QUEENSLAND CONSERVATION COUNCIL

PROTECT CONSERVE SUSTAIN

THREATENED SPECIES DETECTION REPORT:

PROPOSED GEMINI COAL MINE

10 October 2025

A report on the detection of Central and Southern Greater Glider (*Petauroides volans*) and Southern Squatter Pigeon (*Geophaps scripta scripta)* at the proposed Magnetic South Gemini coal mine.

Acknowledgements

The Queensland Conservation Council and the survey team thank the Ghungalu people for welcoming us onto their Country. We acknowledge them as the Traditional Owners of the local land, sky and waters and celebrate their enduring connection to Country. We pay our respects to Elders past and present and acknowledge that Aboriginal sovereignty was never ceded. We acknowledge Country and thank the Country for caring for us while staying on the land.

Abstract

Surveys were conducted at the proposed Magnetic South Gemini Coal Mine site in Central Queensland to assess habitat quality and detect the endangered Greater Glider (*Petauroides volans*) and other fauna species. Three Greater Gliders and a Southern Squatter Pigeon (*Geophaps scripta scripta*) were identified and recorded during these surveys, along with a list of other species observed on the site.

Project Team

This citizen science project was conducted by volunteers with the Queensland Conservation Council (QCC). Field surveys were carried out by experienced citizen scientists Phil Marshall, Chris Schuringa, and Eva Davis, with cultural guidance and support from Ghungalu Traditional Owners and cultural experts Suneilia Rebel-Lawson and Luke Lawson. The final report was authored by Phil Marshall and reviewed by Natalie Frost (ecologist, QCC's Nature Campaigner) and Nicky Moffat (QCC's Protected Areas Campaigner).

Date of Investigation: 15–17 August 2025

Date of report: 10 October 2025

Introduction

The Queensland Conservation Council was invited by the Ghungalu people to demonstrate survey techniques and undertake fauna surveys at the proposed Gemini Mine site in Central Queensland. The surveys targeted the endangered Greater Glider, to identify suitable habitat and confirm its continued presence on the site. Three Greater Gliders were identified during the surveys, showing that this is a significant corridor for the endangered Greater Glider. A vulnerable Southern Squatter Pigeon was also identified during the team's stay at the site, along with numerous other fauna species.

Background

About the site

The Gemini project is a proposed open-cut coal mine by Magnetic South Pty Ltd located in Dingo, Queensland, west of Rockhampton and east of Blackwater. Taunton National Park is located directly north of the project site.

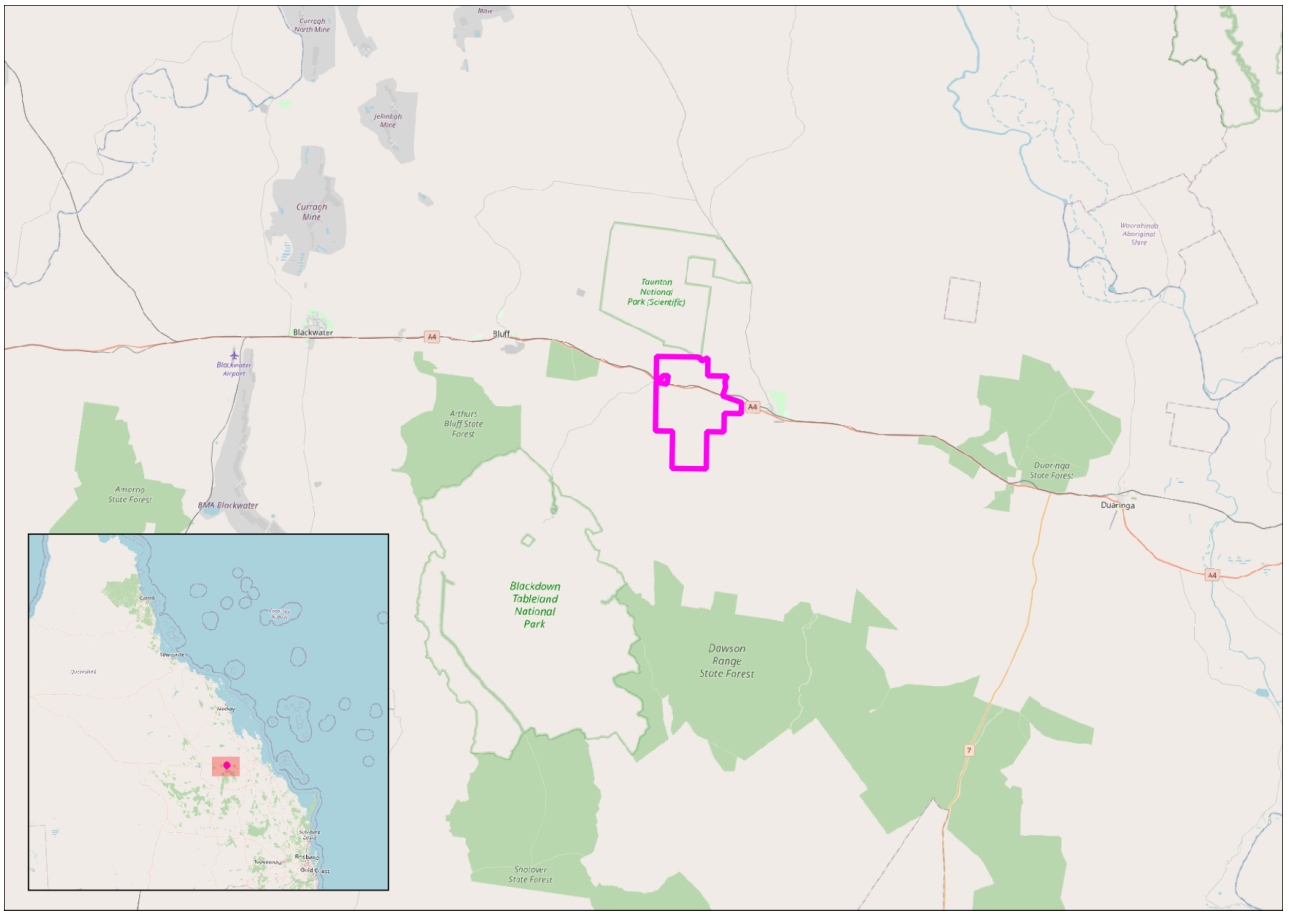


Figure 1: Map showing the location of the Gemini Mine site (source: Open Street Map)

Significant cultural connections and knowledge - shared by Ghungulu Traditional Owners

The site is significant to the Ghungalu people, who are the Traditional Owners of the area and as such, they have enduring generational cultural and scientific knowledge and obligations to this place and the many animals, plants, waterways and creatures that contribute to the health of the ecosystem. To honour these obligations, Ghungulu First Peoples set up camp on the mine site to perform ceremonies and continue practicing culture. The camp was named Yamba Balbarrabarri, meaning camp/country of many rivers. The survey team camped at Yamba Balbarrabarri, which was located at the edge of a wetland that connects via a stream to Springton Creek.

The Ghungulu people have passed down story-lines, and cultural connection to the Greater Glider for many generations. Greater Gliders were never hunted due to their significance and Ghungulu special cultural connection to the species. The knowledge of which animals to eat and hunt has been passed down for tens of thousands of years. The protection of Greater Gliders is deeply linked to the ongoing connection of Ghungulu peoples to their Country.

Figure 2: Wooradjina - the wetland at Yamba Balbarrabarri - likely spring fed on a tributary of Springton Creek

Springton Creek crosses the site in the south-east and runs near much of the site's eastern boundary. Charlevue Creek runs through the site in a north-easterly direction. This investigation was primarily conducted between these two creek corridors (including the forested areas along the creeks).

Previous studies

AARC report

AARC Environmental Solutions was commissioned by Magnetic South to prepare a terrestrial ecology assessment for the Gemini Project. This assessment was conducted within the mining lease and included field surveys between 2017 and 2019 to identify terrestrial flora and fauna species. The report was published in September 2019 and documents the identification of threatened species on the site, including Southern Squatter Pigeon and Greater Glider.

PTBA report

Protect the Bush Alliance (PTBA) undertook an assessment of the areas surrounding the mine site after the Gemini Project was brought to its attention by local landholders concerned about adverse impacts on their properties. PTBA reviewed the AARC report and found key deficiencies, including that 'the biodiversity values of the landscape surrounding the proposed mine site, particularly roadside verges, areas of mixed woodland and vegetated riparian edges, and the connectivity these provide across the landscape had not been fully considered.'

In October 2023, PTBA undertook field surveys to assess biodiversity values in the area surrounding the proposed mine. The report, published in January 2024, noted detection of the endangered Koala in the surrounding area and also concluded that the project will '[d]amage a significant corridor for the endangered Greater Glider.'

Method

Three surveyors visited the mine site from 15 to 18 August to demonstrate surveying techniques to Ghungalu people, assess habitat values, undertake spotlight surveys to detect Greater Glider and identify other threatened species. Surveys were conducted in line with the Queensland Environment and Science Department's *Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (2022).*

Preliminary identification of survey areas was undertaken through desktop review of publicly available data, including satellite imagery, WildNet records and the AARC and PTBA reports. These areas were then inspected on the ground to confirm areas of suitable habitat. Hollow-bearing trees were observed across the site, indicating suitable habitat for arboreal mammals such as the Greater Glider.

Spotlight surveys were undertaken on the evenings of 15 to 17 August 2025 with the Ghungulu Traditional Owners. These involved:

- Using high powered spotlights shone into the canopy of trees, to detect animal eye-shine and identifying features.
- Upon successfully obtaining video footage of the animal, the camera was panned to a GPS to provide the coordinates of the detection location and proof of location.
- A GPX waypoint was taken shortly after the animal was recorded/detected directly beneath the tree/animal or projected to the animal location using the 'slight and go' (waypoint projection) function on the GPS.

The waypoints for each individual recorded tree or animal were developed with the following sequence:

- Firstly, the three letters at the beginning represented a unique sequence for the survey e.g. 'CHA' denoting Charlevue Creek.
- Then, the following two numbers represented the individual count of threatened species encountered throughout the survey e.g. '01' for the first Greater Glider encountered
- Then, two or three letters representing a unique species code e.g. 'GG' for Greater Glider and 'SQR' for Southern Squatter Pigeon.

Other opportunistic observations of animals at the site were noted and a species list developed.

Results

Threatened species detections

Three Greater Gliders and a Southern Squatter Pigeon were detected during the team's stay at the site. Details of these detections are outlined in Table 1.

Table 1: Threatened species detections summary

Date	Waypoint	Species	EPBC status	Coordinates (55H)	Distance to pit
16/8/25	CHA01GG	Greater Glider	Endangered	0729781 7382857	69m
17/8/25	SNG01GG	Greater Glider	Endangered	0732866 7381098	50m
17/8/25	SNG02GG	Greater Glider	Endangered	0733024 7381378	26m
17/8/25	YAM01SQR	Southern Squatter Pigeon	Vulnerable	0731616 7381767	Inside pit

Figure 3: Greater Glider detected at waypoint CHA01GG

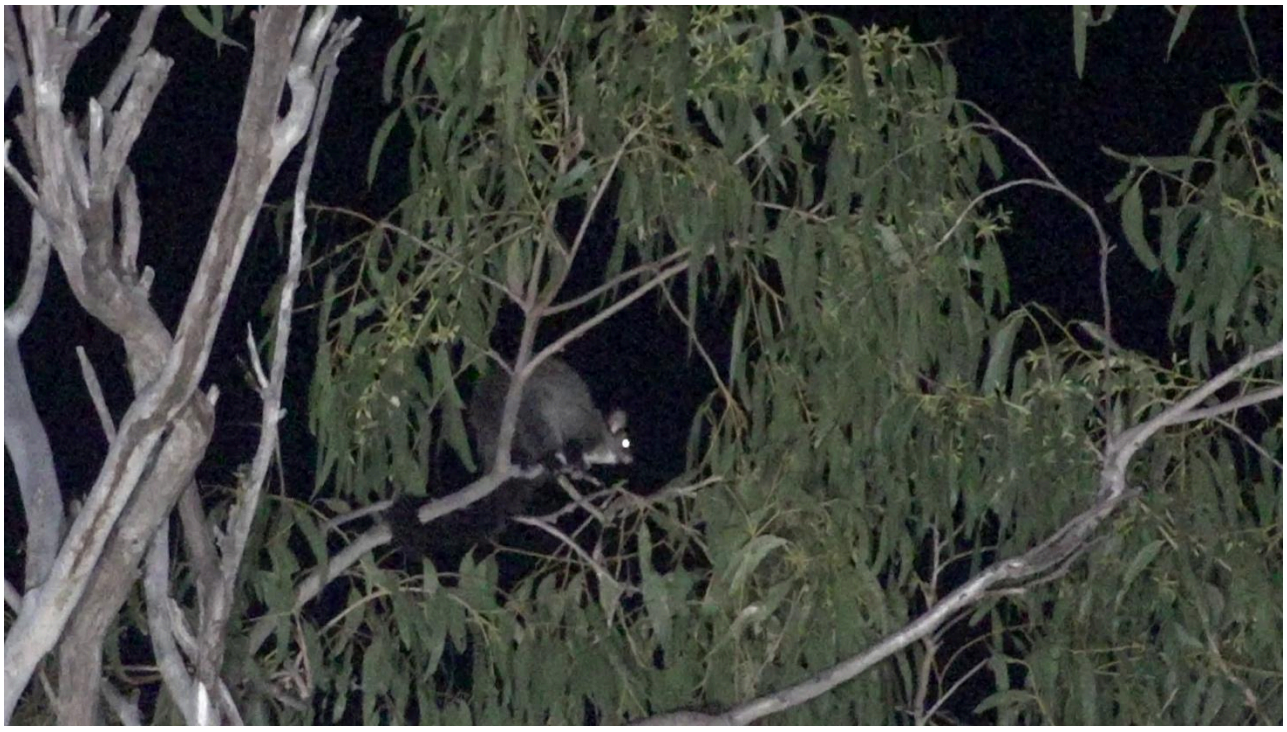
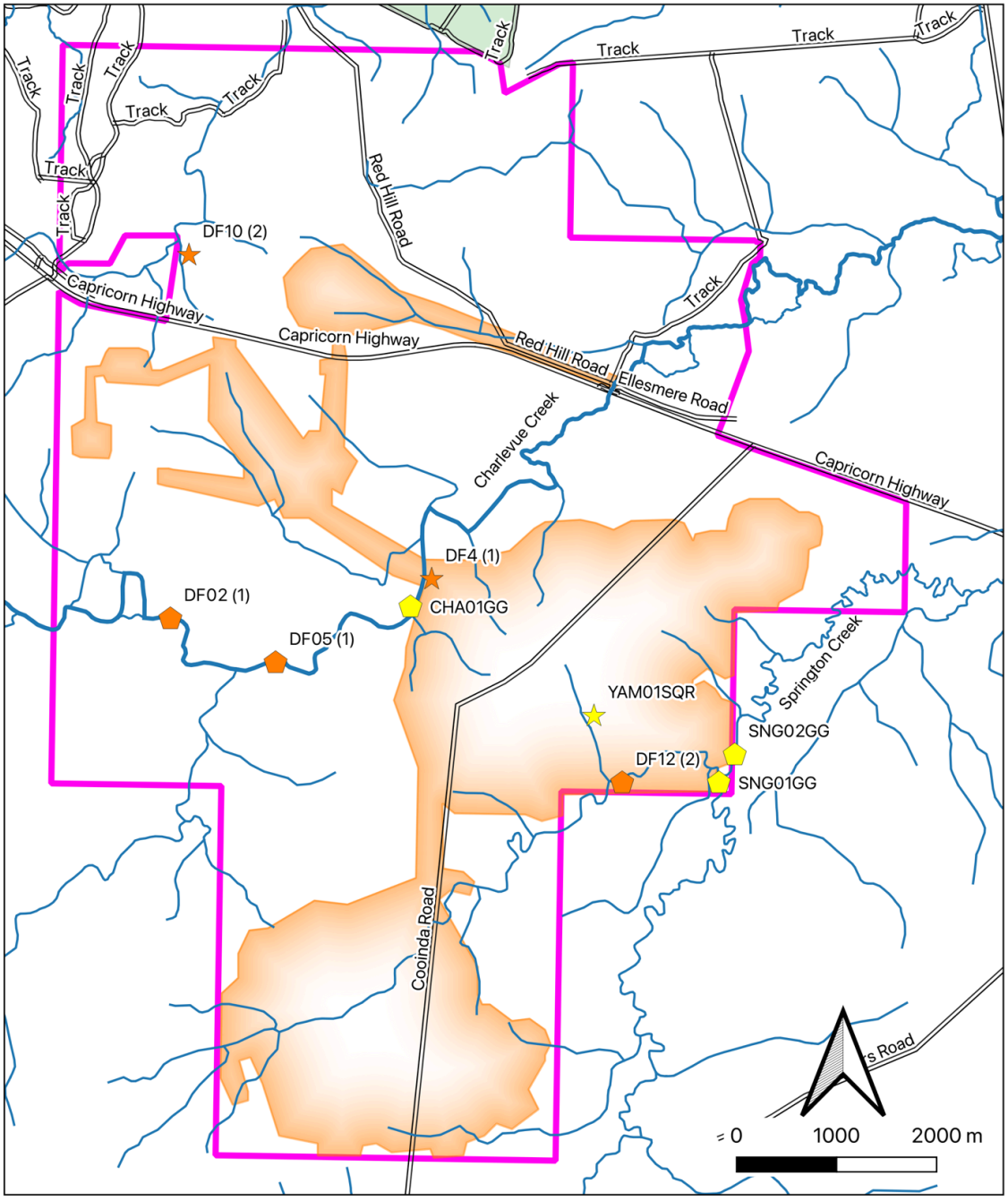


Figure 4: Greater Glider detected at waypoint SNG01GG

Figure 5: Greater Glider detected at waypoint SNG02GG

Figure 6: Southern Squatter Pigeon detected at waypoint YAM01SQR

The threatened species detection locations from this investigation and the previous AARC surveys at the proposed mine site are shown in Figure 1. Note that the AARC locations are the survey site locations described in the AARC report and may not be the exact position of the detection.



Greater Glider and Squatter Pigeon records at proposed Gemini mine

QCC surveys (2025)
- Greater Glider
- Squatter Pigeon

AARC surveys (2017–18)
- Greater Glider (no.)
- Squatter Pigeon (no.)

Gemini mine
- Proposed pits
- Mining lease

Features
- Major watercourse
- Minor watercourse
- Roads and tracks

Figure 7: Map of threatened species detection locations at the proposed Gemini Mine

Species list

The following species were observed during the team's stay at the proposed mine site.

Common name	Scientific name	EPBC Act status
Mammals		
Common Brushtail Possum	*Trichosurus vulpecula*	NA
Eastern Grey Kangaroo	*Macropus giganteus*	NA
Greater Glider	*Petauroides volans*	Endangered
Little Red Flying Fox	*Pteropus scapulatus*	NA
Rakali	*Hydromys chrysogaster*	NA
Rufous Bettong	*Aepyprymnus rufescens*	NA
Birds		
Apostlebird	*Struthidea cinerea*	NA
Australasian Grebe	*Tachybaptus novaehollandiae*	NA
Australian Magpie	*Cracticus tibicen*	NA
Australian Owlet Nightjar	*Aegotheles cristatus*	NA
Australian Pelican	*Pelecanus conspicillatus*	NA
Australian Pipit	*Anthus australis*	NA
Australian Raven	*Corvus coronoides*	NA
Black-Faced Cuckoo Shrike	*Coracina novaehollandiae*	NA
Blue-Faced Honeyeater	*Entomyzon cyanotis*	NA
Comb-Crested Jacana	*Irediparra gallinacea*	NA
Forest Kingfisher	*Todiramphus macleayii*	NA
Great Cormorant	*Phalacrocorax carbo*	NA
Grey-Crowned Babbler	*Pomatostomus temporalis*	NA
Grey Fantail	*Rhipidura albiscapa*	NA
Intermediate Egret	*Ardea intermedia*	NA
Laughing Kookaburra	*Dacelo novaeguineae*	NA
Little Friarbird	*Philemon citreogularis*	NA

Common name	Scientific name	EPBC Act status
Magpie-Lark	*Grallina cyanoleuca*	NA
Masked Lapwing	*Vanellus miles*	NA
Nankeen Kestrel	*Falco cenchroides*	NA
Noisy Friarbird	*Philemon corniculatus*	NA
Noisy Miner	*Manorina melanocephala*	NA
Pacific Black Duck	*Anas superciliosa*	NA
Pale-Headed Rosella	*Platycercus adscitus*	NA
Pied Butcherbird	*Cracticus nigrogularis*	NA
Rainbow Lorikeet	*Trichoglossus moluccanus*	NA
Red-Backed Fairy Wren	*Malurus melanocephalus*	NA
Red-Tailed Black Cockatoo	*Calyptorhynchus banksii*	NA
Red Winged Parrot	*Aprosmictus erythropterus*	NA
Restless Flycatcher	*Myiagra inquieta*	NA
Southern Squatter Pigeon	*Geophaps scripta scripta*	Vulnerable
Spotted Nightjar	*Eurostopodus argus*	NA
Sulphur-Crested Cockatoo	*Cacatua galerita*	NA
Tawny Frogmouth	*Podargus strigoides*	NA
Whistling Kite	*Haliastur sphenurus*	NA
White-Necked Heron	*Ardea pacifica*	NA
Willie Wagtail	*Rhipidura leucophrys*	NA
Yellow-Throated Miner	*Manorina flavigula*	NA
Reptiles		
Eastern Striped Skink	*Ctenotus robustus*	NA
Orange-Flanked Rainbow Skink	*Carlia rubigo*	NA

Figure 8: A Rufous Bettong found inside the proposed pit area near Springton Creek

Figure 9: Red-Tailed Black Cockatoos visited the eucalypts surrounding the wetland

Figure 10: A Forest Kingfisher spotted at the camp

Conclusion

This report details the detection of three Greater Gliders (listed under the EPBC Act as endangered) and a Southern Squatter Pigeon (listed as vulnerable) on the proposed project site. These detections were all within 70m of the proposed mine pit.

From these surveys, we can conclude that the Charlevue and Singleton creek corridors are occupied by Greater Gliders and the pit site by the Southern Squatter Pigeon. Given the suitable habitat observed and the identification of these populations, further surveys of the Gemini Coal Mine site are required to determine the extent of these populations.