BHP Mitsubishi Alliance

Appendix C

MNES Significant Impact Assessment Report

Revised MNES Significant Impact Assessment Report

BM Alliance Coal Operations Pty Ltd

Peak Downs Mine Powerline Realignment Project

Peak Downs Mine

BAA240122.02

CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

DOCUMENT CONTROL

Revision	Revision date	Revision details	Author	Editorial review	Technical review	Approver
Rev A	23/07/2024	Draft for Internal Review	B Taylor	D Campbell	D Campbell	-
Rev 0	26/07/2024	Draft for Client Review	B Taylor	D Campbell	D Campbell	D Campbell
Rev 1	23/08/2024	Final for Issue	B Taylor	D Campbell	D Campbell	D Campbell
Rev 2	29/08/2024	Revised Final for Issue	B Taylor	D Campbell	D Campbell	D Campbell
Rev 3	10/03/2025	Revised Final for Issue	B Taylor	M Warnock	D Campbell	D Campbell
Rev 4	10/06/2025	Final for Issue	B Taylor	M Warnock	D Campbell	D Campbell
Rev 5	31/07/2025	Revised Final for Issue	B Taylor	M Warnock	D Campbell	D Campbell

DISTRIBUTION

Revision	Revision date	Issued to
Rev 0	29/07/2024	BMA
Rev 1	23/08/2024	BMA
Rev 2	29/08/2024	BMA
Rev 3	10/03/2025	BMA
Rev 4	10/06/2025	BMA
Rev 5	31/07/2025	BMA

DOCUMENT INFORMATION

Printed:	13 August 2025
Last saved:	13 August 2025 03:00 PM
File name:	BAA240122.01-PDM powerline-MNES SIA Rev 5
Author:	Brett Taylor
Project manager:	Morgan Warnock
Client:	BM Alliance Coal Operations Pty Ltd
Document title:	Revised MNES Significant Impact Assessment Report
Project number:	BAA240122.02

ECAAS SAFETY MANAGEMENT ISO 45001 CERTIFIED	ECAAS ENVIRONMENTAL MANAGEMENT ISO 14001 CERTIFIED	ECAAS QUALITY MANAGEMENT ISO 9001 CERTIFIED

1 INTRODUCTION

BM Alliance Coal Operations Pty Ltd (BMA, the Proponent) owns and operates Peak Downs Mine (PDM), an open cut coal mining operation near Moranbah, Queensland. The Proponent plans to progress mining at PDM within Mining Lease (ML) 1775 in an easterly direction in line with its current regulatory authorisations for mining. This has triggered the need to realign the existing 66 kilovolt (kV) power line (Proposed action) ahead of pit progression. The existing 66 kV power line is located within ML 1775, running in a north-south direction generally adjacent to the shared mining lease boundary of ML 1775 and ML 70411 (refer **Figure 1**).

1.1 Proposed Action Location

The Proposed action is located adjacent to the northern side of PDM and is approximately 22 kilometers (km) south-east of the township of Moranbah in central Queensland (**Figure 1**). It lies within land described as Lot 8 on SP 277384 and a small portion of Lot 4 on SP174994, located within the Isaac Regional Council Local Government Area (LGA) and the Brigalow Belt North Bioregion. For the purposes of this report, the Action area is the location where the proposed power line realignment and associated activities will be sited, the Disturbance footprint is the area within the Action area that will be impacted by complete vegetation clearing (including clearing and grubbing), and the Study area is the area assessed by supporting ecological studies, which captures the Action area and nearby surrounding land (**Figure 1**).

1.2 Proposed Action Description

There are currently three existing mine pits at PDM, 7 North, 5 North and 2 North (7N, 5N and 2N respectively), which are progressing to the east. As a result, the current 7N/5N/2N power lines require realignment in order to allow for the pit to progress. The pit progression towards the power lines is approaching exclusion limits to blasting for mining activities. Therefore, the power lines are required to be relocated to the east of their current alignment. The relocation of these power lines is necessary to support continued mining activities at PDM. Without relocation of the power lines, existing mining activities would be severely constrained due to a lack of supporting power requirements.

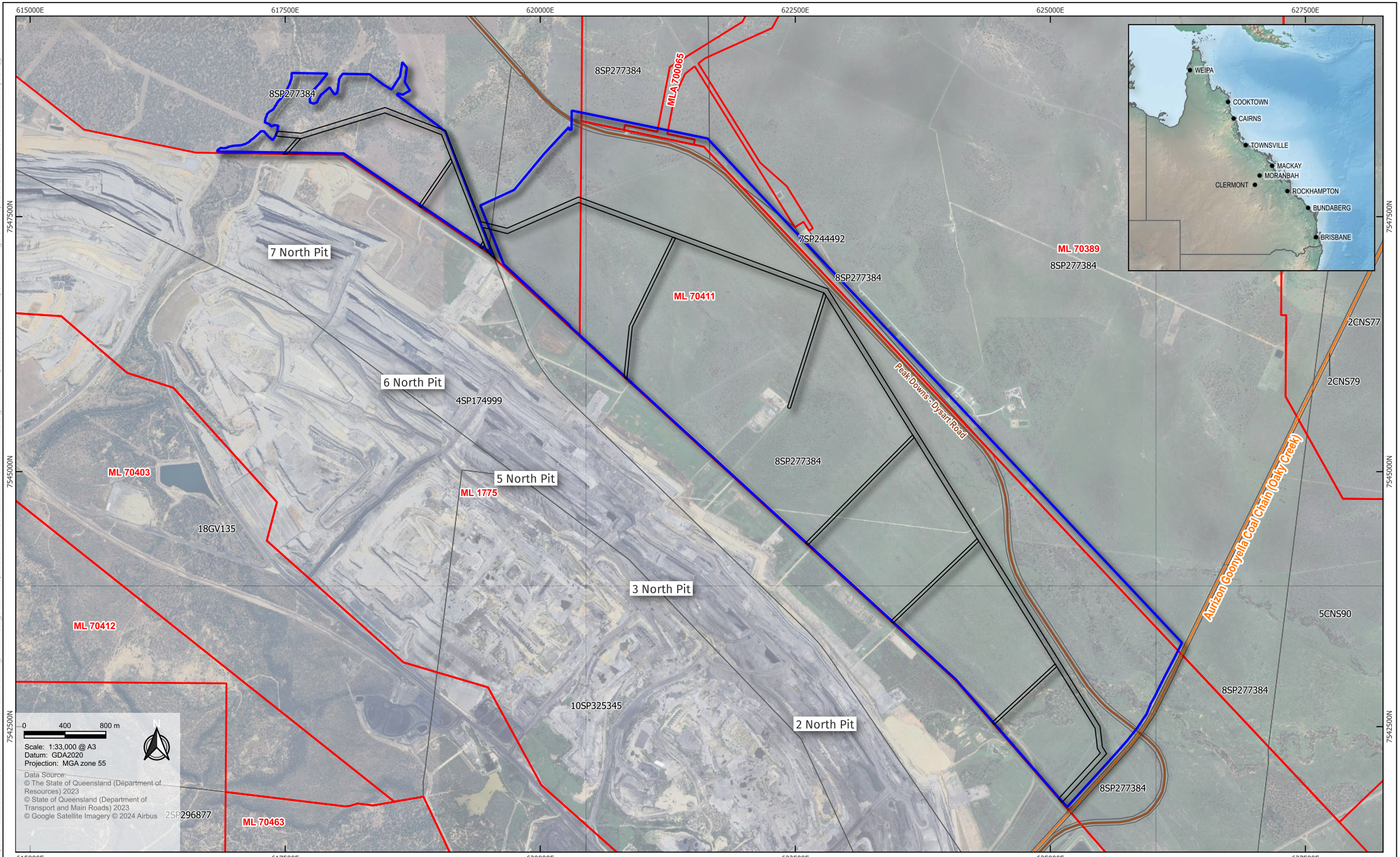
The proposed realignment of the 7N/5N/2N power line for the Proposed action is comprised of the following three components:

- 7N power line realignment – entirely outside of a mining lease
- 5N power line realignment – partly within ML 70411, partly outside a mining lease
- 2N power line realignment – entirely within ML 70411

The Proposed action will consist of the following activities:

- A corridor up to 50 metres (m) wide along the main axis of the proposed power line's main axis
- A series of stub lines with 30 m wide corridors, perpendicular to the power line's main axis
- An access track up to 10 m wide along the main corridor and stub line corridors
- Existing tracks will be used to cross waterways where practical, and new tracks will be constructed as bed level crossings to avoid barriers to fish passage and impacts to hydrology of the waterway
- Excavating and pouring foundations for the power line towers
- Assembly and erecting the power line steel work including installation of stay anchors
- Stringing electrical cables, conductors and earth wires along the power line towers
- Tensioning of electrical cables to achieve minimum ground clearance
- Connection of conductor bridges and droppers
- Testing, commissioning and connection with the main site

The Action area that contains the power line corridors and associated infrastructure is 83.55 hectares (ha). The Disturbance footprint within the Action area, where vegetation clearing will occur is 79.06 ha. Disturbance types and extents associated with the Proposed action are described in **Section 4.1**.



Legend

- Study area
- Action area
- Mining leases
- Cadastre (DCDB)
- State controlled roads
- Railways

epic Environmental — A Montrose Environmental Company

BMA — BHP Mitsubishi Alliance

BM Alliance Coal Operations Pty Ltd
Peak Downs Power Line Realignment
Revised MNES Significant Impact Assessment Report

Figure 1
Study area and Action area location

1.3 Scope and Purpose of Assessment

The Proponent has engaged Epic Environmental Pty Ltd (Epic) to undertake an assessment of the likelihood of significant impacts to Matters of National Environmental Significance (MNES) to occur as a result of the Proposed action. This report presents the approach, findings and conclusions of the assessment, and includes the information necessary to support assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) by the Department of Climate Change, Energy, the Environment and Water (DCCEEW).

1.4 Assessment Method

The assessment is based on recent field-based mapping of environmental values and reporting provided by Ausecology including:

- 7N-5N-2N Powerline Alignment MNES Ecological Report (June 2024) (Ausecology 2024a)
- Peak Downs Mine 7N-5N-2N Power line Project Off-lease – MSES Technical Memo (July 2024) (Ausecology 2024b)
- Terrestrial Ecology Report – Peak Downs Mine Continuation Project (Ausecology 2025)

The reporting encompasses data collected during field surveys undertaken for the Proposed action and the PDM Continuation Project by Ausecology from 2019 to 2024. The purpose of these surveys was to document the existing ecological values of the Study area and surrounds (refer **Figure 1**) and to inform the potential impact of the Proposed action. Additional ecological data collected by other consultants during previous surveys in the area were also incorporated into the assessment.

As such, this assessment is not intended to present a full summary of the ecological values present within the Study area. The Proposed action's MNES Ecological report (Ausecology 2024a) should be reviewed in conjunction with this MNES Significant Impact Assessment Report.

This assessment includes an updated desktop review of publicly available information to ensure all ecological values of conservation significance (listed MNES) considered currently relevant to the Study area are identified. This includes species and vegetation communities of conservation significance that potentially occur within the Study area and surrounds.

Publicly available information sources accessed for this assessment included the following:

- DCCEEW Protected Matters Search Tool area search with a 10 km buffer placed around the Study area
- Species Profile and Threats (SPRAT) Database administered by DCCEEW
- Queensland Government Wildlife Online database: 25 km buffer placed around the central coordinates: -22.1912 Latitude, 148.1874 Longitude
- The Atlas of Living Australia (ALA) species database is a web-based search tool that is a partnership between CSIRO, Australian museums, herbaria and other biological collections, and the Australian Government

Copies of the search results are provided in **Appendix A**.

The significant impact assessment has been completed for MNES identified to be relevant to the Action area and surrounds, and was carried out in accordance with the *MNES significant impact guidelines 1.1* (MNES Guidelines) (DoE 2013a) (**Section 5**).

2 RELEVANT LEGISLATION

2.1 Commonwealth Legislation

2.1.1 *Environment Protection and Biodiversity Conservation Act 1999*

The EPBC Act is the key piece of Commonwealth legislation governing environmental protection in Australia. Administered by the DCCEEW, the EPBC Act defines and protects nine MNES including:

- World heritage properties
- National heritage places
- Wetlands of international importance (listed under the Ramsar Convention)
- Listed threatened species and ecological communities
- Migratory species protected under international agreements
- Commonwealth marine areas
- The Great Barrier Reef Marine Park
- Nuclear actions (including uranium mines)
- A water resource in relation to coal seam gas development and large coal mining development

Under Part 3 of the EPBC Act, a person must not undertake an action (e.g. a project, a development, an undertaking, an activity or a series of activities, or an alteration of any of these things) that will have, or is likely to have, a significant impact on a protected matter, without approval from the Minister.

Guidance is provided on assessing the potential for a project to impact on MNES through subordinate referral and impact assessment guidelines, particularly the MNES Guidelines for assessing impacts on threatened species and vegetation communities.

If after all reasonable avoidance and mitigation measure have been taken, there is still a residual impact on a protected matter, an offset may be required where the impact is, or is likely to be, significant.

2.1.2 Environmental Offsets Policy 2012

The EPBC Act *Environmental Offsets Policy October 2012* (EOP) provides upfront guidance on the role of offsets in environmental impact assessments, and how DCCEEW considers the suitability of a proposed offset. The EOP aims to improve environmental outcomes through the consistent application of best practice offset principles, provide more certainty and transparency, and encourage advanced planning of offsets.

3 REVIEW RESULTS

An updated Protected Matters Report (PMR) and other relevant database searches were generated to inform an updated impact assessment for the Proposed action and address part of the Preliminary Documentation request for information (RFI). The updated assessment includes a detailed likelihood of occurrence of all species and threatened ecological communities (TECs) identified in the updated review process, with a focus on the Action area, and informed by updated desktop information and information provided by reporting for the PDM Continuation Project (Ausecology 2025). This also allows for a central reference point for all species subject to assessment. As such, there are minor differences identified with the results that were described in the MNES impact assessment report submitted as part of the referral documentation. Where there are differences, these are identified in the text in the relevant sections. It is noted the revised assessment provided no change to those MNES required to be subject to a detailed significant impact assessment (refer **Section 5**).

3.1 Matters of National Environmental Significance – PMR

The PMR identifies MNES protected under the EPBC Act that are considered as potentially occurring within the Study area and surrounds. The updated PMR identified three categories of MNES potentially present within the Study area or surrounds (as summarised in **Table 1**). A copy of the PMR is provided in **Appendix A**.

Table 1. Study area - EPBC Act PMR summary

MNES	PMR search result
World heritage properties	Not applicable
National heritage properties	Not applicable
Wetlands of international importance	Not applicable
Great Barrier Reef Marine Park	Not applicable
Commonwealth marine area	Not applicable
Listed threatened ecological communities (TECs)	Three ecological communities listed as threatened predicted to be present (refer **Section 3.2.1**)
Listed threatened species	Twenty-eight threatened species including four flora and 24 fauna species listed as threatened predicted to be present (refer **Section 3.2.2.1** and **Section 3.2.2.2**)
Listed migratory species	Ten species listed as migratory predicted to be present (refer **Section 3.2.2.3**)

3.2 Matters of National Environmental Significance - Ground-truthed Data

The Study area (as depicted in **Figure 1**) and surrounds have been the subject of a number of ecology surveys in recent years including surveys carried out by Ausecology in 2019, 2021, 2022, 2023 and 2024, as well as studies carried out by Aurecon (2013), Eco Logical (2016 and 2020), AECOM (2020) and ERM (2021). These studies are outlined in the *7N5N2N Power line alignment MNES ecological report* (Ausecology 2024a). Threatened species records derived from the studies have been used to inform the likelihood of occurrence assessment and subsequent impact assessment in this report. The Ausecology (2024a) report details the methods used for the surveys for the Proposed action and how the survey effort relates to Commonwealth survey guidelines (where these apply).

The following sections summarise the results of the Ausecology (2024a) report with regard to MNES values associated with the Study area.

3.2.1 Threatened Ecological Communities

The PMR identifies the following three TECs as possibly present within the Study area:

- Brigalow (*Acacia harpophylla* dominant and co-dominant) (Brigalow TEC)
- Natural Grasslands of the Queensland Central Highlands and northern Fitzroy Basin (Natural Grasslands TEC)
- Poplar Box Grassy Woodland on Alluvial Plains (Poplar Box TEC)

Two of the TECs were identified as present within the Study area:

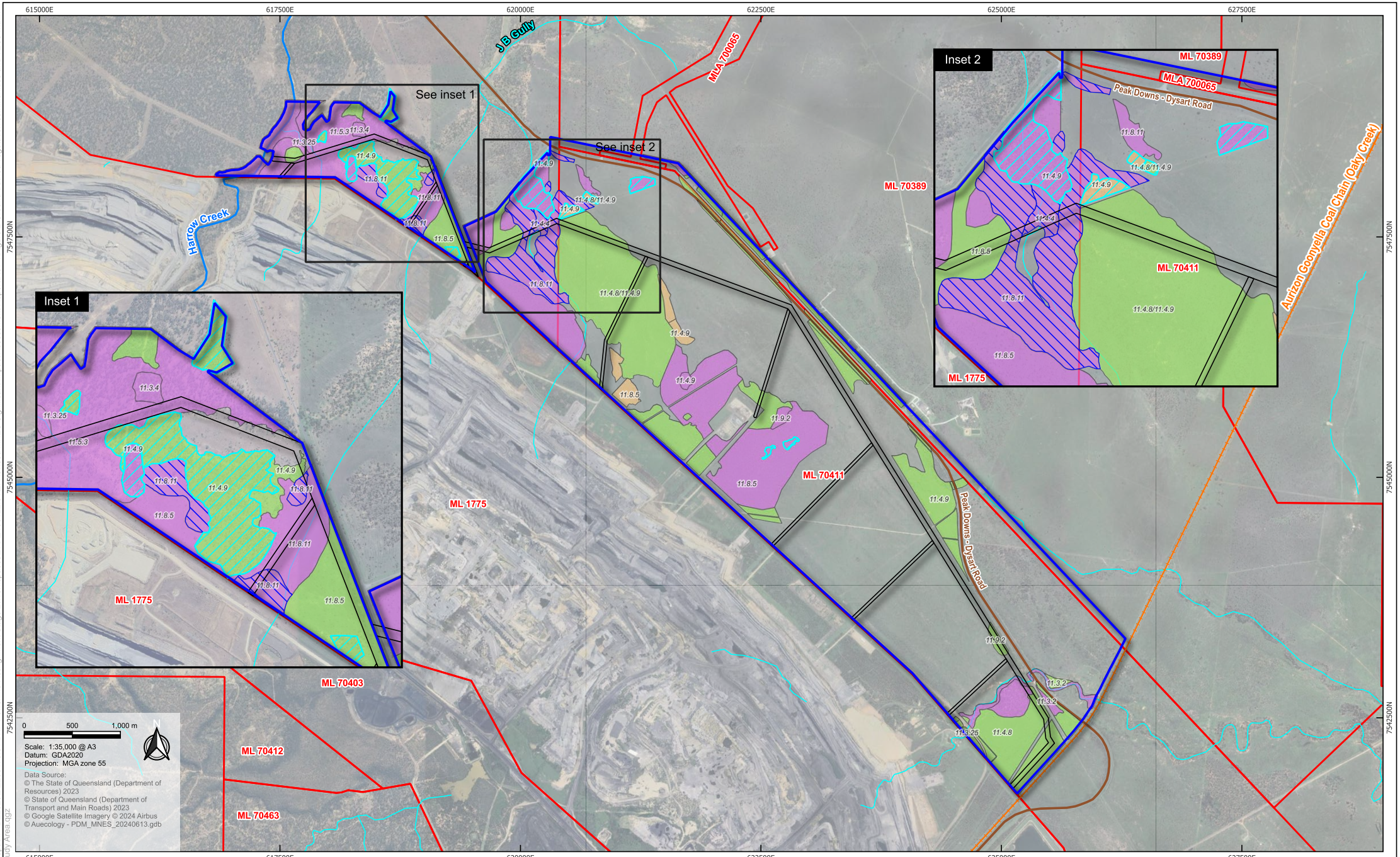
- Brigalow TEC – Brigalow occurs as remnant, but more commonly regrowth communities (RE 11.4.8 and 11.4.9) in the eastern and north-western portions of the Study area. Assessments of these communities were carried out with regard to the diagnostic criteria and condition thresholds in the Approved Conservation Advice for the TEC (DE 2013a). The assessments confirmed the presence of Brigalow TEC in the western and central portions of the Study area (**Plate 1**).
- Natural Grasslands TEC – native grassland communities (RE 11.4.4 and 11.8.11) occur as large patches in the western portion of the Study area. Assessments of these communities were carried out with regard to the description and condition thresholds in the Commonwealth listing advice for the TEC (TSSC 2009). The assessments confirmed the presence of Natural Grasslands TEC only in portions of the overall extent of mapped grassland areas (**Plate 2**). These comprised patches considered to meet 'best quality' or 'good quality' condition class as defined by TSSC (2009).

The Poplar Box TEC was not found in the Study area.

Further detail on the extent and condition of the Brigalow TEC and Natural Grasslands TEC within the Study area is provided in Section 3.2.1 of Ausecology (2024a). The ground-truthed extent of the TECs present is depicted in **Figure 2.**

Plate 1. Example of Brigalow TEC (RE 11.4.9) within the northern portion of the Study area

Plate 2. Example of Natural Grassland TEC (RE 11.4.4) from the Study area



Legend

- Study area
- Action area
- Mining leases
- State controlled roads
- Railways

Vegetation management watercourses and drainage features v7.0

- Major
- Minor

Threatened ecological communities

- Brigalow TEC
- Natural Grasslands TEC

Ground-truthed regional ecosystems

- Remnant
- High-value regrowth
- Regrowth
- Non-remnant

epic A Montrose Environmental Company

BMA BHP Mitsubishi Alliance

BM Alliance Coal Operations Pty Ltd
Peak Downs Power Line Realignment
Revised MNES Significant Impact Assessment Report

Figure 2
Ground-truthed vegetation communities and TECs within Study Area

3.2.2 Threatened Species

The previous threatened species' likelihood of occurrence assessment is located in Appendix B of Ausecology (2024a). The potential for species to occur were categorised as follows:

- **Known to occur** - the species or population has been observed within the Study area
- **Likely to occur** - the Study area is within the species' known distribution, suitable habitat occurs within the area and the species is known to occur in the region. Species not confirmed as occurring in the Study area
- **Potential to occur** - the Study area is within the species' known distribution, marginal habitat occurs within the area and the species is known to occur in the region. Species not confirmed as occurring within 10 km but recorded within 50 km of the Study area
- **Unlikely to occur** - low probability that the species will occur as it is outside the species known distribution, low quality habitat occurs within the Study area or the species is not known to occur within the region. No confirmed species records within 50 km of the Study area

The likelihood of occurrence assessment has been updated based on the updated PMR and relevant database searches. The results are provided in the following sections.

Threatened species records from the desktop searches are shown in **Figure 3**, and the records of species observed during surveys within and surrounding the Study area are shown in **Figure 4**.

3.2.2.1 Threatened Flora

No threatened flora listed under the EPBC Act were recorded within the Action area or Study area during the surveys conducted by Ausecology (2019-2024), nor during other surveys conducted in the surrounding area. Four threatened (MNES) flora species were identified as potentially present in the updated PMR. Two MNES flora species were identified as previously recorded in the wider area (within 25 km) from the Wildnet database search, including one species not identified in the PMR.

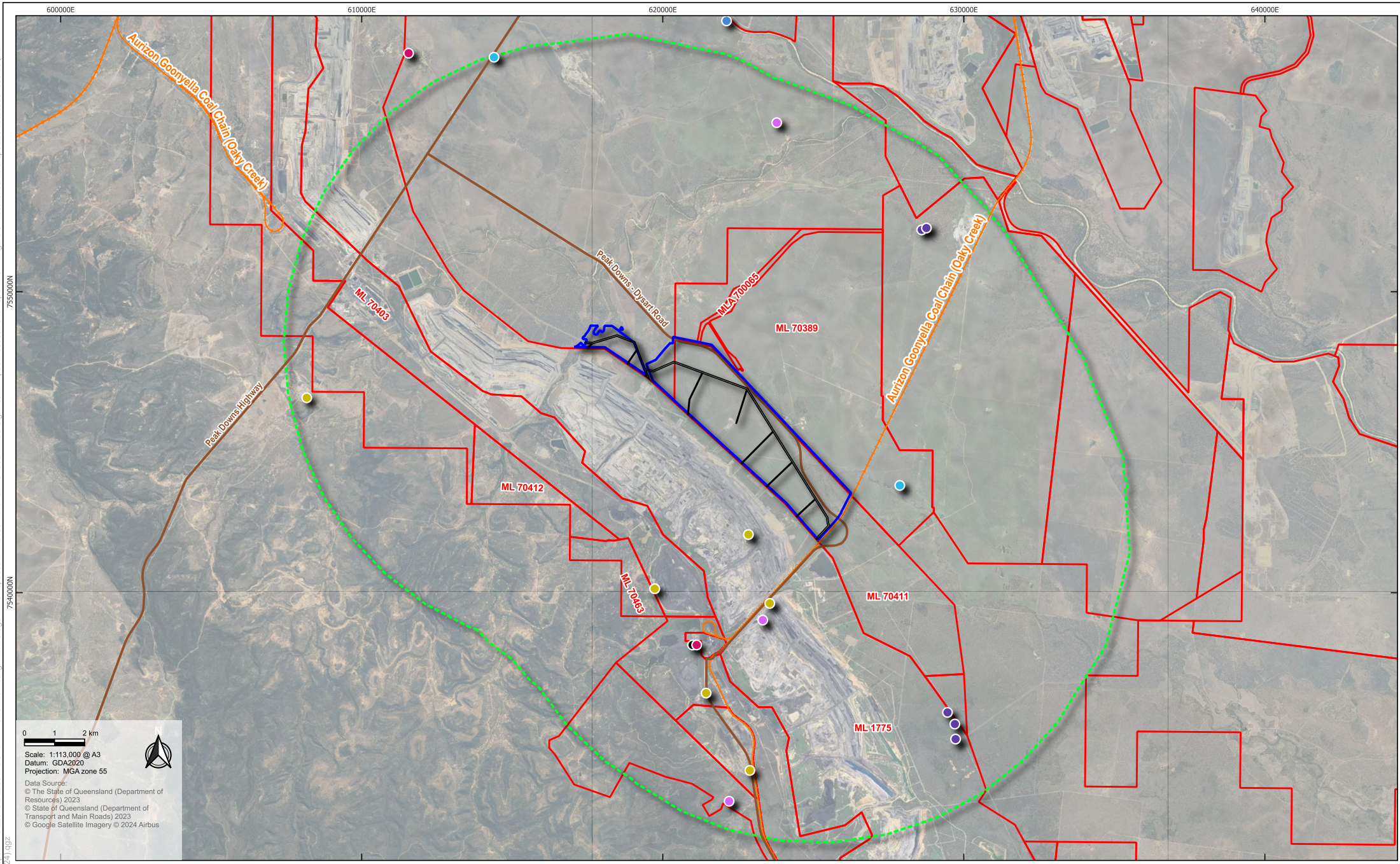
The assessment identified one of the MNES species as a potential occurrence within the Action area or immediate surrounds, *Dichanthium queenslandicum* (**Table 2**). There is a recent record (2022) located 1.5 km east of the southeastern portion of the Study area, and several records in the wider area (ALA 2024) (**Figure 3**). Potential habitat is present (associated with the natural grasslands), however the grasslands in the Study area were generally observed as severely impacted by cattle grazing. The species is considered as potentially occurring only in areas identified as the Natural Grasslands TEC.

The second threatened flora species identified in the Wildnet search has only recently been listed under the EPBC Act: *Ptilotus uncinellus.* The assessment found the species is unlikely to occur as the Study area is outside of the species identified extent of occurrence (TSSC 2024) and there is a lack of potential habitat present (**Table 2**). All other species are considered as 'unlikely to occur'.

Table 2 provides an updated likelihood of occurrence assessment table for those threatened flora species that were identified in the previous assessment by Ausecology 2024a and the updated PMR.

Table 2. Likelihood of occurrence of MNES flora species within the Action area

Species and status	Habitat/distribution	Likelihood of occurrence
Aristida annua Vulnerable	Restricted to central Queensland in Emerald and Springsure districts. Found within eucalypt woodland, restricted to black clay soils and basalt soils. Associated with the 'Natural Grasslands of the Qld Central Highlands and Northern Fitzroy Basin' EPBC listed ecological community (DES,2022; DEWHA 2014).	**Unlikely**. Not recorded during surveys or the current desktop review. Single record (1999) located 50 km south. All other records located south and more than 150 km from the Action area. Proposed action is located north of species' restricted distribution.
King Blue-grass (*Dichanthium queenslandicum*) Endangered	Suitable habitat for the species primarily includes black cracking clay soils supporting tussock grasslands in association with other species of blue grasses (*Dichanthium* spp. and *Bothriochloa* spp.) (DETSI 2025a). Other habitat types include eucalypt woodland with *Corymbia dallachiana*, *Corymbia erythrophloia* or *Eucalyptus orgadophila*. The species is distributed from near Dalby north to about 90 km north of Hughenden and west as far as Clermont (ALA 2025).	**Potential.** Not recorded within the Study area during surveys despite targeted searches. There is a 2022 WildNet record located 1.5 km to the east of the Study area (**Figure 3**). Scattered records to the north (particularly around Moranbah) and to the southwest (ALA 2025). There is suitable habitat present in the native grassland habitats onsite (RE 11.8.11 and 11.4.4).
Blue-grass (*Dichanthium setosum*) Vulnerable	Prefers heavy basaltic black soil and stony red-brown hard-setting loam with a clay subsoil. The extent to which the species can tolerate disturbance is not known. However, it is commonly found in disturbed areas such as cleared woodland, roadside remnants, grazed land and highly disturbed pasture. It is also found on variously grazed pasture where the soil is nutrient-enriched and water enriched (Ayers et al. 1996).	**Unlikely.** Not recorded during project surveys or the current desktop review but included in previous assessment (Ausecology 2024a). Nearest record is from 2006 and over 90 km north of the Study area. No other records within 200 km of the Action (ALA 2025).
Black Ironbox (*Eucalyptus raveretiana*) Vulnerable	Wide distribution in coastal and sub-coastal Queensland, primarily along watercourses. Also found within river flats and open woodlands. Soils varying from sand through to heavy clay (DEWHA 2008a).	**Unlikely.** Not recorded along creek lines within the Study area during surveys despite targeted searches. Nearest records are at least 60 km east of the Study area.
Polianthion minutiflorum Vulnerable	Suitable habitat for the species includes forest and woodlands on sandstone derived skeletal soils. Associated species include *Acacia shirleyi, Corymbia aureola, Eucalyptus corynodes, C. trachyphloia, E. cloeziana* and *E. dura* (DETSI 2025b).	**Unlikely.** No records in the wider area and suitable habitat for the species does not occur.
Ptilotus uncinellus Endangered	Listed under the EPBC Act in September 2024 and not identified in previous assessments for the Action. Annual herb with a highly restricted range confined to two populations near Newlands Mine and Goonyella Mine. Currently appears to occur in non-remnant lands on land zone 5 and land zone 7 (particularly with *Acacia shirleyi*) (TSSC 2024).	**Unlikely.** Not recorded within the Study area during surveys. Nearest records are from 2023 and located 22 km north of Study area. These records appear to be further south of the known populations. Action area is located outside mapped area of occurrence (DCCEEW 2025) and there is no suitable habitat identified within the Study area (Ausecology 2024a).
Quassia (*Samadera bidwillii*) Vulnerable	Small tree that mostly occurs close to waterways on the edges of lowland rainforest and less commonly in open forest and woodland environments (DCCEEW 2025).	**Unlikely.** Not recorded within the Study area during surveys. While habitat may be present (as broadly described) there are few associated tree species present (refer DCCEEW 2025) and there are no database records within 130 km of the Action area (ALA 2025).



Filepath: -BE2020\BE200178.01 BHP Powerline Realignment Stage 2\Workspaces\BAA2400122.0112. Revised MNES Significant Impact Assessment Report\Rev 4\Figure 3 Threatened flora species database records (ALA 2024).mxd

Legend

- Study area
- Action area
- Mining leases
- Project area buffer (10km)
- Railways
- State controlled roads

Atlas of Living Australia database records

- King Bluegrass *(Dichanthium queensladicum)*
- Koala *(Phascolarctos cinereus)*
- Ornamental Snake *(Denisonia maculata)*
- Squatter Pigeon *(Geophaps scripta scripta)*
- Sharp-tailed Sandpiper *(Calidris acuminata)*
- Common Greenshank *(Tringa nebularia)*
- Southern Greater Glider *(Petauroides volans)*

epic A Montrose Environmental Company

BMA BHP Mitsubishi Alliance

BM Alliance Coal Operations Pty Ltd
Peak Downs Power Line Realignment
Revised MNES Significant Impact Assessment Report

Figure 3
Threatened species database records (ALA and WildNet 2025) within 10 km of Action area

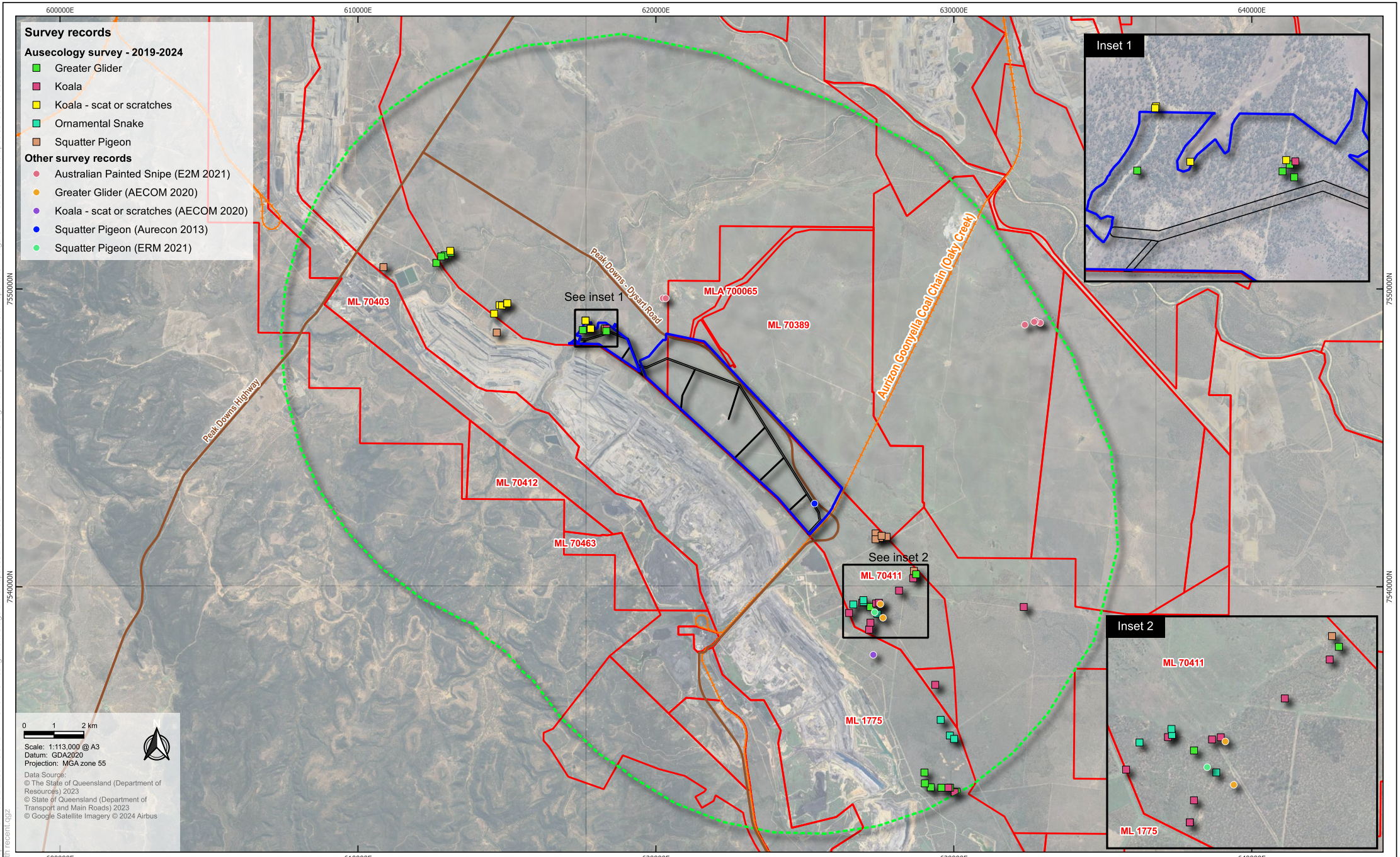
3.2.2.2 Threatened Fauna

Twenty-four threatened (MNES) fauna species were identified as potentially present in the PMR. Six of the species identified have been previously recorded in the wider area from the Wildnet database search, all of which were also identified in the PMR. Five of the species have been previously recorded within 10 km of the Action area (ALA 2025) (**Figure 3**).

Five threatened species have been recorded within the Study area and/or surrounds during ecological surveys for the Proposed action from 2019-2024 (**Figure 4**).

Suitable habitat for threatened species was mapped for the Study area based on the habitat definitions described in *Habitat descriptions for 12 threatened species specific to central Queensland Version 5* (Kerswell et al 2020) and where relevant, DCCEEW threatened species information (e.g. recovery plans or approved conservation advice). The derived habitat mapping formed the basis for the impact assessment within this report.

Table 3 provides an updated likelihood of occurrence assessment table for those threatened fauna species that were identified in the previous assessment by Ausecology 2024a and the updated PMR for completeness. Six fauna species listed as threatened under the EPBC Act are considered as known, likely, or possibly occurring within the Action area or immediate surrounds (**Table 3**). The remaining 18 species are considered unlikely to occur.



Filepath: ~BE2020\BE200178.01 BHP Powerline Realignment Stage 2\Workspaces\BAA2400122.0112. Revised MNES Significant Impact Assessment Report\Rev 4\Figure 4 Threatened fauna species records associated with recent.qgz

Legend

- Study area
- Action area
- Mining leases
- Project area buffer (10km)
- State controlled roads
- Railways

epic A Montrose Environmental Company

BMA BHP Mitsubishi Alliance

BM Alliance Coal Operations Pty Ltd
Peak Downs Power Line Realignment
Revised MNES Significant Impact Assessment Report
Figure 4
Threatened species records associated with recent survey activity in Study area and surrounds (Ausecology 2024a)

Table 3. Likelihood of occurrence of threatened fauna species within the Action area

Species and status	Habitat/distribution	Likelihood of occurrence
Sharp-tailed Sandpiper (*Calidris acuminata*) Vulnerable, Migratory	Non-breeding migratory wetland species that occurs in Australia in the warmer months. They mostly occur along coastal areas but may occur further inland. Sharp-tailed Sandpipers prefer muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation.	**Potential to occur**. Not recorded during surveys for the project or other surveys in the Study area and surrounds. The nearest Sharp-tailed Sandpiper record is from 2001 and located 5 km south of the Action area (**Figure 3**). No other records within 60 km of the Action area (ALA 2025). Possible habitat for the species associated with the Proposed action is restricted to a small man-made wetland adjacent to existing mining infrastructure (refer **Figure 6** in **Section 5.2**). The species occurrence in the Action area will be occasional at best.
Curlew Sandpiper (*Calidris ferruginea*) Critically Endangered, Migratory	The species migrates to coastal regions of Australia with scattered location inland. This species usually forages and roosts in intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms (DE 2015a).	**Unlikely to occur**. In Australia the species occurrence is largely coastal. Marginal habitat for the species associated with the Proposed action is restricted to a small man-made wetland adjacent to existing mining infrastructure. The nearest database record is located more than 90 km southeast of the Study area (ALA 2025).
Red Goshawk (*Erythrotriorchis radiatus*) Endangered	Was once sparsely dispersed across 15% of coastal and sub-coastal Australia, from the Kimberley in Western Australia to north-eastern New South Wales (DCCEEW 2025). The species has declined in southern parts of its range (DERM 2012; Garnett & Baker 2021) and it is now thought that remaining birds in south-east Queensland disappeared before 2010 (Seaton 2014; Garnett & Baker 2021). Strongholds remain in north-east Queensland and eastern Cape York Peninsula (DERM 2012). The species prefers landscapes containing a mosaic of habitats including coastal and sub-coastal tall open forest, woodland and rainforest edges. Forests of intermediate density are particularly favoured, as are ecotones between variably dense habitats. Habitat utilisation is influenced by the location of large populations of birds (primary prey). Nests are restricted to trees taller than 20 m and within 1 km of a watercourse or wetland (Garnett & Baker 2021).	**Unlikely to occur.** Not recorded during surveys in the Study area and surrounds. Sparse records in the surrounding region although none within 50 km of the Action area or more recent than 2001 (ALA 2025). The Action area is sparsely wooded and unsuitable for the species.
Grey Falcon (*Falco hypoleucos*) Vulnerable	Species occurs in arid and semi-arid inland Australia where annual rainfall is less than 500 mm. Younger individuals may disperse outside of this habitat in drought years that follow wet years in inland Australia. Preferred habitat includes sparsely timbered lowland plains, particularly Acacia shrublands that are crossed by tree-lined water courses. The species has been observed hunting in treeless areas and frequents tussock grassland and open woodland, especially in winter (Garnett et al. 2011; TSSC 2020).	**Unlikely to occur.** Not recorded during surveys in the Study area and surrounds. Nearest database record is located over 80 km west and is undated. No other records within 100 km (ALA 2025). The Action area is located outside the normal range of the species occurrence in arid inland Australia.
Latham's Snipe (*Gallinago hardwickii*) Vulnerable, Migratory	Latham's Snipe is a non-breeding summer visitor and occurs in a wide variety of permanent and ephemeral wetlands, preferring open freshwater wetlands with fringing vegetation. The species is also recorded from swamps, billabongs, lakes,	**Unlikely to occur.** Not recorded during surveys in the Study area and surrounds. Marginal habitat for the species associated with the Action area is restricted to a small man-made wetland adjacent to existing mining

Species and status	Habitat/distribution	Likelihood of occurrence
	edges of creeks and rivers, bogs, marshes behind coastal sand dunes and some artificial waterbodies. It will occur in any vegetation around wetlands, including grasslands, heath, woodland and forest (Higgins & Davies 1996).	infrastructure. The nearest database records are located more than 70 km north and south of the Study area (ALA 2025).
Squatter Pigeon (southern) (*Geophaps scripta scripta*) Vulnerable	Squatter Pigeon is now largely restricted to Queensland, where the southern subspecies occurs north to the Burdekin River (Frith 1982). The species extends west to Longreach and Charleville. There is a subpopulation from Warwick to Texas. Squatter Pigeon does not appear to undertake any large-scale seasonal movement and is probably locally nomadic, or perhaps sedentary (Frith 1982; Blakers et al. 1984). It mainly occurs in dry grassy eucalypt woodlands and open forests (Frith 1982; Crome & Shields 1992) but may also inhabit Callitris/Acacia dominated woodlands. Most birds live in sandy sites within 3 km of a permanent water source (Blakers et al. 1984).	**Known to occur.** Species recorded 2 km east of the southern extent and 2 km west of the northern extent of the Study area during field survey effort for the project in 2022 (**Figure 4**). Not recorded within Study area since survey work reported in Aurecon (2013). Suitable (although degraded) foraging habitat is present in scattered patches throughout the Study area (refer **Figure 11** in **Section 5.3.5**).
Painted Honeyeater (*Grantiella picta*) Vulnerable	Sparsely distributed from south-eastern Australia to north-western Queensland and eastern Northern Territory (Garnett & Baker 2021). The greatest concentrations of the bird and almost all breeding occurs on the inland slopes of the Great Dividing Range in NSW, Victoria and southern Queensland (DCCEEW 2025). The species forages on mistletoes in eucalypt forests/woodlands, riparian woodlands of black box and river red gum, box-ironbark-yellow gum woodlands, Acacia-dominated woodlands, paperbarks, Casuarinas, Callitris, and trees on farmland or gardens (DE 2015b). Diet consists primarily of mistletoe fruit derived almost exclusively from the genus Amyema (Higgins et al. 2001; Oliver et al. 2003). The species prefers woodlands which contain a higher number of mature trees, as these host more mistletoes (DE 2015b).	**Unlikely to occur**. Not recorded during surveys in the Study area and surrounds. No records within 150 km of the Project (ALA 2025). The Action area is sparsely wooded, and mistletoes were observed to be scarce during surveys.
White-throated Needletail (*Hirundapus caudacutus*) Vulnerable, Migratory	In Australia the species is almost completely aerial in habits, possibly even sleeping on the wing. The species is sometimes found roosting in trees, usually on ridgelines. White-throated Needletails are found over a wide variety of habitat, including open areas, modified land and the ocean but are most often recorded over wooded areas (Higgins 1999). Foraging for aerial invertebrates occurs at heights from less than one metre up to more than 1000 metres (Higgins 1999) and at least as high as 1,700 m above the ground (Tarburton 2015).	**Potential to occur.** Not recorded during project surveys or in the current desktop review but included in previous assessment (Ausecology 2024a). Closest record is from 2012 and located 35 km northwest of the Action area. Sparsely scattered records in surrounding region but no others within 50 km (ALA 2025). Species occurs widely across eastern and northern Australia in the summer months and may occur over almost any habitat, although prefers wooded areas. Previously considered likely to be present (Ausecology 2024a), but revised to potential based on few records and general lack of preferred wooded habitat present across Study area and Action area.
Star Finch (southern) (*Neochmia ruficauda ruficauda*) Endangered	Occurs in grasslands and grassy woodlands, near permanent water, and sometimes in or near cleared suburban areas, such as along roadsides and in towns. Also reported along river banks dominated by native grasses and sedges.	**Unlikely to occur**. No suitable habitat present. No database records within 70 km of the Action area. The subspecies is likely extinct.

Species and status	Habitat/distribution	Likelihood of occurrence
	Distribution is poorly known and the subpopulation is currently thought to be extinct (Garnett & Baker 2021).	
Black-throated Finch (southern) (*Poephila cincta cincta*) Endangered	Occurs in dry open woodlands and forests with seeding grasses and free-standing water. They are often along watercourses and probably require a mosaic of different habitats (Higgins et al. 2006). This species formerly occurred from far north Queensland south to the Northern Tablelands of New South Wales and as far west as Cunnamulla, Queensland.	**Unlikely to occur**. Habitat present is heavily disturbed, largely sparse and likely unsuitable for the species. Nearest record is over 80 km north and old (pre 1977). No other records within 120 km (ALA 2025).
Australian Painted Snipe (*Rostratula australis*) Endangered	This species occurs in all states of Australia but is most common in eastern Australia. Well-known from the Murray-Darling basin. Other sightings include the Channel Country and the Fitzroy basin, and recently from the floodwater plains of coastal central and north Qld. Suspected to be regular migrants to coastal floodwater plains, in autumn and winter (DCCEEW 2024b). Generally, inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans. They also use inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage farms and bore drains. The species has been recorded to utilise areas lined with trees, or that have some scattered fallen or washed-up timber. Breeding occurs in shallow wetlands with areas of bare wet mud and both upper and canopy cover nearby, typically from or near small islands in freshwater wetlands (DCCEEW 2025).	**Potential to occur**. No records from surveys undertaken for the Proposed action. Recently recorded by E2M (2021) in wider area from two sites associated with man-made wetlands (dams) located 2 km and 10 km north and east of the Action area, respectively (**Figure 4**). Sparse records in the surrounding region, with the most recent from 2017 located 35 km southeast (ALA 2025). Possible habitat for the species associated with the Action area is restricted to a small man-made wetland adjacent to existing mining infrastructure (refer **Figure 6** in **Section 5.2**). Breeding habitat will not be present. The species occurrence in the area will be occasional at best. Previously considered likely to be present (Ausecology 2024a) but revised to potential based on lack of suitable habitat present within or in close proximity to Action area.
Diamond Firetail (*Stagonopleura guttata*) Vulnerable	Not identified in previous assessments for the Action due to recent listing under the EPBC Act. Occurs in lightly timbered habitats with high grass coverage. May occur in farmlands with scattered trees. Diet largely comprises grass seed. Once occurred as far north as Cardwell in Queensland but now only occurs in the far south of the state. Prefers areas with a low density of trees, little fallen timber or leaf litter and a heavy grass cover (Garnett & Baker 2021; DCCEEW 2023a).	**Unlikely to occur**. Not observed during surveys within and surrounding the Study area. Species predicted as 'may occur' only in region (DCCEEW 2025). There are no records within 150 km of the Study area. There are only widely scattered records located north of the Capricorn Highway (which is 140 km south of the Study area) and these are all older than 1977. Further south there are sparsely scattered records although all of these are older records (pre-1982). The only recent record is from 2020 and located over 350 km to the south in Expedition Range National Park. Even this record appears very isolated from other recent records which are much further south (ALA 2024). It would appear the species may only have occurred as occasional vagrant individuals in the region in the past. The Study area is very unlikely to be within the range of the species currently.
Common Greenshank (*Tringa nebularia*) Endangered, Migratory	In Australia, Common Greenshank occurs on a wide variety of coastal habitats and inland wetlands. The species prefers sheltered coastal areas, typically with large mudflats, mangroves and saltmarsh (Lane 1987; Higgins & Davies 1996) but also uses permanent and ephemeral terrestrial wetlands including swamps, dams, creeks, inundated floodplains, claypans and sewage ponds (Pringle 1987; Higgins & Davies 1996). Common Greenshank is a very widespread sandpiper in Australia,	**Unlikely to occur.** Not recorded during surveys for the project or other survey activities in the wider area. Two older records in region include a 1999 record 8 km west and a 1978 record 27 km northwest (ALA 2025). Marginal habitat associated with the Action area is restricted to a small man-made wetland adjacent to existing mining infrastructure. The species occurrence in the area will be occasional at best.

Species and status	Habitat/distribution	Likelihood of occurrence
	occurring in most coastal regions and a few records south of a line from near Dalby to Mt Guide, and sparsely scattered records elsewhere (Pringle 1987; Higgins & Davies 1996).	
Northern Quoll (*Dasyurus hallucatus*) Endangered	In Queensland, the species is now only known from the most rugged and remote parts of its range (Burnett 2012), mostly confined to rocky outcrops that provide protection from Cats (Felis catus) and too-frequent fires (Baker & Dickman 2018). Its range is highly fragmented (Woinarski et al. 2014) and may be as little as 10% of its former distribution (Baker & Dickman 2018). Northern Quolls are most common around rocky escarpments but are also found in eucalypt forest and woodland and around human settlements. The species was once widely distributed across northern Australia (Oakwood 2008).	**Unlikely to occur.** Sparse records in wider region. No records closer than 60 km to the Action area and generally all older records (<1980s). Closest recent record is from 2025 from the township of Nebo (80 km northeast). Action area is sparsely wooded and unsuitable for the species.
Ghost Bat (*Macroderma gigas*) Vulnerable	Occurs in a broad range of habitats from arid spinifex hillsides to tropical rainforest (Churchill 2008; Richards et al. 2008). Their distribution is influenced by availability of suitable roost sites. Ghost Bats will roost in shallow caves and under boulders (Churchill 2008) but prefer deep caves, abandoned mines and deep rock fissures (Armstrong & Anstee 2000; Richards et al. 2008).	**Unlikely to occur**. No records within 80 km (ALA 2025) and no suitable roost habitat present within or near the Action area.
Corben's Long-eared Bat (*Nyctophilus corbeni*) Vulnerable	In Queensland, it is known from <30 localities, mainly in the Brigalow Belt South Bioregion. The distribution is bordered by the Bunya Mountain National Park to the east, Expedition Range and Dawson River areas to the north, the Mulga Lands Bioregion west of Bollon to the west, and the NSW-Qld border to the south (DCCEEW 2025). It occurs in a range of woodlands but the preferred habitat is mallee and Callitris woodlands and habitats that have a distinct canopy with a dense, cluttered understorey (Turbill & Ellis 2006). The species is more abundant in extensive stands of vegetation in comparison to smaller woodland patches (TSSC 2015a).	**Unlikely to occur.** The nearest database records are over 180 km south of the Study area. The Action area is located north of the species area of known occurrence. Habitat within the Action area is sparsely wooded and unsuitable.
Greater Glider (southern, central) (*Petauroides volans*) Endangered	This species occurs in Eastern Australia with a broad distribution from around Proserpine in Qld, south through NSW and the ACT, to Wombat State Forest in central Vic (DCCEEW 2024b). The species is generally restricted to eucalypt forests and woodlands, particularly favouring forest with a diversity of eucalypt species. During the day the species shelters in tree hollows, with a particular selection for large hollows in large, old trees (DCCEEW 2024b). Modelling suggests they require native forest patches of at least 160 km^2 to maintain viable populations (Eyre 2002).	**Known to occur**. Individuals recorded in the Study area including in relatively close proximity (within 100 m) to the Action area. Also recorded approximately 6 km northwest and 3 km southeast of the Study area during survey activity in 2021 and 2022 (**Figure 4**). Suitable eucalypt woodland habitat occurs in the western portion of the Action area (refer **Figure 9** in **Section 5.3.4**).
Koala (*Phascolarctos cinereus*) Endangered	In Queensland, the species contains scattered populations throughout moist forests along the coastline, subhumid woodlands in central and southern regions and within eucalypt woodlands along watercourses within semi-arid areas further west. Koalas occur in a range of temperate, sub-tropical and tropical forest,	**Known to occur.** An individual and signs of presence were recorded adjacent to the Action area in the western portion of the Study area. Also recorded approximately 3 km northwest and 3 km southeast of the Action area during surveys for the Proposed action in 2021 and 2022 (**Figure 4**).

Species and status	Habitat/distribution	Likelihood of occurrence
	woodland and semi-arid communities dominated by Eucalyptus species (preference varying regionally). Diet is thought to be a major determinant of habitat selection, with the use small remnants of original vegetation where suitable habitat is present. Known to occur in modified or regenerating native vegetation communities, as well as urban and rural landscapes where food trees or shelter trees may be highly scattered (DAWE 2022a).	Suitable eucalypt habitat for foraging is present in scattered patches throughout the Action area (refer **Figure 8** in **Section 5.3.3**).
Ornamental Snake (*Denisonia maculata*) Vulnerable	Largely restricted to low-lying areas with deep-cracking clay soils, which are subject to seasonal flooding, and adjacent areas of clay and sandy loams. Habitat includes woodland and shrubland, such as Brigalow Acacia harpophylla, and riverine habitats, where the species lives in soil cracks and under fallen timber (Ehmann 1992; Wilson & Swan 2010). The species may be found in areas of simple habitat structure, such as paddocks, grasslands and regrowth if frogs are present (Melzer 2012).	**Likely to occur**. Not recorded within the Study area during surveys despite targeted survey effort but recorded 2.6 km and 7.5 km southeast of the Action area during survey activity in 2021, 2022 and 2023 (**Figure 4**). These records appear to have been collected in remnant Brigalow communities. Scattered records in the wider area including 2012 records located 8 km northeast and 2010 records 7 km south (ALA 2025) (**Figure 3**). Habitat within the Study area itself is heavily disturbed and generally quite marginal for the species. Limited habitat is present in Action area (refer **Figure 7** in **Section 5.2**).
Yakka Skink (*Egernia rugosa*) Vulnerable	Yakka Skink is endemic to eastern Queensland and is patchily distributed in sub-humid to semi-arid dry open forest, woodland and rocky areas. The species distribution includes the Brigalow Belt, Mulga Lands, South-east Queensland, Einasleigh Uplands, Wet Tropics and Cape York Peninsula Biogeographical Regions (Brigalow Belt Reptiles Workshop 2010; Cogger 2014). The species lives in communal burrow systems, often under timber and in deep rock crevices. The species also uses abandoned Rabbit (Oryctolagus cuniculus) warrens and shelters in hollow logs. Occurs in a variety of habitat types, particularly woodland and open forest dominated by Poplar Box (*E. populnea*), Mulga (*Acacia aneura*), ironbark woodlands (typically *E. melanophloia*) and White Cypress Pine (usually with Poplar Box, *E. melanophloia* or *C. tessellaris*). It has been recorded far less frequently from communities featuring Brigalow (*A. harpophylla*) *A. catenulata, A. shirleyi, Casuarina cristata* or Bull Oak (Ferguson and Matheson 2014). Yakka Skink usually occurs on well-drained, coarse, gritty soils in the vicinity of low ranges, foothills and undulating terrain (Ehmann 1992; Wilson 2015; Richardson 2006; Brigalow Belt Reptiles Workshop 2010; Cogger 2014) but are also found on loam and clay soils (Eddie 2012).	**Unlikely to occur.** No database records within 130 km of the Study area (ALA 2025). Action area is generally sparsely wooded and heavily disturbed and likely less suitable for the species occurrence.
Southern Snapping Turtle (*Elseya albagula*) Critically Endangered	Flowing waters of the Mary, Burnett, Fitzroy-Dawson and associated drainage systems. (Wilson and Swan 2013).	**Unlikely to occur**. Nearest record over 80 km east (ALA 2025). No suitable habitat within or near the Study area.

Species and status	Habitat/distribution	Likelihood of occurrence
Dunmall's Snake (*Furina dunmalli*) Vulnerable	Dunmall's Snake is found from near the Queensland border throughout the Brigalow Belt South and Nandewar bioregions, and as far south as Ashford in New South Wales. In Queensland, it occurs primarily in the Brigalow Belt region in the south-eastern interior (DCCEEW 2025). The snake is very rare or secretive with limited records existing. All recent records are from the Chinchilla and Morven area in southern Queensland (Chapple et al. 2019). The species has been recorded in a range of habitats includes forests and woodlands on black alluvial cracking clay and clay loams dominated by Brigalow, other wattles (e.g. *A. burowii, A. deanii, A. leiocalyx*), *Callitris* spp. or *Allocasuarina luehmannii;* and *Corymbia citriodora, Eucalyptus crebra, E. melanophloia, Callitris glaucophylla* and Bull Oak open forest and woodland associations on sandstone derived soils (DE 2014b).	**Unlikely to occur**. Study area is on the northern extreme of the species potential occurrence. Nearest records are from Clermont (90 km south-west) and from 1999 (ALA 2025). Action area is sparsely wooded and heavily disturbed. Suitable habitat is not present.
Grey Snake (*Hemiaspis damelii*) Endangered	Not identified in previous assessments for the Action due to recent listing under the EPBC Act. Occurs on floodplains (Ehmann 1992) and is often found in seasonally inundated areas, preferring cracking, flood-prone clay or loam soils and areas with gilgais. The preferred habitat for the species in southern Queensland is woodlands featuring Brigalow, *Casuarina cristata* and *Eucalyptus populnea* (Hobson 2012) on dark, cracking clay soils (Hobson 2012; DCCEEW 2022a). The species is often found in riverine habitats near watercourses, natural levees, gullies and ditches (Ehmann 1992; DCCEEW 2022a).	**Unlikely to occur**. Not observed during surveys for the project or other survey activities in the wider area. The Study area is located on the north-west edge of the species predicted potential range and is considered as 'may occur' only (DCCEEW 2024). The nearest records are three records located 80 km south of the Study area. All three records are from the 'Queensland historical fauna database' one of which is dated from 1870 (the remaining records are undated) (ALA 2024). There are no other records closer than 160 km to the Study area. There are no records at all to the east, north or west of the Study area (ALA 2024). There may be suitable clay floodplain habitat present in the Study area but much of this has been subject to disturbance and there seems little indication the species has ever occurred this far north.
Allan's Lerista (*Lerista allanae*) Endangered	Known only from black soil downs in a very restricted distribution in the Clermont region. Early specimens were found under the surface of black-red soil, under tussocks of grass on farmland (Covacevich et al. 1996b; Brigalow Belt Reptiles Workshop 2010). These specimens were in the following habitats: *Eucalyptus orgadophila* and *E. erythrophloia* open woodlands; *Melaleuca bracteata* closed scrub to low closed forest on gravely hills, ridges and gullies; and scattered *Bauhinia* species on plains (DE 2020).	**Unlikely to occur.** Nearest record is from 1948 and located 37 km southwest of Study area. All other records located further southwest. Project is located outside accepted range of species. Study area has been heavily impacted by past disturbance.
Fitzroy Turtle (*Rheodytes leukops*) Endangered	Fitzroy River and its tributaries. Prefers fast flowing clear water. Shelters amongst roots and submerged timber (Wilson and Swan 2013).	**Unlikely to occur**. Nearest record over 80 km east (ALA 2025). No suitable habitat within or near the Study area.

3.2.2.3 Migratory Fauna

Ten bird species listed as migratory were identified in the PMR, where an additional three migratory species were identified in the Wildnet search results. Of these, three species have been recorded during ecological surveys within the Study area and surrounds: Fork-tailed Swift (*Apus pacificus*), Australian Tern (*Gelochelidon macrotarsa*), and Caspian Tern (*Sterna caspia*).

It is noted the Australian Rufous Fantail (*Rhipidura rufifrons*) has also been recorded in the surrounds. However, this species was recently removed from the migratory category under the EPBC Act and is therefore no longer considered in this assessment.

Four of the species identified in the PMR are also listed as threatened and have been assessed in **Table 3.** The likelihood of occurrence of the remaining migratory species have been addressed in **Table 4**. Five species listed only as migratory are considered as known or potentially occurring within the Action area or immediate surrounds.

Table 4. Likelihood of occurrence of Migratory fauna species within the Action area

Species and status	Habitat/distribution	Likelihood of occurrence
Common Sandpiper (*Actitis hypoleucos*) Migratory	Non-breeding migratory wetland species that occur in Australia in the warmer months. Mostly occurs along coastal areas but may occur further inland. Common Sandpiper prefers narrow and often steep shorelines, often away from other waders. It is most common along mangrove-lined creeks but will also use sewage ponds and dams.	**Unlikely to occur.** Marginal habitat for the species associated with the Study area is restricted to a small man-made wetland adjacent to existing mining infrastructure. No records within 50 km of the Study area (ALA 2025). Species occurrence is largely coastal in Australia.
Fork-tailed Swift (*Apus pacificus*) Migratory	Occurs over much of eastern Australia. Predominantly aerial and occurs over inland areas and occasionally above the foothills in coastal areas with dry and open habitat. The species can also occur over low scrub, heathland, saltmarsh and riparian woodlands and are associated with low pressure systems that favour the occurrence of insect prey (DE 2015c).	**Known to occur.** Recorded flying over Study area during surveys by AECOM (2018). Species occurs widely across Australia in the summer months and may occur over almost any habitat (including highly modified environments).
Pectoral Sandpiper (*Calidris melanotos*) Migratory	Non-breeding migratory wetland species that occur in Australia in the warmer months. They mostly occur along coastal areas but may occur further inland. Pectoral Sandpiper mostly occurs on shallow fresh or saline wetlands, using brackish wetlands when freshwater is not available.	**Unlikely to occur.** Marginal habitat for the species associated with the Study area is restricted to a small man-made wetland adjacent to existing mining infrastructure. No records within 50 km of the Project (ALA 2025). Species occurrence is largely coastal in Australia.
Oriental Cuckoo (*Cuculus optatus*) Migratory	Inhabits a variety of forest types from dense to open woodlands and sometimes gardens. Shows a preference for riparian edge habitat. The species is a regular nonbreeding migrant to coastal northern and eastern Australia (Menkhorst et al. 2017).	**Potential to occur**. There is an eBird database record from 2023 located 6 km west of the Study area. No other records within 60 km of the Study area (ALA 2025). The species generally occurs in more closed habitats closer to the coast. Habitat within the Study area has been heavily modified. There is marginal habitat present within Action area where remnant vegetation occurs. Previously considered 'unlikely to occur' (Ausecology 2024a) based on no records present within 50 km.
Caspian Tern (*Hydroprogne caspia*) Migratory	Caspian Tern occurs mostly in sheltered coastal habitats, such as bays, estuaries, harbours and inlets, usually with sandy or muddy margins. The species uses fresh and saline waterbodies and occur on	**Potential to occur**. The species was observed over a large dam located to the immediate south of the Study area during surveys for the project by AECOM (2018). Marginal habitat at best present within Action area. Even then presence would

Species and status	Habitat/distribution	Likelihood of occurrence
	inland wetlands, especially lakes, and reservoirs and rivers (Marchant & Higgins 1996).	likely be dependent on heavy rains causing more widespread inundation.
Australian Tern (*Gelochelidon macrotarsa*) Migratory	Not previously assessed but identified as present in species lists (Ausecology 2024a; 2025). Prefers shallow wetlands, either fresh or saline, particularly those with mudflats. It occurs on estuaries, river deltas, lakes, swamps and lagoons, including ephemeral waterbodies. It also uses inundated lands such as saltmarsh, saltpans and claypans, and artificial wetlands such as reservoirs, dams, irrigation channels, bores and sewage ponds. In inland areas it may occur well away water, foraging over grassy plains and even gibber (Higgins & Davies 1996).	**Potential to occur**. The species was observed outside the Study area during surveys for the project by AECOM (2018), although exact location uncertain. Species presence inland usually associated with larger waterbodies. Marginal habitat at best present within Action area. Even then presence would likely be dependent on heavy rains causing more widespread inundation.
Yellow Wagtail (*Motacilla flava*) Migratory	The species prefers open moist habitats with short grass and/or muddy areas. May occur on wetland/swamp margins, sewage ponds, sports fields and sometimes beaches. The species is regularly recorded as a summer migrant to coastal northern Australia (Menkhorst et al. 2017).	**Unlikely to occur.** The species range of occurrence in Australia is almost entirely coastal or near coastal.
Osprey (*Pandion haliaetus*) Migratory	In Australia, Osprey may be found around almost the entire coastline and offshore islands. It sometimes occurs far inland on rivers and lakes (Marchant & Higgins 1993; Debus 1998). The species mostly breeds on the coast and islands.	**Unlikely to occur.** No suitable habitat present within or near the Study area.
Glossy Ibis (*Plegadis falcinellus*) Migratory	Glossy Ibis occurs in terrestrial wetlands, preferring inland freshwater wetlands with abundant aquatic flora. (Pringle 1985; Marchant & Higgins 1990). Within Australia, the species moves in response to good rainfalls, expanding its range, however the core breeding areas used are within the Murray-Darling Basin region of New South Wales and Victoria, the Macquarie Marshes in New South Wales, and in southern Queensland. Breeding typically occurs in dense colonies, often with other waterbirds and occurs in response to flood events (Pringle 1985).	**Potential to occur**. Not recorded during surveys for the Project or other surveys in the Study area and surrounds. Single 2001 database record 6 km west of Action area. No other nearby records (ALA 2025). Possible habitat for the species associated with the Action area is restricted to a small man-made wetland adjacent to existing mining infrastructure (refer **Figure 6** in **Section 5.2**). The species occurrence in the area will be occasional at best.

4 POTENTIAL PROJECT IMPACTS AND MITIGATION MEASURES ON FLORA AND FAUNA

4.1 Potential Project Impacts

The Proposed action's potential to directly and/or indirectly impact MNES, including TECs and habitat for threatened flora and fauna, is described in the following subsections.

The Disturbance footprint (where direct impacts are limited to) is 79.06 ha, and occurs within the Action area shown in **Figure 1**. Given the relatively benign nature of the Proposed action's operation phase, the majority of impacts (if not all) are expected to occur during construction, which comprises the following:

- Clearing of woody vegetation for a corridor up to 50 m wide located along the proposed power line's main axis, extending 12.66 km in length in an approximate north-west to south-east direction. Existing ground cover present in the Disturbance footprint will be retained (i.e. there will be no topsoil disturbance and the root mass will remain intact), with the exception of the access track addressed below. Outside of the access track, grass slashing may occur in the corridor where required for safe access during construction
- Clearing of woody vegetation along a series of eight stub lines with corridors up to 30 m wide, located perpendicular to the southern side of the power line's main axis. The stub lines vary in length from 160 m to 1,500 m, with an overall length of 7.78 km (i.e. the total Disturbance footprint length is approximately 20 km). As per the main corridor, ground cover within the stub lines will be retained through slashing only (where necessary), with the exception of the access track addressed below
- Clearing and grubbing of an access track up to 10 m along the main corridor and stub line corridors to provide access for vehicles, plant and project materials. This will remove the ground cover present potentially including the root mass. On completion of construction this will be allowed to regenerate naturally. A permanent formed access track will not be retained for the operation of the power line infrastructure, with only slashing required to maintain the track and ensure safe access
- Excavating and pouring foundations for the power line towers will be located within the 10 m wide access track area. Power line towers are generally located 165 m apart for the majority of the alignment

The operational phase of the Proposed action is anticipated to require little maintenance. Maintenance slashing of ground cover within the main corridor and stub line corridors may be carried out when required and cattle grazing will continue across the Action area.

4.1.1 Vegetation Clearing

The clearing of woody vegetation is a direct impact of the Proposed action on the ecological values within the Disturbance footprint. Land clearance is listed as a key threatening process under the EPBC Act. The removal of habitat affects local populations of flora and fauna dependent on that habitat. These impacts are immediate and may be significant in the short-term for species that may use the impacted area.

The Disturbance footprint encompasses a total of 79.06 ha of which 48.56 ha is identified as modified non-remnant lands with little value to MNES (**Plate 3**). The Proposed action will impact 8.10 ha of woody vegetation in remnant vegetation communities and a further 21.83 ha of immature and low-growing woody regrowth (**Table 5**). Much of this has been impacted by previous clearing to some degree, and some communities (such as RE 11.8.5) provide a very sparse open woodland canopy cover (**Plate 4**). The woody regrowth present within the Disturbance footprint is considered to be of 'non-remnant' status under State vegetation mapping definitions (e.g. Neldner et al. 2023). Regrowth vegetation within the Disturbance footprint provides limited value for MNES. For example, very little of the regrowth Brigalow communities present are of a condition that would be characterised as the Brigalow TEC (as defined in DE 2013a).

Plate 3. Non-remnant lands in south of Action area

Plate 4. *E. orgadophila* open woodland (RE 11.8.5) in north of Action area

The Disturbance footprint has been designed to avoid sensitive ecological values as much as is feasible, and during the design phase it was subject to several revisions in order to avoid identified higher value habitats. Through this process, the impact on Brigalow TEC has been largely avoided (0.04 ha).

Impacts on the Natural Grasslands TEC and habitat for *D. queenslandicum* have been substantially reduced through the elimination of 'clearing and grubbing' works through the majority of the Action area where this community occurs. Instead, the Disturbance footprint has been designed to be limited to a 10 m wide track that will be grubbed and graded for construction (thereby removing root mass of grasses), outside of this area grassland will be slashed. The disturbance associated with footings (minor earthworks and concreting) for the poles will also be located within the 10 m wide access track. Overall, this will disturb 0.57 ha of Natural Grasslands TEC. The access track will not be actively rehabilitated on completion of construction but will be allowed to regenerate naturally with groundcover (grasses), where slashing will be undertaken to maintain safe access.

The Disturbance footprint is therefore up to 50 m wide within REs that contain woody vegetation and reduces to only the 10 m wide access track within grassland REs (i.e., only slashing, rather than clearing and grubbing, will occur outside the access track in grassland).

Post-construction, the Action area will be subject to maintenance slashing (when required) and will remain subject to cattle grazing (as is currently the case).

The predicted extent of overall impact to vegetation communities and their relevance to MNES is provided in **Table 5**. The extent of impact is based on the results of the ground-truthed vegetation mapping and onsite habitat assessments (Ausecology 2024a, 2024b).

Table 5. Ground-truthed RE mapping occurring within Disturbance footprint and impacted by vegetation clearing (Ausecology 2024b)

RE	Description	MNES values	Extent (ha)
Remnant			
11.3.4	*Eucalyptus tereticornis* woodland to open forest on Cainozoic alluvial plains and terraces	Koala Greater Glider Squatter Pigeon	0.01
11.3.25	*Eucalyptus tereticornis* woodland to open forest on fringing levees and banks of major rivers and drainage lines	Koala Squatter Pigeon Greater Glider (partial)	0.34
11.4.4	*Dichanthium* spp. +/- *Astrebla* spp. tussock grassland on flat to gently undulating clay plains	Grassland TEC *D. queenslandicum*	0.20[1]
11.5.3	*Eucalyptus populnea* woodland +/- other eucalypts on flat to gently undulating plains formed from Cainozoic sediments	Koala Squatter Pigeon Greater Glider (partial)	6.83
11.8.5	*Eucalyptus orgadophila* open woodland on undulating plains, rises, low hills or sometimes flat tablelands	Koala Squatter Pigeon	0.92
11.8.11	Grassland dominated by *Dichanthium sericeum*, *Aristida* spp., *Astrebla* spp. and *Panicum decompositum* on moderately shallow to deep cracking clay soils	Grassland TEC (partial) *D. queenslandicum*	0.37[1]
		Total remnant	**8.67**
Regrowth and non-remnant vegetation			
11.4.8	*Eucalyptus cambageana* and *Acacia harpophylla* woodland to open forest on level to gently undulating Cainozoic plains	No values present	1.68
11.4.8/ 11.4.9	See above and below	No values present	10.52
11.4.9	*Acacia harpophylla* woodland to open forest on level to gently undulating Cainozoic plains	Brigalow TEC (partial) Ornamental Snake (partial)	0.82
11.8.5	*Eucalyptus orgadophila* open woodland on undulating plains, rises, low hills or sometimes flat tablelands	Koala Squatter Pigeon	7.10
11.9.2	*Eucalyptus melanophloia* and/or *E. orgadophila* woodland to open woodland on undulating plains with cracking clay or texture contrast soils	Squatter Pigeon Koala	1.71
-	Non-remnant	Squatter Pigeon (partial)	48.56
		Total regrowth and non-remnant	**70.39**
		Total impact area	**79.06**

Notes

[1]Impacts to grassland REs is limited only to the construction access track where grubbing and grading will occur in an area up to 10 m wide

The Disturbance footprint occurs in a predominantly disturbed landscape impacted by cattle grazing activities, and is adjacent to existing mining activities. Nevertheless, substantial remnant vegetation present in the Survey area (outside the Disturbance footprint) and wider area will remain undisturbed and continue to provide habitat for MNES and fauna in general. To provide context to the localised impact associated with the Proposed action, an analysis of Queensland Department of Resources (DoR) vegetation community (RE) mapping was carried out (**Table 6**). The analysis indicates there is over 25,000 ha of remnant vegetation located within a 10 km radius of the Disturbance footprint. These communities are depicted by broad vegetation category in **Figure 5**.

Assessment of the available RE data indicates there is approximately 18,480 ha of remnant/high-value regrowth eucalypt woodland habitat within a 10 km radius of the Disturbance footprint which is potentially suitable for Koala and Squatter Pigeon. Squatter Pigeon may utilise an additional 2,870 ha of acacia woodlands occurring on appropriate sandy/coarse soils. Furthermore, there is an estimated 11,000 ha of potential habitat

available for Greater Glider within 10 km of the Disturbance footprint based on the eucalypts the species is associated with (as detailed in Eyre et al. 2022). The proposed disturbance of remnant vegetation associated with the Proposed action (8.67 ha of remnant vegetation) is a very minor area given the extent of available potential habitat remaining in the wider area.

Table 6. State mapped vegetation communities (REs) within 10 km of Disturbance footprint

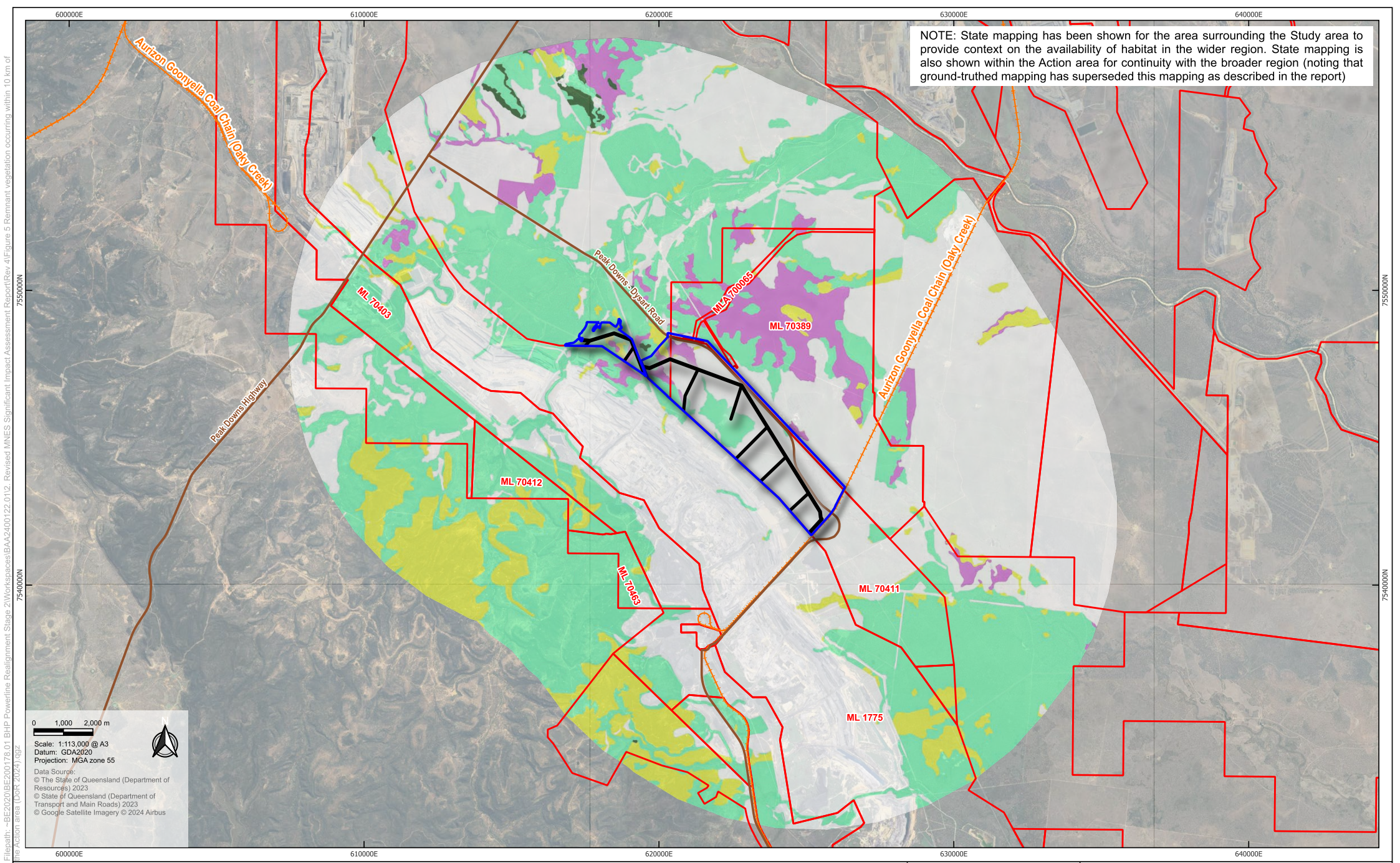
RE	Brief description (Queensland Herbarium 2021)	Broad vegetation category	Extent (ha)
11.3.1	*Acacia harpophylla* open forest on cracking clays on alluvial plains	Acacia forest / woodland	231.45
11.3.2	*Eucalyptus populnea* woodland on alluvial plains	Eucalypt woodland	1,583.34
11.3.21	*Dichanthium sericeum* and/or *Astrebla* spp tussock grassland on cracking clays on alluvial plains and flats	Grassland	79.61
11.3.25	*E. tereticornis* woodland fringing drainage lines	Eucalypt woodland	1,015.08
11.3.27	Freshwater wetlands		7.35
11.3.3	*E. coolabah* woodland on alluvial plains	Eucalypt woodland	247.86
11.3.4	*E. tereticornis* woodland to open forest woodland on alluvial plains	Eucalypt woodland	54.78
11.3.7	*Corymbia clarksoniana, C. tessellaris* and *C. dallachiana* woodland on levees and plains	Eucalypt woodland	190.86
11.4.2	*E. populnea/brownii* mixed woodland on clay plains, often on rises or patches of coarser textured material	Eucalypt woodland	76.25
11.4.4	*D. sericeum* and/or *Astrebla* spp tussock grassland on undulating cracking clay plains	Grassland	92.18
11.4.8	*E. cambageana* and *A. harpophylla* woodland to open forest on level to gently undulating plains	Eucalypt woodland	241.09
11.4.9	*A. harpophylla woodland* to open forest on level to gently undulating clay plains	Acacia forest / woodland	1,223.93
11.5.15	Semi-evergreen vine thicket (SEVT) on remnant Tertiary surfaces	SEVT	1.45
11.5.3	*E. populnea* mixed woodland on flat to gently undulating plains	Eucalypt woodland	7,534.96
11.5.9	*E. crebra* mixed woodland on sandplains formed on plateaus and broad crests of hills and ranges	Eucalypt woodland	2,925.84
11.7.1	*E. thozetiana* on the slopes and scarps of rocky residual ranges	Eucalypt woodland	43.49
11.7.2	*A. shirleyi* and/or *A. catenulata* woodland on scarps and adjacent tops and slopes of dissected tablelands, mesas and buttes	Acacia forest / woodland	27.22
11.8.11	*Dichanthium* spp. and mixed grassland on undulating to gently undulating rises with clay soils	Grassland	671.23
11.8.13	SEVT and microphyll rainforest on gently undulating plains, rises and low hills on Cainozoic igneous rocks	SEVT	133.32
11.8.5	Eucalyptus orgadophila open woodland on undulating plains, rises, low hills or sometimes flat tablelands on stony clay soils	Eucalypt woodland	807.68
11.9.2	*E. melanophloia* and/or *E. orgadophila* woodland to open woodland on rises on undulating plains with cracking clays	Eucalypt woodland	1,998.98
11.9.3	*Dichanthium sericeum* and/or *Astrebla* spp tussock grassland on cracking clays on undulating plains and rises	Grassland	1,420.55
11.9.4	SEVT on undulating plains and rises formed from fine-grained sediments	SEVT	2.29
11.9.5	*Acacia harpophylla* and/or *Casuarina cristata* open forest to woodland on fine-grained sedimentary rocks	Eucalypt woodland	197.65
11.10.1	*Corymbia citriodora* woodland to open forest on hills and ranges	Eucalypt woodland	1,948.01
11.10.3	*A. shirleyi* and/or *A. catenulata* woodland on scarps and adjacent tops and slopes of on crests and ridge tops	Acacia forest / woodland	2,844.91
11.10.7	*E. crebra* mixed woodland on the lower slopes of scarp retreats, associated with dissected tablelands	Eucalypt woodland	54.25
11.10.8	Semi-evergreen vine thicket and microphyll rainforest on medium to coarse-grained sediments	SEVT	29.96
		Total	**25,685.57**

4.1.2 Fragmentation, Connectivity and Edge Effects

Highly fragmented habitats support fewer species than connected blocks of habitat of the same size. This is because fragmentation restricts dispersal of fauna and plant seeds between available habitat. The impacts of habitat fragmentation depend on the degree to which dispersal is inhibited by habitat gaps, the size of the remaining habitat fragments, and ecological attributes of the species.

Much of the landscape associated with the Disturbance footprint has been heavily impacted by previous tree clearing for cattle grazing purposes. A number of extant communities are either grasslands (RE 11.4.4 and 11.8.11) or comprise a very open canopy (RE 11.8.5). Infrastructure for the Proposed action has been situated in areas already cleared of vegetation wherever possible. There will be minor clearing of remnant woody vegetation required. This impact will be linear and up to 50 m in width. Most of the MNES species with potential to be present are mobile species that will not be impacted by the Proposed action. There will be little impact to landscape connectivity and habitat fragmentation as a result of the Proposed action for these species. However, there is potential for Greater Glider to be impacted where the species habitat is intersected by the north-western section of the Disturbance footprint (refer **Table 12** for further detail).

The habitats that remain extant in the Study area are already subject to the potential for edge effects caused by increased exposure to wind and sun (caused by previous tree clearing and thinning practices) as well as substantial weed invasion observed in the ground cover. As noted above, some of the vegetation communities present are already very open in structure, and hence are unlikely to be subject to edge effects as a result of the Proposed action. The Proposed action is proposing to clear a relatively minor extent of wooded habitat in an already disturbed landscape and is considered to have a negligible impact on increasing the impact of edge effects within the local area.



Filepath: -BE2020\BE200178.01 BHP Powerline Realignment Stage 2\Workspaces\BAA2400122.0112. Revised MNES Significant Impact Assessment Report\Rev 4\Figure 5 Remnant vegetation occurring within 10 km of the Action area (DoR 2024).mxd

Legend

- Study area
- Action area
- Mining leases
- State controlled roads
- Railways

Regional ecosystems v13 within 10 km of Project (by broad vegetation category)

- Acacia forest / woodland
- Eucalypt woodland
- Grassland
- Non-remnant
- Semi-evergreen vine thicket

epic A Montrose Environmental Company

BMA BHP Mitsubishi Alliance

BM Alliance Coal Operations Pty Ltd
Peak Downs Power Line Realignment
Revised MNES Significant Impact Assessment Report

Figure 5
Mapped vegetation occurring within 10 km of the Action area (DoR 2025) by broad vegetation category

4.1.3 Fauna Mortality

Clearing of vegetation for the Proposed action presents a risk of direct mortality or injury to fauna. Fauna of low mobility are at risk of injury or death from tree felling and heavy machinery/vehicular movements during the construction of the Proposed action.

The operational phase is unlikely to add to this impact due to the benign nature of the Proposed action's operation phase. There will be occasional vehicle movements associated with maintenance access where required. As such, potential injury or mortality from vehicle movements is considered to be a very low risk during operations.

Tree clearing will only occur within designated areas and only during designated time periods. The extent of habitat providing potential fauna hollows is relatively limited. A suitably qualified fauna spotter-catcher/s will be present during vegetation clearing to eliminate incidences of fauna mortality during tree clearing (refer **Section 4.2**). Educating employees and contractors with regard to fauna and flora will further reduce direct mortality as part of the Proposed action.

4.1.4 Weeds and Pest Animals

Introduced weeds have the potential to impact on terrestrial ecological values as native flora can become displaced through competition with weed species, and adversely affected by browsing and soil trampling caused by feral herbivores. Native fauna populations, particularly small to medium sized species, may be impacted by predation from introduced carnivores, such as feral cats. Wild dog and feral cats were recorded onsite and Red Fox is also likely present. These are indirect impacts which are already present and likely have been exacerbated by existing cattle grazing activities within and near the Disturbance footprint.

The Disturbance footprint (and broader Study area) is often dominated by Buffel Grass in the ground layer throughout and Parthenium was observed to be common. Both are invasive species and Parthenium is listed as a Weed of National Significance.

The following activities associated with the Proposed action have the potential to promote the proliferation of weeds and pests within the Disturbance footprint (and Study area), or introduce new weeds and pests from surrounding areas:

- The use of construction machinery, plant and materials sourced from outside the region and increased vehicular traffic in general may introduce and spread weed seeds if biosecurity hygiene measures are not in place
- Land clearance favours the establishment of weeds due to increased light and soil disturbance
- Inappropriate disposal and storage of putrescible wastes may attract feral animals

Clearing of ground cover within the entire Disturbance footprint will be minimal and restricted to the 10 m wide access track. This will minimise the potential for weeds to establish within the Action area (where they do not already occur), as only slashing will occur outside the Disturbance footprint in grassland REs. The main threat is the introduction of new weeds to the area via contaminated vehicles or soils.

4.1.5 Indirect Impacts

The Proposed action is being constructed to service the adjacent PDM which is currently located approximately 2 km southwest from the Disturbance footprint at its farthest point. PDM is a large mining operation that already likely generates (and mitigates in accordance with the PDM's Environmental Authority obligations) a range of indirect impacts that already occur in the local landscape in which the Proposed action is situated. As stated already, the majority of impacts associated with the Proposed action will be restricted to the construction phase only. The following indirect impacts are addressed for the purpose of providing a complete assessment of the Proposed action.

4.1.5.1 Airborne Dust, and Noise

Earthworks and vehicular traffic associated with construction and operation can generate dust, particularly during dry weather (Field et al. 2010). Dust can have both a physical and chemical impact on plants, either through the smothering of leaves, whereupon the rate of deposition is important, or through chemical

changes to the soil or directly to the plant surface. Dust can form a hard crust on the leaf surface, increasing leaf temperature and increasing susceptibility to drought. Dust can also have adverse impacts on plant photosynthesis, respiration, transpiration and productivity (Farmer 1993; Chaston & Doley 2006). Nevertheless, evidence of potential impacts on entire vegetation communities is scarce. The clearing of ground cover within the entire Disturbance footprint will be minimal and restricted to the 10 m wide access track. This will minimise the extent of exposed soils potentially subject to dust entrainment during dry and windy weather. The proposed access track will be allowed to regenerate naturally on completion of construction. Therefore, the impact of dust settlement from the Proposed action is considered temporary and negligible at worst.

Understanding of the impacts of noise on fauna is limited. There are no current government policies or guidelines that recommend noise thresholds or limits for development activities to mitigate potential harm to fauna. Noise may affect wildlife through a variety of impacts such as: interfering with communication calls; interfering with foraging/defence through cloaking the sound of predators and prey; causing general stress or avoidance reactions; or changes in reproductive or nesting behaviours. Excessive noise may lead some species to avoid noisy areas, which could result in the localised fragmentation of habitat at the species or individual territory level. Radle (2007) states the consensus that terrestrial fauna will avoid any industrial plant or construction area where noise or vibration presents an annoyance to them. Nevertheless, many animals may interpret a new noise as a potential danger at first, but rapidly understand the noise is not associated with any threats (Radle 2007).

Overall, noise impacts from the Proposed action to surrounding habitat will be almost entirely restricted to that emitted during construction activities. Given PDM is located close to the Proposed action and already generates noise impacts, the potential additional impacts from the Proposed action are considered temporary (construction only) and negligible at worst.

No night works are proposed for the Project construction and no lighting will be required as part of operations. There will be no lighting impacts as a result of the Proposed action.

4.1.5.2 Bushfire

The Disturbance footprint is located within largely cleared grazing lands with tracts of sclerophyll woodlands mainly in the west. The woodland areas have potential to be impacted by accidental fires caused by project activities. Fire hazard mapping for Queensland indicates the mapped woodlands within the Study area as having a ‘medium potential bushfire intensity’. Fire is noted as a threatening process on the Brigalow TEC which occurs within the Disturbance footprint (and broader Study area). It is unlikely the Proposed action will further exacerbate bushfire risk.

4.1.5.3 Water Quality

The Proposed action only requires minor excavation works (for power pole footings) and will have no impact on groundwaters. Clearing requiring disturbance of topsoil has also been minimised to the 10 m wide access track. The Proposed action will require clearing along four minor drainage lines including three stream order 1 and one stream order 2 creek lines. Power line poles will be located outside of drainage lines. Only two of these currently retain woody vegetation cover. All of the creeks are considered highly ephemeral in nature and all drain north from PDM itself (i.e. there is very little catchment draining through the Disturbance footprint and any flows would be minor in extent and short-lived).

The Proposed action has potential to impact surface water and associated aquatic ecology values through a variety of processes:

- During construction disturbance, uncontrolled sedimentation of watercourses (particularly during and following heavy rainfall events) can impact aquatic values by smothering stream beds with fine material, and decreasing bed roughness and reducing habitat diversity
- Similarly, uncontrolled sedimentation movements associated with construction disturbance may lead to localised increased turbidity and suspended solids which may negatively impact fish and macroinvertebrates (through reduced respiratory and feeding efficiency), and adversely affect submerged aquatic plants as light penetration (required for photosynthesis) is reduced

- Poorly designed and constructed waterway crossings may create waterway barriers that prevent or impede movements of aquatic fauna
- Waterway crossings may cause bank instability if remediation works are not adequately designed and implemented. This may lead to bank erosion (causing impacts to instream sedimentation and turbidity) and adverse impacts to riparian vegetation

BMA will develop and implement erosion and sediment controls for the Proposed action in line with the existing ESCP implemented at the adjacent PDM.

4.2 Proposed Mitigation Measures

The location of the Proposed action is necessary to allow for proposed expansion of the adjacent PDM. The Disturbance footprint is already within a highly disturbed and fragmented area and lies adjacent to existing mining disturbance including noise and lighting. Therefore, the Proposed action is considered to be located appropriately to minimise potential impacts to MNES.

4.2.1 Mitigation Hierarchy

The applied mitigation hierarchy is a process used to limit the amount of damage a proposed action will have on the environment. There are three steps, and each step must be followed in order and to the greatest extent possible before moving on to the next step. These steps are:

1. Avoid harm to the environment within and surrounding the Action area
2. Reduce or mitigate environmental damage within and surrounding the Action area
3. Identify offsets within the region that compensate for the significant residual impacts to listed species or ecological communities

4.2.1.1 Alignment Optimisation and Avoidance Measures

The avoidance and minimisation of impacts to environmental values and potential MNES habitat have been a major consideration during the planning of the Proposed action. During the design phase, the Disturbance footprint went through a design refinement process which included the relocation and refinement of the power line to avoid or minimise impacts to ground-truthed MNES wherever possible. The original disturbance impact included a corridor up to 60 m wide for both the main lines and the stub lines. The width of the main line has been reduced by 10 m (now 50 m wide) while the width of the stub lines has been reduced by 30 m (now 30 m wide). The main line width is required to remain at 50 m and could not be reduced any further due to safety and design requirements which are managed under BMA's internal procedure policies for a 66 kV power line.

Significant design changes occurred to avoid fragmenting patches of potential habitat through shifting the alignment to the edges of these patches where possible. This includes shifting the alignment to almost completely avoid impacting on the Natural Grassland TEC, and avoid the clearing of mature trees as much as practical to minimise potential impact to Greater Glider and Koala, should the species occur. Further, where necessary clearing could not avoid ground-truthed MNES potential habitat, proposed disturbance has been limited to marginal habitat as much as practicable.

To minimise the proposed vegetation clearing impacts, activities involving grubbing and topsoil removal will be restricted to the construction access track situated within the power line corridor (i.e., located within the above-nominated widths for main lines and stub lines), which will be up to 10 m wide. Topsoil and natural grassland will remain intact within the remaining width of the corridor, with only trees and shrubs required to be removed to reduce the fire hazard and maintain safe operational clearance for the power lines. Regarding the Natural Grassland TEC, this results in a significantly reduced permanent impact, where the original extent to be impacted was 2.55 ha, which through the avoidance and mitigation process has been reduced to 0.57 ha.

Importantly, the 10 m wide construction access track will not be formalised as a gravel access track which would typically result in preventing the vegetation regrowth. Instead, it will be allowed to regenerate naturally with groundcover following completion of construction of the power lines, and will be subject to weed management to support the regeneration of the natural grassland. During the operational life of the power

line, the entire area will be managed through slashing and grazing to keep fuel loads controlled in the corridor and to allow continued maintenance access.

Overall, the refinement of the Disturbance footprint has minimised the direct impact to vegetation communities that have been ground-truthed as potential habitat for MNES.

4.2.2 Mitigation Measures

The Proponent has committed to a range of measures to minimise impacts to MNES and general ecological values associated with the Disturbance footprint. The Proposed action will work under a project-specific MNES Management Plan (MMP), as well as BMA operational management plans and procedures, including bushfire management, weed and feral animal management, and erosion and sediment control.

Mitigation measures have been developed for the Proposed action so as to meet the SMART principles:

- Specific
- Measurable
- Achievable
- Relevant
- Time bound

The major impact of the Proposed action is considered to be associated with vegetation clearing and habitat removal. A range of mitigation strategies appropriate to the level of risk (as assessed in the MMP) will be implemented for the Proposed action (refer **Table 7**). All reference to TECs and MNES species habitat refer to the mapped areas provided in this report.

Table 7. Proposed mitigation measures for general impacts resulting from Proposed action

Impact	Key mitigation measures/controls	Performance target	Timing/frequency	Monitoring timing	Example corrective actions (where required)
Vegetation clearing	Employees and contractors will be made aware of environmental obligations and compliance requirements during pre-start meetings, including identified MNES.	No unauthorised clearing of vegetation including identified TECs and MNES species habitat	Prior to starting works, for the life of the Proposed action.	On-going monitoring by Site Supervisor.	In the event of unauthorised clearing, an incident investigation will be conducted and protocols reviewed to identify and describe any potential environmental harm and evaluate actions that led to the incident occurring. Through the evaluation process corrective actions will be identified as well as improvement opportunities. Specific corrective actions will be dependent on the nature of an incident. Examples include: • Review and modify boundary demarcation methods • In the event of unauthorised clearing, consider if an offset is required • Awareness training refreshers
	Vegetation clearing extents will be clearly demarcated and no clearing to occur outside the delineated boundaries.		During all clearing activities for the life of the Proposed action.	Inspections to occur at setup of demarcation and then as required during progression of clearing works.	
	Disturbance to groundcover and topsoil will be clearly demarcated and restricted entirely to the designated 10 m wide access track. All other areas will only be subject to woody vegetation removal and slashing.		Prior to and during all clearing activities for the life of the Proposed action.		
Fauna mortality	Fauna spotter-catcher to direct on-ground personnel where a threatened species is encountered within an area proposed for clearing (e.g. Koala), or within a hollow-bearing tree.	No fauna mortality during vegetation clearing or vehicle movements.	Prior to and during clearing activities.	Prior to commencement of clearing activities, and periodically during clearing activities.	Not applicable
	Fauna spotter-catchers (licensed) will conduct pre-clearance survey prior to vegetation clearing activities and will be present during vegetation clearing.		Preclearance surveys carried out within one week prior to clearing.	Prior to and during clearing.	Stop work procedure where no preclearance survey found to have taken place.
	During clearing, relocation of fauna habitat features (e.g., hollow logs/limbs, coarse woody debris) to		Ongoing – during tree clearing.	Daily by site personnel.	Training refresher for construction team.

Impact	Key mitigation measures/controls	Performance target	Timing/frequency	Monitoring timing	Example corrective actions (where required)
	undisturbed suitable habitat will occur where possible.				
	Procedures will be in place where injured fauna are encountered during clearing works, in accordance with Fauna spotter-catcher responsibilities.		During all clearing activities.	Fauna spotter-catcher to provide reporting (fauna recorded) during tree clearing in accordance with relevant permits	Review and modify resources allocated to fauna spotter-catcher activities.
	Speed reduction measures (e.g., 30 km/hr) will be established to limit the potential for vehicle collisions with wildlife on relevant roads.		For the life of the Project.	No specific monitoring, site personnel encouraged to report unsafe practices	Awareness training refresher. Review where high risk areas are for speed reduction and make changes to locations of implementation. Increased signage.
Weeds and pests	The existing BMA Weed and Feral Animal Management procedure will be implemented to manage invasive species. Measures will be in line with current best management practices associated with PDM.	No incursion of a novel weed species. No proliferation of existing weed species.	For the life of the Project.	As per BMA Weed and Feral Animal Management procedure.	As per BMA Weed and Feral Animal Management procedure.
	Vehicle wash-downs will be required for all new vehicles (including earthmoving and other construction machinery) entering the Disturbance footprint, in accordance with BMA Weed and Feral Animal Management procedure.		Ongoing during construction	Assessment of vehicle prior to initial entry to site	Additional washdown to be completed and inspection of vehicle / machinery. Awareness training refresher on weed and pest inspection.
	Disturbed areas (i.e. 10 m wide access track) that are no longer required will be allowed to naturally regenerate and will be subject to ongoing weed management and maintenance activities.		Post-construction.	Inspection of Grassland TEC areas on a bi-monthly basis (i.e. every two months) for weed invasion until groundcover established	Targeted weed management to occur where weed incursion observed.
Bushfire	The existing BMA Site Bushfire Management Plan will be implemented for the Proposed action.	No uncontrolled bushfires resulting from the Proposed action.	Implemented prior to and during construction activities.	As per BMA Site Bushfire Management Plan	Not applicable

Impact	Key mitigation measures/controls	Performance target	Timing/frequency	Monitoring timing	Example corrective actions (where required)
	Monitoring of weather conditions leading to increased bushfire hazard will occur during construction activities. Delayed works considered where high risk fire conditions identified.		Ongoing during construction.	Daily check by site environmental representative prior to works	Not applicable
	Work sites will include designated smoking areas.		Ongoing during construction	No specific monitoring, site personnel encouraged to report unsafe practices	Awareness training refresher for construction team of designated location.
Surface water	Erosion and sediment controls for the Disturbance footprint will be implemented in line with PDM's Erosion and Sediment Control Plan (ESCP).	No unauthorised impacts to terrestrial or aquatic habitat.	Implemented prior to and during construction activities.	As per PDM ESCP.	As per PDM ESCP.
	Applicable materials/chemicals for the Proposed action will be stored within storage/bunded sites in the PDM mine infrastructure area.		For the life of the Project.	No specific monitoring, site personnel encouraged to report unsafe practices.	Awareness training refresher for construction team.
	Washdowns and refuelling will be carried out within designated areas, away from watercourses.		For the life of the Project.	No specific monitoring, site personnel encouraged to report unsafe practices.	Awareness training refresher for construction team.
	Wherever possible works within a watercourse will be conducted in the following order of preference: • Conducting works when no water is present • Conducting works in times of no flow		During construction activities proximal to or crossing watercourses.	Inspection of watercourse conditions prior to works.	Where unsuitable conditions identified, complete evaluation and consider delay of works in watercourse.

5 ASSESSMENT FOR SIGNIFICANT IMPACTS ON MNES

Based on desktop and field survey observations a number of MNES were considered when assessing the Proposed action's impacts. This comprised two TECs, eight species listed as threatened (where two of these are also listed migratory) and an additional five species listed as migratory under the EPBC Act. These are as follows:

- Threatened Ecological Communities:
  - Known to occur:
    - Brigalow TEC – Endangered
    - Natural grasslands TEC – Endangered
- Threatened species:
  - Known to occur:
    - Squatter Pigeon (southern) – Vulnerable
    - Koala – Endangered
    - Greater Glider – Endangered
  - Likely occurs:
    - Ornamental Snake – Vulnerable
  - Possibly occurs:
    - Australian Painted Snipe – Endangered
    - Sharp-tailed Sandpiper – Vulnerable, Migratory
    - White-throated Needletail – Vulnerable, Migratory
    - *Dichanthium queenslandicum* – Endangered
- Migratory species:
  - Known to occur:
    - Fork-tailed Swift
  - Possibly occurs:
    - Glossy Ibis
    - Caspian Tern
    - Australian Tern
    - Oriental Cuckoo

The extent of ground-truthed habitat for MNES values identified within the Disturbance footprint are provided in **Table 8**. The habitat condition characteristics used to describe the habitat present within the Study area is detailed in Ausecology (2024a) and summarised under the relevant species detailed in **Section 5.3**.

Table 8. Extent of ground-truthed habitat for MNES within the Disturbance footprint (Ausecology 2024a)

MNES values	Associated Habitat Type / Category	Proposed action impact extent (ha)[1]
TECs		
Natural Grassland TEC	N/A	0.57
Threatened species habitat		
D. queenslandicum	N/A	0.57
Squatter Pigeon	Preferred & suitable	19.84
	Marginal	2.94
Koala	Preferred & suitable	7.18
	Marginal	10.4
Greater Glider	Preferred & suitable	6.42
	Marginal	0.8
Ornamental Snake	Marginal	0.19

[1] It is noted that the impact extents overlap for many of these MNES, and the areas are not intended for a cumulative total calculation

The severity of impacts to marginal habitat for conservation significant species are considered low due to the limited value and role these areas play in supporting these species. Therefore, the significance of impacts from the Proposed action to preferred and suitable habitat values only have been assessed for relevant species within **Section 5.3**.

The assessments have been carried out in accordance with the *MNES significant impact guidelines 1.1* (MNES Guidelines) (DE 2013b).

5.1 Significant Impact Assessment – Criteria Definitions

With regard to species listed as vulnerable, an assessment may require an evaluation of the likely importance of the population of vulnerable fauna species associated with the Disturbance footprint and immediate surrounds. Under four of the nine assessment criteria identified within the MNES Guidelines, vulnerable species are considered as subject to significant impacts when an 'important population' is impacted.

An 'important population' for vulnerable species as defined within the MNES Guidelines is as follows:

- 'An important population is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:
  - Key source populations either for breeding or dispersal
  - Populations that are necessary for maintaining genetic diversity and/or
  - Populations that are near the limit of the species range

Given the specificity of the above definition and the often scarce ecological information and occurrence records available for many threatened species and populations in Australia, it is difficult to determine either of:

- Attributes such as breeding and dispersal behaviour and whether the population is a 'key source' or
- The genetic diversity of individuals inhabiting a regional population or sub-population

A single assessment criterion (for vulnerable, endangered and critically endangered species) refers to impacts on 'habitat critical to the survival of a species or ecological community' (critical habitat) which is defined under the MNES guidelines as areas that are necessary:

- For activities such as foraging, breeding, roosting, or dispersal
- For long-term maintenance of the species or ecological community
- To maintain genetic diversity and long-term evolutionary development and/or
- For the reintroduction of populations or recovery of the species or ecological community

Such habitats may be, but are not limited to:

- Habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community

Many species do not have approved recovery plans and 'habitat critical to the survival of a species' is generally not identified in available literature. For species that have a wide distribution/occurrence, habitat considered as that necessary for 'foraging, breeding, roosting or dispersal' is a broad definition that is not necessarily analogous with the definition of critical at a species level. Given the relative lack of information that is often available, significance of impacts to threatened species has been based on the professional expertise of the assessment personnel and the latest available information relating to species habitat and ecological requirements and distribution.

5.2 MNES Not Subject to Detailed Significant Impact Assessment

While the following MNES are considered to have at least some potential to occur, the proposed impacts are not considered to be of a scale that warrants an assessment using the MNES Guidelines significant impact criteria, as any impacts are considered to be negligible in nature. These MNES are briefly discussed in the following sections.

5.2.1 Brigalow TEC

The Proposed action is located in a highly disturbed landscape impacted by cattle grazing activity and Brigalow has been subject to substantial impact from past clearing as a result. The Disturbance footprint (and broader Study area) also suffers from infestation of invasive weeds including Buffel Grass (*Cenchrus ciliaris*), *Harrisia martinii* and *Parthenium hysterophorus* (Ausecology 2024a). The Disturbance footprint has been substantially revised during the design process and has minimised impact on occurrences of Brigalow TEC where possible. The Proposed action will impact approximately 380 m^2 of Brigalow TEC (0.04 ha) located along 60 m of the edge of a much larger patch (29.10 ha) (**Figure 6**). The patch comprises Brigalow regrowth with varying infestations of weedy ground cover (Ausecology 2024a). The clearing of woody vegetation within the easement will be maintained over the life of the Proposed action, although groundcover (such as grasses) will be allowed to regenerate.

Ground cover will be retained throughout the Disturbance footprint except for the temporary ground cover removal along a 10 m wide access track. This disturbance will be allowed to naturally regenerate following completion of construction. The clearing within the small area of the TEC will not cause fragmentation of a larger patch. The Proposed action does not require landform earthworks that may influence abiotic factors (such as groundwater levels or changes to surface water flows). Other potential threats to the TEC such as the impact of fire and weed invasion are considered a low to negligible risk and will be managed under BMA's MMP or company-wide bushfire management plan. The main impact from the Proposed action will be during construction and is therefore considered temporary in nature. The proposed clearing is very minor in extent and there is no reason to believe the Proposed action would have a significant impact on Brigalow TEC, and it is not referred to further in this assessment.

5.2.2 Ornamental Snake

The Disturbance footprint and broader Study area are mapped as occurring within the known/likely distribution of the Ornamental Snake (DCCEEW 2025). The species was not recorded within the Study area during surveys for the Proposed action. However, individuals were recorded by Ausecology approximately 3 km southeast of the Study area (**Figure 4**). The Proposed action will directly impact 0.19 ha of marginal habitat for the species as per the habitat definitions of Kerswell et al. (2020) (Ausecology 2024a). Marginal habitat is described as "*areas currently or previously dominated by brigalow or coolibah communities where gilgais or soil cracks are infrequent or are shallow or non-remnant areas where threats are high (high abundance of weed incursion and cattle compacting soils) but the species still have potential to occur*." No preferred or suitable habitat was observed within the Disturbance footprint (**Figure 7**).

There are no identified important populations or definitions of habitat critical to the survival of Ornamental Snake. The *Draft referral guidelines for the nationally listed Brigalow Belt reptiles* (Referral guidelines) (DCCEEW 2023b) considers the presence of important habitat for this species a surrogate for an important population. The Referral guidelines describe important habitat as 'gilgai depressions and mounds'. The Disturbance footprint only intersects habitat mapped as marginal for the species. As such, important habitat is not considered to occur.

The Referral guidelines note that clearing of two or more hectares of important habitat may comprise a high risk of a significant impact on the species. Clearing one hectare or less is considered a low risk of significant impact on the species. The Proposed action is proposing to clear 0.19 ha of marginal habitat for Ornamental Snake. Other known threats to the species include feral Pigs (Sus scrofa) and Cane Toad (*Rhinella marina*) ingestion (DE 2014). Both species have been recorded regularly in the Study area and surrounds during surveys for the Proposed action from 2021 to 2024 (Ausecology 2024a). The Proposed action will not feasibly increase the abundance of either species in the area. A significant impact is considered very unlikely to occur and the species is not referred to further hereafter.

5.2.3 Glossy Ibis, Australian Painted Snipe, Caspian Tern, Australian Tern and Sharp-tailed Sandpiper

Glossy Ibis, Australian Painted Snipe, Caspian Tern, Australian Tern and Sharp-tailed Sandpiper are all considered a possible occurrence as associated with the Disturbance footprint. Caspian Tern and Australian Tern have been recorded to the south in association with a large dam, but habitat within the Study area itself appears minor with suitable habitat becoming temporarily available only after significant rainfall events.

Potential wetland habitat for these species is generally limited within the Study area to a single artificial and ephemeral wetland area located adjacent to mining infrastructure (**Figure 6**). This area is relatively small and would be considered only as occasional foraging habitat for the wader species. Suitable habitat features for Australian Painted Snipe breeding will not be present (Ausecology 2024a). Other potential ephemeral wetlands comprising gilgais are not intersected by the Disturbance footprint.

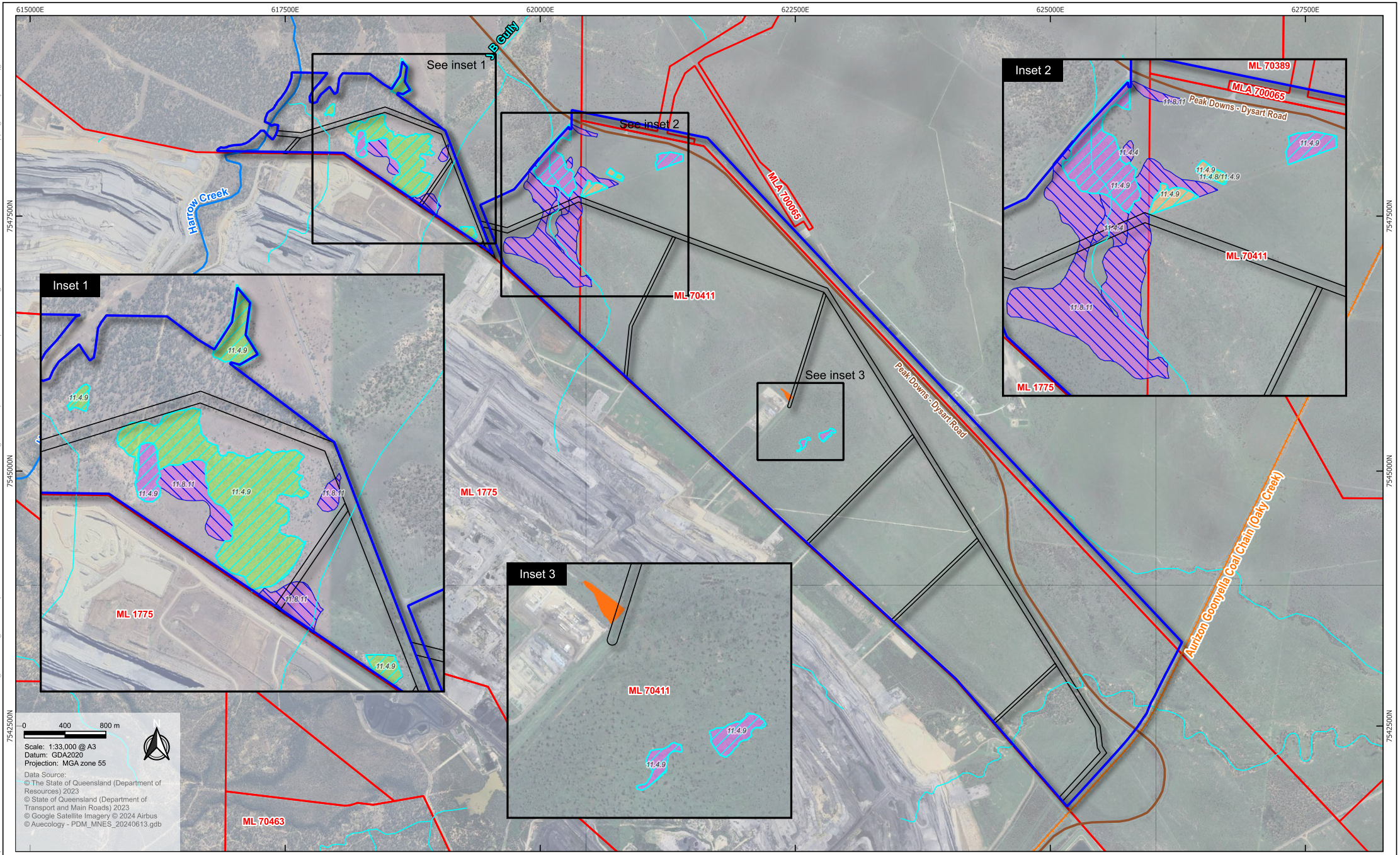
It is noted the mapped wetland area has been reduced from that presented previously (refer Appendix A-10 in Ausecology 2024a) which encompassed a much broader area including lands that are very unlikely to be subject to inundation (including the adjacent industrial yard).

The waterbody is located within 30 m of existing industrial disturbance (explosives yard). A single 30 m wide stub line intersects the edge of the wetland area. No power line footings are located within the wetland area. Clearing for the 10 m wide access track will be located outside (east of) the waterbody. While there may be a temporary disturbance to wetland bird species (should any be present), following construction of the power line there will be no more disturbance on the wetland area from the Proposed action. There is no other suitable habitat located within the Study area. There are no other potential threats.

A significant impact is not considered possible for any of these species, and therefore, they are not addressed further in this assessment.

5.2.4 Aerial Foraging Bird Species

Fork-tailed Swift and White-throated Needletail are almost entirely aerial in their foraging and resting habits when in Australia (i.e. they are rarely recorded roosting). They may be found over a variety of habitats, including open areas, modified lands and the ocean but are most often observed over wooded areas (Higgins 1999). The airspace above the Disturbance footprint will only comprise ephemeral foraging habitat. The Proposed action requires negligible clearing of woody vegetation and there is abundant woodland habitat in the wider area surrounding the Disturbance footprint. The Proposed action will have negligible (if any) impact on the availability of potential foraging habitat for this species.



Filepath: ~BE2020\BE200178.01 BHP Powerline Realignment Stage 2\Workspaces\BAA2400122.012_Revised MNES Significant Impact Assessment Report\Rev 4\Figure 6 Ground-truthed TEC and wetland mapping – Study area.qgz

Legend

- Study area
- Action area
- Mining leases
- Wetland
- Railways
- State controlled roads

Vegetation management watercourses and drainage features v7.0

- Major
- Minor

Ground-truthed regional ecosystems

- Remnant
- High-value regrowth
- Regrowth

Ground-truthed threatened ecological communities

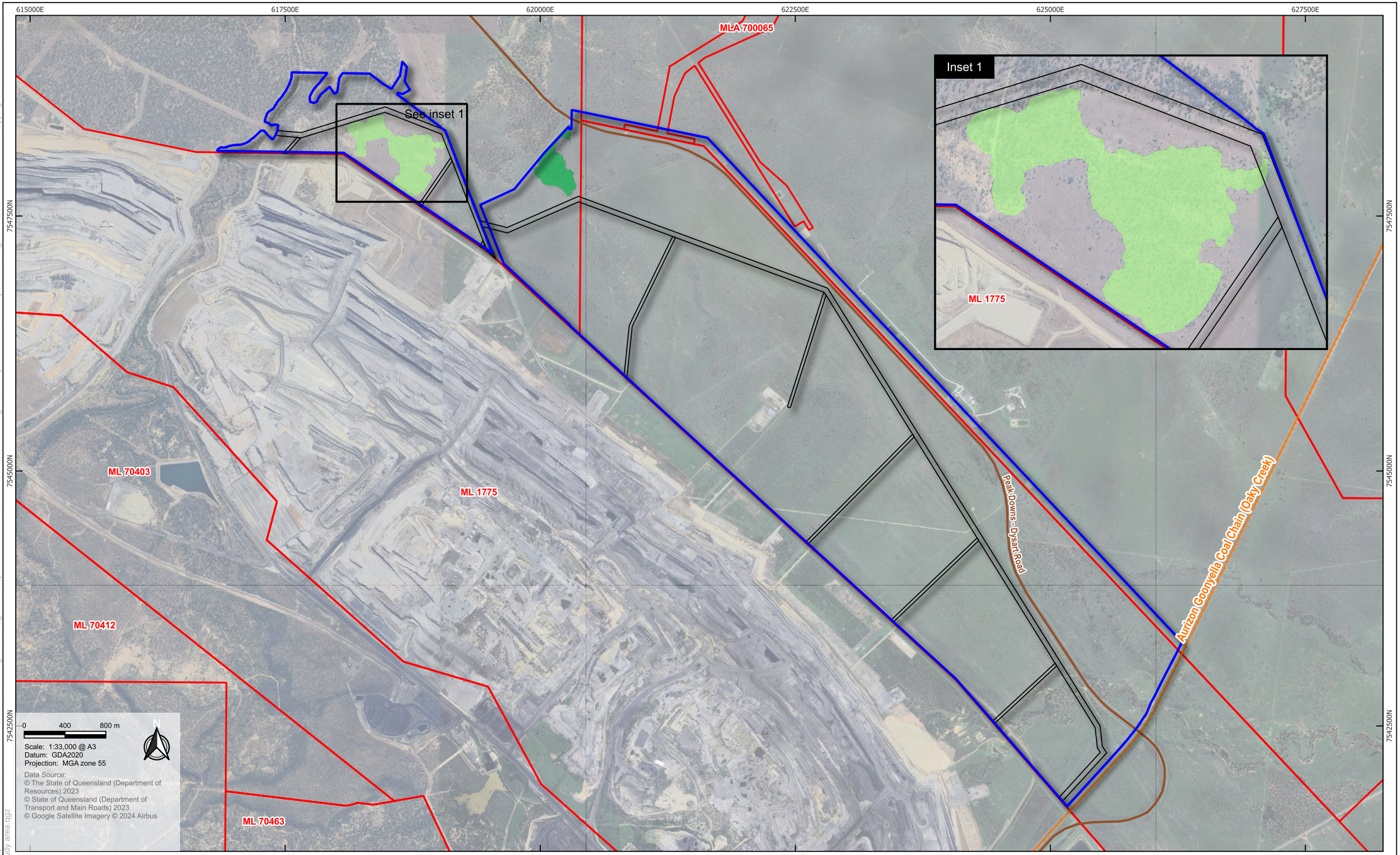
- Brigalow TEC
- Natural Grasslands TEC

epic A Montrose Environmental Company

BMA BHP Mitsubishi Alliance

BM Alliance Coal Operations Pty Ltd
Peak Downs Power Line Realignment
Revised MNES Significant Impact Assessment Report

Figure 6
Ground-truthed TEC and wetland mapping – Study area



Filepath: -BE2020\BE200178.01 BHP Powerline Realignment Stage 2\Workspaces\BAA2400122.0112. Revised MNES Significant Impact Assessment Report\Rev 4\Figure 7 Ground-truthed habitat mapping for Ornamental Snake - Study area.qgz

Legend

- Study area
- Action area
- Mining leases
- State controlled roads
- Railways

Ornamental Snake habitat

- Preferred
- Marginal

epic A Montrose Environmental Company

BMA BHP Mitsubishi Alliance

BM Alliance Coal Operations Pty Ltd
Peak Downs Power Line Realignment
Revised MNES Significant Impact Assessment Report

Figure 7
Ground-truthed habitat mapping for Ornamental Snake – Study area

5.3 Significant Impact Assessment

5.3.1 Natural Grasslands of the Queensland Central Highlands and northern Fitzroy Basin TEC - Endangered

The Natural Grassland TEC occurs as three separate patches comprising RE 11.8.11 and 11.4.4 which are intersected by the western portion of the Disturbance footprint. Onsite classification of the native grassland habitat considered these patches to be of 'best quality' or 'good quality' (Ausecology 2024a) under the condition classes described in the Approved conservation advice for the Natural Grassland TEC (TSSC 2009).

There is 57.46 ha of Natural Grassland TEC located within the overall Study area. The Disturbance footprint has been refined to minimise impacts and as a result proposes a temporary impact to an overall maximum area of 0.57 ha of the TEC spread across the four RE patches (**Figure 6**). The disturbance impact will be restricted to a 10 m wide access track subject to clearing and grubbing and used for locating the power line poles. The cleared track will be allowed to regenerate naturally on the completion of construction of the Proposed action, and will be subject to ongoing weed management in line with activities at PDM. The remainder of the Disturbance footprint will be subject to slashing only (where necessary) which will not remove the grass species currently present.

Apart from vegetation clearing other known threats to the TEC include livestock grazing and associated pasture improvement, weeds and pest animals (TSSC 2009). The Disturbance footprint and broader Study area are subject to cattle grazing currently and this will continue on completion of construction works. Buffel Grass (*Cenchrus ciliaris*) is present and abundant, often dominating the ground layer through large portions of the Study area (Ausecology 2024a). The intrusion of Buffel Grass in areas of the TEC subject to clearing and grubbing (access track only) and where Buffel Grass is not already present will be subject to monitoring and management as part of the MMP for the Proposed action.

Table 9 provides an assessment of the potential for significant impacts on the Natural Grassland TEC based on the Disturbance footprint using the assessment criteria for endangered ecological communities outlined in the MNES Guidelines.

Table 9. Significant impact criteria assessment: Natural Grassland TEC

Criteria	Endangered ecological communities assessment
Reduce the extent of an ecological community	The Natural Grassland TEC is known to occur within the Disturbance footprint. The Disturbance footprint will result in temporary clearing of 0.57 ha of Natural Grassland TEC. The clearing will occur as a narrow linear (up to 10 m wide) disturbance for Proposed action access purposes. The remainder of the Disturbance footprint may be subject to slashing only (where necessary) allowing the grass species present to remain in place. Following completion of construction, the access track will be allowed to regenerate naturally. Clearing for the Proposed action is minor in overall extent and the impact is considered temporary. As such, in the longer term (i.e. following construction) the Proposed action will not reduce the extent of an ecological community.
Fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines	The Disturbance footprint will result in temporary clearing of 0.57 ha of the Natural Grassland TEC. The clearing will occur as a narrow linear (up to 10 m wide) disturbance for access purposes. The remainder of the Disturbance footprint may be subject to slashing only (where necessary) allowing the grass species present to remain in place. Following completion of construction, the access track will be allowed to regenerate naturally. Although some fragmentation may occur, the impact from the Proposed action is considered minor and temporary. As such, in the longer term (i.e. following construction) the Proposed action is not considered to result in increased fragmentation of Natural Grassland TEC.
Adversely affect habitat critical to the survival of an ecological community	There is no definition of habitat critical to the survival of the Natural Grassland TEC. As such, it is uncertain if the Proposed action would adversely affect habitat critical to the survival of the Natural Grassland TEC. Proposed clearing within the TEC is minor in overall extent and the impact is considered temporary. Cleared areas will be allowed to naturally regenerate following construction.

Criteria	Endangered ecological communities assessment
	The Proposed action is considered unlikely to adversely affect habitat critical to the survival of Natural Grassland TEC.
Modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns	The impact from the Proposed action is relatively benign, being largely associated with limited tree clearing and more restricted clearing of the ground layer. The Proposed action will not impact groundwater levels or surface water flows. Areas subject to clearing for the access track will be allowed to regenerate following construction. There is no reason to believe the Proposed action will modify or destroy abiotic factors necessary for the survival of the Natural Grassland TEC.
Cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting	The Disturbance footprint will result in temporary clearing of 0.57 ha of Natural Grassland TEC. This impact occurs as a narrow linear (up to 10 m wide) disturbance for access purposes. The remainder of the Disturbance footprint may be subject to slashing only (where necessary) allowing the grass species present to remain in place. Following completion of construction, the access track will be allowed to regenerate naturally. The majority of the Disturbance footprint is located within areas that have been cleared of vegetation and with a heavy cover of the introduced Buffel Grass. The Proposed action does not require activities such as regular burning or timber harvesting. The Proposed action will not cause a substantial change in the species composition of the Natural Grassland TEC
Cause a substantial reduction in the quality or integrity of an occurrence of an ecological community including but not limited to: • Assisting invasive species, that are harmful to the listed ecological community, to become established, or • Causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community	The *Threat abatement plan for the biological effects, including lethal toxic ingestion, caused by cane toads* (DSEWPC 2011) is considered relevant to this community. Cane Toads are likely to be common in the Study area and were observed on most surveys carried out by Ausecology from 2021 – 2024. Weed and pest management measures will be developed and implemented for the construction and operation phases of the Proposed action to avoid or minimise the introduction or spread of weeds and pests. The Proposed action is located within a landscape subject to cattle grazing impact and invasion by Buffel Grass and Parthenium. No herbicides will be used which may be deleterious to an occurrence of the Natural Grassland TEC. The Proposed action is considered unlikely to cause a substantial reduction in the quality or integrity of an occurrence of Natural Grassland TEC.
Interfere with the recovery of an ecological community	There is no adopted recovery plan for the Natural Grassland TEC. The Proposed action will result in a temporary impact to 0.57 ha of the TEC. There is 54.76 ha of the TEC within the surrounding Study area which has been strategically avoided to minimise impacts on the TEC. This impact occurs as a narrow linear (10 m wide) disturbance for access and power line maintenance purposes. The remainder of the Disturbance footprint may be subject to slashing only (where necessary) allowing the grass species present to remain in place. Following completion of construction, the access track will be allowed to regenerate naturally. There is no reason to believe the minor extent of temporary clearing required will interfere with the recovery of Natural Grassland TEC.
Assessment result	**Based on the MNES criteria assessment above it is considered a significant residual impact to the Natural Grassland TEC is unlikely to occur as a result of the Proposed action.**

5.3.2 Dichanthium queenslandicum – Endangered

5.3.2.1 Ecology

King blue-grass is a perennial grass species that occurs in association with other blue grass species (*Dichanthium* and *Bothriochloa* species) on black cracking clay soils. It is generally confined to native blue grass grassland communities on black clays (derived from basalt) on undulating plains. Associated species include: *Aristida leptopoda*, *Bothriochloa erianthoides*, *Dichanthium sericeum*, *Digitaria brownii*, *Digitaria divaricatissima*, *Ipomoea lonchophylla*, *Iseilema vaginiflorum*, *Panicum decompositum*, *Panicum queenslandicum* and *Paspalidium globoideum* (TSSC 2013; DETSI 2025).

The species occurs in three widely separated regions including the Dalby area in southern Queensland, the Central Highlands from Glenden south to Rolleston and west to Clermont, and isolated records north of Hughenden and Charters Towers. The Central Highlands region is the main stronghold for the species (TSSC 2013; ALA 2025).

5.3.2.2 Association with the Study Area

The species was not recorded during surveys for the Proposed action despite targeted searches. There is a 2022 record located 2.5 km east of the eastern extent of the Disturbance footprint. There is also a 2012 record located 10 km north and a 2011 record located 12 km north-west of the western extent of the Disturbance footprint (ALA 2025).

Although potential habitat is identified as occurring within the Disturbance footprint it was observed that much of the area has been severely impacted by cattle grazing. Introduced species are also common including Buffel Grass and Parthenium (Ausecology 2024a). As such, the species is only considered as *potentially* present in the Disturbance footprint and broader Study area (rather than likely to occur) within occurrences of the Natural Grasslands TEC where the ground cover retains native grass species.

5.3.2.3 DCCEEW Approved Species Documents

There is no approved recovery plan or threat abatement plan adopted for the species under the EPBC Act.

The *Approved conservation advice for Dichanthium queenslandicum (King blue-grass)* (DSEWPC 2013) identifies the following threats to the species:

- Clearing of habitat for agriculture, mining, road infrastructure and other development
- Cropping impact
- Livestock grazing impact (the species does not tolerate continual heavy stocking rates)
- Weed invasion by species including Parthenium, Buffel Grass and Zinnia (*Zinnia peruviana*) threatens the species habitat values (Butler 2007)

There is no definition of critical habitat for the species in the available literature. There is 57.46 ha of potential habitat (i.e. Natural Grassland TEC) located within the overall Study area. Buffel Grass dominates the ground layer through extensive portions of the Study area (Ausecology 2024a) and Parthenium is present. Cattle grazing occurs throughout (Ausecology 2024a). These are all considered threats to the species. Critical habitat is considered unlikely to be present. Both are considered threats to the species. The Disturbance footprint proposes a temporary impact to a maximum area of 0.57 ha of suitable habitat for *Dichanthium queenslandicum* (i.e. Natural Grassland TEC) (**Figure 6**).

The disturbance impact will be restricted to a 10 m wide access track subject to clearing and grubbing and used for locating the power line poles. The cleared track will be allowed to regenerate naturally on the completion of construction of the Proposed action. The remainder of the Disturbance footprint will be subject to slashing only (where necessary) which will not remove the grass species currently present. It is noted the Study area is subject to cattle grazing currently and this will continue on completion of construction works.

5.3.2.4 Significant Impact Assessment

Table 10 provides an assessment of the potential for significant impacts on *Dichanthium queenslandicum* from the Proposed action using the assessment criteria for Endangered species outlined in the MNES Guidelines.

Table 10. Significant impact criteria assessment: *Dichanthium queenslandicum*

Criteria	Endangered species assessment
Lead to a long-term decrease in the size of a population of the species	The species was not recorded within the Study area despite targeted surveys. Nevertheless, there are recent records of the species located nearby to the Study area. Most areas of potential habitat within the Study area were observed to be heavily impacted by cattle and weed invasion and were considered unsuitable for the species occurrence. Potential habitat for the species was identified within areas identified as Natural Grassland TEC. The Disturbance footprint will result in temporary clearing of 0.57 ha of potential habitat for the species. The clearing will occur as a narrow linear (10 m wide) disturbance for access purposes. The remainder of the Disturbance footprint may be subject to slashing only (where necessary) allowing the grass species currently present to remain in place. Following completion of construction, the access track will be allowed to regenerate naturally. Clearing for the Proposed action is minor in overall extent and the impact is considered temporary. As such, the Proposed action is highly unlikely to reduce the size of a population of *Dichanthium queenslandicum* (should a population actually occur within the Disturbance footprint).
Reduce the area of occupancy a population	The species has not been recorded within the Study area despite targeted survey effort, but may potentially occur within areas identified as Natural Grassland TEC. The Disturbance footprint will result in temporary clearing of 0.57 ha of potential habitat for the species. The clearing will occur as a narrow linear (10 m wide) disturbance for access purposes. The remainder of the Disturbance footprint may be subject to slashing only (where necessary) and will not remove existing groundcover. Following completion of construction, the access track will be allowed to regenerate naturally. A population has not been identified, the clearing extent for the Proposed action is minor, and disturbed areas that are no longer required will be allowed to regenerate following construction. The Proposed action is considered highly unlikely to reduce the area of occupancy of a population of *Dichanthium queenslandicum* (should a population actually occur within the Disturbance footprint).
Fragment an existing population into two or more populations	Proposed clearing impact for the Proposed action is linear and narrow (10 m wide). Following completion of construction, the access track will be allowed to regenerate naturally and slashed as part of ongoing management measures. The Proposed action does not require elements that will represent a barrier to the species ability to disperse across the local landscape. The Proposed action will not fragment an existing population of *Dichanthium queenslandicum* (should a population actually occur within the Disturbance footprint).
Adversely affect habitat critical to the survival of the species	There is no definition of habitat critical to the survival of this species. The species has not been recorded in the Study area but is associated with Natural Grassland TEC which does occur within the Disturbance footprint and broader Study area. Clearing within the TEC is minor in overall extent and the impact is considered temporary. Disturbed areas that are no longer required will be allowed to naturally regenerate following construction. The Proposed action is considered unlikely to adversely affect habitat critical to the survival of *Dichanthium queenslandicum*.
Disrupt the breeding cycle of a population	The species has been recorded flowering throughout the year (QH 2012). It is not known if the species actually occurs in the Disturbance footprint or wider Study area. Proposed clearing impact for the Proposed action is linear and narrow (10 m wide). The Proposed action does not require elements that will represent a barrier to the species ability to disperse across the local landscape.

Criteria	Endangered species assessment
	It is considered highly unlikely the Proposed action will disrupt the breeding cycle of a population of *Dichanthium queenslandicum* (should a population actually occur within the Disturbance footprint).
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	The Proposed action impact is relatively benign being largely associated with restricted and temporary impact on the ground layer. There will be no impact to habitat factors such as surface water flows and other potential general impacts on flora species (such as dust settlement) will be temporary and considered minor at worst. Proposed clearing impact for the Proposed action is linear and narrow (10 m wide). Following completion of construction, the access track will be allowed to regenerate naturally. It is unlikely the Proposed action will modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent the species is likely to decline.
Result in invasive species that are harmful to an endangered species becoming established in the endangered species habitat	Buffel Grass and Parthenium are both considered a threat to the species and were commonly recorded in the Study area during surveys for the Proposed action. Buffel Grass was reported as often dominating the ground layer throughout the Study area (Ausecology 2024a). During the construction and operational phases of the Proposed action, the existing BMA Weed and Feral Animal Management procedure will be implemented to manage invasive species. The Proposed action is highly unlikely to result in the introduction of a novel invasive species, or proliferation of an existing invasive species in the species' habitat.
Introduce disease that may cause the species to decline	There are no identified introduced diseases or pathogens associated with this species. The Proposed action does not require the importation of soils or other biological matters into the Study area. Machinery imported from outside the region for earthworks, transportation and other construction activities will be managed in accordance with the existing BMA Weed and Feral Animal Management procedure to reduce the risk of introducing pathogens. It is highly unlikely the Proposed action will result in the introduction of a disease causing the species to decline.
Interfere with the recovery of the species	There is no recovery plan for this species. The Approved conservation advice for the species (DSEWPC 2013) identifies the following priority actions as relevant to the species and the Study area: • Identify high conservation value populations and monitor known populations including the effectiveness of applied management actions • Develop and implement a regional weed management plan for the control of Parthenium and Parkinsonia (*Parkinsonia aculeata*) • Develop a stock management plan for road easements and stock routes • Raise awareness of the species including engagement, improving land management and arranging conservation agreements with relevant landowners The Proposed action is considered highly unlikely to interfere with the actions identified above. The Proposed action will not substantially interfere with the recovery of the species.
Assessment result	**Based on the assessment above it is considered highly unlikely a significant residual impact to *Dichanthium queenslandicum* will occur as a result of the Proposed action.**

5.3.3 Koala – Endangered

5.3.3.1 Ecology

Koalas have a distinct association with eucalypt woodland and forest habitats comprising suitable food trees, mainly of the following genus: *Eucalyptus*, *Corymbia*, *Angophora* and *Melaleuca* (Moore & Foley, 2000; Martin et al. 2008). They are not necessarily restricted to bushland areas and are known to occur and breed where suitable tree species occur within farmland and the urban environment (Dique et al. 2004). Similarly, movement is not confined to vegetated corridors, as they also move across cleared rural land and through

suburbs (Martin et al. 2008). They may use a variety of trees, including many non-eucalypts, for feeding, shelter and breeding purposes (Dique et al. 2004; Martin et al. 2008).

They are known to have localised and variable preferences throughout their range, favouring some tree species over others (Pahl & Hume 1990). At the local level they are known to prefer individual trees. It has been suggested this could be a response to a number of factors such as high leaf moisture and/or nitrogen content, and low levels of toxic chemical compounds which are expressed by eucalypts as a result of herbivory (Pahl & Hume 1990; Hume & Esson 1993; Moore & Foley 2000).

Breeding occurs in spring / summer when males become territorial. Young permanently leave the pouch after seven months but may continue to ride on the mothers back until approximately 12 months. After this time adolescent females may remain in the natal habitat. Males generally disperse to new territories from one to three years of age (Dique et al. 2003; Martin et al. 2008).

5.3.3.2 Association with the Study Area

At least one Koala individual and signs of presence (scats or tree scratches) have been recorded close (approximately 100 m) to the Study area. Additional individuals have been recorded in the surrounding wider area associated with PDM during the surveys by Ausecology (from 2019 to 2024) and other consultants, mainly to the south of the Study area (**Figure 4**). With regard to the Disturbance footprint, an individual and signs of presence were recorded in close proximity in the wooded area in the west in Queensland Blue Gum open forest (RE 11.3.4) and Poplar Box dominated woodland (RE 11.5.3).

Queensland Blue Gum and Poplar Box are considered 'locally important' trees for Koala in the Brigalow Belt (Youngentob et al. 2021) and are present in the Disturbance footprint.

Habitat mapping for the Proposed action has been provided (**Figure 8**) as per the habitat definitions described in Kerswell et al. (2020). The habitat categories encompass the habitat use requirements for Koala as outlined in the *National recovery plan for the Koala* Phascolarctos cinereus *combined populations of Queensland, New South Wales and the Australian Capital Territory* (the Koala Recovery Plan) (DAWE 2022a) with regard to foraging, shelter and dispersal habitat. The mapping for the Study area indicates the Proposed action will intersect up to 17.57 ha of Koala habitat comprising the following habitat areas:

- 6.73 ha of preferred habitat comprising eucalypt woodlands with possible connection to groundwater and frequent palatable food trees (RE 11.3.25, 11.3.4 and 11.5.3) possibly considered as critical habitat for Koala). This habitat provides breeding, foraging, shelter and dispersal opportunities for Koala. The likely higher moisture and nutrient content of eucalypt leaves, due to the habitat's proximity to waterways or occurrence within riparian zones, may further enhance its suitability for raising young, as well provide leafy/shady vegetation for quality shelter sites and use as a dispersal corridor.
- 0.45 ha of suitable habitat comprising other eucalypt woodlands connected to preferred habitat and at least one palatable food tree present (11.5.3). This habitat also provides breeding, foraging, shelter and dispersal opportunities for Koala, mainly due to its proximity to better quality preferred habitat.
- 10.4 ha of marginal habitat comprising fragmented and sparse woodlands with some food trees and subject to water stress and/or periodic high intensity fires (remnant and non-remnant sparse *E. orgadophila* woodland - RE 11.8.5). These areas are often sparsely wooded and are more likely to be used for dispersal purposes with trees used as temporary shelter/forage sites during transit between suitable and preferred habitat areas (rather than as preferred sites).

As the severity of impacts to marginal habitat for Koala are considered low due to the limited value and role these areas play in supporting these species, the assessment of significant impacts is undertaken only for preferred and suitable habitat values. The significant impact assessment (**Section 5.3.3.5**) assesses impacts associated with the Proposed action for 6.73 ha of preferred habitat and 0.45 ha of suitable habitat.

5.3.3.3 DCCEEW Approved Species Documents

The Koala Recovery Plan (DAWE 2022a) was approved on 8th April 2022. The Koala Recovery plan notes the following threats to the species:

- Habitat loss, fragmentation and modification including the impact of native forestry activities
- Drought, extreme heat events including associated with climate change
- Altered fire regimes
- Mortality from dog attack and vehicle collisions
- Diseases including Chlamydia and Koala retrovirus
- Plant pathogens impacting Koala habitat such as Myrtle Rust

The *Conservation Advice for Phascolarctos cinereus (Koala) combined populations of Queensland, New South Wales and the Australian Capital Territory* (DAWE 2022b) notes (with relevance to Queensland) the priority management actions associated with the south-east Queensland population and that sub-populations on the western edge of the species range may be 'climate-sensitive' and comprise genes adapted to environmental extremes which may prove critical to populations elsewhere in the future through translocation programs.

The Koala Recovery plan does not specifically identify any areas comprising 'valued populations' of Koala but does note an imperative to conserve populations:

- That may act as source populations to adjacent areas
- Occur in areas of climatic refugia (specifically from droughts and heat waves)
- Genetically diverse
- Contain adaptive genes to potential environmental stressors or
- Are geographical or environmental outliers

Koalas and signs of presence have been observed close to the Study area in recent years. The woodlands associated with the area comprise widespread communities much of which is disturbed and located within a heavily cleared landscape. Based on the habitat mapping definitions used by BMA (Kerswell et al. 2020) portions of the Disturbance footprint may impact habitats with access to groundwater which may potentially act as 'climate refuge' habitat for Koala.

Similarly, the Koala Recovery plan does not provide a clear description of 'habitat critical to the survival' of Koala but does note that evaluation of the following may be required:

- Is the habitat used during periods of stress (fire, floods or drought)
- Is the habitat used for breeding, foraging, social behaviour or dispersal
- Is an important population present
- Does the habitat support genetic diversity
- Is the habitat used as a corridor
- Is the habitat necessary to maintain the long-term future of Koala

The Koala Recovery plan also notes that in order to halt the decline and promote recovery of the species the following activities should be avoided:

- Clearing of habitat used by Koalas for feeding and resting
- Reducing connectivity between patches used by Koala
- Clearing habitat used during extreme events
- Avoiding activities that will expose Koalas to additional threats

5.3.3.4 Habitat and Connectivity Appraisal

The overall Study area is largely disturbed by past vegetation clearing or thinning for cattle grazing. The vast majority of the Disturbance footprint intersects dispersal habitat (native grassland, cleared habitat or low regrowth). The Proposed action will not erect structures that will provide an impermeable barrier to movement across the landscape. Evidently the species occurs in the local region (based on records close to the Disturbance footprint) and uses the habitat for foraging and possibly breeding. The Disturbance footprint for the most part avoids impacting preferred Queensland Blue Gum dominated habitat (0.35 ha) but does impact

6.72 ha of preferred foraging habitat that may be considered as a refuge during drought or extreme heat events (habitats likely connected to groundwater). Given the species is known to occur, the preferred foraging habitat identified within the Disturbance footprint may be broadly interpreted as habitat critical to the survival of the species.

Known threats to the species are already present in the area. The Peak Downs Mine Road is located within 1 km of the alignment and other mine roads intersect the western portion of the Study area. These may already present vehicle collision risk to Koalas in the area. Predation by wild dogs is a known threat to the species and were detected throughout the Study area during surveys (Ausecology 2024a). With mitigation measures in place (i.e. vehicle speed controls, pest and weed measures, preclearance surveys, the use of fauna spotter catchers during clearing) the Proposed action will not increase additional threats to the species in the area.

The Disturbance footprint impacts an overall area of 79.06 ha. Of this, 17.57 ha is considered as habitat for Koala comprising 7.18 ha of preferred/suitable habitat and 10.4 ha of marginal habitat used for dispersal purposes. Impacts to dispersal habitat are considered relatively minor due to the sparse nature of these woodlands and are not considered further in the impact assessment on the species. Clearing of woody vegetation elsewhere in the Disturbance footprint will only occur where there is shrubby regrowth present. Following construction the access track will be allowed to regenerate naturally with only intermittent slashing occurring required to maintain safe access. There will be no fencing and therefore no post-construction impact to Koala dispersal across the landscape as a result of the Proposed action.

The Proposed action will impact up to 7.18 ha of potential habitat for Koala through vegetation clearing. A preliminary analysis based on existing Queensland vegetation (RE) mapping indicates there is approximately 18,480 ha of potential eucalypt dominated habitat (as defined above) occurring within a 10 km radius of the Disturbance footprint. As such, the Proposed action proposes to impact only 0.09% of potential available habitat within the wider area.

5.3.3.5 Significant Impact Assessment

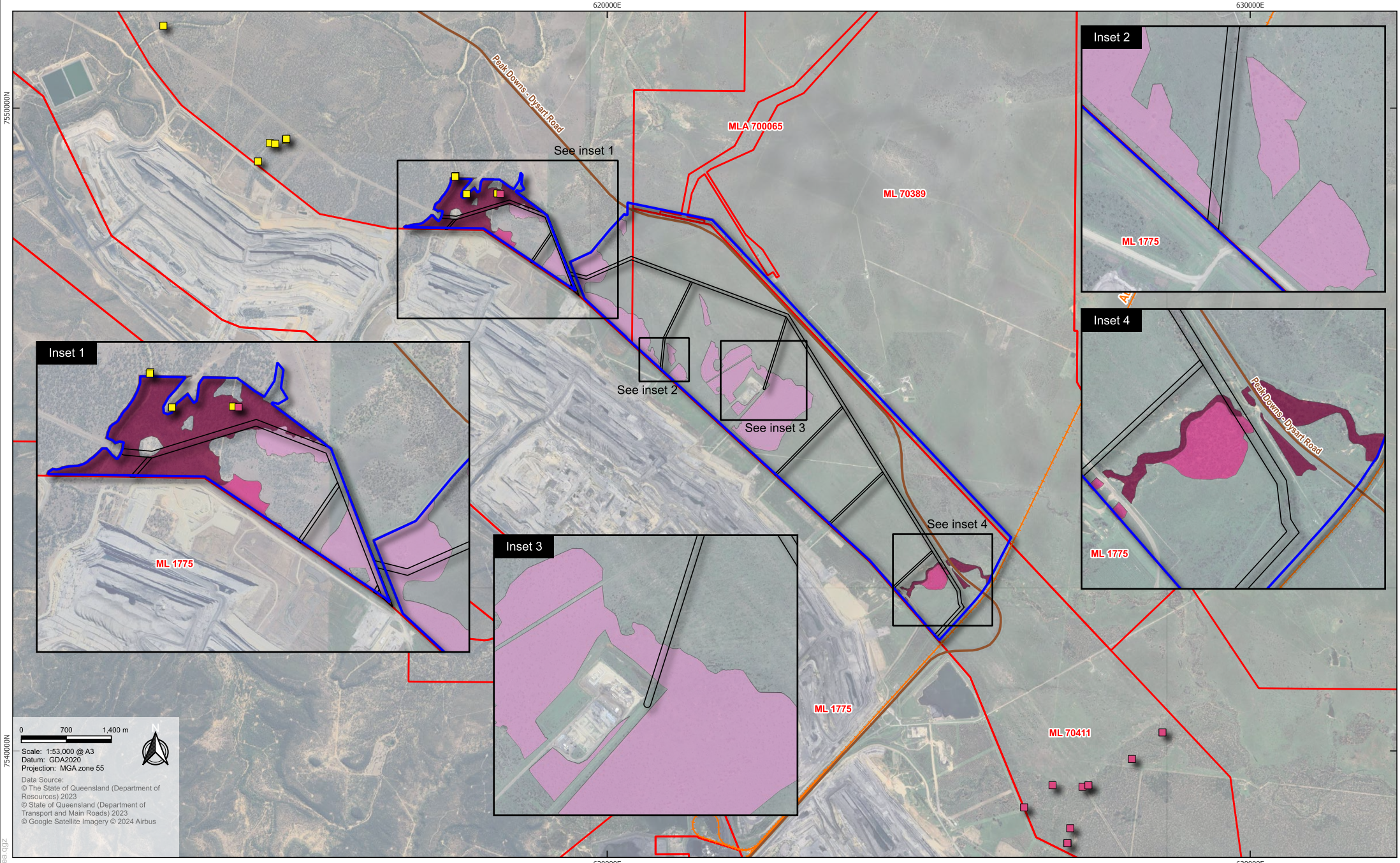
Table 11 provides an assessment of the potential for significant impacts on Koala from the Proposed action using the assessment criteria for Endangered species outlined in the MNES Guidelines.

Table 11. Significant impact criteria assessment: Koala

Criteria	Endangered species assessment
Lead to a long-term decrease in the size of a population of the species	Koala individuals and signs of presence were recorded in close vicinity to the western portion of the Study area (and Disturbance footprint). The species (or evidence of presence) was also identified as occurring in the wider area (within 4 km) to the northwest and southeast of the Study area. Preferred forage tree species in inland Queensland includes habitat supporting Queensland Blue Gum. Clearing of such habitat has been minimised through refinements of the Disturbance footprint to 0.35 ha. The Proposed action will impact 6.83 ha of habitat largely comprising Poplar Box as the dominant canopy species. Both are considered locally important Koala trees in the Brigalow Belt Bioregion (Youngentob et al. 2021). There is abundant eucalypt-dominated habitat in the surrounding area that will remain undisturbed. The majority of the Disturbance footprint that will be impacted comprises grassland habitat sometimes with scattered regrowth Brigalow (which is not a suitable forage or shelter tree for Koala). With site specific measures in place (such as pre-clearance inspections and vehicle speed limits) mortality events are considered highly unlikely. A fauna spotter will be present during vegetation clearing within suitable habitat for Koala to eliminate any potential impact on Koala individuals (should any be present at the time). Indirect impacts to Koala habitat from the Proposed action (such as noise, lighting and dust settlement) will be temporary (during construction only) and have a very minor impact at worst. The Proposed action is considered highly unlikely to lead to a long-term decrease in the size of a population of Koala.

Criteria	Endangered species assessment
Reduce the area of occupancy a population	The species is known to occur in the local area near to the Disturbance footprint. For the most part the Disturbance footprint is devoid of eucalypt vegetation which may support the species. The Proposed action proposes to clear 7.18 ha of potential habitat for Koala. This area is spread across scattered patches largely in the western extent of the Disturbance footprint. There is abundant similar habitat located adjacent to the Disturbance footprint and in the surrounding area which will remain undisturbed. The majority of the Disturbance footprint comprises dispersal habitat for Koala. The Proposed action will not impact Koala dispersal across the landscape, or dispersal habitat once construction has been completed. The Proposed action is considered highly unlikely to reduce the area of occupancy of a population of Koala.
Fragment an existing population into two or more populations	Koalas are a mobile species known to traverse long distances (up to 20 km) during dispersal movements (DCCEEW 2022b). Clearing for the Proposed action is linear and does not require elements that will represent a barrier to the species movement across the Disturbance footprint and surrounds. The Proposed action will not fragment an existing population of Koala.
Adversely affect habitat critical to the survival of the species	Under the broad descriptions provided in the Koala Recovery plan habitat critical to the survival of the species is present. The Disturbance footprint is currently proposing to impact 6.72 ha of preferred habitat which may be interpreted as a refuge during drought conditions (i.e. vegetation with access to groundwater). There is approximately 18,800 ha of eucalypt dominated habitat mapped as occurring within 10 km of the Disturbance footprint. Nevertheless, given critical habitat is considered as occurring there is potential for the Proposed action to adversely affect habitat critical to the survival of Koala.
Disrupt the breeding cycle of a population	The Proposed action will impact habitat in which Koala may occur. Pre-clearing inspections by a suitably qualified Fauna Spotter Catcher will be carried out to identify presence of Koala and where required, the Spotter Catcher will monitor individuals within the Disturbance footprint during clearing activities. Measures will be in place where Koalas are identified within or adjacent to the Disturbance footprint. This will include suspending clearing where individuals are found within designated clearing areas. Clearing will recommence only when the individual has been allowed to vacate the area of its own volition. It is considered unlikely the Proposed action will disrupt the breeding cycle of a population of Koala.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	The Proposed action will impact 7.18 ha of potential habitat for Koala. There is abundant potential habitat located in the wider area which will remain undisturbed. Impacts largely occur in unsuitable grasslands and regrowth acacia vegetation. The Proposed action will not impact the availability or quality of habitat to the extent that the species is likely to decline.
Result in invasive species that are harmful to an endangered species becoming established in the endangered species habitat	Weed invasion is not considered a threat to the species. Feral dogs are considered a threat to the species and were recorded in the local area during surveys for the Proposed action (Ausecology 2024a). During the construction and operational phases, the existing BMA Weed and Feral Animal Management procedure will be implemented to manage invasive species. The Proposed action is highly unlikely to result in the introduction of a novel invasive species, or proliferation of an existing invasive species in the Disturbance footprint or surrounds.
Introduce disease that may cause the species to decline	Myrtle rust may impact a range of eucalypt species and may be a potential threat to habitat for Koala (DAWE 2022a). The Proposed action does not require the importation of soils or other biological matters into the Disturbance footprint. Machinery imported from outside the region for earthworks, transportation and other construction activities will be managed in accordance with the existing BMA Weed and Feral Animal Management procedure to reduce the risk on introducing pathogens. It is highly unlikely the Proposed action will result in the introduction of a disease causing the species to decline.

Criteria	Endangered species assessment
Interfere with the recovery of the species	The Koala Recovery plan outlines a number of recovery strategies and actions for the species including the following: • Identify nationally important populations and strategic areas for restoration, climate/fire refugia and movement corridors • Coordinate research programs including implementing a national monitoring program • Increase the area of protected Koala habitat through incorporation into State protected areas and on private lands and improve land management practises • Ensure koala conservation is integrated into policy, and statutory and land-use plans • Develop and implement strategic restoration of habitat including through natural resource management and land care groups and develop revegetation and restoration guidelines • Develop a strategy of active management practices Koala metapopulations including monitoring population health, fire management, and guidelines for managing Koala translocations and post-care release of individuals (DAWE 2022a) The majority of the Disturbance footprint and broader Study area has been heavily impacted by previous grazing practices. There is abundant habitat present in the surrounding area which will remain undisturbed. With mitigation measures in place during construction works the proposed impact is minor in extent and is considered unlikely to interfere with the management actions identified above or the recovery of the species.
Assessment result	**Based on the assessment above it is considered there is *potential* for a significant impact to Koala to occur as a result of the Proposed action through impact on habitat considered critical to the survival of the species.**



Legend

- Study area
- Action area
- Mining leases
- State controlled roads
- Railways

Survey records

- Koala (Ausecology 2021-2022)
- Koala – scat or scratches (Ausecology 2019)

Koala habitat

- Preferred
- Suitable
- Marginal

epic A Montrose Environmental Company

BMA BHP Mitsubishi Alliance

BM Alliance Coal Operations Pty Ltd
Peak Downs Power Line Realignment
Revised MNES Significant Impact Assessment Report

Figure 8
Ground-truthed habitat for Koala – study area

5.3.4 Greater Glider – Endangered

5.3.4.1 Ecology

The Greater Glider is typically found in mature eucalypt forests and woodlands with a variety of eucalypt species and a high density of large tree hollows (van der Ree et al. 2004). Large hollows in old trees are preferred as daytime shelter sites (Goldingay 2012). Sites with a high abundance of suitable hollows appear to support higher populations. Eyre (2006) reported a single individual required three living hollow-bearing trees per hectare to be present in an area. Suitable trees with large hollows used for den sites were found to be largely trees with a diameter of 50 cm or greater (Smith et al. 2007). Its diet is largely composed of eucalypt leaves and occasionally flowers. Greater Glider utilises small home ranges of between 1 ha and 4 ha recorded in more productive forests (Gibbons & Lindenmayer 2002). In more open and dry habitats it has been recorded using home ranges up to 16 ha in size (Smith et al. 2007).

Females breed at two years of age and may produce a single young each year from March to June (Woinarski et al. 2014). Recent genetic evidence indicates the species may comprise three separate species (McGregor et al. 2020). This is not accepted by other scientists, although it is recognised the species taxonomy is complex (with up to five subspecies present across its range) and requires further revision (Baker and Gynther 2023). The central and southern subspecies occurs patchily across much of eastern Australia and is generally associated with the Great Dividing Range and habitat to the east towards the coast. Occurs from central Victoria north to approximately Ayr. The southern range of the central Greater Glider is uncertain but may be around the Queensland – New South Wales border (McGregor et al. 2020).

5.3.4.2 Association with the Study Area

Greater Gliders were recorded within the wooded northern section of the Study area during spotlighting surveys carried out in 2019 (**Figure 4**). The species was recorded in eucalypt open forest (RE 11.3.4) adjacent to the powerline footprint and in riparian habitat (RE 11.3.25) 300 m to the north. The species has also been recorded further to the northwest and southeast but not elsewhere within the Study area (despite targeted surveys). The nearest database record is from 2024 and located 11 km north in vegetation along the Isaac River (**Figure 3**). There is a 2022 record located 15 km to the northeast (ALA 2025). To the south there are three WildNet records from 2001 located 25 km – 27 km from the Disturbance footprint.

The dominant eucalypt species present in the communities in which the species was recorded includes Queensland Blue Gum (*Eucalyptus tereticornis*), Silver-leaved Ironbark (*E. melanophloia*), *Angophora floribunda,* and Carbeen (*Corymbia tessellaris*). The remainder of the woodland habitat present surrounding these communities (RE 11.5.3) is dominated by Poplar Box (*E. populnea*) with Carbeen and *C. dallachiana.* Of these Greater Glider is known to be associated with Queensland Blue Gum and Carbeen based on a detailed analysis of species observations across a number of studies. The Greater Glider is not generally associated with the other tree species present (refer Table 8 in Eyre et al. 2022).

Habitat potential for Greater Glider within the Disturbance footprint has been categorised as per Kerswell et al. (2020) and Ausecology (2025) as follows:

- 6.04 ha of preferred habitat – connected eucalypt woodlands with one or more food trees and more than two hollow bearing trees per hectare with hollows medium-large in size (>10 cm entrance) and within 1 km of a creek line (RE 11.3.25, 11.3.4 and 11.5.3)
- 0.38 ha of suitable habitat – other eucalypt woodlands connected to preferred habitat with at least one food tree present but not more than two hollow bearing trees per hectare with hollows medium-large in size (RE 11.5.3)
- 0.8 ha of marginal habitat – compliant RE listed under Eyre et al. (2022), trees with 30 cm or greater diameter present but no confirmed records from surveys carried out for the Action

Habitat mapping for Greater Glider is provided in **Figure 9**. The mapping has been updated based on revised mapping for the wider area provided in Ausecology (2025). Preferred and suitable habitat for the species is restricted to the western portion of the Disturbance footprint where the species was recorded. Marginal habitat occurs adjacent to a drainage line in the southeast of the Study area which is disconnected from other habitat and where the species has not been recorded during surveys. The remainder of the Disturbance

footprint is dominated by grasslands, unsuitable woody regrowth, isolated small patches, or other unsuitable habitats such as Brigalow communities or very sparse woodlands (such as RE 11.8.5). The Proposed action will directly impact 6.04 ha of preferred habitat and 0.38 ha of suitable habitat.

The severity of impacts to marginal habitat for Greater Glider are considered low due to the limited value and role these areas play in supporting these species, hence, the assessment of significant impacts is undertaken only for preferred and suitable habitat values. The significant impact assessment (**Section 5.3.4.6**) assesses impacts associated with the Proposed action for 6.04 ha of preferred habitat and 0.38 ha of suitable habitat.

5.3.4.3 Characterisation of Denning Habitat

The PD RFI requested an estimate of tree hollow density associated with the Disturbance footprint with regard to characterising denning habitat as per the following:

- Likely/current denning habitat – areas containing appropriate trees with a diameter at breast height (DBH) greater than the relevant RE threshold for large trees in Eyre et al. (2022)
- Potential/future denning habitat - all areas containing appropriate trees with a diameter at breast height greater than 30 cm but less than the relevant RE threshold for large trees.

An assessment was carried out within areas mapped as 'preferred habitat' associated with the Disturbance footprint and nearby surrounds. This has been based on data collected from targeted assessments of Greater Glider habitat and BioCondition data collected by Ausecology during surveys for the Proposed action.

The targeted habitat assessments involved collection of habitat data within ~1 ha plots including the following:

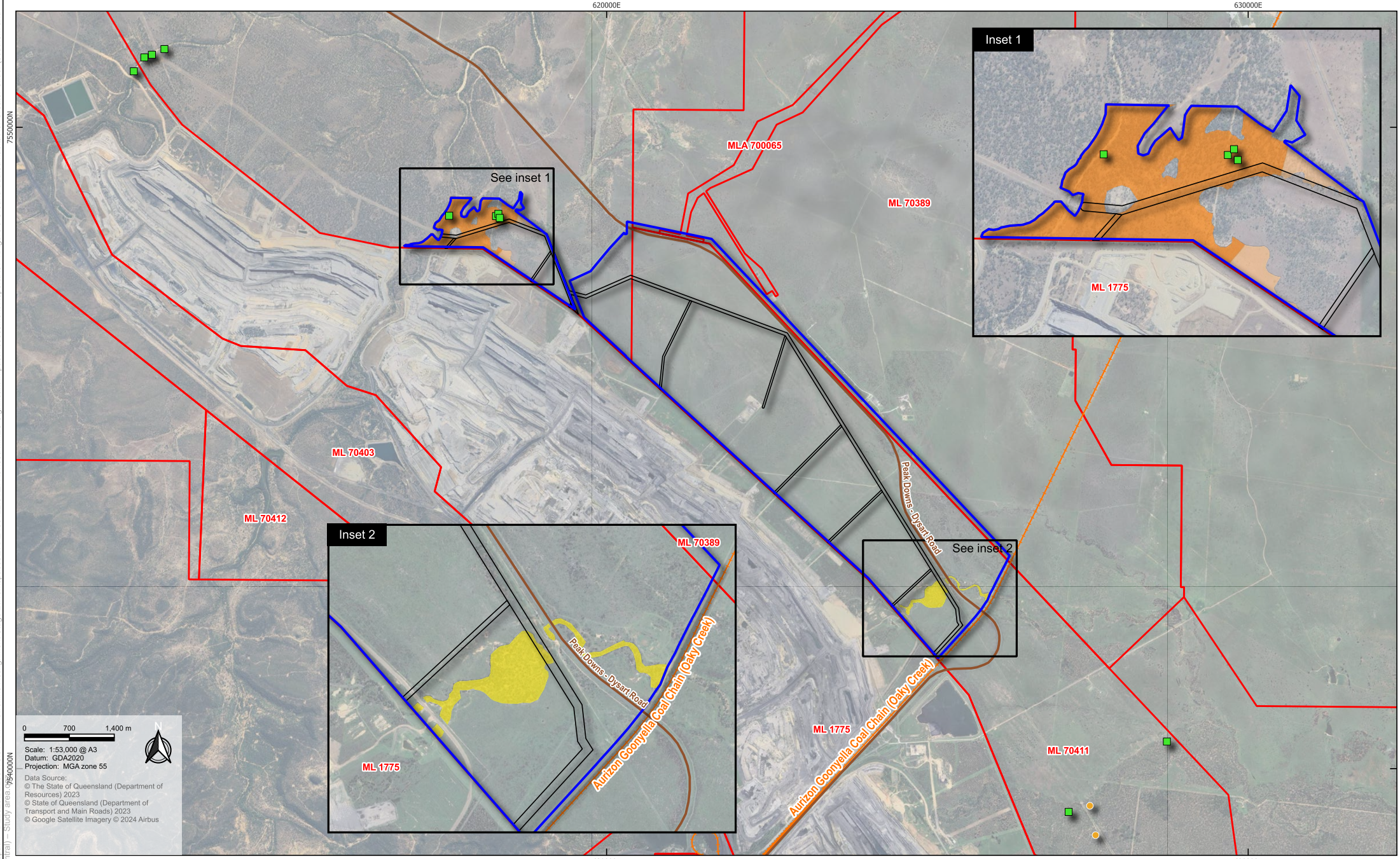
- Tree species
- Height (m)
- DBH (cm)
- Status (alive / dead)
- Presence / absence of visually confirmed hollows with > 10 cm entrance

Trees were categorised based on information provided in Eyre et al. (2022), whereby preferred tree species with a DBH > 30 cm but < 50 cm are considered suitable foraging trees and trees with a DBH ≥ 50 cm are considered suitable denning trees. Stags with a DBH > 50 cm were also considered to be suitable denning trees. Trees that contained a visually confirmed hollow with an entrance > 10 cm, were also considered to be suitable denning trees, regardless of the measured DBH.

BioCondition plots require the collection of a number of structural measurements across a half hectare plot. This includes a count of the number of large eucalypts, classified as those trees greater than the threshold benchmark size described for the associated RE. This data also allows for an assessment of the potential presence of current denning trees, although does not provide data to categorise the presence of future denning trees.

Greater Glider habitat tree data was derived from two targeted habitat assessment sites located within the Disturbance footprint itself and three BioCondition plots (**Figure 10**). One of the BioCondition plots (BC02) overlaps with a habitat assessment site. All sites were located within remnant RE 11.5.3 and within the Action area except for a single BioCondition site located in RE 11.3.4 (BC05). This site coincides with the area in which three individuals were recorded within a relatively small area adjacent to the Disturbance footprint. The large eucalypt benchmark size for RE 11.5.3 and 11.3.4 is 44 cm and 53 cm respectively.

The baseline targeted habitat assessment data collected is provided in **Appendix B**. The denning tree data has been revised such that denning trees include all those considered against the benchmark threshold size for the relevant RE. The data collected at site H1 counted 18 trees comprising four current denning trees (i.e. >44cm DBH) and 12 future denning trees (i.e. >30 cm and <45 cm) within the hectare plot. The data collected at site H2 counted 17 trees comprising nine current denning trees and eight future denning trees within the hectare plot (**Figure 10**). It is noted the majority of the trees were either Poplar Box or Silver-leaved Ironbark (neither of which are trees that the Greater Glider has been particularly associated with in the past) (Eyre et al. 2022).



Filepath: -BE2020\BE200178.01 BHP Powerline Realignment Stage 2\Workspaces\BAA2400122.0112. Revised MNES Significant Impact Assessment Report\Rev 4\Figure 9 Ground-truthed habitat for Greater Glider (southern and central) - Study area.mxd

Legend

- Study area
- Action area
- Mining leases
- State controlled roads
- Railways

Survey records

- Greater Glider (AECOM 2020)
- Greater Glider (Ausecology 2021-2022)

Greater Glider habitat

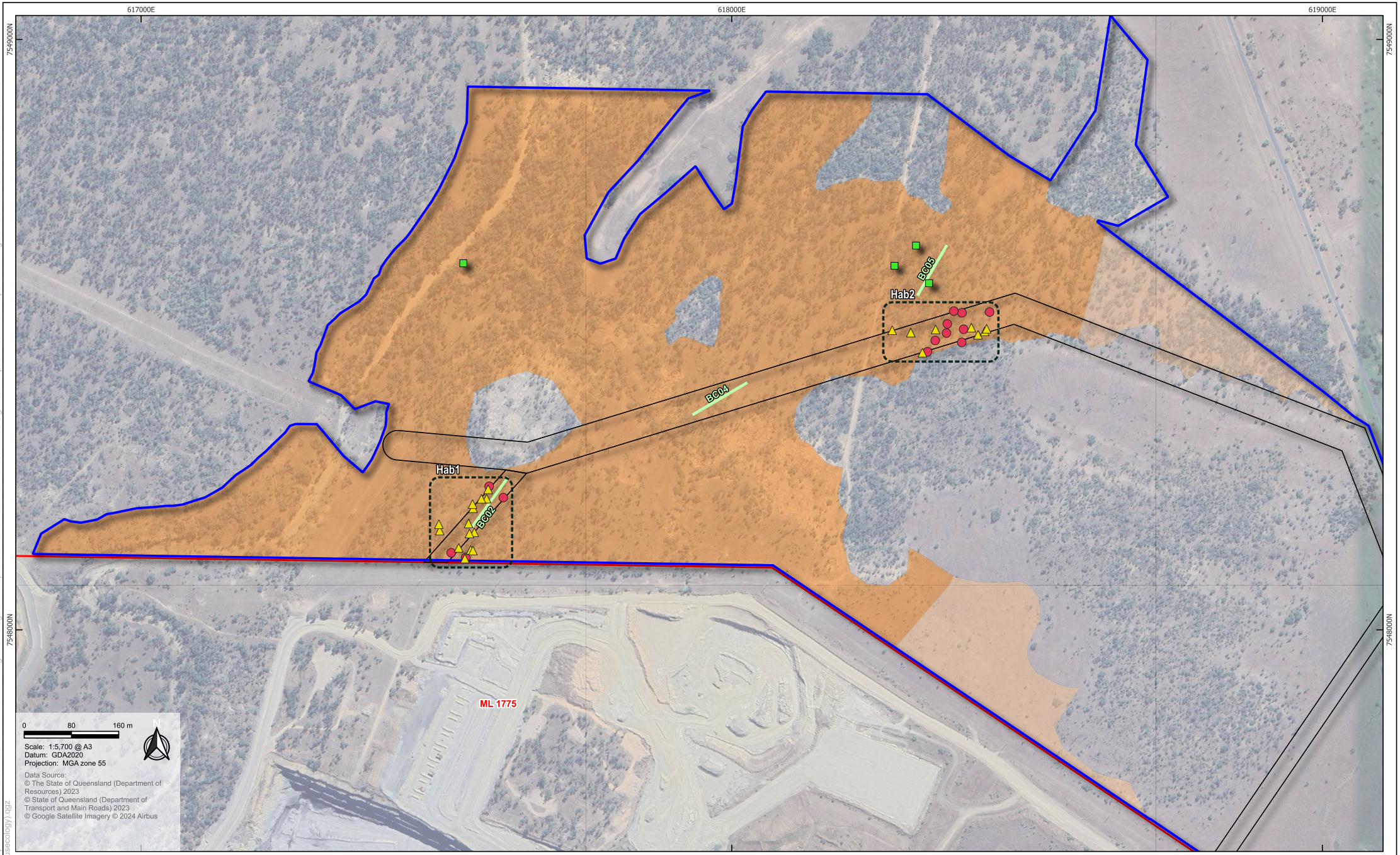
- Preferred
- Suitable
- Marginal

epic A Montrose Environmental Company

BMA BHP Mitsubishi Alliance

BM Alliance Coal Operations Pty Ltd
Peak Downs Power Line Realignment
Revised MNES Significant Impact Assessment Report

Figure 9
Ground-truthed habitat for Greater Glider (southern and central) – Study area



Filepath: -BE2020\BE200178.01 BHP Powerline Realignment Stage 2\Workspaces\BAA2400122.0112. Revised MNES Significant Impact Assessment Report\Rev 4\Figure 10 Greater Glider assessment locations (Ausecology).mxd

Legend

- Study area
- Action area
- Mining leases
- Biocondition assessment sites

Greater Glider habitat

- Preferred
- Suitable

Survey records

- Greater Glider (Ausecology 2019)
- Habitat assessment sites
- Current den trees
- Future den trees

epic A Montrose Environmental Company

BMA BHP Mitsubishi Alliance

BM Alliance Coal Operations Pty Ltd
Peak Downs Power Line Realignment
Revised MNES Significant Impact Assessment Report

Figure 10
Greater Glider habitat assessment locations and data (Ausecology)

The Biocondition data collected at site BC02 (which broadly overlapped with H1) recorded eight large eucalypts (or current denning trees) per hectare (extrapolated from four per half hectare). The data collected at BC04 recorded no large trees at all. Examination of aerial imagery indicates the site is sparsely wooded and is similar to nearby areas mapped as preferred habitat, particularly to the south of the alignment. Site BC05 recorded 30 large trees (>53 cm) per hectare which is substantially more than the other sites. The species composition at this site includes preferred tree species for Greater Glider (Queensland Blue Gum and Carbeen).

Current denning tree density within the mapped area of preferred habitat is highly variable. Although some Poplar Box woodland areas currently support 8-9 suitable large trees per hectare, there are nearby areas which support no large trees. It is uncertain whether this is an indication of past disturbance associated with grazing management or simple natural variation of community structure in the landscape. The Proposed action largely avoids what appears to be the more preferred vegetation type in the local area.

5.3.4.4 DCCEEW Approved Species Documents

There is no approved recovery plan or threat abatement plan adopted for the species under the EPBC Act.

The *Conservation advice for* Petauroides volans *(Greater Glider (southern and central))* (DCCEEW 2022b) identifies the following threats to the species:

- Inappropriate fire regimes leading to high intensity and widespread bushfires impacting populations and habitat values (removing old growth trees with hollows)
- Habitat clearing and fragmentation of habitat for development, agriculture and forestry harvesting
- Climate change impacts to weather patterns increasing the potential for bushfire, heat stress for individuals and declining forage tree moisture levels
- Predation by, or competition for hollows from native species such as owls and cockatoos
- Predation from feral cats and European Red Fox

The Conservation Advice for the species identifies five 'broadly defined' habitat types that may provide habitat critical to the survival of the species:

- Large contiguous areas of eucalypt forest, which contain mature hollow-bearing trees and a diverse range of the species' preferred food species in a particular region
- Smaller or fragmented habitat patches connected to larger patches of habitat, that can facilitate dispersal of the species and/or that enable recolonization
- Cool microclimate forest/woodland areas (e.g. protected gullies, sheltered high elevation areas, coastal lowland areas, southern slopes)
- Areas identified as refuges under future climate changes scenarios
- Short-term or long-term post-fire refuges (i.e. unburnt habitat within or adjacent to recently burnt landscapes) that allow the species to persist, recover and recolonise burnt areas (DCCEEW 2022b)

5.3.4.5 Habitat and Connectivity Appraisal

As noted, large hollow bearing trees occur patchily within the Disturbance footprint and surrounds. The western portion of the Disturbance footprint intersects a tract of eucalypt woodlands which extends to the north and west from the area. The majority of this habitat is dominated by tree species that Greater Glider is not generally associated with (Eyre et al. 2022). Habitat comprising preferred species (such as Queensland Blue Gum) has largely been avoided. The Disturbance footprint is not located in a cool micro-climate woodland and there is no reason to believe the area would be a refuge from wildfires. There is no evidence the Disturbance footprint or adjacent woodland would be considered habitat critical to the survival of Greater Glider.

The tract of eucalypt woodlands intersecting with the Disturbance footprint is somewhat disconnected from larger remnants in the wider area due to previous clearing activities. Greater Gliders are considered capable of an approximate glide angle of 40 degrees from the horizontal take off position. Lesser angles have been observed (31 degrees calculated) although this was recorded in tall forests (45 m canopy height) (Taylor & Goldingay 2009) which would allow for a flatter trajectory over distance. The main power line easement will be too wide (50 m) to be used as a crossing point. Given the height of the tallest canopy trees present (27 m), the

species is unlikely to cross cleared habitat greater than 32 m wide based on a 40 degree glide angle. Most of the trees in the area are less than 22 m in height. The Proposed action will provide a barrier to habitat to the south of the powerline, although analysis of aerial imagery indicates much of the mapped habitat to the south of the alignment appears disturbed and very sparse and much less likely to support the species.

Regarding the presence of other known or potential threats to the species, feral Cat has been recorded during surveys for the Proposed action (Ausecology 2024a). The potential for large wildfires will be managed under the Proponent's company-wide bushfire management plan. There may be existing issues associated with hollow competition and predation from native birds, but these are natural processes that are not in the control of the Proponent.

The Proposed action will impact up to 6.42 ha of potential habitat for the species. This includes 0.04 ha of the more favoured Queensland Blue Gum vegetation (RE 11.3.4 and 11.3.25) with the remainder dominated by Poplar Box and Silver-leaved Ironbark (RE 11.5.3) (species which appear less favoured). There is little evidence this habitat may be considered as habitat critical to the survival of the species. A preliminary analysis based on existing Queensland vegetation (RE) mapping indicates there is approximately 11,000 ha of potential preferred or suitable habitat (as defined above) occurring within a 10 km radius of the Disturbance footprint. As such, the Proposed action proposes to impact 0.06% of potential available habitat within the wider area. It is noted the extent to which the habitat in the wider area is suitable (i.e. availability of large tree hollows) is unknown.

5.3.4.6 Significant Impact Assessment

Table 12 provides an assessment of the potential for significant impacts on Greater Glider from the Proposed action using the assessment criteria for Endangered species outlined in the MNES Guidelines.

Table 12. Significant impact criteria assessment: Greater Glider

Criteria	Endangered species assessment
Lead to a long-term decrease in the size of a population of the species	The species has been recorded adjacent to the Disturbance footprint as well as in the wider area during surveys in recent years. Known preferred tree species which are present includes Queensland Blue Gum and *Corymbia tessellaris*. Large hollow-bearing trees suitable as denning habitat are patchily distributed within this habitat, possibly due to past disturbance. The Proposed action will impact up to 6.42 ha of potential habitat for the species. Only 0.04 ha comprises REs associated with Queensland Blue Gum. The remaining habitat is dominated by Poplar Box and Silver-leaved Ironbark which are less preferred species. There is abundant similar habitat in the surrounding area that will remain undisturbed. Existing Queensland Government vegetation mapping indicates there is over 11,000 ha of potential habitat located within 10 km of the Disturbance footprint. A fauna spotter-catcher will be present to mark trees with suitable large hollows prior to clearing and present during vegetation clearing to inspect hollows in felled trees. Indirect impacts to Greater Glider habitat from the Proposed action (such as noise, lighting and dust settlement) will be temporary and have a very minor impact at worst. With mitigation measures in place to minimise impacts to individuals and given the availability of eucalypt habitat surrounding the Disturbance footprint, it is considered unlikely to lead to a long-term decrease in the size of a population of Greater Glider.
Reduce the area of occupancy a population	The species has been recorded close to the Disturbance footprint as well as in the wider area during surveys in recent years. The Proposed action will impact up to 6.42 ha of potential habitat for Greater Glider, much of which comprises tree species less preferred by Greater Glider. There is abundant similar habitat in the wider area (within 10 km) which will remain undisturbed. Although the Proposed action will reduce the area of available foraging habitat in the local area, given the abundant identical habitat in the surrounding area, the clearing is not considered to be of a scale to reduce the area of occupancy of a population of Greater Glider and thereby cause a significant impact.
Fragment an existing population into two or more populations	The Disturbance footprint comprises linear disturbance of 50 m (main corridor) and 30 m (stub line corridors). Cleared corridors within forested lands are considered a barrier to dispersal for Greater Glider (Taylor and Goldingay 2009). Glide distances associated with the species will be influenced in particular by the height of the launch site as well as other temporal factors such

Criteria	Endangered species assessment
	as weather conditions. Greater Glider tree assessments for the Proposed action were carried out by Ausecology. The assessments included measurements of tree height, species and diameter at breast height. Average tree height within RE 11.5.3 was 16.8 m with a maximum height of 27.8 m recorded. Horizontal glide distance for Greater Glider was calculated via a Taylor & Goldingay (2009) study of the species' ability to cross road infrastructure in south-east Queensland. Based on the site data the local glide distance would be limited to 27.8 m. As such, the width of the main corridor and stub line corridors appear likely to prevent the species ability to traverse from one side to the other. It is noted the species was only recorded to the north of the Disturbance footprint. It is not known if the species occurs to the south and would traverse the proposed Disturbance footprint. Habitat to the south of the Disturbance footprint appears more sparse and disturbed and potentially less suitable for the species. An approximate length of 800 m along the western extent of the Disturbance footprint will bisect mapped Greater Glider habitat. This has potential to isolate approximately 20 ha of mapped habitat for the species from contiguous habitat located north of the Disturbance footprint. It is noted the species has not been recorded to the south of the Disturbance footprint during surveys, and aerial imagery indicates much of this area is sparsely wooded and less likely to support the species presence. The Proposed action has some potential to fragment an existing population of Greater Glider in the northwest of the Disturbance footprint.
Adversely affect habitat critical to the survival of the species	Based on the broad definitions within the conservation advice for the species, it is uncertain if the Disturbance footprint supports habitat critical to the survival of the species. The Proposed action will impact up to 6.42 ha of potential eucalypt habitat. Nevertheless, there is abundant identical habitat in the surrounding area. The Proposed action is considered unlikely to adversely affect habitat critical to the survival of the species.
Disrupt the breeding cycle of a population	The Proposed action will likely impact potential den trees during tree clearing. Young are born from March to June (Baker and Gynther 2023). Pre-clearing inspections by a suitably qualified Fauna Spotter Catcher will be carried out to identify trees with large hollows which may provide roosting habitat for Greater Glider. Measures will be in place where suitable hollows are identified within the Disturbance footprint. This will include felling trees in a manner such that injury to potential hollow occupants will be minimised. The Fauna Spotter Catcher will have further procedures in place should Greater Glider individuals occur within trees felled for the construction, including salvage and relocation protocols. There is a minor potential for the Proposed action to disturb Greater Glider individuals with young during construction, but this is considered unlikely to result in disruption to the breeding cycle of a population. It is considered unlikely the Proposed action will disrupt the breeding cycle of a population of Greater Glider.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	The Proposed action will impact up to 6.42 ha of potential habitat for Greater Glider. There is abundant similar habitat located in the wider area which will remain undisturbed. The Proposed action is not considered likely to impact the availability or quality of habitat to the extent that the species is likely to decline.
Result in invasive species that are harmful to an endangered species becoming established in the endangered species habitat	Weed invasion is not considered a threat to the species. Predation by Red Fox (*Vulpes vulpes*) and feral cats is considered a minor threat to the species. Feral Cats were considered were recorded in the local area during surveys for the Proposed action (Ausecology 2024a). During the construction and operation, the existing BMA Weed and Feral Animal Management procedure will be implemented to manage invasive species. The Proposed action is highly unlikely to result in the introduction of a novel invasive species, or proliferation of an existing invasive species in the Study area or surrounds.

Criteria	Endangered species assessment
Introduce disease that may cause the species to decline	There are no known vectors of disease or pathogens associated with the species. The Proposed action does not require the importation of soils or other biological matters into the Study area. Machinery imported from outside the region for earthworks, transportation and other construction activities will be managed in accordance with the existing BMA Weed and Feral Animal Management procedure to reduce the risk on introducing pathogens. It is highly unlikely the Proposed action will result in the introduction of a disease causing the species to decline.
Interfere with the recovery of the species	The Approved conservation advice identifies a number of conservation and recovery actions for the species including the following: • Identify strategic areas for restoration, climate/fire refugia and movement corridors • Protect unburnt habitat to support populations following bushfires • Protect hollow-bearing trees on private property, roadside reserves and along roads and avoid fragmentation/loss of habitat due to development of transport infrastructure • Where threats from cats and Red Fox are locally significant implement control measures (especially in unburnt areas) • Investigate the feasibility of reintroductions and translocation of the species • Define appropriate levels of timber harvesting exclusion where these activities occur within the species distribution • Develop fire management guidelines for land managers and implement applied research to assess the impact of fires and management activities on the species habitat • Information and research priorities undertaken to improve knowledge of the species and populations including genetic sampling, monitoring surveys across the species range (DCCEEW 2022b) The Proposed action will result in the clearing of up to 6.42 ha of potential habitat for Greater Glider. The Proposed action may also result in the further isolation of approximately 20 ha of habitat, although it is not known if the species utilises this area. Nevertheless, there is extensive potential habitat surrounding the Disturbance footprint and the proposed extent of impact will be minor. The Proposed action is considered unlikely to interfere with the management actions identified above or the recovery of the species.
Assessment result	**Based on the assessment above it is considered there is some potential for a significant impact to Greater Glider through fragmentation of existing preferred and suitable habitat for the species in the northwest of the Disturbance footprint.**

5.3.5 Squatter Pigeon (southern) – Vulnerable

5.3.5.1 Ecology

The Squatter Pigeon is largely a terrestrial pigeon species, foraging and breeding on the ground. The species mainly occurs in dry grassy eucalypt woodlands and open forests (Frith 1982; Crome and Shields 1992). It may also inhabit Callitris/Acacia dominated woodlands and has been reported from open plains in its historical southern range (Frith 1982). Most individuals live in sandy sites within 3 km of a permanent water source (Blakers et al. 1984). They remain common in heavily grazed country in tropical Queensland (Reis 2012) but they are typically more common in ungrazed lands (Woinarski and Ash 2002; Reis 2012). This species mainly feeds on grass seed although insects are seasonally important in the diet (Reis 2012).

The species may breed throughout the year, but this appears to be greatly influenced by rainfall and abundance of foraging resources. Peak breeding is likely to occur during the dry season (April to October) (Squatter Pigeon Workshop 2011). The nest is a shallow depression on the ground usually sheltered by a bush or log (Reis 2012). The total population size is estimated at 220,000 mature birds. Individuals located north of Roma occur as a single continuous interbreeding population (Garnett & Baker 2021).

The subspecies was historically found from the Dubbo region in New South Wales north to the Burdekin River area in in Queensland. There have been no official records in New South Wales since the 1970s. Although the species has declined greatly in southern Queensland in the past it appears this decline has slowed, and the species now persists over a wide area and can be locally abundant in central Queensland (Garnett et al. 2011) where groups of up to 30 individuals can still be seen (Reis 2012). South of the Carnarvon Range the species appears to occur only in scattered areas.

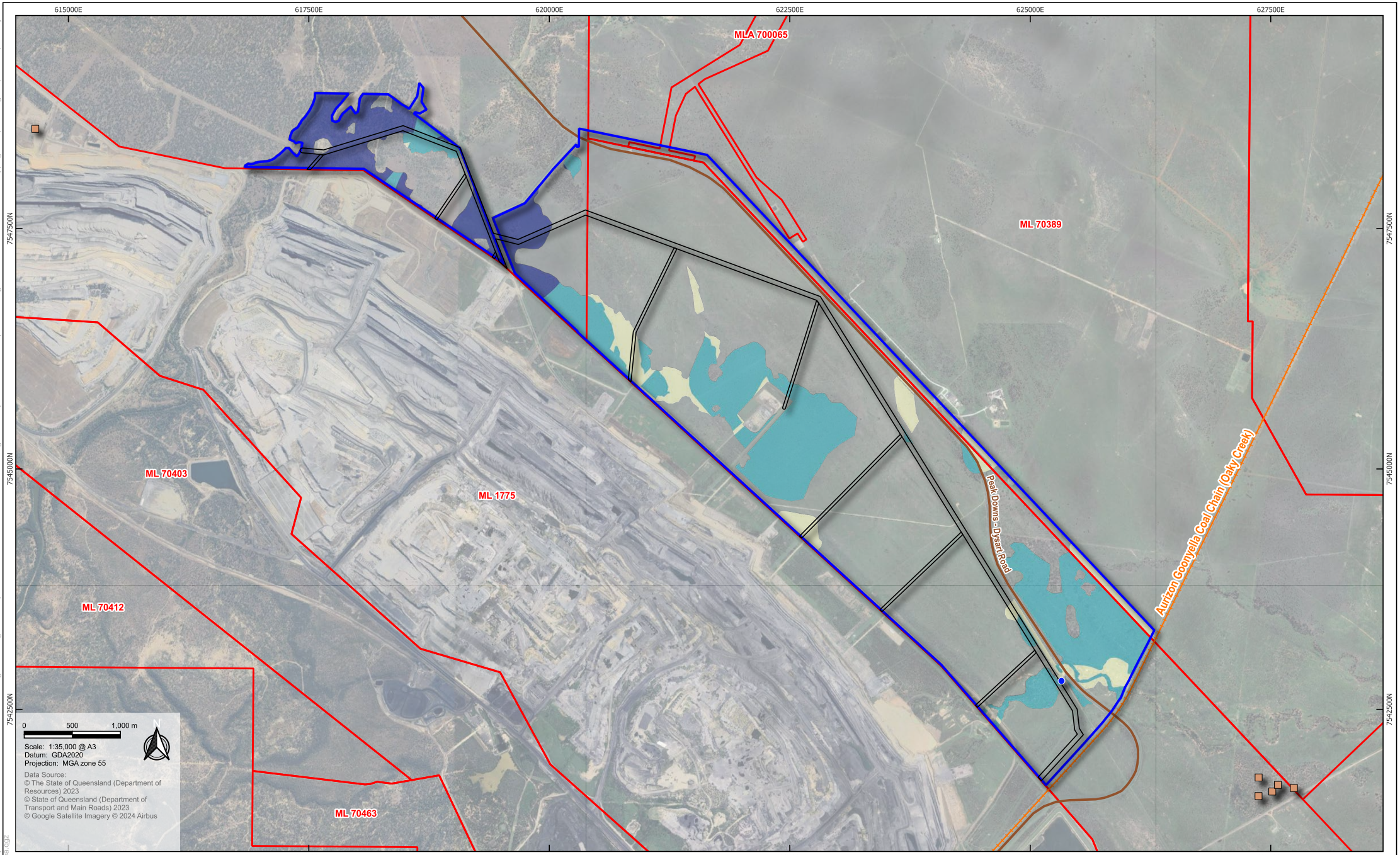
5.3.5.2 Association with the Study Area

Squatter Pigeon was not recorded close to the Disturbance footprint during surveys for the Proposed action (despite repeated surveys across several years) but has been recorded in the surrounding wider area during other surveys by Ausecology. The species and has been recorded within the south-east of the Study area by a separate consultant in 2013 (**Figure 4**). With regard to the Study area, individuals were recorded in RE 11.4.8 but in close proximity to more suitable habitats including riparian Queensland Blue Gum open forest (RE 11.3.25) and Poplar Box dominated woodland (RE 11.5.3).

The species may occur in woodlands on sandy soils within 3 km of permanent water (including farm dams), particularly within REs on Land Zone 5 and 7 (DCCEEW 2025) as well as Land Zones 3 and 10. The species forages/breeds in areas where the ground cover is no more than 33%. Much of the Disturbance footprint was unsuitable for the species as it comprised grasslands with dense cover, woody regrowth, or other unsuitable habitats located on clay soils such as Brigalow communities. Habitat mapping for the Proposed action indicates the Disturbance footprint will impact up to 22.77 ha of Squatter Pigeon habitat (**Figure 11**) comprising the following habitat areas as defined by Kerswell et al. (2020):

- 13.45 ha of preferred habitat – eucalypt or acacia woodlands with <33% ground cover on well-draining soils (land zone 3, 5, 7, 8, 9 and 10) within 1 km of a permanent waterbody
- 6.39 ha of suitable habitat – eucalypt or acacia woodlands with <33% ground cover on well-draining soils (land zone 3, 5, 7, 8, 9 and 10) within 1-3 km of a permanent waterbody (includes non-remnant areas within 100 m of preferred habitat)
- 2.94 ha of marginal habitat – other non-remnant (regrowth) or remnant woodland areas more than 3 km from a waterbody that allow for movement between preferred and suitable habitat

The severity of impacts to marginal habitat for Squatter Pigeon are considered low due to the limited value and role these areas play in supporting these species, hence, the assessment of significant impacts is undertaken only for preferred and suitable habitat values. The significant impact assessment (**Section 5.3.5.5**) assesses impacts associated with the Proposed action for 13.45 ha of preferred habitat and 6.39 ha of suitable habitat.



Filepath: ...\BE2020\BE200178.01 BHP Powerline Realignment Stage 2\Workspaces\BAA2400122.0112_Revised MNES Significant Impact Assessment Report\Rev 4\Figure 11 Ground-truthed habitat mapping for Squatter Pigeon (southern) – Study area.qgz

Legend

- Study area
- Action area
- Mining leases
- State controlled roads
- Railways

Squatter Pigeon habitat

- Preferred
- Suitable
- Marginal

Survey records

- Squatter Pigeon (Aurecon 2013)
- Squatter Pigeon (Ausecology 2022)

epic A Montrose Environmental Company

BMA BHP Mitsubishi Alliance

BM Alliance Coal Operations Pty Ltd
Peak Downs Power Line Realignment
Revised MNES Significant Impact Assessment Report

Figure 11
Ground-truthed habitat mapping for Squatter Pigeon (southern) – Study area

5.3.5.3 DCCEEW Approved Species Documents

There is no approved recovery plan for the species.

Relevant threat abatement plans applicable to the species include:

- Threat abatement plan for competition and land degradation by rabbits (DEE 2016)
- Threat abatement plan for predation by feral cats 2024 (DCCEEW 2024)
- Threat abatement plan for predation by the European red fox (DEWHA 2008b)

The Approved Conservation Advice for the species (TSSC 2015b) notes the following threats to the species:

- Habitat loss through land clearing, particularly for livestock grazing which decreases foraging resources
- Overgrazing by livestock and feral herbivores
- Unsuitable fire regimes
- Changes to habitats caused by invasive weeds and/or thickening of understorey vegetation (Higgins & Davies 1996) including introduced pasture species such as Buffel Grass (Garnett and Baker 2021)
- Predation by feral Cats and Red Fox

All of the small, isolated and sparsely distributed populations south of the Carnarvon Range area are considered as important subpopulations including:

- populations occurring in the Condamine River catchment and Darling Downs
- populations known to occur in the Warwick-Inglewood-Texas area
- populations potentially occurring in northern NSW (Squatter Pigeon Workshop 2011; DCCEEW 2024).

All individuals to the north of the Carnarvon Range are considered to be part of a single, widely distributed, interbreeding population (Squatter Pigeon Workshop 2011; Garnett & Baker 2021). Therefore, given the Study area is located over 250 km north of the Carnarvon Range any individuals present are not considered part of an 'important subpopulation'.

5.3.5.4 Habitat Appraisal

No definition of habitat critical to the survival of the species is defined for this species. This is likely due to the relatively broad habitat requirements of the species and the abundance of similar habitat across the wider landscape. Buffel Grass dominates the ground layer through extensive portions of the Study area. Feral Cat was detected throughout the Study area and cattle grazing also occurs throughout (Ausecology 2024a). These are all degrading impacts and considered threats to the species or its habitat. This may indicate why the species has not been readily detected within the Study area despite repeated surveys across a number of years. Critical habitat for Squatter Pigeon is considered very unlikely to be present.

The Proposed action will impact 19.84 ha of potential habitat for Squatter Pigeon. This occurs across scattered patches throughout the Study area (**Figure 11**). A preliminary analysis based on existing Queensland vegetation (RE) mapping indicates there is approximately 21,470 ha of potentially suitable habitat (as defined above) occurring within a 10 km radius of the Disturbance footprint. As such, the Proposed action will impact only 0.1% of likely available habitat within the wider area.

5.3.5.5 Significant Impact Assessment

Table 13 provides an assessment of the potential for significant impacts on Squatter Pigeon from the Proposed action using the assessment criteria outlined in the MNES Guidelines.

Table 13. Significant impact criteria assessment: Squatter Pigeon

Criteria	Vulnerable species assessment
Lead to a long-term decrease in the size of an important population of the species	The species has been recorded locally during previous surveys in the Study area and surveys for the Proposed action. Suitable habitat is present in the Disturbance footprint. The Disturbance footprint lies north of the Carnarvon Range and as such, the

Criteria	Vulnerable species assessment
	individuals present in the local region are not considered as part of an important subpopulation. The species prefers wooded areas on sandy substrates within 3 km of a permanent water source (including farm dams). Much of the vegetation within the Disturbance footprint and broader Study area is unsuitable as it comprises grasslands or other vegetation on clay soils. The Proposed action will impact 19.84 ha of potential habitat for Squatter Pigeon. It is noted overgrazing by livestock is considered a threat to the species. The habitat located within the Disturbance footprint and surrounds are currently subject to cattle grazing. Vegetation clearing for the Proposed action does not involve broad-scale clearing of habitat. Although the Proposed action requires clearing of 19.84 ha there will be over 21,400 ha of similar habitat remaining in the wider area (within 10 km) surrounding the Disturbance footprint. The nature of the clearing comprises linear clearing (access tracks and footings), and tree removal or slashing of grasses (for the remaining power line corridors) within tracts of woodlands, grasslands and previously cleared areas which will remain undisturbed. Grasses will be allowed to revegetate the 10 m wide access track on completion of construction. The species is mobile and should individuals be present they are expected to simply move from the clearing area. With site specific measures in place (such as pre-clearance inspections and vehicle speed limits) mortality events are considered highly unlikely. The Proposed action is considered highly unlikely to lead to a long-term decrease in the size of an important population or subpopulation of Squatter Pigeon.
Reduce the area of occupancy of an important population	The species has been recorded locally and suitable habitat is present in the Disturbance footprint. The individuals present in the local region are not considered as part of an important subpopulation. Vegetation clearing for the Proposed action does not involve broad-scale clearing of habitat. Although the Proposed action requires clearing of 19.84 ha of potential habitat there will be over 21,400 ha of similar habitat remaining in the wider area (within 10 km) surrounding the Disturbance footprint. The nature of the clearing comprises linear clearing (access tracks and footings) and tree removal or slashing of grasses (for the power line corridors) within tracts of woodlands, grasslands and previously cleared areas which will remain undisturbed. Grasses will be allowed to revegetate the 10 m wide access track on completion of construction. Given the relatively minor extent of impact to habitat in the context of the wider area, the Proposed action is considered highly unlikely to reduce the area of occupancy of an important subpopulation.
Fragment an existing important population into two or more populations	The species has been recorded locally and suitable habitat is present in the Disturbance footprint. The individuals present in the area are not considered as part of an important subpopulation. The nature of the clearing comprises linear clearing (access tracks and footings) and tree removal or slashing of grasses (for the power line corridors) within tracts of woodlands, grasslands and previously cleared areas which will remain undisturbed. Grasses will be allowed to revegetate the 10 m wide access track on completion of construction. The species is highly mobile, and the Proposed action will not fragment an existing important subpopulation.
Adversely affect habitat critical to the survival of the species	There is no definition of habitat critical to the survival of Squatter Pigeon. The species has broad habitat requirements and there is abundant suitable habitat for the species within and surrounding the Disturbance footprint. The Disturbance footprint is subject to degrading processes which may influence the lack of survey records within the Study area. Critical habitat is not considered to occur. The Proposed action will not adversely affect habitat critical to the survival of Squatter Pigeon.

Criteria	Vulnerable species assessment
Disrupt the breeding cycle of an important population	The species has been recorded locally, and suitable habitat is present in the Disturbance footprint. The individuals present in the area are not considered as part of an important subpopulation. The Disturbance footprint lies on relatively flat plain with little topographic relief. Breeding habitat is identified as stony rises with sandy or gravel soils and within 1 km of permanent water (Squatter Pigeon Workshop 2011). Under this definition there is unlikely to be breeding habitat for the species present. Regardless, potential habitat for the species (as identified in this report) will be subject to preclearance surveys prior to vegetation clearing for construction. Mitigation measures will be in place as discussed in **Section 4.2**. Where an active nest site for the species is identified within or adjacent to the Disturbance footprint the site will be avoided during the nesting period. The species may breed throughout the year with a likely peak from April to October. While there is potential for construction activities to disrupt the breeding cycle of individuals this impact will be temporary (restricted to the construction period). It is considered any impact would be minor (at worst) and is not considered to be to the extent a significant impact would occur on an important subpopulation of Squatter Pigeon.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	The species occurs in the Study area and surrounds. There is abundant suitable habitat for the species within the wider area surrounding the Disturbance footprint. The Proposed action will impact 19.84 ha of potential habitat. There will be over 21,400 ha of similar habitat remaining in the wider area (within 10 km) surrounding the Disturbance footprint. Given the relatively minor extent of impact to habitat in the context of the wider area, the Proposed action is considered highly unlikely to impact the availability or quality of habitat to the extent that the species is likely to decline.
Result in invasive species that are harmful to an endangered species becoming established in the endangered species habitat	Invasion by Buffel Grass is considered a threat to the species and dominates the ground layer in many areas within the Study area. Browsing and land degradation by feral species (such as rabbits) and livestock (such as cattle) is considered a threat to the species' habitat. Both are currently known to be present in the Disturbance footprint and broader Study area. Feral Cats are a known predator and are also present (Ausecology 2024a). During the construction and operation phases, the existing BMA Weed and Feral Animal Management procedure will be implemented to manage invasive species. The Proposed action is highly unlikely to result in the introduction of a novel invasive species, or proliferation of an existing invasive species in the Study area or surrounds.
Introduce disease that may cause the species to decline	There are no identified introduced diseases or pathogens associated with this species. The Proposed action does not require the importation of soils or other biological matters into the Disturbance footprint. Machinery imported from outside the region for earthworks, transportation and other construction activities will be required to be certified free of weed seeds and soil matter prior to entry onsite. It is highly unlikely the Proposed action will result in the introduction of a disease causing the species to decline.
Interfere substantially with the recovery of the species	There is no recovery plan for this species. The Approved conservation advice for the species (TSSC 2015b) identifies the following conservation and management actions as relevant to the species and the Study area: • Identify high priority sub-populations (particularly in southern areas) and establish conservation protections, habitat rehabilitation and management plans for threats including stock and feral herbivore management • Develop and implement stock management plans and management plans for introduced herbivores at key sites and in areas inhabited by the species • Monitor sub-populations throughout the distribution of the species • Further research on the species ecology including preferred food plants, movement/dispersal patterns and reproductive factors

Criteria	Vulnerable species assessment
	The Proposed action is considered highly unlikely to interfere with the actions identified above. The Proposed action will not substantially interfere with the recovery of the species.
Assessment result	**Based on the assessment above it is considered unlikely a significant impact to Squatter Pigeon (southern) will occur as a result of the Proposed action.**

5.4 Significant Impact Assessment – Migratory Species

The Proposed action will impact an estimated 7.17 ha of potential habitat for Oriental Cuckoo. The MNES Guideline criteria for Migratory species requires an assessment of the potential for 'important habitat' to be present within or near the Disturbance footprint, or if an 'ecologically significant proportion of the population' may be disrupted by the Proposed action. Important habitat is defined as the following:

- Habitat utilised by a migratory species occasionally or periodically within a region that supports an ecologically significant proportion of the population of the species
- Habitat that is of critical importance to the species at particular life-cycle stages
- Habitat utilised by a migratory species which is at the limit of the species range and/or
- Habitat within an area where the species is declining

Oriental Cuckoo occurs in a variety of vegetation types including rainforest, vine thicket and open forest and woodland. The species is sometimes found in mangroves and is often recorded in gardens and plantations (Blakers et al. 1984; Higgins 1999). It is often found along forest edges and vegetation ecotones. The species is a non-breeding migrant and mostly occurs on the northern and eastern coasts of Australia, between September and April. Most birds do not arrive in Australia until December.

The majority of the Disturbance footprint and Study area is cleared of vegetation. The remnant vegetation present remains common in the wider area. An ecologically or nationally significant proportion of the population of Oriental Cuckoo (at 0.1% of the population as described in DE 2015c) comprises 1,000 individuals. It is noted that no recorded sightings of this species exist within the Study area, despite terrestrial ecological surveys being undertaken across several years. There is no reason to believe the habitats within the Disturbance footprint or Study area would support an ecologically significant proportion of the population of the species. As such, the potential for significant impacts on Oriental Cuckoo is negligible at worst.

6 CONCLUSION

The Proponent owns and operates PDM, an open cut coal mining operation located south of Moranbah, Central Queensland. Current mining operations have triggered the need to relocate three 66 kV power lines (the Proposed action) that run adjacent to the current ML 1775 and ML 70411 boundaries. The Proposed action comprises the construction of power line infrastructure along a length of approximately 20 km (including the main corridor and eight associated stub line corridors).

The Disturbance footprint encompasses 79.06 ha which comprises 8.67 ha of remnant vegetation, 21.83 ha of regrowth vegetation and 48.56 ha of modified non-remnant lands. Desktop review and contemporary field surveys for the Proposed action (carried out from 2021 to 2024) characterised the terrestrial ecology and MNES values within the Study area. A number of other surveys in the local area carried out for different projects have also provided additional information for the assessment.

There are two TECs listed under the EPBC Act identified in the northwest of the Disturbance footprint: Brigalow TEC and Natural Grasslands TEC. No threatened flora species were observed during the surveys for the Proposed action. It is noted despite no recorded observations that potential habitat for *Dichanthium queenslandicum* (Endangered - EPBC Act) occurs within the Disturbance footprint.

Three MNES fauna species have been recorded within the Study area, and potential habitat for these species is present within the Disturbance footprint. Koala and Greater Glider (both Endangered – EPBC Act) were recorded close to the north-western extent of the Disturbance footprint in riparian Queensland Blue Gum open forest and Poplar Box dominated woodland. Squatter Pigeon (southern) (Vulnerable – EPBC Act) has been previously recorded in the Study area in 2013.

Despite no recorded observations within the Study area, Ornamental Snake (Vulnerable – EPBC Act) is considered likely to occur as it has been recorded locally during surveys. Australian Painted Snipe (Endangered – EPBC Act), Sharp-tailed Sandpiper (Vulnerable and migratory – EPBC Act) and White-throated Needletail (Vulnerable and migratory – EPBC Act) are considered as possibly occurring. The Disturbance footprint also provides potential habitat for five migratory bird species. The extent of potential habitat for these species which is impacted by the Proposed action is minor and no significant impact is considered feasible on these species.

Overall, impacts resulting from Proposed action will be minor and likely only restricted to the construction phase. Impacts from the operational phase are likely to be benign and restricted to occasional slashing of grasses within the corridors and maintenance activities. Infrastructure has been located away from MNES values as much as is feasible. The Disturbance footprint has been substantially revised and is predicted to impact 0.04 ha of Brigalow TEC and 0.57 ha of Natural Grassland TEC through vegetation clearing. The Proposed action will impact 19.84 ha of potential habitat for Squatter Pigeon, 7.18 ha of potential habitat for Koala and 6.42 ha of potential habitat for Greater Glider. The Proposed action may also impact very minor areas of habitat suitable for Ornamental Snake and *D. queenslandicum.*

Impacts to MNES from the Proposed action were subject to an assessment for significant impacts under the Commonwealth MNES Guideline criteria. The assessment results indicate a *potential* for a significant impact to occur on 7.18 ha of preferred/suitable habitat for Koala and 6.42 ha of preferred/suitable habitat for Greater Glider as a result of vegetation clearing for the Proposed action. The remaining MNES species and TECs were determined unlikely to be subject to significant impacts resultant of the Proposed action.

7 REFERENCES

Atlas of Living Australia (ALA) 2025, Atlas of Living Australia spatial portal, available from: https://www.ala.org.au/

Ausecology 2024a, 7N5N2N Powerline Alignment: MNES Ecological Report, report prepared for BHP (June 2024)

Ausecology 2024b, Peak Downs Mine 7N-5N-2N Power line Project Off-lease – MSES Technical Memo, report prepared for BHP (July 2024).

Ausecology 2025, Terrestrial Ecology Report Peak Downs Mine Continuation Project, report prepared for BMA (March 2025).

Baker, A & Dickman, C 2018, *Secret lives of carnivorous marsupials*, CSIRO Publishing, Clayton South.

Baker, AM & Gynther, IC 2023, *Strahan's mammals of Australia, Third Edition*, Reed New Holland Publishers, Wahroonga.

Black, R, Houston, W & Jaensch, R 2010, 'Evidence of regular seasonal migration by Australian painted snipe Rostratula australis to the Queensland tropics in autumn and winter', *Stilt*, vol. 58, pp. 1-9.

Blakers, M, Davies, SJJF. & Reilly, PN 1984, *The atlas of Australian birds*, Melbourne University Press, Melbourne.

Brigalow Belt Reptiles Workshop 2010, *Proceedings from the workshop for the nine listed reptiles of the Brigalow Belt bioregions, 18-19 August 2010*, Queensland Herbarium, Brisbane.

BFRT 2007, *National recovery plan for the black-throated finch southern subspecies Poephila cincta cincta*, Report to the Department of the Environment and Water Resources, Canberra. Black-throated Finch Recovery Team, Hurstville, NSW: Department of Environment and Climate Change; and Brisbane, Queensland: Queensland Parks and Wildlife Service.

Buchanan B. W. 1993, Effects of enhanced lighting on the behaviour of nocturnal frogs. *Animal Behaviour*, Vol 45, pp. 893–899.

Burnett, S 2012, 'Northern Quoll Dasyurus hallucatus Gould, 1842', in LK Curtis, AJ Dennis, KR McDonald, PM Kyne & SJS Debus (eds), *Queensland's threatened animals*, CSIRO Publishing, Collingwood, pp. 340-341.

Butler, DW 2007, *Draft Recovery plan for the Bluegrass (*Dichanthium *spp.) dominant grassland of the Brigalow Belt Bioregions (north and south) endangered ecological community, 2007-2011*. Report to Department of the Environment and Heritage, Canberra. Queensland Parks and Wildlife Service, Brisbane.

Chapple, D. G., Tingley, R., Mitchell, N. J., Macdonald, S. L., Keogh, J. S., Shea, G. M., Bowles, P., Cox, N. A., & Woinarski, J. C. Z. 2019, The Action Plan for Australian Lizards and Snakes 2017. Melbourne, Vic., Australia: CSIRO Publishing.

Chaston, K & Doley, D 2006, 'Mineral Particulates and Vegetation: Effects of Coal Dust, Overburden and Flyash on Light Interception and Leaf Temperature, *Clean Air and Environmental Quality*, vol. 40, pp. 40-44.

Cogger, HG 2014, *Reptiles and amphibians of Australia, Seventh edition*, Reed Books, Sydney.

Covacevich, JA, Couper, PJ & McDonald, KR 1996a, 'Lerista allanae (Scincidae: Lygosominae): 60 years from exhibition to extinction?', Memoirs of the Queensland Museum, vol. 39, pp. 247-256.

Covacevich, JA, Couper, PJ & McDonald, KR 1996b, Reptiles of Queensland's Brigalow Biogeographic Region: distributions, status and conservation, Australian Nature Conservation Agency (ANCA), Canberra.

Crome, F & Shields, J 1992, *The parrots and pigeons of Australia: The National Photographic Index of Australian wildlife*, Angus and Robertson, Pymble.

Debus, S 1998, *The birds of prey of Australia: a field guide*, Oxford University Press, Melbourne.

DAWE 2022a, *National Recovery Plan for the Koala* Phascolarctos cinereus (*combined populations of Queensland, New South Wales and the Australian Capital Territory).* Department of Agriculture, Water

and the Environment, Australian Government, Canberra. Available at: http://www.awe.gov.au/environment/biodiversity/threatened/publications/recovery/koala-2022.

DAWE 2022b, *Conservation Advice for* Phascolarctos cinereus *(Koala) combined populations of Queensland, New South Wales and the Australian Capital Territory*, Department of Agriculture, Water and the Environment, Australian Government, Canberra. Available online: http://www.environment.gov.au/biodiversity/threatened/species/pubs/85104-conservation-advice-12022022.pdf

Department of Climate Change, Energy, Environment and Water (DCCEEW) 2022a, *Approved conservation advice for* Hemiaspis damelii *(Grey Snake),* Department of Climate Change, Energy, Environment and Water, Australian Government, Canberra. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/1179-conservation-advice-05102022.pdf.

DCCEEW 2022b, *Conservation Advice for* Petauroides volans *(greater glider (southern and central*)). Department of Climate Change, Energy, the Environment and Water, Australian Government, Canberra. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/254-conservation-advice-05072022.pdf.

DCCEEW 2023a, *Conservation Advice for* Stagonopleura guttata *(diamond firetail)*, Department of Climate Change, Energy, Environment and Water, Australian Government, Canberra. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/59398-conservation-advice-31032023.pdf.

DCCEEW 2023b, *Draft Referral guidelines for the nationally listed Brigalow Belt reptiles v1.1*, Department of Climate Change, Energy, Environment and Water, Australian Government, Canberra, available from: https://www.dcceew.gov.au/sites/default/files/documents/draft-referral-guidelines-nationally-listed-brigalow-belt-reptiles.pdf

DCCEEW 2024, *Threat abatement plan for predation by feral cats 2024*, Department of Climate Change, Energy, Environment and Water, Australian Government, Canberra, available from: https://www.dcceew.gov.au/sites/default/files/documents/tap-for-predation-feral-cats-2024.pdf

DCCEEW 2025, *Species Profile and Threats Database*. Department of Climate Change, Energy, Environment and Water, Australian Government, Canberra, available from: https://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=17906

Department of the Environment (DoE) 2013a, *Matters of National Environmental Significance: significant impact guidelines 1.1*, Department of the Environment, Australian Government, Canberra. Available from: https://www.dcceew.gov.au/sites/default/files/documents/nes-guidelines_1.pdf

Department of the Environment (DE) 2013a, *Approved Conservation Advice for the Brigalow (*Acacia harpophylla *dominant and co-dominant) ecological community*, Department of the Environment, Australian Government, Canberra. Available from: http://www.environment.gov.au/biodiversity/threatened/communities/pubs/028-conservation-advice.pdf.

DE 2013b, *Matters of National Environmental Significance: significant impact guidelines 1.1*, Department of the Environment, Australian Government, Canberra. Available from: https://www.dcceew.gov.au/sites/default/files/documents/nes-guidelines_1.pdf

DE 2014, *Approved conservation advice for Furina dunmalli (Dunmall's snake)*, Department of the Environment, Australian Government, Canberra, available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/59254-conservation-advice.pdf.

DE 2015a, *Conservation advice Calidris ferruginea curlew sandpiper*, Department of the Environment, Canberra, available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/856-conservation-advice.pdf.

DE 2015b, Conservation Advice Grantiella picta painted honeyeater, Department of the Environment, , Australian Government, Canberra. Available at: http://www.environment.gov.au/biodiversity/threatened/species/pubs/470-conservation-advice.pdf.

DE 2015c, *Draft referral guideline for 14 birds listed as migratory species under the EPBC Act*, Department of the Environment, Australian Government, Canberra. Available from: https://www.dcceew.gov.au/sites/default/files/documents/migratory-birds-draft-referral-guideline.pdf

Department of Environment and Energy (DEE) 2016, *Threat abatement plan for competition and land degradation by rabbits*, Department of the Environment and Energy, Australian Government, Canberra.

DEE 2019, *Conservation Advice (including listing advice) for the Poplar Box Grassy Woodland on Alluvial Plains*, Department of the Environment and Energy, Australian Government, Canberra.

DERM 2012, National recovery plan for the red goshawk Erythrotriorchis radiatus, Report to the Department of Sustainability, Environment, Water, Population and Communities, Canberra, Queensland Department of Environment and Resource Management, Brisbane.

Department of Environment, Tourism, Science and Innovation (DETSI) 2025a, *Species profile* – Dichanthium queenslandicum, Department of Environment, Science and Innovation, Queensland Government, Brisbane. Available from: https://apps.des.qld.gov.au/species-search/details/?id=11064

DETSI 2025b, *Species profile* – Polianthion minutiflorum, Department of Environment, Science and Innovation, Queensland Government, Brisbane. Available from: https://apps.des.qld.gov.au/species-search/details/?id=30919

Department of Environment, Water, Heritage and the Arts (DEWHA) 2008a, *Approved conservation advice Eucalyptus raveretiana (Black Ironbox)*, Department of the Environment, Water, Heritage and the Arts, Australian Government, Canberra. Available from: https://www.environment.gov.au/biodiversity/threatened/species/pubs/16344-conservation-advice.pdf

DEWHA 2008b, *Threat abatement plan for predation by the European red fox*, Department of the Environment, Water, Heritage and the Arts, Australian Government, Canberra.

Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) 2011, *Threat abatement plan for the biological effects, including lethal toxic ingestion, caused by cane toads*. Department of Sustainability, Environment, Water, Population and Communities, Australian Government, Canberra. Available from: http://www.environment.gov.au/resource/threat-abatement-plan-biological-effects-including-lethal-toxic-ingestion-caused-cane-toads.

DSEWPC 2013, *Approved Conservation Advice for* Dichanthium queenslandicum *(king blue-grass)*, Canberra, ACT: Department of Sustainability, Environment, Water, Population and Communities, Australian Government, Canberra. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/5481-conservation-advice.pdf.

Dique, DS, Preece, HJ, Thompson, J and Villiers, DL 2004, 'Determining the distribution of a regional koala population in south-east Queensland for conservation management.' *Wildlife Research*, vol. 31, pp. 109-117.

Eddie, C 2012, 'Yakka Skink Egernia rugosa De Vis, 1888', in LK Curtis, AJ Dennis, KR McDonald, PM Kyne & SJS Debus (eds), *Queensland's threatened animals*, CSIRO Publishing, Collingwood, pp. 224-225.

Ehmann, H 1992, *Encyclopedia of Australian animals: reptiles*, Angus & Robertson, Sydney.

Eyre TJ 2002, *Habitat preferences and management of large gliding possums in southern Queensland*. Ph.D. thesis, Southern Cross University, Lismore.

Eyre TJ, Smith GC, Venz MF, Mathieson MT, Hogan LD, Starr, C, Winter, J and McDonald, K 2022, Guide to greater glider habitat in Queensland, report prepared for the Department of Agriculture, Water and the Environment, Canberra. Department of Environment and Science, Queensland Government, Brisbane.

Eyre TJ 2006, Regional habitat selection of large gliding possums at forest stand and landscape scales in southern Queensland, Australia. I. Greater glider (Petauroides volans). Forest Ecology and Management 235, 270-282. 10.1016/j.foreco.2006.08.338 Farmer, AM, 1993, The effects of dust on vegetation – a review, *Environmental Pollution*, vo. 79, pp. 63-75.

Ferguson, D & Matheson, M 2014, *Yakka skink, Egernia rugosa. Targeted species survey guidelines.* Queensland Herbarium, Department of Environment and Science, Queensland Government, Brisbane.

Field, JP, Belnap, J, Breshears, DD, Neff, JC, Okin, GS, Whicker, JJ, Painter, TH, Ravi, S, Reheis, MC & Reynolds, RL 2010, 'The ecology of dust', *Frontiers in Ecology and the Environment*, vol. 8, pp. 423-430.

Frith, HJ 1982, *Pigeons and doves of Australia*, Rigby, Adelaide.

Garnett, ST, Szabo, JK & Dutson, G 2011, *The action plan for Australian birds 2010*, CSIRO Publishing, Collingwood.

Garnett ST & Baker GB (eds) 2021, *The Action Plan for Australian Birds 2020*. CSIRO Publishing, Melbourne.

Geering, A, Agnew, L & Harding, S 2007, *Shorebirds of Australia*, CSIRO Publishing, Collingwood.

Gibbons, P and Lindenmayer DB 2002. *Tree hollows and wildlife conservation in Australia*, CSIRO Publishing, Collingwood.

Goldingay, RL 2012. 'Characteristics of tree hollows used by Australian arboreal and scansorial mammals.' *Australian Journal of Zoology*, vol. 59, pp. 277-294.

Gordos, M 2012, 'Fitzroy River Turtle Rheodytes leukops Legler & Cann, 1980', in LK Curtis, AJ Dennis, KR McDonald, PM Kyne & SJS Debus (eds), Queensland's threatened animals, CSIRO Publishing, Collingwood, pp. 205-206.

Hamann, M, Schäuble, CS, Limpus, DJ, Emerick, SP & Limpus, CJ 2007, *Management plan for the conservation of Elseya sp. [Burnett River] in the Burnett River Catchment*, Environmental Protection Agency, Brisbane.

Higgins, PJ (ed) 1999, *Handbook of Australian, New Zealand and Antarctic birds, Vol 4: parrots to dollarbird*, Oxford University Press, Melbourne.

Higgins, PJ & Davies, SJJF (eds) 1996, *Handbook of Australian, New Zealand and Antarctic birds, Vol. 3: snipe to pigeons*, Oxford University Press, Melbourne.

Higgins, PJ, Peter, JM & Steele, WK (eds) 2001, *Handbook of Australian, New Zealand and Antarctic birds, Vol. 5, tyrant-flycatchers to chats*, Oxford University Press, Melbourne.

Higgins, PJ, Peter, JM & Cowling, SJ (eds) 2006, *Handbook of Australian, New Zealand and Antarctic birds, Vol. 7: boatbill to starlings, Part A: boatbill to larks*, Oxford University Press, South Melbourne

Hobson, R 2012, 'Grey Snake *Hemiaspis damelii (*Gunther, 1876)', in LK Curtis, AJ Dennis, KR McDonald, PM Kyne & SJS Debus (eds), *Queensland's threatened animals*, CSIRO Publishing, Collingwood, pp. 245-246.

Hume, ID & Esson, C 1993, 'Nutrients, antinutrients and leaf selection by captive koalas (Phascolarctos cinereus).' *Australian Journal of Zoology*, vol. 41, pp. 379–392.

Kerswell, A, Kaveney, T, Evans, C & Appleby, L 2020, *Habitat descriptions for 12 threatened species, specific to central Queensland*. Report commissioned by BHP. Version 5, prepared January 2023.

Lane, BA 1987, *Shorebirds in Australia*, Nelson Publishers, Melbourne.

Marchant, S & Higgins, PJ (eds) 1990, *Handbook of Australian, New Zealand and Antarctic birds, Vol. 1: ratites to ducks, Part B, Australian pelican to ducks*, Oxford University Press, Melbourne.

Marchant, S & Higgins, PJ (eds) 1993, *Handbook of Australian, New Zealand and Antarctic birds. Vol. 2: raptors to lapwings*, Oxford University Press, Melbourne.

Martin, RW, Handasyde, KA & Krockenberger, A 2008, 'Koala Phascolarctos cinereus', in S Van Dyck & R Strahan (eds), *The mammals of Australia*, 3rd edn, Reed New Holland, Sydney, pp. 198-201.

Matheu, E & del Hoyo, J 1992, 'Family Threskiornithidae (Ibises and Spoonbills)', in J del Hoyo, A Elliott & J Sargatal (eds), *Handbook of the birds of the world, Vol. 5: ostrich to ducks*, Lynx Edicions, Barcelona, pp. 472-506.

McGregor DC, Padovan A, Georges A, Krockenberger A Yoon H & Youngentob KN 2020, 'Genetic evidence supports three previously described species of greater glider, *Petauroides volans, P. minor*, and *P. armillatus*.' *Scientific Reports* 10, 19284. Available at: https://doi.org/10.1038/s41598-020-76364-z

Melzer, A 2012, 'Ornamental Snake Denisonia maculata (Steindachner, 1867)', in LK Curtis, AJ Dennis, KR McDonald, PM Kyne & SJS Debus (eds), *Queensland's threatened animals*, CSIRO Publishing, Collingwood, pp. 241-242.

Menkhorst, P, Rogers, D & Clarke, R 2017, *The Australian bird guide*, CSIRO Publishing, Clayton South.

Moore, BD & Foley, WJ 2000, 'A review of feeding and diet selection in koalas (*Phascolarctos cinereus*)', *Australian Journal of Zoology*, vol. 48, pp. 317-333.

Oakwood, M 2008, 'Northern Quoll Dasyurus hallucatus,' in S Van Dyck & R Strahan (eds), *The mammals of Australia, Third edition*, Reed New Holland, Sydney, pp. 57-59.

Oliver, DL, Chambers, MA & Parker, DG 2003, 'Habitat and resource selection of the Painted Honeyeater (*Grantiella picta*) on the northern floodplains region of New South Wales.' *Emu*, vol. 103, pp. 171-176.

Pahl, LI & Hume, ID 1990, 'Preferences for Eucalyptus species of the New England Tablelands and initial development of an artificial diet for Koalas.' In: AK Lee, KA Handasyde and GD Sanson (eds.), *Biology of the Koala*. Surrey Beatty and Sons, Sydney. pp. 123–128.

Perry, G, Buchanan, BW, Fisher, RN, Salmon, M & Wise, SE 2008, 'Effects of artificial night lighting on amphibians and reptiles in urban environments.' In: JC Mitchell, RE Jung Brown & B Bartholomew (eds.), *Herpetological Conservation*, Society for the Study of Amphibians and Reptiles.

Pringle, JD 1985, *The waterbirds of Australia: the National Photographic Index of Australian wildlife*, Angus and Robertson, North Ryde.

Pringle, JD 1987, *The shorebirds of Australia: the National Photographic Index of Australian wildlife*, Angus & Robertson, North Ryde.

Queensland Herbarium (QH) 2011, Specimen label information. Queensland Herbarium. Accessed 27/02/2012.

Radle, AL 2007, Effects of noise on wildlife: a literature review, Available at: http://wfae.proscenia.net/library/articles

Reis, T 2012, 'Squatter Pigeon (southern subspecies) Geophaps scripta scripta (Temminck, 1821)', in LK Curtis, AJ Dennis, KR McDonald, PM Kyne & SJS Debus (eds), *Queensland's threatened animals*, CSIRO Publishing, Collingwood, pp. 254-255.

Rich, C & Longcore, (eds.) T 2006, *Ecological consequences of artificial night lighting*, Island Press, Washington.

Rogers, D, Hance, I, Paton, S, Tzaros, C, Griffioen, P, Herring, M, Jaensch, R, Oring, L, Silcocks, A & Weston, M 2005, 'The breeding bottleneck: breeding habitat and population decline in the Australian painted snipe', in P Straw, (ed), *Status and conservation of seabirds in the East Asian-Australasian Flyway: proceedings of the Australasian Shorebirds Conference, 13-15 Dec 2003*, Canberra, Wetlands International Global Series 18, International Wader Studies 17, Sydney, pp. 15-23. Seaton 2014, Surveys for the Red Goshawk (Erythrotriorchis radiatus) in South East Queensland, *The Sunbird*, vol 44, pp 52.

Smith, GC, Mathieson, M, and Hogan, L 2007. 'Home range and habitat use of a low-density population of Greater Glider, Petauroides volans (Pseudocheiridae: Marsupialia), in a hollow-limiting environment.' *Wildlife Research*, vol. 34, pp. 472-483.

Squatter Pigeon Workshop 2011, *Proceedings from the workshop for the Squatter Pigeon (southern),* 14-15 December 2011, Queensland Parks and Wildlife Service, Toowoomba.

Taylor, BD & Goldingay, RL 2009, 'Can Road-Crossing Structures Improve Population Viability of an Urban Gliding Mammal?', *Ecology and Society*, vol. 14, no. 13. [online] URL: http://www.ecologyandsociety.org/ vol14/iss2/art13/

Threatened Species Scientific Committee (TSSC) 2009, *Commonwealth Listing Advice on Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin.* Department of the Environment, Water, Heritage and the Arts, Australian Government, Canberra. Available from: http://www.environment.gov.au/biodiversity/threatened/communities/pubs/99-listing-advice.pdf.

TSSC 2013, *Commonwealth Listing Advice on* Dichanthium queenslandicum *(king blue-grass)*, Department of Sustainability, Environment, Water, Population and Communities, Australian Government, Canberra. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/5481-listing-advice.pdf.

TSSC 2015a, *Conservation Advice* Nyctophilus corbeni *south-eastern long-eared bat*. Department of the Environment, Australian Government, Canberra. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/83395-conservation_advice-01102015.pdf.

TSSC 2015b, *Conservation advice Geophaps scripta scripta squatter pigeon (southern),* Threatened Species Scientific Committee, Department of the Environment, Australian Government, Canberra. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/64440-conservation-advice-31102015.pdf

TSSC 2020, Conservation Advice Falco hypoleucos Grey Falcon. Department of Agriculture, Water and the Environment, Queensland Government, Canberra. Accessed at: http://www.environment.gov.au/biodiversity/threatened/species/pubs/929-conservation-advice-09072020.pdf.

TSSC 2024, *Conservation advice Ptilotus uncinellus*, Threatened Species Scientific Committee, Department of the Environment, Australian Government, Canberra. Available from: https://www.environment.gov.au/biodiversity/threatened/species/pubs/91385-conservation-advice-04092024.pdf

Threlfall, CG, Law, B, & Banks, PB 2013, 'The urban matrix and artificial light restricts the nightly ranging behaviour of Gould's long-eared bat (*Nyctophilus gouldi*).' *Austral Ecology*, vol. 38, pp. 921–930.

Tucker, AD, Limpus, CJ, Priest, TE, Cay, J, Glen, C & Guarino, E 2001, 'Home ranges of Fitzroy River turtles (Rheodytes leukops) overlap riffle zones: potential concerns related to river regulation', Biological Conservation, vol. 102, pp. 171-181.

Turbill, C. & M. Ellis 2006. Distribution and abundance of the south eastern form of the Greater Long-eared Bat *Nyctophilus timoriensis*. *Australian Mammalogy*. 28:1-7.

van der Ree, R, Ward, SJ, and Handasyde, KA 2004. 'Distribution and conservation status of possums and gliders in Victoria.' In *The Biology of Australian Possums and Gliders* (eds RL Goldingay and SM Jackson), pp. 91-110. Surrey Beatty and Sons, Sydney.

Wilson, S & Swan, G 2010, *A complete guide to reptiles of Australia, Third edition*, New Holland Publishers, Sydney.

Woinarski, JCZ & Ash, AJ 2002, 'Responses of vertebrates to pastoralism, military land use and landscape position in an Australian tropical savanna', *Austral Ecology*, vol. 27, pp. 311-323.

Woinarski, JCZ, Burbidge, AA & Harrison, PL 2014, *The action plan for Australian mammals 2012*, CSIRO Publishing, Collingwood.

Youngentob, KN, Marsh, KF & Skewes, J 2021, *A review of koala habitat assessment criteria and methods*, report prepared for the Department of Agriculture, Water and the Environment, Australian Government, Canberra.

8 LIMITATIONS AND DISCLAIMER

Epic Environmental Pty Ltd (Epic) has prepared the following report for the exclusive benefit of BM Alliance Coal Operations Pty Ltd and for the singular purpose of providing an assessment for potential significant impact to MNES associated with power line realignment works at Peak Downs Mine. All interpretations, finding or recommendations outlined in this report should be read and relied upon only in the context of the report as a whole.

The following report cannot be relied upon for any other purpose, at any other location or for the benefit of any other person, without the prior written consent of Epic. Except with Epic's prior written consent, this report may not be:

a. released to any other person, whether in whole or in part
b. used or relied upon by any other party
c. filed with any Governmental agency or other person or quoted or referred to in any public document

This report has been prepared based on information provided by the Client and other parties. In preparing this report Epic:

a. presumed the accuracy of the information provided by the Client (including its representatives)
b. has not undertaken any verification to the accuracy or reliability included in this information (with the exception where such verification formed part of the scope of works)
c. has not undertaken any independent investigations or enquiries outside the scope of works with respect to information provided for this report
d. provides no warranty or guarantee, expressed or implied, as to the accuracy or reliability of the information provided in this report

In recognition of the limited use of this report, the Client agrees that, to the maximum extent permitted by law, Epic (including its representatives and related entities) is not liable for any losses, claims, costs, expenses, damages (whether pursuant to statute, in contract or tort, for negligence or otherwise) suffered or incurred by the Client or any third party as a result of the information, findings, opinions, estimates, recommendations and conclusions provided in this report.

Without limiting the above, Epic (including its representatives and related entities) is not liable, in any way whatsoever:

e. for the use or reliance of this report for any purpose other than that for which it has been prepared
f. for any use or reliance upon this report by any person other than the Client
g. where another person has a different interpretation of the same information contained in the report
h. for any consequential or indirect losses, or for loss of profit or goodwill or any loss or corruption of any data, database or software

If a section of this disclaimer is determined by any court or other competent authority to be unlawful and/or unenforceable, the other sections of this disclaimer continue in effect. Where further information becomes available, or additional assumptions need to be made, Epic reserves its right to amend this report, but is not obliged to do so.

APPENDIX A 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: 05-Mar-2025

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	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	28
Listed Migratory Species:	10

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:	15
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	30
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

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

Community Name	Threatened Category	Presence Text	Buffer Status
Brigalow (Acacia harpophylla dominant and co-dominant)	Endangered	Community known to occur within area	In feature area
Natural Grasslands of the Queensland Central Highlands and northern Fitzroy Basin	Endangered	Community likely to occur within area	In feature area
Poplar Box Grassy Woodland on Alluvial Plains	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			
Calidris acuminata			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Erythrotriorchis radiatus			
Red Goshawk [942]	Endangered	Species or species habitat may occur within area	In feature area
Falco hypoleucos			
Grey Falcon [929]	Vulnerable	Species or species habitat likely to 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 may occur within area	In feature area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat known to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area	In feature area
Neochmia ruficauda ruficauda Star Finch (eastern), Star Finch (southern) [26027]	Endangered	Species or species habitat likely to occur within area	In feature area
Poephila cincta cincta Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area	In buffer area only
MAMMAL			
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
Macroderma gigas Ghost Bat [174]	Vulnerable	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

Scientific Name	Threatened Category	Presence Text	Buffer Status
Petauroides volans			
Greater Glider (southern and central) [254]	Endangered	Species or species habitat known to occur within area	In feature area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)			
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
PLANT			
Dichanthium queenslandicum			
King Blue-grass [5481]	Endangered	Species or species habitat known to occur within area	In feature area
Eucalyptus raveretiana			
Black Ironbox [16344]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Polianthion minutiflorum			
[82772]	Vulnerable	Species or species habitat may occur within area	In feature area
Samadera bidwillii			
Quassia [29708]	Vulnerable	Species or species habitat may occur within area	In feature area
REPTILE			
Denisonia maculata			
Ornamental Snake [1193]	Vulnerable	Species or species habitat known to occur within area	In feature area
Egernia rugosa			
Yakka Skink [1420]	Vulnerable	Species or species habitat may 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
Hemiaspis damelii			
Grey Snake [1179]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Lerista allanae			
Allan's Lerista, Retro Slider [1378]	Endangered	Species or species habitat may occur within area	In feature area
Rheodytes leukops			
Fitzroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle, White-eyed River Diver [1761]	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
Motacilla flava			
Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to 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 may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pandion haliaetus			
Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Tringa nebularia			
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may 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
Calidris acuminata			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to 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

Scientific Name	Threatened Category	Presence Text	Buffer Status
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 may occur within area overfly marine area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area overfly marine area	In buffer area only

Extra Information

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Caval Ridge Mine Horse Pit Extension, Bowen Basin	2021/9031		Post-Approval	In buffer area only
Isaac Downs coal mine project, near Moranbah, Qld	2019/8413		Post-Approval	In buffer area only
Moranbah South Project 2013 Seismic Exploration Program, Qld	2013/6814		Completed	In buffer area only
Olive Downs Project	2005/2377		Post-Approval	In buffer area only
Olive Downs Project Mine Site and Access Road	2017/7867		Post-Approval	In buffer area only
Peak Downs Mine Continuation Project	2022/09350		Assessment	In feature area
Peak Downs Mine Power Line Realignment Project	2024/09983		Assessment	In feature area
Vulcan Coal Mine ? Matilda Pit and Ancillary Infrastructure	2022/09361		Assessment	In buffer area only
Vulcan South Coal Mine	2023/09708		Post-Approval	In buffer area only
Winchester South Project Electricity Transmission Line, near Moranbah, Qld	2019/8458		Approval	In feature area
Winchester South Project Mine Site and Access Road, near Moranbah, Qld	2019/8460		Approval	In feature area
Winchester South Project Water Pipeline, near Moranbah, Qld	2019/8459		Approval	In feature area
Controlled action				
7 North Dam Extension Project - Peak Downs Mine	2012/6260	Controlled Action	Completed	In buffer area only
Arrow Bowen Pipeline (CSG), QLD	2012/6459	Controlled Action	Post-Approval	In buffer area only
Bowen Gas Project	2012/6377	Controlled Action	Post-Approval	In feature area
Caval Ridge Open Cut Coal Mine Project	2008/4417	Controlled Action	Post-Approval	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Eagle Downs Coal Mine Central Queensland	2008/3945	Controlled Action	Post-Approval	In feature area
install & operate gas pipeline	2005/2059	Controlled Action	Post-Approval	In buffer area only
Moranbah South Project Coal Mine, QLD	2012/6337	Controlled Action	Post-Approval	In feature area
Olive Downs Project Rail Spur	2017/7870	Controlled Action	Post-Approval	In buffer area only
Olive Downs Project Water Pipeline	2017/7868	Controlled Action	Post-Approval	In buffer area only
Open Cut Coal Mining	2004/1770	Controlled Action	Post-Approval	In feature area
Relocation of approximately 16km of Dysart Road and associated service infrastructure	2013/6868	Controlled Action	Post-Approval	In feature area
Vulcan Complex Project	2020/8676	Controlled Action	Post-Approval	In buffer area only
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Integrated Isaac Plains Project	2006/3043	Not Controlled Action	Completed	In buffer area only
Open cut coal mine 7km NE of Moranbah (Isaac Plains)	2005/2070	Not Controlled Action	Completed	In buffer area only
Vulcan Bulk Sample Project	2019/8504	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
Moranbah South Feasibility Seismic Survey	2010/5497	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Referral decision				
Expansion of open cut coal mine and diversion of creeks in existing mine operati	2006/2845	Referral Decision	Completed	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 is 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 on the contents of this report.

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 point locations and environmental data layers.

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 when time permits.

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 breeding sites; and
- 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.

Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

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: -22.1924
Longitude: 148.1921
Distance: 25
Email: ysuen@epicenvironmental.com.au
Date submitted: Wednesday 05 Mar 2025 12:49:55
Date extracted: Wednesday 05 Mar 2025 13:00:03

The number of records retrieved = 738

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Bufonidae	*Rhinella marina*	cane toad	Y			39
animals	amphibians	Hylidae	*Cyclorana alboguttata*	greenstripe frog		C		6
animals	amphibians	Hylidae	*Cyclorana brevipes*	superb collared frog		C		4
animals	amphibians	Hylidae	*Cyclorana novaehollandiae*	eastern snapping frog		C		3
animals	amphibians	Hylidae	*Cyclorana verrucosa*	rough collared frog		C		2/1
animals	amphibians	Hylidae	*Litoria caerulea*	common green treefrog		C		7
animals	amphibians	Hylidae	*Litoria fallax*	eastern sedgefrog		C		1
animals	amphibians	Hylidae	*Litoria inermis*	bumpy rocketfrog		C		5
animals	amphibians	Hylidae	*Litoria latopalmata*	broad palmed rocketfrog		C		8
animals	amphibians	Hylidae	*Litoria rothii*	eastern laughing treefrog		C		1
animals	amphibians	Hylidae	*Litoria rubella*	ruddy treefrog		C		9
animals	amphibians	Limnodynastidae	*Limnodynastes peronii*	striped marshfrog		C		1
animals	amphibians	Limnodynastidae	*Limnodynastes salmini*	salmon striped frog		C		8
animals	amphibians	Limnodynastidae	*Limnodynastes tasmaniensis*	spotted grassfrog		C		12
animals	amphibians	Limnodynastidae	*Limnodynastes terraereginae*	scarlet sided pobblebonk		C		3
animals	amphibians	Limnodynastidae	*Platyplectrum ornatum*	ornate burrowing frog		C		21
animals	amphibians	Myobatrachidae	*Pseudophryne major*	great brown broodfrog		C		1
animals	amphibians	Myobatrachidae	*Uperoleia rugosa*	chubby gungan		C		1
animals	birds	Acanthizidae	*Acanthiza apicalis*	inland thornbill		C		3
animals	birds	Acanthizidae	*Acanthiza chrysorrhoa*	yellow-rumped thornbill		C		3
animals	birds	Acanthizidae	*Acanthiza nana*	yellow thornbill		C		5
animals	birds	Acanthizidae	*Acanthiza reguloides*	buff-rumped thornbill		C		4
animals	birds	Acanthizidae	*Gerygone fusca*	western gerygone		C		1
animals	birds	Acanthizidae	*Gerygone olivacea*	white-throated gerygone		C		26
animals	birds	Acanthizidae	*Pyrrholaemus sagittatus*	speckled warbler		C		3
animals	birds	Acanthizidae	*Smicrornis brevirostris*	weebill		C		31
animals	birds	Accipitridae	*Accipiter cirrocephalus*	collared sparrowhawk		C		3
animals	birds	Accipitridae	*Accipiter fasciatus*	brown goshawk		C		4
animals	birds	Accipitridae	*Aquila audax*	wedge-tailed eagle		C		14
animals	birds	Accipitridae	*Aviceda subcristata*	Pacific baza		C		3
animals	birds	Accipitridae	*Circus approximans*	swamp harrier		C		1
animals	birds	Accipitridae	*Circus assimilis*	spotted harrier		C		2
animals	birds	Accipitridae	*Elanus axillaris*	black-shouldered kite		C		7
animals	birds	Accipitridae	*Haliaeetus leucogaster*	white-bellied sea-eagle		C		4
animals	birds	Accipitridae	*Haliastur sphenurus*	whistling kite		C		31
animals	birds	Accipitridae	*Hieraaetus morphnoides*	little eagle		C		1
animals	birds	Accipitridae	*Milvus migrans*	black kite		C		13
animals	birds	Acrocephalidae	*Acrocephalus australis*	Australian reed-warbler		C		10
animals	birds	Aegothelidae	*Aegotheles cristatus*	Australian owlet-nightjar		C		4
animals	birds	Alaudidae	*Mirafra javanica*	Horsfield's bushlark		C		9
animals	birds	Alcedinidae	*Dacelo leachii*	blue-winged kookaburra		C		11
animals	birds	Alcedinidae	*Dacelo novaeguineae*	laughing kookaburra		C		31
animals	birds	Alcedinidae	*Todiramphus macleayii*	forest kingfisher		C		12
animals	birds	Alcedinidae	*Todiramphus pyrrhopygius*	red-backed kingfisher		C		7
animals	birds	Alcedinidae	*Todiramphus sanctus*	sacred kingfisher		C		9
animals	birds	Anatidae	*Anas gracilis*	grey teal		C		29

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Anatidae	*Anas superciliosa*	Pacific black duck		C		29
animals	birds	Anatidae	*Aythya australis*	hardhead		C		18
animals	birds	Anatidae	*Chenonetta jubata*	Australian wood duck		C		26
animals	birds	Anatidae	*Cygnus atratus*	black swan		C		12
animals	birds	Anatidae	*Dendrocygna arcuata*	wandering whistling-duck		C		2
animals	birds	Anatidae	*Dendrocygna eytoni*	plumed whistling-duck		C		6
animals	birds	Anatidae	*Malacorhynchus membranaceus*	pink-eared duck		C		1
animals	birds	Anatidae	*Nettapus coromandelianus*	cotton pygmy-goose		C		9
animals	birds	Anhingidae	*Anhinga novaehollandiae*	Australasian darter		C		22
animals	birds	Anseranatidae	*Anseranas semipalmata*	magpie goose		C		1
animals	birds	Ardeidae	*Ardea alba modesta*	eastern great egret		C		19
animals	birds	Ardeidae	*Ardea intermedia*	intermediate egret		C		12
animals	birds	Ardeidae	*Ardea pacifica*	white-necked heron		C		13
animals	birds	Ardeidae	*Bubulcus ibis*	cattle egret		C		3
animals	birds	Ardeidae	*Egretta garzetta*	little egret		C		4
animals	birds	Ardeidae	*Egretta novaehollandiae*	white-faced heron		C		19
animals	birds	Ardeidae	*Nycticorax caledonicus*	nankeen night-heron		C		5
animals	birds	Artamidae	*Artamus cinereus*	black-faced woodswallow		C		10
animals	birds	Artamidae	*Artamus leucorynchus*	white-breasted woodswallow		C		17
animals	birds	Artamidae	*Artamus personatus*	masked woodswallow		C		2
animals	birds	Artamidae	*Artamus superciliosus*	white-browed woodswallow		C		1
animals	birds	Artamidae	*Cracticus nigrogularis*	pied butcherbird		C		35
animals	birds	Artamidae	*Cracticus torquatus*	grey butcherbird		C		22
animals	birds	Artamidae	*Gymnorhina tibicen*	Australian magpie		C		48
animals	birds	Artamidae	*Strepera graculina*	pied currawong		C		8
animals	birds	Burhinidae	*Burhinus grallarius*	bush stone-curlew		C		3
animals	birds	Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo		C		29
animals	birds	Cacatuidae	*Eolophus roseicapilla*	galah		C		33
animals	birds	Cacatuidae	*Nymphicus hollandicus*	cockatiel		C		9
animals	birds	Campephagidae	*Coracina maxima*	ground cuckoo-shrike		C		1
animals	birds	Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike		C		33
animals	birds	Campephagidae	*Coracina papuensis*	white-bellied cuckoo-shrike		C		2
animals	birds	Campephagidae	*Edolisoma tenuirostre*	common cicadabird		C		5
animals	birds	Campephagidae	*Lalage tricolor*	white-winged triller		C		6
animals	birds	Casuariidae	*Dromaius novaehollandiae*	emu		C		15
animals	birds	Charadriidae	*Elseyornis melanops*	black-fronted dotterel		C		15
animals	birds	Charadriidae	*Vanellus miles*	masked lapwing		C		15
animals	birds	Charadriidae	*Vanellus miles novaehollandiae*	masked lapwing (southern subspecies)		C		7
animals	birds	Ciconiidae	*Ephippiorhynchus asiaticus*	black-necked stork		C		2
animals	birds	Cisticolidae	*Cisticola exilis*	golden-headed cisticola		C		14
animals	birds	Climacteridae	*Climacteris picumnus*	brown treecreeper		C		1
animals	birds	Columbidae	*Geopelia cuneata*	diamond dove		C		2
animals	birds	Columbidae	*Geopelia humeralis*	bar-shouldered dove		C		14
animals	birds	Columbidae	*Geopelia placida*	peaceful dove		C		18
animals	birds	Columbidae	*Geophaps scripta scripta*	squatter pigeon (southern subspecies)		V	V	26
animals	birds	Columbidae	*Ocyphaps lophotes*	crested pigeon		C		25

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Columbidae	*Phaps chalcoptera*	common bronzewing		C		5
animals	birds	Coraciidae	*Eurystomus orientalis*	dollarbird		C		17
animals	birds	Corcoracidae	*Corcorax melanorhamphos*	white-winged chough		C		8
animals	birds	Corcoracidae	*Struthidea cinerea*	apostlebird		C		38
animals	birds	Corvidae	*Corvus coronoides*	Australian raven		C		2
animals	birds	Corvidae	*Corvus orru*	Torresian crow		C		71
animals	birds	Cuculidae	*Cacomantis flabelliformis*	fan-tailed cuckoo		C		3
animals	birds	Cuculidae	*Cacomantis pallidus*	pallid cuckoo		C		7
animals	birds	Cuculidae	*Cacomantis variolosus*	brush cuckoo		C		1
animals	birds	Cuculidae	*Centropus phasianinus*	pheasant coucal		C		12
animals	birds	Cuculidae	*Chalcites basalis*	Horsfield's bronze-cuckoo		C		9
animals	birds	Cuculidae	*Chalcites lucidus*	shining bronze-cuckoo		C		2
animals	birds	Cuculidae	*Chalcites minutillus*	little bronze-cuckoo		C		1
animals	birds	Cuculidae	*Eudynamys orientalis*	eastern koel		C		4
animals	birds	Cuculidae	*Scythrops novaehollandiae*	channel-billed cuckoo		C		7
animals	birds	Dicaeidae	*Dicaeum hirundinaceum*	mistletoebird		C		12
animals	birds	Dicruridae	*Dicrurus bracteatus*	spangled drongo		C		5
animals	birds	Estrildidae	*Lonchura castaneothorax*	chestnut-breasted mannikin		C		4
animals	birds	Estrildidae	*Neochmia modesta*	plum-headed finch		C		3
animals	birds	Estrildidae	*Taeniopygia bichenovii*	double-barred finch		C		20
animals	birds	Estrildidae	*Taeniopygia guttata*	zebra finch		C		4
animals	birds	Eurostopodidae	*Eurostopodus mystacalis*	white-throated nightjar		C		5
animals	birds	Falconidae	*Falco berigora*	brown falcon		C		16
animals	birds	Falconidae	*Falco cenchroides*	nankeen kestrel		C		23
animals	birds	Falconidae	*Falco longipennis*	Australian hobby		C		5
animals	birds	Falconidae	*Falco peregrinus macropus*	Australian peregrine falcon		C		1
animals	birds	Gruidae	*Antigone rubicunda*	brolga		C		24
animals	birds	Hirundinidae	*Hirundo neoxena*	welcome swallow		C		8
animals	birds	Hirundinidae	*Petrochelidon ariel*	fairy martin		C		12
animals	birds	Hirundinidae	*Petrochelidon nigricans*	tree martin		C		11
animals	birds	Jacanidae	*Irediparra gallinacea*	comb-crested jacana		C		2
animals	birds	Laridae	*Chlidonias hybrida*	whiskered tern		C		1
animals	birds	Laridae	*Chroicocephalus novaehollandiae*	silver gull		C		2
animals	birds	Laridae	*Gelochelidon macrotarsa*	Australian tern		C		1
animals	birds	Laridae	*Hydroprogne caspia*	Caspian tern		SL		1
animals	birds	Locustellidae	*Cincloramphus cruralis*	brown songlark		C		2
animals	birds	Locustellidae	*Cincloramphus mathewsi*	rufous songlark		C		9
animals	birds	Locustellidae	*Cincloramphus timoriensis*	tawny grassbird		C		4
animals	birds	Maluridae	*Malurus assimilis*	purple-backed fairy-wren		C		11
animals	birds	Maluridae	*Malurus cyaneus*	superb fairy-wren		C		1
animals	birds	Maluridae	*Malurus melanocephalus*	red-backed fairy-wren		C		34
animals	birds	Megapodiidae	*Alectura lathami*	Australian brush-turkey		C		1
animals	birds	Meliphagidae	*Acanthagenys rufogularis*	spiny-cheeked honeyeater		C		4
animals	birds	Meliphagidae	*Caligavis chrysops*	yellow-faced honeyeater		C		1
animals	birds	Meliphagidae	*Entomyzon cyanotis*	blue-faced honeyeater		C		30
animals	birds	Meliphagidae	*Gavicalis virescens*	singing honeyeater		C		31

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Meliphagidae	*Lichmera indistincta*	brown honeyeater		C		21
animals	birds	Meliphagidae	*Manorina flavigula*	yellow-throated miner		C		16
animals	birds	Meliphagidae	*Manorina melanocephala*	noisy miner		C		16
animals	birds	Meliphagidae	*Meliphaga lewinii*	Lewin's honeyeater		C		1
animals	birds	Meliphagidae	*Melithreptus albogularis*	white-throated honeyeater		C		28
animals	birds	Meliphagidae	*Melithreptus brevirostris*	brown-headed honeyeater		C		1
animals	birds	Meliphagidae	*Myzomela obscura*	dusky honeyeater		C		1
animals	birds	Meliphagidae	*Myzomela sanguinolenta*	scarlet honeyeater		C		1
animals	birds	Meliphagidae	*Philemon citreogularis*	little friarbird		C		22
animals	birds	Meliphagidae	*Philemon corniculatus*	noisy friarbird		C		32
animals	birds	Meliphagidae	*Plectorhyncha lanceolata*	striped honeyeater		C		15
animals	birds	Meliphagidae	*Ptilotula fusca*	fuscous honeyeater		C		1
animals	birds	Meliphagidae	*Stomiopera flava*	yellow honeyeater		C		2
animals	birds	Meropidae	*Merops ornatus*	rainbow bee-eater		C		29
animals	birds	Monarchidae	*Grallina cyanoleuca*	magpie-lark		C		51
animals	birds	Monarchidae	*Monarcha melanopsis*	black-faced monarch		C		1
animals	birds	Monarchidae	*Myiagra inquieta*	restless flycatcher		C		4
animals	birds	Monarchidae	*Myiagra rubecula*	leaden flycatcher		C		11
animals	birds	Motacillidae	*Anthus novaeseelandiae*	Australasian pipit		C		17
animals	birds	Neosittidae	*Daphoenositta chrysoptera*	varied sittella		C		10
animals	birds	Oriolidae	*Oriolus sagittatus*	olive-backed oriole		C		9
animals	birds	Oriolidae	*Sphecotheres vieilloti*	Australasian figbird		C		6
animals	birds	Otididae	*Ardeotis australis*	Australian bustard		C		12
animals	birds	Pachycephalidae	*Colluricincla harmonica*	grey shrike-thrush		C		15
animals	birds	Pachycephalidae	*Pachycephala pectoralis*	golden whistler		C		1
animals	birds	Pachycephalidae	*Pachycephala rufiventris*	rufous whistler		C		21
animals	birds	Pardalotidae	*Pardalotus striatus*	striated pardalote		C		40
animals	birds	Passeridae	*Passer domesticus*	house sparrow	Y			1
animals	birds	Pelecanidae	*Pelecanus conspicillatus*	Australian pelican		C		16
animals	birds	Petroicidae	*Eopsaltria australis*	eastern yellow robin		C		1
animals	birds	Petroicidae	*Microeca fascinans*	jacky winter		C		5
animals	birds	Petroicidae	*Petroica goodenovii*	red-capped robin		C		2
animals	birds	Phalacrocoracidae	*Microcarbo melanoleucos*	little pied cormorant		C		19
animals	birds	Phalacrocoracidae	*Phalacrocorax carbo*	great cormorant		C		1
animals	birds	Phalacrocoracidae	*Phalacrocorax sulcirostris*	little black cormorant		C		19
animals	birds	Phalacrocoracidae	*Phalacrocorax varius*	pied cormorant		C		4
animals	birds	Phasianidae	*Coturnix pectoralis*	stubble quail		C		2
animals	birds	Phasianidae	*Synoicus ypsilophorus*	brown quail		C		11
animals	birds	Podargidae	*Podargus strigoides*	tawny frogmouth		C		19
animals	birds	Podicipedidae	*Podiceps cristatus*	great crested grebe		C		8
animals	birds	Podicipedidae	*Tachybaptus novaehollandiae*	Australasian grebe		C		25
animals	birds	Pomatostomidae	*Pomatostomus temporalis*	grey-crowned babbler		C		25
animals	birds	Psittaculidae	*Aprosmictus erythropterus*	red-winged parrot		C		15
animals	birds	Psittaculidae	*Melopsittacus undulatus*	budgerigar		C		1
animals	birds	Psittaculidae	*Parvipsitta pusilla*	little lorikeet		C		1
animals	birds	Psittaculidae	*Platycercus adscitus*	pale-headed rosella		C		34

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Psittaculidae	*Platycercus adscitus palliceps*	pale-headed rosella (southern form)		C		2
animals	birds	Psittaculidae	*Trichoglossus chlorolepidotus*	scaly-breasted lorikeet		C		3
animals	birds	Psittaculidae	*Trichoglossus moluccanus*	rainbow lorikeet		C		36
animals	birds	Ptilonorhynchidae	*Chlamydera maculata*	spotted bowerbird		C		10
animals	birds	Ptilonorhynchidae	*Chlamydera nuchalis*	great bowerbird		C		2
animals	birds	Rallidae	*Fulica atra*	Eurasian coot		C		10
animals	birds	Rallidae	*Gallinula tenebrosa*	dusky moorhen		C		13
animals	birds	Rallidae	*Gallirallus philippensis*	buff-banded rail		C		1
animals	birds	Rallidae	*Porphyrio melanotus*	purple swamphen		C		10
animals	birds	Rallidae	*Porzana fluminea*	Australian spotted crake		C		1
animals	birds	Recurvirostridae	*Himantopus leucocephalus*	pied stilt		C		11
animals	birds	Rhipiduridae	*Rhipidura albiscapa*	grey fantail		C		20
animals	birds	Rhipiduridae	*Rhipidura leucophrys*	willie wagtail		C		36
animals	birds	Rhipiduridae	*Rhipidura rufifrons*	rufous fantail		C		1
animals	birds	Scolopacidae	*Calidris acuminata*	sharp-tailed sandpiper		V	V	1
animals	birds	Scolopacidae	*Tringa nebularia*	common greenshank		E	E	1
animals	birds	Scolopacidae	*Tringa stagnatilis*	marsh sandpiper		SL		3
animals	birds	Strigidae	*Ninox boobook*	southern boobook		C		8
animals	birds	Strigidae	*Ninox connivens*	barking owl		C		1
animals	birds	Sturnidae	*Acridotheres tristis*	common myna	Y			2
animals	birds	Threskiornithidae	*Platalea flavipes*	yellow-billed spoonbill		C		5
animals	birds	Threskiornithidae	*Platalea regia*	royal spoonbill		C		14
animals	birds	Threskiornithidae	*Plegadis falcinellus*	glossy ibis		SL		2
animals	birds	Threskiornithidae	*Threskiornis molucca*	Australian white ibis		C		8
animals	birds	Threskiornithidae	*Threskiornis spinicollis*	straw-necked ibis		C		11
animals	birds	Turnicidae	*Turnix varius*	painted button-quail		C		3
animals	birds	Tytonidae	*Tyto javanica*	eastern barn owl		C		5
animals	birds	Tytonidae	*Tyto longimembris*	eastern grass owl		C		1
animals	birds	Zosteropidae	*Zosterops lateralis*	silvereye		C		1
animals	insects	Nymphalidae	*Acraea andromacha andromacha*	glasswing				1
animals	insects	Nymphalidae	*Euploea corinna*	common crow				2
animals	insects	Nymphalidae	*Junonia villida villida*	meadow argus				1
animals	insects	Pieridae	*Belenois java teutonia*	caper white				2
animals	insects	Pieridae	*Catopsilia pomona*	lemon migrant				2
animals	insects	Pieridae	*Cepora perimale scyllara*	caper gull (Australian subspecies)				1
animals	mammals	Bovidae	*Bos taurus*	European cattle	Y			2
animals	mammals	Canidae	*Canis familiaris*	dog	Y			2
animals	mammals	Canidae	*Canis familiaris (dingo)*	dingo				2
animals	mammals	Canidae	*Canis sp.*		Y			3
animals	mammals	Canidae	*Vulpes vulpes*	red fox	Y			2
animals	mammals	Cervidae	*Axis axis*	chital	Y			4
animals	mammals	Dasyuridae	*Planigale maculata*	common planigale		C		5
animals	mammals	Dasyuridae	*Planigale tenuirostris*	narrow-nosed planigale		C		2
animals	mammals	Dasyuridae	*Sminthopsis macroura*	stripe-faced dunnart		C		1
animals	mammals	Emballonuridae	*Saccolaimus flaviventris*	yellow-bellied sheathtail bat		C		9
animals	mammals	Emballonuridae	*Taphozous troughtoni*	Troughton's sheathtail bat		C		2

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	mammals	Felidae	*Felis catus*	cat	Y			5
animals	mammals	Leporidae	*Oryctolagus cuniculus*	rabbit	Y			22
animals	mammals	Macropodidae	*Macropus giganteus*	eastern grey kangaroo		C		16
animals	mammals	Macropodidae	*Notamacropus dorsalis*	black-striped wallaby		C		2
animals	mammals	Macropodidae	*Osphranter robustus*	common wallaroo		C		4
animals	mammals	Macropodidae	*Petrogale inornata*	unadorned rock-wallaby		C		1
animals	mammals	Macropodidae	*Petrogale sp.*			C		1
animals	mammals	Macropodidae	*Wallabia bicolor*	swamp wallaby		C		2
animals	mammals	Miniopteridae	*Miniopterus australis*	little bent-wing bat		C		4
animals	mammals	Miniopteridae	*Miniopterus orianae oceanensis*	eastern bent-wing bat		C		4
animals	mammals	Molossidae	*Austronomus australis*	white-striped freetail bat		C		1
animals	mammals	Molossidae	*Chaerephon jobensis*	northern freetail bat		C		10
animals	mammals	Molossidae	*Mormopterus lumsdenae*	northern free-tailed bat		C		5
animals	mammals	Molossidae	*Mormopterus ridei*	eastern free-tailed bat		C		5
animals	mammals	Muridae	*Hydromys chrysogaster*	water rat		C		7
animals	mammals	Muridae	*Leggadina lakedownensis*	Lakeland Downs mouse		C		1
animals	mammals	Muridae	*Mus musculus*	house mouse	Y			18
animals	mammals	Muridae	*Pseudomys gracilicaudatus*	eastern chestnut mouse		C		5
animals	mammals	Muridae	*Pseudomys mimulus*	eastern delicate mouse		C		5
animals	mammals	Muridae	*Pseudomys patrius*	eastern pebble-mound mouse		C		1
animals	mammals	Muridae	*Rattus fuscipes*	bush rat		C		1
animals	mammals	Muridae	*Rattus rattus*	black rat	Y			1
animals	mammals	Peramelidae	*Isoodon macrourus*	northern brown bandicoot		C		2
animals	mammals	Petauridae	*Petaurus norfolcensis*	squirrel glider		C		2
animals	mammals	Petauridae	*Petaurus notatus*	Krefft's glider		C		10
animals	mammals	Phalangeridae	*Trichosurus vulpecula*	common brushtail possum		C		10
animals	mammals	Phascolarctidae	*Phascolarctos cinereus*	koala		E	E	87
animals	mammals	Potoroidae	*Aepyprymnus rufescens*	rufous bettong		C		11
animals	mammals	Pseudocheiridae	*Petauroides volans volans*	southern greater glider		E	E	107
animals	mammals	Pteropodidae	*Pteropus scapulatus*	little red flying-fox		C		8
animals	mammals	Suidae	*Sus scrofa*	pig	Y			8
animals	mammals	Tachyglossidae	*Tachyglossus aculeatus*	short-beaked echidna		SL		19
animals	mammals	Vespertilionidae	*Chalinolobus gouldii*	Gould's wattled bat		C		15
animals	mammals	Vespertilionidae	*Chalinolobus morio*	chocolate wattled bat		C		7
animals	mammals	Vespertilionidae	*Chalinolobus nigrogriseus*	hoary wattled bat		C		4
animals	mammals	Vespertilionidae	*Chalinolobus picatus*	little pied bat		C		12
animals	mammals	Vespertilionidae	*Chalinolobus sp.*			C		2
animals	mammals	Vespertilionidae	*Nyctophilus bifax*	northern long-eared bat		C		1
animals	mammals	Vespertilionidae	*Nyctophilus geoffroyi*	lesser long-eared bat		C		1
animals	mammals	Vespertilionidae	*Nyctophilus gouldi*	Gould's long-eared bat		C		3
animals	mammals	Vespertilionidae	*Nyctophilus sp.*			C		1
animals	mammals	Vespertilionidae	*Scotorepens balstoni*	inland broad-nosed bat		C		5
animals	mammals	Vespertilionidae	*Scotorepens greyii*	little broad-nosed bat		C		12
animals	mammals	Vespertilionidae	*Scotorepens sanborni*	northern broad-nosed bat		C		3
animals	mammals	Vespertilionidae	*Scotorepens sp.*			C		1
animals	mammals	Vespertilionidae	*Vespadelus baverstocki*	inland forest bat		C		4

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	mammals	Vespertilionidae	*Vespadelus troughtoni*	eastern cave bat		C		8
animals	ray-finned fishes	Ambassidae	*Ambassis agassizii*	Agassiz's glassfish				30
animals	ray-finned fishes	Atherinidae	*Craterocephalus stercusmuscarum*	flyspecked hardyhead				8
animals	ray-finned fishes	Cichlidae	*Oreochromis mossambica*	Mozambique mouthbrooder	Y			14
animals	ray-finned fishes	Clupeidae	*Nematalosa erebi*	bony bream				16
animals	ray-finned fishes	Eleotridae	*Hypseleotris galii*	firetail gudgeon				1
animals	ray-finned fishes	Eleotridae	*Hypseleotris klunzingeri*	western carp gudgeon				3
animals	ray-finned fishes	Eleotridae	*Hypseleotris sp.*					27
animals	ray-finned fishes	Eleotridae	*Mogurnda adspersa*	southern purplespotted gudgeon				8
animals	ray-finned fishes	Eleotridae	*Oxyeleotris lineolata*	sleepy cod				7
animals	ray-finned fishes	Eleotridae	*Philypnodon grandiceps*	flathead gudgeon				1
animals	ray-finned fishes	Melanotaeniidae	*Melanotaenia splendida splendida*	eastern rainbowfish				28
animals	ray-finned fishes	Percichthyidae	*Macquaria ambigua*	golden perch				3
animals	ray-finned fishes	Plotosidae	*Neosilurus hyrtlii*	Hyrtl's catfish				11
animals	ray-finned fishes	Plotosidae	*Porochilus rendahli*	Rendahl's catfish				1
animals	ray-finned fishes	Plotosidae	*Tandanus tandanus*	freshwater catfish				1
animals	ray-finned fishes	Poeciliidae	*Gambusia holbrooki*	mosquitofish	Y			3
animals	ray-finned fishes	Poeciliidae	*Xiphophorus maculatus*	platy	Y			2
animals	ray-finned fishes	Retropinnidae	*Retropinna semoni*	Australian smelt				1
animals	ray-finned fishes	Terapontidae	*Leiopotherapon unicolor*	spangled perch				17
animals	reptiles	Agamidae	*Amphibolurus burnsi*	Burns's dragon		C		6
animals	reptiles	Agamidae	*Chlamydosaurus kingii*	frilled lizard		C		1
animals	reptiles	Agamidae	*Diporiphora australis*	tommy roundhead		C		15
animals	reptiles	Agamidae	*Pogona barbata*	bearded dragon		C		7
animals	reptiles	Boidae	*Antaresia maculosa*	spotted python		C		10
animals	reptiles	Boidae	*Aspidites melanocephalus*	black-headed python		C		4
animals	reptiles	Carphodactylidae	*Nephrurus asper*	spiny knob-tailed gecko		C		4
animals	reptiles	Chelidae	*Chelodina longicollis*	eastern snake-necked turtle		C		3
animals	reptiles	Chelidae	*Emydura macquarii krefftii*	Krefft's river turtle		C		6
animals	reptiles	Chelidae	*Emydura sp.*			C		1
animals	reptiles	Colubridae	*Boiga irregularis*	brown tree snake		C		4
animals	reptiles	Colubridae	*Dendrelaphis punctulatus*	green tree snake		C		3
animals	reptiles	Colubridae	*Tropidonophis mairii*	freshwater snake		C		5
animals	reptiles	Diplodactylidae	*Amalosia queenslandia*	Queensland zigzag gecko		C		3
animals	reptiles	Diplodactylidae	*Diplodactylus platyurus*	eastern fat-tailed gecko		C		8
animals	reptiles	Diplodactylidae	*Diplodactylus vittatus*	wood gecko		C		2
animals	reptiles	Diplodactylidae	*Lucasium steindachneri*	Steindachner's gecko		C		8
animals	reptiles	Diplodactylidae	*Oedura monilis*	ocellated velvet gecko		C		10
animals	reptiles	Diplodactylidae	*Strophurus williamsi*	soft-spined gecko		C		4
animals	reptiles	Elapidae	*Acanthophis antarcticus*	common death adder		V		1
animals	reptiles	Elapidae	*Brachyurophis australis*	coral snake		C		1
animals	reptiles	Elapidae	*Cryptophis boschmai*	Carpentaria whip snake		C		5
animals	reptiles	Elapidae	*Demansia psammophis*	yellow-faced whipsnake		C		4
animals	reptiles	Elapidae	*Denisonia maculata*	ornamental snake		V	V	42
animals	reptiles	Elapidae	*Denisonia sp.*			C		1
animals	reptiles	Elapidae	*Furina diadema*	red-naped snake		C		3

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	reptiles	Elapidae	*Hoplocephalus bitorquatus*	pale-headed snake		C		4
animals	reptiles	Elapidae	*Pseudonaja textilis*	eastern brown snake		C		13
animals	reptiles	Elapidae	*Suta suta*	myall snake		C		6
animals	reptiles	Gekkonidae	*Gehyra catenata*	chain-backed dtella		C		32
animals	reptiles	Gekkonidae	*Gehyra dubia*	dubious dtella		C		98
animals	reptiles	Gekkonidae	*Gehyra versicolor*			C		2
animals	reptiles	Gekkonidae	*Heteronotia binoei*	Bynoe's gecko		C		64
animals	reptiles	Pygopodidae	*Lialis burtonis*	Burton's legless lizard		C		4
animals	reptiles	Pygopodidae	*Paradelma orientalis*	brigalow scaly-foot		C		2
animals	reptiles	Scincidae	*Bellatorias frerei*	major skink		C		1
animals	reptiles	Scincidae	*Carlia munda*	shaded-litter rainbow-skink		C		4
animals	reptiles	Scincidae	*Carlia pectoralis sensu lato*			C		2
animals	reptiles	Scincidae	*Carlia rubigo*	orange-flanked rainbow skink		C		12
animals	reptiles	Scincidae	*Carlia schmeltzii*	robust rainbow-skink		C		1
animals	reptiles	Scincidae	*Carlia sp.*			C		1
animals	reptiles	Scincidae	*Carlia vivax*	tussock rainbow-skink		C		1
animals	reptiles	Scincidae	*Cryptoblepharus adamsi*	Adams' snake-eyed 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		6
animals	reptiles	Scincidae	*Cryptoblepharus sp.*			C		1
animals	reptiles	Scincidae	*Cryptoblepharus virgatus sensu lato*			C		1
animals	reptiles	Scincidae	*Ctenotus spaldingi*	straight-browed ctenotus		C		13
animals	reptiles	Scincidae	*Ctenotus strauchii*	eastern barred wedgesnout ctenotus		C		1
animals	reptiles	Scincidae	*Ctenotus taeniolatus*	copper-tailed skink		C		10
animals	reptiles	Scincidae	*Eulamprus sp.*			C		1
animals	reptiles	Scincidae	*Glaphyromorphus punctulatus*	fine-spotted mulch-skink		C		1
animals	reptiles	Scincidae	*Lampropholis delicata*	dark-flecked garden sunskink		C		1
animals	reptiles	Scincidae	*Lerista fragilis*	eastern mulch slider		C		12
animals	reptiles	Scincidae	*Lygisaurus foliorum*	tree-base litter-skink		C		12
animals	reptiles	Scincidae	*Menetia greyii*	common dwarf skink		C		3
animals	reptiles	Scincidae	*Morethia boulengeri*	south-eastern morethia skink		C		5
animals	reptiles	Scincidae	*Morethia taeniopleura*	fire-tailed skink		C		7
animals	reptiles	Scincidae	*Pygmaeascincus timlowi*	dwarf litter-skink		C		2
animals	reptiles	Scincidae	*Tiliqua rugosa*	shingle-back		C		1
animals	reptiles	Scincidae	*Tiliqua scincoides scincoides*	eastern bluetongue		C		2
animals	reptiles	Typhlopidae	*Anilios affinis*	small-headed blind snake		C		2
animals	reptiles	Typhlopidae	*Anilios ligatus*	robust blind snake		C		1
animals	reptiles	Varanidae	*Varanus tristis*	black-tailed monitor		C		7
animals	uncertain	Indeterminate	*Indeterminate*	Unknown or Code Pending				1
fungi	lecanoromycetes	Parmeliaceae	*Xanthoparmelia exuviata*			C		1/1
fungi	lecanoromycetes	Porinaceae	*Porina subargillacea*			C		1/1
plants	land plants	Acanthaceae	*Brunoniella australis*	blue trumpet		C		12
plants	land plants	Acanthaceae	*Harnieria sp. (Lornesleigh E.J.Thompson+ CHA75)*			C		1/1
plants	land plants	Acanthaceae	*Pseuderanthemum variabile*	pastel flower		C		2/1
plants	land plants	Acanthaceae	*Rostellularia adscendens*			C		25
plants	land plants	Acanthaceae	*Rostellularia adscendens var. hispida*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Aizoaceae	*Trianthema portulacastrum*	black pigweed	Y			1
plants	land plants	Aizoaceae	*Trianthema triquetrum*	red spinach		C		1
plants	land plants	Amaranthaceae	*Alternanthera denticulata var. micrantha*			C		4
plants	land plants	Amaranthaceae	*Alternanthera nana*	hairy joyweed		C		1/1
plants	land plants	Amaranthaceae	*Ptilotus*					1
plants	land plants	Amaranthaceae	*Ptilotus uncinellus*			E	E	2/2
plants	land plants	Amaryllidaceae	*Crinum*					1
plants	land plants	Apiaceae	*Eryngium plantagineum*	long eryngium		C		2/2
plants	land plants	Apocynaceae	*Alstonia constricta*	bitterbark		C		2/1
plants	land plants	Apocynaceae	*Carissa ovata*	currantbush		C		5
plants	land plants	Apocynaceae	*Leichhardtia australis*			C		1
plants	land plants	Apocynaceae	*Marsdenia*					1
plants	land plants	Apocynaceae	*Parsonsia lanceolata*	northern silkpod		C		3/2
plants	land plants	Apocynaceae	*Wrightia saligna*			C		1/1
plants	land plants	Asphodelaceae	*Bulbine bulbosa*	golden lily		C		2
plants	land plants	Asteraceae	*Apowollastonia spilanthoides*			C		9/3
plants	land plants	Asteraceae	*Bidens pilosa*		Y			1
plants	land plants	Asteraceae	*Calotis cuneifolia*	burr daisy		C		1
plants	land plants	Asteraceae	*Calotis dentex*	white burr daisy		C		1/1
plants	land plants	Asteraceae	*Coronidium rupicola*			C		1/1
plants	land plants	Asteraceae	*Cyanthillium cinereum*			C		1/1
plants	land plants	Asteraceae	*Emilia sonchifolia*		Y			2
plants	land plants	Asteraceae	*Euchiton involucratus*			C		1
plants	land plants	Asteraceae	*Gamochaeta pensylvanica*		Y			1/1
plants	land plants	Asteraceae	*Parthenium hysterophorus*	parthenium weed	Y			36
plants	land plants	Asteraceae	*Peripleura hispidula*			C		2
plants	land plants	Asteraceae	*Pterocaulon redolens*			C		2
plants	land plants	Asteraceae	*Rutidosis leucantha*			C		1/1
plants	land plants	Asteraceae	*Senecio pinnatifolius var. pinnatifolius*			C		2
plants	land plants	Asteraceae	*Sonchus oleraceus*	common sowthistle	Y			1
plants	land plants	Asteraceae	*Sphaeromorphaea australis*			C		1/1
plants	land plants	Asteraceae	*Sphaeromorphaea subintegra*			C		1/1
plants	land plants	Asteraceae	*Tridax procumbens*	tridax daisy	Y			1/1
plants	land plants	Asteraceae	*Vittadinia pustulata*			C		1/1
plants	land plants	Boraginaceae	*Ehretia membranifolia*	weeping koda		C		1
plants	land plants	Boraginaceae	*Trichodesma zeylanicum*			C		5
plants	land plants	Brassicaceae	*Cardamine hirsuta*	common bittercress	Y			1/1
plants	land plants	Byttneriaceae	*Hannafordia shanesii*			C		1/1
plants	land plants	Cactaceae	*Harrisia martinii*		Y			6
plants	land plants	Cactaceae	*Opuntia*					1
plants	land plants	Cactaceae	*Opuntia tomentosa*	velvety tree pear	Y			3
plants	land plants	Campanulaceae	*Wahlenbergia gracilis*	sprawling bluebell		SL		2
plants	land plants	Campanulaceae	*Wahlenbergia queenslandica*			SL		1/1
plants	land plants	Capparaceae	*Capparis*					2
plants	land plants	Capparaceae	*Capparis anomala*			C		5
plants	land plants	Capparaceae	*Capparis lasiantha*	nipan		C		8

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Capparaceae	*Capparis loranthifolia*			C		1
plants	land plants	Capparaceae	*Capparis mitchellii*			C		1
plants	land plants	Caryophyllaceae	*Polycarpaea longiflora*			C		5
plants	land plants	Casuarinaceae	*Allocasuarina luehmannii*	bull oak		C		2
plants	land plants	Casuarinaceae	*Casuarina cunninghamiana*			C		1
plants	land plants	Celastraceae	*Denhamia cunninghamii*			C		2/1
plants	land plants	Chenopodiaceae	*Dysphania melanocarpa forma melanocarpa*			C		1/1
plants	land plants	Chenopodiaceae	*Enchylaena tomentosa*			C		7
plants	land plants	Chenopodiaceae	*Maireana microphylla*			C		1
plants	land plants	Chenopodiaceae	*Sclerolaena lanicuspis*			C		1/1
plants	land plants	Chenopodiaceae	*Sclerolaena muricata var. muricata*			C		2
plants	land plants	Chenopodiaceae	*Sclerolaena muricata var. villosa*			C		3
plants	land plants	Chenopodiaceae	*Sclerolaena tetracuspis*	brigalow burr		C		1/1
plants	land plants	Cleomaceae	*Arivela viscosa*			C		6
plants	land plants	Combretaceae	*Terminalia oblongata*			C		1
plants	land plants	Commelinaceae	*Commelina*					1
plants	land plants	Convolvulaceae	*Evolvulus alsinoides*			C		4
plants	land plants	Convolvulaceae	*Evolvulus alsinoides var. decumbens*			C		1
plants	land plants	Convolvulaceae	*Ipomoea brownii*			C		1/1
plants	land plants	Convolvulaceae	*Ipomoea calobra*			C		1/1
plants	land plants	Convolvulaceae	*Ipomoea lonchophylla*			C		29
plants	land plants	Convolvulaceae	*Jacquemontia paniculata*			C		3/1
plants	land plants	Convolvulaceae	*Polymeria longifolia*	polymeria		C		17
plants	land plants	Convolvulaceae	*Polymeria pusilla*			C		7
plants	land plants	Convolvulaceae	*Xenostegia tridentata*			C		1/1
plants	land plants	Cucurbitaceae	*Cucumis melo*			C		5
plants	land plants	Cyperaceae	*Cyperus alopecuroides*			C		1/1
plants	land plants	Cyperaceae	*Cyperus alterniflorus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus betchei*			C		2
plants	land plants	Cyperaceae	*Cyperus compressus*		Y			1/1
plants	land plants	Cyperaceae	*Cyperus concinnus*			C		2
plants	land plants	Cyperaceae	*Cyperus conicus var. conicus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus exaltatus*	tall flatsedge		C		3
plants	land plants	Cyperaceae	*Cyperus flaccidus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus gilesii*			C		23
plants	land plants	Cyperaceae	*Cyperus gracilis*			C		1/1
plants	land plants	Cyperaceae	*Cyperus iria*			C		1/1
plants	land plants	Cyperaceae	*Cyperus isabellinus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus javanicus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus polystachyos var. polystachyos*			C		1/1
plants	land plants	Cyperaceae	*Cyperus pulchellus*			C		1/1
plants	land plants	Cyperaceae	*Fimbristylis depauperata*			C		1/1
plants	land plants	Cyperaceae	*Schoenoplectiella dissachantha*			C		2
plants	land plants	Cyperaceae	*Scleria rugosa*			C		1/1
plants	land plants	Erythroxylaceae	*Erythroxylum australe*	cocaine tree		C		4
plants	land plants	Euphorbiaceae	*Bertya pedicellata*			NT		14/6

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Euphorbiaceae	*Beyeria viscosa*			C		1/1
plants	land plants	Euphorbiaceae	*Euphorbia coghlanii*			C		6
plants	land plants	Euphorbiaceae	*Euphorbia drummondii*			C		9/1
plants	land plants	Goodeniaceae	*Goodenia glabra*			C		18
plants	land plants	Goodeniaceae	*Goodenia grandiflora*			C		3/3
plants	land plants	Goodeniaceae	*Goodenia sp. (Mt Castletower M.D.Crisp 2753)*			C		2/2
plants	land plants	Haloragaceae	*Haloragis stricta*			C		13
plants	land plants	Hemerocallidaceae	*Dianella*					1
plants	land plants	Hemerocallidaceae	*Dianella longifolia*			C		3
plants	land plants	Hypericaceae	*Hypericum gramineum*			C		2/2
plants	land plants	Lamiaceae	*Basilicum polystachyon*			C		3
plants	land plants	Lamiaceae	*Clerodendrum floribundum*			C		1
plants	land plants	Lamiaceae	*Leucas lavandulifolia*		Y			1/1
plants	land plants	Lamiaceae	*Mentha*					1
plants	land plants	Lamiaceae	*Ocimum tenuiflorum*			C		3
plants	land plants	Lamiaceae	*Prostanthera collina*			C		1/1
plants	land plants	Laxmanniaceae	*Eustrephus latifolius*	wombat berry		C		1
plants	land plants	Laxmanniaceae	*Lomandra multiflora*			C		3
plants	land plants	Leguminosae	*Acacia bancroftiorum*			C		1/1
plants	land plants	Leguminosae	*Acacia catenulata*	bendee		C		1
plants	land plants	Leguminosae	*Acacia conferta*			C		1/1
plants	land plants	Leguminosae	*Acacia cowleana*			C		1/1
plants	land plants	Leguminosae	*Acacia crassa*			C		1
plants	land plants	Leguminosae	*Acacia excelsa*			C		2
plants	land plants	Leguminosae	*Acacia fodinalis*			C		1/1
plants	land plants	Leguminosae	*Acacia harpophylla*	brigalow		C		6
plants	land plants	Leguminosae	*Acacia julifera subsp. curvinervia*			C		3/3
plants	land plants	Leguminosae	*Acacia leiocalyx*			C		1
plants	land plants	Leguminosae	*Acacia oswaldii*	miljee		C		1
plants	land plants	Leguminosae	*Acacia salicina*	doolan		C		3
plants	land plants	Leguminosae	*Acacia shirleyi*	lancewood		C		2
plants	land plants	Leguminosae	*Aeschynomene indica*	budda pea		C		2
plants	land plants	Leguminosae	*Albizia canescens*			C		1/1
plants	land plants	Leguminosae	*Cassia brewsteri*			C		10
plants	land plants	Leguminosae	*Crotalaria*					1
plants	land plants	Leguminosae	*Crotalaria dissitiflora*			C		1
plants	land plants	Leguminosae	*Crotalaria juncea*	sunhemp	Y			17/1
plants	land plants	Leguminosae	*Crotalaria montana*			C		4
plants	land plants	Leguminosae	*Cullen tenax*	emu-foot		C		9
plants	land plants	Leguminosae	*Desmodium*					1
plants	land plants	Leguminosae	*Desmodium campylocaulon*			C		8
plants	land plants	Leguminosae	*Desmodium macrocarpum*			C		4/3
plants	land plants	Leguminosae	*Desmodium tortuosum*	Florida beggar-weed	Y			1/1
plants	land plants	Leguminosae	*Galactia muelleri*			C		7
plants	land plants	Leguminosae	*Galactia tenuiflora*			C		2
plants	land plants	Leguminosae	*Galactia tenuiflora var. lucida*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Leguminosae	*Glycine falcata*			C		14
plants	land plants	Leguminosae	*Glycine latifolia*			C		2
plants	land plants	Leguminosae	*Glycine tomentella*	woolly glycine		C		1/1
plants	land plants	Leguminosae	*Heliodendron basalticum*			C		3
plants	land plants	Leguminosae	*Indigofera linifolia*			C		11
plants	land plants	Leguminosae	*Lysiphyllum*					2
plants	land plants	Leguminosae	*Lysiphyllum carronii*	ebony tree		C		1
plants	land plants	Leguminosae	*Macroptilium atropurpureum*	siratro	Y			1
plants	land plants	Leguminosae	*Neptunia gracilis forma gracilis*			C		22
plants	land plants	Leguminosae	*Pycnospora lutescens*	pycnospora		C		1/1
plants	land plants	Leguminosae	*Rhynchosia minima*			C		5
plants	land plants	Leguminosae	*Rhynchosia minima var. minima*			C		18
plants	land plants	Leguminosae	*Senna*					2
plants	land plants	Leguminosae	*Senna artemisioides subsp. zygophylla*			C		1
plants	land plants	Leguminosae	*Sesbania cannabina*			C		8
plants	land plants	Leguminosae	*Stylosanthes hamata*		Y			6/1
plants	land plants	Leguminosae	*Tephrosia*					2/2
plants	land plants	Leguminosae	*Tephrosia dietrichiae*			C		1/1
plants	land plants	Leguminosae	*Tephrosia filipes*			C		3
plants	land plants	Leguminosae	*Tephrosia filipes subsp. filipes*			C		1/1
plants	land plants	Leguminosae	*Vachellia farnesiana*		Y			23
plants	land plants	Leguminosae	*Vigna lanceolata*			C		29
plants	land plants	Leguminosae	*Vigna radiata var. sublobata*			C		5
plants	land plants	Leguminosae	*Zornia*					1
plants	land plants	Leguminosae	*Zornia areolata*			C		1/1
plants	land plants	Leguminosae	*Zornia muelleriana*			C		1
plants	land plants	Leguminosae	*Zornia muelleriana subsp. muelleriana*			C		1/1
plants	land plants	Leguminosae	*Zornia muriculata subsp. angustata*			C		1/1
plants	land plants	Linderniaceae	*Torenia crustacea*			C		1/1
plants	land plants	Loganiaceae	*Mitrasacme*					1/1
plants	land plants	Loranthaceae	*Lysiana subfalcata*			C		1/1
plants	land plants	Malvaceae	*Abelmoschus ficulneus*	native rosella		C		12/1
plants	land plants	Malvaceae	*Abutilon fraseri*	dwarf lantern flower		C		1
plants	land plants	Malvaceae	*Abutilon hannii*			C		2
plants	land plants	Malvaceae	*Hibiscus*					29
plants	land plants	Malvaceae	*Hibiscus divaricatus*			C		1/1
plants	land plants	Malvaceae	*Hibiscus heterophyllus*			C		1/1
plants	land plants	Malvaceae	*Hibiscus meraukensis*	Merauke hibiscus		C		1
plants	land plants	Malvaceae	*Hibiscus sp. (Emerald S.L.Everist 2124)*			C		1/1
plants	land plants	Malvaceae	*Hibiscus sturtii*			C		2/1
plants	land plants	Malvaceae	*Hibiscus verdcourtii*			C		1/1
plants	land plants	Malvaceae	*Malvastrum americanum*		Y			22
plants	land plants	Malvaceae	*Malvastrum americanum var. stellatum*			C		1/1
plants	land plants	Malvaceae	*Sida*					4
plants	land plants	Malvaceae	*Sida corrugata*			C		22
plants	land plants	Malvaceae	*Sida cunninghamii*			C		2

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Malvaceae	*Sida everistiana*			C		1
plants	land plants	Malvaceae	*Sida fibulifera*			C		2/2
plants	land plants	Malvaceae	*Sida hackettiana*			C		1
plants	land plants	Malvaceae	*Sida sp. (Aramac E.J.Thompson+ JER192)*			C		2/2
plants	land plants	Malvaceae	*Sida sp. (Charters Towers E.J.THompson+ CHA456)*			C		1/1
plants	land plants	Malvaceae	*Sida sp. (Musselbrook M.B.Thomas+ MRS437)*			C		1
plants	land plants	Malvaceae	*Sida spinosa*	spiny sida	Y			23/1
plants	land plants	Malvaceae	*Sida trichopoda*			C		15/1
plants	land plants	Marsileaceae	*Marsilea drummondii*	common nardoo		C		1
plants	land plants	Marsileaceae	*Marsilea mutica*	shiny nardoo		C		2
plants	land plants	Meliaceae	*Owenia acidula*	emu apple		C		3
plants	land plants	Meliaceae	*Owenia x reliqua*			C		1/1
plants	land plants	Molluginaceae	*Glinus lotoides*	hairy carpet weed		C		1/1
plants	land plants	Myrtaceae	*Blakella dallachiana*			C		3
plants	land plants	Myrtaceae	*Blakella tessellaris*			C		2
plants	land plants	Myrtaceae	*Corymbia*					1
plants	land plants	Myrtaceae	*Corymbia aureola*			C		9/9
plants	land plants	Myrtaceae	*Corymbia clarksoniana*			C		4/2
plants	land plants	Myrtaceae	*Corymbia erythrophloia*	variable-barked bloodwood		C		4
plants	land plants	Myrtaceae	*Eucalyptus*					2
plants	land plants	Myrtaceae	*Eucalyptus crebra*	narrow-leaved red ironbark		C		1
plants	land plants	Myrtaceae	*Eucalyptus orgadophila*	mountain coolibah		C		1
plants	land plants	Myrtaceae	*Eucalyptus persistens*			C		1/1
plants	land plants	Myrtaceae	*Eucalyptus populnea*	poplar box		C		5
plants	land plants	Myrtaceae	*Eucalyptus tholiformis*			C		2/2
plants	land plants	Myrtaceae	*Lysicarpus angustifolius*	budgeroo		C		1/1
plants	land plants	Myrtaceae	*Melaleuca*					1
plants	land plants	Myrtaceae	*Melaleuca fluviatilis*			C		1/1
plants	land plants	Myrtaceae	*Melaleuca nervosa*			C		1
plants	land plants	Myrtaceae	*Myrtaceae*					2
plants	land plants	Nyctaginaceae	*Boerhavia burbidgeana*			C		1
plants	land plants	Nyctaginaceae	*Boerhavia dominii*			C		2
plants	land plants	Nyctaginaceae	*Boerhavia sp. (St George A.Hill AQ399299)*			C		1/1
plants	land plants	Oleaceae	*Jasminum didymum subsp. lineare*			C		1
plants	land plants	Onagraceae	*Ludwigia octovalvis*	willow primrose		C		1
plants	land plants	Orchidaceae	*Cymbidium canaliculatum*			SL		1
plants	land plants	Oxalidaceae	*Oxalis radicosa*			C		3
plants	land plants	Passifloraceae	*Passiflora foetida*		Y			1/1
plants	land plants	Phyllanthaceae	*Flueggea leucopyrus*			C		1/1
plants	land plants	Phyllanthaceae	*Phyllanthus maderaspatensis*			C		3
plants	land plants	Phyllanthaceae	*Phyllanthus virgatus*			C		10
plants	land plants	Phyllanthaceae	*Synostemon rhytidospermus*			C		1/1
plants	land plants	Picrodendraceae	*Petalostigma pubescens*	quinine tree		C		4
plants	land plants	Pittosporaceae	*Bursaria spinosa subsp. spinosa*			C		1
plants	land plants	Pittosporaceae	*Pittosporum angustifolium*			C		1
plants	land plants	Pittosporaceae	*Pittosporum spinescens*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Plantaginaceae	*Scoparia dulcis*	scoparia	Y			1/1
plants	land plants	Poaceae	*Alloteropsis cimicina*			C		2/2
plants	land plants	Poaceae	*Alloteropsis semialata*	cockatoo grass		C		2
plants	land plants	Poaceae	*Ancistrachne uncinulata*	hooky grass		C		1/1
plants	land plants	Poaceae	*Aristida*					2
plants	land plants	Poaceae	*Aristida calycina var. praealta*			C		1/1
plants	land plants	Poaceae	*Aristida gracilipes*			C		1/1
plants	land plants	Poaceae	*Aristida holathera var. holathera*			C		2/1
plants	land plants	Poaceae	*Aristida jerichoensis var. jerichoensis*			C		1/1
plants	land plants	Poaceae	*Aristida jerichoensis var. subspinulifera*			C		2/2
plants	land plants	Poaceae	*Aristida latifolia*	feathertop wiregrass		C		28
plants	land plants	Poaceae	*Aristida leptopoda*	white speargrass		C		12
plants	land plants	Poaceae	*Aristida muricata*			C		1/1
plants	land plants	Poaceae	*Aristida personata*			C		4
plants	land plants	Poaceae	*Aristida queenslandica var. dissimilis*			C		1
plants	land plants	Poaceae	*Aristida queenslandica var. queenslandica*			C		1/1
plants	land plants	Poaceae	*Astrebla elymoides*	hoop mitchell grass		C		3
plants	land plants	Poaceae	*Astrebla lappacea*	curly mitchell grass		C		7
plants	land plants	Poaceae	*Astrebla squarrosa*	bull mitchell grass		C		25
plants	land plants	Poaceae	*Bothriochloa decipiens var. decipiens*			C		1/1
plants	land plants	Poaceae	*Bothriochloa erianthoides*	satintop grass		C		2
plants	land plants	Poaceae	*Bothriochloa ewartiana*	desert bluegrass		C		30
plants	land plants	Poaceae	*Bothriochloa pertusa*		Y			6/2
plants	land plants	Poaceae	*Brachyachne convergens*	common native couch		C		32
plants	land plants	Poaceae	*Calyptochloa gracillima subsp. gracillima*			C		1/1
plants	land plants	Poaceae	*Cenchrus ciliaris*		Y			43/1
plants	land plants	Poaceae	*Cenchrus pennisetiformis*		Y			1/1
plants	land plants	Poaceae	*Chloris divaricata var. divaricata*	slender chloris		C		2
plants	land plants	Poaceae	*Chloris inflata*	purpletop chloris	Y			2
plants	land plants	Poaceae	*Chloris truncata*			C		3
plants	land plants	Poaceae	*Chloris virgata*	feathertop rhodes grass	Y			9
plants	land plants	Poaceae	*Chrysopogon fallax*			C		6/3
plants	land plants	Poaceae	*Cymbopogon ambiguus*	lemon grass		C		1/1
plants	land plants	Poaceae	*Cymbopogon bombycinus*	silky oilgrass		C		2/1
plants	land plants	Poaceae	*Dactyloctenium radulans*	button grass		C		1
plants	land plants	Poaceae	*Dichanthium aristatum*	angleton grass	Y			2/2
plants	land plants	Poaceae	*Dichanthium queenslandicum*			V	E	3/3
plants	land plants	Poaceae	*Dichanthium sericeum*			C		30
plants	land plants	Poaceae	*Dichanthium sericeum subsp. sericeum*			C		1/1
plants	land plants	Poaceae	*Digitaria*					1/1
plants	land plants	Poaceae	*Digitaria ammophila*	silky umbrella grass		C		6/1
plants	land plants	Poaceae	*Digitaria bicornis*			C		1
plants	land plants	Poaceae	*Digitaria brownii*			C		1/1
plants	land plants	Poaceae	*Digitaria papposa*			C		1/1
plants	land plants	Poaceae	*Elytrophorus spicatus*			C		1
plants	land plants	Poaceae	*Enneapogon gracilis*	slender nineawn		C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Poaceae	*Enneapogon truncatus*			C		22
plants	land plants	Poaceae	*Enneapogon virens*			C		2/1
plants	land plants	Poaceae	*Enteropogon acicularis*	curly windmill grass		C		2
plants	land plants	Poaceae	*Enteropogon unispiceus*			C		1/1
plants	land plants	Poaceae	*Eragrostis*					2
plants	land plants	Poaceae	*Eragrostis brownii*	Brown's lovegrass		C		1/1
plants	land plants	Poaceae	*Eragrostis lacunaria*	purple lovegrass		C		2/1
plants	land plants	Poaceae	*Eragrostis parviflora*	weeping lovegrass		C		2
plants	land plants	Poaceae	*Eragrostis pilosa*	soft lovegrass	Y			1/1
plants	land plants	Poaceae	*Eragrostis schultzii*			C		1/1
plants	land plants	Poaceae	*Eragrostis sororia*			C		3
plants	land plants	Poaceae	*Eragrostis speciosa*			C		1/1
plants	land plants	Poaceae	*Eragrostis tenellula*	delicate lovegrass		C		7
plants	land plants	Poaceae	*Eriachne mucronata*			C		1
plants	land plants	Poaceae	*Eriachne mucronata forma (Alpha C.E.Hubbard 7882)*			C		1/1
plants	land plants	Poaceae	*Eriachne sp. (Dugald River B.K.Simon+ 3007)*			C		1/1
plants	land plants	Poaceae	*Eriochloa crebra*	spring grass		C		30/2
plants	land plants	Poaceae	*Eriochloa procera*	slender cupgrass		C		2
plants	land plants	Poaceae	*Eriochloa pseudoacrotricha*			C		25
plants	land plants	Poaceae	*Eulalia aurea*	silky browntop		C		1/1
plants	land plants	Poaceae	*Heteropogon contortus*	black speargrass		C		20
plants	land plants	Poaceae	*Hyparrhenia rufa subsp. rufa*		Y			2/2
plants	land plants	Poaceae	*Iseilema vaginiflorum*	red flinders grass		C		34/1
plants	land plants	Poaceae	*Leptochloa digitata*			C		1
plants	land plants	Poaceae	*Melinis repens*	red natal grass	Y			12
plants	land plants	Poaceae	*Mnesithea formosa*			C		1/1
plants	land plants	Poaceae	*Moorochloa eruciformis*		Y			9/1
plants	land plants	Poaceae	*Ophiuros exaltatus*			C		3
plants	land plants	Poaceae	*Panicum decompositum var. decompositum*			C		23
plants	land plants	Poaceae	*Panicum effusum*			C		2/1
plants	land plants	Poaceae	*Panicum queenslandicum*			C		8
plants	land plants	Poaceae	*Panicum queenslandicum var. acuminatum*			C		2/2
plants	land plants	Poaceae	*Paspalidium globoideum*	sago grass		C		22/1
plants	land plants	Poaceae	*Paspalidium rarum*			C		1/1
plants	land plants	Poaceae	*Paspalum mandiocanum*		Y			1/1
plants	land plants	Poaceae	*Poaceae*					3
plants	land plants	Poaceae	*Sehima nervosum*			C		1/1
plants	land plants	Poaceae	*Setaria paspalidioides*			C		1/1
plants	land plants	Poaceae	*Sporobolus actinocladus*	katoora grass		C		1/1
plants	land plants	Poaceae	*Sporobolus caroli*	fairy grass		C		3
plants	land plants	Poaceae	*Sporobolus creber*			C		15
plants	land plants	Poaceae	*Thellungia advena*	coolibah grass		C		4/1
plants	land plants	Poaceae	*Themeda triandra*	kangaroo grass		C		15/1
plants	land plants	Poaceae	*Thyridolepis mitchelliana*	mulga mitchell grass		C		1
plants	land plants	Poaceae	*Urochloa holosericea subsp. velutina*			C		1/1
plants	land plants	Poaceae	*Urochloa mosambicensis*	sabi grass	Y			1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Poaceae	*Urochloa piligera*			C		1
plants	land plants	Polygalaceae	*Polygala crassitesta*			C		13
plants	land plants	Pontederiaceae	*Pontederia cyanea*			C		3
plants	land plants	Portulacaceae	*Portulaca oleracea*	pigweed	Y			1
plants	land plants	Portulacaceae	*Portulaca pilosa*		Y			1
plants	land plants	Proteaceae	*Grevillea*					2
plants	land plants	Proteaceae	*Grevillea parallela*			C		1
plants	land plants	Proteaceae	*Grevillea pteridifolia*	golden parrot tree		C		2/1
plants	land plants	Proteaceae	*Hakea lorea subsp. lorea*			C		1
plants	land plants	Rhamnaceae	*Alphitonia excelsa*	soap tree		C		3
plants	land plants	Rhamnaceae	*Ventilago viminalis*	supplejack		C		5
plants	land plants	Rubiaceae	*Dolichocarpa coerulescens*			C		1/1
plants	land plants	Rubiaceae	*Larsenaikia ochreata*			C		2/2
plants	land plants	Rubiaceae	*Paranotis mitrasacmoides subsp. trachymenoides*			C		6
plants	land plants	Rubiaceae	*Pavetta granitica*			C		1/1
plants	land plants	Rubiaceae	*Psydrax odorata*			C		1
plants	land plants	Rubiaceae	*Richardia brasiliensis*	white eye	Y			1/1
plants	land plants	Rubiaceae	*Scleromitrion galioides*			C		1/1
plants	land plants	Rubiaceae	*Spermacoce brachystema*			C		1
plants	land plants	Rutaceae	*Flindersia dissosperma*			C		1
plants	land plants	Rutaceae	*Geijera salicifolia*	brush wilga		C		1/1
plants	land plants	Rutaceae	*Murraya lucida*			C		1/1
plants	land plants	Santalaceae	*Santalum lanceolatum*			SL		3
plants	land plants	Sapindaceae	*Alectryon diversifolius*	scrub boonaree		C		2
plants	land plants	Sapindaceae	*Alectryon oleifolius subsp. elongatus*			C		3
plants	land plants	Sapindaceae	*Atalaya*					1
plants	land plants	Sapindaceae	*Atalaya hemiglauca*			C		5
plants	land plants	Sapotaceae	*Planchonella pohlmaniana*			C		1/1
plants	land plants	Scrophulariaceae	*Eremophila bignoniiflora*	eurah		C		1
plants	land plants	Scrophulariaceae	*Eremophila debilis*	winter apple		C		4
plants	land plants	Scrophulariaceae	*Eremophila longifolia*	berrigan		C		1
plants	land plants	Scrophulariaceae	*Eremophila maculata*			C		3
plants	land plants	Scrophulariaceae	*Eremophila mitchellii*			C		2
plants	land plants	Scrophulariaceae	*Myoporum acuminatum*	coastal boobialla		C		2/1
plants	land plants	Solanaceae	*Datura stramonium*	common thornapple	Y			3
plants	land plants	Solanaceae	*Solanum adenophorum*			E		1/1
plants	land plants	Solanaceae	*Solanum elachophyllum*			E		1/1
plants	land plants	Solanaceae	*Solanum esuriale*	quena		C		8
plants	land plants	Solanaceae	*Solanum parvifolium subsp. parvifolium*			C		1/1
plants	land plants	Sparrmanniaceae	*Corchorus trilocularis*			C		11
plants	land plants	Sparrmanniaceae	*Grewia latifolia*	dysentery plant		C		4
plants	land plants	Sparrmanniaceae	*Grewia savannicola*			C		4
plants	land plants	Stylidiaceae	*Stylidium eglandulosum*			SL		1/1
plants	land plants	Thymelaeaceae	*Pimelea haematostachya*			C		19
plants	land plants	Thymelaeaceae	*Pimelea microcephala*			C		1
plants	land plants	Verbenaceae	*Glandularia aristigera*		Y			1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Verbenaceae	*Verbena macrostachya*			C		1
plants	land plants	Zygophyllaceae	*Tribulus eichlerianus*	bull head		C		1

CODES

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

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

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

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

APPENDIX B TARGETED ASSESSMENT DATA FOR GREATER GLIDER DENNING TREES

RE	Transect	Tree species	Tree DBH (cm)	Tree Height (m)	Habitat Type (Ausecology)	Denning tree (>44 cm benchmark)	Longitude	Latitude
11.5.3	Hab 1	Eucalyptus populnea	41	18.7	Foraging Habitat (>= 30cm)	Future	148.1402285	-22.1680162
11.5.3	Hab 1	Eucalyptus populnea	38	18.7	Foraging Habitat (>= 30cm)	Future	148.1401917	-22.1680081
11.5.3	Hab 1	Eucalyptus populnea	30	15.2	Foraging Habitat (>= 30cm)	Future	148.1399946	-22.1679772
11.5.3	Hab 1	Eucalyptus populnea	34	11	Foraging Habitat (>= 30cm)	Future	148.1400972	-22.1681406
11.5.3	Hab 1	Eucalyptus populnea (stag)	46	8	Foraging Habitat (>= 30cm)	Current	148.1398722	-22.1680533
11.5.3	Hab 1	Eucalyptus populnea	38	21	Foraging Habitat (>= 30cm)	Future	148.1401692	-22.1677566
11.5.3	Hab 1	Eucalyptus populnea	40	22.6	Foraging Habitat (>= 30cm)	Future	148.1402489	-22.1677374
11.5.3	Hab 1	Eucalyptus populnea	36	14.8	Foraging Habitat (>= 30cm)	Future	148.1401532	-22.1676036
11.5.3	Hab 1	Eucalyptus populnea	44	19.5	Foraging Habitat (>= 30cm)	Future	148.1396808	-22.1677156
11.5.3	Hab 1	Corymbia clarksoniana	40	20.1	Foraging Habitat (>= 30cm)	Future	148.1396660	-22.1676181
11.5.3	Hab 1	Eucalyptus populnea	44	14.6	Foraging Habitat (>= 30cm)	Future	148.1402257	-22.1673695
11.5.3	Hab 1	Eucalyptus populnea (stag)	43	11.7	Foraging Habitat (>= 30cm)	Future	148.1402171	-22.1673065
11.5.3	Hab 1	Eucalyptus populnea	36	15.8	Foraging Habitat (>= 30cm)	Future	148.1403610	-22.1672238
11.5.3	Hab 1	Eucalyptus populnea	44	15.8	Foraging Habitat (>= 30cm)	Future	148.1404463	-22.1672210
11.5.3	Hab 1	Eucalyptus populnea	38	15.1	Foraging Habitat (>= 30cm)	Future	148.1404712	-22.1670779
11.5.3	Hab 1	Eucalyptus populnea	45	12.2	Foraging Habitat (>= 30cm)	Current	148.1404873	-22.1670308
11.5.3	Hab 1	Eucalyptus populnea	45	21.7	Foraging Habitat (>= 30cm)	Current	148.1407197	-22.1672030
11.5.3	Hab 1	Eucalyptus populnea	54	11	Breeding Habitat (>= 50cm)	Current	148.1401113	-22.1681231
11.5.3	Hab 2	Eucalyptus melanophloia	37	16.6	Foraging Habitat (>=30cm and <50cm)	Future	148.1470840	-22.1645983
11.5.3	Hab 2	Eucalyptus melanophloia	44	16.6	Foraging Habitat (>=30cm and <50cm)	Future	148.1473899	-22.1646323
11.5.3	Hab 2	Eucalyptus populnea	40	24.6	Foraging Habitat (>=30cm and <50cm)	Future	148.1475834	-22.1649384
11.5.3	Hab 2	Eucalyptus populnea	69	17.1	Breeding Habitat (>= 50cm) - 20 to 30 c, hollow observed	Current	148.1476663	-22.1649235
11.5.3	Hab 2	Eucalyptus populnea	47	27.1	Foraging Habitat (>=30cm and <50cm)	Current	148.1477921	-22.1647494
11.5.3	Hab 2	Eucalyptus melanophloia	35	12.7	Foraging Habitat (>=30cm and <50cm)	Future	148.1477967	-22.1645806
11.5.3	Hab 2	Eucalyptus melanophloia	46	17.8	Foraging Habitat (>=30cm and <50cm)	Current	148.1479766	-22.1646346
11.5.3	Hab 2	Corymbia dallachiana	80	20.6	Breeding Habitat (>= 50cm)	Current	148.1479884	-22.1644953

11.5.3	Hab 2	Stag with hollow	54	0	Breeding Habitat (>= 50cm)	Current	148.1482280	-22.1647764
11.5.3	Hab 2	Eucalyptus melanophloia	48	14.1	Foraging Habitat (>=30cm and <50cm)	Current	148.1482570	-22.1645742
11.5.3	Hab 2	Eucalyptus populnea	39	14	Foraging Habitat (>=30cm and <50cm)	Future	148.1483840	-22.1645499
11.5.3	Hab 2	Eucalyptus populnea	37	12.2	Foraging Habitat (>=30cm and <50cm)	Future	148.1484948	-22.1646577
11.5.3	Hab 2	Eucalyptus melanophloia	41	17.3	Foraging Habitat (>=30cm and <50cm)	Future	148.1486035	-22.1646048
11.5.3	Hab 2	Eucalyptus melanophloia	39	15.2	Foraging Habitat (>=30cm and <50cm)	Future	148.1486348	-22.1645657
11.5.3	Hab 2	Eucalyptus populnea	46	15.9	Foraging Habitat (>=30cm and <50cm)	Current	148.1486806	-22.1643089
11.5.3	Hab 2	Stag. E. Melanophloia	57	0	Breeding Habitat (>= 50cm)	Current	148.1482289	-22.1643232
11.5.3	Hab 2	Stag.	65	0	Breeding Habitat (>= 50cm)	Current	148.1480935	-22.1642986

CONTACT US

www.epicenvironmental.com.au
https://www.linkedin.com/company/epic-environmental-pty-ltd/
1800 779 363
enquiries@epicenvironmental.com.au