UCMPL Fauna Monitoring Report 2025

Ulan Coal Mines Pty Ltd

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Abbreviations

Abbreviation	Description
BC Act	NSW *Biodiversity Conservation Act 2016*
BMP	Biodiversity Management Plan
EPBC Act	Commonwealth *Environment Protection Biodiversity Conservation Act 1999*
FBS	Floristic Based Subsidence
HBT	Hollow bearing tree
LW	Longwall
OC	Open Cut
pfc	Projected foliage cover
TARP	Trigger Action Response Plan
UCC	Ulan Coal Complex
UCMPL	Ulan Coal Mines Pty Ltd
UG	Ulan Underground
UW	Ulan West
VOA	Vegetation Offset Area

Executive Summary

Ulan Coal Mines Pty Ltd (UCMPL) is located in the central west of New South Wales (NSW), near the village of Ulan. UCMPL developed a Biodiversity Management Plan (BMP) to satisfy the requirements of NSW Project Approval PA 08_0184, as well as Commonwealth Approvals EPBC Ref: 2009/5252 and EPBC Ref: 2015/7511. This report has been written in accordance with Version 7 of the UCMPL BMP (UCMPL 2024a). This report details the results of feral pest monitoring, targeted threatened bird monitoring, including subsidence monitoring of threatened bird habitat, and nest box monitoring.

Threatened bird monitoring did not detect the target species, Regent Honeyeater or Swift Parrot across 30 monitoring sites despite extensive flowering of key feed species. Masked Owl monitoring was undertaken at two designated monitoring sites. Masked Owl was not detected at these sites however, was detected for the first time within the Ulan Coal Complex (UCC) during 2025 during monitoring outside of the requirements of the BMP. The lack of presence of Regent Honeyeater and Swift Parrot during 2025 does not indicate lack of suitable habitat, with extensive areas of mature woodland and forest containing key feed species present within the UCC.

Several species of pest animals were detected during 2025. All species have been previously detected at the UCC. Pest animal presence resulted in Condition Amber according to the Threats to Ulan Coal Rehabilitation Trigger Action Response Plan (TARP) (UCMPL 2024a) due to an apparent increase in feral pest presence along Apple Road and Trig Road compared to previous monitoring periods.

Condition Amber was triggered for threatened woodland birds in 2024 due to lack of detection of *Pyrrholaemus sagittatus* (Speckled Warbler), *Climacteris picumnus victoriae* (Brown Treecreeper; eastern subspecies) or *Daphoenositta chrysoptera* (Varied Sittella) in the 2024 monitoring period. During 2025, an investigation was undertaken, as required by the TARP, into habitat availability for these species within Bobadeen VOA. The investigation found that there has been no decrease in habitat availability over the last 5 years within the Bobadeen VOA. All three species were opportunistically detected during 2025. As such, the TARP condition for threatened woodland birds has returned to green.

The 2-year post mining monitoring requirement for UGLW31 and UGLWW7 has been completed and data indicates that a >10% decrease in pfc of Regent Honeyeater and / or Swift Parrot key feed species did not occur when comparing pre-mining and post-mining pfc. There has been no reduction in the availability of HBTs suitable for Masked Owl on UGLW31 or UGLWW7 when comparing pre-mining and post-mining data.

A total of 115 nest boxes were monitored during 2025. Nine nest boxes monitored during 2025 require replacement or repair as they are no longer fully functional (see Appendix A).

Ongoing monitoring in accordance with the BMP (UCMPL 2024a) is recommended.

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1. Introduction

Eco Logical Pty Ltd (ELA) was engaged by Ulan Coal Mines Pty Ltd (UCMPL) to undertake fauna monitoring in 2025. Terrestrial fauna monitoring within the UCMPL complex dates back to 1994, with detailed baseline monitoring conducted from 2008 to 2015. Current fauna monitoring within the UCMPL complex includes targeted feral pest monitoring, targeted threatened bird surveys, subsidence monitoring of threatened bird habitat and nest box monitoring.

1.1. Background

The Ulan Coal Complex (UCC) is situated in the central west of New South Wales. It is located in the Mid-Western Regional Council Local Government Area near the village of Ulan, approximately 38 km north-northeast of Mudgee and 19 km northeast of Gulgong. The UCC landholdings straddle the Great Dividing Range and are located at the headwaters of the Goulburn and Talbragar River Catchments.

The UCMPL Project Area comprises approximately 13,700 hectares (ha), made up of:

- Ulan West Underground Area – the Ulan West area covers approximately 3,200 ha, to the west of the Ulan Underground Area. The southwestern portion of the Bobadeen Offset Area overlies longwall panels LW1 and LW2.
- Ulan Underground Area – continuing underground operations in the northeastern part of the project area which are expected to be completed in 10 to 18 years. Remaining longwalls below the Bobadeen Offset Area include W3 and W4. The other longwall panels below Bobadeen Offset Area and Bobadeen Vegetation Offset Corridor have previously been mined.
- Open Cut (OC) Mining Area – approximately 239 ha of approved open cut operations.
- Previous Open Cut Mining Area - approximately 475 ha of previously mined open cut areas, which are largely rehabilitated, though some final voids are retained to support current mining activities (i.e. water storage, tailings disposal, underground access etc.).
- Surface Infrastructure Disturbance Area – 169 ha of disturbance approved for the construction of underground service infrastructure, such as transmission lines, pipes, mine dewatering pump sites and access roads.
- Residual Project Area – the remainder of the Project Area includes areas that were previously undermined, agricultural grazing land, irrigation pivots and areas of remnant native vegetation.
- Biodiversity Offset Areas and Conservation and Cliffline Management Areas, including:
    - Bobadeen Vegetation Offset Area (VOA) including:
    - Bobadeen, Bobadeen Corridor and Bobadeen East – 1,364 ha
    - Brokenback Conservation Area – 58 ha
    - Spring Gully Cliffline Management Area – 273 ha
    - Highett Rd *Acacia ausfeldii* Management area – 21 ha
- Bobadeen West Biodiversity Stewardship Site – 22.5 ha
- Salinity Offset Area – 4,460 ha which overlaps parts of the Biodiversity Offset Areas and Residual Project Area (UCMPL 2024a)

1.2. Purpose of this monitoring report

UCMPL has developed a Biodiversity Management Plan (BMP) (UCMPL 2024a) to satisfy the requirements of Condition 44 of Schedule 3 of the Project Approval (PA 08_0184). The BMP specifies monitoring methodology, completion criteria and a Trigger Action Response Plan (TARP) designed to track the performance against targets and compliance requirements for terrestrial and aquatic flora and fauna within the Project Area and offset areas.

This report details the results of autumn and spring feral pest monitoring, targeted threatened bird surveys, subsidence monitoring and nest box monitoring to provide evidence of compliance to biodiversity-related conditions summarised in Table 1. The results of monitoring are compared against TARP in the BMP (UCMPL 2024a) where applicable.

It is noted that some survey components do not have completion criteria or performance measures. For example, nest box monitoring does not have an associated TARP. In addition, Condition 44 of PA 08_0184 requires UCMPL to control feral pests beyond the Rehabilitation Area across the Project Area. Nonetheless, the results are stated in detail in this report for long-term monitoring purposes.

Table 1: Statutory requirements of the BMP and their relevant methods of assessment in fauna monitoring 2025

Aspect/category	Key element	Condition Green	Condition Amber	Condition Red	Relevant statutory conditions and requirements	Assessment method
Biodiversity (Woodland / Open Forest and Specific Endemic Vegetation Community Rehabilitation Areas)	Pest Fauna presence	Declining or stable (<25% increase) pest animal activity levels. No previously unrecorded pest animal species recorded within rehabilitation areas.	Pest animal activity level increase of >25% observed, or; Previously unrecorded pest animal species recorded within rehabilitation.	Pest animal activity level increase of >50% observed, or; Previously unrecorded pest animal species recorded within rehabilitation.	Condition 44 of PA 08_0184: Control feral pests across the Project Area	Presence/absence, species richness and activity of feral pests through the setting of a representative number of remote camera lines Opportunistic observations of pest scats and tracks during the annual monitoring
	Native fauna	Monitoring confirms native bird and microbat species from multiple families are recorded utilising the rehabilitation, or suitable habitat is available.	Monitoring fails to record native bird and bat species from multiple families, or suitable habitat is unavailable	Monitoring fails to record native bird and bat species from multiple families across two or more consecutive monitoring periods, or suitable habitat is unavailable.	NA	Monitoring of woodland bird richness and abundance through the general fauna monitoring program.
Threated fauna species habitat	Threatened Woodland Birds	A species of threatened woodland bird previously identified within the Bobadeen BOAs for two or more consecutive monitoring periods, detected during subsequent monitoring period	A species of threatened woodland bird previously identified within the Bobadeen BOAs for two or more consecutive monitoring periods, not detected in these BOAs during subsequent monitoring period.	Investigation indicates a decline in condition and/or availability of threatened species habitat within the BOAs.	Condition 44 of PA 08_0184: Measure the short-, medium- and long-term success of the offset strategy, including annual indicators and trigger values for the provision of suitable habitat for threatened woodland birds Condition 3 of the EPBC Approval 2009/5252: Undertake a monitoring program to monitor *Lathamus discolor* (Swift Parrot) and *Anthochaera phrygia* (Regent Honeyeater) and their response to management actions undertaken in the Bobadeen and Bobadeen East BOAs	Monitoring of woodland bird richness and abundance by carrying out a 30-minute visual/aural bird count Targeted Regent Honeyeater and Swift Parrot monitoring surveys within targeted habitat containing flowering eucalypt feed trees.

Aspect/category	Key element	Condition Green	Condition Amber	Condition Red	Relevant statutory conditions and requirements	Assessment method
Subsidence impacts to threatened species, populations, habitat or ecological communities	Threatened targeted bird species	As predicted, subsidence impacts on threatened targeted bird species are negligible, consistent with subsidence performance criteria.	Masked Owl: reduction in abundance and/or condition of hollow bearing trees (HBTs) at FBS monitoring sites; and Regent Honeyeater and Swift Parrot: >10% (percentage points) decline in percentage foliage canopy cover of key feed species at FBS monitoring sites.	Results from biodiversity monitoring have been confirmed that an exceedance or its likely to be exceeded regarding the Performance Measure for biodiversity	Condition 24 of PA 08_0184: Ensure that the project does not cause any exceedances of the performance measure: Negligible impact on threatened species, populations habitat or ecological communities	FBS monitoring to assess against performance triggers, which are reduction in abundance and/or condition of HBTs (Masked Owl) >10% decline in canopy cover of key feed species. (Regent Honeyeater and Swift Parrot)
NA	Nest box monitoring	NA	NA	NA	Condition 44 of PA 08_0184: Minimise the impacts upon fauna, through providing important habitat features (e.g. nest boxes) during the period of revegetation and rehabilitation.	Monitoring of a representative subset of installed nest boxes to assess condition and usage.

1.3. Biodiversity monitoring areas

Fauna monitoring sites are located across five broad areas contained within the UCC. A description of each biodiversity monitoring area is provided below in Table 2, and the location of each biodiversity monitoring area is shown below in Figure 1.

Table 2: Biodiversity monitoring areas and fauna monitoring sites within the UCC

Area	Description	Pest animal spotlighting	Masked Owl	Remote cameras	Subsidence monitoring	Targeted threatened bird surveys
Bobadeen VOA	This area has been established for biodiversity conservation and contains both remnant and regenerating vegetation.	✓	✓	✓	✓	✓
Surface Infrastructure Areas	This area covers areas of remnant vegetation adjacent to surface infrastructure including ventilation shafts, vehicle access tracks and pipelines	-	✓	✓	-	-
Open Cut Rehabilitation Areas	This area covers the post-mining open cut area and is comprised of rehabilitating woodland. The two monitoring sites are located in rehabilitation which was established in 1985 (OC1) and 2003 (OC5).	-	-	✓	-	✓
Spring Gully Cliffline Management Area	This area provides for the protection of cliff line, caves or other structures that are likely to provide habitat for micro-bats.	-	-	-	-	✓
Residual Project Areas	This area covers residual project areas within the UCMPL complex and includes previously undermined land, agricultural grazing and irrigation land and large areas of remnant vegetation.	✓	✓	✓	✓	✓
Bobadeen West Stewardship Site	This area has been established for biodiversity conservation and contains both remnant and regenerating vegetation.	-	-	-	-	-

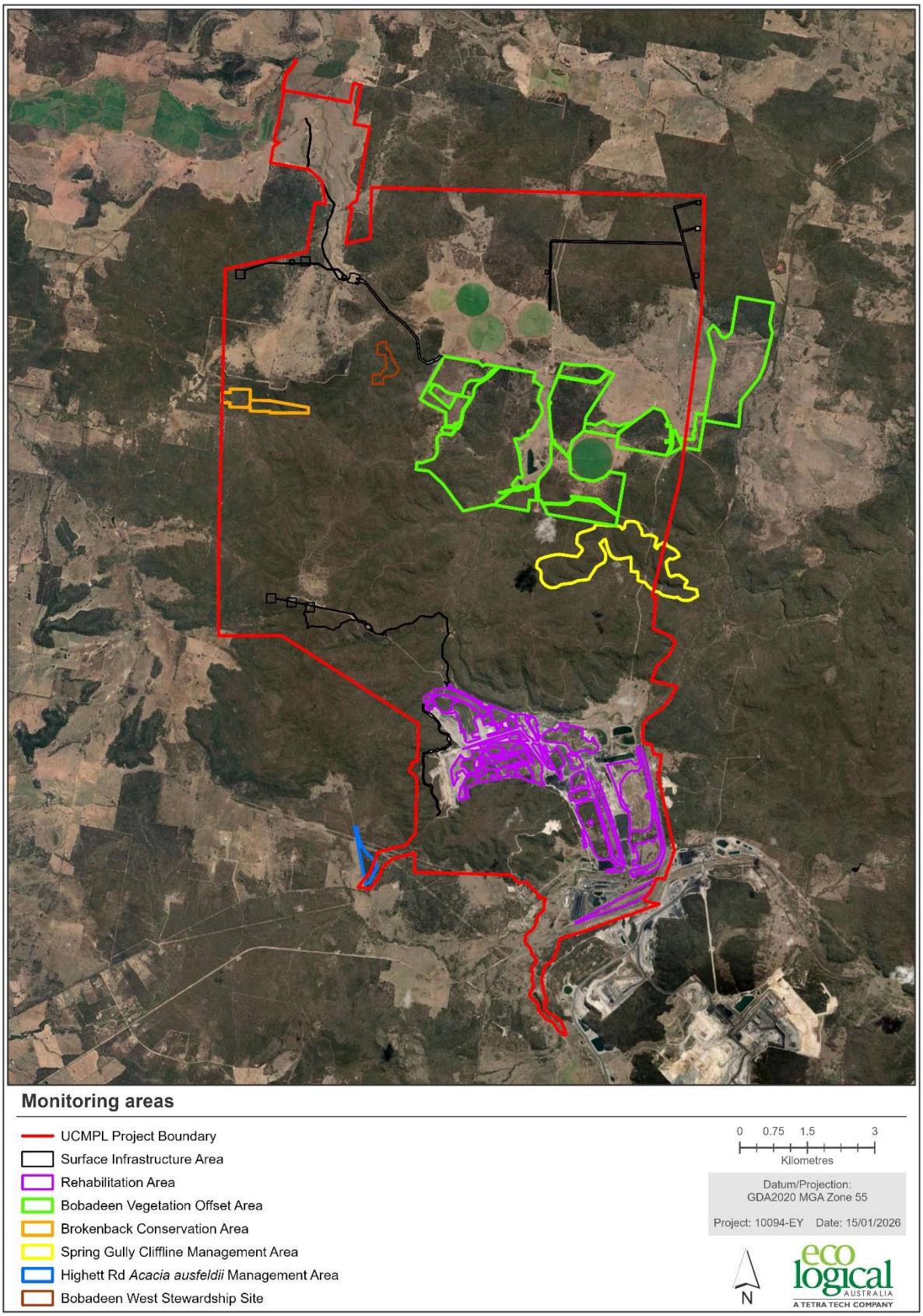

Figure 1: Monitoring areas

2. Methods

Fauna monitoring was undertaken during 2025 in accordance with the UCMPL BMP (UCMPL 2024a). Opportunistic sightings of threatened fauna species and feral pest species were recorded throughout the UCMPL complex. Figure 2 below shows the feral pest and threatened bird monitoring sites within UCMPL.

2.1. Targeted feral pest monitoring

Targeted feral pest monitoring involved the following methodologies:

- Remote camera transect – 20 infra-red motion sensitive trail cameras were set up along two monitoring transects (Trig Road and Apple Road) at intervals greater than 200 m apart, capturing high resolution images of passing fauna over fourteen consecutive nights from 15 May to 29 May 2025.
- 30-minute spotlighting survey with two observers at two General Fauna sites (RES2 and BE1) across two separate survey nights on 14 October and 15 October 2025.

The location of feral pest monitoring sites is provided in Figure 2.

An activity index for each pest species is calculated by dividing the total number of individuals by the total number of camera trap nights, to compare long term trends in feral animal activities.

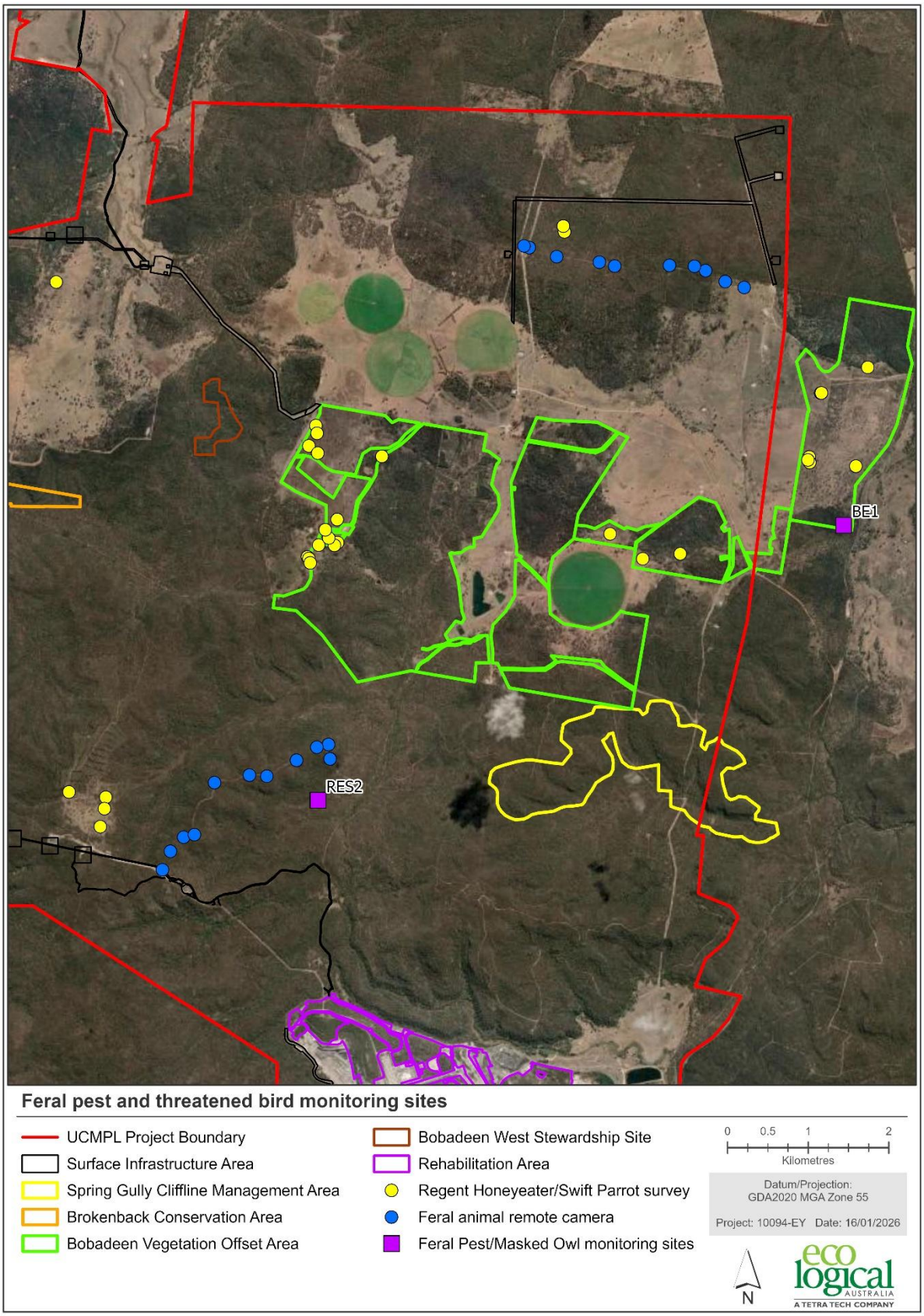

Figure 2: Feral pest and threatened bird monitoring sites

2.2. Targeted threatened bird surveys

2.2.1. Regent Honeyeater and Swift Parrot

Targeted Regent Honeyeater and Swift Parrot monitoring surveys involve rapid 5-minute call playback surveys (1-minute call broadcast followed by 4-minute listening and observation within a 50 m radius site) when eucalypt trees are flowering (UCMPL 2024a).

Regent Honeyeater feeds mainly on the nectar from a relatively small number of eucalypts that provide high volumes of nectar, endemic to the Ulan region, including *Eucalyptus sideroxylon* (Mugga Ironbark), *Eucalyptus melliodora* (Yellow Box) and *Eucalyptus albens* (White Box) (NSW Government 2026).

Swift Parrot migrates from Tasmania to the Australian south-east mainland between February to October. When on the mainland, they occur in areas where eucalypts are flowering profusely or where there are abundant lerp infestations. Favoured feed trees endemic to the Ulan region include *E. sideroxylon* and *E. albens*, and *E. melliodora* and *E. microcarpa* (Inland Grey Box) with lerp infestations (NSW Government 2026).

Flowering of the *E. albens* and *E. sideroxylon* was observed throughout most of the Bobadeen VOA and surrounds, such as along Apple Road and within *E. albens* woodland near the junction of Grass Tree Lane and Valley Way.

A total of 30 targeted threatened bird surveys were undertaken in May and June 2025 (Figure 2), with 23 surveys undertaken within Bobadeen VOA.

2.2.2. Targeted Masked Owl monitoring

Targeted surveys for the Masked Owl involved 5 minutes of call playback followed by a 30-minute observation and spotlighting search with two observers on the 14 and 15 of October 2025 at the following General Fauna sites (RES2, BE1– see Figure 2).

2.3. Subsidence monitoring of targeted threatened bird habitat

Monitoring is undertaken within Floristic Based Subsidence (FBS) sites located above Ulan Underground (UG) and Ulan West (UW) longwall (LW) panels to monitor for potential subsidence impacts on habitat for the *Tyto novaehollandiae* (Masked Owl), Regent Honeyeater and Swift Parrot habitat.

Masked Owl inhabit in dry eucalypt forest and woodlands and utilise trees with large hollows (>20 cm entrance diameter) for nesting (NSW Government 2026).

Longwalls listed in Table 3 were surveyed during 2025 (Figure 3). At each site, the presence of hollow bearing trees (HBTs) containing large hollows (>20 cm entrance diameter) suitable for Masked Owl breeding is recorded, along with the projected foliage cover (pfc) of Regent Honeyeater and Swift Parrot key and supplementary feed trees listed in Table 7.12 of the BMP (UMCPL 2024a).

Each site is comprised of a 20 m x 20 m quadrat and is monitored for two years before and after undermining, with full assessment of the relevant performance measure (see Table 10) only undertaken for longwalls once they have been monitored for at least two years post-mining.

Table 3: Mining completion and monitoring status of longwalls in 2025

Table 3Longwall	Sites	Mining completion	Monitoring status	Comment
UW LW7	L1-L10	Autumn 2024	Ongoing	2-year post-mining to be completed Autumn 2026
UW LW8	L1-L10	Spring 2025	Ongoing	2-year post-mining to be completed Spring 2027
UW LW9	L1-L10	Autumn 2027	Ongoing	2-year post-mining to be completed Autumn 2029
UG LWW7	**L1-L10**	**Spring 2022**	**Completed**	**2-year post-mining to completed Spring 2024**
UG LWW8	L1-L10	Autumn 2027	Ongoing	2-year post-mining to be completed Autumn 2029
UG LWW9	L1-L10	Spring 2027	Ongoing	2-year post-mining to be completed Spring 2029
UG LW30	**L1-L10**	**Spring 2023**	**Completed**	**2-year post mining completed Spring 2025**
UG LW31	L1-L10	Autumn 2025	Ongoing	2-year post-mining to be completed Autumn 2027

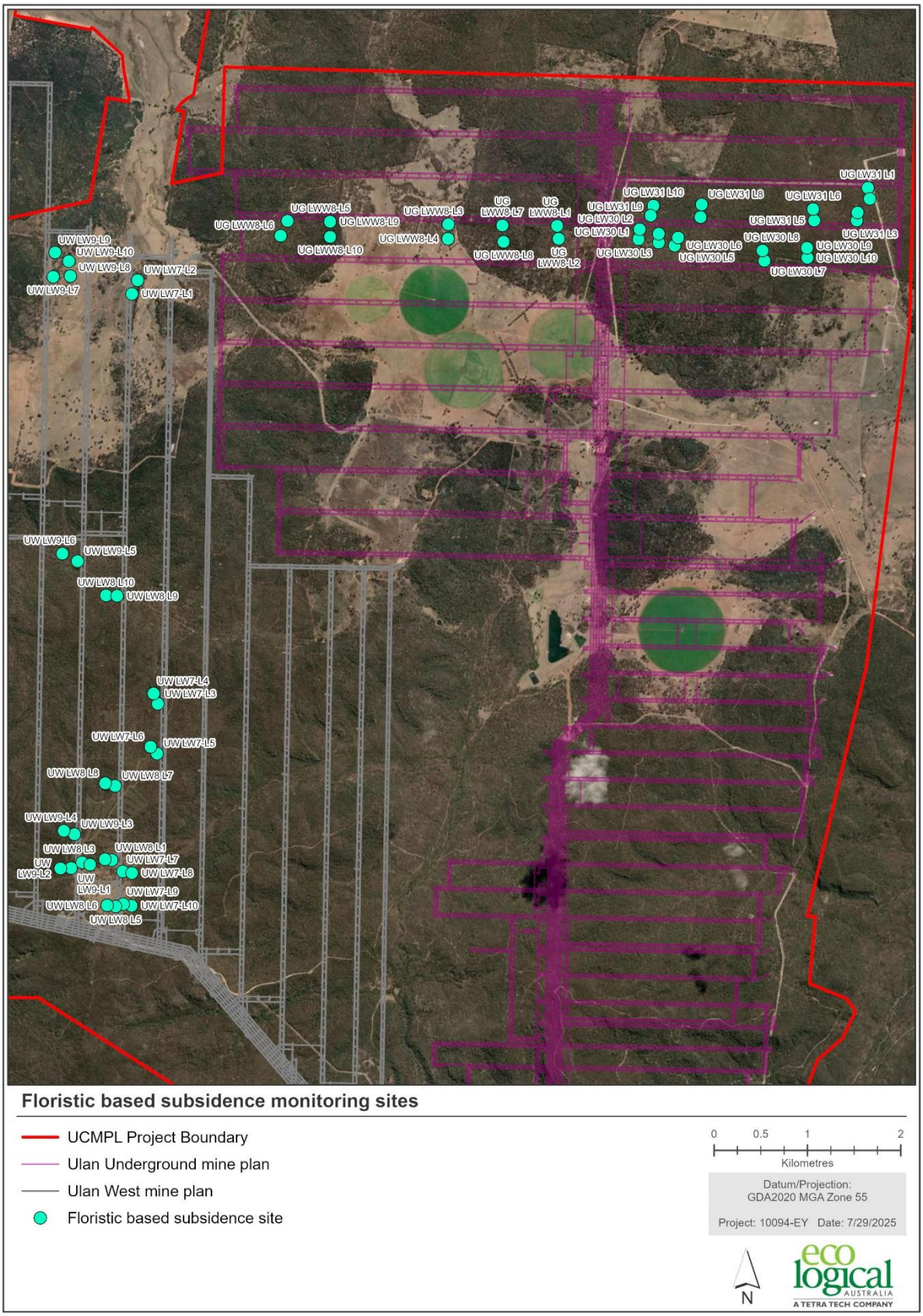

Figure 3: FBS monitoring sites

2.4. Nest box monitoring

Nest boxes were monitored using a 12 m high pole and wireless hollow scope to investigate fauna presence and signs of use, along with condition of the nest boxes. A total of 115 pre-selected nest boxes installed in 2013 and 2015 and located within the East Pit Rehabilitation and near LW 32 infrastructure road were surveyed on the 18 October 2025 (Figure 4 and Figure 5).

The condition of nest boxes was divided into three categories, with the nature of any damage also noted (e.g. fallen off tree, missing roof):

- Fit for use
- In need of repair
- Unserviceable

Nest box usage was determined by the presence of indicators such as nesting material, feathers, droppings, signs of chewing, scratching or a combination of these. An assessment of whether nest boxes had been currently or recently used was also made based on the nature and condition of the signs of use, including nest structure, age of droppings and the colour of leaves and plant material in the nest.

Figure 4: Nest box monitoring - North

Figure 5: Nest box monitoring sites - South

2.5. Opportunistic observations

Threatened species, or signs of threatened species listed under the NSW *Biodiversity Conservation Act 2016* (BC Act) and / or Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act), and direct observations of pest animal species or signs of pest animal species (scats, diggings etc) were opportunistically recorded during field surveys.

2.6. Weather conditions

While there were only a few fluctuations in rainfall during 2025, April experienced very little rain with a total of 0.3mm recorded for the entire year. Similarly with the temperature, while there were some fluctuations the temperatures in 2025 were largely in line with historical averages for the region. The temperatures ranged from 5ºC in June to 29ºC in January (UCMPL 2025, Figure 6). Below average rainfall was experienced at Ulan 2025 (Figure 7). Rainfall was particularly high in May and low in April in 2025 compared to the long-term average.

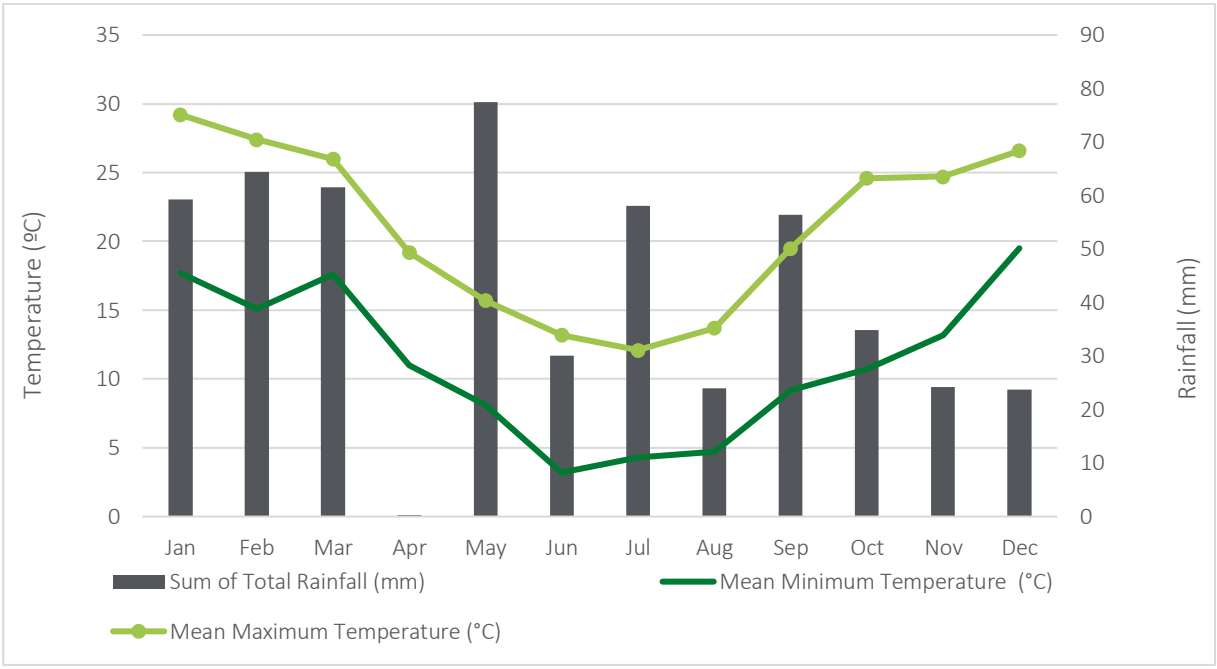

Figure 6: Monthly temperature and rainfall for 2025 (UCMPL 2025)

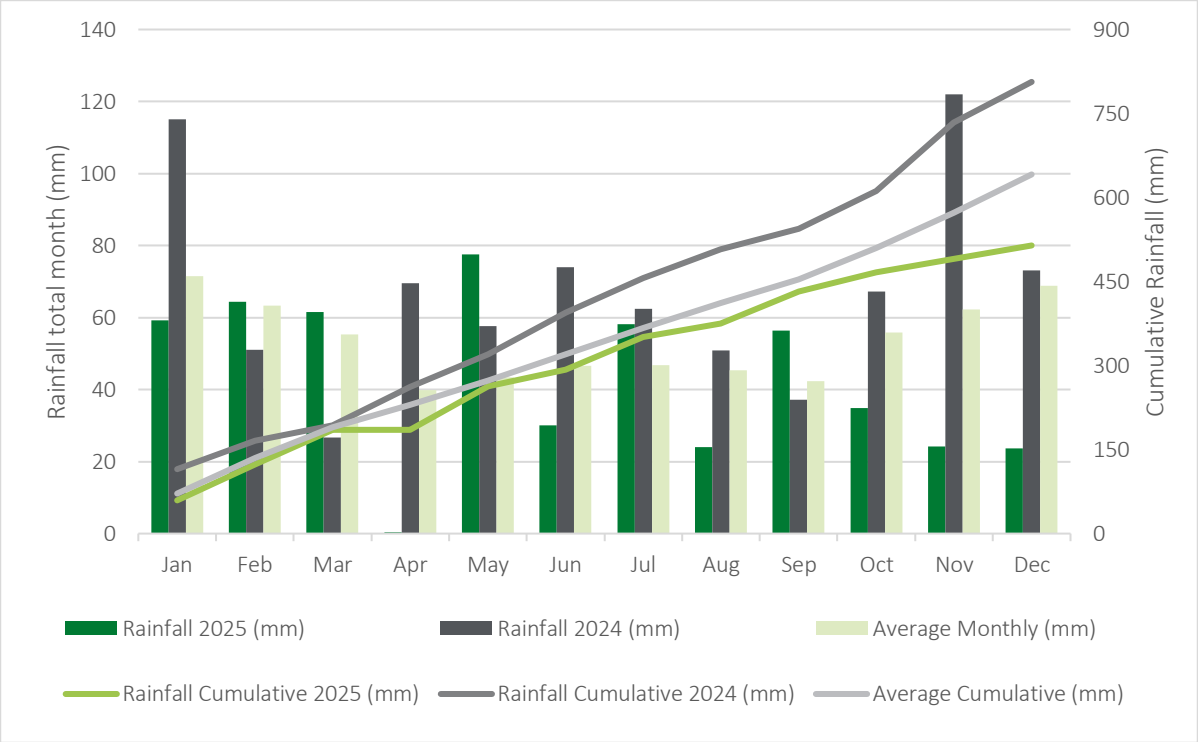

Figure 7: Monthly and cumulative rainfall totals for 2024, 2025 and long-term average dating back to 1906

3. Results and discussion

3.1. Targeted feral pest monitoring

Six feral animal species were recorded across two remote camera monitoring transects (Table 4), all of which are listed as priority pest species under the Central Tablelands Regional Strategic Pest Management Plan 2024-2028 (Local Land Services 2024). *Vulpes vulpes* (European Red Fox) was the most frequently species recorded on the remote cameras, with a total of 65 individual animals detected, followed by *Sus scrofa* (Feral Pig), with 48 detections and *Capra hircus* (Feral Goat), with 45 detections. Examples of species images are shown in Plate 1 to Plate 4.

Table 4: Feral animal species recorded within the UCMPL Project Area, 2025

Common Name	Scientific Name	Trig Road (total detections)	Apple Road (total detections)	Opportunistically recorded?	Previously recorded at UCMPL?
Fallow Deer*	*Dama dama*	11	5	Yes	Yes
Feral Cat*	*Felis catus*	0	2	Yes	Yes
Wild Dog*	*Canis familiaris*	1^	0	No	Yes
European Red Fox*	*Vulpes vulpes*	60	5	Yes	Yes
Feral Goat*	*Capra hircus*	0	45	Yes	Yes
Feral Pig*	*Sus scrofa*	4	44	Yes	Yes
European Rabbit	*Oryctolagus cuniculus*	0	0	Yes	Yes
European Hare	*Lepus europaeus*	0	0	Yes	Yes
Common Starling	*Sturnis vulgaris*	0	0	Yes	Yes
Sheep	*Ovis aries*	0	0	Yes	Yes
Indian Miner	*Acridotheres tristis*	0	0	Yes	Yes

*Declared priority pest species (Local Land Services 2024)

^ Wild Dog was detected twice in two separate cameras along Trig Road; however, review of images indicates that the detections are the same individual (Plate 3 and Plate 4).

Plate 1: Red Fox observed in Trig Road

Plate 2: Feral Goats observed in Apple Road

Plate 3: Wild Dog observed in Trig Road

Plate 4: The same Wild Dog observed in Trig Road

Three cameras in Trig Road detected no pest species and one camera in Apple Road detected no pest species over the 14-night monitoring period. Wild Dog was recorded only at Trig Road while Feral Cat was only recorded at Apple Road. However, both transects were heavily utilised by a mix of pest animal species as there were variations in the number of species captured by each camera within the same transect.

Figure 8 below plots feral animal activity (number of individuals per camera per night) for each species across monitoring years from 2018. Trig Road and Apple Road were also surveyed in 2019 and 2022, allowing for direct comparison of feral animal activity over time (Figure 9). It is not possible for remote camera detections to inform population size; however, the detection rate of several pest animal species along Trig Road and Apple Road has increased since 2019:

- Fallow Deer – 55% increase
- Feral Pig – 36% increase
- Red Fox – 69% increase
- Feral Goat – 100% increase

Wild Dog was recorded for the first time along Trig Road in 2025. This species has been previously recorded within the UCC along Old Ulan Road in 2018 (ELA 2019). Given the proximity of Trig Road to Old Ulan Road (<1 km), the detection of Wild Dog on Trig Road is not considered an increase in the detection rate for this species. Individual home ranges for Wild Dog vary from 400 to 100,000 ha, averaging about 4,000 ha in size (DPI 2026). Review of camera imagery indicates that the Wild Dog individual detected during 2025 it is unlikely to be the same individual as that recorded in 2018 (ELA 2019).

Locations of pest animal species is provided in Figure 10.

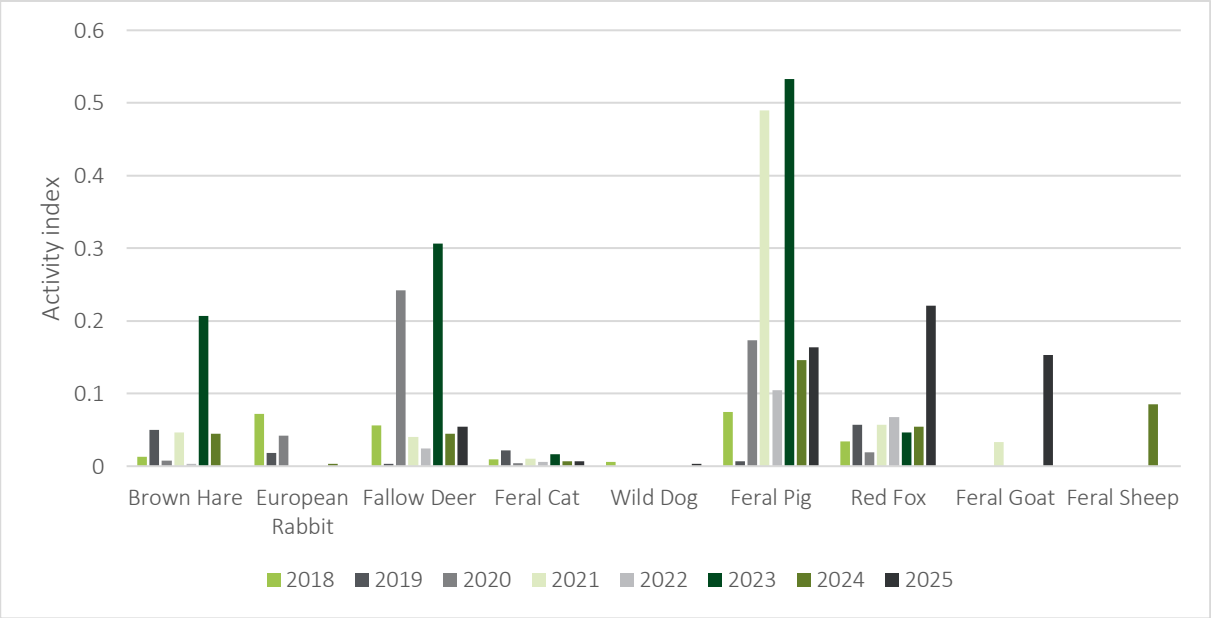

Figure 8: Comparison of feral animal activities across all camera transects (2018-2025)

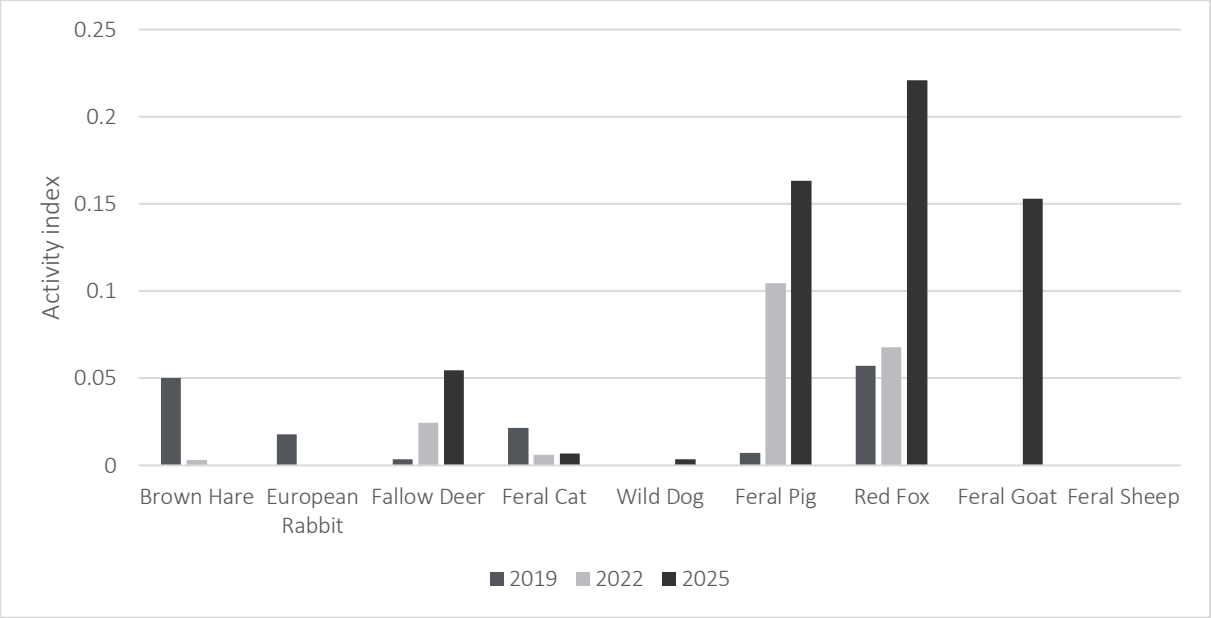

Figure 9: Direct comparison of feral animal activities across Trig Road and Apple Road transects, 2019, 2022 and 2025

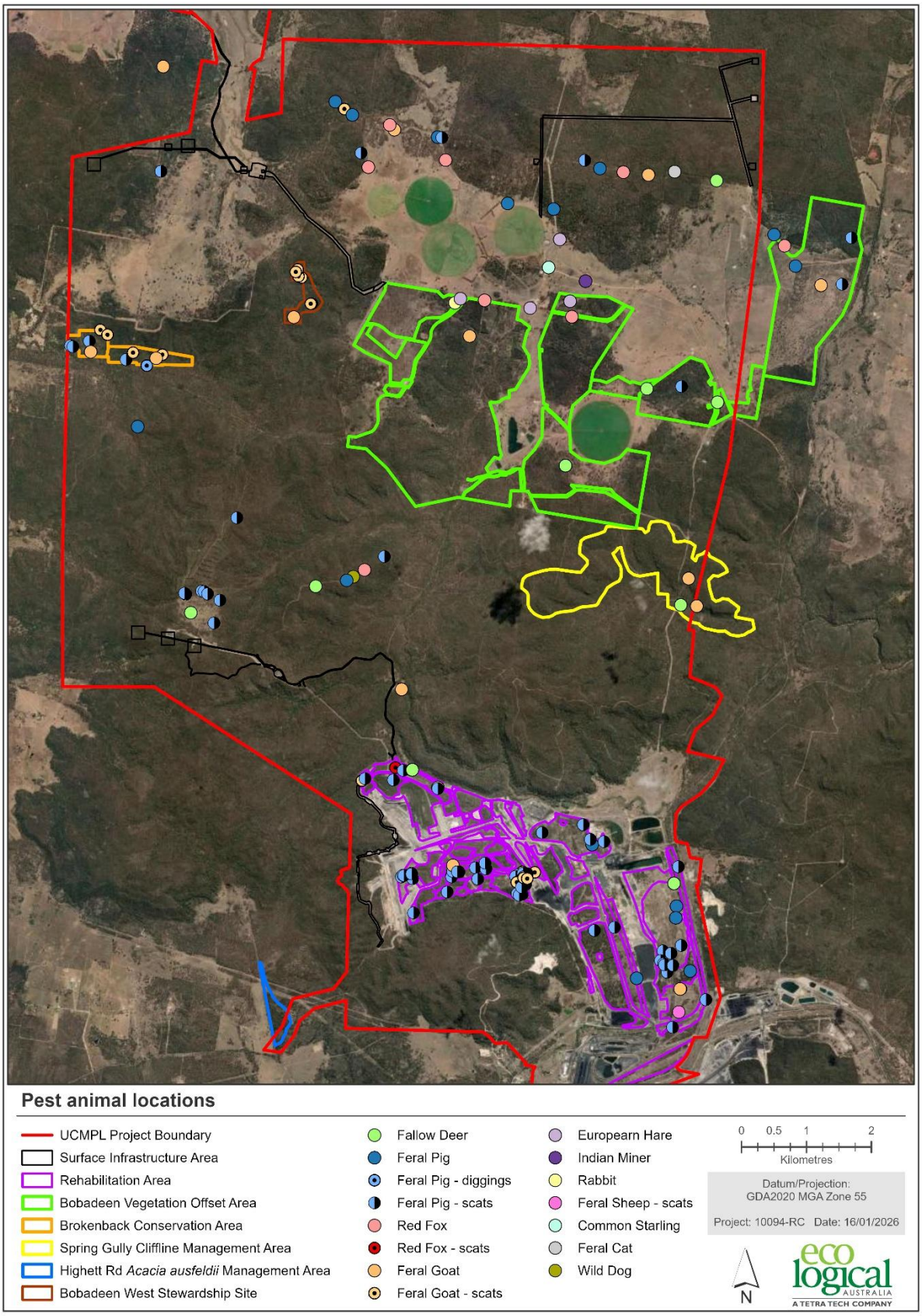

Figure 10: Pest animal locations

3.2. Targeted threatened bird surveys

3.2.1. Regent Honeyeater and Swift Parrot

Regent Honeyeater and Swift Parrot were not recorded during the 2025 targeted threatened bird surveys. Habitat for these species remains present with the UCC.

Several threatened diurnal bird species were recorded during the targeted threatened bird surveys or through opportunistic observation within the UCC in 2025 (Figure 11). These species, along with their BC Act and / or EPBC Act status is provided in Table 5.

Table 5: Threatened diurnal bird species recorded during 2025

Species	BC Act listing status	EPBC Act listing status
Climacteris picumnus victoriae (Brown Treecreeper; eastern subspecies)	Vulnerable	Vulnerable
Artamus cyanopterus cyanopterus (Dusky Woodswallow; eastern subspecies)	Vulnerable	Not listed
Calyptorhynchus lathami lathami (South-eastern Glossy Black-Cockatoo)	Vulnerable	Vulnerable
Pomatostomus temporalis temporalis (Grey-crowned Babbler; eastern subspecies)	Vulnerable	Not listed
Melanodryas cucullata cucullata (South-eastern Hooded Robin)	Endangered	Endangered
Parvipsitta pusilla (Little Lorikeet)	Vulnerable	Not listed
Grantiella picta (Painted Honeyeater)	Vulnerable	Vulnerable
Petroica boodang (Scarlet Robin)	Vulnerable	Not listed
Pyrrholaemus sagittatus (Speckled Warbler)	Vulnerable	Not listed
Neophema pulchella (Turquoise Parrot)	Vulnerable	Not listed
Daphoenositta chrysoptera (Varied Sittella)	Vulnerable	Not listed
Haliaeetus leucogaster (White-bellied Sea Eagle)	Vulnerable	Not listed
Hirundapus caudacutus (White-throated Needletail)	Vulnerable	Vulnerable, Migratory

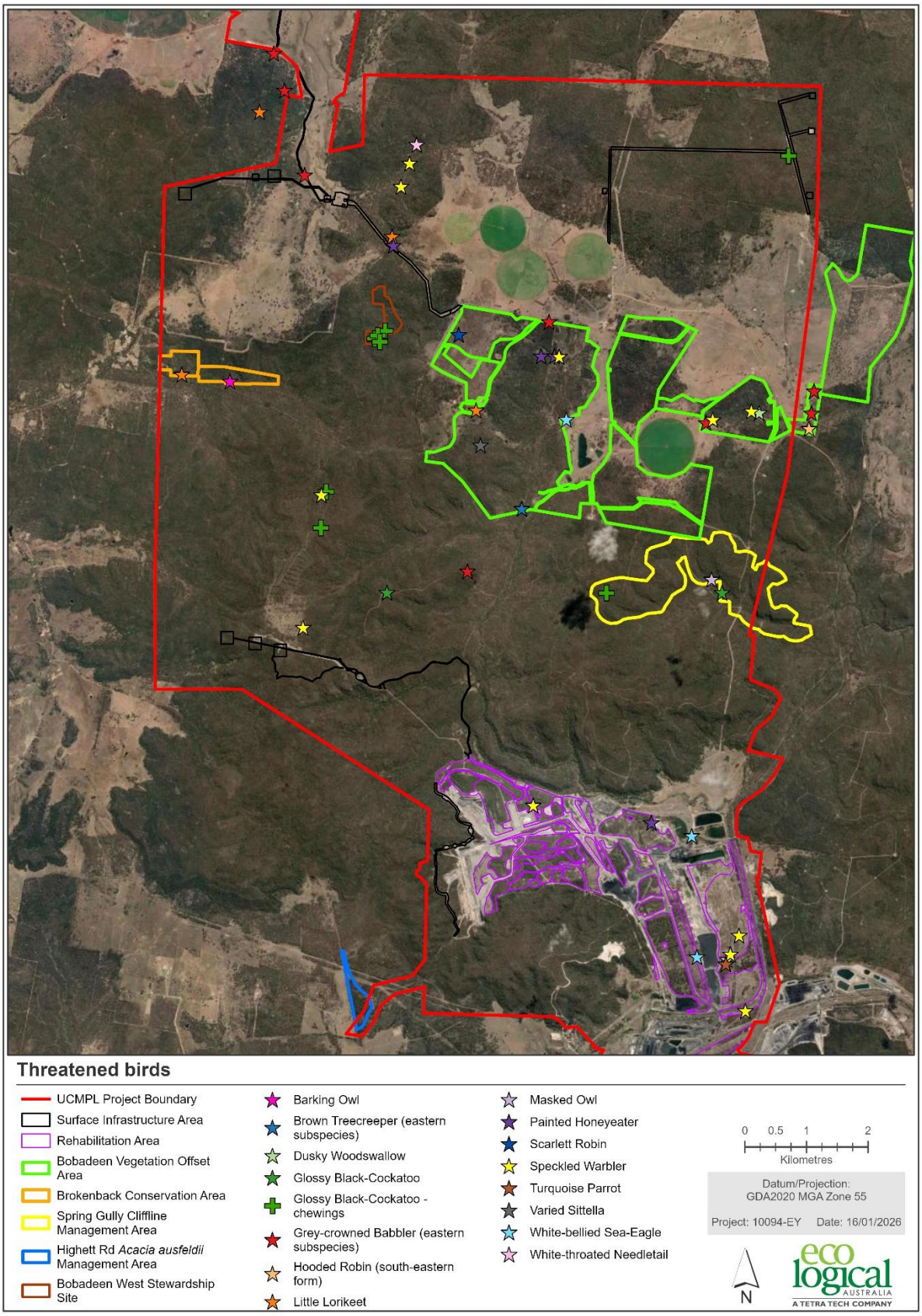

Figure 11: Threatened bird locations

3.2.2. Masked Owl

Masked Owl was not detected at two nocturnal monitoring sites BE1 and RES2: however, surveys undertaken in the Spring Gully Cliffline Management Area in accordance with the Combined Crown Licence resulted in detection of Masked Owl during 2025 (ELA 2026). This is the first documented detection of Masked Owl within the UCC (NSW Government 2026; ELA 2019-2025). Combined Crown Licence monitoring in Brokenback Conservation Area during 2025 also detected Barking Owl. Barking Owl is previously known to occur within the UCC. Masked Owl and Barking Owl locations are shown on Figure 11.

Table 6 lists the species identified during Masked Owl monitoring at sites BE1 and RES2.

Table 6: Fauna species observed during Masked Owl surveys 2025

Site	Common Name	Scientific Name
BE1	Southern Boobook	*Ninox boobook*
	Brush-tailed Possum	*Trichosurus vulpecula*
	Eastern Grey Kangaroo	*Macropus giganteus*
	Common Eastern Froglet	*Crinia signifera*
	Spotted Marsh Frog	*Limnodynastes tasmaniensis*
	White-striped Freetail Bat	*Austronomus australis*
RES2	Southern Boobook	*Ninox boobook*
	Common Eastern Froglet	*Crinia signifera*
	Spotted Marsh Frog	*Limnodynastes tasmaniensis*
	White-striped Freetail Bat	*Austronomus australis*
	Wombat	*Vombatus ursinus*
	Brush-tailed Possum	*Trichosurus vulpecula*
	Feral Goat	*Capra hircus*

3.3. Subsidence monitoring of targeted threatened bird habitat

Pre-mining pfc compared to during or post-mining pfc for UG and UW longwall sites and average change in pfc for longwall and transition sites is shown in Figure 12 and Figure 13 respectively.

Transition sites UGLW31 L5, and UGLWW8 L1 recorded a decrease in pfc of >10% when compared to pre-mining data; however, the average change in pfc for transition sites on UGLW31 and UWLWW8 is 3% and -3% respectively. No other site has recorded a >10% decrease in pfc when compared to pre-mining data. The monitoring period requirement has been completed on UGLWW7 and UGLW31.

The abundance of large hollows has stayed consistent, with no increase or decrease in the number of hollows present (Table 7).

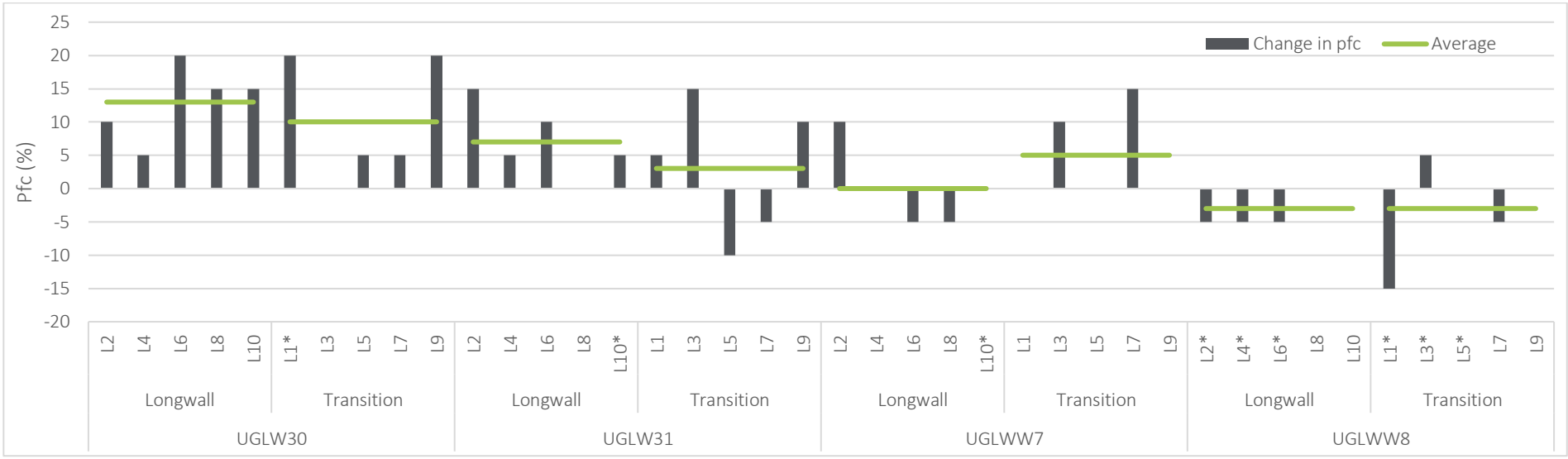

Figure 12: Change in pfc and average change in pfc for longwall and transition sites, UG longwalls (*denotes sites which contain key feed species)

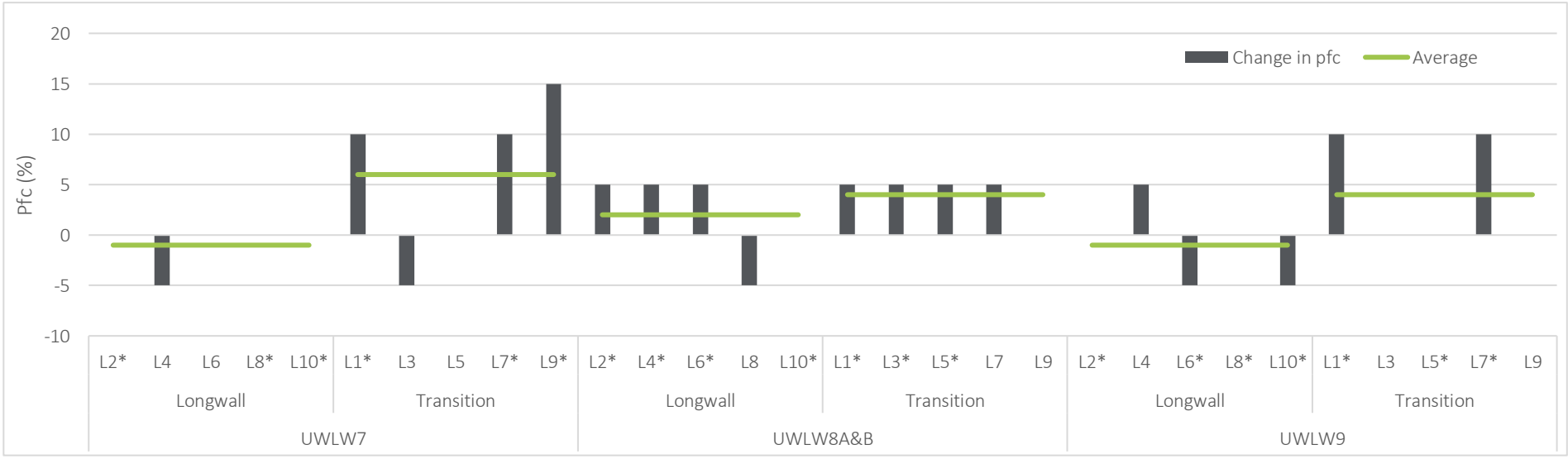

Figure 13: Change in pfc and average change in pfc for longwall and transition sites, UW longwalls (*denotes sites which contain key feed species)

Table 7: Change in HBTs at UGLWW7 sites containing large hollows – pre-mining and post-mining

Longwall	Site	Number of hollows pre-mining	Number of hollows post-mining	Change in abundance
UGLWW7	L3	1	1	0
UWLW8	L10	2	2	0
UWLW9	L5	1	1	0
	L6	2	2	0
UGLWW8	L3	1	1	0
	L4	2	2	0
	L8	0	1	0

3.4. Nest box monitoring

Of the 115 nest boxes monitored:

- 75 (65%) were deemed fit for use.
- Four nest boxes (3%) were classified as 'unserviceable'.
- Six nest boxes (5%) need repair.

A total of 42 nest boxes (36%) demonstrated signs of use; of which 33 contained nests or nesting material or showing other signs of habitation including chewing and scratches on the box.

Five individual nest boxes contained fauna at the time of survey, including two Common Brushtail Possum (Plate 5) in separate nest boxes, one *Psedocheirus peregrinus* (Common Ringtail Possum) (Plate 6), one *Varanus varius* (Lace Monitor) (Plate 7), and one nest box with three eggs likely to be a common parrot species (Plate 8).

No feral animals were utilising the nest boxes. The location and details of the nest boxes requiring repairs or replacement are detailed in Appendix A.

Plate 5: Common Brushtail Possum

Plate 6: Common Ringtail Possum

Plate 7: Lace Monitor

Plate 8: Three eggs, likely to be a common parrot species

4. Progress of management objectives and completion criteria

4.1. Threatened woodland birds TARP investigation

Biodiversity monitoring within Bobadeen VOA during 2024 did not detect the following threatened woodland bird species which had been previously recorded within the Bobadeen VOA (ELA 2025):

- Brown Treecreeper
- Speckled Warbler
- Varied Sittella

In 2024, an investigation into the habitat availability was triggered under the Threats to Ulan Coal Rehabilitation TARP (Table 8) for all three species:

- Brown Treecreeper – detected in four consecutive monitoring periods and not detected during 2024.
- Speckled Warbler – detected in five consecutive monitoring periods and not detected during 2024.
- Varied Sittella – detected in 2015 and 2016 consecutive monitoring periods, and then in 2020 and 2022 consecutive monitoring periods, and not detected during 2024 (Table 9).

Table 8: Threats to Ulan Coal Rehabilitation TARP for threatened woodland birds (extracted from Appendix A of BMP)

Trigger/ response	Condition Green	Condition Amber	Condition Red
Trigger	A species of threatened woodland bird previously identified within the Bobadeen BOAs for two or more consecutive monitoring periods, detected during subsequent monitoring period	A species of threatened woodland bird previously identified within the Bobadeen BOAs for two or more consecutive monitoring periods, not detected in these BOAs during subsequent monitoring period	Investigation indicates a decline in condition and/or availability of threatened species habitat within the BOAs
Response	No response required. Continue monitoring program	**Investigate** if threatened species habitat has reduced within BOAs and **undertake additional monitoring** to confirm absence of threatened species from within BOAs	Provide additional habitat and undertake additional monitoring to evaluate management measures
	Indicates triggered TARP condition		

Table 9: Frequency of detection of Brown Treecreeper, Speckled Warbler and Varied Sittella within Bobadeen VOA[1]

Species	2015	2016	2018	2020	2022	2024
Brown Treecreeper	Yes	Yes	Yes	Yes	**No**	**No**
Speckled Warbler	Yes	Yes	Yes	Yes	Yes	**No**
Varied Sittella	Yes	Yes	No	Yes	Yes	**No**

The following was undertaken for this investigation:

- Review of habitat requirements for Brown Treecreeper, Speckled Warbler and Varied Sittella.
- Analysis of previous years tree pfc and shrub pfc data to determine if there has been a decrease in habitat quality. All three species inhabit remnant woodland and forest

ecosystems (NSW Government 2026) and are not frequently detected within grassland or immature revegetation. The following remnant woodland / forest monitoring sites located within the Bobadeen VOA were used in the analysis: BOB4B, BOBC1, BOBC3, BOBE3, UCML_CA_Site10, UCML_CA_Site11, UCML_CA_Site13, UCML_CA_Site53, and UCML_CA_Site7.

- Analysis of HBT and length of large woody debris for the sites listed above from 2020-2024 to determine if there has been a reduction in key habitat features.
- Opportunistic monitoring for these species within the UCC during 2025.

The key findings of the investigation are outlined below.

4.1.1. Habitat requirements

The key habitat requirements for the Brown Treecreeper include Eucalyptus woodlands and dry open forests (NSW Government 2026). Fallen timber is a key component for foraging for these species, as well as hollows for nesting. The Speckled Warbler and Varied Sittella require very similar habitat requirements, in the form of Eucalyptus dominated communities and woodlands, however the Speckled Warbler requires nests in slight hollows in the ground or at the base of a low dense plant among fallen timber and litter, while the Varied Sittella nests high up in the living canopy forests. As these features are key requirements for the species, analysis of previous years data including tree cover, shrub cover, log lengths, and the number of HBTs was conducted to assist into the investigation.

4.1.2. Tree cover and shrub cover

Figure 14 plots tree pfc from the Bobadeen VOA across monitoring periods from the years 2020, 2021, 2022, 2023 and 2024. The results show that the tree cover across the selected sites has stayed relatively consistent. The shrub pfc plotted in Figure 15 illustrates that there has been an increase in shrub cover throughout the 5-year period. Consistent tree pfc and increasing shrub pfc indicates that there is no vegetation condition decrease, and habitat remains available for the three threatened bird species.

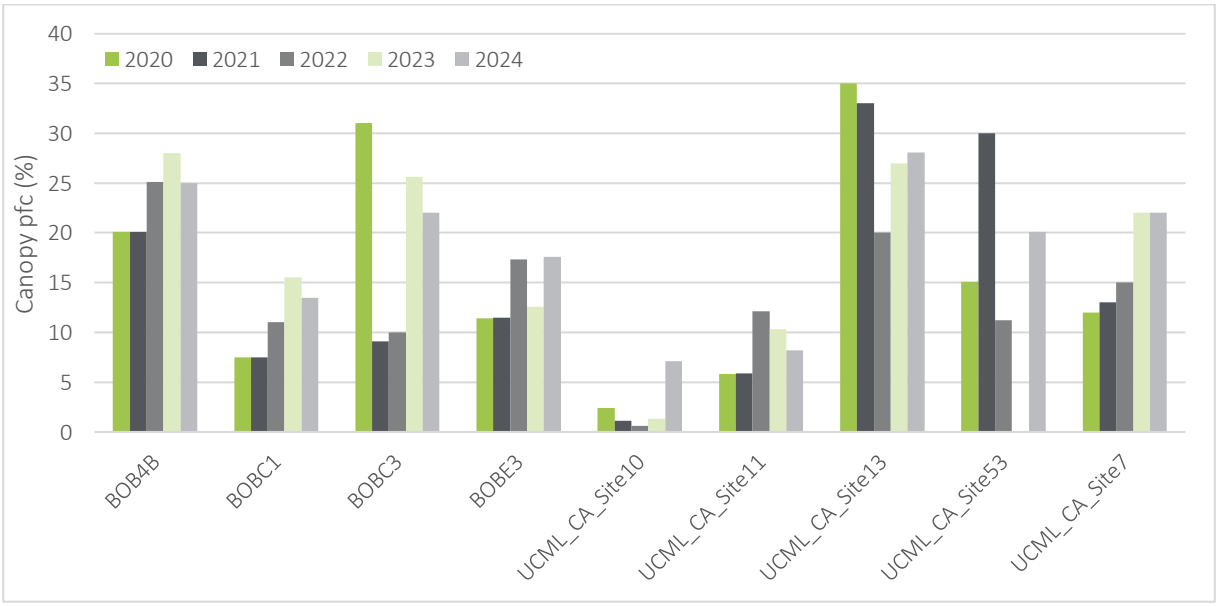

Figure 14: Tree pfc fluctuation at each site 2020 to 2024

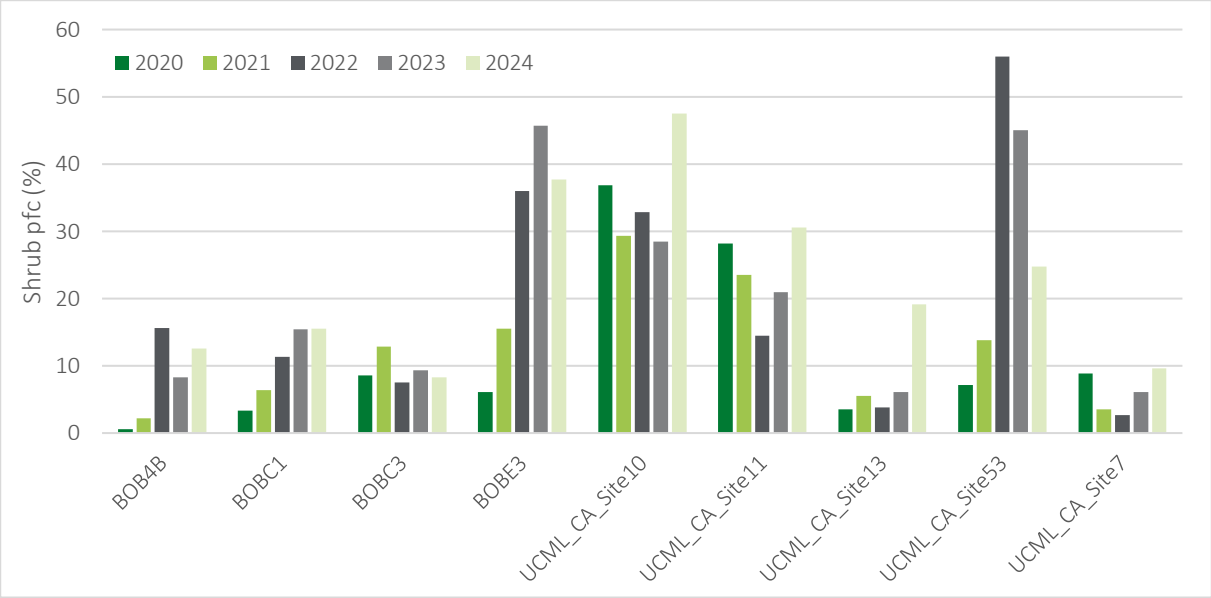

Figure 15: Shrub pfc fluctuation at each site 2020 to 2024

4.1.3. Log length and HBTs

Figure 16 and Figure 17 below show HBTs and length of large woody debris, both of which are important habitat features for the threatened woodland birds mentioned above. The length of large woody debris across sites over the 5 years is shown in Figure 16, with no clear temporal trend across the sites and throughout the 5 years. The detectability of large woody debris, and therefore the recorded length of large woody debris can fluctuate year on year changing levels of groundcover. Figure 17 highlights the number of HBTs from each site across a 5-year period, which shows that the availability of HBTs has not decreased.

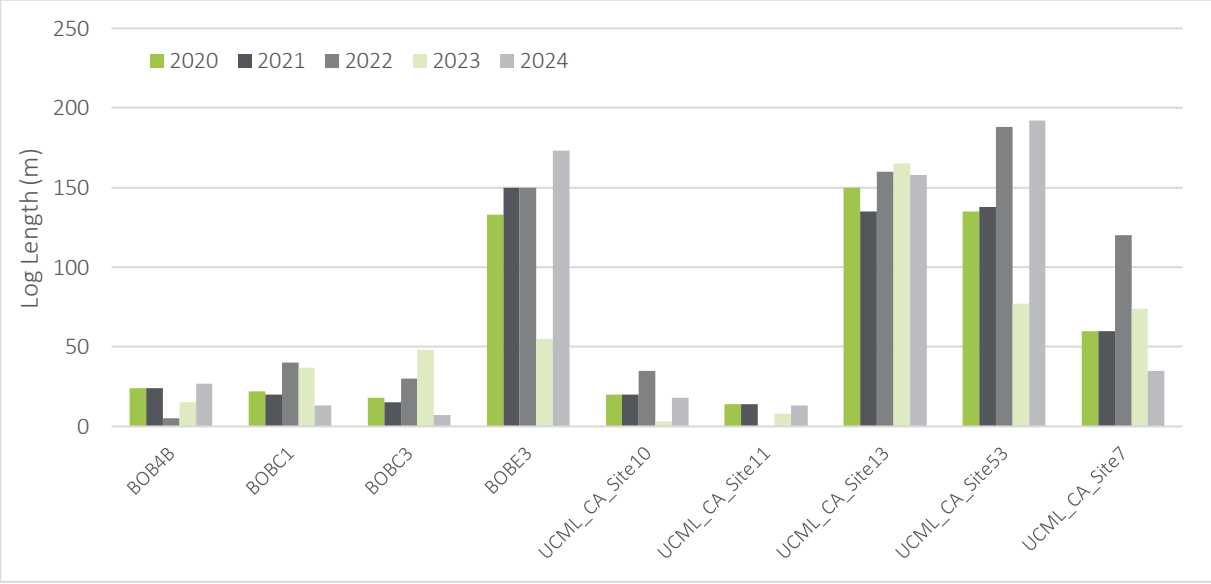

Figure 16: Yearly log length 2020 to 2024

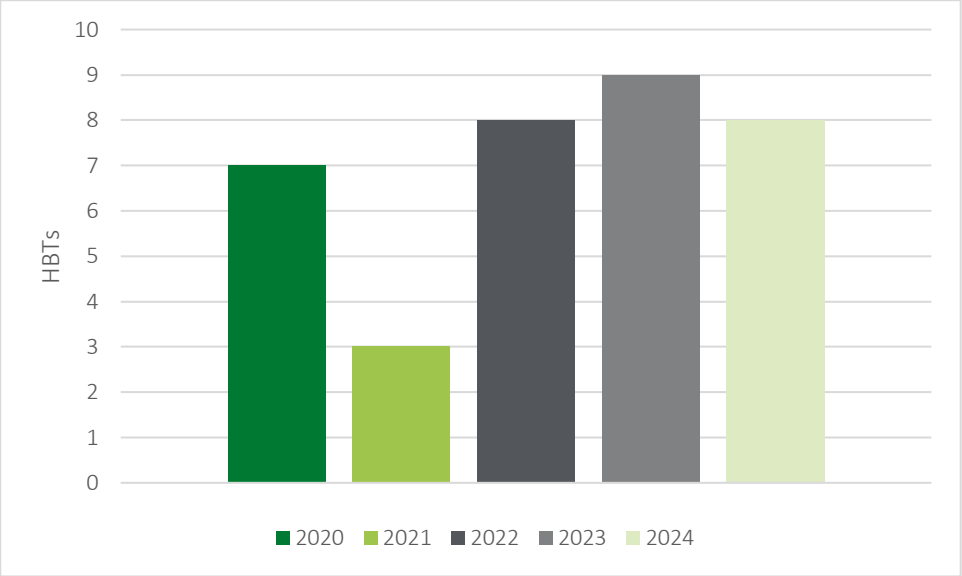

Figure 17: Total number of HBTs across selected monitoring sites; 2020 to 2024

4.1.4. Opportunistic monitoring

All three species were opportunistically recorded within the Bobadeen VOA during 2025 (Figure 11):

- One detection of Varied Sittella (four individuals) in the southwestern section of the VOA during November 2025 microbat surveys. There are previous records of Varied Sittella within 1 km of this location in contiguous habitat during 2016 and 2017 (NSW Government 2026).
- One detection of Brown Treecreeper (two individuals) along Ulan Creek during May 2025 floristic surveys. Brown Treecreeper has been previously recorded in contiguous habitat within 500 m of this detection in 2005, 2018 and 2020 (NSW Government 2026).
- Two detections of Speckled Warbler within Bobadeen Corridor during June (six individuals) and December 2025 (three individuals), and one detection (one individual) in the western side of the VOA during November 2025. All three detection locations are close (<200 m) to known records of this species from 2013, 2018 and 2020 (NSW Government 2026).

4.1.5. Investigation outcome

The investigation found that there has been no decrease in habitat availability for Brown Treecreeper, Varied Sittella and Speckled Warbler within the Bobadeen VOA. The detection of these species during 2025 indicates the ongoing presence and habitat availability for these species within the VOA. The provision of additional habitat and undertake additional monitoring to evaluate management measures is not required.

4.2. TARP assessment 2025

Table 10 provides a summary of progress against each requirement and/or criteria relevant to the UCMPL fauna monitoring program using the Threats to Ulan Coal Rehabilitation TARP (UCMPL 2024a).

Table 10: TARP conditions for 2025 monitoring results

Aspect/category	Key element	Condition Green	Condition Amber	Condition Red	Justification
Biodiversity (Woodland / Open Forest and Specific Endemic Vegetation Community Rehabilitation Areas)	Pest Fauna presence	Declining or stable (<25% increase) pest animal activity levels. No previously unrecorded pest animal species recorded within rehabilitation areas.	Pest animal activity level increase of >25% observed, or; Previously unrecorded pest animal species recorded within rehabilitation.	Pest animal activity level increase of >50% observed, or; Previously unrecorded pest animal species recorded within rehabilitation.	Amber The detection rate of Feral Pig, Feral Goat, Fallow Deer and Wild Dog has increased >25% at Apple Road and Trig Road since previous monitoring periods in 2019 and 2022.
	Native fauna	Monitoring confirms native bird and microbat species from multiple families are recorded utilising the rehabilitation, or suitable habitat is available.	Monitoring fails to record native bird and bat species from multiple families, or suitable habitat is unavailable	Monitoring fails to record native bird and bat species from multiple families across two or more consecutive monitoring periods, or suitable habitat is unavailable.	Green Assessment against this TARP category is undertaken biennially to coincide with the monitoring timing of both general fauna woodland bird monitoring (2024, 2026, 2028 etc) and targeted threatened bird surveys to allow for a robust assessment of bird species presence. However, targeted threatened bird survey results from 2025 confirms that native bird species from multiple families are recorded utilising the rehabilitation, or suitable habitat is available.
Threated fauna species habitat	Threatened Woodland Birds	A species of threatened woodland bird previously identified within the Bobadeen BOAs for two or more consecutive monitoring periods, detected during subsequent monitoring period	A species of threatened woodland bird previously identified within the Bobadeen BOAs for two or more consecutive monitoring periods, not detected in these BOAs during subsequent monitoring period.	Investigation indicates a decline in condition and/or availability of threatened species habitat within the BOAs.	Green Assessment against this TARP category is undertaken biennially to coincide with the monitoring timing of both general fauna woodland bird monitoring (2024, 2026, 2028 etc) and targeted threatened bird surveys to allow for a robust assessment of threatened woodland bird presence. As discussed above, the resulting TARP condition during 2024 was Amber due to the lack of detection of Speckled Warbler, Varied Sittella and Brown Treecreeper within the Bobadeen VOA. These species were recorded during 2025, and therefore the TARP condition has returned to Green.
Subsidence impacts to threatened species, populations, habitat or ecological communities	Threatened targeted bird species	As predicted, subsidence impacts on threatened targeted bird species are negligible, consistent with subsidence performance criteria.	Masked Owl: reduction in abundance and/or condition of hollow bearing trees (HBTs) at FBS monitoring sites; and Regent Honeyeater and Swift Parrot: >10%	Results from biodiversity monitoring have been confirmed that an exceedance or its likely to be exceeded regarding the	Green Two longwalls have reached the TARP assessment phase of the monitoring program: • UG LW31 – mining completed in 2023, and 2-years post-mining monitoring completed in 2025

Aspect/category	Key element	Condition Green	Condition Amber	Condition Red	Justification
			(percentage points) decline in percentage foliage canopy cover of key feed species at FBS monitoring sites.	Performance Measure for biodiversity	• UG LWW7 – mining completed in 2022, and 2-years post-mining monitoring completed in 2025 **Masked Owl**: No reduction in the pre-mining abundance of HBTs compared to the post-mining abundance of HBTs was recorded at UG LW31 and UG LWW7. **Regent Honeyeater and Swift Parrot:** The transition site UGLW31 L5 recorded a decrease in pfc of >10% when compared to pre-mining data; however, the average change in pfc for transition sites on UGLW31 is +3%. No other site has recorded a >10% decrease in pfc when compared to pre-mining data. UG LWW7 recorded an average change in pre-mining compared to post-mining pfc of -1% for transition sites, and +6% for longwall sites.
NA	Nest box monitoring	NA	NA	NA	No associated TARP conditions

5. Conclusion and recommendations

Fauna monitoring was undertaken across the UCC and included feral pest monitoring, targeted threatened bird monitoring, subsidence monitoring of threatened bird habitat, and nest box monitoring. Given the successful implementation of the monitoring program in 2025, UCMPL is compliant with their relevant project approval conditions.

Threatened bird monitoring did not detect the target species, Regent Honeyeater, Swift Parrot or Masked Owl within designated monitoring sites; however, Masked Owl was detected for the first time within the UCMPL Project Area during 2025. The lack of presence of Regent Honeyeater and Swift Parrot during 2025 does not indicate lack of suitable habitat, with extensive flowering of *Eucalyptus albens* throughout the UCC observed during 2025.

Several species of pest animals were detected during 2025. Pest animal presence resulted in Condition Amber according to the Threats to Ulan Coal Rehabilitation TARP (UCMPL 2024a) due to an apparent increase in feral pest presence along Apple Road and Trig Road compared to previous monitoring periods. Ongoing pest control management are recommended.

Condition Amber was triggered for threatened woodland birds in 2024 due to lack of detection of Brown Treecreeper Speckled Warbler, Varied Sittella in the 2024 monitoring period. An investigation was undertaken, as required by the TARP, into habitat availability for these species within Bobadeen VOA. The investigation found that there has been no decrease in habitat availability over the last 5 years. All three species were opportunistically detected during 2025. As such, the TARP condition for threatened woodland birds has returned to green.

As a result of annual inspections of representative sample of nest boxes, nine nest boxes monitored during 2025 require replacement or repair as they are no longer fully functional (see Appendix A). Replacement nest boxes should be of the same type and preferably supplied from a manufacturer with demonstrated success for the target fauna species / groups.

The 2-year post mining monitoring requirement for UGLW31 and UGLWW7 has been completed. Data indicates that a >10% decrease in pfc of Regent Honeyeater and / or Swift Parrot key feed species did not occur when comparing pre-mining and post-mining pfc. There has been no reduction in the availability of HBTs suitable for Masked Owl on UGLW31 or UGLWW7 when comparing pre-mining and post-mining data. Due to the stable nature of the vegetation and Regent Honeyeater, Swift Parrot and Masked Owl habitat, ongoing monitoring for UGLW31 and UGLWW7 is not recommended.

Ongoing monitoring in accordance with the BMP (UCMPL 2024a) is recommended.

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Appendix A – Nest boxes requiring attention

Unique cluster identifier	Nest box ID	Type	Easting	Northing	Condition
Unserviceable					
ERW1	Nest box 4	MMS Bat	759999	6426651	Fallen off tree
ERW10	Nest box 10	LTU Glider	759736	6427842	No hole for fauna to get in
ERW6	Nest box 9	LTU Parrot	759630	6427623	Fallen off tree
ERW9	Nest box 10	LTU Parrot	759813	6427770	Roof missing
Repair					
ERW10	Nest box 9	HLH Treecreeper	759704	6427830	Roof missing
ERW3	Nest box 5	LTU Parrot	760192	6426635	Roof missing
ERW5	Nest box 6	LTU Parrot	759988	6427163	Roof missing
ERW8	Nest box 3	HLH Treecreeper	759923	6427619	Roof missing
ERW8	Nest box 10	LTU Parrot	759935	6427610	Roof missing
ERW9	Nest box 7	HLH Treecreeper	759828	6427755	Roof missing