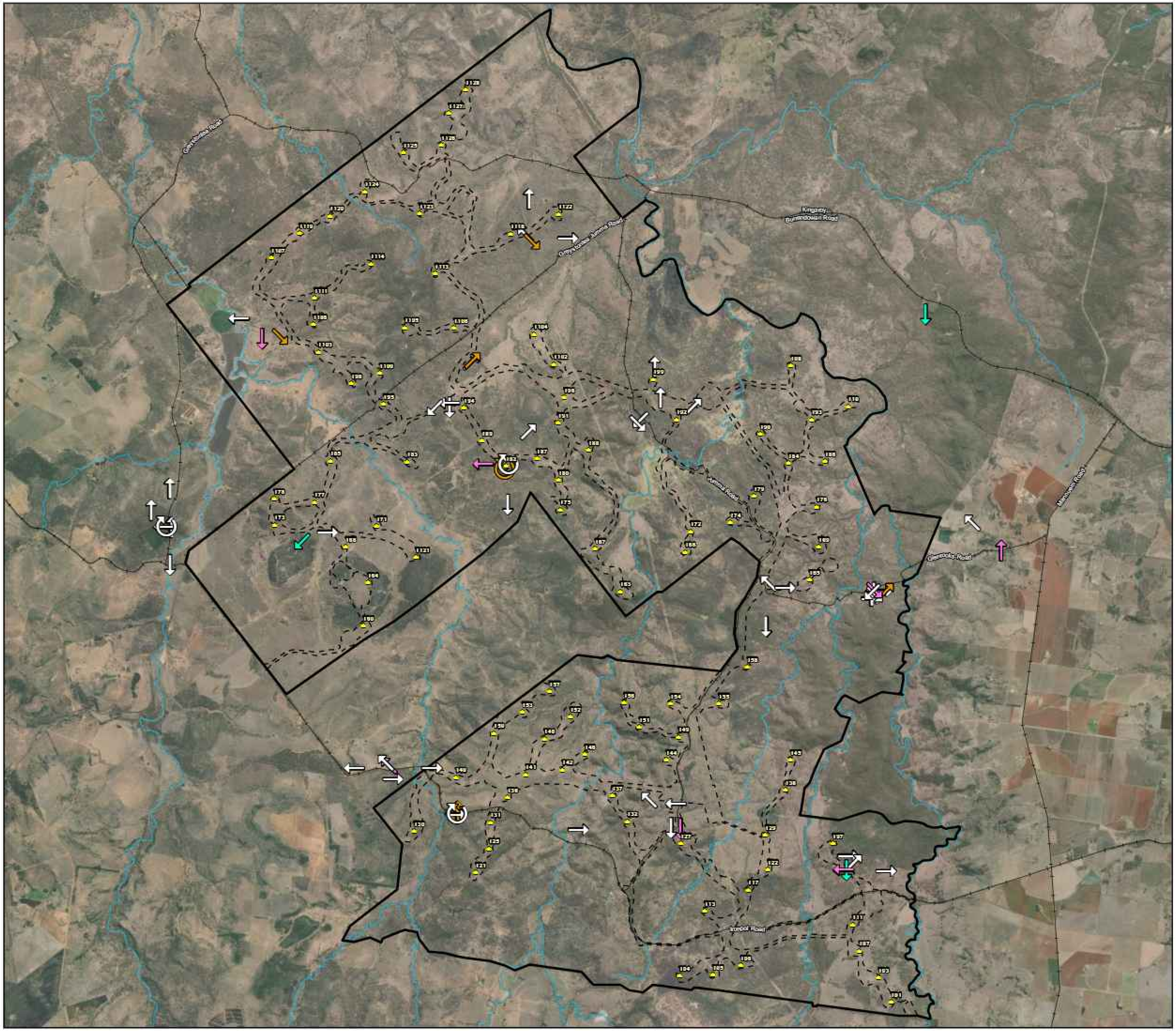

Figure 15: Raptor species direction of travel recorded during fixed point count surveys

Legend

Direction of travel

- Brown falcon
- Brown goshawk
- Nankeen kestrel
- Wedge-tailed eagle
- WTG
- Watercourse
- Road
- Planning corridor
- Project boundary

Tarong West Project Co Pty Ltd

Bird and Bat Utlisation Survey Report for Tarong West Wind Farm

0 1 2 4
Kilometers

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GDA 1994 MGA Zone 56
Projection: Transverse Mercator
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4.3 Collision risk modelling

4.3.1 StochLab (Band model)

StochLab's *mig_stoch_crm* was used to estimate mortality per migratory season (September to February) for populations of white-throated needletails and fork-tailed swifts passing through the Tarong West Wind Farm project area. Three different avoidance rates were used for the white-throated needletail and fork-tailed swift (95%, 99%, and 99.9%). As both species have similar body size, flight types, and migratory seasons, mortality rates for both species are similar at each assumed population size.

Mortality rates for white-throated needletail differed depending on avoidance rate and population size, with a population size of 500 and assumed avoidance rate of 99.9% resulting in an estimated 0.006 mortalities per migratory season (Table 36). As a total of 364 individual white-throated needletails were detected over surveys from 2018 to 2023, an assumed population size of 1,000 individuals per migratory season is reasonable. For a population size of 1,000 white-throated needletails, mortality estimates ranged from 0.012 (99.9% avoidance) to 0.612 (95% avoidance) individuals per migratory season depending on avoidance rate (Table 36).

Mortality estimates for fork-tailed swifts ranged from 0.006 individuals per migratory season (assuming population size of 500 and avoidance rate of 99.9%) to 0.598 individuals per year (assuming population size of 1,000 and avoidance rate of 95%) (Table 36). Realistically, only 3 fork-tailed swifts were sighted during all site surveys from 2018 to 2023 and so the population passing through the project area during each season is more likely to be representative of 500 individuals. A conservative population size of 500 individuals results in a mortality estimate of 0.006 to 0.299 birds per migratory season depending on avoidance rate (Table 36).

Table 36 Results of collision risk modelling using the StochLab R package (*mig_stoch_crm* function) for migratory species confirmed to occur at Tarong West Wind Farm

	White-throated needletail			Fork-tailed swift		
Avoidance rate	95%	99%	99.9%	95%	99%	99.9%
	Mortality estimates (number of individuals per migratory season)					
Population size: 500 Standard deviation: 125	Mean: 0.306 SD: 0.077	Mean: 0.061 SD: 0.015	Mean: 0.006 SD: 0.002	Mean: 0.299 SD: 0.075	Mean: 0.060 SD: 0.015	Mean: 0.006 SD: 0.002
Population size: 1000 Standard deviation: 250	Mean: 0.612 SD: 0.153	Mean: 0.122 SD: 0.031	Mean: 0.012 SD: 0.003	Mean: 0.598 SD: 0.150	Mean: 0.120 SD: 0.030	Mean: 0.012 SD: 0.003

StochLab's *band_crm* function was used to estimate mortality of wedge-tailed eagles. Two different avoidance rates (80% and 90%) were used for wedge-tailed eagles based on observed avoidance behaviours at Tasmanian wind farms (Hull et al., 2013b). Mortality rates for wedge-tailed eagles range from 14.134 to 28.252 individuals per year (Table 37).

Table 37 Results of collision risk modelling using the StochLab R package (*band_crm* function) for Turbine A

	Wedge-tailed eagle	
Avoidance rate	80%	90%
January	2.01	1.01
February	3.24	1.62
March	0.257	0.129
April	1.03	0.517
May	3.58	1.79
June	2.33	1.16
July	2.24†	1.12†
August	4.48	2.24
September	2.45†	1.23†
October	0.775	0.388
November	2.94	1.47
December	2.92†	1.46†
Total	28.252	14.134

†Species density for July, September, and December has been assumed based on the average density of all other months.

4.3.2 Uungula Wind Farm

Collision risk modelling using the method presented for Uungula Wind Farm results in markedly lower estimates of individuals at risk from collision compared to StochLab (Table 38 and Table 39). Three different avoidance rates were used for the white-throated needletail and fork-tailed swift (95%, 99%, and 99.9%), and two different avoidance rates (80% and 90%) were used for wedge-tailed eagles. Mortality estimates were generated separately for Turbine A and Turbine B, however as the rotor radius is identical and the hub height only differs by 6 m, mortality estimates do not differ greatly between the two turbines.

For the white-throated needletail, mortality estimates range from 0.054 to 2.748 birds per year, when active for 13.5 hrs per day (Table 39). When active for 24 hours per day, mortality estimates range from 0.095 to 4.886 birds per year (Table 38). All mortalities are predicted to occur in summer and spring, when individuals were sighted in field surveys and are known to be present in Australia.

Fork-tailed swift mortality estimates range from less than 0.001 to 0.024 individuals per year when active for 13.5 hours per day (Table 39). When active for 24 hours per day, mortality estimates range from less than 0.001 to 0.044 individuals per year (Table 38). This reflects the relatively low number of fork-tailed swifts sighted in the project area (n = 3) compared to

white-throated needletails (n = 363), which have higher estimates of mortality.

Wedge-tailed eagle mortality estimates range from 1.036 to 2.161 individuals per year.

Table 38 Results of collision risk modelling for Tarong West Wind Farm using methods presented for Uungula Wind Farm (assuming 24 active hours for white-throated needletail and fork-tailed swift)

		White-throated needletail			Fork-tailed swift			Wedge-tailed eagle	
Avoidance rate		95%	99%	99.9%	95%	99%	99.9%	80%	90%
Turbine A predicted collisions	Summer	3.871	0.774	0.077	0.037	0.007	0.001	0.632	0.316
	Autumn	0.000	0.000	0.000	0.000	0.000	0.000	0.436	0.218
	Winter	0.000	0.000	0.000	0.000	0.000	0.000	0.632	0.316
	Spring	0.886	0.177	0.018	0.005	0.001	<0.001	0.372	0.186
	Total	**4.757**	**0.951**	**0.095**	**0.042**	**0.008**	**0.001**	**2.071**	**1.036**
Turbine B predicted collisions	Summer	3.966	0.793	0.079	0.038	0.008	0.001	0.647	0.324
	Autumn	0.000	0.000	0.000	0.000	0.000	0.000	0.447	0.224
	Winter	0.000	0.000	0.000	0.000	0.000	0.000	0.647	0.324
	Spring	0.919	0.184	0.018	0.006	0.001	<0.001	0.419	0.209
	Total	**4.886**	**0.977**	**0.098**	**0.044**	**0.009**	**0.001**	**2.161**	**1.080**

Table 39 Results of collision risk modelling for Tarong West Wind Farm using methods presented for Uungula Wind Farm (assuming 13.5 active hours for white-throated needletail and fork-tailed swift)

		White-throated needletail			Fork-tailed swift		
Avoidance rate		95%	99%	99.9%	95%	99%	99.9%
Turbine A predicted collisions	Summer	2.177	0.435	0.044	0.021	0.004	<0.001
	Autumn	0.000	0.000	0.000	0.000	0.000	0.000
	Winter	0.000	0.000	0.000	0.000	0.000	0.000
	Spring	0.498	0.100	0.010	0.003	0.001	<0.001
	Total	**2.676**	**0.535**	**0.054**	**0.024**	**0.005**	**<0.001**
Turbine B predicted collisions	Summer	2.231	0.446	0.045	0.021	0.004	<0.001
	Autumn	0.000	0.000	0.000	0.000	0.000	0.000
	Winter	0.000	0.000	0.000	0.000	0.000	0.000
	Spring	0.517	0.103	0.010	0.003	0.001	<0.001
	Total	**2.748**	**0.550**	**0.055**	**0.024**	**0.005**	**<0.001**

4.3.3 Ironpot Wind Farm

As the CRI method generates a relative indication of risk, the CRI for one species in isolation cannot be used to assess collision risk. Therefore, the results for all identified species which were assigned a CRI is presented in Table 40. Species with the highest CRI were those which were present in large numbers and often recorded within the RSA, and include the Torresian crow, sulphur-crested cockatoo, galah, Australian raven, rainbow lorikeet, little corella, and white-throated needletail. The fork-tailed swift was assigned a relatively low CRI, reflecting that the species is present in the RSA, but only in low numbers and infrequently. This indicates that relatively speaking, the white-throated needletail has a higher risk of collision with wind turbines than most of the other species recorded flying over the Tarong West Wind Farm project area. Importantly, several species which are not listed under the EPBC Act and which are listed as least concern under the NC Act may be at higher risk of collision with wind turbines than white-throated needletails, refer Table 40.

The glossy black-cockatoo was not recorded flying within the RSA and was therefore assigned a CRI of 0, indicating that the species is at relatively low risk of wind turbine collision. However, it is important to note that sightings of the species in flight were relatively uncommon, with only seven individuals being sighted across three different occasions.

The two potential turbines (A and B) show some minor differences in the level of relative risk, however white-throated needletails are at a high level of risk relative to other species under both turbine specifications. This is expected, as turbines A and B have the same rotor radius and only differ slightly (6 m) in hub height.

Table 40 Results of the CRI calculation for Tarong West Wind Farm using methods presented for Ironpot Wind Farm

Species	NC Act	EPBC Act	CRI Turbine A	CRI Turbine B
Torresian crow	LC	-	0.133389	0.148361
sulphur-crested cockatoo	LC	-	0.044778	0.054422
Australian raven	LC	-	0.025783	0.030839
white-throated needletail	V	V, Mi	0.019308	0.019308
little corella	LC	-	0.018489	0.019356
crow/raven	LC	-	0.018053	0.018592
galah	LC	-	0.017661	0.028097
rainbow lorikeet	LC	-	0.016875	0.025625
wedge-tailed eagle	LC	-	0.009989	0.010333
Australian magpie	LC	-	0.005708	0.006850
pied currawong	LC	-	0.004133	0.005167
grey butcherbird	LC	-	0.001792	0.001792
rainbow bee-eater	LC	-	0.001097	0.001097
little friarbird	LC	-	0.001011	0.001011
pale-headed rosella	LC	-	0.000939	0.000939
red-winged parrot	LC	-	0.000700	0.000700

Species	NC Act	EPBC Act	CRI Turbine A	CRI Turbine B
passerine sp.	LC	-	0.000578	0.000578
rufous whistler	LC	-	0.000539	0.000539
scaly-breasted lorikeet	LC	-	0.000450	0.000900
nankeen kestrel	LC	-	0.000400	0.000400
wood swallow sp.	LC	-	0.000239	0.000239
brown falcon	LC	-	0.000222	0.000222
cockatiel	LC	-	0.000192	0.000192
fairy martin	LC	-	0.000133	0.000133
martin sp.	LC	-	0.000125	0.000125
channel-billed cuckoo	LC	-	0.000075	0.000075
little lorikeet	LC	-	0.000058	0.000058
tree martin	LC	-	0.000050	0.000050
Australian pelican	LC	-	0.000033	0.000033
dusky woodswallow	LC	-	-	0.000033
straw-necked ibis	LC	-	0.000025	0.000025
great cormorant	LC	-	0.000011	0.000011
brown goshawk	LC	-	0.000011	0.000011
fork-tailed swift	SLC	Mi	0.000011	0.000011
pied cormorant	LC	-	0.000008	0.000008
unknown	LC	-	0.000008	0.000008
eastern great egret	LC	-	0.000006	0.000006
white-necked heron	LC	-	0.000006	0.000006
Australian hobby	LC	-	-	0.000006
whistling kite	LC	-	0.000003	0.000003
brolga	LC	-	0.000003	0.000003
falcon sp.	LC	-	0.000003	0.000003

Conservation status: NC Act: LC – Least Concern, V – Vulnerable, SLC – Special Least Concern;
EPBC Act status: V – Vulnerable, Mi – Migratory Species.

4.3.4 Collision risk model assessment

Given the sources of uncertainty present in mathematical collision risk modelling, and the lack of empirical data informing avoidance rates in particular, the results of collision risk model must be interpreted in the context of what is known about the biology of the species and the way they are observed to interact with wind turbines. While it is difficult to exactly quantify the unmitigated risk to species of concern (as demonstrated by the difference in collision estimates depending on method used and assumed avoidance rate), these collision risk models demonstrate that for the Tarong West Wind Farm project, white-throated needletails are the conservation significant species that is most at risk from unmitigated impact due to wind turbine collision. Fork-tailed swifts are also at risk of collision, but at a much lower level relatively as they have been observed utilising the site infrequently and in much lower numbers than the white-throated needletail.

Mortality rates have been reported for white-throated needletail at operating wind farms. Hull et al. (2013) reported 22 white-throated needletail mortalities at two Tasmanian wind farms which underwent carcass monitoring from 3 and 8 years in duration. Moloney et al. (2019) reported that five needletails in total were found dead across 15 Victorian wind farms during post-construction mortality monitoring from 2003 to 2018. It is important to note that morality monitoring methods varied across the wind farms investigated in Moloney et al. (2019), and only two wind farms were considered to have sufficient data for rigorous analysis of annual mortality data. Furthermore, the number of mortalities recorded at any wind farm is affected by survey design, searcher efficiency, and scavenging rates, and so the number of recorded mortalities is likely to be lower than the true number of mortalities at any given wind farm.

4.4 TNT and migratory species assessment

Field surveys detected three species listed as threatened or TNT under the EPBC Act and/or NC Act (glossy black-cockatoo, white-throated needletail, and grey-headed flying-fox) and four migratory species (white-throated needletail [also listed as vulnerable under the EPBC Act], rufous fantail, satin flycatcher, and fork-tailed swift). The results of the risk assessment for species likely or known to occur are listed below.

4.4.1 Species known or likely to occur

4.4.1.1 Glossy black-cockatoo

The detection of feeding signs for glossy black-cockatoos on the project site (22 ort scatters) indicate that this species utilises numerous patches of remnant and non-remnant vegetation across the site as feeding habitat. Two individuals were observed circling a dam and perching in the canopy in the spring 2021 surveys, and two further group sightings were made in 2022 (n = 2) and 2023 (n = 3) during fixed point count surveys (control site NT6). During 2022 two individuals were heard flying above the canopy and during 2023 three individuals were observed flying just above the canopy at approximately 20 m height. There is limited information on the foraging and nesting behaviour of glossy black-cockatoo in the wider region. However, orts have also been recorded at a nearby site which borders the project boundary, and a pair of glossy black-cockatoos were previously observed to the west of Jumma Road, just outside the current project site (Golder Associates, 2018). Records of glossy black-cockatoo presence and signs of feeding activity have thus been made in 2018 (Golder Associates, 2018), 2019, 2020, 2021, 2022, and 2023 (Table 33), suggesting sustained use of the area by this species.

Information regarding glossy black-cockatoo flight altitudes is limited, however Pepper (1996) states that they usually fly within a few tens of meters above the ground and have been observed in tandem flight at "unusually high altitudes". Owing to the relatively few sightings of glossy black-cockatoo, their flight behaviours within the project site are not well understood. As most of the project site is grassland it is reasonable to assume that this species would be flying considerable distances between patches of vegetation and may sometimes be flying at RSA height.

As glossy black-cockatoos are a conservation significant species (listed as vulnerable under the EPBC Act and the NC Act), the consequence rating for a collision impact is higher than other non-TNT species. The probability of a collision in the qualitative assessment was considered medium for this species.

As this is a TNT species under both the EPBC and the NC Act a precautionary approach should be applied with a minimum risk rating of 'medium' for the glossy black-cockatoo. However, mitigating measures as outlined in the Bird and Bat Management Plan (Ecosure, 2025b) may potentially reduce the likelihood of collision and therefore reduce the risk rating to 'low' for the glossy black-cockatoo.

4.4.1.2 White-throated needletail

Two white-throated needletails were recorded flying above non-remnant vegetation during the spring 2018 bird surveys, and a third individual was recorded opportunistically in the spring 2021 surveys. Subsequent pre-construction surveys recorded higher numbers of white-throated needletail (12 in summer 2022, 26 in spring 2022, 191 in summer 2023, and 132 in spring 2023). The high number of sightings during these periods were generally associated with storm fronts. Group sizes in summer 2023 were variable, ranging from individual birds to flocks of approximately 50 individuals. Group sizes in spring 2023 were likewise variable, ranging from individual birds to a flock of approximately 100 individuals. In total across all surveys, a maximum of 364 individuals were sighted from 2018 – 2023. Sightings within a single survey period were often made over a number of days, and it is possible that individuals of the same larger flock remained in the area and were sighted repeatedly within each survey period.

This species is listed as vulnerable under the EPBC Act and NC Act and also as migratory under the EPBC Act. They arrive in Australia around October and depart as late as April, returning to breeding grounds in the northern hemisphere. They are almost entirely aerial at heights up to 'cloud level', above a wide variety of habitats ranging from heavily treed forests to open habitats (DCCEEW, 2024a). They are generally gregarious when in Australia, sometimes occurring in large flocks, comprising hundreds or thousands of birds. They are occasionally seen individually and may occur in mixed flocks with other aerial insectivores (DCCEEW, 2024a). Studies using geolocators have shown that white-throated needletails move up and down the eastern coast of Australia and the Great Dividing Range and are capable of moving up to 900 km in a 24-hour period (Yamaguchi et al., 2021). Within Australia the area of occupancy of white-throated needletail is greater than 20,000 km^2.

The draft referral guidelines for 14 bird species listed as migratory species under the EPBC Act (DoE, 2015) considers 100 individuals to be an internationally significant proportion of the population and 10 individuals to be a nationally significant proportion of the population. The species is almost entirely aerial in Australia, but has been recorded roosting in dense foliage or tree hollows (Tarburton, 1993; Threatened Species Scientific Committee, 2019). Given their aerial foraging habits and numbers observed utilising the project site, and the results of collision risk modelling, the species is at relatively high probability of collision with WTGs, and therefore the white-throated needletail must be considered at a risk rating of 'high'. However, the collision risk modelling does indicate that a low number of birds are subject to potential

turbine strike each year dependent on the site population and avoidance rate. Further monitoring of the site during and after construction must be conducted to detect any potential collisions with WTGs and inform an adaptive management plan.

4.4.1.3 Grey-headed flying-fox

The numbers and movements of grey-headed flying-foxes are typically driven by food availability (nectar, pollen, and fruits), and so colonies are largely nomadic (DEWHA, 2010). On four occasions during the 2021 surveys, small groups of grey-headed flying-foxes were detected within or near to the project boundary. Two observations were made of small groups (four and five individuals), and in another observation numerous grey-headed flying-foxes were heard. In another sighting, two grey-headed flying-foxes were seen feeding in trees, confirming that the species does use the project site for foraging.

Within the project site, the dominant canopy trees spotted gum (*Corymbia citriodora*) and narrow-leaved ironbark (*Eucalyptus crebra*) are known food sources for grey-headed flying-foxes (DAWE, 2021a), although no habitats are considered to be critical food sources for this species. The nearest known grey-headed flying-fox camp is nationally important and is located near Cooyar (38 km south-east of the project site). Most recently, the camp is estimated to contain 500 - 2,500 grey-headed flying-foxes in 2022 (DCCEEW, 2024b), and as the species has been recorded to fly up to 148.3 km from roost to food source (DAWE, 2021a), it is possible that grey-headed flying-foxes will occupy the project site during times of food availability (July – December). While there was an absence of large volumes of flowering feed trees during the 2022 and 2023 surveys and therefore low nectar abundance, no flying-fox camps were observed within traversed areas of the project site and none were observed within the project site during these surveys.

The species is considered high risk of collision with WTGs owing to their tendency to congregate around feeding sources and their ability to fly at RSA height. Further surveys should be conducted during periods of high food availability (spring) during and after construction to gather data on the use of the project site and flight behaviours by the grey-headed flying-fox.

4.4.1.4 Fork-tailed swift

Fork-tailed swifts were not observed in surveys of the project site from 2018 - 2021, but were observed in ongoing preconstruction surveys in 2023. A small number of individuals were observed in total (n = 3) during the summer and spring 2023 fixed point count surveys, foraging aerially in association with flocks of white-throated needletails. Two fork-tailed swifts were recorded flying above one site during summer 2023 surveys and one fork-tailed swift was recorded flying above the site during spring 2023 surveys. The sightings occurred over open woodland and grassland in the project site (Figure 9). The DoE (DoE, 2015) considers 1,000 individuals to be an internationally significant proportion of the population and 100 individuals to be a nationally significant proportion of the population. Survey results therefore indicate that the project site does not support an ecologically significant proportion of the fork-tailed swift population.

The habitat and flight behaviour of the fork-tailed swift is similar to the white-throated needletail. In Australia, fork-tailed swifts are believed to be exclusively aerial, flying at heights up to 1,000 m above the ground (DoE, 2015). The species migrates to Australia in October and November and departs in April to breed in east Asia (DoE, 2015). Fork-tailed swifts occur mostly over inland plains, but are also seen above vegetated areas, coastal habitats and urban environments, where they forage ahead of storm fronts to feed on aerial insects (DCCEEW, 2023a). The project site is highly unlikely to provide roosting habitat for fork-tailed swifts, however, they may forage aerially and roost on the wing over the entire site.

The species is considered at medium risk of collision with WTGs due to their low numbers observed within the project site but high likelihood of occurring within the RSA. Further monitoring of the site during and after construction must be conducted to detect any potential collisions with WTGs and inform an adaptive management plan.

4.4.2 Species possible to occur

Eight TNT or migratory species may possibly occur, based on desktop assessment and field surveys of habitat (Appendix 2). However, none of these species are considered likely to occur at this project site, due to limited suitable habitat within the project site and/or the lack of recent nearby records of the species. The results of the risk assessment for species that may possibly occur is presented below in Table 41.

Table 41 Risk assessment for species possibly occurring within the project site

Species	RSA probability	Risk assessment
powerful owl	Medium probability - do not soar, generally fly between roosts and food sources - moderate vigilance - territorial species at greater risk of blade strike	The powerful owl is considered to be a low risk of collision with WTGs as no individuals have been observed during targeted or other surveys.
black-breasted button quail	Low probability - generally fly below hub height - generally a ground dwelling bird	The black-breasted button quail is considered to be a low risk of collision with WTGs as they generally fly below hub height and no individuals have been observed during targeted or other surveys.
oriental cuckoo	Low probability - generally fly below hub height - generally fly between vegetated patches	The oriental cuckoo is considered to be a low risk of collision with WTGs as they generally fly below hub height and no individuals have been observed during targeted or other surveys.
diamond firetail	Low probability - generally fly below hub height - generally fly between vegetated patches	The diamond firetail is considered to be a low risk of collision with WTGs as they generally fly below hub height and no individuals have been observed during targeted or other surveys.
squatter pigeon	Low probability - generally fly below hub height - generally a ground dwelling bird with low flight	The squatter pigeon is considered to be a low risk of collision with WTGs as they generally fly below hub height and no individuals have been observed during targeted or other surveys.

Species	RSA probability	Risk assessment
regent honeyeater	Low probability - generally fly below hub height - generally fly between vegetated patches	The regent honeyeater is considered to be a low risk of collision with WTGs as they generally fly below hub height and no individuals have been observed during targeted or other surveys.
glossy ibis	Low probability - generally fly below hub height - generally fly between vegetated patches	The glossy ibis is considered to be a low risk of collision with WTGs as they generally fly below hub height and no individuals have been observed during targeted or other surveys.
Australasian bittern	Low probability - generally fly below hub height - generally fly between vegetated patches	The Australasian bittern is considered to be a low risk of collision with WTGs as they generally fly below hub height and no individuals have been observed during targeted or other surveys.

4.5 Bat collision risk

4.5.1 Microbats

Most microbats forage just above, around or below tree canopy height. However, a study of bats in the Southern Tablelands of NSW (Pennay & Mills, 2018) identified that most species present in the landscape will occasionally fly at altitudes of up to 100 m. This locates species occasionally within the RSA height and therefore with a chance of collision with turbines. This is most likely to occur when turbines are positioned close to forested areas and within the flight paths of microbats.

Bats are also prone to barotrauma injuries from flying in close proximity to turbine blades (Baerwald et al., 2008). Impacts associated with barotrauma are only likely to occur in the immediate area around the turbine blade (barotrauma area).

Three species of microbat recorded on the project site are likely to fly well above the canopy and therefore considered possible to be found at the RSA height. These species were also considered a high collision risk in the qualitative assessment. These include:

- eastern bent-wing bat can fly many times above the canopy in forested areas, but in open areas (typical of most of the project site) flight is typically within a few meters above the ground (Churchill, 2008)
- white-striped freetail bat intercepts prey at heights of 50 m or higher above the ground (Churchill, 2008)
- yellow-bellied sheathtail bat flies fast and direct above the canopy height, but in open areas they typically fly lower and along the forest edge (Churchill, 2008).

Corben's long-eared bat (*Nyctophilus corbeni*) is the only TNT microbat species identified during desktop assessment, however it was considered unlikely to occur on the project site. Although *Nyctophilus* species were detected in acoustic recordings, it is considered more likely the acoustic recordings of *Nyctophilus* species are from the more common species, lesser long-eared bat (*Nyctophilus geoffroyi)* or Gould's long-eared bat (*Nyctophilus gouldi*). These

species are both common and have been recorded within 10 km of the project site, and the lesser long-eared bat was detected in harp trapping surveys on the project site in 2021. Corben's long-eared bat is considered to be highly manoeuvrable and flies at canopy height close to vegetation (Churchill, 2008). It is unlikely that the Corben's long-eared bat occurs within the project site and therefore a significant impact from WTG collision for this species is considered unlikely.

4.5.2 Flying-foxes

Three flying-fox species, the grey-headed flying-fox, black flying-fox, and little red flying-fox, were observed at the project site and are considered high collision risk species in the qualitative assessment. Collision is most likely to occur when vegetation species are flowering and fruiting across the project site. These flying-fox species were observed in low numbers, possibly because there were no food trees in mass flower during the surveys. Further surveys during flowering season would provide data on the flight paths and use of the site by flying-fox species (including the threatened grey-headed flying-fox confirmed to occur at the project site). The dominant canopy species on the site are spotted gum (*Corymbia citriodora*) which flowers from June to September and narrow-leaved ironbark (*Eucalyptus crebra*) which flowers from August to December. Both of these species are known food sources for the grey-headed flying-fox (DAWE, 2021a).

5 Management measures

The following is recommended for further investigation and mitigation of potential impacts:

- Develop an adaptive management and monitoring program to assess the effectiveness and implementation of controls as required. Adaptive management measures should be applied during the operational phase of the project in accordance with an approved Bird and Bat Management Plan (Ecosure, 2025b).
- Investigate and implement mitigation measures for turbine strike, in particular if applicable radar-based curtailment technologies (e.g. Robin Radar or Identiflight). This is to mitigate against the risk of wind turbine strike for white-throated needletail in particular (which was identified at high risk of collision in both semi-quantitative and quantitative analysis), but is likely to reduce collision risk for other species travelling at RSA height. The IdentiFlight radar detection system in particular, while mainly used to detect large birds of prey, has been demonstrated to be capable of detecting white-throated needletails (Goldwind, 2022).
- Ongoing seasonal bird surveys and carcass monitoring (incorporating carcass persistence and observer efficiency trials) during operation must be conducted to monitor mortality rates of these species and respond adaptively to detected risks.
- Compare data collected quarterly following the commencement of operation against baseline data to monitor potential changes in the number and distribution of species and/or individuals utilising the site. A decrease in site utilisation may trigger the implementation of adaptive management measures in accordance with the Bird and Bat Management Plan (Ecosure, 2025b)
- During the construction phase of the project, complete additional bird and bat surveys during the flowering and fruiting (if present) season of foraging resources for flying-foxes and glossy black-cockatoos to gather further information on the usage of the site by these species. Additional nesting hollow surveys should be undertaken during glossy black-cockatoo breeding season to identify potential nesting hollows in proximity (within 500 m) of WTGs. If nesting hollows are confirmed, these will be monitored into the operational phase to identify whether nesting hollows may be abandoned as a result of behavioural disturbance from WTGs.
- Maintain the RSA height at greater than 65 m above ground height, to minimise WTG collision risk to migratory woodland birds in particular. Further assessment of potential impacts should be completed when information on the WTG design and speed is available and the impacts of potential vortex distances can be refined.
- Where engineering and construction allows, ensure WTGs are micro-sited as far from remnant vegetation and dams as possible within the infrastructure corridor. This aims to reduce risk to birds and bats as they traverse between habitat patches and farm dams.
- Ensure any lighting required for maintenance and/or operation uses aviation low intensity red lights where practical to reduce the attraction of insects and influence on nocturnal bird and bat species (DCCEEW, 2023b; Longcore et al., 2008). Artificial lighting may also temporarily blind birds, particularly nocturnal species such as owls or other species used to flying at night or in low light conditions. Birds may then fly

towards the lights and / or collide with physical structures such as WTGs or other infrastructure such as buildings and powerlines (Gauthreaux Jr & Belser, 2006). At this time proposed WTGs will not require obstacle lighting to maintain an acceptable level of safety to aircraft (Aviation Projects Pty Ltd, 2023).

6 Conclusions

The bird and bat values for the project site have been identified through a desktop assessment, field surveys and risk assessment (qualitative and semi-quantitative). The potential impacts of the proposed wind farm have been identified, assessed and a suite of management measures recommended.

Surveys detected 189 identified native bird species and 19 identified bat species, plus an additional 15 unidentified bird species (by sighting or call) and six unidentified bat species (by acoustic recording). Three TNT species were identified on the project site through a variety of survey methods; glossy black-cockatoo, white-throated needletail, and grey-headed flying-fox. Four migratory species were identified on site, the white-throated needletail, rufous fantail, satin flycatcher, and fork-tailed swift. The project site contains conservation significant values for bird and bat species including:

- matters of national environmental significance
  - known habitat for glossy black-cockatoo
  - known habitat for vulnerable and migratory white-throated needletail
  - known habitat for grey-headed flying-fox
  - known habitat for migratory rufous fantail, satin flycatcher, and fork-tailed swift
  - potential habitat for other migratory species.
- matters of state environmental significance
  - known TNT wildlife habitat (glossy black-cockatoo and white-throated needletail)
  - known habitat for SLC species (rufous fantail, satin flycatcher, and fork-tailed swift).

Of the bird species observed during field surveys, 63% exhibited low risk flight behaviours, occurring at heights lower than RSA height (± 25 m buffer) on all recorded occasions. Species groups considered at high risk of collision with WTG include aerial foragers (including listed TNT and migratory species), raptors, cockatoos, microbats that forage above the canopy, flying-foxes and wetland birds (including listed migratory species).

The level one assessment on matters of national and state environmental significance concluded that collision impact is likely to have a low risk of impact on the populations of rufous fantail and satin flycatcher. The assessment determined glossy black-cockatoo and fork-tailed swift have a medium risk of collision with WTGs without mitigating measures and white-throated needletail and grey-headed flying-fox have a high risk of collision with WTGs. Collision risk modelling also reinforced the quantitative and semi-quantitative assessments of collision risk for white-throated needletail and fork-tailed swift. It is recommended that radar-based curtailment technologies (e.g. Robin Radar, Identiflight) are implemented at the Tarong West Wind Farm to reduce the risk of mortality to these species, and others which travel through the RSA. Management measures suitable for these species are incorporated into the Bird and Bat Management Plan (Ecosure, 2025b) and Fauna Management Plan (Ecosure, 2025c). A risk of collision impact to Corben's long-eared bat is considered 'low risk' as the

species was considered unlikely to occur at the project site.

Continuing seasonal surveys are recommended during pre-construction, construction and operation to provide additional data for some TNT species (e.g. glossy black-cockatoo, white-throated needletail and grey-headed flying-fox) and migratory species. This additional data may allow more effective mitigation measures to be implemented and reduce the risk assessment to 'low risk' of collision for some of these species (e.g. glossy black-cockatoo).

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Appendix 1 Database search results

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: 30-Apr-2024

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	4
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	8
Listed Threatened Species:	53
Listed Migratory Species:	14

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:	21
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:	2
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	8
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	1300 - 1400km upstream from Ramsar site	In buffer area only
Narran lake nature reserve	500 - 600km upstream from Ramsar site	In buffer area only
Riverland	1200 - 1300km upstream from Ramsar site	In buffer area only
The coorong, and lakes alexandrina and albert wetland	1400 - 1500km upstream from Ramsar site	In buffer area only

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 buffer area only
Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions	Endangered	Community may occur within area	In feature area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community likely to occur within area	In buffer area only
Natural grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland	Critically Endangered	Community likely to occur within area	In buffer area only
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community likely to occur within area	In feature area
Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions	Endangered	Community likely to occur within area	In buffer area only

Community Name	Threatened Category	Presence Text	Buffer Status
Weeping Myall Woodlands	Endangered	Community likely to occur within area	In feature area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area	In feature area

Listed Threatened Species [Resource Information]

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

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour may occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	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 may occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area
Cyclopsitta diophthalma coxeni Coxen's Fig-Parrot [59714]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	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
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to 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			
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat may occur within area	In feature area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
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 feature area
Nyctophilus corbeni			
Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area	In feature area
Petauroides volans			
Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area	In feature area
Petaurus australis australis			
Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Petrogale penicillata			
Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)			
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
Potorous tridactylus tridactylus			
Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pseudomys novaehollandiae			
New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pteropus poliocephalus			
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
PLANT			
Acacia grandifolia			
[3566]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Arthraxon hispidus			
Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bothriochloa bunyensis Satin-top Grass [15961]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Cadellia pentastylis Ooline [9828]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Clematis fawcettii Stream Clematis [4311]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Coleus omissus listed as Plectranthus omissus [91381]	Endangered	Species or species habitat may occur within area	In buffer area only
Cossinia australiana Cossinia [3066]	Endangered	Species or species habitat likely to occur within area	In feature area
Denhamia parvifolia Small-leaved Denhamia [18106]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Dichanthium setosum bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Eucalyptus taurina Helidon Ironbark [64255]	Endangered	Species or species habitat may occur within area	In buffer area only
Haloragis exalata subsp. velutina Tall Velvet Sea-berry [16839]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lepidium peregrinum Wandering Pepper-cress [14035]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Macadamia integrifolia Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Phebalium distans Mt Berryman Phebalium [81869]	Endangered	Species or species habitat likely to occur within area	In feature area
Picris evae Hawkweed [10839]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Polianthion minutiflorum [82772]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Rhaponticum australe Austral Cornflower, Native Thistle [22647]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Sophora fraseri [8836]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat known 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 likely to occur within area	In feature area
Egernia rugosa Yakka Skink [1420]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Elseya albagula Southern Snapping Turtle, White-throated Snapping Turtle [81648]	Critically Endangered	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

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hemiaspis damelii Grey Snake [1179]	Endangered	Species or species habitat likely to occur within area	In feature area

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		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

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	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]	Vulnerable	Species or species habitat known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only

Other Matters Protected by the EPBC Act

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

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	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]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Pterodroma cervicalis White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat may occur within area overfly marine area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Boyneside	Nature Refuge	QLD	In buffer area only
Bunya Mountains	National Park	QLD	In buffer area only

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Tarong West Wind Farm	2023/09643		Assessment	In feature area
Wambo Wind Farm	2020/8727		Post-Approval	In buffer area only
Not controlled action				
Coal Conveyor between New Acland Coal Mine and Tarong Power Stations	2007/3430	Not Controlled Action	Completed	In feature area
Coopers Gap Wind Farm	2008/4237	Not Controlled Action	Completed	In buffer area only
Coopers Gap Wind Farm	2008/4559	Not Controlled Action	Completed	In buffer area only
Development of the Coopers Gap Wind Farm	2011/5976	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Surat Basin to Tarong Railway project	2003/1264	Not Controlled Action	Completed	In feature area

Bioregional Assessments			[Resource Information]
SubRegion	BioRegion	Website	Buffer Status
Maranoa-Balonne-Condamine	Northern Inland Catchments	BA website	In buffer area only

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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Queensland Government

WildNet species list

Search Criteria: Species List for a Specified Point
Species: All
Type: All
Queensland status: All
Records: All
Date: Since 1980
Latitude: -26.5941
Longitude: 151.5207
Distance: 20
Email: mcastelli@ecosure.com.au
Date submitted: Tuesday 30 Apr 2024 16:12:57
Date extracted: Tuesday 30 Apr 2024 16:20:05

The number of records retrieved = 400

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Bufonidae	*Rhinella marina*	cane toad	Y			1
animals	amphibians	Hylidae	*Cyclorana alboguttata*	greenstripe frog		C		1
animals	amphibians	Hylidae	*Cyclorana brevipes*	superb collared frog		C		1
animals	amphibians	Hylidae	*Litoria balatus*	slender bleating treefrog		C		1
animals	amphibians	Hylidae	*Litoria caerulea*	common green treefrog		C		4
animals	amphibians	Hylidae	*Litoria fallax*	eastern sedgefrog		C		6
animals	amphibians	Hylidae	*Litoria latopalmata*	broad palmed rocketfrog		C		4
animals	amphibians	Hylidae	*Litoria peronii*	emerald spotted treefrog		C		3
animals	amphibians	Hylidae	*Litoria rubella*	ruddy treefrog		C		3
animals	amphibians	Limnodynastidae	*Limnodynastes peronii*	striped marshfrog		C		5
animals	amphibians	Limnodynastidae	*Limnodynastes tasmaniensis*	spotted grassfrog		C		2
animals	amphibians	Limnodynastidae	*Limnodynastes terraereginae*	scarlet sided pobblebonk		C		2
animals	amphibians	Limnodynastidae	*Platyplectrum ornatum*	ornate burrowing frog		C		1
animals	amphibians	Myobatrachidae	*Uperoleia rugosa*	chubby gungan		C		1
animals	birds	Acanthizidae	*Acanthiza chrysorrhoa*	yellow-rumped thornbill		C		4
animals	birds	Acanthizidae	*Acanthiza reguloides*	buff-rumped thornbill		C		1
animals	birds	Acanthizidae	*Gerygone olivacea*	white-throated gerygone		C		9
animals	birds	Acanthizidae	*Pyrrholaemus sagittatus*	speckled warbler		C		3
animals	birds	Acanthizidae	*Sericornis frontalis*	white-browed scrubwren		C		4
animals	birds	Acanthizidae	*Smicrornis brevirostris*	weebill		C		5
animals	birds	Accipitridae	*Aquila audax*	wedge-tailed eagle		C		4
animals	birds	Acrocephalidae	*Acrocephalus australis*	Australian reed-warbler		C		1
animals	birds	Alcedinidae	*Dacelo novaeguineae*	laughing kookaburra		C		10
animals	birds	Alcedinidae	*Todiramphus sanctus*	sacred kingfisher		C		5
animals	birds	Anatidae	*Anas gracilis*	grey teal		C		4
animals	birds	Anatidae	*Anas superciliosa*	Pacific black duck		C		9
animals	birds	Anatidae	*Aythya australis*	hardhead		C		4
animals	birds	Anatidae	*Chenonetta jubata*	Australian wood duck		C		5
animals	birds	Anatidae	*Cygnus atratus*	black swan		C		1
animals	birds	Anatidae	*Dendrocygna eytoni*	plumed whistling-duck		C		2
animals	birds	Anatidae	*Oxyura australis*	blue-billed duck		C		2
animals	birds	Anhingidae	*Anhinga novaehollandiae*	Australasian darter		C		4
animals	birds	Ardeidae	*Ardea alba modesta*	eastern great egret		C		2
animals	birds	Ardeidae	*Ardea pacifica*	white-necked heron		C		2
animals	birds	Ardeidae	*Egretta novaehollandiae*	white-faced heron		C		7
animals	birds	Artamidae	*Artamus cinereus*	black-faced woodswallow		C		1
animals	birds	Artamidae	*Cracticus nigrogularis*	pied butcherbird		C		14
animals	birds	Artamidae	*Cracticus torquatus*	grey butcherbird		C		5
animals	birds	Artamidae	*Gymnorhina tibicen*	Australian magpie		C		12
animals	birds	Artamidae	*Strepera graculina*	pied currawong		C		7
animals	birds	Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo		C		9
animals	birds	Cacatuidae	*Calyptorhynchus banksii*	red-tailed black-cockatoo		C		3
animals	birds	Cacatuidae	*Eolophus roseicapilla*	galah		C		17
animals	birds	Cacatuidae	*Nymphicus hollandicus*	cockatiel		C		5
animals	birds	Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike		C		7
animals	birds	Campephagidae	*Coracina papuensis*	white-bellied cuckoo-shrike		C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Campephagidae	*Lalage tricolor*	white-winged triller		C		1
animals	birds	Charadriidae	*Elseyornis melanops*	black-fronted dotterel		C		3
animals	birds	Charadriidae	*Vanellus miles*	masked lapwing		C		2
animals	birds	Charadriidae	*Vanellus miles novaehollandiae*	masked lapwing (southern subspecies)		C		5
animals	birds	Charadriidae	*Vanellus tricolor*	banded lapwing		C		1
animals	birds	Ciconiidae	*Ephippiorhynchus asiaticus*	black-necked stork		C		1
animals	birds	Climacteridae	*Cormobates leucophaea metastasis*	white-throated treecreeper (southern)		C		1
animals	birds	Columbidae	*Geopelia humeralis*	bar-shouldered dove		C		3
animals	birds	Columbidae	*Geopelia placida*	peaceful dove		C		2
animals	birds	Columbidae	*Ocyphaps lophotes*	crested pigeon		C		7
animals	birds	Columbidae	*Phaps chalcoptera*	common bronzewing		C		1
animals	birds	Coraciidae	*Eurystomus orientalis*	dollarbird		C		6
animals	birds	Corcoracidae	*Corcorax melanorhamphos*	white-winged chough		C		5
animals	birds	Corcoracidae	*Struthidea cinerea*	apostlebird		C		6
animals	birds	Corvidae	*Corvus coronoides*	Australian raven		C		4
animals	birds	Corvidae	*Corvus orru*	Torresian crow		C		20
animals	birds	Cuculidae	*Centropus phasianinus*	pheasant coucal		C		2
animals	birds	Cuculidae	*Chalcites minutillus barnardi*	Eastern little bronze-cuckoo		C		1
animals	birds	Cuculidae	*Scythrops novaehollandiae*	channel-billed cuckoo		C		2
animals	birds	Dicaeidae	*Dicaeum hirundinaceum*	mistletoebird		C		3
animals	birds	Dicruridae	*Dicrurus bracteatus*	spangled drongo		C		1
animals	birds	Estrildidae	*Lonchura castaneothorax*	chestnut-breasted mannikin		C		1
animals	birds	Estrildidae	*Neochmia modesta*	plum-headed finch		C		1
animals	birds	Estrildidae	*Taeniopygia bichenovii*	double-barred finch		C		4
animals	birds	Estrildidae	*Taeniopygia guttata*	zebra finch		C		1
animals	birds	Falconidae	*Falco cenchroides*	nankeen kestrel		C		1
animals	birds	Hirundinidae	*Cheramoeca leucosterna*	white-backed swallow		C		1
animals	birds	Hirundinidae	*Hirundo neoxena*	welcome swallow		C		3
animals	birds	Hirundinidae	*Petrochelidon ariel*	fairy martin		C		1
animals	birds	Maluridae	*Malurus cyaneus*	superb fairy-wren		C		4
animals	birds	Maluridae	*Malurus lamberti*	variegated fairy-wren		C		2
animals	birds	Maluridae	*Malurus lamberti sensu lato*	variegated fairy-wren		C		2
animals	birds	Maluridae	*Malurus melanocephalus*	red-backed fairy-wren		C		8
animals	birds	Megapodiidae	*Alectura lathami*	Australian brush-turkey		C		1
animals	birds	Meliphagidae	*Acanthagenys rufogularis*	spiny-cheeked honeyeater		C		2
animals	birds	Meliphagidae	*Caligavis chrysops*	yellow-faced honeyeater		C		3
animals	birds	Meliphagidae	*Entomyzon cyanotis*	blue-faced honeyeater		C		4
animals	birds	Meliphagidae	*Lichmera indistincta*	brown honeyeater		C		5
animals	birds	Meliphagidae	*Manorina melanocephala*	noisy miner		C		13
animals	birds	Meliphagidae	*Meliphaga lewinii*	Lewin's honeyeater		C		2
animals	birds	Meliphagidae	*Melithreptus albogularis*	white-throated honeyeater		C		2
animals	birds	Meliphagidae	*Myzomela sanguinolenta*	scarlet honeyeater		C		1
animals	birds	Meliphagidae	*Philemon citreogularis*	little friarbird		C		3
animals	birds	Meliphagidae	*Philemon corniculatus*	noisy friarbird		C		5
animals	birds	Meliphagidae	*Plectorhyncha lanceolata*	striped honeyeater		C		2
animals	birds	Meliphagidae	*Ptilotula penicillata*	white-plumed honeyeater		C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Meropidae	*Merops ornatus*	rainbow bee-eater		C		1
animals	birds	Monarchidae	*Grallina cyanoleuca*	magpie-lark		C		14
animals	birds	Monarchidae	*Myiagra rubecula*	leaden flycatcher		C		2
animals	birds	Motacillidae	*Anthus novaeseelandiae*	Australasian pipit		C		2
animals	birds	Neosittidae	*Daphoenositta chrysoptera*	varied sittella		C		1
animals	birds	Oriolidae	*Oriolus sagittatus*	olive-backed oriole		C		1
animals	birds	Pachycephalidae	*Colluricincla harmonica*	grey shrike-thrush		C		1
animals	birds	Pachycephalidae	*Colluricincla megarhyncha*	little shrike-thrush		C		1
animals	birds	Pachycephalidae	*Pachycephala pectoralis*	golden whistler		C		1
animals	birds	Pachycephalidae	*Pachycephala rufiventris*	rufous whistler		C		7
animals	birds	Pardalotidae	*Pardalotus punctatus*	spotted pardalote		C		1
animals	birds	Pardalotidae	*Pardalotus striatus*	striated pardalote		C		13
animals	birds	Petroicidae	*Eopsaltria australis*	eastern yellow robin		C		1
animals	birds	Petroicidae	*Microeca fascinans*	jacky winter		C		1
animals	birds	Petroicidae	*Petroica rosea*	rose robin		C		1
animals	birds	Phalacrocoracidae	*Microcarbo melanoleucos*	little pied cormorant		C		2
animals	birds	Phalacrocoracidae	*Phalacrocorax carbo*	great cormorant		C		1
animals	birds	Phalacrocoracidae	*Phalacrocorax sulcirostris*	little black cormorant		C		1
animals	birds	Phalacrocoracidae	*Phalacrocorax varius*	pied cormorant		C		2
animals	birds	Podargidae	*Podargus strigoides*	tawny frogmouth		C		1
animals	birds	Podicipedidae	*Tachybaptus novaehollandiae*	Australasian grebe		C		3
animals	birds	Pomatostomidae	*Pomatostomus temporalis*	grey-crowned babbler		C		5
animals	birds	Psittaculidae	*Alisterus scapularis*	Australian king-parrot		C		3
animals	birds	Psittaculidae	*Aprosmictus erythropterus*	red-winged parrot		C		3
animals	birds	Psittaculidae	*Parvipsitta pusilla*	little lorikeet		C		1
animals	birds	Psittaculidae	*Platycercus adscitus*	pale-headed rosella		C		6
animals	birds	Psittaculidae	*Platycercus elegans*	crimson rosella		C		1
animals	birds	Psittaculidae	*Platycercus eximius*	eastern rosella		C		1
animals	birds	Psittaculidae	*Psephotus haematonotus*	red-rumped parrot		C		3
animals	birds	Psittaculidae	*Trichoglossus chlorolepidotus*	scaly-breasted lorikeet		C		4
animals	birds	Psittaculidae	*Trichoglossus moluccanus*	rainbow lorikeet		C		5
animals	birds	Psophodidae	*Psophodes olivaceus*	eastern whipbird		C		1
animals	birds	Rallidae	*Fulica atra*	Eurasian coot		C		2
animals	birds	Rallidae	*Gallinula tenebrosa*	dusky moorhen		C		1
animals	birds	Rallidae	*Porphyrio melanotus*	purple swamphen		C		1
animals	birds	Rallidae	*Tribonyx ventralis*	black-tailed native-hen		C		1
animals	birds	Recurvirostridae	*Himantopus leucocephalus*	pied stilt		C		2
animals	birds	Rhipiduridae	*Rhipidura albiscapa*	grey fantail		C		6
animals	birds	Rhipiduridae	*Rhipidura leucophrys*	willie wagtail		C		7
animals	birds	Rhipiduridae	*Rhipidura rufifrons*	rufous fantail		SL		1
animals	birds	Strigidae	*Ninox boobook*	southern boobook		C		1
animals	birds	Threskiornithidae	*Platalea flavipes*	yellow-billed spoonbill		C		2
animals	birds	Threskiornithidae	*Threskiornis molucca*	Australian white ibis		C		1
animals	birds	Threskiornithidae	*Threskiornis spinicollis*	straw-necked ibis		C		5
animals	birds	Zosteropidae	*Zosterops lateralis*	silvereye		C		3
animals	mammals	Felidae	*Felis catus*	cat	Y			1

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animals	mammals	Leporidae	*Lepus europaeus*	European brown hare	Y			1
animals	mammals	Leporidae	*Oryctolagus cuniculus*	rabbit	Y			1
animals	mammals	Macropodidae	*Macropus giganteus*	eastern grey kangaroo		C		1
animals	mammals	Macropodidae	*Notamacropus rufogriseus*	red-necked wallaby		C		1
animals	mammals	Peramelidae	*Isoodon macrourus*	northern brown bandicoot		C		1
animals	mammals	Phalangeridae	*Trichosurus vulpecula*	common brushtail possum		C		1
animals	mammals	Phascolarctidae	*Phascolarctos cinereus*	koala		E	E	9
animals	mammals	Pteropodidae	*Pteropus scapulatus*	little red flying-fox		C		6
animals	mammals	Tachyglossidae	*Tachyglossus aculeatus*	short-beaked echidna		SL		1
animals	reptiles	Agamidae	*Intellagama lesueurii*	eastern water dragon		C		1
animals	reptiles	Agamidae	*Pogona barbata*	bearded dragon		C		1
animals	reptiles	Boidae	*Antaresia maculosa*	spotted python		C		1
animals	reptiles	Carphodactylidae	*Underwoodisaurus milii*	thick-tailed gecko		C		1
animals	reptiles	Chelidae	*Chelodina longicollis*	eastern snake-necked turtle		C		4/4
animals	reptiles	Elapidae	*Pseudonaja textilis*	eastern brown snake		C		1
animals	reptiles	Scincidae	*Cryptoblepharus pulcher pulcher*	elegant snake-eyed skink		C		1
animals	reptiles	Scincidae	*Lygisaurus foliorum*	tree-base litter-skink		C		1
animals	reptiles	Scincidae	*Tiliqua scincoides scincoides*	eastern bluetongue		C		1
animals	reptiles	Varanidae	*Varanus gouldii*	sand monitor		C		1
animals	reptiles	Varanidae	*Varanus varius*	lace monitor		C		3
fungi	Agaricomycetes	Agaricaceae	*Calvatia lilacina*			C		2/1
fungi	Agaricomycetes	Agaricaceae	*Chlorophyllum*					1/1
fungi	Agaricomycetes	Agaricaceae	*Coprinus truncorum*			C		1/1
fungi	Agaricomycetes	Boletaceae	*Boletus*					1/1
fungi	Agaricomycetes	Fomitopsidaceae	*Postia*					1/1
fungi	Agaricomycetes	Ganodermataceae	*Amauroderma rude*			C		1/1
fungi	Agaricomycetes	Gloeophyllaceae	*Veluticeps*			C		1/1
fungi	Agaricomycetes	Hymenochaetaceae	*Hymenochaete*					1/1
fungi	Agaricomycetes	Marasmiaceae	*Marasmius crinisequi*			C		1/1
fungi	Agaricomycetes	Omphalotaceae	*Lentinula lateritia*			C		2/1
fungi	Agaricomycetes	Panaeolaceae	*Panaeolus bernicis*			C		1/1
fungi	Agaricomycetes	Polyporaceae	*Lenzites*					1/1
fungi	Agaricomycetes	Polyporaceae	*Trametes hirsuta*			C		1/1
fungi	Agaricomycetes	Polyporaceae	*Trametes versicolor*			C		1/1
fungi	Agaricomycetes	Stereaceae	*Stereum hirsutum*			C		1/1
fungi	Agaricomycetes	Stereaceae	*Stereum illudens*			C		1/1
fungi	Pezizomycetes	Pyronemataceae	*Scutellinia*					1/1
fungi	Pezizomycetes	Sarcoscyphaceae	*Cookeina*					1/1
fungi	sordariomycetes	Cordycipitaceae	*Cordyceps hawkesii*			C		1/1
plants	land plants	Acanthaceae	*Rostellularia adscendens*			C		1/1
plants	land plants	Agavaceae	*Agave*		Y			1
plants	land plants	Agavaceae	*Agave americana*		Y			1
plants	land plants	Amaranthaceae	*Deeringia amaranthoides*	redberry		C		1/1
plants	land plants	Apiaceae	*Apium prostratum var. prostratum*			C		1/1
plants	land plants	Apiaceae	*Berula erecta*	water parsnip	Y			1/1
plants	land plants	Apiaceae	*Cyclospermum leptophyllum*		Y			1/1

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plants	land plants	Apiaceae	*Daucus glochidiatus*	Australian carrot		C		1/1
plants	land plants	Apocynaceae	*Alstonia constricta*	bitterbark		C		1/1
plants	land plants	Apocynaceae	*Alyxia ruscifolia*			C		2/2
plants	land plants	Apocynaceae	*Carissa ovata*	currantbush		C		1
plants	land plants	Apocynaceae	*Gymnema pleiadenium*			C		1/1
plants	land plants	Araceae	*Landoltia punctata*			C		1/1
plants	land plants	Araliaceae	*Hydrocotyle acutiloba*			C		1/1
plants	land plants	Araliaceae	*Hydrocotyle elegans*			C		1/1
plants	land plants	Araliaceae	*Hydrocotyle laxiflora*	stinking pennywort		C		1/1
plants	land plants	Asphodelaceae	*Aloe*		Y	C		1
plants	land plants	Asteraceae	*Acanthospermum hispidum*	star burr	Y			1/1
plants	land plants	Asteraceae	*Brachyscome*					1/1
plants	land plants	Asteraceae	*Brachyscome microcarpa subsp. microcarpa*			C		1/1
plants	land plants	Asteraceae	*Calotis lappulacea*	yellow burr daisy		C		1/1
plants	land plants	Asteraceae	*Carduus thoermeri*	nodding thistle	Y			1/1
plants	land plants	Asteraceae	*Carthamus lanatus*	saffron thistle	Y			1/1
plants	land plants	Asteraceae	*Cassinia laevis subsp. rosmarinifolia*			C		1/1
plants	land plants	Asteraceae	*Chrysocephalum apiculatum*	yellow buttons		C		1/1
plants	land plants	Asteraceae	*Coreopsis lanceolata*		Y			1/1
plants	land plants	Asteraceae	*Glossocardia bidens*	native cobbler's pegs		C		2/2
plants	land plants	Asteraceae	*Olearia canescens subsp. discolor*			C		1/1
plants	land plants	Asteraceae	*Peripleura hispidula var. setosa*			C		1/1
plants	land plants	Asteraceae	*Picris angustifolia subsp. carolorum-henricorum*			C		1/1
plants	land plants	Asteraceae	*Senecio esleri*			C		1/1
plants	land plants	Asteraceae	*Senecio quadridentatus*	cotton fireweed		C		1/1
plants	land plants	Asteraceae	*Sigesbeckia orientalis*	Indian weed		C		1/1
plants	land plants	Asteraceae	*Zinnia peruviana*	wild zinnia	Y			3/3
plants	land plants	Bignoniaceae	*Pandorea pandorana*	wonga vine		C		1/1
plants	land plants	Boraginaceae	*Cynoglossum australe*			C		1/1
plants	land plants	Boraginaceae	*Heliotropium amplexicaule*	blue heliotrope	Y			2/2
plants	land plants	Brassicaceae	*Lepidium africanum*	common peppercress	Y			1/1
plants	land plants	Brassicaceae	*Rorippa nasturtium-aquaticum*	watercress	Y			1/1
plants	land plants	Cactaceae	*Opuntia*					27
plants	land plants	Cactaceae	*Opuntia tomentosa*	velvety tree pear	Y			2
plants	land plants	Campanulaceae	*Wahlenbergia capillaris*			SL		2/2
plants	land plants	Capparaceae	*Capparis sarmentosa*	scrambling caper		C		2/2
plants	land plants	Caryophyllaceae	*Petrorhagia dubia*		Y			1/1
plants	land plants	Caryophyllaceae	*Polycarpon tetraphyllum*		Y			1/1
plants	land plants	Casuarinaceae	*Allocasuarina littoralis*			C		1/1
plants	land plants	Casuarinaceae	*Allocasuarina luehmannii*	bull oak		C		1/1
plants	land plants	Celastraceae	*Celastrus subspicata*	large-leaved staffvine		C		1/1
plants	land plants	Celastraceae	*Denhamia bilocularis*			C		1/1
plants	land plants	Celastraceae	*Denhamia disperma*			C		1/1
plants	land plants	Celastraceae	*Elaeodendron australe var. integrifolium*			C		2/2
plants	land plants	Commelinaceae	*Commelina diffusa*			C		1/1
plants	land plants	Commelinaceae	*Murdannia graminea*	murdannia		C		1/1

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plants	land plants	Convolvulaceae	*Convolvulus angustissimus subsp. angustissimus*			C		1/1
plants	land plants	Convolvulaceae	*Convolvulus erubescens*	Australian bindweed		C		1/1
plants	land plants	Convolvulaceae	*Dichondra repens*	kidney weed		C		1/1
plants	land plants	Convolvulaceae	*Evolvulus alsinoides var. decumbens*			C		1/1
plants	land plants	Crassulaceae	*Bryophyllum delagoense*		Y			1
plants	land plants	Crassulaceae	*Bryophyllum x houghtonii*		Y			1
plants	land plants	Cupressaceae	*Callitris baileyi*	Bailey's cypress		NT		4/4
plants	land plants	Cupressaceae	*Callitris columellaris*			C		1/1
plants	land plants	Cyperaceae	*Bolboschoenus fluviatilis*			C		1/1
plants	land plants	Cyperaceae	*Cyperus fulvus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus involucratus*		Y			1/1
plants	land plants	Cyperaceae	*Cyperus vaginatus*			C		1/1
plants	land plants	Cyperaceae	*Eleocharis cylindrostachys*			C		1/1
plants	land plants	Cyperaceae	*Fimbristylis dichotoma*	common fringe-rush		C		1/1
plants	land plants	Cyperaceae	*Schoenoplectus tabernaemontani*			C		1/1
plants	land plants	Droseraceae	*Drosera lunata*			SL		1/1
plants	land plants	Ebenaceae	*Diospyros geminata*	scaly ebony		C		1/1
plants	land plants	Ericaceae	*Styphelia trichostyla*			C		1/1
plants	land plants	Erythroxylaceae	*Erythroxylum sp. (Splityard Creek L.Pedley 5360)*			C		1/1
plants	land plants	Euphorbiaceae	*Acalypha eremorum*	soft acalypha		C		1/1
plants	land plants	Euphorbiaceae	*Croton acronychioides*	thick-leaved croton		C		1/1
plants	land plants	Euphorbiaceae	*Croton insularis*	Queensland cascarilla		C		1/1
plants	land plants	Euphorbiaceae	*Croton phebalioides*	narrow-leaved croton		C		1/1
plants	land plants	Euphorbiaceae	*Euphorbia dallachyana*			C		1/1
plants	land plants	Euphorbiaceae	*Euphorbia davidii*		Y			2/2
plants	land plants	Gentianaceae	*Centaurium*					1/1
plants	land plants	Gentianaceae	*Centaurium tenuiflorum*		Y			1/1
plants	land plants	Geraniaceae	*Geranium solanderi var. solanderi*	native geranium		C		1/1
plants	land plants	Goodeniaceae	*Goodenia paradoxa*			C		1/1
plants	land plants	Haloragaceae	*Gonocarpus*					1/1
plants	land plants	Haloragaceae	*Haloragis heterophylla*	rough raspweed		C		1/1
plants	land plants	Hypericaceae	*Hypericum gramineum*			C		1/1
plants	land plants	Hypoxidaceae	*Hypoxis pratensis var. tuberculata*			C		1/1
plants	land plants	Lamiaceae	*Ajuga australis*	Australian bugle		C		1/1
plants	land plants	Lamiaceae	*Coleus australis*			C		1/1
plants	land plants	Lamiaceae	*Mentha satureioides*	native pennyroyal		C		2/2
plants	land plants	Lamiaceae	*Teucrium argutum*			C		1/1
plants	land plants	Lamiaceae	*Teucrium junceum*			C		1/1
plants	land plants	Laxmanniaceae	*Eustrephus latifolius*	wombat berry		C		1
plants	land plants	Laxmanniaceae	*Lomandra filiformis subsp. coriacea*			C		1/1
plants	land plants	Leguminosae	*Acacia*					1
plants	land plants	Leguminosae	*Acacia disparrima subsp. disparrima*			C		1/1
plants	land plants	Leguminosae	*Acacia leiocalyx subsp. leiocalyx*			C		1/1
plants	land plants	Leguminosae	*Acacia leucoclada subsp. argentifolia*			C		1/1
plants	land plants	Leguminosae	*Acacia loroloba*	Ma Ma Creek wattle		C		1/1
plants	land plants	Leguminosae	*Acacia penninervis var. penninervis*			C		1/1

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plants	land plants	Leguminosae	*Acacia salicina*	doolan		C		1/1
plants	land plants	Leguminosae	*Bossiaea scortechinii*			C		1/1
plants	land plants	Leguminosae	*Chorizema parviflorum*	eastern flame pea		C		1/1
plants	land plants	Leguminosae	*Crotalaria incana subsp. incana*		Y			1/1
plants	land plants	Leguminosae	*Crotalaria mitchellii subsp. mitchellii*			C		2/2
plants	land plants	Leguminosae	*Crotalaria montana var. angustifolia*			C		1/1
plants	land plants	Leguminosae	*Desmodium brachypodum*	large ticktrefoil		C		1/1
plants	land plants	Leguminosae	*Galactia tenuiflora var. lucida*			C		1/1
plants	land plants	Leguminosae	*Glycine*					3/2
plants	land plants	Leguminosae	*Glycine clandestina*			C		1/1
plants	land plants	Leguminosae	*Glycine tabacina*	glycine pea		C		1/1
plants	land plants	Leguminosae	*Hardenbergia violacea*			C		1/1
plants	land plants	Leguminosae	*Hovea parvicalyx*			C		1/1
plants	land plants	Leguminosae	*Indigofera baileyi*			C		1/1
plants	land plants	Leguminosae	*Indigofera hirsuta*	hairy indigo		C		2/2
plants	land plants	Leguminosae	*Indigofera tryonii*			C		1/1
plants	land plants	Leguminosae	*Lespedeza juncea subsp. sericea*	perennial lespedeza		C		1/1
plants	land plants	Leguminosae	*Melilotus indicus*	hexham scent	Y			1/1
plants	land plants	Leguminosae	*Mirbelia pungens*			C		1/1
plants	land plants	Leguminosae	*Pultenaea bracteaminor*			C		1/1
plants	land plants	Leguminosae	*Senna barclayana*			C		1/1
plants	land plants	Leguminosae	*Senna surattensis*			C		1/1
plants	land plants	Leguminosae	*Tephrosia bidwillii*			C		1/1
plants	land plants	Leguminosae	*Trifolium repens var. repens*	white clover	Y			1/1
plants	land plants	Leguminosae	*Zornia muriculata subsp. angustata*			C		2/2
plants	land plants	Linderniaceae	*Lindernia prolata*			C		1/1
plants	land plants	Loranthaceae	*Amyema lucasii*			C		1/1
plants	land plants	Loranthaceae	*Amyema quandang var. bancroftii*	broad-leaved grey mistletoe		C		1/1
plants	land plants	Loranthaceae	*Dendrophthoe glabrescens*			C		1/1
plants	land plants	Malvaceae	*Anoda cristata*	anoda weed	Y			1/1
plants	land plants	Malvaceae	*Malvastrum coromandelianum subsp. coromandelianum*		Y			1/1
plants	land plants	Malvaceae	*Sida hackettiana*			C		1/1
plants	land plants	Malvaceae	*Sida rhombifolia*		Y			1/1
plants	land plants	Meliaceae	*Owenia venosa*	crow's apple		C		2/2
plants	land plants	Menyanthaceae	*Nymphoides indica*	water snowflake		SL		1/1
plants	land plants	Myrtaceae	*Angophora floribunda*	rough-barked apple		C		1/1
plants	land plants	Myrtaceae	*Corymbia citriodora*	spotted gum		C		1
plants	land plants	Myrtaceae	*Corymbia trachyphloia subsp. trachyphloia*			C		1/1
plants	land plants	Myrtaceae	*Eucalyptus*					1
plants	land plants	Myrtaceae	*Eucalyptus apothalassica*			C		1/1
plants	land plants	Myrtaceae	*Eucalyptus crebra*	narrow-leaved red ironbark		C		2/1
plants	land plants	Myrtaceae	*Eucalyptus dura*			C		2/2
plants	land plants	Myrtaceae	*Eucalyptus major*	mountain grey gum		C		1/1
plants	land plants	Myrtaceae	*Sannantha collina*			C		1/1
plants	land plants	Oleaceae	*Jasminum simplicifolium subsp. australiense*			C		1/1
plants	land plants	Oleaceae	*Notelaea microcarpa*			C		1/1

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plants	land plants	Oxalidaceae	*Oxalis chnoodes*			C		2/2
plants	land plants	Phyllanthaceae	*Bridelia leichhardtii*			C		1/1
plants	land plants	Phyllanthaceae	*Phyllanthus subcrenulatus*			C		1/1
plants	land plants	Pittosporaceae	*Pittosporum*					1
plants	land plants	Pittosporaceae	*Pittosporum angustifolium*			C		1/1
plants	land plants	Pittosporaceae	*Pittosporum viscidum*	black-fruited thornbush		C		1/1
plants	land plants	Plantaginaceae	*Callitriche sonderi*			C		1/1
plants	land plants	Plantaginaceae	*Gratiola pedunculata*			C		1/1
plants	land plants	Plumbaginaceae	*Plumbago zeylanica*	native plumbago		C		1/1
plants	land plants	Poaceae	*Aristida calycina var. filifolia*			C		1/1
plants	land plants	Poaceae	*Arundinella nepalensis*	reedgrass		C		2/2
plants	land plants	Poaceae	*Bothriochloa bladhii subsp. bladhii*			C		1/1
plants	land plants	Poaceae	*Bothriochloa decipiens var. decipiens*			C		1/1
plants	land plants	Poaceae	*Capillipedium spicigerum*	spicytop		C		1/1
plants	land plants	Poaceae	*Cenchrus purpurascens*			C		1/1
plants	land plants	Poaceae	*Chloris divaricata var. cynodontoides*			C		1/1
plants	land plants	Poaceae	*Chloris ventricosa*	tall chloris		C		1/1
plants	land plants	Poaceae	*Chrysopogon filipes*			C		1/1
plants	land plants	Poaceae	*Chrysopogon sylvaticus*			C		1/1
plants	land plants	Poaceae	*Cleistochloa subjuncea*			C		1/1
plants	land plants	Poaceae	*Cymbopogon refractus*	barbed-wire grass		C		2/2
plants	land plants	Poaceae	*Dichanthium sericeum subsp. sericeum*			C		1/1
plants	land plants	Poaceae	*Dichelachne montana*			C		2/2
plants	land plants	Poaceae	*Digitaria minima*			C		1/1
plants	land plants	Poaceae	*Echinopogon caespitosus var. caespitosus*	hedgehog grass		C		1/1
plants	land plants	Poaceae	*Eragrostis curvula*		Y			3/3
plants	land plants	Poaceae	*Eragrostis longipedicellata*			C		1/1
plants	land plants	Poaceae	*Eragrostis sororia*			C		2/2
plants	land plants	Poaceae	*Heteropogon contortus*	black speargrass		C		1/1
plants	land plants	Poaceae	*Imperata cylindrica*	blady grass		C		1/1
plants	land plants	Poaceae	*Microlaena stipoides var. stipoides*			C		1/1
plants	land plants	Poaceae	*Oplismenus aemulus*	creeping shade grass		C		1/1
plants	land plants	Poaceae	*Paspalidium distans*	shotgrass		C		1/1
plants	land plants	Poaceae	*Sarga leiocladum*			C		1/1
plants	land plants	Poaceae	*Sporobolus creber*			C		3/3
plants	land plants	Poaceae	*Sporobolus elongatus*			C		1/1
plants	land plants	Poaceae	*Themeda triandra*	kangaroo grass		C		1/1
plants	land plants	Poaceae	*Tripogon loliiformis*	five minute grass		C		2/2
plants	land plants	Poaceae	*Urochloa whiteana*			C		1/1
plants	land plants	Polygalaceae	*Polygala japonica*			C		1/1
plants	land plants	Polygalaceae	*Polygala triflora*			C		1/1
plants	land plants	Polygonaceae	*Persicaria decipiens*	slender knotweed		C		1/1
plants	land plants	Polygonaceae	*Rumex crispus*	curled dock	Y			1/1
plants	land plants	Polypodiaceae	*Pyrrosia rupestris*	rock felt fern		SL		1/1
plants	land plants	Portulacaceae	*Portulaca bicolor*			C		1/1
plants	land plants	Pteridaceae	*Adiantum atroviride*			SL		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Pteridaceae	*Cheilanthes distans*	bristly cloak fern		C		2/2
plants	land plants	Pteridaceae	*Cheilanthes sieberi subsp. sieberi*			C		2/2
plants	land plants	Pteridaceae	*Pellaea nana*			SL		1/1
plants	land plants	Ranunculaceae	*Ranunculus lappaceus*	common buttercup		C		1/1
plants	land plants	Ranunculaceae	*Ranunculus meristus*			C		1/1
plants	land plants	Ranunculaceae	*Ranunculus sessiliflorus var. sessiliflorus*			C		1/1
plants	land plants	Rhamnaceae	*Cryptandra longistaminea*			C		1/1
plants	land plants	Rosaceae	*Rubus parvifolius*	pink-flowered native raspberry		C		1/1
plants	land plants	Rubiaceae	*Everistia vacciniifolia var. vacciniifolia*			C		1/1
plants	land plants	Rubiaceae	*Opercularia hispida*	hairy stinkweed		C		1/1
plants	land plants	Rubiaceae	*Psydrax odorata forma subnitida*			C		1/1
plants	land plants	Rutaceae	*Acronychia laevis*	glossy acronychia		C		1/1
plants	land plants	Rutaceae	*Coatesia paniculata*			C		1/1
plants	land plants	Rutaceae	*Flindersia collina*	broad-leaved leopard tree		C		2/2
plants	land plants	Rutaceae	*Zieria aspalathoides subsp. aspalathoides*			C		1/1
plants	land plants	Salicaceae	*Casearia multinervosa*	casearia		C		1/1
plants	land plants	Samolaceae	*Samolus valerandi*	brookweed		C		1/1
plants	land plants	Santalaceae	*Exocarpos cupressiformis*	native cherry		C		1/1
plants	land plants	Santalaceae	*Korthalsella breviarticulata*			C		1/1
plants	land plants	Santalaceae	*Thesium australe*	toadflax		V	V	3/3
plants	land plants	Sapindaceae	*Cardiospermum*		Y	C		1
plants	land plants	Sapindaceae	*Dodonaea*					1
plants	land plants	Sapindaceae	*Elattostachys xylocarpa*	white tamarind		C		1/1
plants	land plants	Sapotaceae	*Planchonella cotinifolia var. cotinifolia*			C		1/1
plants	land plants	Scrophulariaceae	*Eremophila debilis*	winter apple		C		1/1
plants	land plants	Solanaceae	*Solanum*					1
plants	land plants	Solanaceae	*Solanum corifolium*	straggling nightshade		C		1/1
plants	land plants	Solanaceae	*Solanum nemophilum*			C		1/1
plants	land plants	Solanaceae	*Solanum seaforthianum*	Brazilian nightshade	Y			1
plants	land plants	Thymelaeaceae	*Pimelea curviflora subsp. divergens*			C		1/1
plants	land plants	Verbenaceae	*Lantana camara*	lantana	Y			4
plants	land plants	Violaceae	*Pigea stellarioides*			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.

Queensland Government

WildNet species list

Search Criteria: Species List for a Specified Point
Species: All
Type: All
Queensland status: All
Records: All
Date: Since 1980
Latitude: -26.5941
Longitude: 151.5207
Distance: 30
Email: mcastelli@ecosure.com.au
Date submitted: Tuesday 30 Apr 2024 16:13:31
Date extracted: Tuesday 30 Apr 2024 16:20:01

The number of records retrieved = 1443

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Bufonidae	*Rhinella marina*	cane toad	Y			13
animals	amphibians	Hylidae	*Cyclorana alboguttata*	greenstripe frog		C		1
animals	amphibians	Hylidae	*Cyclorana brevipes*	superb collared frog		C		1
animals	amphibians	Hylidae	*Litoria balatus*	slender bleating treefrog		C		5/2
animals	amphibians	Hylidae	*Litoria caerulea*	common green treefrog		C		5
animals	amphibians	Hylidae	*Litoria chloris*	orange eyed treefrog		C		1
animals	amphibians	Hylidae	*Litoria fallax*	eastern sedgefrog		C		38
animals	amphibians	Hylidae	*Litoria gracilenta*	graceful treefrog		C		1
animals	amphibians	Hylidae	*Litoria latopalmata*	broad palmed rocketfrog		C		15
animals	amphibians	Hylidae	*Litoria peronii*	emerald spotted treefrog		C		11
animals	amphibians	Hylidae	*Litoria rubella*	ruddy treefrog		C		4
animals	amphibians	Hylidae	*Litoria verreauxii*	whistling treefrog		C		10
animals	amphibians	Hylidae	*Litoria wilcoxii*	eastern stony creek frog		C		28
animals	amphibians	Limnodynastidae	*Limnodynastes peronii*	striped marshfrog		C		14
animals	amphibians	Limnodynastidae	*Limnodynastes sp.*			C		1
animals	amphibians	Limnodynastidae	*Limnodynastes tasmaniensis*	spotted grassfrog		C		10/1
animals	amphibians	Limnodynastidae	*Limnodynastes terraereginae*	scarlet sided pobblebonk		C		3
animals	amphibians	Limnodynastidae	*Platyplectrum ornatum*	ornate burrowing frog		C		1
animals	amphibians	Myobatrachidae	*Crinia parinsignifera*	beeping froglet		C		1
animals	amphibians	Myobatrachidae	*Crinia signifera*	clicking froglet		C		8
animals	amphibians	Myobatrachidae	*Mixophyes fasciolatus*	great barred frog		C		25
animals	amphibians	Myobatrachidae	*Mixophyes sp.*			C		2
animals	amphibians	Myobatrachidae	*Pseudophryne major*	great brown broodfrog		C		1
animals	amphibians	Myobatrachidae	*Pseudophryne sp.*			C		1
animals	amphibians	Myobatrachidae	*Uperoleia fusca*	dusky gungan		C		1
animals	amphibians	Myobatrachidae	*Uperoleia rugosa*	chubby gungan		C		1
animals	birds	Acanthizidae	*Acanthiza chrysorrhoa*	yellow-rumped thornbill		C		76
animals	birds	Acanthizidae	*Acanthiza lineata*	striated thornbill		C		6
animals	birds	Acanthizidae	*Acanthiza nana*	yellow thornbill		C		24
animals	birds	Acanthizidae	*Acanthiza pusilla*	brown thornbill		C		37
animals	birds	Acanthizidae	*Acanthiza reguloides*	buff-rumped thornbill		C		13
animals	birds	Acanthizidae	*Gerygone fusca*	western gerygone		C		19
animals	birds	Acanthizidae	*Gerygone mouki*	brown gerygone		C		42
animals	birds	Acanthizidae	*Gerygone olivacea*	white-throated gerygone		C		60
animals	birds	Acanthizidae	*Pyrrholaemus sagittatus*	speckled warbler		C		83
animals	birds	Acanthizidae	*Sericornis citreogularis*	yellow-throated scrubwren		C		26
animals	birds	Acanthizidae	*Sericornis frontalis*	white-browed scrubwren		C		108
animals	birds	Acanthizidae	*Sericornis magnirostra*	large-billed scrubwren		C		14
animals	birds	Acanthizidae	*Smicrornis brevirostris*	weebill		C		118
animals	birds	Accipitridae	*Accipiter fasciatus*	brown goshawk		C		82
animals	birds	Accipitridae	*Accipiter novaehollandiae*	grey goshawk		C		78
animals	birds	Accipitridae	*Aquila audax*	wedge-tailed eagle		C		78
animals	birds	Accipitridae	*Aviceda subcristata*	Pacific baza		C		8
animals	birds	Accipitridae	*Circus approximans*	swamp harrier		C		6
animals	birds	Accipitridae	*Elanus axillaris*	black-shouldered kite		C		15
animals	birds	Accipitridae	*Haliaeetus leucogaster*	white-bellied sea-eagle		C		4

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Accipitridae	*Haliastur sphenurus*	whistling kite		C		5
animals	birds	Accipitridae	*Hamirostra melanosternon*	black-breasted buzzard		C		2
animals	birds	Accipitridae	*Hieraaetus morphnoides*	little eagle		C		1
animals	birds	Accipitridae	*Lophoictinia isura*	square-tailed kite		C		1
animals	birds	Accipitridae	*Milvus migrans*	black kite		C		1
animals	birds	Acrocephalidae	*Acrocephalus australis*	Australian reed-warbler		C		1
animals	birds	Aegothelidae	*Aegotheles cristatus*	Australian owlet-nightjar		C		28
animals	birds	Alaudidae	*Mirafra javanica*	Horsfield's bushlark		C		4
animals	birds	Alcedinidae	*Dacelo novaeguineae*	laughing kookaburra		C		205
animals	birds	Alcedinidae	*Todiramphus macleayii*	forest kingfisher		C		6
animals	birds	Alcedinidae	*Todiramphus pyrrhopygius*	red-backed kingfisher		C		1
animals	birds	Alcedinidae	*Todiramphus sanctus*	sacred kingfisher		C		86
animals	birds	Anatidae	*Anas castanea*	chestnut teal		C		2
animals	birds	Anatidae	*Anas gracilis*	grey teal		C		20
animals	birds	Anatidae	*Anas superciliosa*	Pacific black duck		C		68
animals	birds	Anatidae	*Aythya australis*	hardhead		C		13
animals	birds	Anatidae	*Chenonetta jubata*	Australian wood duck		C		67
animals	birds	Anatidae	*Cygnus atratus*	black swan		C		8
animals	birds	Anatidae	*Dendrocygna arcuata*	wandering whistling-duck		C		1
animals	birds	Anatidae	*Dendrocygna eytoni*	plumed whistling-duck		C		5
animals	birds	Anatidae	*Malacorhynchus membranaceus*	pink-eared duck		C		6
animals	birds	Anatidae	*Nettapus coromandelianus*	cotton pygmy-goose		C		1
animals	birds	Anatidae	*Oxyura australis*	blue-billed duck		C		2
animals	birds	Anatidae	*Radjah radjah*	radjah shelduck		C		1
animals	birds	Anatidae	*Spatula rhynchotis*	Australasian shoveler		C		6
animals	birds	Anhingidae	*Anhinga novaehollandiae*	Australasian darter		C		8
animals	birds	Anseranatidae	*Anseranas semipalmata*	magpie goose		C		1
animals	birds	Apodidae	*Apus pacificus*	fork-tailed swift		SL		4
animals	birds	Apodidae	*Hirundapus caudacutus*	white-throated needletail		V	V	4
animals	birds	Ardeidae	*Ardea alba modesta*	eastern great egret		C		12
animals	birds	Ardeidae	*Ardea intermedia*	intermediate egret		C		4
animals	birds	Ardeidae	*Ardea pacifica*	white-necked heron		C		16
animals	birds	Ardeidae	*Botaurus poiciloptilus*	Australasian bittern		E	E	1
animals	birds	Ardeidae	*Bubulcus ibis*	cattle egret		C		8
animals	birds	Ardeidae	*Egretta garzetta*	little egret		C		5
animals	birds	Ardeidae	*Egretta novaehollandiae*	white-faced heron		C		54
animals	birds	Artamidae	*Artamus cinereus*	black-faced woodswallow		C		4
animals	birds	Artamidae	*Artamus cyanopterus*	dusky woodswallow		C		2
animals	birds	Artamidae	*Artamus leucorynchus*	white-breasted woodswallow		C		3
animals	birds	Artamidae	*Artamus minor*	little woodswallow		C		1
animals	birds	Artamidae	*Artamus personatus*	masked woodswallow		C		80
animals	birds	Artamidae	*Artamus superciliosus*	white-browed woodswallow		C		3
animals	birds	Artamidae	*Cracticus nigrogularis*	pied butcherbird		C		199
animals	birds	Artamidae	*Cracticus torquatus*	grey butcherbird		C		180
animals	birds	Artamidae	*Gymnorhina tibicen*	Australian magpie		C		250
animals	birds	Artamidae	*Strepera graculina*	pied currawong		C		257

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo		C		176
animals	birds	Cacatuidae	*Cacatua sanguinea*	little corella		C		4
animals	birds	Cacatuidae	*Calyptorhynchus banksii*	red-tailed black-cockatoo		C		13
animals	birds	Cacatuidae	*Calyptorhynchus lathami lathami*	glossy black-cockatoo (eastern)		V	V	4
animals	birds	Cacatuidae	*Eolophus roseicapilla*	galah		C		239
animals	birds	Cacatuidae	*Nymphicus hollandicus*	cockatiel		C		66
animals	birds	Cacatuidae	*Zanda funerea*	yellow-tailed black-cockatoo		C		21
animals	birds	Campephagidae	*Coracina maxima*	ground cuckoo-shrike		C		6
animals	birds	Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike		C		192
animals	birds	Campephagidae	*Coracina papuensis*	white-bellied cuckoo-shrike		C		7
animals	birds	Campephagidae	*Edolisoma tenuirostre*	common cicadabird		C		30
animals	birds	Campephagidae	*Lalage leucomela*	varied triller		C		36
animals	birds	Campephagidae	*Lalage tricolor*	white-winged triller		C		28
animals	birds	Casuariidae	*Dromaius novaehollandiae*	emu		C		1
animals	birds	Charadriidae	*Elseyornis melanops*	black-fronted dotterel		C		8
animals	birds	Charadriidae	*Erythrogonys cinctus*	red-kneed dotterel		C		2
animals	birds	Charadriidae	*Vanellus miles*	masked lapwing		C		23
animals	birds	Charadriidae	*Vanellus miles novaehollandiae*	masked lapwing (southern subspecies)		C		20
animals	birds	Charadriidae	*Vanellus tricolor*	banded lapwing		C		3
animals	birds	Ciconiidae	*Ephippiorhynchus asiaticus*	black-necked stork		C		2
animals	birds	Cisticolidae	*Cisticola exilis*	golden-headed cisticola		C		8
animals	birds	Climacteridae	*Climacteris picumnus*	brown treecreeper		C		80
animals	birds	Climacteridae	*Cormobates leucophaea*	white-throated treecreeper		C		52
animals	birds	Climacteridae	*Cormobates leucophaea metastasis*	white-throated treecreeper (southern)		C		45
animals	birds	Columbidae	*Chalcophaps longirostris*	Pacific emerald dove		C		79
animals	birds	Columbidae	*Columba leucomela*	white-headed pigeon		C		6
animals	birds	Columbidae	*Columba livia*	rock dove	Y			3
animals	birds	Columbidae	*Geopelia cuneata*	diamond dove		C		1
animals	birds	Columbidae	*Geopelia humeralis*	bar-shouldered dove		C		174
animals	birds	Columbidae	*Geopelia placida*	peaceful dove		C		168
animals	birds	Columbidae	*Geophaps plumifera*	spinifex pigeon		C		1
animals	birds	Columbidae	*Leucosarcia melanoleuca*	wonga pigeon		C		20
animals	birds	Columbidae	*Lopholaimus antarcticus*	topknot pigeon		C		14
animals	birds	Columbidae	*Macropygia phasianella*	brown cuckoo-dove		C		27
animals	birds	Columbidae	*Ocyphaps lophotes*	crested pigeon		C		210
animals	birds	Columbidae	*Phaps chalcoptera*	common bronzewing		C		13
animals	birds	Columbidae	*Ptilinopus magnificus*	wompoo fruit-dove		C		2
animals	birds	Columbidae	*Ptilinopus regina*	rose-crowned fruit-dove		C		4
animals	birds	Columbidae	*Spilopelia chinensis*	spotted dove	Y			4
animals	birds	Coraciidae	*Eurystomus orientalis*	dollarbird		C		64
animals	birds	Corcoracidae	*Corcorax melanorhamphos*	white-winged chough		C		40
animals	birds	Corcoracidae	*Struthidea cinerea*	apostlebird		C		168
animals	birds	Corvidae	*Corvus coronoides*	Australian raven		C		115
animals	birds	Corvidae	*Corvus orru*	Torresian crow		C		220
animals	birds	Corvidae	*Corvus sp.*			C		5
animals	birds	Cuculidae	*Cacomantis flabelliformis*	fan-tailed cuckoo		C		55

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Cuculidae	*Cacomantis pallidus*	pallid cuckoo		C		11
animals	birds	Cuculidae	*Cacomantis variolosus*	brush cuckoo		C		23
animals	birds	Cuculidae	*Centropus phasianinus*	pheasant coucal		C		128
animals	birds	Cuculidae	*Chalcites basalis*	Horsfield's bronze-cuckoo		C		7
animals	birds	Cuculidae	*Chalcites lucidus*	shining bronze-cuckoo		C		13
animals	birds	Cuculidae	*Chalcites minutillus barnardi*	Eastern little bronze-cuckoo		C		1
animals	birds	Cuculidae	*Chalcites osculans*	black-eared cuckoo		C		1
animals	birds	Cuculidae	*Eudynamys orientalis*	eastern koel		C		43
animals	birds	Cuculidae	*Scythrops novaehollandiae*	channel-billed cuckoo		C		32
animals	birds	Dicaeidae	*Dicaeum hirundinaceum*	mistletoebird		C		143
animals	birds	Dicruridae	*Dicrurus bracteatus*	spangled drongo		C		51
animals	birds	Estrildidae	*Lonchura castaneothorax*	chestnut-breasted mannikin		C		11
animals	birds	Estrildidae	*Neochmia modesta*	plum-headed finch		C		14
animals	birds	Estrildidae	*Neochmia temporalis*	red-browed finch		C		94
animals	birds	Estrildidae	*Taeniopygia bichenovii*	double-barred finch		C		189
animals	birds	Estrildidae	*Taeniopygia guttata*	zebra finch		C		17
animals	birds	Eurostopodidae	*Eurostopodus mystacalis*	white-throated nightjar		C		6
animals	birds	Falconidae	*Falco berigora*	brown falcon		C		3
animals	birds	Falconidae	*Falco cenchroides*	nankeen kestrel		C		33
animals	birds	Falconidae	*Falco longipennis*	Australian hobby		C		3
animals	birds	Falconidae	*Falco peregrinus macropus*	Australian peregrine falcon		C		6
animals	birds	Falcunculidae	*Falcunculus frontatus*	crested shrike-tit		C		6
animals	birds	Hirundinidae	*Cheramoeca leucosterna*	white-backed swallow		C		1
animals	birds	Hirundinidae	*Hirundo neoxena*	welcome swallow		C		36
animals	birds	Hirundinidae	*Petrochelidon ariel*	fairy martin		C		7
animals	birds	Hirundinidae	*Petrochelidon nigricans*	tree martin		C		16
animals	birds	Jacanidae	*Irediparra gallinacea*	comb-crested jacana		C		3
animals	birds	Laridae	*Chlidonias hybrida*	whiskered tern		C		1
animals	birds	Laridae	*Hydroprogne caspia*	Caspian tern		SL		2
animals	birds	Locustellidae	*Cincloramphus cruralis*	brown songlark		C		2
animals	birds	Locustellidae	*Cincloramphus mathewsi*	rufous songlark		C		3
animals	birds	Locustellidae	*Cincloramphus timoriensis*	tawny grassbird		C		3
animals	birds	Maluridae	*Malurus cyaneus*	superb fairy-wren		C		180
animals	birds	Maluridae	*Malurus lamberti*	variegated fairy-wren		C		117
animals	birds	Maluridae	*Malurus lamberti sensu lato*	variegated fairy-wren		C		44
animals	birds	Maluridae	*Malurus melanocephalus*	red-backed fairy-wren		C		82
animals	birds	Megapodiidae	*Alectura lathami*	Australian brush-turkey		C		39
animals	birds	Meliphagidae	*Acanthagenys rufogularis*	spiny-cheeked honeyeater		C		23
animals	birds	Meliphagidae	*Acanthorhynchus tenuirostris*	eastern spinebill		C		34
animals	birds	Meliphagidae	*Anthochaera carunculata*	red wattlebird		C		1
animals	birds	Meliphagidae	*Caligavis chrysops*	yellow-faced honeyeater		C		58
animals	birds	Meliphagidae	*Entomyzon cyanotis*	blue-faced honeyeater		C		153
animals	birds	Meliphagidae	*Grantiella picta*	painted honeyeater		V	V	1
animals	birds	Meliphagidae	*Lichenostomus melanops*	yellow-tufted honeyeater		C		3
animals	birds	Meliphagidae	*Lichmera indistincta*	brown honeyeater		C		153
animals	birds	Meliphagidae	*Manorina flavigula*	yellow-throated miner		C		4

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Meliphagidae	*Manorina melanocephala*	noisy miner		C		221
animals	birds	Meliphagidae	*Manorina melanophrys*	bell miner		C		1
animals	birds	Meliphagidae	*Meliphaga lewinii*	Lewin's honeyeater		C		236
animals	birds	Meliphagidae	*Melithreptus albogularis*	white-throated honeyeater		C		75
animals	birds	Meliphagidae	*Melithreptus brevirostris*	brown-headed honeyeater		C		12
animals	birds	Meliphagidae	*Melithreptus gularis*	black-chinned honeyeater		C		6
animals	birds	Meliphagidae	*Melithreptus lunatus*	white-naped honeyeater		C		5
animals	birds	Meliphagidae	*Myzomela sanguinolenta*	scarlet honeyeater		C		25
animals	birds	Meliphagidae	*Nesoptilotis leucotis*	white-eared honeyeater		C		10
animals	birds	Meliphagidae	*Philemon citreogularis*	little friarbird		C		105
animals	birds	Meliphagidae	*Philemon corniculatus*	noisy friarbird		C		125
animals	birds	Meliphagidae	*Plectorhyncha lanceolata*	striped honeyeater		C		119
animals	birds	Meliphagidae	*Ptilotula fusca*	fuscous honeyeater		C		6
animals	birds	Meliphagidae	*Ptilotula penicillata*	white-plumed honeyeater		C		3
animals	birds	Meropidae	*Merops ornatus*	rainbow bee-eater		C		77
animals	birds	Monarchidae	*Grallina cyanoleuca*	magpie-lark		C		233
animals	birds	Monarchidae	*Monarcha melanopsis*	black-faced monarch		SL		83
animals	birds	Monarchidae	*Myiagra cyanoleuca*	satin flycatcher		SL		27
animals	birds	Monarchidae	*Myiagra inquieta*	restless flycatcher		C		36
animals	birds	Monarchidae	*Myiagra rubecula*	leaden flycatcher		C		76
animals	birds	Monarchidae	*Symposiachrus trivirgatus*	spectacled monarch		SL		4
animals	birds	Motacillidae	*Anthus novaeseelandiae*	Australasian pipit		C		4
animals	birds	Neosittidae	*Daphoenositta chrysoptera*	varied sittella		C		102
animals	birds	Oriolidae	*Oriolus sagittatus*	olive-backed oriole		C		72
animals	birds	Oriolidae	*Sphecotheres vieilloti*	Australasian figbird		C		51
animals	birds	Otididae	*Ardeotis australis*	Australian bustard		C		8
animals	birds	Pachycephalidae	*Colluricincla harmonica*	grey shrike-thrush		C		151
animals	birds	Pachycephalidae	*Colluricincla megarhyncha*	little shrike-thrush		C		4
animals	birds	Pachycephalidae	*Pachycephala pectoralis*	golden whistler		C		130
animals	birds	Pachycephalidae	*Pachycephala rufiventris*	rufous whistler		C		137
animals	birds	Pandionidae	*Pandion haliaetus cristatus*	eastern osprey		SL		1
animals	birds	Paradisaeidae	*Ptiloris paradiseus*	paradise riflebird		C		19
animals	birds	Pardalotidae	*Pardalotus punctatus*	spotted pardalote		C		47
animals	birds	Pardalotidae	*Pardalotus striatus*	striated pardalote		C		207
animals	birds	Passeridae	*Passer domesticus*	house sparrow	Y			5
animals	birds	Pelecanidae	*Pelecanus conspicillatus*	Australian pelican		C		8
animals	birds	Petroicidae	*Eopsaltria australis*	eastern yellow robin		C		190
animals	birds	Petroicidae	*Microeca fascinans*	jacky winter		C		25
animals	birds	Petroicidae	*Petroica goodenovii*	red-capped robin		C		4
animals	birds	Petroicidae	*Petroica rosea*	rose robin		C		22
animals	birds	Petroicidae	*Tregellasia capito*	pale-yellow robin		C		1
animals	birds	Phalacrocoracidae	*Microcarbo melanoleucos*	little pied cormorant		C		16
animals	birds	Phalacrocoracidae	*Phalacrocorax carbo*	great cormorant		C		3
animals	birds	Phalacrocoracidae	*Phalacrocorax sulcirostris*	little black cormorant		C		7
animals	birds	Phalacrocoracidae	*Phalacrocorax varius*	pied cormorant		C		5
animals	birds	Phasianidae	*Coturnix pectoralis*	stubble quail		C		2

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animals	birds	Phasianidae	*Pavo cristatus*	Indian peafowl	Y			1
animals	birds	Phasianidae	*Synoicus ypsilophorus*	brown quail		C		77
animals	birds	Pittidae	*Pitta versicolor*	noisy pitta		C		12
animals	birds	Podargidae	*Podargus strigoides*	tawny frogmouth		C		99
animals	birds	Podicipedidae	*Podiceps cristatus*	great crested grebe		C		5
animals	birds	Podicipedidae	*Tachybaptus novaehollandiae*	Australasian grebe		C		35
animals	birds	Pomatostomidae	*Pomatostomus temporalis*	grey-crowned babbler		C		81
animals	birds	Psittaculidae	*Alisterus scapularis*	Australian king-parrot		C		177
animals	birds	Psittaculidae	*Aprosmictus erythropterus*	red-winged parrot		C		118
animals	birds	Psittaculidae	*Glossopsitta concinna*	musk lorikeet		C		1
animals	birds	Psittaculidae	*Melopsittacus undulatus*	budgerigar		C		3
animals	birds	Psittaculidae	*Northiella haematogaster*	blue bonnet		C		2
animals	birds	Psittaculidae	*Parvipsitta pusilla*	little lorikeet		C		15
animals	birds	Psittaculidae	*Platycercus adscitus*	pale-headed rosella		C		206
animals	birds	Psittaculidae	*Platycercus adscitus palliceps*	pale-headed rosella (southern form)		C		1
animals	birds	Psittaculidae	*Platycercus elegans*	crimson rosella		C		32
animals	birds	Psittaculidae	*Platycercus eximius*	eastern rosella		C		2
animals	birds	Psittaculidae	*Psephotus haematonotus*	red-rumped parrot		C		26
animals	birds	Psittaculidae	*Trichoglossus chlorolepidotus*	scaly-breasted lorikeet		C		78
animals	birds	Psittaculidae	*Trichoglossus moluccanus*	rainbow lorikeet		C		181
animals	birds	Psophodidae	*Psophodes olivaceus*	eastern whipbird		C		106
animals	birds	Ptilonorhynchidae	*Ailuroedus crassirostris*	green catbird		C		17
animals	birds	Ptilonorhynchidae	*Chlamydera maculata*	spotted bowerbird		C		2
animals	birds	Ptilonorhynchidae	*Ptilonorhynchus violaceus*	satin bowerbird		C		174
animals	birds	Ptilonorhynchidae	*Sericulus chrysocephalus*	regent bowerbird		C		46
animals	birds	Rallidae	*Fulica atra*	Eurasian coot		C		18
animals	birds	Rallidae	*Gallinula tenebrosa*	dusky moorhen		C		7
animals	birds	Rallidae	*Gallirallus philippensis*	buff-banded rail		C		2
animals	birds	Rallidae	*Porphyrio melanotus*	purple swamphen		C		5
animals	birds	Rallidae	*Tribonyx ventralis*	black-tailed native-hen		C		1
animals	birds	Recurvirostridae	*Himantopus leucocephalus*	pied stilt		C		13
animals	birds	Rhipiduridae	*Rhipidura albiscapa*	grey fantail		C		178
animals	birds	Rhipiduridae	*Rhipidura leucophrys*	willie wagtail		C		217
animals	birds	Rhipiduridae	*Rhipidura rufifrons*	rufous fantail		SL		65
animals	birds	Scolopacidae	*Calidris acuminata*	sharp-tailed sandpiper		SL	V	3
animals	birds	Scolopacidae	*Tringa stagnatilis*	marsh sandpiper		SL		1
animals	birds	Strigidae	*Ninox boobook*	southern boobook		C		126
animals	birds	Strigidae	*Ninox connivens*	barking owl		C		1
animals	birds	Strigidae	*Ninox strenua*	powerful owl		V		16
animals	birds	Sturnidae	*Acridotheres tristis*	common myna	Y			6
animals	birds	Sturnidae	*Sturnus vulgaris*	common starling	Y			17
animals	birds	Threskiornithidae	*Platalea flavipes*	yellow-billed spoonbill		C		12
animals	birds	Threskiornithidae	*Platalea regia*	royal spoonbill		C		3
animals	birds	Threskiornithidae	*Plegadis falcinellus*	glossy ibis		SL		3
animals	birds	Threskiornithidae	*Threskiornis molucca*	Australian white ibis		C		16
animals	birds	Threskiornithidae	*Threskiornis spinicollis*	straw-necked ibis		C		35

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animals	birds	Turdidae	*Zoothera heinei*	russet-tailed thrush		C		6
animals	birds	Turdidae	*Zoothera lunulata*	Bassian thrush		C		6
animals	birds	Turdidae	*Zoothera sp.*			C		2/2
animals	birds	Turnicidae	*Turnix melanogaster*	black-breasted button-quail		V	V	21
animals	birds	Tytonidae	*Tyto javanica*	eastern barn owl		C		13
animals	birds	Tytonidae	*Tyto novaehollandiae*	masked owl		C		2
animals	birds	Tytonidae	*Tyto tenebricosa tenebricosa*	sooty owl		C		2
animals	birds	Zosteropidae	*Zosterops lateralis*	silvereye		C		178
animals	insects	Aeshnidae	*Anax papuensis*	Australian Emperor				1
animals	insects	Coenagrionidae	*Ischnura heterosticta heterosticta*	common bluetail				1
animals	insects	Coenagrionidae	*Pseudagrion aureofrons*	gold-fronted riverdamsel				1
animals	insects	Coenagrionidae	*Xanthagrion erythroneurum*	red & blue damsel				1
animals	insects	Hesperiidae	*Anisynta tillyardi*	chequered grass-skipper				1
animals	insects	Hesperiidae	*Dispar compacta*	barred skipper				1
animals	insects	Hesperiidae	*Ocybadistes walkeri sothis*	green grass-dart				1
animals	insects	Hesperiidae	*Suniana lascivia lascivia*	dark grass-dart				1
animals	insects	Libellulidae	*Crocothemis nigrifrons*	black-headed skimmer				1
animals	insects	Libellulidae	*Diplacodes bipunctata*	wandering percher				2
animals	insects	Libellulidae	*Orthetrum caledonicum*	blue skimmer				1
animals	insects	Libellulidae	*Tramea loewii*	common glider				1
animals	insects	Lycaenidae	*Acrodipsas cuprea variabilis*	copper ant-blue				1
animals	insects	Lycaenidae	*Nacaduba biocellata biocellata*	two-spotted line-blue				1
animals	insects	Lycaenidae	*Prosotas felderi*	short-tailed line-blue				1
animals	insects	Lycaenidae	*Theclinesthes serpentatus serpentatus*	salt-bush blue				2
animals	insects	Lycaenidae	*Zizina otis labradus*	common grass-blue (Australian subspecies)				2
animals	insects	Nymphalidae	*Acraea andromacha andromacha*	glasswing				2
animals	insects	Nymphalidae	*Charaxes sempronius sempronius*	tailed emperor				1
animals	insects	Nymphalidae	*Danaus petilia*	lesser wanderer				3
animals	insects	Nymphalidae	*Danaus plexippus*	monarch	Y			2
animals	insects	Nymphalidae	*Euploea corinna*	common crow				1
animals	insects	Nymphalidae	*Geitoneura acantha*	ringed xenica				2
animals	insects	Nymphalidae	*Hypocysta adiante adiante*	orange ringlet				1
animals	insects	Nymphalidae	*Hypocysta metirius*	brown ringlet				2
animals	insects	Nymphalidae	*Junonia villida villida*	meadow argus				2
animals	insects	Nymphalidae	*Melanitis leda bankia*	evening brown				1
animals	insects	Papilionidae	*Graphium choredon*	blue triangle				1
animals	insects	Papilionidae	*Graphium eurypylus*	pale triangle				1
animals	insects	Papilionidae	*Papilio aegeus aegeus*	orchard swallowtail (Australian subspecies)				1
animals	insects	Papilionidae	*Papilio demoleus sthenelus*	chequered swallowtail				2
animals	insects	Pieridae	*Belenois java teutonia*	caper white				1
animals	insects	Pieridae	*Catopsilia pyranthe crokera*	white migrant				1
animals	insects	Pieridae	*Cepora perimale*					1
animals	insects	Pieridae	*Cepora perimale scyllara*	caper gull (Australian subspecies)				1
animals	insects	Pieridae	*Delias argenthona argenthona*	scarlet jezebel				2

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animals	insects	Pieridae	*Delias nysa nysa*	yellow-spotted jezebel (Australian subspecies)				1
animals	insects	Pieridae	*Elodina angulipennis*	southern pearl-white				2
animals	insects	Pieridae	*Elodina parthia*	striated pearl-white				2
animals	insects	Pieridae	*Eurema hecabe*	large grass-yellow				1
animals	insects	Pieridae	*Eurema smilax*	small grass-yellow				2
animals	insects	Pieridae	*Pieris rapae*	cabbage white	Y			1
animals	insects	Telephlebiidae	*Austroaeschna sigma*	sigma darner				1
animals	mammals	Canidae	*Canis familiaris*	dog	Y			7
animals	mammals	Dasyuridae	*Antechinus flavipes flavipes*	yellow-footed antechinus (south-east Queensland)		C		5
animals	mammals	Dasyuridae	*Dasyurus hallucatus*	northern quoll		C	E	1
animals	mammals	Dasyuridae	*Dasyurus maculatus maculatus*	spotted-tailed quoll (southern subspecies)		E	E	2
animals	mammals	Dasyuridae	*Sminthopsis murina*	common dunnart		C		2
animals	mammals	Emballonuridae	*Saccolaimus flaviventris*	yellow-bellied sheathtail bat		C		4
animals	mammals	Felidae	*Felis catus*	cat	Y			7
animals	mammals	Leporidae	*Lepus europaeus*	European brown hare	Y			3
animals	mammals	Leporidae	*Oryctolagus cuniculus*	rabbit	Y			4
animals	mammals	Macropodidae	*Macropus giganteus*	eastern grey kangaroo		C		6
animals	mammals	Macropodidae	*Notamacropus dorsalis*	black-striped wallaby		C		6
animals	mammals	Macropodidae	*Notamacropus parryi*	whiptail wallaby		C		5
animals	mammals	Macropodidae	*Notamacropus rufogriseus*	red-necked wallaby		C		6
animals	mammals	Macropodidae	*Thylogale stigmatica*	red-legged pademelon		C		1
animals	mammals	Macropodidae	*Wallabia bicolor*	swamp wallaby		C		8
animals	mammals	Miniopteridae	*Miniopterus australis*	little bent-wing bat		C		4
animals	mammals	Miniopteridae	*Miniopterus schreibersii oceanensis*	eastern bent-wing bat		C		7
animals	mammals	Molossidae	*Austronomus australis*	white-striped freetail bat		C		1
animals	mammals	Molossidae	*Mormopterus lumsdenae*	northern free-tailed bat		C		1
animals	mammals	Molossidae	*Mormopterus ridei*	eastern free-tailed bat		C		1
animals	mammals	Molossidae	*Mormopterus sp.*			C		2
animals	mammals	Muridae	*Melomys cervinipes*	fawn-footed melomys		C		6
animals	mammals	Muridae	*Mus musculus*	house mouse	Y			11
animals	mammals	Muridae	*Pseudomys gracilicaudatus*	eastern chestnut mouse		C		1
animals	mammals	Muridae	*Rattus fuscipes*	bush rat		C		7
animals	mammals	Muridae	*Rattus lutreolus*	swamp rat		C		1
animals	mammals	Muridae	*Rattus sp.*			C		2
animals	mammals	Muridae	*Rattus tunneyi*	pale field-rat		C		1
animals	mammals	Peramelidae	*Isoodon macrourus*	northern brown bandicoot		C		14
animals	mammals	Peramelidae	*Perameles nasuta*	long-nosed bandicoot		C		3
animals	mammals	Petauridae	*Petaurus australis australis*	yellow-bellied glider (southern subspecies)		V	V	2
animals	mammals	Petauridae	*Petaurus norfolcensis*	squirrel glider		C		2
animals	mammals	Phalangeridae	*Trichosurus caninus*	short-eared possum		C		8
animals	mammals	Phalangeridae	*Trichosurus vulpecula*	common brushtail possum		C		23
animals	mammals	Phascolarctidae	*Phascolarctos cinereus*	koala		E	E	32

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animals	mammals	Potoroidae	*Aepyprymnus rufescens*	rufous bettong		C		12
animals	mammals	Pseudocheiridae	*Petauroides volans volans*	southern greater glider		E	E	10
animals	mammals	Pseudocheiridae	*Pseudocheirus peregrinus*	common ringtail possum		C		2
animals	mammals	Pteropodidae	*Pteropus alecto*	black flying-fox		C		5
animals	mammals	Pteropodidae	*Pteropus poliocephalus*	grey-headed flying-fox		C	V	8
animals	mammals	Pteropodidae	*Pteropus scapulatus*	little red flying-fox		C		12
animals	mammals	Pteropodidae	*Pteropus sp.*	flying-fox		C		1
animals	mammals	Suidae	*Sus scrofa*	pig	Y			2
animals	mammals	Tachyglossidae	*Tachyglossus aculeatus*	short-beaked echidna		SL		5
animals	mammals	Vespertilionidae	*Chalinolobus gouldii*	Gould's wattled bat		C		5
animals	mammals	Vespertilionidae	*Chalinolobus morio*	chocolate wattled bat		C		13
animals	mammals	Vespertilionidae	*Chalinolobus picatus*	little pied bat		C		2
animals	mammals	Vespertilionidae	*Kerivoula papuensis*	golden-tipped bat		C		5
animals	mammals	Vespertilionidae	*Nyctophilus geoffroyi*	lesser long-eared bat		C		8
animals	mammals	Vespertilionidae	*Nyctophilus gouldi*	Gould's long-eared bat		C		26
animals	mammals	Vespertilionidae	*Scoteanax rueppellii*	greater broad-nosed bat		C		1
animals	mammals	Vespertilionidae	*Scotorepens greyii*	little broad-nosed bat		C		4
animals	mammals	Vespertilionidae	*Vespadelus baverstocki*	inland forest bat		C		5
animals	mammals	Vespertilionidae	*Vespadelus pumilus*	eastern forest bat		C		17
animals	mammals	Vespertilionidae	*Vespadelus vulturnus*	little forest bat		C		3
animals	ray-finned fishes	Ambassidae	*Ambassis agassizii*	Agassiz's glassfish				1
animals	ray-finned fishes	Atherinidae	*Craterocephalus marjoriae*	silverstreak hardyhead				2
animals	ray-finned fishes	Eleotridae	*Hypseleotris galii*	firetail gudgeon				1
animals	ray-finned fishes	Eleotridae	*Hypseleotris sp.*					1
animals	ray-finned fishes	Eleotridae	*Mogurnda adspersa*	southern purplespotted gudgeon				2
animals	ray-finned fishes	Melanotaeniidae	*Melanotaenia duboulayi*	crimsonspotted rainbowfish				2
animals	ray-finned fishes	Plotosidae	*Tandanus tandanus*	freshwater catfish				1
animals	ray-finned fishes	Terapontidae	*Leiopotherapon unicolor*	spangled perch				1
animals	reptiles	Agamidae	*Intellagama lesueurii*	eastern water dragon		C		6
animals	reptiles	Agamidae	*Pogona barbata*	bearded dragon		C		8
animals	reptiles	Boidae	*Antaresia maculosa*	spotted python		C		1
animals	reptiles	Boidae	*Morelia spilota*	carpet python		C		9
animals	reptiles	Carphodactylidae	*Underwoodisaurus milii*	thick-tailed gecko		C		4
animals	reptiles	Chelidae	*Chelodina longicollis*	eastern snake-necked turtle		C		4/4
animals	reptiles	Diplodactylidae	*Diplodactylus vittatus*	wood gecko		C		4
animals	reptiles	Diplodactylidae	*Oedura tryoni*	southern spotted velvet gecko		C		7
animals	reptiles	Elapidae	*Cacophis krefftii*	dwarf crowned snake		C		1
animals	reptiles	Elapidae	*Cryptophis nigrescens*	eastern small-eyed snake		C		5
animals	reptiles	Elapidae	*Furina dunmalli*	Dunmall's snake		V	V	1/1
animals	reptiles	Elapidae	*Hemiaspis signata*	black-bellied swamp snake		C		1
animals	reptiles	Elapidae	*Hoplocephalus bitorquatus*	pale-headed snake		C		1
animals	reptiles	Elapidae	*Notechis scutatus*	eastern tiger snake		C		2
animals	reptiles	Elapidae	*Pseudechis guttatus*	spotted black snake		C		3
animals	reptiles	Elapidae	*Pseudechis porphyriacus*	red-bellied black snake		C		1
animals	reptiles	Elapidae	*Pseudonaja textilis*	eastern brown snake		C		1
animals	reptiles	Gekkonidae	*Gehyra dubia*	dubious dtella		C		2

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animals	reptiles	Gekkonidae	*Heteronotia binoei*	Bynoe's gecko		C		10
animals	reptiles	Pygopodidae	*Delma torquata*	collared delma		V	V	1
animals	reptiles	Scincidae	*Anomalopus verreauxii*	three-clawed worm-skink		C		4
animals	reptiles	Scincidae	*Calyptotis scutirostrum*	scute-snouted calyptotis		C		11
animals	reptiles	Scincidae	*Carlia pectoralis*	open-litter rainbow skink		C		1
animals	reptiles	Scincidae	*Carlia pectoralis sensu lato*			C		6
animals	reptiles	Scincidae	*Carlia vivax*	tussock rainbow-skink		C		2
animals	reptiles	Scincidae	*Concinnia tenuis*	bar-sided skink		C		1
animals	reptiles	Scincidae	*Cryptoblepharus pannosus*	ragged snake-eyed skink		C		1
animals	reptiles	Scincidae	*Cryptoblepharus pulcher pulcher*	elegant snake-eyed skink		C		10
animals	reptiles	Scincidae	*Ctenotus spaldingi*	straight-browed ctenotus		C		2
animals	reptiles	Scincidae	*Egernia striolata*	tree skink		C		2/1
animals	reptiles	Scincidae	*Lampropholis colossus*	Bunya sunskink		NT		8
animals	reptiles	Scincidae	*Lampropholis delicata*	dark-flecked garden sunskink		C		1
animals	reptiles	Scincidae	*Lampropholis guichenoti*	pale-flecked garden sunskink		C		1
animals	reptiles	Scincidae	*Lerista fragilis*	eastern mulch slider		C		2/1
animals	reptiles	Scincidae	*Lerista sp.*			C		1
animals	reptiles	Scincidae	*Lerista timida*	timid slider		C		4/2
animals	reptiles	Scincidae	*Lygisaurus foliorum*	tree-base litter-skink		C		12
animals	reptiles	Scincidae	*Morethia boulengeri*	south-eastern morethia skink		C		3
animals	reptiles	Scincidae	*Saiphos equalis*	three-toed skink		C		3
animals	reptiles	Scincidae	*Tiliqua scincoides scincoides*	eastern bluetongue		C		2
animals	reptiles	Typhlopidae	*Anilios sp.*			C		3
animals	reptiles	Varanidae	*Varanus gouldii*	sand monitor		C		3
animals	reptiles	Varanidae	*Varanus panoptes*	yellow-spotted monitor		C		2
animals	reptiles	Varanidae	*Varanus tristis*	black-tailed monitor		C		1
animals	reptiles	Varanidae	*Varanus varius*	lace monitor		C		19
animals	uncertain	Indeterminate	*Indeterminate*	Unknown or Code Pending				5
fungi	Agaricomycetes	Agaricaceae	*Agaricus*					1/1
fungi	Agaricomycetes	Agaricaceae	*Calvatia lilacina*			C		2/1
fungi	Agaricomycetes	Agaricaceae	*Chlorophyllum*					1/1
fungi	Agaricomycetes	Agaricaceae	*Chlorophyllum molybdites*	green-spored parasol		C		1/1
fungi	Agaricomycetes	Agaricaceae	*Coprinus truncorum*			C		1/1
fungi	Agaricomycetes	Agaricaceae	*Lepiota*					10/10
fungi	Agaricomycetes	Agaricaceae	*Macrolepiota clelandii*			C		1/1
fungi	Agaricomycetes	Agaricaceae	*Macrolepiota konradii*			C		1/1
fungi	Agaricomycetes	Amanitaceae	*Amanita*			C		3/3
fungi	Agaricomycetes	Amanitaceae	*Amanita pyramidifera*			C		1/1
fungi	Agaricomycetes	Amanitaceae	*Amanita subvaginata*			C		1/1
fungi	Agaricomycetes	Amanitaceae	*Amanita xanthocephala*			C		1/1
fungi	Agaricomycetes	Aphelariaceae	*Aphelaria complanata*			C		1/1
fungi	Agaricomycetes	Auriculariaceae	*Auricularia*					1/1
fungi	Agaricomycetes	Auriculariaceae	*Auricularia auricula-judae*			C		2/2
fungi	Agaricomycetes	Auriculariaceae	*Auricularia cornea*			C		1/1
fungi	Agaricomycetes	Auriscalpiaceae	*Lentinellus*					2/2
fungi	Agaricomycetes	Auriscalpiaceae	*Lentinellus ursinus*			C		2/2

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fungi	Agaricomycetes	Bolbitiaceae	*Descolea recedens*			C		3/3
fungi	Agaricomycetes	Bolbitiaceae	*Setchelliogaster*					1/1
fungi	Agaricomycetes	Boletaceae	*Boletus*					3/3
fungi	Agaricomycetes	Boletaceae	*Phylloporus*					1/1
fungi	Agaricomycetes	Botryobasidiaceae	*Botryobasidium*			C		2/2
fungi	Agaricomycetes	Cantharellaceae	*Cantharellus*					1/1
fungi	Agaricomycetes	Clavariaceae	*Clavaria*					2/2
fungi	Agaricomycetes	Clavulinaceae	*Clavulina*			C		1/1
fungi	Agaricomycetes	Coniophoraceae	*Gyrodontium sacchari*			C		2/2
fungi	Agaricomycetes	Corticiaceae	*Corticium*			C		1/1
fungi	Agaricomycetes	Cortinariaceae	*Cortinarius*					12/12
fungi	Agaricomycetes	Cortinariaceae	*Crepidotus nephrodes*			C		3/3
fungi	Agaricomycetes	Cortinariaceae	*Gymnopilus*					1/1
fungi	Agaricomycetes	Crepidotaceae	*Crepidotus*					12/12
fungi	Agaricomycetes	Crepidotaceae	*Crepidotus applanatus*			C		1/1
fungi	Agaricomycetes	Entolomataceae	*Clitopilus*					1/1
fungi	Agaricomycetes	Entolomataceae	*Entoloma*					9/9
fungi	Agaricomycetes	Entolomataceae	*Rhodocybe*					1/1
fungi	Agaricomycetes	Fomitopsidaceae	*Postia*					1/1
fungi	Agaricomycetes	Ganodermataceae	*Amauroderma rude*			C		2/2
fungi	Agaricomycetes	Ganodermataceae	*Ganoderma australe*			C		1/1
fungi	Agaricomycetes	Geastraceae	*Geastrum australe*			C		2/2
fungi	Agaricomycetes	Geastraceae	*Geastrum pectinatum*			C		2/2
fungi	Agaricomycetes	Gloeophyllaceae	*Veluticeps*			C		1/1
fungi	Agaricomycetes	Hericiaceae	*Hericium coralloides*			C		1/1
fungi	Agaricomycetes	Hydnodontaceae	*Trechispora*					13/13
fungi	Agaricomycetes	Hygrophoraceae	*Hygrocybe kula*			C		2/2
fungi	Agaricomycetes	Hymenochaetaceae	*Hymenochaete*					5/5
fungi	Agaricomycetes	Hymenochaetaceae	*Inonotus*					2/2
fungi	Agaricomycetes	Hymenochaetaceae	*Phellinus*					4/4
fungi	Agaricomycetes	Hyphodermataceae	*Hyphoderma setigerum*			C		2/2
fungi	Agaricomycetes	Inocybaceae	*Inocybe*			C		5/5
fungi	Agaricomycetes	Inocybaceae	*Inocybe nobilissima*			C		2/2
fungi	Agaricomycetes	Lachnocladiaceae	*Scytinostroma*					1/1
fungi	Agaricomycetes	Marasmiaceae	*Armillaria novaezelandiae*			C		2/2
fungi	Agaricomycetes	Marasmiaceae	*Crinipellis*					3/3
fungi	Agaricomycetes	Marasmiaceae	*Favolaschia calocera*		Y			3/3
fungi	Agaricomycetes	Marasmiaceae	*Gerronema*					1/1
fungi	Agaricomycetes	Marasmiaceae	*Marasmius*					12/12
fungi	Agaricomycetes	Marasmiaceae	*Marasmius cohortalis*			C		1/1
fungi	Agaricomycetes	Marasmiaceae	*Marasmius crinisequi*			C		2/2
fungi	Agaricomycetes	Marasmiaceae	*Marasmius elegans*			C		2/2
fungi	Agaricomycetes	Mycenaceae	*Mycena*					29/29
fungi	Agaricomycetes	Mycenaceae	*Mycena leaiana var. australis*			C		4/4
fungi	Agaricomycetes	Omphalotaceae	*Anthracophyllum*					1/1
fungi	Agaricomycetes	Omphalotaceae	*Anthracophyllum archeri*			C		1/1

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fungi	Agaricomycetes	Omphalotaceae	*Lentinula lateritia*			C		7/6
fungi	Agaricomycetes	Omphalotaceae	*Marasmiellus*					9/9
fungi	Agaricomycetes	Omphalotaceae	*Omphalotus nidiformis*			C		1/1
fungi	Agaricomycetes	Panaeolaceae	*Panaeolus antillarum*			C		1/1
fungi	Agaricomycetes	Panaeolaceae	*Panaeolus bernicis*			C		2/2
fungi	Agaricomycetes	Panaeolaceae	*Panaeolus sphinctrinus*			C		2/2
fungi	Agaricomycetes	Peniophoraceae	*Peniophora*					1/1
fungi	Agaricomycetes	Phanerochaetaceae	*Ceriporia*					1/1
fungi	Agaricomycetes	Physalacriaceae	*Armillaria*					2/2
fungi	Agaricomycetes	Physalacriaceae	*Armillaria hinnulea*			C		3/3
fungi	Agaricomycetes	Physalacriaceae	*Armillaria luteobubalina*			C		1/1
fungi	Agaricomycetes	Physalacriaceae	*Oudemansiella exannulata*			C		4/4
fungi	Agaricomycetes	Pleurotaceae	*Hohenbuehelia*					9/9
fungi	Agaricomycetes	Pleurotaceae	*Pleurotus*					3/3
fungi	Agaricomycetes	Pluteaceae	*Chamaeota*					1/1
fungi	Agaricomycetes	Pluteaceae	*Pluteus*					19/19
fungi	Agaricomycetes	Pluteaceae	*Pluteus cervinus var. cervinus*			C		1/1
fungi	Agaricomycetes	Pluteaceae	*Pluteus nanus*			C		1/1
fungi	Agaricomycetes	Polyporaceae	*Coriolus*					1/1
fungi	Agaricomycetes	Polyporaceae	*Hexagonia*					1/1
fungi	Agaricomycetes	Polyporaceae	*Laetiporus sulphureus*			C		1/1
fungi	Agaricomycetes	Polyporaceae	*Lenzites*					2/2
fungi	Agaricomycetes	Polyporaceae	*Panus*					3/3
fungi	Agaricomycetes	Polyporaceae	*Polyporus*					8/8
fungi	Agaricomycetes	Polyporaceae	*Polyporus grammocephalus*			C		1/1
fungi	Agaricomycetes	Polyporaceae	*Trametes*					5/5
fungi	Agaricomycetes	Polyporaceae	*Trametes hirsuta*			C		2/2
fungi	Agaricomycetes	Polyporaceae	*Trametes versicolor*			C		2/2
fungi	Agaricomycetes	Psathyrellaceae	*Lacrymaria*					1/1
fungi	Agaricomycetes	Psathyrellaceae	*Psathyrella*					5/5
fungi	Agaricomycetes	Psathyrellaceae	*Psathyrella asperospora*			C		1/1
fungi	Agaricomycetes	Russulaceae	*Russula*			C		1/1
fungi	Agaricomycetes	Russulaceae	*Russula erumpens*			C		3/3
fungi	Agaricomycetes	Russulaceae	*Russula lenkunya*			C		2/2
fungi	Agaricomycetes	Russulaceae	*Zelleromyces*			C		1/1
fungi	Agaricomycetes	Schizophyllaceae	*Schizophyllum commune*			C		1/1
fungi	Agaricomycetes	Schizoporaceae	*Hyphodontia australis*			C		4/4
fungi	Agaricomycetes	Schizoporaceae	*Schizopora*					2/2
fungi	Agaricomycetes	Sclerodermataceae	*Pisolithus albus*			C		1/1
fungi	Agaricomycetes	Stereaceae	*Aleurodiscus*					1/1
fungi	Agaricomycetes	Stereaceae	*Stereum hirsutum*			C		1/1
fungi	Agaricomycetes	Stereaceae	*Stereum illudens*			C		1/1
fungi	Agaricomycetes	Stereaceae	*Stereum ostrea*			C		2/2
fungi	Agaricomycetes	Strophariaceae	*Galerina marginata*			C		1/1
fungi	Agaricomycetes	Strophariaceae	*Hypholoma*					2/2
fungi	Agaricomycetes	Strophariaceae	*Hypholoma fasciculare*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
fungi	Agaricomycetes	Strophariaceae	*Pholiota*					4/4
fungi	Agaricomycetes	Strophariaceae	*Pholiota adiposa*			C		1/1
fungi	Agaricomycetes	Strophariaceae	*Stropharia aurantiaca*			C		5/5
fungi	Agaricomycetes	Tricholomataceae	*Collybia*					8/8
fungi	Agaricomycetes	Tricholomataceae	*Conchomyces*					1/1
fungi	Agaricomycetes	Tricholomataceae	*Conchomyces bursiformis*			C		1/1
fungi	Agaricomycetes	Tricholomataceae	*Filoboletus manipularis*			C		2/2
fungi	Agaricomycetes	Tricholomataceae	*Melanoleuca*					1/1
fungi	Agaricomycetes	Tricholomataceae	*Mycena pura*			C		2/2
fungi	Agaricomycetes	Tricholomataceae	*Panellus stipticus*			C		2/2
fungi	Agaricomycetes	Tricholomataceae	*Tricholoma*					3/3
fungi	Leotiomycetes	Chlorociboriaceae	*Chlorociboria aeruginascens*			C		1/1
fungi	Leotiomycetes	Helotiaceae	*Helotium*					1/1
fungi	Pezizomycetes	Pezizaceae	*Peziza repanda*			C		2/2
fungi	Pezizomycetes	Pyronemataceae	*Aleuria*					1/1
fungi	Pezizomycetes	Pyronemataceae	*Scutellinia*					1/1
fungi	Pezizomycetes	Pyronemataceae	*Scutellinia scutellata*			C		1/1
fungi	Pezizomycetes	Sarcoscyphaceae	*Cookeina*					1/1
fungi	arthoniomycetes	Arthoniaceae	*Arthonia*					3/3
fungi	arthoniomycetes	Arthoniaceae	*Cryptothecia scripta*			C		1/1
fungi	arthoniomycetes	Chrysothricaceae	*Chrysothrix xanthina*			C		1/1
fungi	arthoniomycetes	Roccellaceae	*Cresponea plurilocularis*			C		1/1
fungi	lecanoromycetes	Acarosporaceae	*Acarospora novae-hollandiae*			C		1/1
fungi	lecanoromycetes	Caliciaceae	*Buellia*					1/1
fungi	lecanoromycetes	Caliciaceae	*Calicium glaucellum*			C		1/1
fungi	lecanoromycetes	Caliciaceae	*Dirinaria applanata*			C		1/1
fungi	lecanoromycetes	Caliciaceae	*Dirinaria confluens*			C		1/1
fungi	lecanoromycetes	Caliciaceae	*Dirinaria picta*			C		1/1
fungi	lecanoromycetes	Caliciaceae	*Pyxine petricola*			C		1/1
fungi	lecanoromycetes	Cladoniaceae	*Cladia aggregata*			C		1/1
fungi	lecanoromycetes	Cladoniaceae	*Cladia muelleri*			C		1/1
fungi	lecanoromycetes	Cladoniaceae	*Cladonia cervicornis subsp. verticillata*			C		1/1
fungi	lecanoromycetes	Cladoniaceae	*Cladonia floerkeana*			C		1/1
fungi	lecanoromycetes	Coenogoniaceae	*Coenogonium*					1/1
fungi	lecanoromycetes	Collemataceae	*Collema*					2/2
fungi	lecanoromycetes	Graphidaceae	*Allographa daintreensis*			C		1/1
fungi	lecanoromycetes	Graphidaceae	*Diorygma circumfusum*			C		2/2
fungi	lecanoromycetes	Graphidaceae	*Diorygma pruinosum*			C		2/2
fungi	lecanoromycetes	Graphidaceae	*Graphis virescens*			C		3/3
fungi	lecanoromycetes	Graphidaceae	*Sarcographa labyrinthica*			C		1/1
fungi	lecanoromycetes	Graphidaceae	*Thelotrema*					1/1
fungi	lecanoromycetes	Haematommataceae	*Haematomma collatum*			C		1/1
fungi	lecanoromycetes	Lecanoraceae	*Lecanora achroa*			C		1/1
fungi	lecanoromycetes	Lecanoraceae	*Lecidella*					1/1
fungi	lecanoromycetes	Lobariaceae	*Crocodia aurata*			C		2/2
fungi	lecanoromycetes	Lobariaceae	*Pseudocyphellaria haywardiorum*			C		1/1

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fungi	lecanoromycetes	Megalosporaceae	*Megalospora tuberculosa*			C		1/1
fungi	lecanoromycetes	Pannariaceae	*Pannaria microphyllizans*			C		1/1
fungi	lecanoromycetes	Pannariaceae	*Physma*					1/1
fungi	lecanoromycetes	Parmeliaceae	*Austroparmelina subarida*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Austroparmelina subtiliacea*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Flavoparmelia euplecta*			C		2/2
fungi	lecanoromycetes	Parmeliaceae	*Flavoparmelia rutidota*			C		2/2
fungi	lecanoromycetes	Parmeliaceae	*Hypotrachyna heterochroa*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Notoparmelia cunninghamii*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Parmelia*					1/1
fungi	lecanoromycetes	Parmeliaceae	*Parmotrema austrosinense*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Parmotrema cristiferum*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Parmotrema perlatum*			C		2/2
fungi	lecanoromycetes	Parmeliaceae	*Parmotrema reticulatum*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Parmotrema tinctorum*			C		3/3
fungi	lecanoromycetes	Parmeliaceae	*Punctelia pseudocoralloidea*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Punctelia subflava*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Usnea angulata*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Usnea baileyi*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Usnea bismolliuscula*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Usnea dasaea*			C		3/3
fungi	lecanoromycetes	Parmeliaceae	*Xanthoparmelia australasica*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Xanthoparmelia spargenosa*			C		1/1
fungi	lecanoromycetes	Pertusariaceae	*Lepra patellifera*			C		1/1
fungi	lecanoromycetes	Pertusariaceae	*Lepra scaberula*			C		5/5
fungi	lecanoromycetes	Physciaceae	*Heterodermia japonica*			C		2/2
fungi	lecanoromycetes	Physciaceae	*Heterodermia leucomela*			C		2/2
fungi	lecanoromycetes	Physciaceae	*Heterodermia obscurata*			C		1/1
fungi	lecanoromycetes	Physciaceae	*Hyperphyscia*					1/1
fungi	lecanoromycetes	Physciaceae	*Hyperphyscia pandani*			C		1/1
fungi	lecanoromycetes	Physciaceae	*Physcia jackii*			C		2/2
fungi	lecanoromycetes	Physciaceae	*Physcia undulata*			C		1/1
fungi	lecanoromycetes	Pilocarpaceae	*Micarea*					1/1
fungi	lecanoromycetes	Porinaceae	*Porina*					1/1
fungi	lecanoromycetes	Porinaceae	*Porina internigrans*			C		1/1
fungi	lecanoromycetes	Ramalinaceae	*Bacidia*					2/2
fungi	lecanoromycetes	Ramalinaceae	*Ramalina*					3/3
fungi	lecanoromycetes	Ramalinaceae	*Ramalina celastri*			C		1/1
fungi	lecanoromycetes	Ramalinaceae	*Ramalina celastri subsp. celastri*			C		1/1
fungi	lecanoromycetes	Ramalinaceae	*Ramalina inflata subsp. perpusilla*			C		1/1
fungi	lecanoromycetes	Ramalinaceae	*Ramalina peruviana*			C		1/1
fungi	lecanoromycetes	Teloschistaceae	*Caloplaca norfolkensis*			C		1/1
fungi	lecanoromycetes	Teloschistaceae	*Caloplaca rexfilsonii*			C		1/1
fungi	lecanoromycetes	Teloschistaceae	*Teloschistes flavicans*			C		3/3
fungi	lecanoromycetes	Teloschistaceae	*Teloschistes sieberianus*			C		2/2
fungi	lecanoromycetes	Teloschistaceae	*Teloschistes xanthoroides*			C		1/1

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fungi	lecanoromycetes	Tephromelataceae	*Tephromela atra*			C		2/2
fungi	sordariomycetes	Cordycipitaceae	*Cordyceps*					2/2
fungi	sordariomycetes	Cordycipitaceae	*Cordyceps hawkesii*			C		1/1
fungi	sordariomycetes	Nectriaceae	*Nectria pseudotrichia*			C		2/2
fungi	sordariomycetes	Xylariaceae	*Biscogniauxia*					7/7
fungi	sordariomycetes	Xylariaceae	*Daldinia eschscholzii*			C		3/3
fungi	sordariomycetes	Xylariaceae	*Hypoxylon*					6/6
fungi	sordariomycetes	Xylariaceae	*Hypoxylon rubiginosum var. rubiginosum*			C		3/3
fungi	uncertain	Incertae sedis Fungi	*Chlorosplenium*					1/1
plants	land plants	Acanthaceae	*Brunoniella australis*	blue trumpet		C		1/1
plants	land plants	Acanthaceae	*Pseuderanthemum variabile*	pastel flower		C		5/5
plants	land plants	Acanthaceae	*Rostellularia adscendens*			C		5/4
plants	land plants	Agavaceae	*Agave*		Y			2
plants	land plants	Agavaceae	*Agave americana*		Y			1
plants	land plants	Aizoaceae	*Tetragonia tetragonoides*	New Zealand spinach		C		1/1
plants	land plants	Amaranthaceae	*Alternanthera denticulata*	lesser joyweed		C		1/1
plants	land plants	Amaranthaceae	*Alternanthera nana*	hairy joyweed		C		2/2
plants	land plants	Amaranthaceae	*Alternanthera pungens*	khaki weed	Y			1/1
plants	land plants	Amaranthaceae	*Deeringia amaranthoides*	redberry		C		2/2
plants	land plants	Amaranthaceae	*Gomphrena celosioides*	gomphrena weed	Y			1/1
plants	land plants	Amaranthaceae	*Nyssanthes diffusa*	barbed-wire weed		C		3/2
plants	land plants	Amaranthaceae	*Nyssanthes erecta*			C		5/4
plants	land plants	Anacardiaceae	*Rhodosphaera rhodanthema*	tulip satinwood		C		1/1
plants	land plants	Annonaceae	*Melodorum leichhardtii*			C		1
plants	land plants	Apiaceae	*Apium prostratum var. prostratum*			C		1/1
plants	land plants	Apiaceae	*Berula erecta*	water parsnip	Y			1/1
plants	land plants	Apiaceae	*Cyclospermum leptophyllum*		Y			1/1
plants	land plants	Apiaceae	*Daucus glochidiatus*	Australian carrot		C		3/3
plants	land plants	Apiaceae	*Platysace ericoides*	heath platysace		C		1/1
plants	land plants	Apocynaceae	*Alstonia constricta*	bitterbark		C		5/5
plants	land plants	Apocynaceae	*Alyxia ruscifolia*			C		8/6
plants	land plants	Apocynaceae	*Araujia sericifera*	white moth vine	Y			1/1
plants	land plants	Apocynaceae	*Carissa ovata*	currantbush		C		6/2
plants	land plants	Apocynaceae	*Cynanchum viminale subsp. brunonianum*			C		1/1
plants	land plants	Apocynaceae	*Gomphocarpus physocarpus*	balloon cottonbush	Y			1/1
plants	land plants	Apocynaceae	*Gymnema pleiadenium*			C		2/2
plants	land plants	Apocynaceae	*Leichhardtia lloydii*			C		1/1
plants	land plants	Apocynaceae	*Leichhardtia micradenia*			C		1/1
plants	land plants	Apocynaceae	*Leichhardtia viridiflora subsp. viridiflora*			C		1/1
plants	land plants	Apocynaceae	*Parsonsia eucalyptophylla*	gargaloo		C		1/1
plants	land plants	Apocynaceae	*Parsonsia lanceolata*	northern silkpod		C		2/2
plants	land plants	Apocynaceae	*Parsonsia lilacina*	crisped silkpod		C		1/1
plants	land plants	Apocynaceae	*Parsonsia longipetiolata*			C		2/2
plants	land plants	Apocynaceae	*Secamone elliptica*			C		1/1
plants	land plants	Apocynaceae	*Vincetoxicum grandiflorum*			C		1/1
plants	land plants	Apocynaceae	*Vincetoxicum ovatum*			C		1/1

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plants	land plants	Apocynaceae	*Vincetoxicum paniculatum*			C		1/1
plants	land plants	Araceae	*Landoltia punctata*			C		1/1
plants	land plants	Araliaceae	*Astrotricha biddulphiana*			C		2/1
plants	land plants	Araliaceae	*Hydrocotyle acutiloba*			C		1/1
plants	land plants	Araliaceae	*Hydrocotyle elegans*			C		2/2
plants	land plants	Araliaceae	*Hydrocotyle laxiflora*	stinking pennywort		C		4/4
plants	land plants	Araliaceae	*Polyscias elegans*	celery wood		C		1/1
plants	land plants	Araliaceae	*Trachymene incisa subsp. incisa*			C		1/1
plants	land plants	Araucariaceae	*Araucaria cunninghamii*	hoop pine		C		1
plants	land plants	Asparagaceae	*Asparagus africanus*	ornamental asparagus	Y			17
plants	land plants	Asphodelaceae	*Aloe*		Y	C		1
plants	land plants	Asphodelaceae	*Aloe maculata*		Y			1
plants	land plants	Asphodelaceae	*Bulbine alata*	native leek		C		1/1
plants	land plants	Asphodelaceae	*Bulbine bulbosa*	golden lily		C		2/2
plants	land plants	Aspleniaceae	*Asplenium australasicum*			C		1/1
plants	land plants	Aspleniaceae	*Asplenium flabellifolium*	necklace fern		C		1/1
plants	land plants	Aspleniaceae	*Asplenium flaccidum subsp. flaccidum*			C		1/1
plants	land plants	Aspleniaceae	*Asplenium polyodon*	mare's tail fern		C		1/1
plants	land plants	Aspleniaceae	*Asplenium subglandulosum subsp. subglandulosum*			C		1/1
plants	land plants	Asteraceae	*Acanthospermum hispidum*	star burr	Y			1/1
plants	land plants	Asteraceae	*Apowollastonia spilanthoides*			C		1/1
plants	land plants	Asteraceae	*Brachyscome*					1/1
plants	land plants	Asteraceae	*Brachyscome basaltica*			C		1/1
plants	land plants	Asteraceae	*Brachyscome microcarpa subsp. microcarpa*			C		3/3
plants	land plants	Asteraceae	*Brachyscome multifida*			C		1
plants	land plants	Asteraceae	*Calotis cuneata*			C		1/1
plants	land plants	Asteraceae	*Calotis dentex*	white burr daisy		C		3/3
plants	land plants	Asteraceae	*Calotis lappulacea*	yellow burr daisy		C		3/3
plants	land plants	Asteraceae	*Camptacra barbata*			C		1/1
plants	land plants	Asteraceae	*Carduus thoermeri*	nodding thistle	Y			2/2
plants	land plants	Asteraceae	*Carthamus lanatus*	saffron thistle	Y			1/1
plants	land plants	Asteraceae	*Cassinia laevis subsp. rosmarinifolia*			C		2/2
plants	land plants	Asteraceae	*Cassinia quinquefaria*			C		1/1
plants	land plants	Asteraceae	*Chrysocephalum apiculatum*	yellow buttons		C		4/3
plants	land plants	Asteraceae	*Cirsium vulgare*	spear thistle	Y			1/1
plants	land plants	Asteraceae	*Coreopsis lanceolata*		Y			1/1
plants	land plants	Asteraceae	*Cyanthillium cinereum*			C		3/1
plants	land plants	Asteraceae	*Erigeron bonariensis*		Y			1/1
plants	land plants	Asteraceae	*Erigeron pusillus*		Y			1/1
plants	land plants	Asteraceae	*Euchiton japonicus*			C		2/2
plants	land plants	Asteraceae	*Euchiton sphaericus*			C		1/1
plants	land plants	Asteraceae	*Galinsoga parviflora*	yellow weed	Y			1/1
plants	land plants	Asteraceae	*Glossocardia bidens*	native cobbler's pegs		C		5/5
plants	land plants	Asteraceae	*Gynura drymophila var. drymophila*			C		1/1
plants	land plants	Asteraceae	*Hypochaeris albiflora*		Y			1/1
plants	land plants	Asteraceae	*Leuzea australis*			V	V	1/1

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plants	land plants	Asteraceae	*Olearia canescens subsp. discolor*			C		2/2
plants	land plants	Asteraceae	*Ozothamnus bidwillii*	climbing daisy		C		1/1
plants	land plants	Asteraceae	*Ozothamnus cassinioides*			C		1/1
plants	land plants	Asteraceae	*Peripleura hispidula*			C		1
plants	land plants	Asteraceae	*Peripleura hispidula var. setosa*			C		1/1
plants	land plants	Asteraceae	*Picris angustifolia subsp. carolorum-henricorum*			C		2/2
plants	land plants	Asteraceae	*Podolepis arachnoidea*	clustered copper-wire daisy		C		2/2
plants	land plants	Asteraceae	*Podolepis neglecta*			C		1/1
plants	land plants	Asteraceae	*Pterocaulon redolens*			C		1/1
plants	land plants	Asteraceae	*Rhodanthe anthemoides*	white paper daisy		C		3/3
plants	land plants	Asteraceae	*Schkuhria pinnata*		Y			2/2
plants	land plants	Asteraceae	*Senecio diaschides*			C		2/2
plants	land plants	Asteraceae	*Senecio esleri*			C		1/1
plants	land plants	Asteraceae	*Senecio quadridentatus*	cotton fireweed		C		1/1
plants	land plants	Asteraceae	*Sigesbeckia orientalis*	Indian weed		C		4/4
plants	land plants	Asteraceae	*Solenogyne bellioides*			C		1/1
plants	land plants	Asteraceae	*Sonchus oleraceus*	common sowthistle	Y			1/1
plants	land plants	Asteraceae	*Sphaeromorphaea australis*			C		3/1
plants	land plants	Asteraceae	*Vittadinia dissecta var. hirta*			C		1/1
plants	land plants	Asteraceae	*Vittadinia pustulata*			C		2/2
plants	land plants	Asteraceae	*Vittadinia sulcata*	native daisy		C		2/2
plants	land plants	Asteraceae	*Vittadinia tenuissima*	western New Holland daisy		C		1/1
plants	land plants	Asteraceae	*Xerochrysum bracteatum*	golden everlasting daisy		C		1/1
plants	land plants	Asteraceae	*Xerochrysum viscosum*			C		1/1
plants	land plants	Asteraceae	*Zinnia peruviana*	wild zinnia	Y			7/7
plants	land plants	Bignoniaceae	*Dolichandra unguis-cati*	cat's claw creeper	Y			5
plants	land plants	Bignoniaceae	*Pandorea pandorana*	wonga vine		C		3/2
plants	land plants	Blechnaceae	*Blechnum neohollandicum*			C		2/2
plants	land plants	Boraginaceae	*Cynoglossum australe*			C		1/1
plants	land plants	Boraginaceae	*Heliotropium amplexicaule*	blue heliotrope	Y			2/2
plants	land plants	Brassicaceae	*Erucastrum austroafricanum*		Y			1/1
plants	land plants	Brassicaceae	*Lepidium africanum*	common peppercress	Y			3/3
plants	land plants	Brassicaceae	*Raphanus raphanistrum*	wild radish	Y			1/1
plants	land plants	Brassicaceae	*Rapistrum rugosum*		Y			1/1
plants	land plants	Brassicaceae	*Rorippa dietrichiana*			C		1/1
plants	land plants	Brassicaceae	*Rorippa nasturtium-aquaticum*	watercress	Y			2/2
plants	land plants	Brassicaceae	*Sisymbrium orientale*	Indian hedge mustard	Y			1/1
plants	land plants	Bryaceae	*Bryum argenteum*			C		1/1
plants	land plants	Bryaceae	*Imbribryum clavatum*			C		1/1
plants	land plants	Byttneriaceae	*Seringia corollata*			C		3/3
plants	land plants	Cactaceae	*Harrisia pomanensis*		Y			2/2
plants	land plants	Cactaceae	*Opuntia*					38
plants	land plants	Cactaceae	*Opuntia stricta*		Y			2
plants	land plants	Cactaceae	*Opuntia tomentosa*	velvety tree pear	Y			19
plants	land plants	Campanulaceae	*Lobelia purpurascens*	white root		SL		1/1
plants	land plants	Campanulaceae	*Wahlenbergia*					2/1

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plants	land plants	Campanulaceae	*Wahlenbergia capillaris*			SL		2/2
plants	land plants	Campanulaceae	*Wahlenbergia gracilis*	sprawling bluebell		SL		1/1
plants	land plants	Campanulaceae	*Wahlenbergia graniticola*	granite bluebell		SL		1/1
plants	land plants	Capparaceae	*Capparis loranthifolia*			C		1
plants	land plants	Capparaceae	*Capparis mitchellii*			C		1
plants	land plants	Capparaceae	*Capparis sarmentosa*	scrambling caper		C		3/2
plants	land plants	Caryophyllaceae	*Paronychia brasiliana*	Brazilian whitlow	Y			1/1
plants	land plants	Caryophyllaceae	*Petrorhagia dubia*		Y			1/1
plants	land plants	Caryophyllaceae	*Petrorhagia nanteuilii*	proliferous pink	Y			1/1
plants	land plants	Caryophyllaceae	*Polycarpon tetraphyllum*		Y			2/2
plants	land plants	Caryophyllaceae	*Stellaria angustifolia subsp. angustifolia*			C		1/1
plants	land plants	Caryophyllaceae	*Stellaria media*	chickweed	Y			2/2
plants	land plants	Casuarinaceae	*Allocasuarina inophloia*			C		9
plants	land plants	Casuarinaceae	*Allocasuarina littoralis*			C		1/1
plants	land plants	Casuarinaceae	*Allocasuarina luehmannii*	bull oak		C		4/3
plants	land plants	Casuarinaceae	*Casuarina cristata*	belah		C		3/1
plants	land plants	Casuarinaceae	*Casuarina cunninghamiana subsp. cunninghamiana*			C		1/1
plants	land plants	Celastraceae	*Celastrus australis*	staff climber		C		1/1
plants	land plants	Celastraceae	*Celastrus subspicata*	large-leaved staffvine		C		2/1
plants	land plants	Celastraceae	*Denhamia bilocularis*			C		9/8
plants	land plants	Celastraceae	*Denhamia disperma*			C		3/3
plants	land plants	Celastraceae	*Denhamia parvifolia*			V	V	12/11
plants	land plants	Celastraceae	*Denhamia silvestris*			C		1/1
plants	land plants	Celastraceae	*Elaeodendron australe var. integrifolium*			C		4/4
plants	land plants	Celastraceae	*Siphonodon australis*	ivorywood		C		1
plants	land plants	Chenopodiaceae	*Dysphania ambrosioides*		Y			2/2
plants	land plants	Chenopodiaceae	*Dysphania carinata*			C		2/2
plants	land plants	Chenopodiaceae	*Einadia hastata*			C		1/1
plants	land plants	Chenopodiaceae	*Einadia nutans*			C		1
plants	land plants	Chenopodiaceae	*Enchylaena tomentosa var. glabra*			C		1/1
plants	land plants	Chenopodiaceae	*Maireana microphylla*			C		1/1
plants	land plants	Chenopodiaceae	*Salsola australis*			C		1/1
plants	land plants	Chenopodiaceae	*Sclerolaena birchii*	galvanised burr		C		1/1
plants	land plants	Commelinaceae	*Commelina diffusa*			C		4/4
plants	land plants	Commelinaceae	*Murdannia graminea*	murdannia		C		6/5
plants	land plants	Convolvulaceae	*Convolvulus angustissimus subsp. angustissimus*			C		1/1
plants	land plants	Convolvulaceae	*Convolvulus erubescens*	Australian bindweed		C		1/1
plants	land plants	Convolvulaceae	*Dichondra repens*	kidney weed		C		1/1
plants	land plants	Convolvulaceae	*Dichondra sp. (Inglewood J.M.Dalby 86/93)*			C		1/1
plants	land plants	Convolvulaceae	*Evolvulus alsinoides*			C		2
plants	land plants	Convolvulaceae	*Evolvulus alsinoides var. decumbens*			C		2/2
plants	land plants	Convolvulaceae	*Ipomoea lonchophylla*			C		1/1
plants	land plants	Crassulaceae	*Bryophyllum delagoense*		Y			3
plants	land plants	Crassulaceae	*Bryophyllum x houghtonii*		Y			1
plants	land plants	Cucurbitaceae	*Sicyos australis*	star cucumber		C		1/1
plants	land plants	Cupressaceae	*Callitris baileyi*	Bailey's cypress		NT		10/8

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plants	land plants	Cupressaceae	*Callitris columellaris*			C		1/1
plants	land plants	Cupressaceae	*Callitris endlicheri*	black cypress pine		C		1/1
plants	land plants	Cyperaceae	*Abildgaardia oxystachya*			C		1/1
plants	land plants	Cyperaceae	*Bolboschoenus fluviatilis*			C		2/2
plants	land plants	Cyperaceae	*Carex appressa*			C		1/1
plants	land plants	Cyperaceae	*Carex declinata*			C		4/4
plants	land plants	Cyperaceae	*Carex gaudichaudiana*			C		1/1
plants	land plants	Cyperaceae	*Carex inversa*	knob sedge		C		3/3
plants	land plants	Cyperaceae	*Cyperus bowmanni*			C		1/1
plants	land plants	Cyperaceae	*Cyperus clarus*			V		1/1
plants	land plants	Cyperaceae	*Cyperus concinnus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus curvistylis*			C		1/1
plants	land plants	Cyperaceae	*Cyperus dietrichiae var. brevibracteatus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus dietrichiae var. dietrichiae*			C		1/1
plants	land plants	Cyperaceae	*Cyperus fulvus*			C		6/6
plants	land plants	Cyperaceae	*Cyperus gracilis*			C		3/3
plants	land plants	Cyperaceae	*Cyperus involucratus*		Y			1/1
plants	land plants	Cyperaceae	*Cyperus mirus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus sanguinolentus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus squarrosus*	bearded flatsedge		C		1/1
plants	land plants	Cyperaceae	*Cyperus vaginatus*			C		2/2
plants	land plants	Cyperaceae	*Eleocharis cylindrostachys*			C		2/2
plants	land plants	Cyperaceae	*Eleocharis dietrichiana*			C		1/1
plants	land plants	Cyperaceae	*Fimbristylis aestivalis*			C		1/1
plants	land plants	Cyperaceae	*Fimbristylis dichotoma*	common fringe-rush		C		6/5
plants	land plants	Cyperaceae	*Fimbristylis tristachya*			C		1/1
plants	land plants	Cyperaceae	*Fimbristylis vaginata*			C		1/1
plants	land plants	Cyperaceae	*Gahnia aspera*			C		2/1
plants	land plants	Cyperaceae	*Lepidosperma laterale*			C		2/1
plants	land plants	Cyperaceae	*Schoenoplectus tabernaemontani*			C		2/2
plants	land plants	Cyperaceae	*Schoenus kennyi*			C		1
plants	land plants	Cyperaceae	*Scleria mackaviensis*			C		2/2
plants	land plants	Cyperaceae	*Scleria sphacelata*			C		1
plants	land plants	Dilleniaceae	*Hibbertia linearis var. obtusifolia*			C		1/1
plants	land plants	Dilleniaceae	*Hibbertia patens*			C		1/1
plants	land plants	Dilleniaceae	*Hibbertia stricta*			C		2
plants	land plants	Ditrichaceae	*Ceratodon purpureus*			C		1/1
plants	land plants	Droseraceae	*Drosera lunata*			SL		1/1
plants	land plants	Dryopteridaceae	*Lastreopsis decomposita*	trim shield fern		SL		1/1
plants	land plants	Dryopteridaceae	*Parapolystichum microsorum*			SL		1/1
plants	land plants	Ebenaceae	*Diospyros geminata*	scaly ebony		C		2/2
plants	land plants	Ebenaceae	*Diospyros humilis*	small-leaved ebony		C		1/1
plants	land plants	Elaeocarpaceae	*Elaeocarpus obovatus subsp. obovatus*			C		2/2
plants	land plants	Entodontaceae	*Entodon mackaviensis*			C		1/1
plants	land plants	Ericaceae	*Brachyloma daphnoides subsp. daphnoides*			C		1/1
plants	land plants	Ericaceae	*Lissanthe pluriloculata*			C		1

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plants	land plants	Ericaceae	*Melichrus urceolatus*	honey gorse		C		2/2
plants	land plants	Ericaceae	*Styphelia biflora*			C		1
plants	land plants	Ericaceae	*Styphelia trichostyla*			C		1/1
plants	land plants	Erythroxylaceae	*Erythroxylum australe*	cocaine tree		C		1
plants	land plants	Erythroxylaceae	*Erythroxylum sp. (Splityard Creek L.Pedley 5360)*			C		3/3
plants	land plants	Euphorbiaceae	*Acalypha capillipes*	small-leaved acalypha		C		1/1
plants	land plants	Euphorbiaceae	*Acalypha eremorum*	soft acalypha		C		1/1
plants	land plants	Euphorbiaceae	*Alchornea ilicifolia*	native holly		C		1
plants	land plants	Euphorbiaceae	*Claoxylon australe*	brittlewood		C		1/1
plants	land plants	Euphorbiaceae	*Croton acronychioides*	thick-leaved croton		C		2/1
plants	land plants	Euphorbiaceae	*Croton insularis*	Queensland cascarilla		C		8/6
plants	land plants	Euphorbiaceae	*Croton phebalioides*	narrow-leaved croton		C		3/3
plants	land plants	Euphorbiaceae	*Euphorbia dallachyana*			C		1/1
plants	land plants	Euphorbiaceae	*Euphorbia davidii*		Y			2/2
plants	land plants	Euphorbiaceae	*Euphorbia drummondii*			C		1/1
plants	land plants	Euphorbiaceae	*Euphorbia hirta*		Y			1/1
plants	land plants	Euphorbiaceae	*Excoecaria dallachyana*	scrub poison tree		C		3/3
plants	land plants	Euphorbiaceae	*Homalanthus populifolius*			C		1/1
plants	land plants	Euphorbiaceae	*Mallotus philippensis*	red kamala		C		1/1
plants	land plants	Euphorbiaceae	*Manihot grahamii*		Y			1/1
plants	land plants	Fabroniaceae	*Fabronia australis*			C		1/1
plants	land plants	Frullaniaceae	*Frullania monocera var. subhampeana*			C		1/1
plants	land plants	Gentianaceae	*Centaurium*					1/1
plants	land plants	Gentianaceae	*Centaurium tenuiflorum*		Y			1/1
plants	land plants	Geraniaceae	*Geranium solanderi var. solanderi*	native geranium		C		3/3
plants	land plants	Goodeniaceae	*Dampiera adpressa*			C		1/1
plants	land plants	Goodeniaceae	*Goodenia*					2
plants	land plants	Goodeniaceae	*Goodenia delicata*			C		4/3
plants	land plants	Goodeniaceae	*Goodenia glabra*			C		2/2
plants	land plants	Goodeniaceae	*Goodenia grandiflora*			C		2/2
plants	land plants	Goodeniaceae	*Goodenia paniculata*			C		1/1
plants	land plants	Goodeniaceae	*Goodenia paradoxa*			C		3/3
plants	land plants	Goodeniaceae	*Goodenia rosulata*			C		1/1
plants	land plants	Goodeniaceae	*Goodenia rotundifolia*			C		1
plants	land plants	Grimmiaceae	*Grimmia laevigata*			C		1/1
plants	land plants	Gyrostemonaceae	*Codonocarpus attenuatus*			C		1/1
plants	land plants	Haloragaceae	*Gonocarpus*					1/1
plants	land plants	Haloragaceae	*Haloragis exalata subsp. velutina*			V	V	4/4
plants	land plants	Haloragaceae	*Haloragis heterophylla*	rough raspweed		C		2/2
plants	land plants	Haloragaceae	*Myriophyllum crispatum*			C		1/1
plants	land plants	Hemerocallidaceae	*Caesia parviflora*			C		2/2
plants	land plants	Hemerocallidaceae	*Caesia parviflora var. vittata*			C		1/1
plants	land plants	Hemerocallidaceae	*Dianella brevipedunculata*			C		1
plants	land plants	Hemerocallidaceae	*Dianella caerulea var. assera*			C		1/1
plants	land plants	Hemerocallidaceae	*Dianella longifolia*			C		1
plants	land plants	Hemerocallidaceae	*Dianella longifolia var. stenophylla*			C		1/1

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plants	land plants	Hemerocallidaceae	*Dianella longifolia var. stupata*			C		1/1
plants	land plants	Hemerocallidaceae	*Dianella revoluta*			C		3
plants	land plants	Hemerocallidaceae	*Geitonoplesium cymosum*	scrambling lily		C		3/3
plants	land plants	Hemerocallidaceae	*Tricoryne elatior*	yellow autumn lily		C		2/1
plants	land plants	Hypericaceae	*Hypericum gramineum*			C		3/3
plants	land plants	Hypopterygiaceae	*Hypopterygium tamarisci*			C		1/1
plants	land plants	Hypoxidaceae	*Hypoxis pratensis var. tuberculata*			C		1/1
plants	land plants	Juncaceae	*Juncus aridicola*	tussock rush		C		1/1
plants	land plants	Juncaceae	*Juncus polyanthemus*			C		1/1
plants	land plants	Juncaceae	*Juncus prismatocarpus*	branching rush		C		2/2
plants	land plants	Juncaceae	*Juncus subsecundus*			C		1/1
plants	land plants	Juncaceae	*Juncus usitatus*			C		4/3
plants	land plants	Juncaceae	*Juncus vaginatus*			C		1/1
plants	land plants	Juncaceae	*Luzula flaccida*			C		1/1
plants	land plants	Lamiaceae	*Ajuga australis*	Australian bugle		C		1/1
plants	land plants	Lamiaceae	*Clerodendrum tomentosum*			C		1/1
plants	land plants	Lamiaceae	*Coleus australis*			C		5/5
plants	land plants	Lamiaceae	*Coleus graveolens*			C		2/2
plants	land plants	Lamiaceae	*Mentha satureioides*	native pennyroyal		C		5/5
plants	land plants	Lamiaceae	*Prostanthera cryptandroides subsp. euphrasioides*			C		2/2
plants	land plants	Lamiaceae	*Scutellaria humilis*	dwarf skullcap		C		1/1
plants	land plants	Lamiaceae	*Teucrium argutum*			C		3/3
plants	land plants	Lamiaceae	*Teucrium junceum*			C		3/2
plants	land plants	Lamiaceae	*Vitex lignum-vitae*			C		2/2
plants	land plants	Lauraceae	*Cinnamomum camphora*	camphor laurel	Y			1/1
plants	land plants	Lauraceae	*Cryptocarya bidwillii*	yellow laurel		C		1/1
plants	land plants	Lauraceae	*Cryptocarya floydii*	gorge laurel		NT		1/1
plants	land plants	Lauraceae	*Litsea reticulata*			C		1/1
plants	land plants	Lauraceae	*Neolitsea australiensis*	green bolly gum		C		2/2
plants	land plants	Laxmanniaceae	*Eustrephus latifolius*	wombat berry		C		2/1
plants	land plants	Laxmanniaceae	*Laxmannia gracilis*	slender wire lily		C		6/3
plants	land plants	Laxmanniaceae	*Lomandra filiformis*			C		3
plants	land plants	Laxmanniaceae	*Lomandra filiformis subsp. coriacea*			C		1/1
plants	land plants	Laxmanniaceae	*Lomandra laxa*	broad-leaved matrush		C		1/1
plants	land plants	Laxmanniaceae	*Lomandra leucocephala subsp. leucocephala*			C		1/1
plants	land plants	Laxmanniaceae	*Lomandra longifolia*			C		3/1
plants	land plants	Laxmanniaceae	*Lomandra multiflora subsp. multiflora*			C		2
plants	land plants	Leguminosae	*Acacia*					2
plants	land plants	Leguminosae	*Acacia bancroftiorum*			C		2/2
plants	land plants	Leguminosae	*Acacia blakei subsp. blakei*			C		2/2
plants	land plants	Leguminosae	*Acacia buxifolia subsp. pubiflora*			C		1/1
plants	land plants	Leguminosae	*Acacia caroleae*			C		1/1
plants	land plants	Leguminosae	*Acacia complanata*	flatstem wattle		C		2
plants	land plants	Leguminosae	*Acacia conferta*			C		1/1
plants	land plants	Leguminosae	*Acacia crassa subsp. crassa*			C		4
plants	land plants	Leguminosae	*Acacia disparrima subsp. disparrima*			C		1/1

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plants	land plants	Leguminosae	*Acacia excelsa*			C		1
plants	land plants	Leguminosae	*Acacia glaucocarpa*	hickory wattle		C		2/2
plants	land plants	Leguminosae	*Acacia grandifolia*			C	V	1/1
plants	land plants	Leguminosae	*Acacia harpophylla*	brigalow		C		1/1
plants	land plants	Leguminosae	*Acacia implexa*	lightwood		C		2/2
plants	land plants	Leguminosae	*Acacia irrorata subsp. irrorata*			C		2/2
plants	land plants	Leguminosae	*Acacia leichhardtii*			C		3/1
plants	land plants	Leguminosae	*Acacia leiocalyx*			C		4
plants	land plants	Leguminosae	*Acacia leiocalyx subsp. leiocalyx*			C		4/4
plants	land plants	Leguminosae	*Acacia leucoclada subsp. argentifolia*			C		1/1
plants	land plants	Leguminosae	*Acacia longispicata*			C		1
plants	land plants	Leguminosae	*Acacia loroloba*	Ma Ma Creek wattle		C		3/2
plants	land plants	Leguminosae	*Acacia maidenii*	Maiden's wattle		C		1/1
plants	land plants	Leguminosae	*Acacia melvillei*			C		1/1
plants	land plants	Leguminosae	*Acacia muelleriana*			C		4/4
plants	land plants	Leguminosae	*Acacia neriifolia*	pechey wattle		C		1
plants	land plants	Leguminosae	*Acacia penninervis var. penninervis*			C		3/1
plants	land plants	Leguminosae	*Acacia pustula*			C		3/3
plants	land plants	Leguminosae	*Acacia salicina*	doolan		C		3/2
plants	land plants	Leguminosae	*Acacia tingoorensis*			V		10/10
plants	land plants	Leguminosae	*Aeschynomene brevifolia*			C		1/1
plants	land plants	Leguminosae	*Bossiaea scortechinii*			C		1/1
plants	land plants	Leguminosae	*Chamaecrista rotundifolia var. rotundifolia*		Y			1/1
plants	land plants	Leguminosae	*Chorizema parviflorum*	eastern flame pea		C		2/2
plants	land plants	Leguminosae	*Crotalaria incana subsp. incana*		Y			2/2
plants	land plants	Leguminosae	*Crotalaria juncea*	sunhemp	Y			1/1
plants	land plants	Leguminosae	*Crotalaria mitchellii subsp. laevis*			C		1/1
plants	land plants	Leguminosae	*Crotalaria mitchellii subsp. mitchellii*			C		4/4
plants	land plants	Leguminosae	*Crotalaria montana var. angustifolia*			C		1/1
plants	land plants	Leguminosae	*Daviesia wyattiana*	long-leaved bitter pea		C		1/1
plants	land plants	Leguminosae	*Desmodium brachypodum*	large ticktrefoil		C		5/5
plants	land plants	Leguminosae	*Desmodium macrocarpum*			C		1/1
plants	land plants	Leguminosae	*Desmodium rhytidophyllum*			C		3/2
plants	land plants	Leguminosae	*Desmodium varians*	slender tick trefoil		C		2/1
plants	land plants	Leguminosae	*Dillwynia sieberi*			C		1
plants	land plants	Leguminosae	*Erythrina numerosa*			C		1/1
plants	land plants	Leguminosae	*Erythrina vespertilio*			C		1/1
plants	land plants	Leguminosae	*Erythrina vespertilio subsp. vespertilio*			C		1/1
plants	land plants	Leguminosae	*Galactia tenuiflora var. lucida*			C		1/1
plants	land plants	Leguminosae	*Gleditsia triacanthos*	honey locust	Y			1/1
plants	land plants	Leguminosae	*Glycine*					3/2
plants	land plants	Leguminosae	*Glycine clandestina*			C		1/1
plants	land plants	Leguminosae	*Glycine clandestina var. sericea*			C		1/1
plants	land plants	Leguminosae	*Glycine latifolia*			C		1/1
plants	land plants	Leguminosae	*Glycine stenophita*			C		1/1
plants	land plants	Leguminosae	*Glycine tabacina*	glycine pea		C		4/3

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plants	land plants	Leguminosae	*Glycine tomentella*	woolly glycine		C		1/1
plants	land plants	Leguminosae	*Gompholobium foliolosum*	fern-leaved burtonia		C		1/1
plants	land plants	Leguminosae	*Hardenbergia violacea*			C		2/1
plants	land plants	Leguminosae	*Hovea lanceolata*			C		1
plants	land plants	Leguminosae	*Hovea lorata*			C		2/1
plants	land plants	Leguminosae	*Hovea parvicalyx*			C		2/2
plants	land plants	Leguminosae	*Indigofera australis subsp. australis*			C		1/1
plants	land plants	Leguminosae	*Indigofera baileyi*			C		1/1
plants	land plants	Leguminosae	*Indigofera brevidens*			C		1/1
plants	land plants	Leguminosae	*Indigofera hirsuta*	hairy indigo		C		2/2
plants	land plants	Leguminosae	*Indigofera tryonii*			C		1/1
plants	land plants	Leguminosae	*Jacksonia scoparia*			C		5/3
plants	land plants	Leguminosae	*Lespedeza juncea subsp. sericea*	perennial lespedeza		C		2/2
plants	land plants	Leguminosae	*Leucaena leucocephala*		Y			1
plants	land plants	Leguminosae	*Melilotus indicus*	hexham scent	Y			1/1
plants	land plants	Leguminosae	*Mirbelia aotoides*			C		1/1
plants	land plants	Leguminosae	*Mirbelia pungens*			C		1/1
plants	land plants	Leguminosae	*Mirbelia speciosa subsp. ringrosei*			C		2/1
plants	land plants	Leguminosae	*Neptunia gracilis*			C		1/1
plants	land plants	Leguminosae	*Pultenaea bracteaminor*			C		1/1
plants	land plants	Leguminosae	*Pultenaea cunninghamii*	prickly pea		C		1/1
plants	land plants	Leguminosae	*Pultenaea petiolaris*			C		1/1
plants	land plants	Leguminosae	*Pultenaea spinosa*			C		1
plants	land plants	Leguminosae	*Rhynchosia minima var. minima*			C		2/2
plants	land plants	Leguminosae	*Senna barclayana*			C		1/1
plants	land plants	Leguminosae	*Senna coronilloides*			C		1/1
plants	land plants	Leguminosae	*Senna surattensis*			C		1/1
plants	land plants	Leguminosae	*Tephrosia bidwillii*			C		1/1
plants	land plants	Leguminosae	*Tephrosia brachyodon var. longipes*			C		1/1
plants	land plants	Leguminosae	*Tephrosia filipes subsp. filipes*			C		1/1
plants	land plants	Leguminosae	*Tephrosia rufula*			C		1/1
plants	land plants	Leguminosae	*Trifolium repens var. repens*	white clover	Y			2/2
plants	land plants	Leguminosae	*Zornia dyctiocarpa var. dyctiocarpa*			C		1/1
plants	land plants	Leguminosae	*Zornia muriculata subsp. angustata*			C		6/6
plants	land plants	Lejeuneaceae	*Lejeunea drummondii*			C		1/1
plants	land plants	Lembophyllaceae	*Camptochaete excavata*			C		1/1
plants	land plants	Lembophyllaceae	*Fallaciella gracilis*			C		2/2
plants	land plants	Lentibulariaceae	*Utricularia dichotoma*	fairy aprons		SL		2/2
plants	land plants	Leptodontaceae	*Forsstroemia trichomitria subsp. australis*			C		1/1
plants	land plants	Leptodontaceae	*Leptodon smithii*			C		1/1
plants	land plants	Leptostomataceae	*Leptostomum macrocarpon*			C		1/1
plants	land plants	Liliaceae	*Lilium formosanum*		Y			1/1
plants	land plants	Linderniaceae	*Lindernia prolata*			C		1/1
plants	land plants	Loganiaceae	*Strychnos psilosperma*	strychnine tree		C		1/1
plants	land plants	Lophocoleaceae	*Chiloscyphus semiteres*			C		1/1
plants	land plants	Loranthaceae	*Amyema cambagei*			C		1/1

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plants	land plants	Loranthaceae	*Amyema congener subsp. rotundifolia*			C		2/2
plants	land plants	Loranthaceae	*Amyema lucasii*			C		1/1
plants	land plants	Loranthaceae	*Amyema quandang var. bancroftii*	broad-leaved grey mistletoe		C		3/3
plants	land plants	Loranthaceae	*Amyema quandang var. quandang*			C		1/1
plants	land plants	Loranthaceae	*Dendrophthoe glabrescens*			C		1/1
plants	land plants	Loranthaceae	*Lysiana subfalcata*			C		1/1
plants	land plants	Malvaceae	*Abutilon oxycarpum var. oxycarpum*			C		3/3
plants	land plants	Malvaceae	*Anoda cristata*	anoda weed	Y			1/1
plants	land plants	Malvaceae	*Hibiscus sturtii*			C		1/1
plants	land plants	Malvaceae	*Hibiscus sturtii var. sturtii*			C		1/1
plants	land plants	Malvaceae	*Hibiscus verdcourtii*			C		1/1
plants	land plants	Malvaceae	*Malvastrum americanum*		Y			1
plants	land plants	Malvaceae	*Malvastrum coromandelianum subsp. coromandelianum*		Y			2/2
plants	land plants	Malvaceae	*Pavonia hastata*	pink pavonia	Y			1/1
plants	land plants	Malvaceae	*Sida*					2/2
plants	land plants	Malvaceae	*Sida atherophora*			C		1/1
plants	land plants	Malvaceae	*Sida hackettiana*			C		3/1
plants	land plants	Malvaceae	*Sida rhombifolia*		Y			1/1
plants	land plants	Meliaceae	*Anthocarapa nitidula*	incense cedar		C		1/1
plants	land plants	Meliaceae	*Owenia venosa*	crow's apple		C		7/5
plants	land plants	Meliaceae	*Owenia x reliqua*			C		1/1
plants	land plants	Menispermaceae	*Legnephora moorei*			C		1/1
plants	land plants	Menyanthaceae	*Nymphoides indica*	water snowflake		SL		1/1
plants	land plants	Meteoriaceae	*Papillaria crocea*			C		1/1
plants	land plants	Meteoriaceae	*Papillaria flexicaulis*			C		1/1
plants	land plants	Meteoriaceae	*Papillaria leuconeura*			C		2/2
plants	land plants	Metzgeriaceae	*Metzgeria furcata*			C		1/1
plants	land plants	Moraceae	*Ficus coronata*	creek sandpaper fig		C		1/1
plants	land plants	Myrtaceae	*Acmena smithii*	lillypilly satinash		C		1/1
plants	land plants	Myrtaceae	*Angophora floribunda*	rough-barked apple		C		1/1
plants	land plants	Myrtaceae	*Angophora leiocarpa*	rusty gum		C		40/1
plants	land plants	Myrtaceae	*Angophora subvelutina*			C		1/1
plants	land plants	Myrtaceae	*Backhousia angustifolia*	narrow-leaved backhousia		C		3/2
plants	land plants	Myrtaceae	*Corymbia citriodora*	spotted gum		C		1
plants	land plants	Myrtaceae	*Corymbia citriodora subsp. variegata*			C		59
plants	land plants	Myrtaceae	*Corymbia gummifera*	red bloodwood		C		1
plants	land plants	Myrtaceae	*Corymbia intermedia*	pink bloodwood		C		1
plants	land plants	Myrtaceae	*Corymbia tessellaris*	Moreton Bay ash		C		1
plants	land plants	Myrtaceae	*Corymbia trachyphloia subsp. trachyphloia*			C		1/1
plants	land plants	Myrtaceae	*Corymbia watsoniana subsp. watsoniana*			C		10
plants	land plants	Myrtaceae	*Eucalyptus*					1
plants	land plants	Myrtaceae	*Eucalyptus acmenoides*			C		3
plants	land plants	Myrtaceae	*Eucalyptus apothalassica*			C		2/1
plants	land plants	Myrtaceae	*Eucalyptus bakeri*	Baker's mallee		C		1/1
plants	land plants	Myrtaceae	*Eucalyptus blakelyi*	Blakely's red gum		C		1
plants	land plants	Myrtaceae	*Eucalyptus crebra*	narrow-leaved red ironbark		C		17/2

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plants	land plants	Myrtaceae	*Eucalyptus decorticans*			C		39
plants	land plants	Myrtaceae	*Eucalyptus dura*			C		3/3
plants	land plants	Myrtaceae	*Eucalyptus exserta*	Queensland peppermint		C		2
plants	land plants	Myrtaceae	*Eucalyptus fibrosa*			C		1
plants	land plants	Myrtaceae	*Eucalyptus fibrosa subsp. fibrosa*			C		1/1
plants	land plants	Myrtaceae	*Eucalyptus longirostrata*			C		1/1
plants	land plants	Myrtaceae	*Eucalyptus major*	mountain grey gum		C		1/1
plants	land plants	Myrtaceae	*Eucalyptus melanophloia subsp. melanophloia*			C		1/1
plants	land plants	Myrtaceae	*Eucalyptus orgadophila*	mountain coolibah		C		1/1
plants	land plants	Myrtaceae	*Eucalyptus populnea*	poplar box		C		1
plants	land plants	Myrtaceae	*Eucalyptus tereticornis subsp. basaltica*			C		1/1
plants	land plants	Myrtaceae	*Eucalyptus tereticornis subsp. tereticornis*			C		1/1
plants	land plants	Myrtaceae	*Gossia bidwillii*			C		2
plants	land plants	Myrtaceae	*Lysicarpus angustifolius*	budgeroo		C		4
plants	land plants	Myrtaceae	*Melaleuca decora*			C		1/1
plants	land plants	Myrtaceae	*Melaleuca formosa*			NT		3/2
plants	land plants	Myrtaceae	*Melaleuca squamophloia*			C		1/1
plants	land plants	Myrtaceae	*Melaleuca trichostachya*			C		1/1
plants	land plants	Myrtaceae	*Rhodamnia dumicola*	rib-fruited malletwood		E		1/1
plants	land plants	Myrtaceae	*Sannantha collina*			C		1/1
plants	land plants	Nyctaginaceae	*Boerhavia dominii*			C		2/2
plants	land plants	Nyctaginaceae	*Boerhavia sp. (St George A.Hill AQ399299)*			C		1/1
plants	land plants	Nyctaginaceae	*Bougainvillea glabra*		Y			1
plants	land plants	Oleaceae	*Jasminum dianthifolium*			C		1/1
plants	land plants	Oleaceae	*Jasminum didymum subsp. racemosum*			C		4/4
plants	land plants	Oleaceae	*Jasminum simplicifolium subsp. australiense*			C		5/4
plants	land plants	Oleaceae	*Ligustrum lucidum*	large-leaved privet	Y			1/1
plants	land plants	Oleaceae	*Notelaea longifolia*			C		3
plants	land plants	Oleaceae	*Notelaea microcarpa*			C		4/4
plants	land plants	Oleaceae	*Notelaea pungens*			C		3/2
plants	land plants	Onagraceae	*Epilobium billardierianum subsp. cinereum*			C		1/1
plants	land plants	Onagraceae	*Epilobium billardierianum subsp. hydrophilum*			C		1/1
plants	land plants	Onagraceae	*Oenothera affinis*	long-flowered evening primrose	Y			1/1
plants	land plants	Ophioglossaceae	*Ophioglossum lusitanicum*	adder's tongue		C		1/1
plants	land plants	Ophioglossaceae	*Ophioglossum reticulatum*			C		1/1
plants	land plants	Ophioglossaceae	*Sceptridium australe*			C		1/1
plants	land plants	Orchidaceae	*Calanthe triplicata*	christmas orchid		SL		1/1
plants	land plants	Orchidaceae	*Dendrobium monophyllum*			SL		1/1
plants	land plants	Orchidaceae	*Dipodium punctatum*			SL		1/1
plants	land plants	Orchidaceae	*Dipodium variegatum*			SL		1/1
plants	land plants	Orchidaceae	*Diuris abbreviata*	lemon doubletail		SL		1/1
plants	land plants	Orchidaceae	*Diuris parvipetala*			V		1/1
plants	land plants	Orchidaceae	*Dockrillia pugioniformis*	dagger orchid		SL		1/1
plants	land plants	Orthotrichaceae	*Macromitrium*					1/1
plants	land plants	Oxalidaceae	*Oxalis chnoodes*			C		2/2
plants	land plants	Oxalidaceae	*Oxalis radicosa*			C		2/2

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plants	land plants	Passifloraceae	*Passiflora aurantia var. pubescens*			C		2/2
plants	land plants	Passifloraceae	*Passiflora subpeltata*	white passion flower	Y			1/1
plants	land plants	Phrymaceae	*Mimulus gracilis*	slender monkey flower		C		2/2
plants	land plants	Phyllanthaceae	*Breynia oblongifolia*			C		4/3
plants	land plants	Phyllanthaceae	*Bridelia leichhardtii*			C		1/1
plants	land plants	Phyllanthaceae	*Phyllanthus microcladus*			C		1/1
plants	land plants	Phyllanthaceae	*Phyllanthus occidentalis*			C		1
plants	land plants	Phyllanthaceae	*Phyllanthus similis*			C		1/1
plants	land plants	Phyllanthaceae	*Phyllanthus subcrenulatus*			C		1/1
plants	land plants	Phyllanthaceae	*Phyllanthus virgatus*			C		4/2
plants	land plants	Phytolaccaceae	*Phytolacca octandra*	inkweed	Y			1/1
plants	land plants	Picrodendraceae	*Petalostigma pubescens*	quinine tree		C		3/1
plants	land plants	Pittosporaceae	*Auranticarpa rhombifolia*			C		2/2
plants	land plants	Pittosporaceae	*Bursaria incana*			C		3/1
plants	land plants	Pittosporaceae	*Bursaria spinosa subsp. spinosa*			C		4/2
plants	land plants	Pittosporaceae	*Pittosporum*					1
plants	land plants	Pittosporaceae	*Pittosporum angustifolium*			C		6/5
plants	land plants	Pittosporaceae	*Pittosporum undulatum*	sweet pittosporum		C		2/2
plants	land plants	Pittosporaceae	*Pittosporum viscidum*	black-fruited thornbush		C		5/5
plants	land plants	Plantaginaceae	*Callitriche sonderi*			C		1/1
plants	land plants	Plantaginaceae	*Gratiola pedunculata*			C		1/1
plants	land plants	Plantaginaceae	*Plantago debilis*	shade plantain		C		2/2
plants	land plants	Plantaginaceae	*Veronica plebeia*	trailing speedwell		C		1/1
plants	land plants	Plumbaginaceae	*Plumbago zeylanica*	native plumbago		C		1/1
plants	land plants	Poaceae	*Alloteropsis semialata*	cockatoo grass		C		1/1
plants	land plants	Poaceae	*Ancistrachne uncinulata*	hooky grass		C		2/2
plants	land plants	Poaceae	*Aristida benthamii var. benthamii*			C		1
plants	land plants	Poaceae	*Aristida calycina var. calycina*			C		2/1
plants	land plants	Poaceae	*Aristida calycina var. filifolia*			C		1/1
plants	land plants	Poaceae	*Aristida calycina var. praealta*			C		1/1
plants	land plants	Poaceae	*Aristida caput-medusae*			C		5/3
plants	land plants	Poaceae	*Aristida echinata*			C		1/1
plants	land plants	Poaceae	*Aristida jerichoensis var. jerichoensis*			C		1
plants	land plants	Poaceae	*Aristida lazaridis*			C		2/2
plants	land plants	Poaceae	*Aristida leptopoda*	white speargrass		C		1/1
plants	land plants	Poaceae	*Aristida lignosa*			C		1/1
plants	land plants	Poaceae	*Aristida personata*			C		1/1
plants	land plants	Poaceae	*Aristida queenslandica var. dissimilis*			C		1
plants	land plants	Poaceae	*Aristida ramosa*	purple wiregrass		C		2
plants	land plants	Poaceae	*Aristida vagans*			C		3/1
plants	land plants	Poaceae	*Arundinella nepalensis*	reedgrass		C		3/2
plants	land plants	Poaceae	*Austrostipa scabra subsp. scabra*			C		1/1
plants	land plants	Poaceae	*Austrostipa verticillata*	slender bamboo grass		C		1/1
plants	land plants	Poaceae	*Bothriochloa bladhii subsp. bladhii*			C		1/1
plants	land plants	Poaceae	*Bothriochloa bunyensis*	Bunya Mountains bluegrass		V	V	3/3
plants	land plants	Poaceae	*Bothriochloa decipiens*			C		1

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plants	land plants	Poaceae	*Bothriochloa decipiens var. decipiens*			C		2/2
plants	land plants	Poaceae	*Bothriochloa macra*	redleg grass		C		1/1
plants	land plants	Poaceae	*Bromus catharticus*	prairie grass	Y			1/1
plants	land plants	Poaceae	*Calyptochloa gracillima subsp. gracillima*			C		3/2
plants	land plants	Poaceae	*Capillipedium parviflorum*	scented top		C		1/1
plants	land plants	Poaceae	*Capillipedium spicigerum*	spicytop		C		2/2
plants	land plants	Poaceae	*Cenchrus caliculatus*	hillside burrgrass		C		1/1
plants	land plants	Poaceae	*Cenchrus ciliaris*		Y			1/1
plants	land plants	Poaceae	*Cenchrus purpurascens*			C		2/2
plants	land plants	Poaceae	*Chloris divaricata var. cynodontoides*			C		1/1
plants	land plants	Poaceae	*Chloris ventricosa*	tall chloris		C		3/3
plants	land plants	Poaceae	*Chrysopogon filipes*			C		1/1
plants	land plants	Poaceae	*Chrysopogon sylvaticus*			C		1/1
plants	land plants	Poaceae	*Cleistochloa subjuncea*			C		7/5
plants	land plants	Poaceae	*Cymbopogon obtectus*			C		1/1
plants	land plants	Poaceae	*Cymbopogon refractus*	barbed-wire grass		C		7/5
plants	land plants	Poaceae	*Dactyloctenium radulans*	button grass		C		1/1
plants	land plants	Poaceae	*Dichanthium annulatum*	sheda grass	Y			1/1
plants	land plants	Poaceae	*Dichanthium sericeum subsp. sericeum*			C		5/5
plants	land plants	Poaceae	*Dichelachne crinita*	longhair plumegrass		C		1/1
plants	land plants	Poaceae	*Dichelachne montana*			C		2/2
plants	land plants	Poaceae	*Digitaria*					1/1
plants	land plants	Poaceae	*Digitaria ammophila*	silky umbrella grass		C		1/1
plants	land plants	Poaceae	*Digitaria breviglumis*			C		1
plants	land plants	Poaceae	*Digitaria brownii*			C		1/1
plants	land plants	Poaceae	*Digitaria diminuta*			C		1/1
plants	land plants	Poaceae	*Digitaria divaricatissima*	spreading umbrella grass		C		2/2
plants	land plants	Poaceae	*Digitaria minima*			C		1/1
plants	land plants	Poaceae	*Digitaria ramularis*			C		2/1
plants	land plants	Poaceae	*Dinebra decipiens var. peacockii*			C		2/2
plants	land plants	Poaceae	*Echinopogon caespitosus var. caespitosus*	hedgehog grass		C		2/2
plants	land plants	Poaceae	*Echinopogon ovatus*			C		1/1
plants	land plants	Poaceae	*Eleusine tristachya*	goose grass	Y			1/1
plants	land plants	Poaceae	*Enneapogon gracilis*	slender nineawn		C		3/3
plants	land plants	Poaceae	*Enneapogon lindleyanus*			C		2/2
plants	land plants	Poaceae	*Entolasia stricta*	wiry panic		C		4/1
plants	land plants	Poaceae	*Eragrostis curvula*		Y			6/3
plants	land plants	Poaceae	*Eragrostis elongata*			C		3/1
plants	land plants	Poaceae	*Eragrostis leptostachya*			C		3
plants	land plants	Poaceae	*Eragrostis longipedicellata*			C		1/1
plants	land plants	Poaceae	*Eragrostis megalosperma*			C		1/1
plants	land plants	Poaceae	*Eragrostis sororia*			C		3/3
plants	land plants	Poaceae	*Eragrostis tenuifolia*	elastic grass	Y			1/1
plants	land plants	Poaceae	*Eremochloa bimaculata*	poverty grass		C		3/1
plants	land plants	Poaceae	*Eriochloa crebra*	spring grass		C		2/2
plants	land plants	Poaceae	*Eulalia aurea*	silky browntop		C		4/2

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Poaceae	*Heteropogon contortus*	black speargrass		C		4/4
plants	land plants	Poaceae	*Homopholis belsonii*	Belson's panic		E	V	1
plants	land plants	Poaceae	*Imperata cylindrica*	blady grass		C		2/2
plants	land plants	Poaceae	*Megathyrsus maximus*		Y			1
plants	land plants	Poaceae	*Megathyrsus maximus var. pubiglumis*		Y			1/1
plants	land plants	Poaceae	*Melinis repens*	red natal grass	Y			2/2
plants	land plants	Poaceae	*Microlaena stipoides var. stipoides*			C		2/2
plants	land plants	Poaceae	*Oplismenus aemulus*	creeping shade grass		C		1/1
plants	land plants	Poaceae	*Panicum effusum*			C		6/3
plants	land plants	Poaceae	*Panicum queenslandicum var. queenslandicum*			C		2/2
plants	land plants	Poaceae	*Panicum simile*			C		1/1
plants	land plants	Poaceae	*Paspalidium caespitosum*	brigalow grass		C		1/1
plants	land plants	Poaceae	*Paspalidium criniforme*			C		1
plants	land plants	Poaceae	*Paspalidium distans*	shotgrass		C		3/3
plants	land plants	Poaceae	*Paspalidium gracile*	slender panic		C		1/1
plants	land plants	Poaceae	*Poa labillardierei var. labillardierei*	tussock grass		C		5/5
plants	land plants	Poaceae	*Rytidosperma bipartitum*			C		1
plants	land plants	Poaceae	*Rytidosperma indutum*			C		1/1
plants	land plants	Poaceae	*Rytidosperma longifolium*			C		2/2
plants	land plants	Poaceae	*Rytidosperma racemosum var. obtusatum*			C		1/1
plants	land plants	Poaceae	*Rytidosperma tenuius*			C		1/1
plants	land plants	Poaceae	*Sarga leiocladum*			C		3/3
plants	land plants	Poaceae	*Setaria surgens*			C		1/1
plants	land plants	Poaceae	*Sporobolus creber*			C		4/4
plants	land plants	Poaceae	*Sporobolus elongatus*			C		3/3
plants	land plants	Poaceae	*Sporobolus fertilis*	giant Parramatta grass	Y			1/1
plants	land plants	Poaceae	*Themeda triandra*	kangaroo grass		C		5/4
plants	land plants	Poaceae	*Tragus australianus*	small burr grass		C		1/1
plants	land plants	Poaceae	*Tripogon loliiformis*	five minute grass		C		3/3
plants	land plants	Poaceae	*Urochloa foliosa*			C		2/2
plants	land plants	Poaceae	*Urochloa whiteana*			C		1/1
plants	land plants	Poaceae	*Walwhalleya proluta*			C		1/1
plants	land plants	Polygalaceae	*Polygala japonica*			C		2/2
plants	land plants	Polygalaceae	*Polygala triflora*			C		1/1
plants	land plants	Polygalaceae	*Polygala virgata*		Y			1/1
plants	land plants	Polygonaceae	*Muehlenbeckia gracillima*			C		1/1
plants	land plants	Polygonaceae	*Persicaria barbata*			C		1/1
plants	land plants	Polygonaceae	*Persicaria decipiens*	slender knotweed		C		2/2
plants	land plants	Polygonaceae	*Persicaria lapathifolia*	pale knotweed		C		3/3
plants	land plants	Polygonaceae	*Persicaria orientalis*	princes feathers		C		1/1
plants	land plants	Polygonaceae	*Persicaria prostrata*	creeping knotweed		C		1/1
plants	land plants	Polygonaceae	*Polygonum plebeium*	small knotweed		C		1/1
plants	land plants	Polygonaceae	*Rumex brownii*	swamp dock		C		1/1
plants	land plants	Polygonaceae	*Rumex crispus*	curled dock	Y			1/1
plants	land plants	Polypodiaceae	*Dictymia brownii*	strap fern		SL		2/2
plants	land plants	Polypodiaceae	*Pyrrosia rupestris*	rock felt fern		SL		2/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Polypodiaceae	*Zealandia pustulata subsp. pustulata*			SL		1/1
plants	land plants	Porellaceae	*Porella crawfordii*			C		1/1
plants	land plants	Portulacaceae	*Portulaca australis*			C		2/1
plants	land plants	Portulacaceae	*Portulaca bicolor*			C		2/2
plants	land plants	Portulacaceae	*Portulaca filifolia*			C		1/1
plants	land plants	Portulacaceae	*Portulaca oleracea*	pigweed	Y			2/2
plants	land plants	Pottiaceae	*Barbula calycina*			C		1/1
plants	land plants	Pottiaceae	*Triquetrella papillata*			C		1/1
plants	land plants	Pottiaceae	*Weissia controversa*			C		1/1
plants	land plants	Proteaceae	*Banksia spinulosa var. collina*			C		2/2
plants	land plants	Proteaceae	*Grevillea floribunda subsp. floribunda*			C		1/1
plants	land plants	Proteaceae	*Grevillea floribunda subsp. tenella*			C		1/1
plants	land plants	Proteaceae	*Grevillea robusta*			C		2/1
plants	land plants	Proteaceae	*Grevillea striata*	beefwood		C		3/2
plants	land plants	Proteaceae	*Persoonia sericea*	silky geebung		C		3/2
plants	land plants	Psilotaceae	*Psilotum nudum*	skeleton fork fern		SL		1/1
plants	land plants	Pteridaceae	*Adiantum atroviride*			SL		2/2
plants	land plants	Pteridaceae	*Adiantum formosum*			C		1/1
plants	land plants	Pteridaceae	*Adiantum hispidulum var. hypoglaucum*			SL		1/1
plants	land plants	Pteridaceae	*Cheilanthes distans*	bristly cloak fern		C		4/4
plants	land plants	Pteridaceae	*Cheilanthes sieberi*			C		1
plants	land plants	Pteridaceae	*Cheilanthes sieberi subsp. sieberi*			C		5/5
plants	land plants	Pteridaceae	*Pellaea nana*			SL		3/2
plants	land plants	Pteridaceae	*Pellaea paradoxa*	heart fern		SL		2/1
plants	land plants	Ptychomitriaceae	*Ptychomitrium*					1/1
plants	land plants	Ptychomitriaceae	*Ptychomitrium australe*			C		1/1
plants	land plants	Putranjivaceae	*Drypetes deplanchei*	grey boxwood		C		3
plants	land plants	Racopilaceae	*Racopilum cuspidigerum*			C		1/1
plants	land plants	Ranunculaceae	*Clematis fawcettii*			V	V	5/5
plants	land plants	Ranunculaceae	*Clematis glycinoides*			C		1/1
plants	land plants	Ranunculaceae	*Ranunculus lappaceus*	common buttercup		C		1/1
plants	land plants	Ranunculaceae	*Ranunculus meristus*			C		1/1
plants	land plants	Ranunculaceae	*Ranunculus sessiliflorus var. sessiliflorus*			C		1/1
plants	land plants	Rhamnaceae	*Alphitonia excelsa*	soap tree		C		11/2
plants	land plants	Rhamnaceae	*Cryptandra longistaminea*			C		1/1
plants	land plants	Rhamnaceae	*Polianthion minutiflorum*			V	V	1/1
plants	land plants	Rhamnaceae	*Pomaderris aspera*			C		1/1
plants	land plants	Rhamnaceae	*Pomaderris canescens*			C		1/1
plants	land plants	Rhamnaceae	*Pomaderris coomingalensis*			E		1/1
plants	land plants	Rhamnaceae	*Pomaderris queenslandica*			C		2/2
plants	land plants	Rhamnaceae	*Pomaderris sp. (Wondul Range P.Grimshaw+ G675)*			C		2/2
plants	land plants	Ripogonaceae	*Ripogonum album*	white supplejack		C		1
plants	land plants	Ripogonaceae	*Ripogonum brevifolium*	small-leaved supplejack		C		1/1
plants	land plants	Rosaceae	*Acaena novae-zelandiae*			C		1/1
plants	land plants	Rosaceae	*Cotoneaster pannosus*		Y			1/1
plants	land plants	Rosaceae	*Rubus anglocandicans*	blackberry	Y			1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Rosaceae	*Rubus moluccanus var. trilobus*			C		1/1
plants	land plants	Rosaceae	*Rubus parvifolius*	pink-flowered native raspberry		C		1/1
plants	land plants	Rosaceae	*Rubus rosifolius var. rosifolius*			C		1/1
plants	land plants	Rosaceae	*Rubus x novus*			C		1/1
plants	land plants	Rubiaceae	*Asperula conferta*			C		1/1
plants	land plants	Rubiaceae	*Cyclophyllum coprosmoides*			C		1
plants	land plants	Rubiaceae	*Everistia vacciniifolia var. vacciniifolia*			C		1/1
plants	land plants	Rubiaceae	*Galium ciliare subsp. ciliare*			C		1/1
plants	land plants	Rubiaceae	*Galium leptogonium*			C		2/2
plants	land plants	Rubiaceae	*Opercularia hispida*	hairy stinkweed		C		1/1
plants	land plants	Rubiaceae	*Pomax umbellata*			C		2/1
plants	land plants	Rubiaceae	*Psychotria daphnoides var. daphnoides*			C		1/1
plants	land plants	Rubiaceae	*Psydrax lamprophylla*			C		1/1
plants	land plants	Rubiaceae	*Psydrax odorata forma buxifolia*			C		4/3
plants	land plants	Rubiaceae	*Psydrax odorata forma subnitida*			C		2/2
plants	land plants	Rubiaceae	*Psydrax oleifolia*			C		2/1
plants	land plants	Rubiaceae	*Spermacoce*					1
plants	land plants	Rubiaceae	*Triflorensia cameronii*			C		2/2
plants	land plants	Rutaceae	*Acronychia laevis*	glossy acronychia		C		5/2
plants	land plants	Rutaceae	*Boronia glabra*			C		2/2
plants	land plants	Rutaceae	*Coatesia paniculata*			C		3/3
plants	land plants	Rutaceae	*Flindersia australis*	crow's ash		C		5/4
plants	land plants	Rutaceae	*Flindersia collina*	broad-leaved leopard tree		C		5/3
plants	land plants	Rutaceae	*Flindersia xanthoxyla*	yellow-wood		C		1/1
plants	land plants	Rutaceae	*Geijera parviflora*	wilga		C		2/2
plants	land plants	Rutaceae	*Geijera salicifolia*	brush wilga		C		8/5
plants	land plants	Rutaceae	*Melicope micrococca*	white evodia		C		2/2
plants	land plants	Rutaceae	*Phebalium distans*	Mt Berryman phebalium		E	E	3/3
plants	land plants	Rutaceae	*Phebalium nottii*	pink phebalium		C		1/1
plants	land plants	Rutaceae	*Philotheca difformis subsp. difformis*			C		1/1
plants	land plants	Rutaceae	*Zieria aspalathoides subsp. aspalathoides*			C		1/1
plants	land plants	Rutaceae	*Zieria cytisoides*	downy zieria		C		1/1
plants	land plants	Rutaceae	*Zieria obovata*			V	V	1
plants	land plants	Salicaceae	*Casearia multinervosa*	casearia		C		3/3
plants	land plants	Salviniaceae	*Azolla rubra*			C		1/1
plants	land plants	Samolaceae	*Samolus valerandi*	brookweed		C		1/1
plants	land plants	Santalaceae	*Exocarpos cupressiformis*	native cherry		C		2/2
plants	land plants	Santalaceae	*Exocarpos latifolius*			C		1
plants	land plants	Santalaceae	*Korthalsella breviarticulata*			C		1/1
plants	land plants	Santalaceae	*Santalum lanceolatum*			SL		2/2
plants	land plants	Santalaceae	*Thesium australe*	toadflax		V	V	4/4
plants	land plants	Santalaceae	*Viscum whitei subsp. whitei*			C		1/1
plants	land plants	Sapindaceae	*Alectryon diversifolius*	scrub boonaree		C		2/2
plants	land plants	Sapindaceae	*Alectryon oleifolius subsp. elongatus*			C		1/1
plants	land plants	Sapindaceae	*Alectryon pubescens*			C		1/1
plants	land plants	Sapindaceae	*Alectryon subdentatus*			C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Sapindaceae	*Arytera foveolata*	pitted coogera		C		2/2
plants	land plants	Sapindaceae	*Arytera microphylla*			C		2
plants	land plants	Sapindaceae	*Atalaya salicifolia*			C		2/2
plants	land plants	Sapindaceae	*Cardiospermum*		Y	C		1
plants	land plants	Sapindaceae	*Cardiospermum grandiflorum*	heart seed vine	Y			2
plants	land plants	Sapindaceae	*Cossinia australiana*			E	E	1/1
plants	land plants	Sapindaceae	*Cupaniopsis parvifolia*	small-leaved tuckeroo		C		2
plants	land plants	Sapindaceae	*Dodonaea*					1
plants	land plants	Sapindaceae	*Dodonaea stenophylla*			C		1/1
plants	land plants	Sapindaceae	*Dodonaea triangularis*			C		1/1
plants	land plants	Sapindaceae	*Dodonaea viscosa subsp. angustifolia*			C		1/1
plants	land plants	Sapindaceae	*Elattostachys xylocarpa*	white tamarind		C		2/1
plants	land plants	Sapotaceae	*Planchonella cotinifolia var. cotinifolia*			C		1/1
plants	land plants	Sapotaceae	*Planchonella cotinifolia var. pubescens*			C		1/1
plants	land plants	Scrophulariaceae	*Eremophila debilis*	winter apple		C		3/3
plants	land plants	Scrophulariaceae	*Eremophila deserti*			C		1/1
plants	land plants	Scrophulariaceae	*Myoporum acuminatum*	coastal boobialla		C		2/2
plants	land plants	Sematophyllaceae	*Sematophyllum subhumile*			C		3/3
plants	land plants	Solanaceae	*Duboisia leichhardtii*			C		2/2
plants	land plants	Solanaceae	*Lycium ferocissimum*	African boxthorn	Y			2
plants	land plants	Solanaceae	*Nicotiana megalosiphon*			C		1/1
plants	land plants	Solanaceae	*Physalis ixocarpa*	annual ground cherry	Y			1/1
plants	land plants	Solanaceae	*Solanum*					1
plants	land plants	Solanaceae	*Solanum corifolium*	straggling nightshade		C		1/1
plants	land plants	Solanaceae	*Solanum ellipticum*	potato bush		C		2/2
plants	land plants	Solanaceae	*Solanum latens*			C		2/2
plants	land plants	Solanaceae	*Solanum limitare*			C		2/2
plants	land plants	Solanaceae	*Solanum mauritianum*	wild tobacco	Y			2/1
plants	land plants	Solanaceae	*Solanum mitchellianum*			C		1/1
plants	land plants	Solanaceae	*Solanum nemophilum*			C		9/7
plants	land plants	Solanaceae	*Solanum rixosum*			C		1/1
plants	land plants	Solanaceae	*Solanum seaforthianum*	Brazilian nightshade	Y			1
plants	land plants	Solanaceae	*Solanum stelligerum*	devil's needles		C		3/2
plants	land plants	Stackhousiaceae	*Stackhousia muricata*			C		1
plants	land plants	Stackhousiaceae	*Stackhousia viminea*	slender stackhousia		C		1/1
plants	land plants	Sterculiaceae	*Brachychiton australis*	broad-leaved bottle tree		SL		1
plants	land plants	Sterculiaceae	*Brachychiton discolor*			SL		1/1
plants	land plants	Sterculiaceae	*Brachychiton populneus subsp. populneus*			SL		2/2
plants	land plants	Sterculiaceae	*Brachychiton populneus subsp. trilobus*			SL		1/1
plants	land plants	Stylidiaceae	*Stylidium eglandulosum*			SL		1/1
plants	land plants	Tectariaceae	*Arthropteris tenella*	climbing fern		C		1/1
plants	land plants	Thelypteridaceae	*Cyclosorus interruptus*			SL		1/1
plants	land plants	Thuidiaceae	*Thuidiopsis sparsa*			C		3/3
plants	land plants	Thuidiaceae	*Thuidiopsis sparsa var. sparsa*			C		3/3
plants	land plants	Thymelaeaceae	*Pimelea curviflora subsp. divergens*			C		3/3
plants	land plants	Thymelaeaceae	*Pimelea linifolia subsp. linifolia*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Thymelaeaceae	*Pimelea neoanglica*	poison pimelea		C		1/1
plants	land plants	Trachylomataceae	*Trachyloma diversinerve*			C		1/1
plants	land plants	Trachylomataceae	*Trachyloma planifolium*			C		1/1
plants	land plants	Urticaceae	*Dendrocnide photiniphylla*	shiny-leaved stinging tree		C		1
plants	land plants	Urticaceae	*Parietaria debilis*	native pellitory		C		1/1
plants	land plants	Urticaceae	*Urtica incisa*	stinging nettle		C		3/3
plants	land plants	Verbenaceae	*Glandularia aristigera*		Y			1/1
plants	land plants	Verbenaceae	*Lantana camara*	lantana	Y			38
plants	land plants	Verbenaceae	*Verbena incompta*		Y			1/1
plants	land plants	Viburnaceae	*Sambucus australasica*	native elderberry		C		1/1
plants	land plants	Violaceae	*Pigea enneasperma*			C		1/1
plants	land plants	Violaceae	*Pigea stellarioides*			C		3/3
plants	land plants	Violaceae	*Viola hederacea*			C		1/1
plants	land plants	Vitaceae	*Apocissus antarctica*			C		1
plants	land plants	Vitaceae	*Causonis clematidea*			C		2/2
plants	land plants	Vitaceae	*Clematicissus opaca*			C		1/1
plants	land plants	Vitaceae	*Tetrastigma nitens*	shining grape		C		1
plants	land plants	Xanthorrhoeaceae	*Xanthorrhoea*					1/1
plants	land plants	Xanthorrhoeaceae	*Xanthorrhoea glauca*			SL		1/1
plants	land plants	Xanthorrhoeaceae	*Xanthorrhoea glauca subsp. glauca*			SL		1/1
plants	land plants	Xanthorrhoeaceae	*Xanthorrhoea johnsonii*			SL		2
plants	land plants	Zygophyllaceae	*Roepera apiculata*			C		1/1
plants	uncertain	Indet.	*Indet.*			C		7/7

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 2 Likelihood of occurrence assessment

Key to likelihood of occurrence assessment:

- EPBC Act Status
  - CE – critically endangered
  - E – endangered
  - V – vulnerable
  - Mi – migratory.
- NC Act Status
  - CR – critically endangered
  - E – endangered
  - V – vulnerable
  - NT – near threatened
  - SLC – special least concern
  - LC – least concern.
- Likelihood of occurrence
  - Confirmed – the species or signs of their presence were observed during the field survey
  - Likely – the site contains habitat that is suitable for the species and Wildnet has recent records of the species (i.e. since 1980) within 10 km of the site
  - Possible – the site contains habitat that is suitable for the species but Wildnet has no recent records of the species within 10 km of the site; or the site contains marginal / low quality habitat for the species and Wildnet has recent records of the species within 10 km of the site
  - Unlikely – the site does not contain habitat for the species and Wildnet has no recent records of the species within 10 km of the site.
- Source
  - E – EPBC protected matters search tool
  - W – wildlife online database search.

Scientific name	Common name	EPBC status	Habitat description/ regional ecosystems present	Likelihood of occurrence	Source
Actitis hypoleucos	common sandpiper	Mi	Around coastal wetlands and some inland wetlands on the muddy margins or rocky shores. Also inhabits estuaries, deltas of streams, lakes, pools, billabongs, reservoirs, dams and claypans.	Unlikely. Limited suitable habitat onsite. No Wildnet records within 20 km. No detections during dam surveys, bird surveys, 24 months of BUS and opportunistic sightings.	E
Anthochaera phrygia	regent honeyeater	CE	Commonly associated with box-ironbark eucalypt woodland and dry sclerophyll forest, may inhabit riparian vegetation and lowland coastal forest. Mainly a canopy species it is reliant on select species of eucalypt and mistletoe which provide rich nectar (Commonwealth of Australia, 2016).	**Possible.** Moderate habitat on site and no records within 20 km. No detections during dam surveys, bird surveys, 24 months of BUS and opportunistic sightings.	E
Apus pacificus	fork-tailed swift	Mi	The fork-tailed swift is a non-breeding migrant to Australia. It is widespread across Australia and territories arriving in north west Australia in October and November. Almost exclusively aerial from <1 m to 1,000 m. Most observed over inland plains in Australia, but sometimes recorded over coastal cliffs and beaches as well as urban areas.	**Confirmed.** Present in a wide range of habitats and may overfly the site. Three individuals sighted in fixed point surveys. No Wildnet records within 10 km but four records within 20 km.	E
Botaurus poiciloptilus	Australasian bittern	E	The Australasian Bittern can be found in habitats containing reedbeds, and other vegetation in water such as cumbungi, lignum and sedges (BirdLife Australia, 2024).	**Possible.** Limited suitable habitat on site. No records within 10 km but one Wildnet record within 20 km to the north adjacent to Gordonbrook Dam 1984. No detections during dam surveys, bird surveys, 24 months of BUS and opportunistic sightings.	W
Calidris acuminata	sharp-tailed sandpiper	V, Mi	Edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation, lagoons, swamps, lakes and pools near the coast, dams, waterholes, soaks, bore drains and bore swamps, saltpans and hypersaline salt lakes, saltworks, sewage farms, flooded paddocks, sedge lands, ephemeral wetlands, but leave when they dry (Morcombe, 2004).	Unlikely. Limited suitable habitat onsite. No Wildnet records within 10 km, but 3 records within 20 km. No detections during dam surveys, 24 months of BUS, roaming surveys and opportunistic sightings.	E, W

Scientific name	Common name	EPBC status	Habitat description/ regional ecosystems present	Likelihood of occurrence	Source
Calidris ferruginea	curlew sandpiper	CE, Mi	Intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, non-tidal swamps, lakes and lagoons, ponds in saltworks, sewage farms, ephemeral and permanent lakes, dams, waterholes and bore drains (Pizzey & Knight, 2012).	Unlikely. No suitable habitat onsite. No Wildnet records within 20 km. No detections during dam surveys, bird surveys, 24 months of BUS and opportunistic sightings.	E
Calidris melanotos	pectoral sandpiper	Mi	In Australasia, the pectoral sandpiper prefers shallow fresh to saline wetlands. The species is found at coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands (DCCEEW, 2023c).	Unlikely. No suitable habitat onsite. No Wildnet records within 20 km. No detections during dam surveys, bird surveys, 24 months of BUSand opportunistic sightings.	E
Calyptorhynchus lathami lathami	glossy black-cockatoo	V	The glossy black cockatoo is highly dependent on *Allocasuarina* species (Higgins et al., 2001). It inhabits open forest and woodlands on the coastline as well as within the Great Dividing Range where stands of sheoak (especially *Allocasuarina littoralis* and *Allocasuarina torulosa*). Inland populations feed on a wide variety of sheoaks including drooping sheoak, *Allocasuarina diminuta*, *Allocasuarina gymnanthera* and belah (OEH, 2022). They mostly roost in the canopy of live, leafy trees such as eucalypts but breed in a hollow stump or limb of living or dead trees as well as holes in trunks of tall trees (Higgins et al., 2001).	**Confirmed.** Suitable foraging habitat exists in patches onsite. Two individuals observed roosting beside a dam onsite, a further five sighted during fixed point surveys, and evidence of feeding found.	E, survey results
Chalinolobus dwyeri	large-eared pied bat	E	The species has been found roosting in caves, overhangs, abandoned mine tunnels and disused fairy martin nests (Hoye & Dwyer, 1995; Schulz, 1998). No evidence exists of the large-eared pied bat roosting in tree hollows (DES, 2022).	Unlikely. Limited suitable habitat onsite and no Wildnet records within 20 km. No detections during surveys.	E
Climacteris picumnus victoriae	brown treecreeper (south-eastern)	V	Found in eucalypt woodlands and dry open forests of the inland slopes and plains inland of the Great Dividing Range. Northernmost known range is in the Bunya Mountains, Queensland. Mainly inhabits woodlands dominated by stringybarks or other rough-barked eucalypts; also found in mallee and River Red Gum (*Eucalyptus camaldulensis*) forest (OEH, 2024a).	Unlikely. No Wildnet records within 20 km. Marginal suitable habitat on site, but project site is outside of known species range.	E

Scientific name	Common name	EPBC status	Habitat description/ regional ecosystems present	Likelihood of occurrence	Source
Cuculus optatus	oriental cuckoo	Mi	Mainly inhabiting forests, the oriental cuckoo occurs in mixed, deciduous and coniferous forest. It is present at all levels of the forest canopy, and can be found at a range of elevations, occasionally being recorded in mountains as high up as 1,100 metres (Higgins, 1999).	**Possible.** Present in a wide range of habitats, and suitable habitat for the species is present on the project site. No Wildnet records within the 10 or 20 km. No detections during dam surveys, bird surveys, 24 months of BUS and opportunistic sightings.	E
Cyclopsitta diophthalma coxeni	Coxen's fig-parrot	CE	Habitat includes rainforests, adjacent eucalypt woodlands, coastal scrub and riparian vegetation (Pizzey & Knight, 2012). Coxen's fig-parrot occurs wherever fig trees are present in lowland and upland forest types, riparian corridors, farmland and urban environments. It feeds primarily on the seeds of figs (Coxen's Fig-Parrot Recovery Team, 2001).	Unlikely. No suitable habitat onsite and no confirmed records within the locality. One citizen science record exists from Kumbia (ALA 2020); however this is likely to be erroneous and has not been confirmed by other reputable sources.	E
Erythrotriorchis radiatus	red goshawk	E	Typically occurs in woodland and forests in subtropical and warm temperate regions of Australia (Marchant and Higgins 1993). It prefers landscapes that contain a mix of habitats including coastal and sub-coastal tall open forest, woodland and rainforest edges . Resident pairs of red goshawks prefer intact, extensive woodlands and forests with a mosaic of vegetation types that are open enough for fast manoeuvring flight (Marchant & Higgins, 1993). These favoured areas contain permanent water, are relatively fertile and biologically rich with large populations of birds. Such areas are also preferentially selected for agricultural development (Sattler & Williams, 1999). Nests are typically built at an average height of 20 m (DERM, 2012).	Unlikely. Marginal habitat onsite, nearest record is from the Nanango area approximately 50 km east of the project site.	E
Falco hypoleucos	grey falcon	V	Inhabits woodland, shrubland and grassland in the arid and semi-arid zones, especially wooded watercourses.	Unlikely. Limited habitat and no records within 20 km. No detections during dam surveys, bird surveys, 24 months BUS and opportunistic sightings.	E
Gallinago hardwickii	Latham's snipe	V, Mi	Latham's snipe is a non-breeding migrant to the south-east of Australia including Tasmania, passing through the north and New Guinea on passage. Latham's Snipe breed in Japan and on the east Asian mainland. Usually seen in small groups or singly in freshwater wetlands on or near the coast (Pizzey & Knight, 2012).	Unlikely. No suitable waterbodies onsite. No Wildnet records within 20 km.	E

Scientific name	Common name	EPBC status	Habitat description/ regional ecosystems present	Likelihood of occurrence	Source
Geophaps scripta scripta	squatter pigeon	V	The squatter pigeon is regionally abundant within the Brigalow Belt (northern) and Desert Uplands Bioregions. The species occurs in a wide range of habitats wherever there is a grassy understorey. It is commonly encountered in grassy woodlands and open forests dominated by Eucalypts (DCCEEW, 2023c).	**Possible.** Suitable habitat is present within the project site, however no Wildnet records within 10 or 20 km. No detections across any surveys between 2018-2025 or during specific bird surveys including, dam surveys, bird surveys, 24 months of BUS and opportunistic sightings.	E
Grantiella picta	painted honeyeater	V	Forests, woodlands, dry scrublands often with abundant mistletoe. Key habitat is defined as brigalow and gidgee (with mistletoe), including REs 11.3.1, 11.3.1a, 11.3.1b, 11.3.1c, 11.3.16, 11.3.17, 11.3.20, 11.4.3, 11.4.3a, 11.4.3b, 11.4.3c, 11.4.7, 11.4.10, 11.9.5, 11.9.6, 11.9.6a, and 11.9.10 (DES, 2022).	Unlikely. No suitable habitat exists onsite and no records within 10 km. One Wildnet record within 20 km. Many records from the wider locality (ALA 2022). No detections during dam surveys, bird surveys, 24 months of BUS and opportunistic sightings.	E
Hirundapus caudacutus	white-throated needletail	V, Mi	The white-throated needletail is a non-breeding migrant to Australia (present October-April). It is widespread across eastern and south-eastern Australia but is considered a vagrant in central and western Australia. White-throated needletails are aerial birds, utilising the airspace above forests, woodlands, farmlands and ridge tops (Pizzey & Knight, 2012).	**Confirmed.** Numerous individuals recorded during fixed point count surveys from 2018 - 2023. Likely to fly over the site. Four Wildnet records within 20 km.	E, W, survey results
Hydroprogne caspia	Caspian tern	Mi	Mostly found in sheltered coastal areas and may also occur on near-coastal or inland terrestrial wetlands that are either fresh or saline.	Unlikely. No suitable habitat on site and no Wildnet records within 10 km. One Wildnet record within 20 km.	W
Lathamus discolor	swift parrot	CE	Dry sclerophyll eucalypt forests and woodlands. Occasionally wet sclerophyll forests. Feeds mostly on nectar, mainly from eucalypts, but also eats psyllid insects and lerps, seeds and fruit.	Unlikely. No suitable habitat onsite and no records within 20 km.	E
Motacilla flava	yellow wagtail	Mi	Variety of habitat types from farmland to wet pastures and grasslands.	Unlikely. Habitat is suitable, but no Wildnet records within 20 km. No detections during dam surveys, bird surveys, 24 months of BUS and opportunistic sightings.	E

Scientific name	Common name	EPBC status	Habitat description/ regional ecosystems present	Likelihood of occurrence	Source
Nyctophilus corbeni	Corben's long-eared bat, south-eastern long-eared bat	V	Variety of vegetation types, including mallee, bulloak and box eucalypt dominated communities. Requires hollows for roosting and prefers large, intact and connected habitat patches.	Unlikely. No suitable habitat and no records from within 20 km. Harp trapping did not detect this species.	E
Pandion cristatus (syn. *P. haliaetus)*	eastern osprey	Mi	Occur in littoral and coastal habitats and terrestrial wetlands and occasionally travel inland along major rivers. Require extensive areas of open fresh, brackish or saline waters.	Unlikely. No rivers with permanent water occur. No Wildnet records within 10 km but one record within 20 km.	E, W
Pteropus poliocephalus	grey-headed flying fox	V	Sub-tropical and temperate rainforest, tall open forest, swamps, heaths and urban areas. Roosting sites usually in dense forest adjacent to waterbodies. Forages within 50 km of camp in flowering trees or rainforests, eucalypts, paperbarks and banksias.	**Confirmed**. Observed foraging at two locations within the site during spring 2021 when food species in flower. Most flying fox camps occur closer to the coast. No camps known from within 20 km, with closest camp in The Palms National Park, Cooyar, approximately 39 km to the south-east.	E, W, survey results
Plegadis falcinellus	glossy ibis	Mi	Fresh water marshes near the edges of lakes and rivers, lagoons, flood-plains, swamps, reservoirs, sewage ponds and cultivated areas under irrigation.	**Possible.** Suitable habitat exists on site. No Wildnet records within 10 km but three records within 20 km. No detections during dam surveys, bird surveys, 24 months of BUS and opportunistic sightings.	W
Rostratula australis	Australian painted snipe	E	Shallow inland wetlands, brackish or freshwater that are permanently or temporarily inundated.	Unlikely. No suitable wetland habitat and no records within 20 km.	E
Stagonopleura guttata	diamond firetail	V	Endemic to south-eastern Australia, extending from central Queensland to the Eyre Peninsula in South Australia. Found in grassy eucalypt woodlands, including Box-Gum woodlands and Snow Gum *Eucalyptus pauciflora* woodlands. Also occurs in open forest, mallee, Natural Temperate Grassland, and in secondary grassland derived from other communities (DCCEEW, 2023c).	**Possible**. Suitable habitat is -present, but species not detected during surveys and no Wildnet records within 20 km.	E

Scientific name	Common name	EPBC status	Habitat description/ regional ecosystems present	Likelihood of occurrence	Source
Tringa stagnatilis	marsh sandpiper	Mi	Permanent or ephemeral wetlands of varying salinity, including swamps, lagoons, billabongs, saltpans, saltmarshes, estuaries, pools on inundated floodplains, intertidal mudflats, sewage farms and saltworks.	Unlikely. No suitable habitat. No Wildnet records within 10 km, but one record within 20 km.	E
Turnix melanogaster	black-breasted button-quail	V	Occur in forested areas where deep leaf litter layer exists in a wide variety of forest types. Fallen logs and a dense, heterogeneously distributed shrub layers are also considered to be important habitat characteristics for shelter and breeding.	**Possible.** Marginal habitat exists in RE 11.8.3 in the south-western corner. No Wildnet records within 10 km. Numerous records within 20 km from Bunya Mountains which contains very different habitat. No detections during dam surveys, bird surveys, 24 months of BUS and opportunistic sightings.	E, W

Appendix 3 Bird and bat species observations 2018 - 2023

Family	Species	Common name	NC status	EPBC status	Spring 2018	Autumn 2019	Spring 2020	Spring 2021	Summer 2022	Autumn 2022	Winter 2022	Spring 2022	Summer 2023	Autumn 2023	Winter 2023	Spring 2023
-	-	passerine species†	-	-	-	-	-	-	-	1	-	-	-	1	1	-
-	-	raptor species†	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Acanthizidae	*Acanthiza chrysorrhoa*	yellow-rumped thornbill	LC	-	-	1	-	1	1	1	1	1	1	1	1	1
Acanthizidae	*Acanthiza lineata*	striated thornbill	LC	-	1	-	-	1	-	-	-	1	1	1	-	1
Acanthizidae	*Acanthiza nana*	yellow thornbill	LC	-	-	1	1	1	1	1	1	1	1	1	1	1
Acanthizidae	*Acanthiza pusilla*	brown thornbill	LC	-	-	1	-	1	-	1	-	-	-	-	-	1
Acanthizidae	Acanthiza spp.	thornbill species†	-	-	-	-	-	-	-	-	1	-	-	-	1	-
Acanthizidae	*Gerygone fusca*	western gerygone	LC	-	-	-	-	-	-	-	1	-	-	-	-	-
Acanthizidae	*Gerygone mouki*	brown gerygone	LC	-	1	-	1	1	1	-	-	-	-	-	-	-
Acanthizidae	*Gerygone olivacea*	white-throated gerygone	LC	-	-	1	1	1	1	1	1	1	1	-	1	1
Acanthizidae	*Pyrrholaemus sagittatus*	speckled warbler	LC	-	-	1	-	-	1	1	-	1	-	-	-	-
Acanthizidae	*Sericornis citreogularis*	yellow-throated scrubwren	LC	-	1	-	-	-	-	-	-	-	-	-	-	-
Acanthizidae	*Sericornis frontalis*	white-browed scrubwren	LC	-	1	1	-	1	-	1	1	1	-	-	-	1
Acanthizidae	*Sericornis magnirostra*	large-billed scrubwren	LC	-	-	-	-	1	-	-	-	-	-	-	-	-
Acanthizidae	*Smicrornis brevirostris*	weebill	LC	-	1	1	-	1	-	1	1	1	1	1	1	1
Accipitridae	*Accipiter cirrocephalus*	collared sparrowhawk	LC	-	-	1	-	-	-	-	-	-	-	-	-	-
Accipitridae	*Accipiter fasciatus*	brown goshawk	LC	-	-	-	-	1	-	-	-	1	1	1	-	1
Accipitridae	*Aquila audax*	wedge-tailed eagle	LC	-	1	1	-	1	1	1	1	1	1	1	1	1
Accipitridae	*Aviceda subcristata*	Pacific baza	LC	-	-	1	-	-	-	-	-	-	-	-	-	-
Accipitridae	*Elanus axillaris*	black-shouldered kite	LC	-	1	-	-	1	1	-	-	-	-	-	-	-
Accipitridae	*Haliastur sphenurus*	whistling kite	LC	-	1	1	-	-	-	-	-	-	-	-	-	-
Accipitridae	*Hamirostra melanosternon*	black-breasted buzzard	LC	-	-	-	-	1	-	-	-	-	-	-	-	-
Accipitridae	*Milvus migrans*	black kite	LC	-	-	-	-	1	-	-	-	-	-	-	-	-
Aegothelidae	*Aegotheles cristatus*	Australian owlet-nightjar	LC	-	-	1	-	1	-	-	1	-	1	-	-	1
Alaudidae	*Mirafra javanica*	Horsfield's Bushlark	LC	-	1	-	-	-	-	1	-	-	-	-	-	-
Anatidae	*Anas castanea*	chestnut teal	LC	-	1	-	-	-	-	-	-	-	-	-	-	-
Anatidae	*Anas gracilis*	grey teal	LC	-	1	1	1	1	-	-	1	-	-	-	-	-
Anatidae	*Anas superciliosa*	Pacific black duck	LC	-	1	1	1	1	1	1	1	1	1	1	1	-
Anatidae	*Aythya australis*	hardhead	LC	-	1	-	-	-	-	-	-	-	-	-	-	-
Anatidae	*Chenonetta jubata*	Australian wood duck	LC	-	1	1	1	1	1	1	1	1	-	1	-	1
Anatidae	*Dendrocygna arcuata*	wandering whistling duck	LC	-	-	-	-	1	-	-	-	-	-	-	-	-
Anatidae	*Dendrocygna arcuata*	wandering whistling-duck	LC	-	-	-	-	-	1	-	-	-	-	-	-	-
Anatidae	*Dendrocygna eytoni*	plumed whistling-duck	LC	-	1	-	-	1	-	-	-	-	1	-	-	-
Anhingidae	*Anhinga novaehollandiae*	Australasian darter	LC	-	-	-	1	-	-	-	-	-	-	-	-	-
Apodidae	*Apus pacificus*	fork-tailed swift	SLC	V, Mi	-	-	-	-	-	-	-	-	1	-	-	1
Apodidae	*Hirundapus caudacutus*	white-throated needletail	V	V	1	-	-	1	1	-	-	1	1	-	-	1

Family	Species	Common name	NC status	EPBC status	Spring 2018	Autumn 2019	Spring 2020	Spring 2021	Summer 2022	Autumn 2022	Winter 2022	Spring 2022	Summer 2023	Autumn 2023	Winter 2023	Spring 2023
Ardeidae	*Ardea intermedia*	intermediate egret	LC	-	1	-	-	-	-	-	-	-	-	1	-	-
Ardeidae	*Ardea modesta*	eastern great egret	LC	-	1	-	-	-	-	-	-	-	1	-	-	-
Ardeidae	*Ardea pacifica*	white-necked heron	LC	-	1	1	1	-	-	-	-	-	1	1	-	-
Ardeidae	*Egretta novaehollandiae*	white-faced heron	LC	-	1	1	1	1	1	1	1	1	1	1	-	1
Ardeidae	*Nycticorax caledonicus*	nankeen night-heron	LC	-	-	-	-	1	-	-	-	-	-	-	-	-
Artamidae	-	woodswallow species†	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Artamidae	*Artamus cyanopterus*	dusky woodswallow	LC	-	1	-	1	-	1	1	-	-	-	-	1	-
Artamidae	*Artamus leucorynchus*	white-breasted woodswallow	LC	-	1	1	-	-	-	-	-	-	-	-	1	-
Artamidae	*Artamus superciliosus*	white-browed woodswallow	LC	-	1	-	-	-	-	-	1	-	-	-	-	-
Artamidae	*Cracticus nigrogularis*	pied butcherbird	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Artamidae	*Cracticus torquatus*	grey butcherbird	LC	-	1	1	-	1	1	1	1	1	1	1	1	1
Artamidae	*Gymnorhina tibicen*	Australian magpie	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Artamidae	*Strepera graculina*	pied currawong	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Cacatuidae	*Cacatua sanguinea*	little corella	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Cacatuidae	*Cacatua tenuirostris*	long-billed corella	LC	-	-	-	-	-	-	-	-	1	-	-	-	-
Cacatuidae	*Calyptorhynchus banksii*	red-tailed black-cockatoo	LC	-	1	1	1	-	1	1	-	-	-	-	-	1
Cacatuidae	*Calyptorhynchus funereus*	yellow-tailed black-cockatoo	LC	-	-	1	-	-	-	-	-	-	-	-	-	-
Cacatuidae	*Calyptorhynchus lathami lathami*	glossy black-cockatoo	V	V	-	^^^1	^^^1	1	-	-	-	1	-	-	-	1
Cacatuidae	*Eolophus roseicapilla*	galah	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Cacatuidae	*Nymphicus hollandicus*	cockatiel	LC	-	1	1	1	-	1	-	1	1	-	1	1	-
Campephagidae	*Coracina maxima*	ground cuckoo-shrike	LC	-	-	-	1	-	-	-	-	-	-	-	-	-
Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Campephagidae	*Coracina papuensis*	white-bellied cuckoo-shrike	LC	-	1	1	-	-	1	1	-	1	1	-	-	-
Campephagidae	*Coracina tenuirostris*	cicadabird	LC	-	-	1	-	1	1	-	1	1	1	-	-	-
Campephagidae	*Lalage leucomela*	varied triller	LC	-	-	-	-	1	-	1	-	-	-	1	-	1
Campephagidae	*Lalage tricolor*	white-winged triller	LC	-	1	-	1	1	1	-	-	-	-	-	-	-
Casuariidae	*Dromaius novaehollandiae*	emu	LC	-	-	1	-	-	1	-	-	-	-	-	-	-
Charadriidae	*Elseyornis melanops*	black-fronted dotterel	LC	-	-	-	1	-	-	1	-	1	-	-	-	-
Charadriidae	*Vanellus miles miles*	masked lapwing	LC	-	1	1	1	1	1	1	1	-	1	1	1	1
Cisticolidae	*Cisticola exilis*	golden-headed cisticola	LC	-	1	-	-	1	1	-	-	-	-	-	-	-
Climacteridae	*Climacteris picumnus*	brown treecreeper	LC	-	1	1	-	-	-	1	-	-	-	-	1	-
Climacteridae	*Cormobates leucophaea*	white-throated treecreeper	LC	-	-	1	-	1	1	-	1	1	1	1	1	1
Columbidae	*Chalcophaps longirostris*	emerald dove	LC	-	-	-	-	-	1	-	-	-	-	-	-	-
Columbidae	*Geopelia cuneata*	diamond dove	LC	-	-	-	-	1	-	-	-	-	-	-	-	-
Columbidae	*Geopelia humeralis*	bar-shouldered dove	LC	-	1	1	-	1	1	1	1	1	1	1	1	1
Columbidae	*Geopelia striata*	peaceful dove	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Columbidae	*Lopholaimus antarcticus*	topknot pigeon	LC	-	-	-	-	1	-	-	-	-	-	-	-	-
Columbidae	*Macropygia amboinensis*	brown cuckoo-dove	LC	-	-	-	-	-	1	-	-	-	-	-	-	-

Family	Species	Common name	NC status	EPBC status	Spring 2018	Autumn 2019	Spring 2020	Spring 2021	Summer 2022	Autumn 2022	Winter 2022	Spring 2022	Summer 2023	Autumn 2023	Winter 2023	Spring 2023
Columbidae	*Ocyphaps lophotes*	crested pigeon	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Columbidae	*Phaps chalcoptera*	common bronzewing	LC	-	1	1	1	1	1	1	1	1	1	-	1	1
Columbidae	*Spilopelia chinensis**	spotted dove*	-	-	-	-	-	-	-	1	-	1	1	1	-	1
Coraciidae	*Eurystomus orientalis*	dollarbird	LC	-	1	-	1	1	1	-	-	1	1	-	-	1
Corcoracidae	*Corcorax melanorhamphos*	white-winged chough	LC	-	1	1	1	1	1	-	1	1	1	1	1	1
Corcoracidae	*Struthidea cinerea*	apostlebird	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Corvidae	*Corvus coronoides*	Australian raven	LC	-	-	-	-	-	-	1	1	1	1	1	1	1
Corvidae	*Corvus orru*	Torresian crow	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Corvidae	*Corvus* spp.	corvid species (Australian raven/Torresian crow)†	LC	-	-	-	-	-	-	1	-	1	1	1	1	1
Cuculidae	*Cacomantis flabelliformis*	fan-tailed cuckoo	LC	-	-	-	-	1	-	-	1	1	-	1	1	-
Cuculidae	*Cacomantis pallidus*	pallid cuckoo	LC	-	1	-	-	-	1	-	-	-	-	-	-	-
Cuculidae	*Cacomantis variolosus*	brush cuckoo	LC	-	-	-	-	1	-	-	-	1	1	-	-	-
Cuculidae	*Centropus phasianinus*	pheasant coucal	LC	-	1	1	1	1	1	1	1	1	1	1	-	1
Cuculidae	*Chalcites basalis*	Horsfield's bronze-cuckoo	LC	-	-	-	-	-	-	-	-	-	-	1	-	-
Cuculidae	*Chalcites lucidus*	shining bronze-cuckoo	LC	-	-	-	-	-	1	-	-	-	-	-	-	-
Cuculidae	*Chalcites minutillus*	little bronze-cuckoo	LC	-	-	-	-	1	-	-	-	-	-	-	-	1
Cuculidae	*Chalcites osculans*	black-eared cuckoo	LC	-	1	-	-	-	-	-	-	1	-	-	-	-
Cuculidae	*Eudynamys orientalis*	eastern koel	LC	-	1	-	1	1	-	-	-	1	1	-	-	1
Cuculidae	*Scythrops novaehollandiae*	channel-billed cuckoo	LC	-	1	-	1	1	1	-	-	1	1	-	-	1
Dicruridae	*Dicrurus bracteatus*	spangled drongo	LC	-	-	1	-	-	1	-	-	1	1	-	-	-
Estrildidae	*Lonchura castaneothorax*	chestnut-breasted mannikin	LC	-	-	-	-	-	1	-	-	-	-	-	-	-
Estrildidae	*Neochmia modesta*	plum-headed finch	LC	-	-	1	-	1	-	1	-	-	-	-	-	-
Estrildidae	*Neochmia temporalis*	red-browed finch	LC	-	-	1	-	-	-	1	-	1	-	-	-	-
Estrildidae	*Taeniopygia bichenovii*	double-barred finch	LC	-	1	1	1	1	1	1	1	1	-	1	1	1
Eurostopodidae	*Eurostopodus mystacalis*	white-throated nightjar	LC	-	-	-	1	1	-	-	-	-	-	-	-	-
Falconidae	*Falco berigora*	brown falcon	LC	-	1	1	1	1	1	-	1	1	1	-	1	1
Falconidae	*Falco cenchroides*	nankeen kestrel	LC	-	1	1	-	1	1	1	1	1	1	1	-	1
Falconidae	*Falco longipennis*	Australian hobby	LC	-	1	-	-	-	-	-	1	-	-	-	-	-
Falconidae	*Falco peregrinus*	peregrine falcon	LC	-	1	-	-	-	-	-	-	1	-	-	-	-
Falconidae	*Falco* spp.	falcon species†	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Gruidae	*Antigone rubicunda*	brolga	LC	-	-	1	-	-	-	-	-	-	-	-	-	-
Halcyonidae	*Dacelo leachii*	blue-winged kookaburra	LC	-	-	-	-	1	-	-	-	-	-	-	-	-
Halcyonidae	*Dacelo novaeguineae*	laughing kookaburra	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Halcyonidae	*Todiramphus macleayii*	forest kingfisher	LC	-	1	1	1	1	1	-	-	1	1	-	-	1
Halcyonidae	*Todiramphus sanctus*	sacred kingfisher	LC	-	1	-	1	1	1	-	-	1	1	1	1	1
Hirudinidae	-	swallow species†	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Hirundinidae	*Cheramoeca leucosterna*	white-backed swallow	LC	-	1	-	-	-	-	-	-	-	-	-	-	-
Hirundinidae	*Hirundo neoxena*	welcome swallow	LC	-	1	-	1	1	-	1	-	-	-	1	-	1
Hirundinidae	*Petrochelidon ariel*	fairy martin	LC	-	1	-	-	-	-	1	-	1	1	1	-	-

Family	Species	Common name	NC status	EPBC status	Spring 2018	Autumn 2019	Spring 2020	Spring 2021	Summer 2022	Autumn 2022	Winter 2022	Spring 2022	Summer 2023	Autumn 2023	Winter 2023	Spring 2023
Hirundinidae	*Petrochelidon nigricans*	tree martin	LC	-	1	1	1	1	1	1	1	1	1	-	-	1
Hirundinidae	*Petrochelidon* sp.	martin species†	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Maluridae	*Malurus cyaneus*	superb fairy-wren	LC	-	1	1	1	1	1	1	-	1	1	1	1	1
Maluridae	*Malurus lamberti*	variegated fairy-wren	LC	-	-	-	-	1	1	1	1	1	1	1	1	1
Maluridae	*Malurus melanocephalus*	red-backed fairy-wren	LC	-	1	1	-	1	1	1	1	1	1	1	1	1
Maluridae	*Malurus* sp.	fairy-wren species†	-	-	-	1	-	-	1	-	1	1	-	-	1	-
Megaluridae	*Cincloramphus mathewsi*	rufous songlark	LC	-	1	-	-	1	1	-	-	-	-	-	-	-
Megaluridae	*Megalurus gramineus*	grassbird†	LC	-	1	-	-	-	-	-	-	-	-	-	-	-
Megapodiidae	*Alectura lathami*	Australian brush-turkey	LC	-	1	1	-	-	-	-	-	-	1	-	-	-
Meliphagidae	-	honeyeater species†	-	-	1	-	-	-	-	1	-	-	-	1	-	1
Meliphagidae	*Acanthagenys rufogularis*	spiny-cheeked honeyeater	LC	-	-	-	-	-	-	-	-	1	-	1	-	-
Meliphagidae	*Acanthorhynchus tenuirostris*	eastern spinebill	LC	-	-	-	-	-	-	1	1	-	1	1	1	-
Meliphagidae	*Caligavis chrysops*	yellow-faced honeyeater	LC	-	-	1	1	1	1	1	1	1	1	1	1	1
Meliphagidae	*Entomyzon cyanotis*	blue-faced honeyeater	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Meliphagidae	*Gavicalis virescens*	singing honeyeater	LC	-	-	-	-	-	-	-	-	-	1	-	1	1
Meliphagidae	*Lichenostomus leucotis*	white-eared honeyeater	LC	-	-	-	-	-	-	1	-	-	1	1	-	1
Meliphagidae	*Lichenostomus penicillatus*	white-plumed honeyeater	LC	-	-	-	-	-	-	1	1	-	-	1	1	1
Meliphagidae	*Lichmera indistincta*	brown honeyeater	LC	-	1	-	1	1	-	1	-	1	1	-	1	1
Meliphagidae	*Manorina melanocephala*	noisy miner	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Meliphagidae	*Manorina melanophrys*	bell miner	LC	-	-	-	-	-	-	1	-	-	-	-	-	-
Meliphagidae	*Meliphaga lewinii*	Lewin's honeyeater	LC	-	1	-	-	1	1	1	1	1	1	1	1	1
Meliphagidae	*Melithreptus albogularis*	white-throated honeyeater	LC	-	-	1	1	1	1	1	-	1	1	1	1	1
Meliphagidae	*Melithreptus brevirostris*	brown-headed honeyeater	LC	-	-	1	1	1	1	-	-	-	-	-	1	-
Meliphagidae	*Melithreptus gularis*	black-chinned honeyeater	LC	-	-	-	-	-	-	-	-	-	-	-	-	1
Meliphagidae	*Melithreptus lunatus*	white-naped honeyeater	LC	-	-	-	-	-	-	1	-	-	1	1	-	-
Meliphagidae	*Myzomela obscura*	dusky honeyeater	LC	-	1	-	-	1	-	-	-	-	-	-	-	-
Meliphagidae	*Myzomela sanguinolenta*	scarlet honeyeater	LC	-	-	-	-	1	-	-	-	1	1	1	-	-
Meliphagidae	*Philemon citreogularis*	little friarbird	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Meliphagidae	*Philemon corniculatus*	noisy friarbird	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Meliphagidae	*Plectorhyncha lanceolata*	striped honeyeater	LC	-	-	1	-	1	1	-	1	1	1	1	1	1
Meropidae	*Merops ornatus*	rainbow bee-eater	LC	-	1	-	1	1	1	-	1	1	1	-	1	1
Monarchidae	*Grallina cyanoleuca*	magpie-lark	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Monarchidae	*Myiagra cyanoleuca*	satin flycatcher	SLC	Mi	-	-	1	1	-	1	-	-	-	-	-	-
Monarchidae	*Myiagra inquieta*	restless flycatcher	LC	-	1	1	-	1	1	1	-	-	1	1	-	-
Monarchidae	*Myiagra rubecula*	leaden flycatcher	LC	-	1	1	1	1	1	1	1	1	1	-	-	1
Motacillidae	*Anthus australis*	Australian pipit	LC	-	-	-	-	-	-	-	-	-	-	-	1	-
Motacillidae	*Anthus novaeseelandiae*	Australasian pipit	LC	-	1	1	1	1	1	1	1	-	-	-	-	-
Nectariniidae	*Dicaeum hirundinaceum*	mistletoebird	LC	-	1	1	-	1	-	1	-	1	1	1	1	1
Neosittidae	*Daphoenositta chrysoptera*	varied sittella	LC	-	1	1	1	1	1	1	-	1	1	1	1	1

Family	Species	Common name	NC status	EPBC status	Spring 2018	Autumn 2019	Spring 2020	Spring 2021	Summer 2022	Autumn 2022	Winter 2022	Spring 2022	Summer 2023	Autumn 2023	Winter 2023	Spring 2023
Oriolidae	*Oriolus sagittatus*	olive-backed oriole	LC	-	-	1	1	-	1	-	-	1	1	1	1	1
Oriolidae	*Sphecotheres vieilloti*	Australasian figbird	LC	-	-	-	1	1	1	1	1	1	1	1	-	-
Otididae	*Ardeotis australis*	Australian bustard	LC	-	1	1	1	1	1	-	1	-	1	-	1	1
Pachycephalidae	*Colluricincla harmonica*	grey shrike-thrush	LC	-	1	1	-	-	-	1	1	1	-	1	1	-
Pachycephalidae	*Colluricincla megarhyncha*	little shrike-thrush	LC	-	1	-	-	1	-	1	-	-	-	-	-	-
Pachycephalidae	*Pachycephala pectoralis*	golden whistler	LC	-	-	-	-	-	-	1	1	-	-	1	1	-
Pachycephalidae	*Pachycephala rufiventris*	rufous whistler	LC	-	-	1	1	1	1	1	1	1	1	1	1	1
Pardalotidae	-	pardalote species†	-	-	-	-	-	1	-	-	-	-	1	1	-	-
Pardalotidae	*Acanthiza reguloides*	buff-rumped thornbill	LC	-	-	-	-	-	1	1	1	1	1	1	1	1
Pardalotidae	*Pardalotus punctatus*	spotted pardalote	LC	-	1	1	1	1	-	1	1	1	1	1	1	1
Pardalotidae	*Pardalotus striatus*	striated pardalote	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Pelecanidae	*Pelecanus conspicillatus*	Australian pelican	LC	-	1	-	-	-	-	-	-	-	-	-	1	-
Petroicidae	*Eopsaltria australis*	eastern yellow robin	LC	-	-	-	-	1	1	-	1	-	-	-	1	1
Petroicidae	*Melanodryas cucullata*	hooded robin	LC	-	1	-	-	-	-	-	-	-	-	-	-	-
Petroicidae	*Microeca fascinans*	jacky winter	LC	-	-	1	-	1	1	1	1	1	1	1	1	1
Petroicidae	*Petroica goodenovii*	red-capped robin	LC	-	-	-	-	-	-	-	-	-	-	1	1	-
Phalacrocoracidae	*Phalacrocorax carbo*	great cormorant	LC	-	-	-	-	-	-	-	-	1	-	-	-	1
Phalacrocoracidae	*Phalacrocorax sulcirostris*	little black cormorant	LC	-	-	-	-	1	-	-	1	-	-	-	-	1
Phalacrocoracidae	*Phalacrocorax varius*	pied cormorant	LC	-	-	1	-	-	-	-	-	-	-	1	1	-
Phalacrocoracidae	*Phalacrocorax melanoleucos*	little pied cormorant	LC	-	-	-	1	-	-	-	1	-	-	-	-	-
Phasianidae	-	quail species†	-	-	-	-	-	1	-	-	1	-	-	-	-	-
Phasianidae	*Coturnix pectoralis*	stubble quail	LC	-	-	-	-	-	-	-	-	1	-	-	-	-
Phasianidae	*Coturnix ypsilophora*	brown quail	LC	-	1	1	1	1	1	-	-	-	-	-	-	-
Podargidae	*Podargus strigoides*	tawny frogmouth	LC	-	1	1	1	1	1	-	1	-	-	-	-	-
Podicipedidae	*Tachybaptus novaehollandiae*	Australasian grebe	LC	-	1	1	1	1	1	-	-	-	-	-	-	-
Pomatostomidae	*Pomatostomus temporalis*	grey-crowned babbler	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Psittacidae	-	parrot species†	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Psittacidae	*Alisterus scapularis*	Australian king-parrot	LC	-	-	-	-	1	1	1	1	1	1	1	1	1
Psittacidae	*Aprosmictus erythropterus*	red-winged parrot	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Psittacidae	*Glossopsitta concinna*	musk lorikeet	LC	-	-	-	-	-	-	-	1	-	-	-	-	-
Psittacidae	*Northiella haematogaster*	greater bluebonnet	LC	-	-	-	-	-	1	-	-	-	-	-	-	-
Psittacidae	*Parvipsitta pusilla*	little lorikeet	LC	-	-	-	1	-	1	-	1	-	1	-	1	1
Psittacidae	*Platycercus adscitus*	pale-headed rosella	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Psittacidae	*Psephotus haematonotus*	red-rumped parrot	LC	-	1	1	1	1	1	-	1	-	-	-	-	-
Psittacidae	*Trichoglossus chlorolepidotus*	scaly-breasted lorikeet	LC	-	1	1	-	1	1	1	1	1	1	1	1	1
Psittacidae	*Trichoglossus haematodus moluccanus*	rainbow lorikeet	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Psittaculidae	*Neophema pulchella*	turquoise parrot	LC	-	-	-	-	-	-	-	-	-	-	-	-	1
Psophodidae	*Psophodes olivaceus*	eastern whipbird	LC	-	1	-	-	-	-	-	-	-	-	-	-	-
Rallidae	*Gallinula tenebrosa*	dusky moorhen	LC	-	-	1	-	1	-	-	-	-	-	-	-	-

Family	Species	Common name	NC status	EPBC status	Spring 2018	Autumn 2019	Spring 2020	Spring 2021	Summer 2022	Autumn 2022	Winter 2022	Spring 2022	Summer 2023	Autumn 2023	Winter 2023	Spring 2023
Rallidae	*Porphyrio melanotus*	purple swamphen	LC	-	-	-	-	-	-	-	1	-	-	-	-	-
Recurvirostridae	*Himantopus himantopus*	black-winged stilt	LC	-	1	-	1	1	-	-	-	-	-	-	-	-
Rhipiduridae	*Rhipidura albiscapa*	grey fantail	LC	-	-	1	-	-	-	1	1	1	-	1	1	-
Rhipiduridae	*Rhipidura leucophrys*	willie wagtail	LC	-	1	1	1	1	1	1	1	1	1	1	1	1
Rhipiduridae	*Rhipidura rufifrons*	rufous fantail	SLC	Mi	-	1	-	-	-	-	-	-	-	-	-	-
Strigidae	*Ninox connivens*	barking owl	LC	-	1	-	-	-	1	-	-	-	-	-	-	-
Strigidae	*Ninox novaeseelandiae*	southern boobook	LC	-	1	1	1	1	1	-	1	-	-	-	-	-
Sturnidae	*Acridotheres tristis**	common myna*	-	-	1	1	1	1	-	-	-	-	-	-	-	-
Sturnidae	*Sturnus vulgaris**	common starling*	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Threskiornithidae	*Platalea flavipes*	yellow-billed spoonbill	LC	-	-	-	-	-	-	-	-	1	-	-	-	-
Threskiornithidae	*Threskiornis spinicollis*	straw-necked ibis	LC	-	1	1	-	1	1	-	1	-	-	-	1	1
Timaliidae	*Zosterops lateralis*	silvereye	LC	-	1	-	-	-	1	-	-	1	1	1	-	1
Turnicidae	*Turnix varius*	painted button-quail	LC	-	-	-	-	1	-	-	-	-	-	-	-	-
Tytonidae	*Tyto delicatula*	eastern barn owl	LC	-	1	-	1	1	-	1	1	-	-	-	-	1
Unknown species	-	unknown species†	-	-	1	-	-	-	-	-	1	-	-	-	-	-
Emballonuridae	*Saccolaimus flaviventris*	yellow-bellied sheathtail bat	LC	-	1	1	1	1	-	-	-	-	-	-	-	-
Miniopteridae	*Miniopterus australis*	little bent-wing bat	LC	-	1	1	1	1	-	-	-	-	-	-	-	-
Miniopteridae	*Miniopterus schreibersii oceanensis*	northern bent-wing bat	LC	-	1	1	1	-	-	-	-	-	-	-	-	-
Molossidae	*Austronomus australis*	white-striped freetail bat	LC	-	1	1	1	1	-	-	-	-	-	-	-	-
Molossidae	*Mormopterus lumsdenae*	northern free=tailed bat	LC	-	-	1	1	1	-	-	-	-	-	-	-	-
Molossidae	*Mormopterus ridei*	eastern free-tailed bat	LC	-	1	1	1	1	-	-	-	-	-	-	-	-
Pteropodidae	*Pteropus alecto*	black flying-fox	LC	-	1	1	-	1	-	-	-	-	-	-	-	-
Pteropodidae	*Pteropus poliocephalus*	grey-headed flying-fox	LC	V	-	-	-	1	-	-	-	-	-	-	-	-
Pteropodidae	*Pteropus scapulatus*	little red flying-fox	LC	-	1	1	1	1	-	-	-	-	-	-	-	-
Vespertilionidae	*Chalinolobus gouldii*	Gould's wattled bat	LC	-	1	1	1	1	-	-	-	-	-	-	-	-
Vespertilionidae	*Chalinolobus morio*	chocolate wattled bat	LC	-	^1	^1	^1	1	-	-	-	-	-	-	-	-
Vespertilionidae	*Chalinolobus nigrogriseus^*	hoary wattled bat†	LC	-	1	^1	-	-	-	-	-	-	-	-	-	-
Vespertilionidae	*Chalinolobus picatus*	little pied bat	LC	-	1	1	1	1	-	-	-	-	-	-	-	-
Vespertilionidae	*Nyctophilus geoffroyi*	lesser long-eared bat	LC	-	-	-	-	1	-	-	-	-	-	-	-	-
Vespertilionidae	*Nyctophilus* spp.^^	long eared bat species†	LC	-	^^1	^^1	^^1	^^1	-	-	-	-	-	-	-	-
Vespertilionidae	*Scoteanax rueppellii^*	greater broad-nosed bat†	LC	-	-	-	-	^1	-	-	-	-	-	-	-	-
Vespertilionidae	*Scotorepens balstoni^*	inland broad-nosed bat†	LC	-	^1	^1	-	^1	-	-	-	-	-	-	-	-
Vespertilionidae	*Scotorepens greyii*	little broad-nosed bat	LC	-	1	1	1	1	-	-	-	-	-	-	-	-
Vespertilionidae	*Scotorepens orion*	eastern broad-nosed bat	LC	-	-	-	-	1	-	-	-	-	-	-	-	-
Vespertilionidae	*Vespadelus darlingtoni*	large forest bat	LC	-	1	-	-	-	-	-	-	-	-	-	-	-
Vespertilionidae	*Vespadelus pumilus*	eastern forest bat	LC	-	-	-	1	-	-	-	-	-	-	-	-	-
Vespertilionidae	*Vespadelus* spp.	unknown Vespadelus bat†	LC	-	-	-	1	1	-	-	-	-	-	-	-	-
Vespertilionidae	*Vespadelus troughtoni*	eastern cave bat	LC	-	1	1	1	1	-	-	-	-	-	-	-	-
Vespertilionidae	*Vespadelus vulturnus*	little forest bat	LC	-	1	-	1	1	-	-	-	-	-	-	-	-

NC Act status - conservation status under NC Act.

V = Vulnerable, NT = Near Threatened, LC = Least Concern, SLC = Special Least Concern

EPBC Act status - conservation status under EPBC Act.

V= Vulnerable, Mi = Migratory Species

† unable to be identified to species level

* introduced species

^ possible detection. Calls similar to those of the species were recorded, but were not reliably identified.

^^ *Nyctophilus* species cannot be reliably identified from call records alone. Given the almost certain occurrence of two other *Nyctophilus* species in the study area (*N. geoffroyii* and *N. gouldi*), it is highly probable that either of these species was responsible for the call in question.

^^^ Detected via orts during active search.

Appendix 4 Relative abundance of birds detected during fixed point count surveys within the project site 2018 - 2023

Common name	Total number of individuals	% of total number of birds	Cumulative % of total number of birds	Qualitative risk probability
noisy miner	2830	11.54%	11.54%	Low
Torresian crow	2309	9.41%	20.95%	Low
little corella	1775	7.24%	28.19%	High
galah	1472	6.00%	34.19%	High
pied currawong	929	3.79%	37.98%	Low
rainbow lorikeet	909	3.71%	41.69%	Low
sulphur-crested cockatoo	884	3.60%	45.29%	High
Australian magpie	875	3.57%	48.86%	Low
Australian raven	694	2.83%	51.69%	Low
noisy friarbird	682	2.78%	54.47%	Low
striated pardalote	601	2.45%	56.92%	Low
apostlebird	594	2.42%	59.34%	Low
pied butcherbird	486	1.98%	61.32%	Low
weebill	469	1.91%	63.23%	Low
little friarbird	441	1.80%	65.03%	Low
laughing kookaburra	410	1.67%	66.70%	Low
white-throated needletail	363	1.48%	68.18%	High
pale-headed rosella	360	1.47%	69.65%	Low
Torresian crow/Australian raven	353	1.44%	71.09%	Low
rufous whistler	315	1.28%	72.38%	Low
grey butcherbird	310	1.26%	73.64%	Low
white-winged chough	279	1.14%	74.78%	Low
scaly-breasted lorikeet	275	1.12%	75.90%	Low
magpie-lark	261	1.06%	76.96%	Low
willie wagtail	247	1.01%	77.97%	Low
blue-faced honeyeater	218	0.89%	78.86%	Low
black-faced cuckoo-shrike	209	0.85%	79.71%	Low
white-throated honeyeater	190	0.77%	80.49%	Low
pheasant coucal	185	0.75%	81.24%	Low
red-winged parrot	173	0.71%	81.95%	Low
rainbow bee-eater	160	0.65%	82.60%	Low
jacky winter	151	0.62%	83.21%	Low

Common name	Total number of individuals	% of total number of birds	Cumulative % of total number of birds	Qualitative risk probability
superb fairy-wren	151	0.62%	83.83%	Low
red-backed fairy-wren	147	0.60%	84.43%	Low
Australian wood duck	145	0.59%	85.02%	High
crested pigeon	142	0.58%	85.60%	Low
white-throated gerygone	135	0.55%	86.15%	Low
grey-crowned babbler	120	0.49%	86.64%	Low
grey fantail	111	0.45%	87.09%	Low
yellow-rumped thornbill	110	0.45%	87.54%	Low
buff-rumped thornbill	109	0.44%	87.98%	Low
masked lapwing	106	0.43%	88.42%	Medium
wedge-tailed eagle	95	0.39%	88.80%	High
cockatiel	90	0.37%	89.17%	Low
sacred kingfisher	90	0.37%	89.54%	Low
wood swallow sp.	86	0.35%	89.89%	High
double-barred finch	83	0.34%	90.23%	Low
Australasian pipit	81	0.33%	90.56%	Low
common myna	79	0.32%	90.88%	Low
spotted pardalote	77	0.31%	91.19%	Low
white-plumed honeyeater	75	0.31%	91.50%	Low
yellow-faced honeyeater	73	0.30%	91.80%	Low
varied sittella	71	0.29%	92.09%	Low
variegated fairy-wren	70	0.29%	92.37%	Low
brown thornbill	66	0.27%	92.64%	Low
mistletoebird	65	0.27%	92.91%	Low
leaden flycatcher	61	0.25%	93.15%	Low
little black cormorant	58	0.24%	93.39%	Medium
passerine sp.	58	0.24%	93.63%	-
striped honeyeater	56	0.23%	93.86%	Low
white-breasted woodswallow	53	0.22%	94.07%	High
Lewin's honeyeater	52	0.21%	94.28%	Low
red-rumped parrot	49	0.20%	94.48%	Low
olive-backed oriole	47	0.19%	94.68%	Low
brown honeyeater	46	0.19%	94.86%	Low
yellow thornbill	45	0.18%	95.05%	Low
silvereye	44	0.18%	95.23%	Low
common bronzewing	43	0.18%	95.40%	Low
straw-necked ibis	43	0.18%	95.58%	Medium
tree martin	41	0.17%	95.74%	High
bar-shouldered dove	39	0.16%	95.90%	Low

Common name	Total number of individuals	% of total number of birds	Cumulative % of total number of birds	Qualitative risk probability
cicadabird	36	0.15%	96.05%	Low
dollarbird	36	0.15%	96.20%	Low
channel-billed cuckoo	35	0.14%	96.34%	Low
white-throated treecreeper	33	0.13%	96.47%	Low
white-browed scrubwren	32	0.13%	96.60%	Low
eastern koel	30	0.12%	96.73%	low
Pacific black duck	30	0.12%	96.85%	High
peaceful dove	30	0.12%	96.97%	Low
brown-headed honeyeater	27	0.11%	97.08%	Low
fairy-wren sp.	27	0.11%	97.19%	Low
Australian king-parrot	25	0.10%	97.29%	Low
red-browed finch	24	0.10%	97.39%	Low
Australasian figbird	23	0.09%	97.48%	Low
brown falcon	21	0.09%	97.57%	High
brown gerygone	21	0.09%	97.66%	Low
martin sp.	21	0.09%	97.74%	High
white-winged triller	20	0.08%	97.82%	Low
brown quail	18	0.07%	97.90%	Low
nankeen kestrel	17	0.07%	97.97%	High
white-faced heron	17	0.07%	98.03%	High
grey shrike-thrush	16	0.07%	98.10%	Low
Australian bustard	15	0.06%	98.16%	Low
eastern yellow robin	14	0.06%	98.22%	Low
fairy martin	14	0.06%	98.28%	High
brown treecreeper	13	0.05%	98.33%	Low
spangled drongo	13	0.05%	98.38%	Low
speckled warbler	13	0.05%	98.43%	Low
striated thornbill	13	0.05%	98.49%	Low
restless flycatcher	12	0.05%	98.54%	Low
fan-tailed cuckoo	11	0.04%	98.58%	Low
Horsfield's Bushlark	11	0.04%	98.63%	Low
little lorikeet	11	0.04%	98.67%	Low
forest kingfisher	10	0.04%	98.71%	Low
plum-headed finch	10	0.04%	98.75%	Low
quail sp.	10	0.04%	98.79%	Low
scarlet honeyeater	10	0.04%	98.83%	Low
welcome swallow	10	0.04%	98.87%	High
grey teal	9	0.04%	98.91%	High
little shrike-thrush	9	0.04%	98.95%	Low

Common name	Total number of individuals	% of total number of birds	Cumulative % of total number of birds	Qualitative risk probability
red-tailed black-cockatoo	9	0.04%	98.98%	High
varied triller	9	0.04%	99.02%	Low
Australasian grebe	8	0.03%	99.05%	Low
common starling	8	0.03%	99.09%	Low
dusky woodswallow	8	0.03%	99.12%	High
eastern spinebill	8	0.03%	99.15%	Low
golden whistler	8	0.03%	99.18%	Low
black-winged stilt	7	0.03%	99.21%	Low
Pacific baza	7	0.03%	99.24%	Medium
white-bellied cuckoo-shrike	7	0.03%	99.27%	Low
Australian pelican	6	0.02%	99.29%	High
brown goshawk	6	0.02%	99.32%	High
brush cuckoo	6	0.02%	99.34%	Low
great cormorant	6	0.02%	99.37%	High
spotted dove	6	0.02%	99.39%	Low
white-eared honeyeater	6	0.02%	99.42%	Low
glossy black-cockatoo (eastern)	5	0.02%	99.44%	Medium
honeyeater sp.	5	0.02%	99.46%	Low
long-billed corella	5	0.02%	99.48%	High
plumed whistling-duck	5	0.02%	99.50%	High
red-capped robin	5	0.02%	99.52%	Low
singing honeyeater	5	0.02%	99.54%	Low
swallow sp.	5	0.02%	99.56%	High
yellow-throated scrubwren	5	0.02%	99.58%	Low
lorikeet sp.	4	0.02%	99.60%	Low
musk lorikeet	4	0.02%	99.61%	Low
thornbill sp.	4	0.02%	99.63%	Low
unknown	4	0.02%	99.65%	-
Australian hobby	3	0.01%	99.66%	High
Australian owlet-nightjar	3	0.01%	99.67%	Medium
black-fronted dotterel	3	0.01%	99.68%	Medium
fork-tailed swift	3	0.01%	99.69%	High
golden-headed cisticola	3	0.01%	99.71%	Low
Horsfield's bronze-cuckoo	3	0.01%	99.72%	Low
pallid cuckoo	3	0.01%	99.73%	Low
pied cormorant	3	0.01%	99.74%	Medium
southern boobook	3	0.01%	99.76%	Medium
western gerygone	3	0.01%	99.77%	Low

Common name	Total number of individuals	% of total number of birds	Cumulative % of total number of birds	Qualitative risk probability
white-naped honeyeater	3	0.01%	99.78%	Low
black-eared cuckoo	2	0.01%	99.79%	Low
brown cuckoo-dove	2	0.01%	99.80%	Low
diamond dove	2	0.01%	99.80%	Low
dusky honeyeater	2	0.01%	99.81%	Low
eastern great egret	2	0.01%	99.82%	High
eastern whipbird	2	0.01%	99.83%	Low
grassbird sp.	2	0.01%	99.84%	Low
hooded robin	2	0.01%	99.85%	Low
intermediate egret	2	0.01%	99.85%	High
little pied cormorant	2	0.01%	99.86%	Medium
pardalote sp.	2	0.01%	99.87%	Low
rufous fantail	2	0.01%	99.88%	Low
satin flycatcher	2	0.01%	99.89%	Low
spiny-cheeked honeyeater	2	0.01%	99.89%	Low
stubble quail	2	0.01%	99.90%	Low
white-necked heron	2	0.01%	99.91%	Medium
yellow-billed spoonbill	2	0.01%	99.92%	High
Australian brush-turkey	1	<0.01%	99.92%	Low
barking owl	1	<0.01%	99.93%	Medium
bell miner	1	<0.01%	99.93%	Low
black-chinned honeyeater	1	<0.01%	99.93%	Low
black-shouldered kite	1	<0.01%	99.94%	High
brolga	1	<0.01%	99.94%	High
eastern barn owl	1	<0.01%	99.95%	Medium
emerald dove	1	<0.01%	99.95%	Low
falcon sp.	1	<0.01%	99.96%	High
ground cuckoo-shrike	1	<0.01%	99.96%	Low
large-billed scrubwren	1	<0.01%	99.96%	Low
little bronze-cuckoo	1	<0.01%	99.97%	Low
purple swamphen	1	<0.01%	99.97%	Medium
raptor sp.	1	<0.01%	99.98%	High
rufous songlark	1	<0.01%	99.98%	Low
shining bronze-cuckoo	1	<0.01%	99.98%	Low
tawny frogmouth	1	<0.01%	99.99%	Medium
whistling kite	1	<0.01%	99.99%	High
white-backed swallow	1	<0.01%	100.00%	High
white-browed woodswallow	1	<0.01%	100.00%	High

Appendix 5 Collision risk modelling data

Table 42 Chord width profile for StochLab collision risk modelling

Proportion of chord (from root)	Proportion of maximum chord width
0.0	1.000
0.1	0.923
0.2	0.845
0.3	0.768
0.4	0.690
0.5	0.613
0.6	0.535
0.7	0.458
0.8	0.381
0.9	0.302
1.0	0.00

Table 43 Monthly wind availability estimates for Tarong West Wind Farm

Month	Proportion of wind availability
January	0.9233871
February	0.9717262
March	0.9166667
April	0.9694444
May	0.9193548
June	0.9541667
July	0.9381720
August	0.9475806
September	0.9472222
October	0.9610215
November	0.9236111
December	0.9435484

Table 44 Monthly bird density estimates for StochLab collision risk modelling

	Density (per km²)		
Month	White-throated needletail	Fork-tailed swift	Wedge-tailed eagle
January	0.44210131	0	0.055262663
February	1.58993401	0.01630702	0.097842093
March	0	0	0.007894666
April	0	0	0.033157598
May	0	0	0.124340993

	Density (per km²)		
Month	White-throated needletail	Fork-tailed swift	Wedge-tailed eagle
June	0	0	0.082893995
July	0*	0*	-
August	0	0	0.145965513
September	0.01462835*	0*	-
October	0.01462835	0	0.021942528
November	0.46225593	0.00292567	0.084844442
December	0.45217900*	0.00292567*	-

*Species density for this month has been assumed based on other months in the same season

Table 45 Number of birds sighted per season for Uungula Wind Farm collision risk calculation

	Number of birds			
Month	White-throated needletail	Fork-tailed swift	Wedge-tailed eagle	Total number of surveys
Summer	203	2	13	70
Autumn	0	0	15	152
Winter	0	0	35	140
Spring	160	1	32	238

Table 46 Data used for collision risk estimate calculation

Species	Number of airborne birds	Number of airborne flocks	Total number of flocks	Total number of individuals	Number in RSA	Number of surveys species occurs in
crow/raven	339	184	194	353	72	97
Australian magpie	297	199	614	875	7	411
Torresian crow	1295	593	1056	2309	125	490
wedge-tailed eagle	74	57	71	95	61	62
Australian raven	403	197	393	694	68	182
rainbow lorikeet	651	240	370	909	51	225
tree martin	33	7	9	41	2	9
little corella	1446	108	161	1775	88	104
white-throated needletail	363	24	24	363	337	21
little lorikeet	7	4	7	11	3	7
grey butcherbird	66	49	269	310	3	215
galah	1263	421	535	1472	50	289
sulphur-crested cockatoo	667	254	408	884	100	248
rufous whistler	112	97	281	315	1	194
Australian pelican	6	2	2	6	6	2
great cormorant	6	2	2	6	2	2

Species	Number of airborne birds	Number of airborne flocks	Total number of flocks	Total number of individuals	Number in RSA	Number of surveys species occurs in
wood swallow sp.	86	1	1	86	86	1
whistling kite	1	1	1	1	1	1
nankeen kestrel	15	14	16	17	9	16
brolga	1	1	1	1	1	1
straw-necked ibis	27	5	9	43	1	9
falcon sp.	1	1	1	1	1	1
fairy martin	14	9	9	14	6	8
pied currawong	441	259	653	929	16	372
pied cormorant	2	2	3	3	1	3
red-winged parrot	134	71	98	173	3	84
brown falcon	14	13	18	21	5	16
rainbow bee-eater	66	25	86	160	7	79
scaly-breasted lorikeet	184	71	115	275	4	81
eastern great egret	2	2	2	2	1	2
brown goshawk	6	4	4	6	1	4
channel-billed cuckoo	15	10	28	35	1	27
little friarbird	208	109	312	441	2	182
fork-tailed swift	3	2	2	3	2	2
pale-headed rosella	179	92	204	360	2	169
white-necked heron	2	2	2	2	1	2
cockatiel	80	22	29	90	3	23
martin sp.	18	3	4	21	15	3
passerine sp.	57	13	14	58	16	13
unknown	3	3	4	4	1	3
Australian hobby	3	2	2	3	3	2
dusky woodswallow	8	4	4	8	3	4
musk lorikeet	4	1	1	4	4	1
noisy friarbird	383	216	426	682	1	240
raptor sp.	1	1	1	1	1	1
pied butcherbird	128	88	367	486	1	275
white-winged chough	114	19	64	279	0	61
little pied cormorant	2	2	2	2	0	1
Pacific black duck	19	6	14	30	0	14
dollarbird	18	15	33	36	0	30
black-faced cuckoo-shrike	109	80	167	209	0	145
apostlebird	202	28	104	594	0	98
red-rumped parrot	30	9	18	49	0	15

Species	Number of airborne birds	Number of airborne flocks	Total number of flocks	Total number of individuals	Number in RSA	Number of surveys species occurs in
common myna	29	11	37	79	0	31
white-faced heron	7	6	14	17	0	14
magpie-lark	93	43	172	261	0	142
grey-crowned babbler	52	9	48	120	0	42
blue-faced honeyeater	143	69	112	218	0	87
laughing kookaburra	76	52	272	410	0	213
weebill	90	62	340	469	0	193
noisy miner	1261	618	1247	2830	0	470
welcome swallow	10	6	6	10	0	6
white-throated gerygone	9	8	124	135	0	109
Australasian figbird	16	8	12	23	0	10
white-plumed honeyeater	29	22	52	75	0	37
white-browed woodswallow	1	1	1	1	0	1
little black cormorant	58	3	3	58	0	2
black-fronted dotterel	2	1	2	3	0	2
Australian bustard	2	2	9	15	0	9
white-bellied cuckoo-shrike	5	4	6	7	0	6
Pacific baza	6	2	3	7	0	3
masked lapwing	11	8	55	106	0	50
striated pardalote	159	111	476	601	0	319
cicadabird	7	4	30	36	0	25
spotted pardalote	28	25	68	77	0	55
yellow-faced honeyeater	10	8	69	73	0	56
common bronzewing	21	17	35	43	0	30
spotted dove	1	1	6	6	0	5
Australian king-parrot	14	10	19	25	0	16
white-breasted woodswallow	51	12	13	53	0	12
spangled drongo	4	4	12	13	0	9
brown-headed honeyeater	19	6	10	27	0	10
yellow thornbill	17	8	28	45	0	28
white-throated honeyeater	60	34	133	190	0	109
mistletoebird	18	18	64	65	0	58
crested pigeon	39	28	76	142	0	65

Species	Number of airborne birds	Number of airborne flocks	Total number of flocks	Total number of individuals	Number in RSA	Number of surveys species occurs in
pheasant coucal	6	6	153	185	0	127
brown thornbill	36	14	30	66	0	27
red-tailed black-cockatoo	5	2	5	9	0	5
ground cuckoo-shrike	1	1	1	1	0	1
leaden flycatcher	7	5	48	61	0	40
sacred kingfisher	9	8	83	90	0	60
varied sittella	45	15	26	71	0	25
willie wagtail	73	62	214	247	0	179
grey shrike-thrush	9	6	13	16	0	13
common starling	6	1	2	8	0	2
long-billed corella	5	2	2	5	0	2
Australian wood duck	22	7	16	145	0	15
striped honeyeater	21	17	48	56	0	41
jacky winter	28	24	141	151	0	99
honeyeater sp.	5	4	4	5	0	4
grey fantail	51	40	94	111	0	70
double-barred finch	37	10	34	83	0	33
Lewin's honeyeater	19	15	46	52	0	44
fan-tailed cuckoo	3	2	9	11	0	7
Horsfield's bronze-cuckoo	3	2	2	3	0	2
olive-backed oriole	15	14	44	47	0	32
intermediate egret	1	1	2	2	0	2
glossy black-cockatoo (eastern)	3	1	2	5	0	2
swallow sp.	5	2	2	5	0	2
black-shouldered kite	1	1	1	1	0	1
eastern koel	2	2	30	30	0	27
bar-shouldered dove	13	8	30	39	0	26
white-winged triller	7	4	15	20	0	15
golden whistler	4	4	8	8	0	5
southern boobook	1	1	3	3	0	3
scarlet honeyeater	2	2	10	10	0	10
buff-rumped thornbill	33	15	61	109	0	54
varied triller	2	2	9	9	0	8
red-capped robin	4	3	4	5	0	4
white-naped honeyeater	1	1	3	3	0	3

Species	Number of airborne birds	Number of airborne flocks	Total number of flocks	Total number of individuals	Number in RSA	Number of surveys species occurs in
spiny-cheeked honeyeater	1	1	2	2	0	2
yellow-rumped thornbill	22	9	59	110	0	41
singing honeyeater	1	1	4	5	0	4
brown gerygone	17	5	9	21	0	9
rufous fantail	1	1	2	2	0	2
superb fairy-wren	73	14	48	151	0	46
brown cuckoo-dove	2	2	2	2	0	2
pardalote sp.	2	2	2	2	0	2
plumed whistling-duck	3	1	2	5	0	2
restless flycatcher	4	4	11	12	0	9
peaceful dove	6	3	23	30	0	23
white-eared honeyeater	2	2	5	6	0	4
striated thornbill	4	4	12	13	0	11
eastern spinebill	2	1	5	8	0	5
pallid cuckoo	1	1	3	3	0	2
brown treecreeper	9	6	10	13	0	8
Horsfield's Bushlark	8	5	6	10	0	6
white-throated treecreeper	8	7	31	33	0	30
Australasian pipit	7	2	14	81	0	12
brown honeyeater	8	4	35	46	0	30
red-backed fairy-wren	52	13	67	147	0	62
silvereye	20	7	14	44	0	13
white-browed scrubwren	11	5	17	32	0	17
eastern whipbird	2	2	2	2	0	2
brown quail	1	1	7	18	0	7
little shrike-thrush	3	1	7	9	0	6
hooded robin	1	1	2	2	0	2
quail sp.	10	1	1	10	0	1
stubble quail	2	1	1	2	0	1
white-backed swallow	1	1	1	1	0	1
yellow-throated scrubwren	5	1	1	5	0	1
golden-headed cisticola	2	1	2	3	0	2
black-eared cuckoo	1	1	2	2	0	2
red-browed finch	19	2	4	24	0	4

Species	Number of airborne birds	Number of airborne flocks	Total number of flocks	Total number of individuals	Number in RSA	Number of surveys species occurs in
fairy-wren sp.	4	1	18	27	0	18
variegated fairy-wren	8	2	34	70	0	31
dusky honeyeater	1	1	2	2	0	2
barking owl	0	0	1	1	0	1
black-winged stilt	0	0	2	7	0	2
Australasian grebe	0	0	5	8	0	4
grassbird sp.	0	0	1	2	0	1
speckled warbler	0	0	6	13	0	6
grey teal	0	0	5	9	0	5
tawny frogmouth	0	0	1	1	0	1
eastern yellow robin	0	0	14	14	0	13
satin flycatcher	0	0	2	2	0	2
large-billed scrubwren	0	0	1	1	0	1
diamond dove	0	0	1	2	0	1
rufous songlark	0	0	1	1	0	1
shining bronze-cuckoo	0	0	1	1	0	1
thornbill sp.	0	0	4	4	0	4
forest kingfisher	0	0	9	10	0	9
emerald dove	0	0	1	1	0	1
Horsfield's bushlark	0	0	1	1	0	1
lorikeet sp.	0	0	1	4	0	1
plum-headed finch	0	0	1	10	0	1
bell miner	0	0	1	1	0	1
western gerygone	0	0	3	3	0	3
purple swamphen	0	0	1	1	0	1
yellow-billed spoonbill	0	0	1	2	0	1
brush cuckoo	0	0	6	6	0	5
Australian owlet-nightjar	0	0	3	3	0	3
Australian brush-turkey	0	0	1	1	0	1
little bronze-cuckoo	0	0	1	1	0	1
black-chinned honeyeater	0	0	1	1	0	1
eastern barn owl	0	0	1	1	0	1

Revision History

Revision No.	Revision date	Details	Prepared by	Reviewed by	Approved by
00	11/12/2024	Bird and Bat Utilisation Survey for Tarong West Wind Farm Final Report	Meghan Castelli, Fauna Ecologist	Leigh Knight, Principal Environmental Planner	Dr Natalie Toon, Principal Ecologist
01	26/05/2025	Bird and Bat Utilisation Survey for Tarong West Wind Farm Final Report.R1	Kalita Free, Associate Ecologist (SLR)	Natalie Toon, Technical Director (SLR)	Diane Lanyon, Director Strategic Partnerships

Distribution List

Copy #	Date	Type	Issued to	Name
1	26/05/2025	Electronic	Tarong West Project Co Pty Ltd	Toby Coates

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