Southern Whiteface and Grey Falcon Survey

Yinnetharra Lithium Project Area

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EXECUTIVE SUMMARY

Electrostate Malinda Pty Ltd (Electrostate), a wholly owned subsidiary of Delta Lithium Limited (Delta), plans to mine lithium in the Gascoyne region of Western Australia. The proposed mining area (Malinda Project – the Project Area) is located 265km east of Carnarvon and 125km east, northeast of Gascoyne Junction, lying midway between the Kennedy Range and Mount Augustus.

Stantec (2024) undertook a detailed vertebrate fauna survey of the project area, including an avifauna survey. The Stantec (2024) survey in 2023 recorded the presence of Southern Whiteface (listed as Vulnerable) at four locations, but no Grey Falcons (listed as Vulnerable) in the Project Area. Although Southern Whiteface were confirmed as present in the area, a more comprehensive survey for Southern Whiteface was required to determine whether clearing of vegetation and development and operation of a mine were likely to have a significant impact requiring a referral under the *Environment Protection and Biodiversity Conservation Act 1999* (*EPBC Act*). Terrestrial Ecosystems was commissioned to undertake the additional investigations and completed 344 observation surveys and 110 acoustic (autonomous recording device; ARU) surveys of the Project Area and surrounds. Terrestrial Ecosystems avifauna survey recorded no Grey Falcons in the Project Area or surrounds. Southern Whiteface were recorded at thirteen locations during observational surveys and 25 locations in the ARU surveys. The observation surveys recorded the Southern Whiteface mostly outside the development envelope and ARU recordings detected the birds both inside and outside the development envelope.

The Commonwealth Government's criteria for deciding whether an action is likely to be significant have been applied to the available data, and the conclusion is that the Southern Whiteface and Grey Falcon are unlikely to be significantly impacted by the proposed developments and mining operations.

Southern Whiteface was mostly recorded in habitats adjacent to ephemeral drainage lines. These ephemeral drainage lines are common throughout the landscape, both inside and outside the development envelope, so it is expected that Southern Whiteface would be found in both areas and would regularly move between them. Given that this small bush bird will move if disturbed, the impact of clearing vegetation and mining is unlikely to be significant for this species. Based on Terrestrial Ecosystems' surveys south of Laverton, near Meekatharra, around Sandstone and the Yinnetharra project area and surrounds, the Southern Whitefaces' preferred habitat is areas with a substrate of red gritty, pebbly sand, and sometimes with small quartz stones, supporting open mulga woodlands with Acacia shrubs, with patches of leaf litter mostly restricted to immediately under trees and shrubs with leaves near ephemeral creek lines.

The Grey Falcon has not been reported or seen in or near the development envelope in any of the surveys, so it is unlikely to be impacted by vegetation clearing or mining activity.

1. INTRODUCTION

1.1 BACKGROUND

Electrostate Malinda Pty Ltd (Electrostate), a wholly owned subsidiary of Delta Lithium Limited (Delta Lithium) plans to mine lithium in the Gascoyne region of Western Australia. The proposed mining area (Malinda Project – i.e. Project Area) is located approximately 265km east of Carnarvon and 125km east, northeast of Gascoyne Junction, and midway between the Kennedy Range and Mount Augustus, in the Augustus (GAS3) IBRA subregion.

Numerous tributaries of the Gascoyne River have their origins approximately 25km to the east of the Project Area, and flow through or past the Project Area in a south-westerly direction. The Project Area is mainly flat or gently undulating plain vegetated with sparse mulga over scattered shrubs, although there are some low hills and rocky outcrops in some areas.

Stantec (2024) undertook a detailed vertebrate fauna survey of the Project Area and confirmed the presence of Southern Whiteface (listed as Vulnerable under the *EPBC Act 1999* and WA *Biodiversity Conservation Act 2016*). Although confirmed as present in the area, a more comprehensive survey was required to determine whether clearing vegetation and development of a mine were likely to have a significant impact on this species. Stantec (2024) reported the Grey Falcon as potentially occurring in the Project Area, but it was not recorded in the Stantec (2024) survey.

This report presents the results of a comprehensive survey of Southern Whiteface and Grey Falcons in the Project Area and its surroundings. Field results, combined with scientific literature and subject-matter expert (SME) knowledge gathered from field assessments across Western Australia, were used to evaluate potential impacts of mining on these two species.

1.2 SCOPE OF WORKS

Delta Lithium requested Terrestrial Ecosystems to:

- review the *Yinnetharra Detailed Terrestrial Vertebrate and Short-range Endemic Invertebrate Fauna Survey* report (Stantec 2024) and habitat descriptions specific to the Southern Whiteface and Grey Falcon, and provide feedback on the suitability of Stantec's analysis;
- undertake two seven-day surveys of the development envelope and surrounds for Southern Whiteface and Grey Falcons using Birds Australia 20-minute searches of a 2ha area (i.e. standard Birdlife avifauna search protocol; Bibby 2005); and
- deploy 10 acoustic recording units (ARUs; Wildlife Acoustics SM4 units) at multiple locations to target Southern Whiteface. These units were moved every 2-4 weeks to ensure adequate coverage.

The Project Area is defined by tenements E09/2170, E09/2169 and E09/2283. Avifauna surveys in areas beyond the tenements were conducted by Terrestrial Ecosystems to determine the presence and relative abundance of target species across the broader area and to better understand the preferred Southern Whiteface and Grey Falcon habitat.

1.3 OBJECTIVES

Terrestrial Ecosystems was commissioned by Delta Lithium to undertake additional surveys for Southern Whiteface and Grey Falcon in the Project Area and to comment on Stantec's (2024) survey and report. The objectives of this survey and assessment were to:

- determine the presence, relative abundance and distribution of Southern Whiteface and Grey Falcons in the Project Area and the surrounding area;

- determine if the regional availability of the habitat is sufficient to counterbalance the impact of disturbance within the disturbance envelope;
- comment on the adequacy of Stantec's (2024) survey of Southern Whiteface and its assessment of potential mining operation impacts on this threatened species; and
- assess the potential impacts that vegetation clearing and mining activity will have on Southern Whiteface and Grey Falcon.

1.4 STANTEC FAUNA SURVEYS

Stantec (2024) undertook a detailed terrestrial vertebrate fauna and short-range endemic (SRE) invertebrate fauna survey of the Yinnetharra Project Area (i.e. E09/2169, E09/2170 and E09/2283; 11,215.3ha). The multi-phased survey included:

- reconnaissance survey: 6 – 11 June 2023;
- detailed terrestrial vertebrate fauna and SRE invertebrate survey phase 1: 8 – 19 September 2023;
- detailed terrestrial vertebrate fauna and SRE invertebrate survey phase 2 (Trip 1): 4 – 11 April 2024;
- targeted Yinnetharra Rock-dragon survey: 30 April – 3 May 2024; and
- detailed terrestrial vertebrate fauna and SRE invertebrate survey phase 2 (Trip 2): 21 – 27 May 2024.

The Grey Falcon was not recorded in any of these surveys. Two Southern Whiteface were observed displaying nesting behaviour (i.e. flying in and out of a hollow; Site E during Phase 2) in an ephemeral drainage line, and eight of their calls were recorded by autonomous recording devices (ARUs) at three locations (Stantec 2024). Stantec (2024) indicated that critical habitat (e.g. major drainage, minor drainage, and mulga woodland) for this species occurred within the Project Area.

The avifauna methodology adopted by Stantec (2024) in their two-phase survey included:

- 20-minute avifauna census conducted at each trapping site (i.e. 8 sites) on each day of the trapping program during each phase of the Detailed vertebrate fauna survey from 06:00-11:00hrs while clearing traps to give a total of 37.3 hours of observations;
- opportunistic recordings; and
- ARUs (i.e. SM4) were deployed at each systematic survey site (i.e. 8 sites) for two nights during each phase of the Detailed vertebrate fauna survey. ARUs were set to begin recording one hour before sunset and to finish recording one hour after sunrise, and were set to target Night Parrots. In addition, ARUs were deployed in minor and major drainage habitats, which have the potential to support nesting and foraging. The targeted acoustic (ARU) surveys were conducted at 9 locations over 54 nights.

Bird call data from ARUs were analysed for Southern Whiteface calls by Stantec's zoologist, Jasmin Pratt, an ornithology specialist with experience in call identification. Analysis was conducted using Kaleidoscope Pro v5.5.0, targeting the frequency range of 3,500–7,000Hz. Analysis was restricted to triggers recorded during the first two hours and the last three hours of each night, targeting dawn and dusk, when diurnal bird call activity peaks. A call classifier was trained using a Southern Whiteface call library to perform a cluster analysis of bird call data. Cluster analysis groups similar-sounding calls, with the call most like previously identified Southern Whiteface calls presented at the top. The number of clusters was set to a maximum of 100, and all detections in the first 10 clusters and subsets of the remaining clusters were manually analysed.

Stantec (2024) provided species accumulation curves for the avifauna census data (i.e. at trapping sites) that were derived from 'Sobs (Mao Tao)' and Jackknife 1, Bootstrap and bias-corrected formulae for Chao 1 and Chao 2 for species richness estimates, but the software used was not identified (but probably Estimates).

The Stantec (2024) survey results indicated the following nine broad fauna habitats in the Project Area:

- stony plains;
- minor drainages;
- low hills;
- alluvial plains;

- major drainages;
- rocky outcropping;
- rocky hills;
- mulga woodlands; and
- sandy plains.

A description of these fauna habitats is provided in Appendix A and they are mapped in Figure 6.

Seventy-four bird species were recorded, with 57 of these species detected at systematic sampling sites.

2. TARGET SPECIES ECOLOGY

2.1 SOUTHERN WHITEFACE

2.1.1 Description

The Southern Whiteface was listed as Vulnerable under the *EPBC Act 1999* in March 2023, and similarly in August 2025 under the WA *BC Act 2016*. The WA listing of Southern Whiteface as Vulnerable is mainly based on the Threatened Species Scientific Committee's (Department of Climate Change Energy the Environment and Water 2023) assessment. The Commonwealth Government's Threatened Species Scientific Committee (Department of Climate Change Energy the Environment and Water 2023) suggested that this species met criterion 1 of the threatened species assessment process, which addresses the decline in the species population. It is reported that the Southern Whiteface has declined substantially over the last 24 years, with an estimated population reduction of 30-50% every 10 years. This decline is based on information provided by Ehmke et al. (2021), with the data coming from Birdata. Southern Whiteface data in Birdata have not been systematically collected across its geographic range and are therefore unlikely to be robust enough to determine a quantifiable decline.

There are two recognised subspecies of Southern Whiteface, *A. l. leucopsis* (south-eastern Southern Whiteface), which is found throughout south-eastern and central Australia, and *A. l. castaneiventris* (south-west Southern Whiteface), which is found in central and southern regions of Western Australia (Department of Climate Change Energy the Environment and Water 2023). These subspecies overlap in range, where they hybridise. The population of *A. l. leucopsis* is estimated at between 36,000 and 134,000, while the population of *A. l. castaneiventris* is estimated at between 236,000 and 954,000 (Department of Climate Change Energy the Environment and Water 2023).

The Southern Whiteface is a small, distinctive bird with a thornbill-like appearance, measuring ~11.5cm in length. It has a dark crown, extending from the forehead to the nape, and a white face (Plate 1). The upper parts of its body are predominantly brownish-grey, and the underparts are white. Its short, pointed bill is finch-like and adapted for feeding on seeds and insects (Nevill 2018). Some birds have a distinct chestnut flank, and their tails are black with a narrow white tip. It has a cream-coloured eye and grey legs, and adults are sexually monomorphic, while juveniles lack a black rear band on the face (Schodde and Mason 1999).

2.1.2 Distribution

The Southern Whiteface occurs over ~4,910,000km^2 of Australia; however, within this distribution, its area of occupancy is estimated to be 34,400-140,000km^2 (Ehmke et al. 2021). In Western Australia, it can be found as far north as Carnarvon, and from the west coast near Hamelin Bay through the Great Victoria Desert into the arid areas of South Australia (Figure 1). In WA, the Southern Whiteface has been found in numerous IBRA subregions, including but not exclusive to the Pilbara, Carnarvon, Gascoyne, Yalgoo, Murchison, Coolgardie, Little Sandy Desert, Gibson Desert, Great Victoria Desert, Central Ranges, Geraldton Sand Plains, Avon Wheatbelt, Nullarbor, and Mallee.

Within a 200km radius of the Project Area, there is a cluster of records near Mt Augustus (possibly due to the higher number of visitors) and a scattering of records over the rest of the area, but predominantly in the southwest (Figure 2).

Plate 1. Southern Whiteface

2.1.3 Movement

The movements, home range, and social structure of Southern Whiteface are poorly understood. Some consider it sedentary, however, records indicate that birds will move locally to new areas, particularly in drought years (Higgins and Peter 2002). Craig and Moore (2020) recorded this bird being present and then absent during surveys near Bungalbin in Western Australia, suggesting it was mobile, probably with a shifting activity area. In multiple surveys south of Laverton in the Goldfields, there was evidence of shifts in its activity area (Terrestrial Ecosystems 2024a).

2.1.4 Habitat and foraging

The geographic distribution of the Southern Whiteface covers a wide range of habitat types. Acacias and Eucalypts usually dominate these habitats and consist of open woodlands and shrublands on ranges, foothills, lowlands, and plains (Higgins and Peter 2002). This bird forages on the ground, feeding on insects, spiders, and seeds found on bare ground or in leaf litter (Higgins and Peter 2002, Antos and Bennet 2006). These birds will generally forage in small groups of 2-8, however, they have been known to congregate in larger groups and mixed flocks, particularly with other whiteface and thornbill species, and during the non-breeding season with foraging parties of up to 70 birds (Higgins and Peter 2002).

Habitat preference observed during a comprehensive survey of a Project Area south of Laverton indicated that Southern Whiteface had a preference for areas adjacent to ephemeral drainage lines where the tree density and litter under the trees were higher than in adjacent areas (Terrestrial Ecosystems 2024a).

Critical habitat for this species was described as relatively undisturbed open woodlands and shrublands with an understorey of grass or shrubs near areas of low tree densities, with a herbaceous understory for foraging habitat and living and dead trees with hollows and crevices, which are needed for roosting and nesting (Department of Climate Change Energy the Environment and Water 2023).

2.1.5 Breeding

Southern Whiteface lays its eggs from April to August in the north of its geographical range (Johnstone and Storr 2004), however, in arid regions, rainfall can affect breeding (Higgins and Peter 2002, Terrestrial Ecosystems 2024a). These birds nest in a variety of locations, including tree hollows and crevices and low bushes, and construct a large, bulky, domed-shaped nest of grass, bark, and roots (Higgins and Peter 2002). Clutches consist of 3-4 eggs. The incubation period is unknown, but young fledge between 14-19 days. Birds generally nest in pairs, but examples of cooperative breeding have been observed (Higgins and Peter 2002). The generational length is estimated at 2.8 years (Bird et al. 2020).

2.1.6 Threats

The conservation advice for the Southern Whiteface lists habitat loss as one of the major threats to the species, particularly on the east coast of Australia (Department of Climate Change Energy the Environment and Water 2023). Across much of the Southern Whiteface's range in WA, the threat to the species is likely to be a combination of overgrazing that affects understorey habitat and feral species predation.

2.2 GREY FALCON

2.2.1 Description

The Grey Falcon (*Falco hypoleucos*) is listed as Vulnerable under the *EPBC Act 1999* and the *BC Act 2016*. This raptor has an estimated wild population of <1000 (Threatened Species Scientific Committee 2020) and is the rarest member of the *Falco* genus in Australia, and is one of the top five rarest Falcon species in the world (Schoenjahn et al. 2019).

The Grey Falcon is a medium-sized falcon that has a pale-grey underbody with a medium-grey back, black outer wings, and off-white underwings (Mullin et al. 2019). Compared to other falcons, its lighter plumage stands out (Mullin et al. 2019). They stand at about 30-45cm tall, with wingspans ranging from 85-95cm (Morcombe 2017). Males have an average body mass of 390g, while females average 560g, displaying the reverse of the typical sexual dimorphism (Schoenjahn et al. 2019). Grey Falcons are usually a quiet species, but during their breeding season, they will make loud, slow "kek-kek-kek" or "kak-ak-ak-ak", which sounds similar to the call of a Peregrine Falcon but is slower, deeper, and harsher (Morcombe 2017).

2.2.2 Distribution

This species is sparsely recorded throughout much of arid, semi-arid Australia and inland Australia. Their range has been reduced to northern WA, with only rare occurrences south of 26°S (Schoenjahn et al. 2019; Figure 3). When sighted, Grey Falcons have been observed in areas with annual rainfall less than 500mm, except during wet years followed by drought, which can cause the species to become marginally more widespread (Threatened Species Scientific Committee 2020). There have been sightings south of 26°S, however, a lot of Grey Falcon sightings are believed to be misidentifications (Schoenjahn et al. 2019).

2.2.3 Movement

The Grey Falcon is a wide-roaming bird commonly recorded in drainage lines, along watercourses, or anywhere where there is permanent water throughout arid and semi-arid regions of Western Australia. There is a suggestion that their movements are seasonal, tending to move within rainfall areas of 150-250mm on the middle latitudes of Australia in the spring, and moving towards the coast while avoiding the north in the rainy seasons (Olsen and Olsen 1986). During autumn and winter, Grey Falcons may move further north, where it is drier (Olsen and Olsen 1986). They are often considered nomadic due to a lack of substantial studies on their movements (Schoenjahn et al. 2019). When recorded, they have been found as individuals or in pairs. In times of severe drought, groups of up to six falcons have been spotted around the junction of the Murray and Darling rivers in the eastern states of Australia (Olsen and Olsen 1986), but there is no information regarding whether anything similar occurs in Western Australia.

2.2.4 Habitat and foraging

The Grey Falcon is most likely to inhabit the timbered country in stony plains, shrublands (especially *Acacia*), grasslands (i.e. spinifex and tussock), and wooded areas of arid/semi-arid regions (Olsen and Olsen 1986). They can also inhabit open coastal woodlands, but this is primarily during seasons of drought (Olsen and Olsen 1986). It has been noted that in winter, Grey Falcons are more likely to be found in tussock grassland and open woodland.

However, Grey Falcons have also been observed using treeless areas for hunting and are known for having large foraging ranges. Their prey predominantly consists of birds, but they also hunt small mammals, reptiles, and insects (Olsen and Olsen 1986). Grey Falcons have a preference for ground-feeding and flocking birds, which can include parrots, pigeons, and wrens (Olsen and Olsen 1986). Their diet becomes more avian-based during the breeding season. While they are said to hunt in treeless areas, most accounts of their feeding have involved them feeding on the ground, especially near outback verges and tracks (Schoenjahn 2018).

2.2.5 Breeding

Breeding habitat appears to be localised in zones with the highest annual average temperatures and in areas with persistently dry and winter-drought climatic conditions. The breeding season for Grey Falcons is reported to be from mid-late winter to the end of spring (June to November). During the breeding season, they nest in tall trees on watercourses and occasionally on man-made structures such as transmission line towers. Grey Falcons are said to be opportunistic and frequently use already existing structures from other bird species, typically corvids and other raptors, with rare reports indicating that they will make their nests (Schoenjahn 2018). Grey Falcons will lay clutches of one to four eggs (Threatened Species Scientific Committee 2020). Eggs take 35 days to incubate, followed by another 49–52 days before they fledge (Schoenjahn 2018).

2.2.6 Threats

Even though multiple reports have recorded threats to the Grey Falcon, none of these have been substantiated and are often considered to be speculative (Schoenjahn 2018, Threatened Species Scientific Committee 2020). The reported threats include:

- predation by cats;
- increased temperatures in arid and semi-arid Australia;
- small population size;
- grazing by exotic herbivores;
- nest shortage;
- birdwatchers and photographers;

- collision with traffic;
- collision with fences and powerlines;
- egg collecting; and
- falconry.

Predation by cats has been listed as the highest priority, as Grey Falcon remains have been found in the stomach contents of feral cats (Threatened Species Scientific Committee 2020). A small population size means that the Grey Falcon is susceptible to demographic and genetic stochastic events, which could impact the long-term survival of the species, making it a very high threat (Threatened Species Scientific Committee 2020).

Listed threats 2, 4, and 5 above, are also considered as very high priority, but there is no evidence that these have impacted Grey Falcons (Threatened Species Scientific Committee 2020). Disturbance by birdwatchers and photographers is a moderate threat to Grey Falcons, as they may interrupt breeding success with repeated visits to known breeding sites (Threatened Species Scientific Committee 2020). Direct mortality from traffic, fences, and power lines is also considered a moderate threat, however, unlike impacts from birdwatchers, there is substantial evidence for this threat (Threatened Species Scientific Committee 2020). Egg collecting and falconry are the least impactful of these threats because they are least likely to occur.

3. METHODS

3.1 REVIEW OF STANTEC'S (2024) REPORT

Terrestrial Ecosystems has reviewed the detailed vertebrate fauna survey and report prepared by Stantec (2024) and comments on the adequacy of the information provided to assess potential impacts on Southern Whiteface and Grey Falcons.

3.2 SURVEY METHODS

Terrestrial Ecosystems has undertaken three avifauna surveys of the Project Area and its surrounds. It was initially intended that only two surveys would be undertaken, however, one of the ornithologists conducting the survey became unwell, so the second survey was not finished. An additional survey was subsequently arranged.

Two experienced ornithologists (i.e. Des Hume – 20 plus years' experience, and Mitch Plozza 10 plus years' experience) undertook the avifauna surveys. These avifauna surveys used the 20-minute/2ha walking transect searches, which is the Birds Australia system (Bibby 2005). Two approaches were used. If the survey areas were adjacent, both surveyors would move 50m from the starting point in opposite directions, and each would survey for 10-minute/1ha walking transect searches, or if the surveyors were separate, each would use the 20-minute/2ha walking transect searches. All birds seen and heard were recorded.

The survey locations were chosen to maximise the chances of detecting Southern Whiteface (i.e. they were not randomly selected). In most cases, surveys were conducted in habitats immediately adjacent to ephemeral drainage lines, where tree density and litter beneath the trees were often higher than in neighbouring areas (Figure 7). This is the habitat type where Terrestrial Ecosystems ornithologists have recorded them most frequently (Terrestrial Ecosystems 2024a, b). Avifauna surveys commenced in the development envelope and then expanded into the adjacent areas. Surveys outside the development envelope were undertaken to demonstrate the abundance of Southern Whiteface in the neighbouring areas.

3.3 SPECIES ACCUMULATION CURVES

Species accumulation curves, or collectors' curves, plot the cumulative number of species discovered in a defined sampling area with increasing levels of survey effort (Thompson and Thompson 2007, Thompson et al. 2007). Species accumulation curves provide a measure of species inventory efficacy and completeness, and can be used to compare survey data based on standardised sampling protocols (Moreno and Halffter 2000). Soberón and Llorente (1993) suggested that species accumulation curves lend rigour to fauna inventories.

Species accumulation curves were prepared to demonstrate the adequacy of the survey effort.

Based on the abundance of birds for each species, a species accumulation curve for all records was calculated using each site as a sampling event (Thompson and Withers 2003, Thompson et al. 2003, Thompson and Thompson 2007, Thompson et al. 2007). We report Incidence Coverage-based (ICE) and Chao-2 estimators of species richness as calculated in EstimateS (Colwell 2013), as Chao and Chiu (2016) indicated that these are most suitable for incidence data (also see: Chazdon et al. 1998). We plotted the cumulative number of species from EstimateS data using the Beta model (see: Thompson et al. 2007) in NLREG software (Sherrod 2001) to provide a smoothed curve. Species accumulation curves for the data collected during this survey are based on the 344 survey sites.

Terrestrial Ecosystems also prepared a species accumulation curve for the Stantec (2024) data using the raw data taken from the IBSA file.

3.4 AUTONOMOUS RECORDING DEVICES

3.4.1 Southern Whiteface calls

The Southern Whiteface has a distinctive call. It has been described as tchip-tchip-chiptchipt-chipt-chip or tzip-tzip-tzipt. The spectrogram of its calls indicates tchips are between 0.13-0.20sec apart, and they range between 4,000 and 6,400Hz. In each call sequence, the tchips vary in number, range and frequency (Plate 2), but the overall characteristic of the call is preserved.

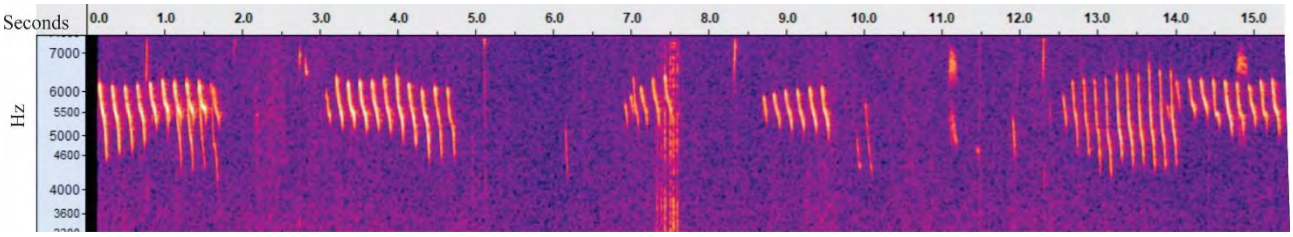

Plate 2. Spectrogram of Southern Whiteface calls

This pattern of calls is therefore able to be detected in ARU wav files.

3.4.2 Deployment of ARUs

New Song Meter SM4 acoustic recorders (i.e. ARUs) were used with a sampling rate of 24000Hz to record diurnal sounds in the Project Area, meaning the microphones were in excellent condition. Ten ARUs were deployed across the Project Area (Figure 7) between April and November 2025. The ARUs were left in situ for between two and four weeks at any location. On one occasion, a four week sampling period was used immediately after it rained, to see if the Southern Whiteface might commence nesting activity. ARUs were set to record all sounds from sunrise until sunset. The deployment and retrieval times and the locations of each ARU sampling point are in Appendix D.

ARUs were initially deployed adjacent to ephemeral drainage lines within the development envelope and then expanded beyond that area to demonstrate their abundance in the areas immediately adjacent to the development envelope.

3.4.3 ARU data analysis

Most ARU recordings contain a very high volume of sounds that are not those of Southern Whiteface. A screening tool was used during the initial phase of data analysis. This screening tool software (i.e. Audentify) was written in Python. Templates used in the software program were derived from on-site recordings of Southern Whiteface in the Yinnetharra area and a single recording from near Laverton, Western Australia, that is available on the Xeno-Canto website (i.e., XC924515).

All ARU recordings were first reviewed in Audentify, and those that closely matched the templates were rated 1-10 based on their similarity. The spectrograms of all recordings with a rating of at least 0.3 were visually examined. The screening software recorded a number of false positives, so any recording that displayed the characteristics shown in Plate 2 was then listened to in Audacity (https://www.audacityteam.org).

3.5 HABITAT QUALITY

Overall habitat quality was assessed in the development envelope using the descriptors provided in Table 1. It is recognised that habitat quality varies substantially across the development envelope.

Table 1. Habitat quality descriptors

Rating	Habitat quality description
5	*High-quality fauna habitat*—These areas closely approximate the vegetation mix and quality that would have been in the area before any disturbance. The habitat is connected to other habitats and likely contains the most natural vertebrate fauna assemblage.
4	*Very good fauna habitat*—These areas show minimal signs of disturbance (e.g., grazing, clearing, fragmentation, weeds) and generally retain many of the characteristics of the habitat if it had not been disturbed. The habitat is connected to other habitats, and fauna assemblages in these areas will likely be minimally affected by disturbance.
3	*Good fauna habitat*—These areas showed signs of disturbance (e.g., grazing, clearing, fragmentation, weeds) but generally retained many of the characteristics of the habitat if it had not been disturbed. The habitat is connected to other habitats, and the fauna assemblages in these areas are likely to be affected by disturbance.
2	*Disturbed fauna habitat*– These areas showed signs of significant disturbance. Many of the trees, shrubs, and undergrowth have been cleared. These areas may be in the early succession and regeneration stages. Areas may show signs of significant grazing, containing weeds or damaged by vehicles or machinery. Habitats are fragmented or have limited connectivity with other fauna habitats. Fauna assemblages in these areas will likely differ significantly from what might be expected in the area had the disturbance not occurred.
1	*Highly degraded fauna habitat* – These areas often have a significant loss of vegetation, an abundance of weeds, and many vehicle tracks or are completely cleared. Limited or no fauna habitat connectivity. Fauna assemblages in these areas will likely significantly differ from what might have been in the pre-disturbance area.

4. RESULTS

4.1 FAUNA HABITAT IN THE DEVELOPMENT ENVELOPE

The areas around where the proposed mining operations will be undertaken have numerous exploration tracks and drill holes, and were therefore highly disturbed. This is an area approximately 2.5km by 1.5km. Cattle have grazed on native pasture for many decades across the tenements, but have mostly foraged in ephemeral drainage lines. Areas that have not been intensively explored for minerals are less disturbed. Fauna habitats were of variable quality, ranging from 'highly degraded fauna habitat' (i.e. rating of 1) to 'good fauna habitat' (rating of 3).

4.2 DATES OF FIELD SURVEYS

Field surveys were undertaken by Terrestrial Ecosystems ornithologists during the following periods:

- 31/3/2025 – 5/4/2025 – 197 survey sites, with some 2 x 10-minute/1ha;
- 27/6/2025 – 29/6/2025 – 62 survey sites; and
- 12/8/2025 - 16/8/2025 – 85 survey sites.

4.3 RAINFALL SINCE JANUARY 2023

Rainfall for the Yinnetharra mining camp is shown in Chart 1 with the avifauna survey period marked in red dashes (Chart 1). There were long periods of very little rain, in particular, the two months before the first survey.

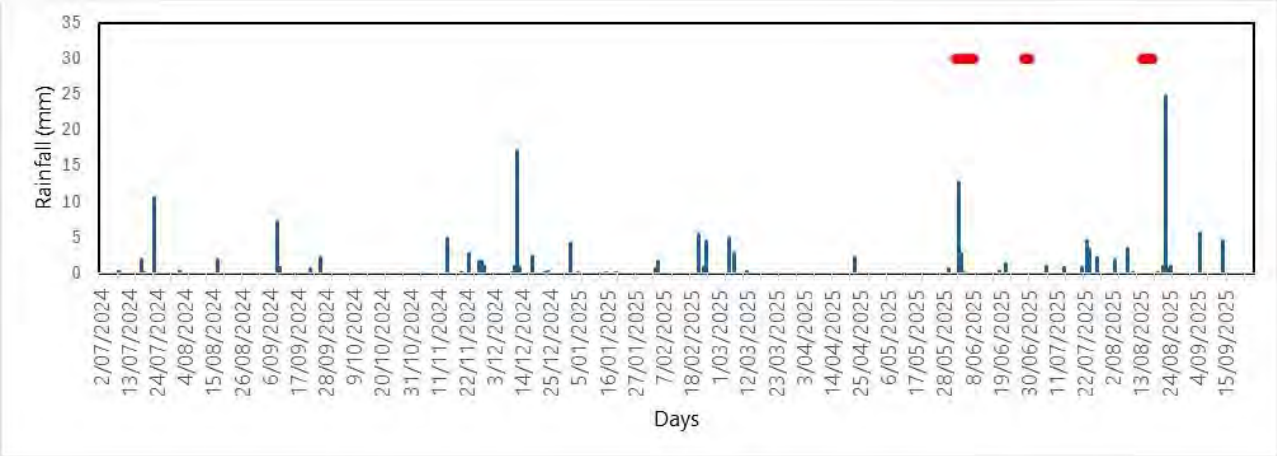

Chart 1. Rainfall recorded at the Yinnetharra mining camp since 1 August 2024

Red bars indicated avifauna survey periods

4.4 AVIFAUNA IN THE PROJECT AREA

Birds recorded in the Project Area are provided in a matrix by survey site in Appendix B. A total of 3,274 individuals from 59 species were recorded. The species accumulation curve, based on the number of birds for each species per survey site, is shown in Chart 2. The curve in Chart 2 has almost reached the asymptote, indicating that very few bird species in the Project Area and its surroundings have not been recorded. The estimated species richness using ICE was 61.7, and using Chao2 was 60.9.

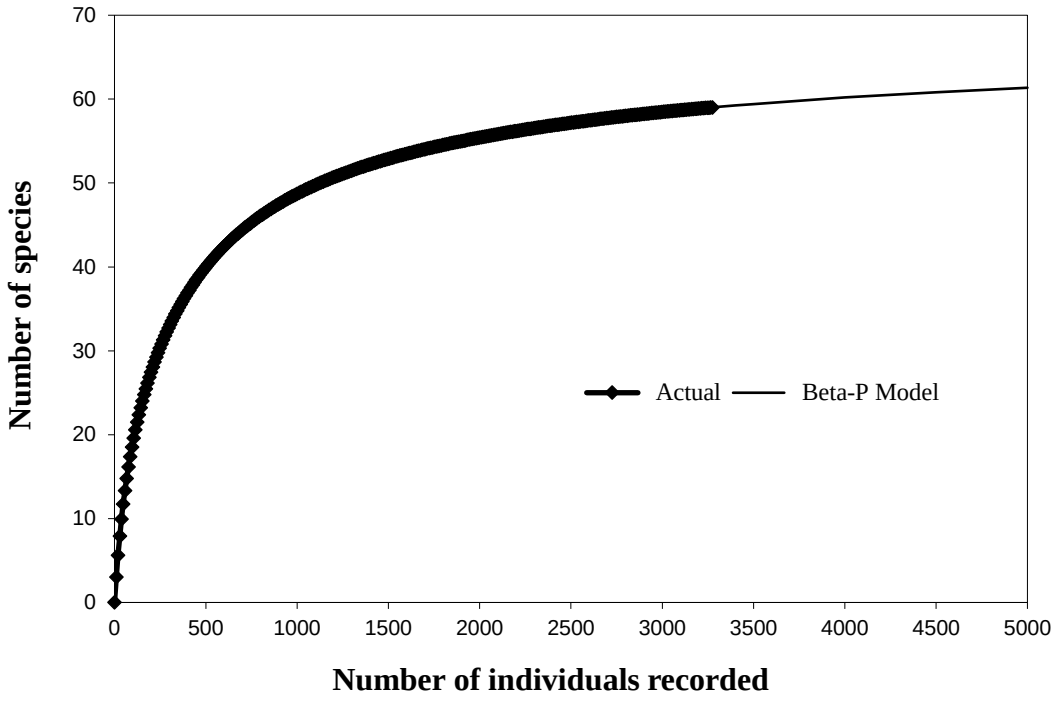

Chart 2. Species accumulation curve for the 344 survey sites

4.5 GREY FALCON SURVEY RECORDS

No Grey Falcons were recorded during the avifauna surveys.

4.6 SOUTHERN WHITEFACE SURVEY VISUAL RECORDS

Southern Whiteface were recorded at 13 locations during the observation and visual surveys (Table 2). None were nesting, and most were foraging or resting in shrubs and in small flocks of 1-5 individuals. Eleven of the 13 Southern Whiteface locations were in or near small ephemeral drainage lines where the tree density and litter under the trees were higher than in adjacent areas. One of the locations is in the southern section of the Project Area at site 13.

Table 2. Southern Whiteface records

Avifauna survey site	Date	Easting	Northing	Number of birds
13	31/03/2025	423084	7286307	2
61	4/04/2025	420760	7279572	3
106	7/04/2025	430090	7292920	4
163	3/04/2025	403777	7292821	2
264	12/08/2025	429627	7292600	5
266	12/08/2025	431797	7291694	3
273	13/08/2025	436242	7290859	3
291	14/08/2025	426275	7294212	2

Avifauna survey site	Date	Easting	Northing	Number of birds
294	14/08/2025	425635	7295408	3
298	14/08/2025	423570	7294049	5
334	16/08/2025	414073	7301532	5
335	16/08/2025	413959	7302317	3
340	16/08/2025	402985	7308666	1

4.7 SOUTHERN WHITEFACE HABITAT FOR VISUAL RECORDS

Plates 3 to 28 show the habitat at the thirteen locations where Terrestrial Ecosystems observed Southern Whiteface. In the Yinnetharra Project Area and its surrounds, Southern Whiteface were mostly recorded in proximity to small ephemeral creek lines in open areas, but close enough to the ephemeral creek line to rapidly retreat to shrubs and trees when disturbed (Figure 8). These areas would have been classified as minor drainage or were too small to be mapped by Stantec (2024). Stantec (2024) described the vegetation in minor drainage as typically *Acacia kempeana* and *Acacia fuscaneura* tall shrubland over *Senna artemisioides* subsp. *helmsii* scattered shrubs over *Aristida contorta*, *Eriachne aristidea* and *Cenchrus ciliaris* open tussock grassland on a substrate of sand and/or clay-based soil with specific drainages containing some quartz gravel. Photos for each survey location are in Appendix C.

Plate 3. Survey site 13

Plate 4. Survey site 13

Plate 5. Survey site 61

Plate 6. Survey site 61

Plate 7. Survey site 106

Plate 8. Survey site 106

Plate 9. Survey site 163

Plate 10. Survey site 163

Plate 11. Survey site 265

Plate 12. Survey site 265

Plate 13. Survey site 267

Plate 14. Survey site 267

Plate 15. Survey site 274

Plate 16. Survey site 274

Plate 17. Survey site 292

Plate 18. Survey site 292

Plate 19. Survey site 295

Plate 20. Survey site 295

Plate 21. Survey site 299

Plate 22. Survey site 299

Plate 23. Survey site 333

Plate 24. Survey site 333

Plate 25. Survey site 334

Plate 26. Survey site 334

Plate 27. Survey site 339

Plate 28. Survey site 339

4.8 ARU RECORDINGS OF SOUTHERN WHITEFACE

Southern Whiteface were recorded at 25 of the 110 ARU sampling sites (Table 3). On some ARUs, there were multiple Southern Whiteface calls over multiple days, but on others, there was one or a few calls on a single day. These data suggest that at some locations Southern Whiteface were present for multiple days, whereas at others they were transient. Plates 29 to 53 show the habitat at the 25 locations where Terrestrial Ecosystems recorded Southern Whiteface using ARUs. Photos of the ARU sample sites are shown in Appendix E.

Table 3. Location of an ARU that recorded a Southern Whiteface call

ARU #	Date in	Date out	Easting	Northing
39	1/06/2025	15/06/2025	423962	7286825
40	1/06/2025	15/06/2025	425367	7287211
50	15/06/2025	30/06/2025	425234	7287085
58	30/06/2025	13/07/2025	424704	7289050
59	30/06/2025	13/07/2025	423110	7286291

ARU #	Date in	Date out	Easting	Northing
60	30/06/2025	13/07/2025	425241	7287396
69	13/07/2025	28/07/2025	422107	7285533
70	13/07/2025	28/07/2025	425619	7287857
71	30/07/2025	22/08/2025	426843	7291140
77	30/07/2025	22/08/2025	426526	7287068

ARU #	Date in	Date out	Easting	Northing
78	30/07/2025	22/08/2025	423966	7288258
80	30/07/2025	22/08/2025	425530	7286902
81	22/08/2025	20/09/2025	414296	7302858
82	22/08/2025	20/09/2025	413977	7302385
83	22/08/2025	20/09/2025	414094	7301532
84	22/08/2025	20/09/2025	423578	7294129
85	22/08/2025	20/09/2025	425156	7295426
86	22/08/2025	20/09/2025	426382	7294262

ARU #	Date in	Date out	Easting	Northing
87	22/08/2025	20/09/2025	429863	7292728
88	22/08/2025	20/09/2025	430580	7292223
89	22/08/2025	20/09/2025	431793	7291711
90	22/08/2025	20/09/2025	436268	7290883
93	20/09/2025	20/10/2025	422679	7289426
94	20/09/2025	20/10/2025	420947	7286378
102	20/10/2025	1/11/2025	422564	7288252

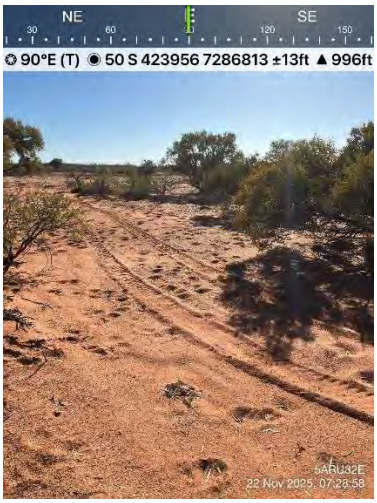

Plate 29. ARU site 39

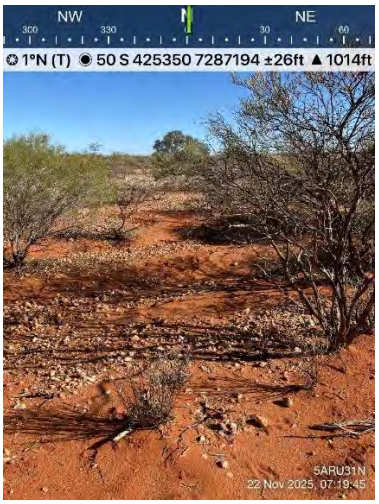

Plate 30. ARU site 40

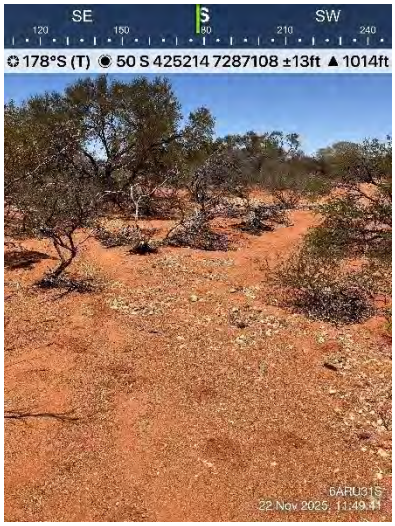

Plate 31. ARU site 50

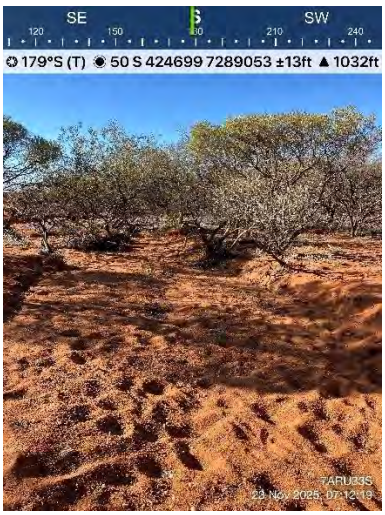

Plate 32. ARU site 58

Plate 33. ARU site 59

Plate 34. ARU site 60

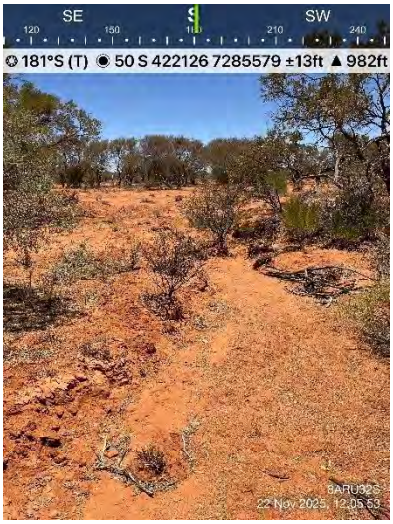

Plate 35. ARU site 69

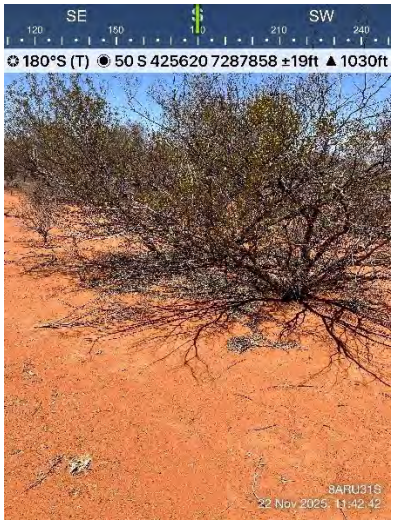

Plate 36. ARU site 70

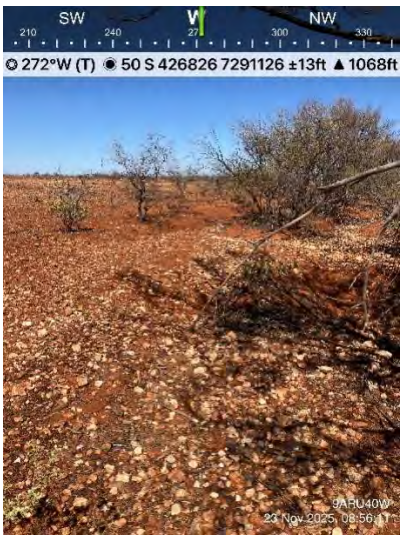

Plate 37. ARU site 71

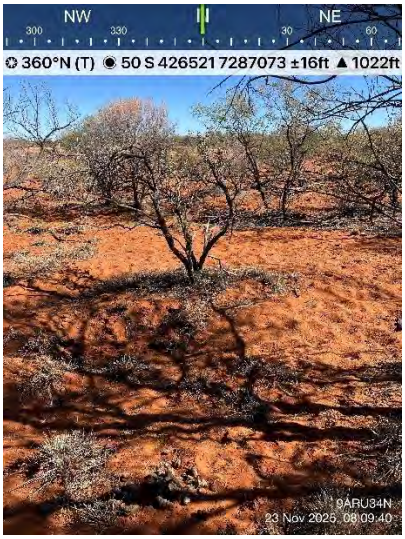

Plate 38. ARU site 77

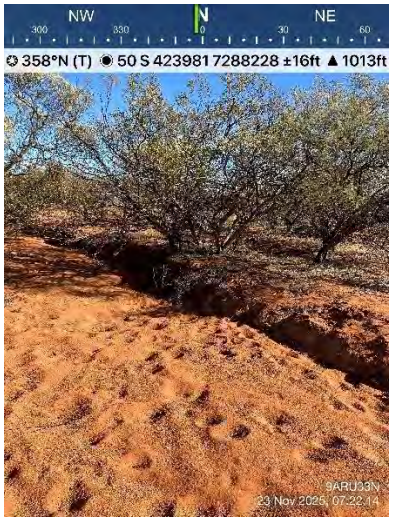

Plate 39. ARU site 78

Plate 40. ARU site 80

Plate 41. ARU site 81

Plate 42. ARU site 82

Plate 43. ARU site 83

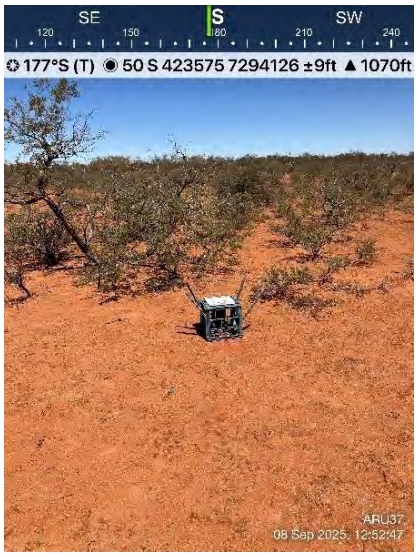

Plate 44. ARU site 84

Plate 45. ARU site 85

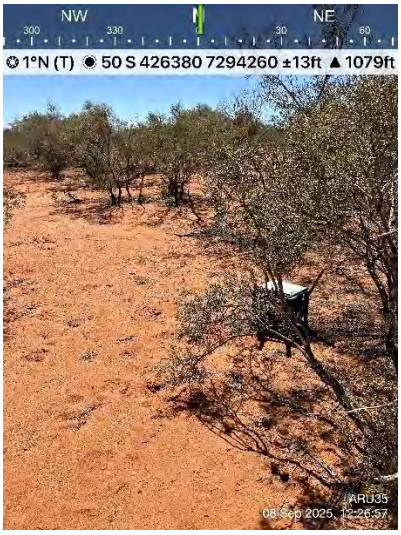

Plate 46. ARU site 86

Plate 47. ARU site 87

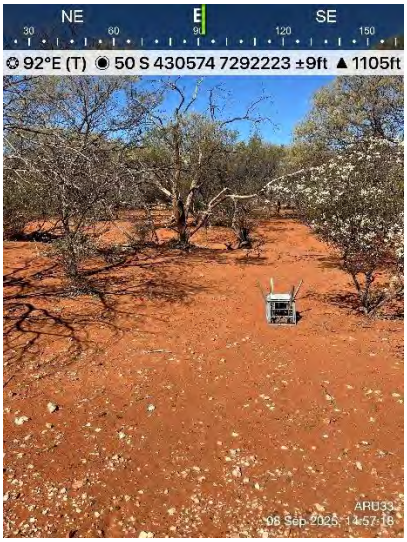

Plate 48. ARU site 88

Plate 49. ARU site 89

Plate 50. ARU s90

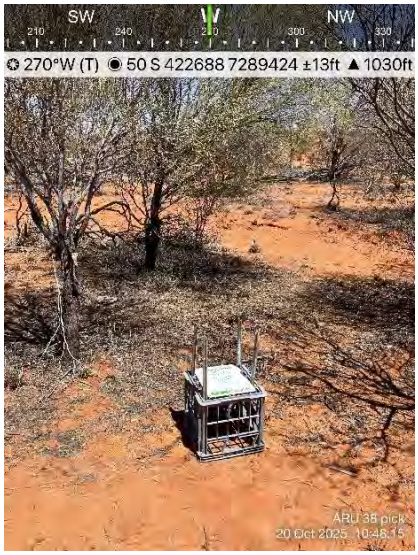

Plate 51. ARU site 93

Plate 52. ARU site 94

Plate 53. ARU site 102

Birdlife Australia (2023) described the habitat for Southern Whiteface as mainly acacia woodlands and shrublands, especially those dominated by Mulga, and with an understorey of grass or low shrubs or both. The shrubs include chenopods, such as saltbush (i.e. *Atriplex*) and bluebush (i.e. *Maireana*), *Eremophila* and *Acacia*. These data indicate that the Southern Whiteface will be found in a broad range of habitat types in inland WA.

It is primarily a terrestrial foraging species that targets small invertebrates and seeds, often on bare ground or areas with little cover, or in sparse litter, around the bases of tussocks, shrubs, and trees, and it sometimes forages in low-growing trees and shrubs.

Des Hume, Terrestrial Ecosystems ornithologist, described Southern Whiteface's preferred habitat in the eastern and northern wheatbelt, Goldfields and pastoral areas as far north as Meekatharra as semi-arid woodlands, mulga and mallee. They appear to prefer more open habitats in close proximity to densely vegetated areas, but avoid foraging in the densely vegetated areas such as those along watercourses. Foraging for food is generally carried out close to shrubby vegetation and less so out in large open areas, which don't provide easy access to cover if required. Stony open ground appears to be avoided in favour of areas with more loamy/sandy soils. This is most likely due to better growing conditions for herbaceous plants and grasses, which, in turn, produce seeds suitable for this species' food requirements during the drier periods of the year.

Mitch Plozza, Terrestrial Ecosystems ornithologist, described Southern Whiteface's preferred habitat as Mulga shrublands/woodlands with an understory of shrubs, or lower Acacia shrubland, and drainage creeks/rivers. The birds prefer habitats are in close proximity to denser habitats but not in the dense habitats. These areas are often near drainage lines, rather than in open habitats, and ground cover (small grasses and leaf litter) likely influences their habitat selection because of the available foraging resources. Drainage lines become less important in areas with patchy dense Mulga woodland with a shrub understory, as foraging is not restricted, but they are still more likely to be found in them. Mitch has not recorded Southern Whiteface in any Eucalyptus woodlands. Southern Whiteface is more common in areas with sandy to small pebble surfaces, and it is unlikely to be found in heavy stone country. Dead Mulga with a healthy surrounding understory of Acacia is critical for breeding, but it is also important to ensure sufficient foraging habitat in the vicinity of the nests. Significant rain events after a long drought will likely cause birds to spread into other habitats as populations boom and foraging capacity increases for a short time, depending on the persistence of the rain.

Plates 29-53 are representative images of the fauna habitat around the location of each ARU where Southern Whiteface were recorded. When these data are considered in conjunction with Figure 8, the areas mostly had a substrate of red gritty, pebbly sand, sometimes with small quartz stones, supporting open mulga woodlands with Acacia shrubs, with patches of leaf litter mostly restricted to immediately under trees and shrubs with leaves near ephemeral creek lines. To breed, Southern Whiteface require access to hollows or holes that can be in forked limbs, spouts, stumps, fallen trees, under loose sheets of bark, fence posts or clefts in rocks (Birdlife Australia 2023).

5. DISCUSSION

5.1 ADEQUACY OF STANTEC (2024) AVIFAUNA SURVEYS AND ASSESSMENT

Stantec (2024) described the fauna habitats in the Project Area as ranging from completely degraded (disturbed habitat) to excellent, with the degrading factors being livestock grazing and weeds (e.g. Buffel Grass), and indicated the development envelope intersects with a section of the Cobra Dairy Creek Road and contains approximately 7.8ha (0.2%) of disturbed habitat. Stantec's (2024) habitat assessment excluded areas that had recently been cleared for exploration drilling. Terrestrial Ecosystems generally concurs with the Stantec (2024) habitat assessment but would only rate the highest quality habitat as good. Our observations indicate that cattle have affected the broader region over an extended period.

The avifauna survey method used by Stantec (2024) involved a 20-minute observation at each systematic trapping site on each day of trapping during each phase of the Detailed survey, with the surveys undertaken between 0600-1100hrs while clearing traps. Only 57 species were recorded at systematic survey sites, whereas 73 bird species were recorded for the Project Area, with the difference presumably due to opportunistic recordings. The surveyor(s) may have been easily distracted while clearing traps and not recording all birds, and this approach is a repetitive survey at the same sites, which would have resulted in the resident individual birds being recorded multiple times. We do not believe this represents a typical 20-minute avifauna observation, and the methodology is not ideal.

One ARU (SM4) was deployed at each systematic site for two nights during each phase of the survey. The ARUs were set to record from one hour before sunset and finish recording one hour after sunrise, presumably to target Night Parrots. As Adaptive NRM assessed these digital audio data, it is unlikely that Southern Whiteface would have been targeted in this analysis. ARUs were also deployed to target Southern Whiteface in minor and major drainage habitats. These ARU recordings were analysed for Southern Whiteface calls by Jasmin Pratt using Kaleidoscope Pro. V5.5.0 in the 3500-7000Hz range, with the analysis restricted to calls for the first two and last three hours of recordings per night using a call classifier prepared by Stantec.

Table 4.5 in the Stantec (2024) report indicates that ARUs were deployed for two nights at each of the eight systematic survey sites for both survey phases, and Table 4.6 indicates ARUs were deployed at three sites in minor and one site in major drainages. Overall, this is not an adequate survey of the Project Area for Southern Whiteface, however, it is noted that Southern Whiteface were recorded nesting at its systematic survey site 13 during phase 2 in the southern section of the Project Area (Figure 8). Based on these data and the survey effort, it could reasonably be presumed that Southern Whiteface could be found at other locations in the Project Area and surroundings.

Stantec's (2024) mapping of major and minor drainage lines as fauna habitats excluded many of the smaller drainage lines (i.e. truncated major and minor drainage lines early) and mixed up the labelling of fauna habitat types based on geographical and geological features (e.g. alluvial plains, low hills, rocky hill, rocky outcropping, sandy plain, stoney plain) with those based on vegetation (e.g. Mulga) and relief (e.g. major and minor drainage), but the detailed descriptions provide information on geographical and vegetation for each habitat type.

Stantec (2024; Section 5.4.1.1) provided a summary of the published information on Southern Whiteface relating to its conservation status, and then assessed the potential for clearing vegetation and mining activities to have a significant impact on Southern Whiteface. Stantec (2024) used the Commonwealth Government's (Department of Climate Change Energy the Environment and Water 2023) 'habitat critical to survival' and 'important population' criteria, and indicated that the Project Area contained critical habitat, noting similar habitat was present in adjacent areas, and that the local population of Southern Whiteface may trigger the requirements for an important population.

In the report summary, Stantec (2024), reiterated the above comments saying 'critical habitat for this species occurs within three broad fauna habitats within the survey area; Major Drainage (4.7%) containing suitable breeding trees and essential foraging habitat with areas of dense understorey within Minor Drainage (13.7%) containing scattered suitable breeding trees with patches of dense understorey providing suitable foraging habitat and Mulga Woodlands (0.1%) containing ecotones where dense acacia shrubs are juxtaposed with open ground', without making a recommendation on whether a referral under the *EPBC Act* was appropriate. It appeared that minor drainage areas were not mapped, potentially increasing the area of critical habitat.

Stantec (2024) recorded 57 species at systematic sampling sites and 73 bird species in total; the ICE and Chao 2 estimates were 82.3 and 79.4, respectively. These data and Chart 3 indicate that the species accumulation curve has not yet reached an asymptote, suggesting that numerous species remain unrecorded. A comparison of the species accumulation curves for the Stantec (2024) data and Terrestrial Ecosystems survey data (Chart 3) indicates that there were fewer avifauna species present in the Project Area and its surroundings in the more recent survey. Pascoe et al. (2021) and Smith (2015) indicate that avifauna species richness in arid areas of Australia is variable and is influenced by rainfall patterns, which in turn affect flowering, seeding and fruiting of vegetation and the availability of foraging opportunities for birds, and these factors therefore probably account for the difference in species richness between surveys. Rainfall in the Project Area was sporadic in the period leading up to and during the avifauna surveys, with periods of weeks between rain events delivering more than 5mm, and much more extended periods delivering more than 10mm (Chart 1). Consequently, avifauna species richness and abundance are likely to vary appreciably.

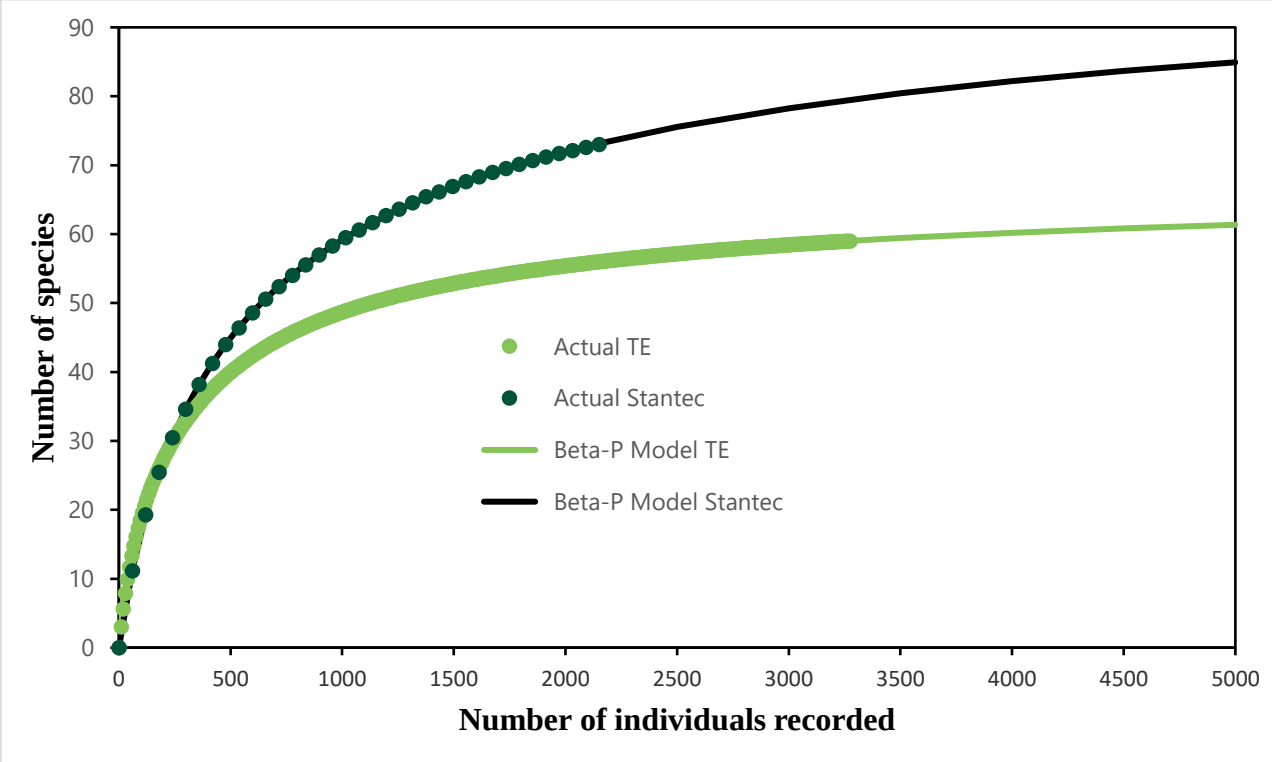

Chart 3. Species accumulation curve for birds reported by Stantec (2024) in the IBSA package and Terrestrial Ecosystems' survey data

5.2 GREY FALCON

No Grey Falcons were recorded in any of the surveys. However, the DBCA threatened species database indicates that over many years, Grey Falcons have been recorded within a 200km radius (Figure 3). There is a very low probability of Grey Falcons being recorded in the Project Area, and if present and disturbed, then they will

readily move. Its preferred habitat is timbered country in stony plains, shrublands (especially *Acacia*), grasslands (i.e. spinifex and tussock), and wooded areas of arid/semi-arid regions (Olsen and Olsen 1986), but we have no information about its preferred habitat in the Midwest and Murchison regions.

5.3 SOUTHERN WHITEFACE

Stantec (2024) recorded a nesting pair of Southern Whiteface in the southern section of the Project Area (site E), and recorded eight calls at three other locations using ARUs (Figure 8). The Stantec ARU calls were all in the southern areas.

Southern Whiteface survey data from a mine site south of Laverton (Terrestrial Ecosystems 2024a) indicated that these birds shift their activity areas every couple of weeks or months, and will remain in one location when incubating eggs and feeding chicks in a nest. Southern Whiteface were recorded in the surroundings of this Project Area, mostly adjacent to ephemeral drainage lines. For some of the ARU recordings, there was a single call; for others, multiple calls, suggesting that Southern Whiteface were moving through some areas and were more sedentary in others. The ARU data collected from April to October 2025 indicated that Southern Whiteface records were patchy but widespread across the development envelope. However, it is unknown whether these are the records of a small number of birds moving around, or a much larger number of birds that were present with only a few records at any one occasion. The ARU sampling sites were designed to target areas where we believed there was a higher probability of recording Southern Whiteface (i.e. not randomly allocated).

Therefore, it is likely that additional avifauna surveys conducted over an extended period would have recorded Southern Whiteface in the area near ephemeral drainage lines at other locations, as these birds are very likely to move over weeks or months.

6. IMPACT ASSESSMENT

Both the Commonwealth and State Government environmental regulators are concerned about impacts that will significantly affect Southern Whiteface, as well as the removal of 'critical habitat', fragmenting populations and removing nesting opportunities. Using the government guidance statements and referral criteria, the discussion below addresses the relevant issues.

6.1 CRITICAL HABITAT

6.1.1 Description

Department of Climate Change, Energy, the Environment, and Water (2023) defined critical habitat for Southern Whiteface as:

- relatively undisturbed open woodlands and shrublands with an understorey of grasses or shrubs, or both;
- habitat with low tree densities and a herbaceous understory litter cover which provides an essential foraging habitat; and
- living and dead trees with hollows and crevices, which are essential for roosting and nesting.

These three descriptors are very generic and could reasonably be applied to vast tracts of land in the Goldfields, Midwest, Murchison, Gascoyne and semi-arid interior of southern Western Australia, and this is why the current geographical distribution of the Southern Whiteface (Figure 1) includes such large areas of the interior of southern Western Australia.

6.1.2 Project area critical habitat

According to the description in DCCEEW's (Department of Climate Change Energy the Environment and Water 2023) Conservation Advice for this species, the Project Area includes Southern Whiteface critical habitat (i.e. open woodlands with an understorey of grasses and shrubs, low tree density, living and dead trees with hollows and crevices). This habitat is also abundant in the adjacent area and across thousands of square kilometres of the Goldfields, Midwest, Murchison, Gascoyne, and the semi-arid interior of southern Western Australia. The DCCEEW's generic habitat description results in vast tracks of the landscape being labelled 'critical habitat'.

6.1.3 What is the preferred Southern Whiteface habitat based on WA data

Critical habitat for Southern Whiteface as defined by the Commonwealth Government (Department of Climate Change Energy the Environment and Water 2023) is very broad and includes very large areas of the Murchison, Midwest and Goldfields in Western Australia. We have used the term 'preferred habitat' to indicate the type of habitat in which we have observed Southern Whiteface in Western Australia, and in particular in areas around Laverton, Meekatharra, Sandstone and the Project Area. The habitat preferred by Southern Whiteface is a substrate of red, gritty, pebbly sand, sometimes with small stones, supporting open mulga woodlands with Acacia shrubs, with leaf litter patches mostly restricted to immediately beneath trees and shrubs near ephemeral creek lines. Nests are in hollows or holes, such as forked limbs, spouts, stumps, fallen trees, under loose sheets of bark, or fence posts.

6.1.4 Will clearing vegetation in the project area significantly impact on the Southern Whiteface?

There was no apparent difference between the habitat in the Project Area and the surrounding many thousands of square kilometres. Southern Whiteface appears to shift their activity areas regularly and does not display long-term site fidelity unless nesting.

The density and shifting activity areas of the local Southern Whiteface population in the surroundings of the Project Area are such that the removal of vegetation in the Project Area is unlikely to have a detectable negative impact on the local population, as these birds will readily move their activity area if disturbed.

It is also apparent that Southern Whiteface are breeding in the habitat in and around the Project Area (Stantec 2024). The removal of vegetation, and therefore possible future nesting sites, in the Project Area is not expected to have a significant negative impact on the local population unless active nest sites are disturbed, as there is an abundance of suitable hollows outside the area to be cleared.

6.2 THE THREAT OF CLEARING OF VEGETATION

The Department of Climate Change, Energy, the Environment, and Water (2023) defined threats to Southern Whiteface as:

- habitat loss caused by clearing for agriculture;
- habitat degradation caused by domestic livestock grazing;
- increased frequency or length of droughts; and
- increased likelihood of extreme events (i.e., wildfire, drought, and heatwaves).

The proposed vegetation clearing is to establish an operational mine and is not broad-scale clearing for agriculture. The Project Area operations are on the Yinnetharra Station, which grazes cattle on native pasture and has done so for many years (Stantec 2024). Pastoral activity and, probably, mining, have coexisted with Southern Whiteface across the broader Gascoyne, Murchison and Goldfields bioregions. The proposed mining operations are unlikely to significantly contribute to droughts or other extreme events any more than any other mining operations in the interior of Western Australia. So, based on the nominated major threats (Department of Climate Change Energy the Environment and Water 2023), the proposed mining operations are unlikely to significantly negatively impact Southern Whiteface.

Clearing vegetation in the Project Area will reduce foraging opportunities and breeding habitat for Southern Whiteface. However, the proposed total development envelope of 3,581ha is minuscule in the context of the available similar habitats in surrounding areas. The loss of this habitat is therefore likely to have an inconsequential impact on the long-term survival of the Southern Whiteface. It is acknowledged that vegetation clearing in the Project Area could result in the displacement of a small number of Southern Whiteface into surrounding areas.

The available data (also see: Terrestrial Ecosystems 2024a) indicates that over a couple of months, these birds shift their foraging areas (also see: Craig and Moore 2020) and their abundance varies across any one location, so any impacts associated with forced displacement into the surrounding area, where the neighbouring habitat is very similar, are unlikely to be significant. This shift in the foraging area is a natural process for these birds, so forced relocations due to vegetation clearing are unlikely to have a significant negative impact unless pairs are displaced while breeding.

6.3 CONSIDERATION OF MNES SIGNIFICANT IMPACT GUIDELINES

The Commonwealth Government's (Department of the Environment 2013) criteria for assessing potential impacts on a species of conservation significance are contained in Table 4 and the potential impact of Delta Lithium's proposed action is assessed against those criteria in the following discussion.

Table 4. Criteria for assessing the potential impacts on Southern Whiteface
(taken from: Department of the Environment 2013)

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:	Southern Whiteface
1. lead to a long-term decrease in the size of an important population of a species	No
2. reduce the area of occupancy of an important population	No
3. fragment an existing important population into two or more populations	No
4. adversely affect habitat critical to the survival of a species	No
5. disrupt the breeding cycle of an important population	No
6. modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	No
7. result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	No
8. introduce disease that may cause the species to decline, or	No
9. interfere substantially with the recovery of the species.	No

6.3.1 Lead to a long-term decrease in the size of an important population of a species

An important population is defined (Department of the Environment 2013) as:

- 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.

There are more than 52 records of Southern Whiteface within 200km of the Project Area in Terrestrial Ecosystems' fauna survey database (Figure 2). The recent avifauna survey recorded 41 individuals in the vicinity of the Project Area, and numerous Southern Whiteface were recorded at 25 ARU sites. The density of Southern Whiteface is likely similar across the many square kilometres of neighbouring areas, and there is nothing about the habitat in the Project Area that makes it unique for Southern Whiteface, so the number of individuals periodically recorded on site does not constitute an important population. The Project Area is toward the northern edge of this species' geographical range in the Gascoyne and Murchison regions. Additionally, any Southern Whiteface living in the Project Area immediately before its clearing will readily relocate to surrounding areas. The answer to Criterion 1 is 'No'.

6.3.2 Reduce the area of occupancy of an important population

The mapped data of Southern Whiteface records (Figure 1) indicate that this small bush bird is widespread in the central and interior parts of Western Australia. Had the Southern Whiteface occupancy area in Western Australia been randomly surveyed instead of survey sites being selected (i.e., mining locations and places with vehicle access), it would have been evident that this bird is geographically widely distributed in Western Australia, and possibly more abundant in the Gascoyne and Murchison bioregions. There is no evidence to

indicate that the number of Southern Whiteface recorded in and around the Project Area represents an important population. Therefore, the loss of a small quantity of vegetation in the Project Area will not reduce its area of occupancy or displace an important population. The answer to Criterion 2 is 'No'.

6.3.3 Fragment an existing important population into two or more populations

As can be seen in Figure 1 the Southern Whiteface's geographic range encompasses the entire width of southern Western Australia and extends into South Australia and the Northern Territory. The loss of a very small part of these many thousands of square kilometres of similar habitat, particularly when this bird is mobile, with a shifting activity area and will readily move if disturbed, will not fragment an existing population into two or more populations to the extent that it will negatively impact the species. There is no evidence that the small population of Southern Whiteface in and near the Project Area is a key source population or necessary to maintain genetic diversity. The answer to Criterion 3 is 'No'.

6.3.4 Adversely affect habitat critical to the survival of a species

Habitat that is critical to the survival of Southern Whiteface is described in the Commonwealth Conservation Advice as:

- relatively undisturbed open woodlands and shrublands with an understorey of grasses or shrubs, or both;
- habitat with low tree densities and an herbaceous understory litter cover which provides an essential foraging habitat; and
- living and dead trees with hollows and crevices which are essential for roosting and nesting.

This critical habitat description is very vague and applies to thousands of square kilometres of inland Western Australia in the Midwest, Murchison, Goldfields, Gascoyne, and elsewhere. The habitats associated with drainage lines occur within the Project Area. However, this vegetation assemblage is common throughout the surrounding landscape, and as such, the impact on the species is not significant. The density and shifting activities of the Southern Whiteface population in the surroundings of the Project Area are such that the removal of vegetation in the Project Area is unlikely to have a detectable negative impact on the Southern Whiteface population, as these birds will shift their activity area if disturbed. The answer to Criterion 4 is 'No'.

6.3.5 Disrupt the breeding cycle of an important population

Johnstone and Storr (2004) reported that the Southern Whiteface builds a dome-shaped nest with a side entrance, mainly in a hollow branch, a tree trunk (Plate 54), a crevice between branches, a stump, a fence post, or a recumbent log entrance through a knot hole or crack. Nests are made with grass, bark, rootlets, feathers, and wool and lined with feathers, wool, fur, and soft plant down (Johnstone and Storr 2004). These nesting opportunities and materials are widely available in the Midwest, Murchison, Gascoyne, and Goldfields of Western Australia and further afield. Based on geographic records, this small bush bird is clearly found breeding in thousands of locations in the semi-arid areas of Western Australia. There is no evidence that the small number of Southern Whiteface recorded in and around the Project Area represents an important population. The answer to Criterion 5 is 'No'.

Plate 54. Southern Whiteface nesting location

6.3.6 Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline

Quality habitat is not defined for the Southern Whiteface, but presumably, it is areas with a high concentration of this species; this is not the situation around the Project Area. Even the defined 'habitat critical to its survival' (Department of Climate Change Energy the Environment and Water 2023) is very widely available in the Goldfields, Murchison, Gascoyne, and Midwest of Western Australia. Although the Southern Whiteface was recorded in and near the Project Area, there is no evidence to indicate that it is a 'quality habitat', and that it is any better than in the many square kilometres of adjacent habitat. In fact, 12 of the 13 observations were outside of the Project Area. The ARU locations were mainly within the Project Area and were deployed for extended periods, which is why Southern Whiteface were recorded at higher abundance in the development envelope than during the avifauna surveys. Given that the habitat in the Project Area is like that in the many square kilometres of neighbouring areas, there is no evidence to indicate that the habitat in the Project Area is any more important or of higher quality than in the neighbouring areas. The answer to Criterion 6 is 'No'.

6.3.7 Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat

The proposed action will not result in invasive species harmful to the Southern Whiteface (e.g. cats) becoming established in the species' habitat. Delta Lithium intends to undertake annual feral cat control programs to maintain cat numbers at levels comparable to those before the mine's development. The answer to Criterion 7 is 'No'.

6.3.8 Introduce a disease that may cause the species to decline

There is no suggestion or evidence to indicate that the Delta Lithium proposed action will introduce a disease into the Southern Whiteface habitats, adversely impacting this small bush bird. The answer to Criterion 8 is 'No'.

6.3.9 Interfere substantially with the recovery of the species

There is no recovery plan for Southern Whiteface, and it is highly improbable that the proposed action will significantly and detrimentally impact the overall Southern Whiteface population or the bioregion's Southern Whiteface population. The answer to Criteria 9 is 'No'.

Using criteria in the Commonwealth Government's (Department of the Environment 2013) significant impact assessment guidelines, the proposed action (i.e. vegetation clearing and mining) is not expected to have a significant negative impact on this species.

The Department of Climate Change, Energy, the Environment and Water's (2023) conservation advice listed the issues shown in Table 5 as threats to the Southern Whiteface. For each threat, a comment is provided on whether the proposed vegetation clearing and mining operations will significantly increase this threat.

Table 5. Threats to Southern Whiteface as described in the conservation advice to the Commonwealth Government Minister

Threat	Response
1. Habitat loss caused by clearing for agriculture	The proposed action on the Yinnetharra Lithium Project Area is not clearing land for agriculture.
2. Habitat degradation caused by domestic livestock grazing	The cattle on the Yinnetharra station have been farmed since the 1920s and were present long before the Delta Lithium exploration activity commenced.
3. Increased frequency or length of droughts	Delta Lithium's mine is highly unlikely to influence the frequency or length of droughts in the Midwest, Gascoyne and Murchison regions.
4. Increased likelihood of extreme events (i.e., wildfire, drought and heatwaves)	The Yinnetharra Lithium mine has minimal capacity to influence the likelihood of extreme events in the Midwest, Gascoyne and Murchison regions. However, it is acknowledged that climate change is likely to lead to a continued decline in rainfall in the Murchison region.

The Yinnetharra Lithium development envelope was comprehensively surveyed for avifauna across three survey periods. Additionally, areas surrounding the Project Area but outside the proposed disturbance envelope were also surveyed at a lower intensity. Southern Whiteface were observed at 13 sites, with one location inside the development envelope and 12 locations beyond the Project Area. The placement of ARUs was mostly in the development envelope, and this small bush bird was recorded at 25 of the 110 ARU survey sites. These observations were in addition to Stantec's (2024) records from four locations. Applying the Commonwealth Government's significant impact assessment criteria, the proposed Yinnetharra Lithium project is unlikely to significantly impact Southern Whiteface.

6.4 MITIGATION

The following mitigation measures will reduce the potential impact of vegetation clearing and mining operations on the Southern Whiteface:

- Where practical, clearing vegetation should be undertaken outside the breeding season of April to October (Johnstone and Storr 2004; includes the period for the chicks to fledge), noting that rain probably triggers breeding activity earlier than April;
- If clearing is to occur in the breeding season, then a zoologist familiar with the species will search the area for active nests before vegetation clearing is undertaken. This will appreciably reduce the probability of an active Southern Whiteface nest being disturbed;
- If an active nest(s) is found, a buffer of 100m radius is implemented around the nest site until all chicks have fledged;
- Minimising vegetation clearing by designing the location of infrastructure to utilise existing disturbed areas (e.g. locating haul roads and mine roads along pre-existing roads and tracks); and
- Move the proposed location for the airstrip away from ephemeral creek lines and into an area of very few trees and shrubs, and out of Southern Whiteface's preferred habitat.

6.5 REMAINING UNCERTAINTY

Little is known about the movement behaviour and activity/foraging area of Southern Whiteface in Western Australia. Better quantification of the extent, distance, and frequency with which Southern Whiteface shifts its activity areas would be useful for determining potential future impacts. If, for example, it moves its activity area every couple of weeks or months, is not range resident, and travels long distances during periods of drought, then displacing Southern Whiteface during vegetation clearing into surrounding areas will have little consequence.

The general nature and abundance of its preferred habitat in the Project Areas and surrounds make it very challenging to map accurately. Additional surveys and studies are required to better define the preferred habitat of the Southern Whiteface across Western Australia's bioregions, also enabling its preferred habitat to be mapped for specific projects.

Knowledge of the activity area size around an active nest would be useful information in determining the buffer that should be implemented around a known active nest.

6.6 CONCLUSION - IS CLEARING VEGETATION IN THE PROJECT AREA LIKELY TO RESULT IN A SIGNIFICANT IMPACT ON SOUTHERN WHITEFACE?

The conclusions drawn from the available data are that Southern Whiteface are geographically widespread in the Goldfields, Murchison, Gascoyne, and Midwest of Western Australia. They are present in the Project Area and its surroundings and are likely highly mobile, with shifting activity areas. There is little or no evidence to indicate a significant recent decline in their abundance or geographical distribution in Western Australia, they typically breed between April and September, have a dome-shaped nest with a side entrance in a hollow branch, tree trunk, crevice between branches, a stump, or a fence post, etc and chicks will have fledged by the end of October. Avoiding vegetation clearing between April and October will ensure active nests are not disturbed.

Southern Whiteface were recorded nesting in the Project Area by Stantec (2024). They were also recorded in multiple locations during Terrestrial Ecosystems avifauna and ARU surveys inside and outside the development envelope and were typically recorded near ephemeral drainage lines.

Clearing vegetation in the Yinnetharra Lithium Project Area will remove habitat that has been and could in the future be used by Southern Whiteface, and any of these birds present during vegetation clearing will be displaced to surrounding areas, but this disturbance is not considered to result in a significant negative impact on this avifauna species.

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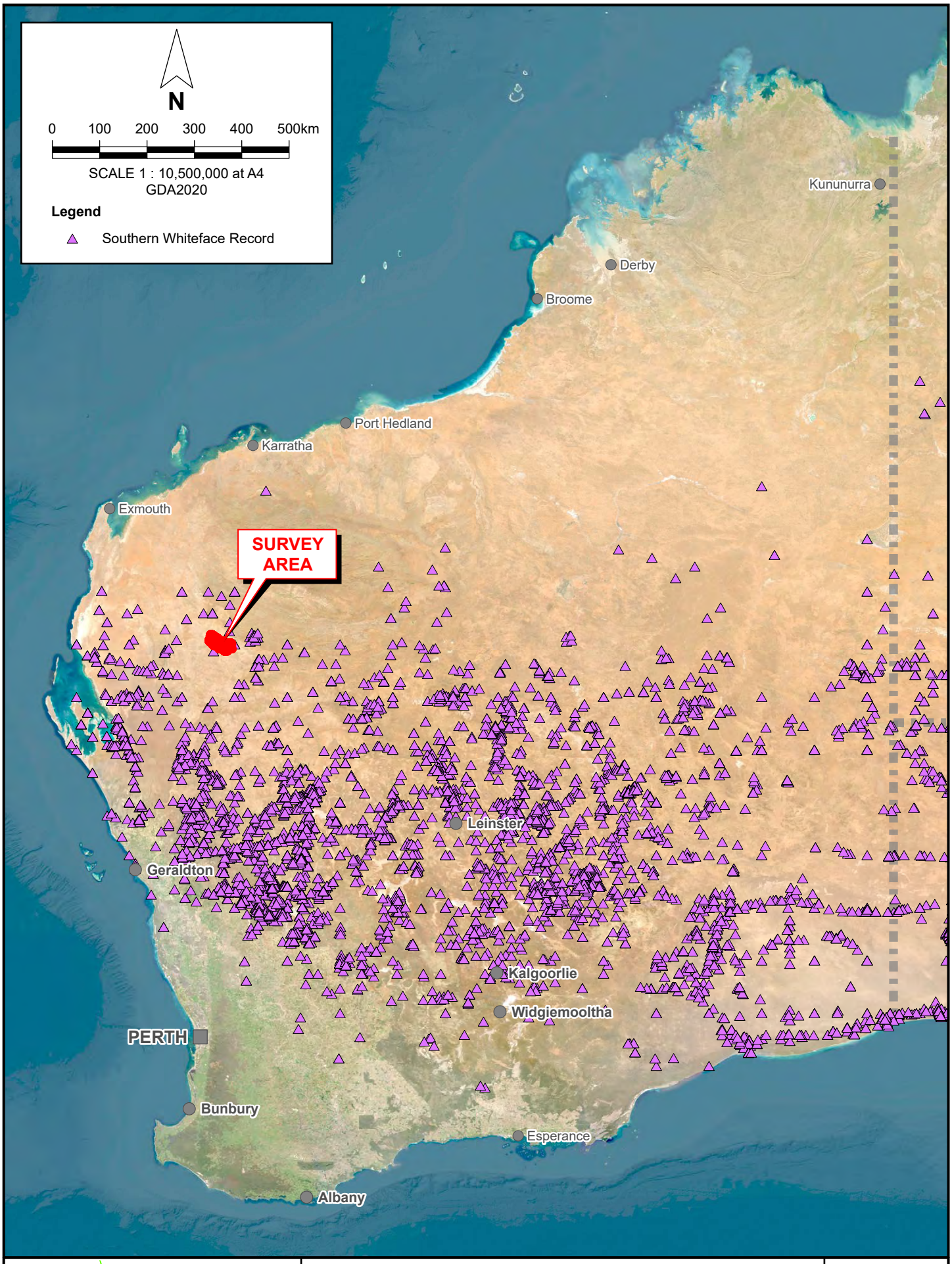
Figures

Southern Whiteface and Grey Falcon Survey
Yinnetharra Lithium Project Area



TERRESTRIAL ECOSYSTEMS

Delta Lithium
SOUTHERN WHITEFACE AND GREY FALCON SURVEY
YINNETHARRA PROJECT AREA

SOUTHERN WHITEFACE RECORDS IN TERRESTRIAL ECOSYSTEMS' FAUNA SURVEY DATABASE

Figure 1

Drawn: G. Thompson | Date: 13 Feb 2026 | Job: 2024-0206

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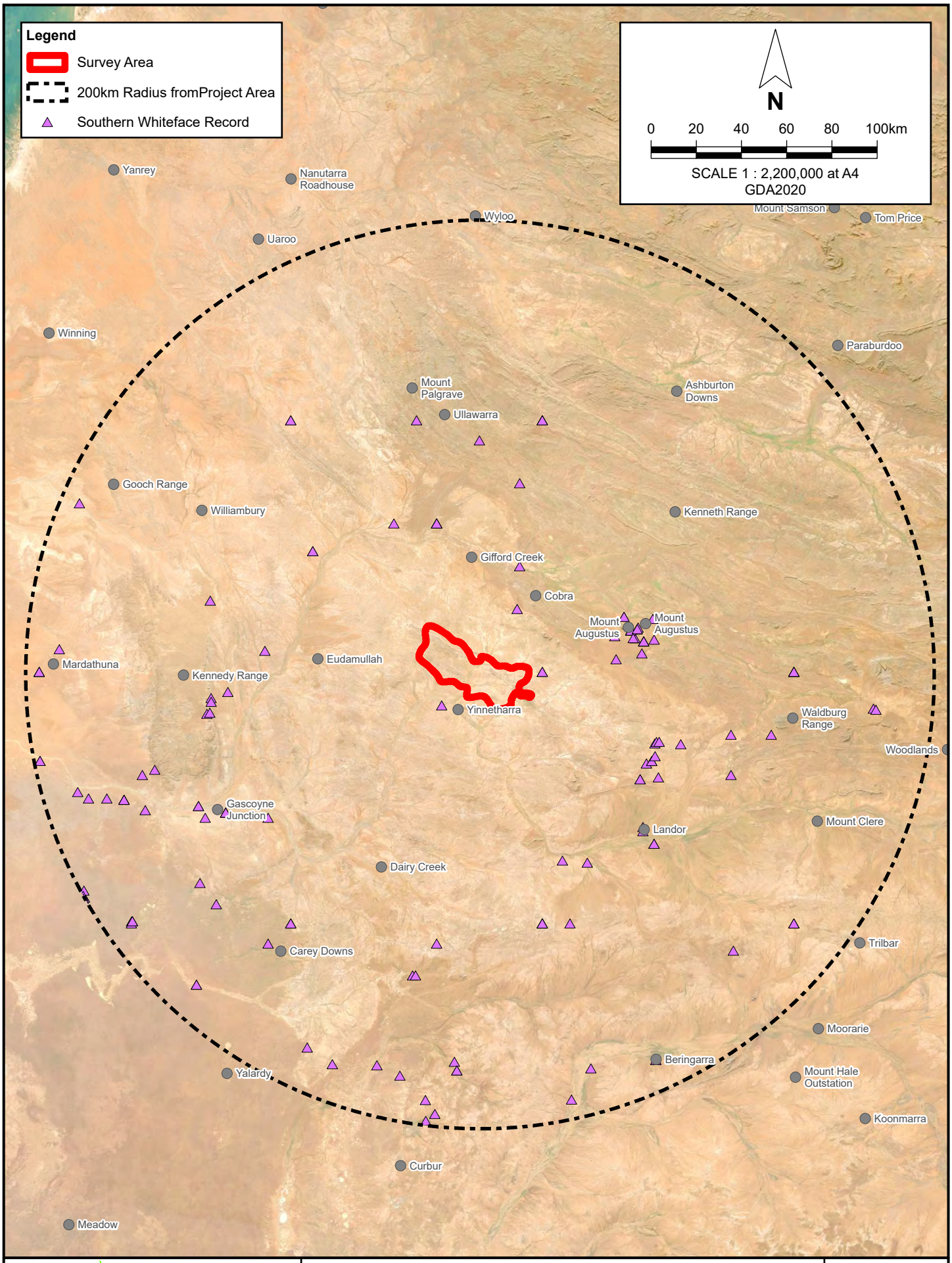

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TERRESTRIAL ECOSYSTEMS

Drawn: G. Thompson

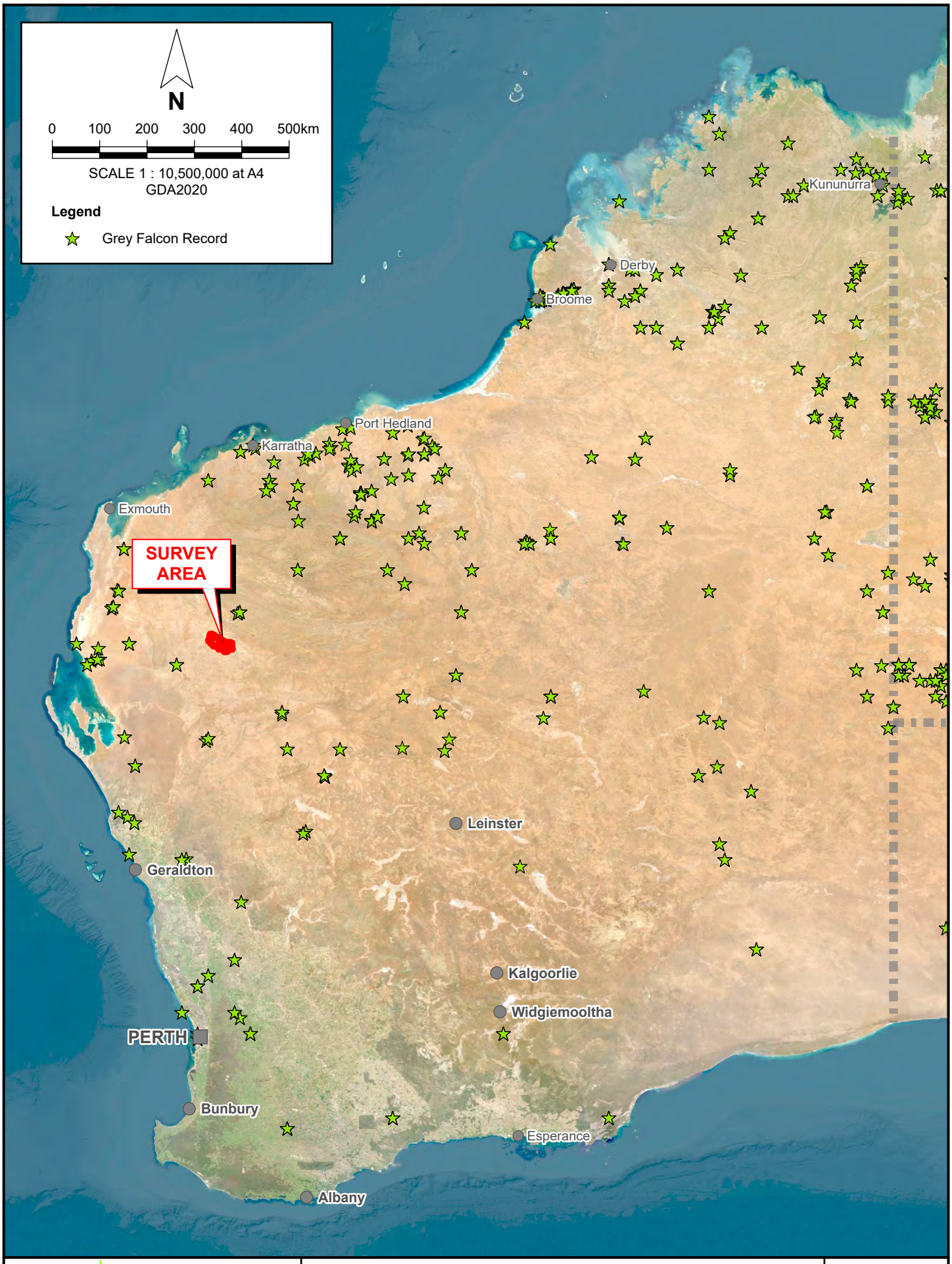
Date: 13 Feb 2026

Delta Lithium
SOUTHERN WHITEFACE AND GREY FALCON SURVEY
YINNETHARRA PROJECT AREA

SOUTHERN WHITEFACE RECORDS WITHIN 200KM OF THE PROJECT AREA

Figure 2

Job: 2024-0206



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TERRESTRIAL ECOSYSTEMS

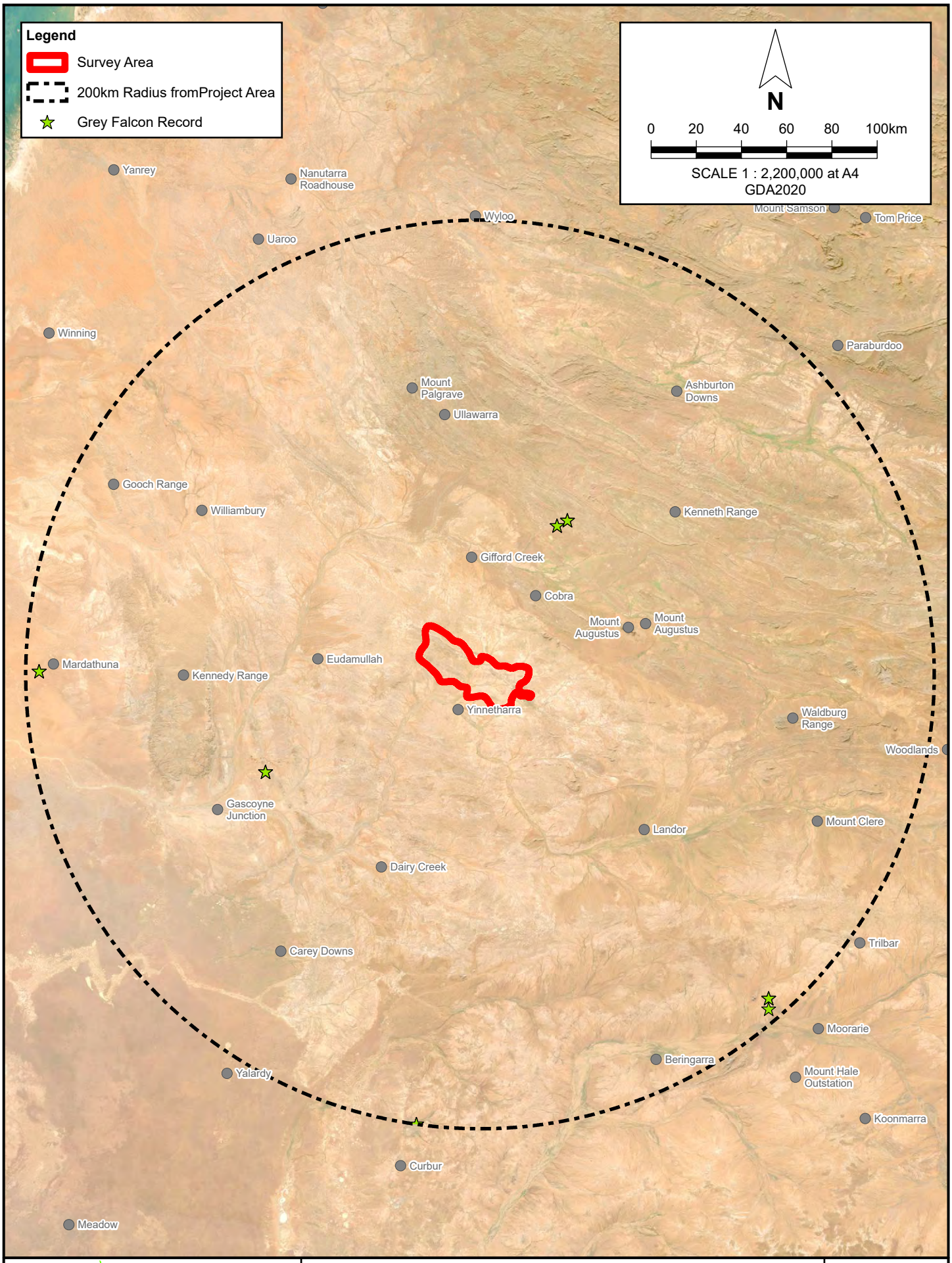
Drawn: G. Thompson | Date: 13 Feb 2026

Delta Lithium
SOUTHERN WHITEFACE AND GREY FALCON SURVEY
YINNETHARRA PROJECT AREA

GREY FALCON RECORDS IN TERRESTRIAL ECOSYSTEMS' FAUNA SURVEY DATABASE

Figure 3

Job: 2024-0206



PINPOINT CARTOGRAPHICS (08) 9562 7136 2024-0206-f04.pagx

TERRESTRIAL ECOSYSTEMS

Drawn: G. Thompson

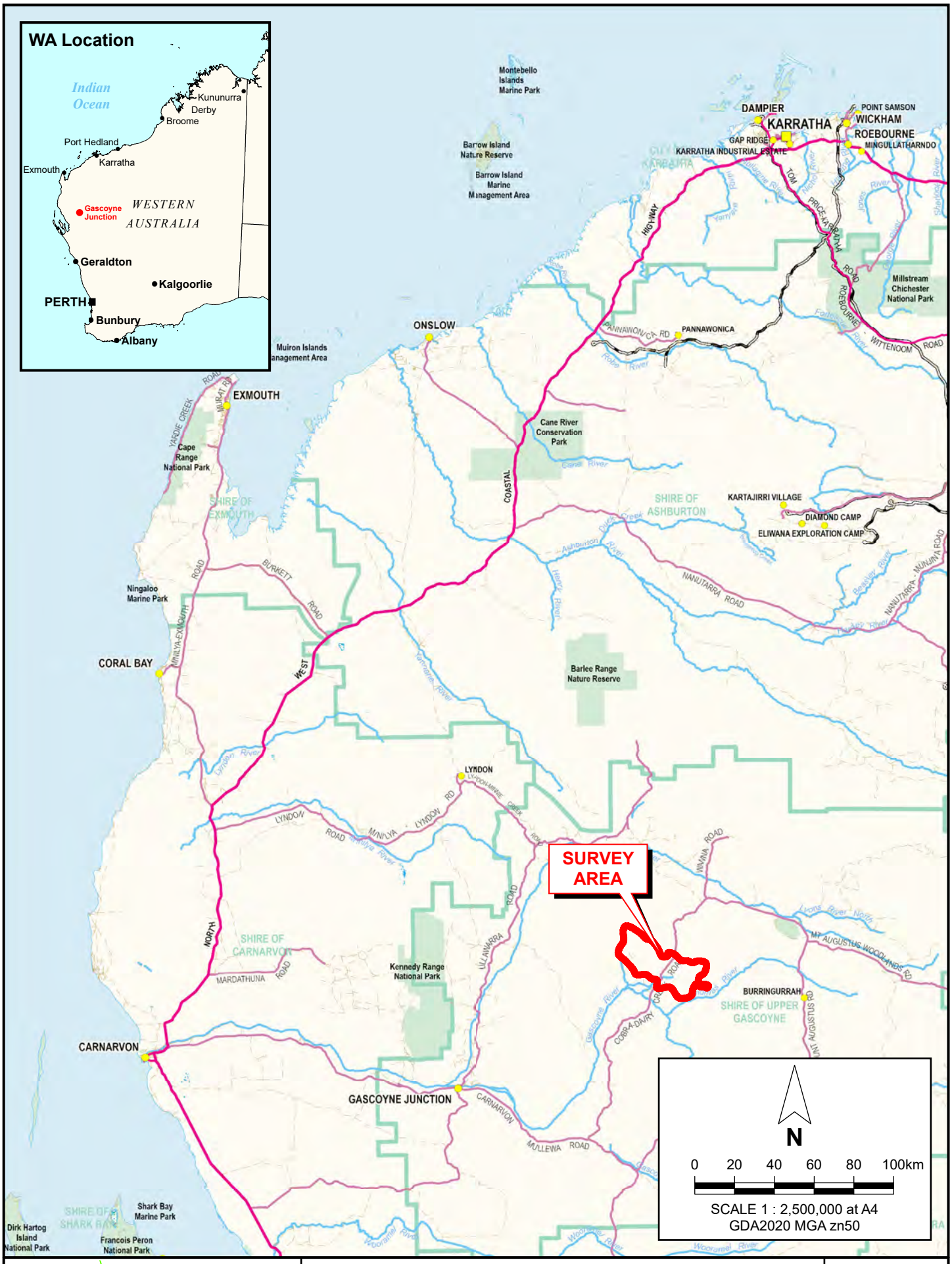
Date: 13 Feb 2026

Delta Lithium
SOUTHERN WHITEFACE AND GREY FALCON SURVEY
YINNETHARRA PROJECT AREA

GREY FALCON RECORDS WITHIN 200KM OF THE PROJECT AREA

Figure 4

Job: 2024-0206



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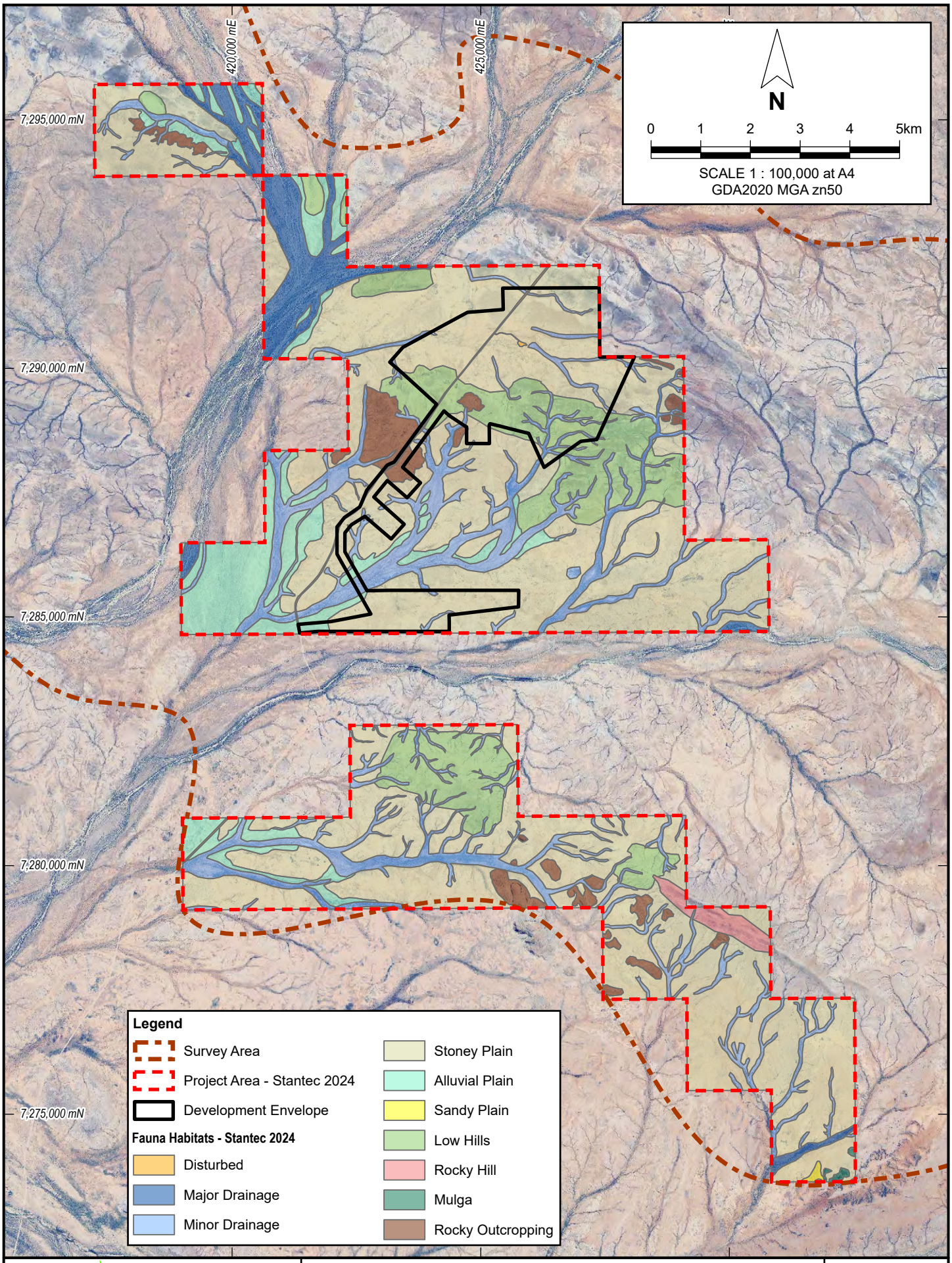
TERRESTRIAL ECOSYSTEMS

Delta Lithium
SOUTHERN WHITEFACE AND GREY FALCON SURVEY
YINNETHARRA PROJECT AREA

Figure 5

REGIONAL CONTEXT

Drawn: G. Thompson | Date: 13 Feb 2026 | Job: 2024-0206



2024-0206-f06.pagx

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TERRESTRIAL ECOSYSTEMS

Drawn: G. Thompson

Date: 16 Dec 2025

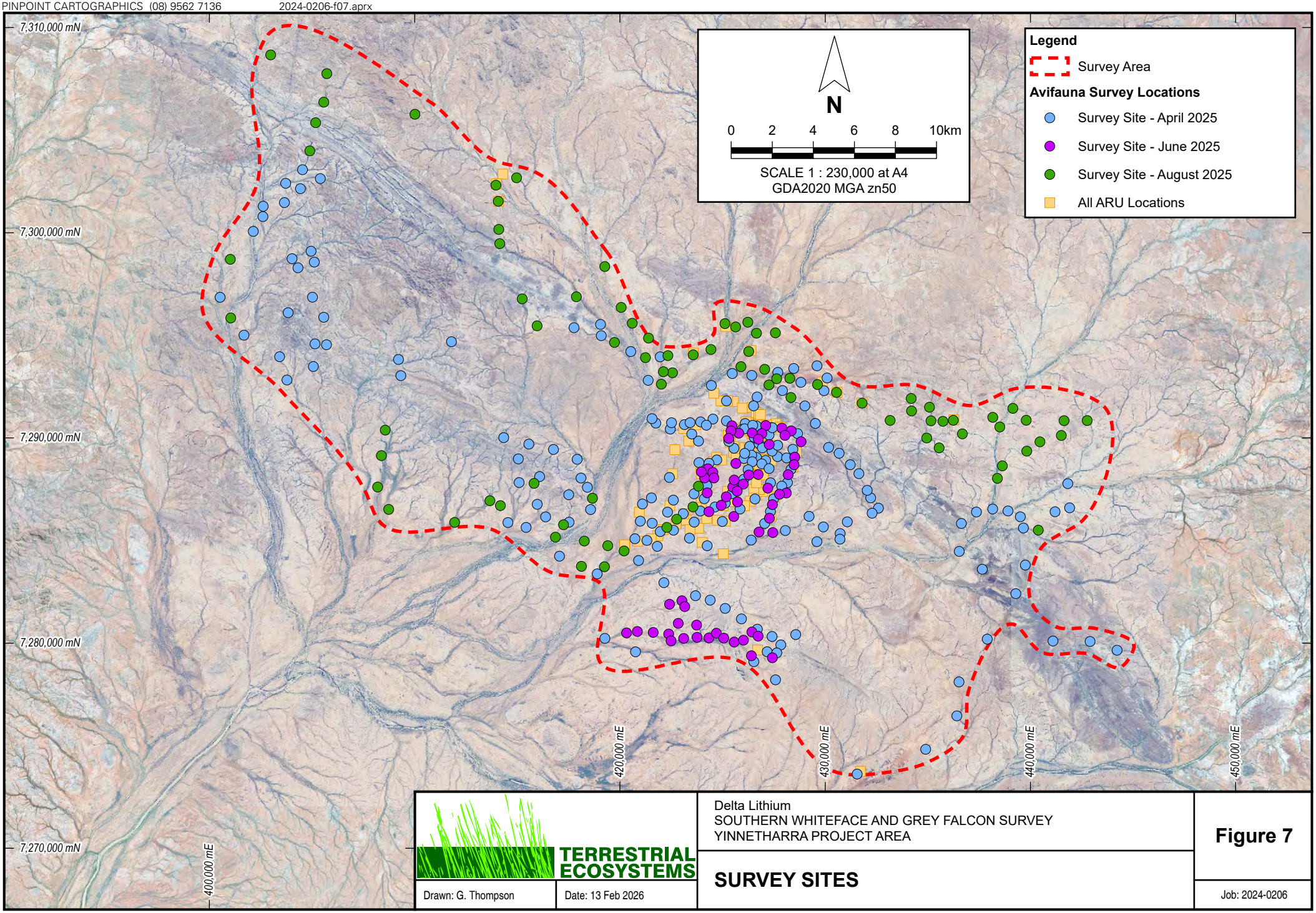
Delta Lithium
SOUTHERN WHITEFACE AND GREY FALCON SURVEY
YINNETHARRA PROJECT AREA

PROJECT AREA, PROPOSED MINING DEVELOPMENT AND FAUNA HABITATS

Figure 6

Job: 2024-0206

PINPOINT CARTOGRAPHICS (08) 9562 7136 2024-0206-f07.aprx



TERRESTRIAL ECOSYSTEMS

Drawn: G. Thompson

Date: 13 Feb 2026

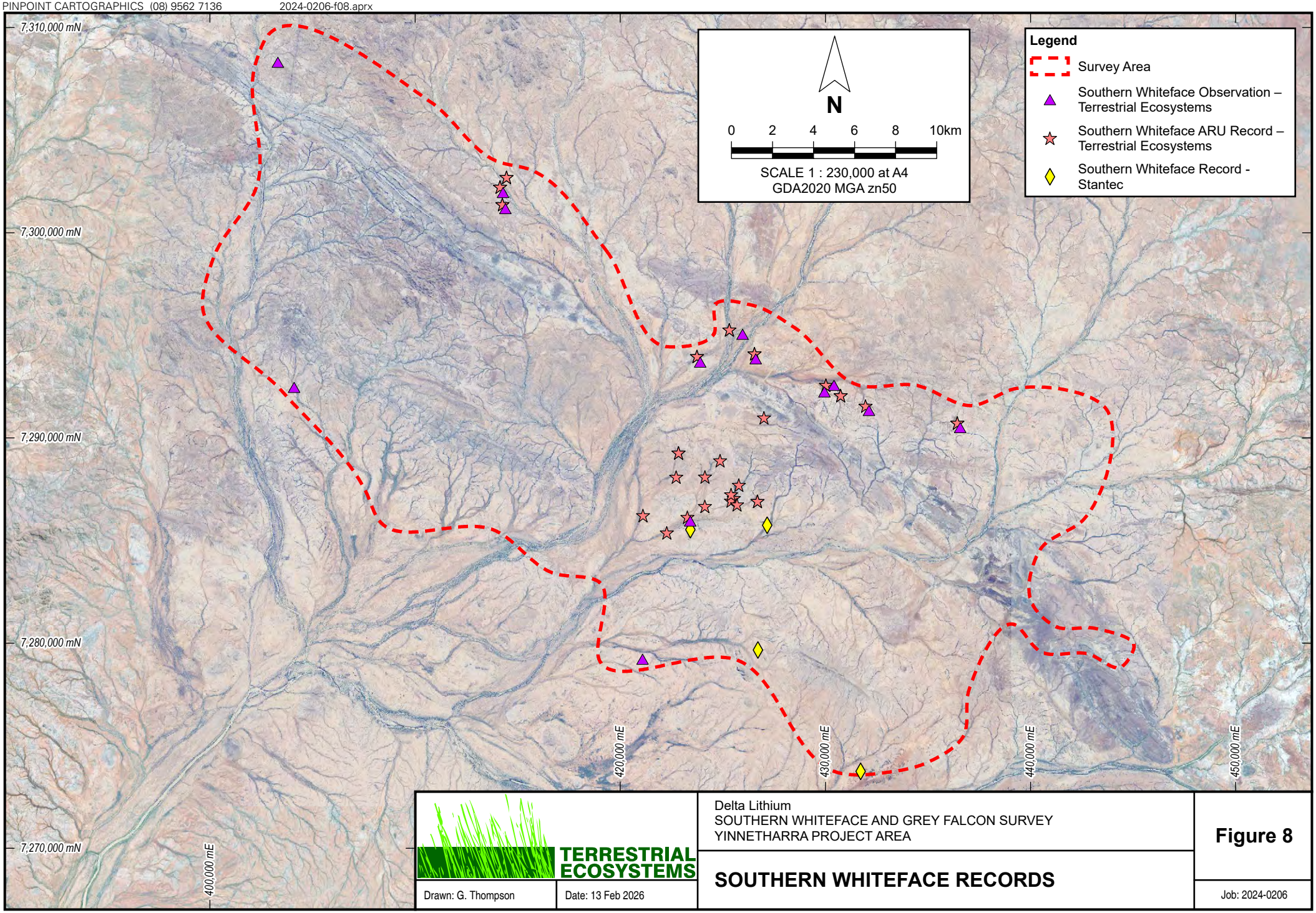
Delta Lithium
SOUTHERN WHITEFACE AND GREY FALCON SURVEY
YINNETHARRA PROJECT AREA

SURVEY SITES

Figure 7

Job: 2024-0206

PINPOINT CARTOGRAPHICS (08) 9562 7136 2024-0206-f08.aprx



TERRESTRIAL ECOSYSTEMS

Drawn: G. Thompson | Date: 13 Feb 2026

Delta Lithium
SOUTHERN WHITEFACE AND GREY FALCON SURVEY
YINNETHARRA PROJECT AREA

SOUTHERN WHITEFACE RECORDS

Figure 8

Job: 2024-0206

Appendix A. Fauna habitats reported by Stantec (2024)

Southern Whiteface and Grey Falcon Survey
Yinnetharra Lithium Project Area

Fauna habitats (taken from Stantec (2024; Fig. 5-1)

Habitat	Description
Stony Plain	Stony Plain habitat comprised low lying areas that have slight to no gradient and a substrate of quartz and granite stones, gravel and pebbles. This habitat contained limited to moderate granite outcropping when adjacent to rocky outcropping habitat. Vegetation typically included: *Eremophila cuneifolia*, *Acacia synchronicia, Acacia xiphophylla, Eremophila fraseri* subsp. *fraseri*, and *Senna artemisioides* subsp. *helmsii* low open shrubland over *Aristida contorta*. This habitat generally had limited woody debris and leaf litter.
Minor Drainage	Minor Drainage habitat comprised relatively small channels, usually dominated by shrubs with scattered tall hollow bearing trees. Vegetation typically included: *Acacia kempeana* and *Acacia fuscaneura* tall shrubland over *Senna artemisioides* subsp. *helmsii* scattered shrubs over *Aristida contorta*, *Eriachne aristidea* and **Cenchrus ciliaris* open tussock grassland. Density of understorey varies within the habitat with denser areas likely to represent suitable foraging habitat for the Southern Whiteface. Substrates were sand and/or clay-based with certain drainages containing some quartz gravel. While not observed during the Detailed Survey, these habitats likely support temporary water pools following rainfall.
Low Hills	Low Hills habitat comprised low, undulating quartz and granite hills interspersed by drainage and areas of Stony Plain. This habitat also contains calcrete landforms such as hills and lower plains. Vegetation typically included: *Hakea preissii*, *Acacia cuspidifolia*, and *Acacia aptaneura* scattered tall shrubs over and *Senna artemisioides* subsp. *oligophylla* and *Senna glutinosa* subsp. *luerssenii* open shrubland over *Sclerolaena cuneata* and *Sclerolaena densiflora* scattered herbs. Rocky substrate varied from quartz/granite pebbles to larger granite rocks. Moderate granite outcropping was observed in some areas, particularly in the north-east portion of the Survey Area.
Alluvial Plain	Alluvial Plain habitat comprised flat, open, low lying floodplains found in association with drainage lines. Vegetation typically included: *Acacia cuspidifolia* and tall open shrubland over *Rhagodia eremaea* scattered shrubs over *Frankenia setosa* low open shrubland. This habitat had limited woody debris and leaf litter.
Major Drainage	Major Drainage habitat was associated with large channels supporting an upper storey of relatively tall and mature *Eucalyptus camaldulensis* subsp. *obtusa* and *Acacia citrinoviridis* woodland over *Cyperus vaginatus* very open sedgeland over **Cenchrus ciliaris* open tussock grassland. These habitats had a greater vegetation cover relative to other habitats in the Survey Area, forming woodlands with an abundance of woody debris and hollows. Substrates were primarily sand based with some patches of quartz gravel. While not observed during the Detailed Survey, these habitats support temporary water pools following rainfall.
Rocky Outcropping	Rocky Outcropping habitat comprised large granite boulders and domes rising above sandy-clay soils with limited rock cover. Granite outcropping radiated out from larger boulders, gradually becoming lower and less complex. Vegetation typically included: *Acacia tetragonophylla* tall open shrubland over *Senna artemisioides* subsp. *helmsii* scattered shrubland over *Aristida contorta*, **Cenchrus ciliaris* and *Cymbopogon ambiguus* very open tussock grassland. This habitat generally contained many crevices and alcoves which provided refuge for a variety of fauna. Additionally, this habitat is used for nesting and perching by several raptor species.
Rocky Hill	Rocky Hill habitat comprised slopes and crests of larger quartz hills rising above the surrounding Low Hills and Stony Plain. Vegetation typically included: *Acacia incurvaneura* tall open shrubland over *Eremophila latrobei* subsp. *latrobei* and *Eremophila phyllopoda* subsp. *Phyllopoda* open shrubland over *Aristida contorta* very open tussock grassland. This habitat supports microhabitats such as crevices, and

Habitat	Description
	alcoves, however to a lesser extent than the Rocky Outcropping habitat. Substrate consisted of quartz and granite rocks with limited visible soil.
Mulga Woodland	Mulga Woodland habitat comprised bands of *Acacia incurvaneura* open woodland on clay based soils. Vegetation typically comprised: *Acacia incurvaneura* and *Acacia kempeana* low woodland over *Acacia tetragonophylla*, *Senna artemisioides* subsp. *helmsii* and *Ptilotus obovatus* var. *obovatus* open shrubland over *Digitaria brownii* and *Aristida contorta* open tussock grassland. This habitat had greater vegetation cover compared to other habitat types and is more likely to support a greater diversity of woodland bird species.
Sandy Plain	Sandy Plain habitat comprised low-lying grassland that had a very slight to no gradient and a substrate of red-brown sand. Vegetation typically included: *Acacia curryana* and *Acacia kempiana* tall open shrubland over *Senna artemisioides* subsp. *helmsii* open shrubland over *Aristida holathera* var. *holathera*, *Aristida contorta* and **Cenchrus ciliaris* open tussock grassland.

Appendix B. Birds recorded during the avifauna surveys

Southern Whiteface and Grey Falcon Survey
Yinnetharra Lithium Project Area

		Survey sites																																		
Common name	**Scientific name**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**
Spiny-cheeked Honeyeater	*Acanthagenys rufogularis*																																			
Slaty-backed Thornbill	*Acanthiza robustirostris*																																			
Chestnut-rumped Thornbill	*Acanthiza uropygialis*											2	2													2	4				1			2		
Collared Sparrowhawk	*Accipiter cirrocephalus*																																			
Australasian Pipit	*Anthus australis*																																			
Southern Whiteface	*Aphelocephala leucopsis*													2																						
Banded Whiteface	*Aphelocephala nigricinata*							4																												
Wedge-tailed Eagle	*Aquila audax*																																			
Australian Bustard	*Ardeotis australis*																																			
Black-faced Woodswallow	*Artamus cinereus*								3	2				4							2			2												
Little Woodswallow	*Artamus minor*																																			
Masked Woodswallow	*Artamus personatus*																																			
Australian Ringneck	*Barnardius zonarius*																																			
Bush Thick-knee	*Burhinus grallarius*																																			
Little Corella	*Cacatua sanguinea*																																			
Pied Honeyeater	*Certhionyx variegatus*																																			
Western Quail-thrush	*Cinclosoma marginatum*		3																									1	1							
Grey Shrike-thrush	*Colluricincla harmonica*																																			
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*																																			
Torresian Crow	*Corvus orru*																																			
Pied Butcherbird	*Cracticus nigrogularis*																																			
Grey Butcherbird	*Cracticus torquatus*																																			
Varied Sittella	*Daphoenositta chrysoptera*																					4														
Galah	*Eolophus roseicapilla*																																			
Crimson Chat	*Ephthianura tricolor*																																			
Brown Falcon	*Falco berigora*																																			
Nankeen Kestrel	*Falco cenchroides*																									1										
Singing Honeyeater	*Gavicalis virescens*																	1																1	1	
Diamond dove	*Geopelia cuneata*	1																																		
Spinifex Pigeon	*Geophaps plumifera*																																			
Western Gerygone	*Gerygone fusca*																			1	1				1											
Whistling Kite	*Haliastur sphenurus*																																			
White-winged Triller	*Lalage tricolor*											2													1											
Purple-backed Fairywren	*Malurus assimilis*							4			6				2			3		3					3											
White-winged Fairywren	*Malurus leucopterus*									1						3		4																		
Splendid Fairywren	*Malurus splendens*													3												3										
Yellow-throated Miner	*Manorina flavigula*																																			
Hooded Robin	*Melanodryas cucullata*																1																			
Budgerigar	*Melopsittacus undulatus*		13	10						10										18				9		7										
Rainbow Bee-eater	*Merops ornatus*																																			
Bourke's Parrot	*Neopsephotus bourkii*																																			

		Survey sites																																	
Common name	**Scientific name**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**
Australian Boobook	*Ninox boobook*																																			
Cockatiel	*Nymphicus hollandicus*																					10														
Crested Pigeon	*Ocyphaps lophotes*					8													2										1						
Crested Bellbird	*Oreoica gutturalis*								1								1							1											
Rufous Whistler	*Pachycephala rufiventris*		1						1	1	1			1						1	1					1									
Tree Martin	*Petrochelidon nigricans*					3																													
Red-capped Robin	*Petroica goodenovii*					2	1		1			1			2					1	2					1									1
Common Bronzewing	*Phaps chalcoptera*																																			1
Mulga Parrot	*Platycercus varius*		4												1															4					5	
White-browed Babbler	*Pomatostomus superciliosus*																		5																3	
Grey-crowned Babbler	*Pomatostomus temporalis*																																			
Chiming Wedgebill	*Psophodes occidentalis*																																			
White-plumed Honeyeater	*Ptilotula penicillata*																																			
Grey-fronted Honeyeater	*Ptilotula plumula*																																			
Redthroat	*Pyrrholaemus brunneus*									1							1														1	1				
Grey Fantail	*Rhipidura albiscapa*																																			
Willie Wagtail	*Rhipidura leucophrys*									2		1									1				1					1						
Zebra Finch	*Taeniopygia guttata*	2			5	3		16	3				18	7			5	2	7	9					11							2				

		Survey sites																																				
Common name	**Scientific name**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**
Spiny-cheeked Honeyeater	*Acanthagenys rufogularis*												4	5								11	4	1			2	3					1				
Slaty-backed Thornbill	*Acanthiza robustirostris*																																					
Chestnut-rumped Thornbill	*Acanthiza uropygialis*							4				2					4		2							2		4			2						
Collared Sparrowhawk	*Accipiter cirrocephalus*																																					
Australasian Pipit	*Anthus australis*																			3																		
Southern Whiteface	*Aphelocephala leucopsis*																										3											
Banded Whiteface	*Aphelocephala nigricinata*																2								1													
Wedge-tailed Eagle	*Aquila audax*																																					
Australian Bustard	*Ardeotis australis*															2																						
Black-faced Woodswallow	*Artamus cinereus*			12			1										2											6				4					
Little Woodswallow	*Artamus minor*																																					
Masked Woodswallow	*Artamus personatus*																				2	42	3	30	2													
Australian Ringneck	*Barnardius zonarius*	14							2	1			3		1																							
Bush Thick-knee	*Burhinus grallarius*																																					
Little Corella	*Cacatua sanguinea*																																					
Pied Honeyeater	*Certhionyx variegatus*																					1																
Western Quail-thrush	*Cinclosoma marginatum*																																					
Grey Shrike-thrush	*Colluricincla harmonica*																																					
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*		1																																			
Torresian Crow	*Corvus orru*		1																								2											
Pied Butcherbird	*Cracticus nigrogularis*		3																							1												
Grey Butcherbird	*Cracticus torquatus*																																					
Varied Sittella	*Daphoenositta chrysoptera*																																					
Galah	*Eolophus roseicapilla*				2																																	
Crimson Chat	*Ephthianura tricolor*													1			3			2	6	5	10	16	16													
Brown Falcon	*Falco berigora*																										1											
Nankeen Kestrel	*Falco cenchroides*																			1	1																	
Singing Honeyeater	*Gavicalis virescens*							1																								1		1	1			
Diamond dove	*Geopelia cuneata*											2							2																			
Spinifex Pigeon	*Geophaps plumifera*												21																									
Western Gerygone	*Gerygone fusca*																																					
Whistling Kite	*Haliastur sphenurus*																																					
White-winged Triller	*Lalage tricolor*																																					
Purple-backed Fairywren	*Malurus assimilis*																																					
White-winged Fairywren	*Malurus leucopterus*																																					
Splendid Fairywren	*Malurus splendens*																									2												
Yellow-throated Miner	*Manorina flavigula*																																					
Hooded Robin	*Melanodryas cucullata*					2																																
Budgerigar	*Melopsittacus undulatus*	3	15		6														1			3																
Rainbow Bee-eater	*Merops ornatus*												1																									

		Survey sites																																		
Common name	**Scientific name**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**
Bourke's Parrot	*Neopsephotus bourkii*																																			
Australian Boobook	*Ninox boobook*					1																														
Cockatiel	*Nymphicus hollandicus*					7						11														2	2									
Crested Pigeon	*Ocyphaps lophotes*	3								7			7																							
Crested Bellbird	*Oreoica gutturalis*																						1			1										1
Rufous Whistler	*Pachycephala rufiventris*													1												1	1	3			1					
Tree Martin	*Petrochelidon nigricans*																				5				2	2										
Red-capped Robin	*Petroica goodenovii*						2							1	2		1	1		1					2	2				1						1
Common Bronzewing	*Phaps chalcoptera*								1										1											1						
Mulga Parrot	*Platycercus varius*									5																										
White-browed Babbler	*Pomatostomus superciliosus*	2	12											4									6					3								
Grey-crowned Babbler	*Pomatostomus temporalis*	2																																		
Chiming Wedgebill	*Psophodes occidentalis*																																			
White-plumed Honeyeater	*Ptilotula penicillata*												5	3								2														
Grey-fronted Honeyeater	*Ptilotula plumula*																																			
Redthroat	*Pyrrholaemus brunneus*			3		1	1	1																		1		2		1	2					
Grey Fantail	*Rhipidura albiscapa*																																			
Willie Wagtail	*Rhipidura leucophrys*	1										3	1	3													3	1		1						
Zebra Finch	*Taeniopygia guttata*	7					11	1	2		8		15	25	17		4			1	15			1	1	28		5		18				5		

		Survey sites																																						
Common name	**Scientific name**	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**	**81**	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**100**	**101**	**102**	**103**	**104**	**105**
Spiny-cheeked Honeyeater	*Acanthagenys rufogularis*						1													2	2	3				2	2									
Slaty-backed Thornbill	*Acanthiza robustirostris*															1																				
Chestnut-rumped Thornbill	*Acanthiza uropygialis*		2			1	3				1	2				5					1		1		2	2				1				1		
Collared Sparrowhawk	*Accipiter cirrocephalus*																																			
Australasian Pipit	*Anthus australis*																																			
Southern Whiteface	*Aphelocephala leucopsis*																																			
Banded Whiteface	*Aphelocephala nigricinata*																																			
Wedge-tailed Eagle	*Aquila audax*																																			
Australian Bustard	*Ardeotis australis*																																			
Black-faced Woodswallow	*Artamus cinereus*		1					5				6																								
Little Woodswallow	*Artamus minor*																																			
Masked Woodswallow	*Artamus personatus*																																			
Australian Ringneck	*Barnardius zonarius*										2		1																							2
Bush Thick-knee	*Burhinus grallarius*																																			
Little Corella	*Cacatua sanguinea*																																			
Pied Honeyeater	*Certhionyx variegatus*																																			
Western Quail-thrush	*Cinclosoma marginatum*									1														2												
Grey Shrike-thrush	*Colluricincla harmonica*					1																														
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*																																			
Torresian Crow	*Corvus orru*																						1													
Pied Butcherbird	*Cracticus nigrogularis*					2																													2	
Grey Butcherbird	*Cracticus torquatus*																																			
Varied Sittella	*Daphoenositta chrysoptera*																																			
Galah	*Eolophus roseicapilla*						2						4		60										6											3
Crimson Chat	*Ephthianura tricolor*																								1											
Brown Falcon	*Falco berigora*																																			
Nankeen Kestrel	*Falco cenchroides*	1																																		
Singing Honeyeater	*Gavicalis virescens*													1				2				1	2		1	1	1		1							
Diamond dove	*Geopelia cuneata*			2										1											2											
Spinifex Pigeon	*Geophaps plumifera*										21																									
Western Gerygone	*Gerygone fusca*					1	1																													
Whistling Kite	*Haliastur sphenurus*																																			
White-winged Triller	*Lalage tricolor*											2																								
Purple-backed Fairywren	*Malurus assimilis*														1						6													1		
White-winged Fairywren	*Malurus leucopterus*																				6	2				11			4							
Splendid Fairywren	*Malurus splendens*																						4													
Yellow-throated Miner	*Manorina flavigula*																																			
Hooded Robin	*Melanodryas cucullata*																																	2		
Budgerigar	*Melopsittacus undulatus*																																			
Rainbow Bee-eater	*Merops ornatus*						1																													

		Survey sites																																		
Common name	**Scientific name**	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**	**81**	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**100**	**101**	**102**	**103**	**104**	**105**
Bourke's Parrot	*Neopsephotus bourkii*																2																			
Australian Boobook	*Ninox boobook*																														1					
Cockatiel	*Nymphicus hollandicus*																																			
Crested Pigeon	*Ocyphaps lophotes*	27												2					3																	31
Crested Bellbird	*Oreoica gutturalis*																						1		1											
Rufous Whistler	*Pachycephala rufiventris*											1		1			1	1					3				2			1			1		1
Tree Martin	*Petrochelidon nigricans*						2							2				1																		
Red-capped Robin	*Petroica goodenovii*										1					1				1			1	1	3											
Common Bronzewing	*Phaps chalcoptera*	1									1						1												1							
Mulga Parrot	*Platycercus varius*														2										2											
White-browed Babbler	*Pomatostomus superciliosus*									3																				3						
Grey-crowned Babbler	*Pomatostomus temporalis*																																			
Chiming Wedgebill	*Psophodes occidentalis*																																			
White-plumed Honeyeater	*Ptilotula penicillata*												1					1																		
Grey-fronted Honeyeater	*Ptilotula plumula*																																			
Redthroat	*Pyrrholaemus brunneus*			1											1						1	2					2		1							
Grey Fantail	*Rhipidura albiscapa*																																			
Willie Wagtail	*Rhipidura leucophrys*		1			1	1									1				1		1			2	1		1							
Zebra Finch	*Taeniopygia guttata*	14	7		1			1			11			15		1		9		12	6		12	3	19					3	13					

Common name	Scientific name	Survey sites																																						
		106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
Spiny-cheeked Honeyeater	*Acanthagenys rufogularis*						2						1	1																						
Slaty-backed Thornbill	*Acanthiza robustirostris*																	3																		
Chestnut-rumped Thornbill	*Acanthiza uropygialis*	3	4			4			3	5	1					3																					
Collared Sparrowhawk	*Accipiter cirrocephalus*																																			
Australasian Pipit	*Anthus australis*																																			
Southern Whiteface	*Aphelocephala leucopsis*	4																																		
Banded Whiteface	*Aphelocephala nigricinata*																						3													
Wedge-tailed Eagle	*Aquila audax*																																			
Australian Bustard	*Ardeotis australis*																																			
Black-faced Woodswallow	*Artamus cinereus*					4			3					2										2												
Little Woodswallow	*Artamus minor*																																			
Masked Woodswallow	*Artamus personatus*																																			
Australian Ringneck	*Barnardius zonarius*																																			
Bush Thick-knee	*Burhinus grallarius*															1																				
Little Corella	*Cacatua sanguinea*																																			
Pied Honeyeater	*Certhionyx variegatus*																																			
Western Quail-thrush	*Cinclosoma marginatum*							1																												
Grey Shrike-thrush	*Colluricincla harmonica*																																			
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*																																			
Torresian Crow	*Corvus orru*																											2								
Pied Butcherbird	*Cracticus nigrogularis*																																			1
Grey Butcherbird	*Cracticus torquatus*						1																													
Varied Sittella	*Daphoenositta chrysoptera*																							2	3											
Galah	*Eolophus roseicapilla*																				21											1				8
Crimson Chat	*Ephthianura tricolor*																							1												
Brown Falcon	*Falco berigora*																																			
Nankeen Kestrel	*Falco cenchroides*																																			
Singing Honeyeater	*Gavicalis virescens*		1	2		1							1	1									1					1								
Diamond dove	*Geopelia cuneata*																																			
Spinifex Pigeon	*Geophaps plumifera*																											2								
Western Gerygone	*Gerygone fusca*				1			1																												
Whistling Kite	*Haliastur sphenurus*																																			
White-winged Triller	*Lalage tricolor*																							1												
Purple-backed Fairywren	*Malurus assimilis*												3	3		6																				
White-winged Fairywren	*Malurus leucopterus*																															2				
Splendid Fairywren	*Malurus splendens*								2							4																				
Yellow-throated Miner	*Manorina flavigula*																																			
Hooded Robin	*Melanodryas cucullata*																																			
Budgerigar	*Melopsittacus undulatus*																			26													2	11		

		Survey sites																																		
Common name	**Scientific name**	**106**	**107**	**108**	**109**	**110**	**111**	**112**	**113**	**114**	**115**	**116**	**117**	**118**	**119**	**120**	**121**	**122**	**123**	**124**	**125**	**126**	**127**	**128**	**129**	**130**	**131**	**132**	**133**	**134**	**135**	**136**	**137**	**138**	**139**	**140**
Rainbow Bee-eater	*Merops ornatus*																																			
Bourke's Parrot	*Neopsephotus bourkii*																						6													
Australian Boobook	*Ninox boobook*																																			
Cockatiel	*Nymphicus hollandicus*																																			
Crested Pigeon	*Ocyphaps lophotes*				3									2		1																				12
Crested Bellbird	*Oreoica gutturalis*	1			1	1														1													1			
Rufous Whistler	*Pachycephala rufiventris*	1		1	1			3	1	2			1	1		2			1					1												
Tree Martin	*Petrochelidon nigricans*	5			1					1																							1			
Red-capped Robin	*Petroica goodenovii*	2		2	3		2	1		1											2				2									1		
Common Bronzewing	*Phaps chalcoptera*																																			
Mulga Parrot	*Platycercus varius*							5																							1	1				
White-browed Babbler	*Pomatostomus superciliosus*																																			3
Grey-crowned Babbler	*Pomatostomus temporalis*																																			
Chiming Wedgebill	*Psophodes occidentalis*																													1						
White-plumed Honeyeater	*Ptilotula penicillata*									1																										
Grey-fronted Honeyeater	*Ptilotula plumula*																																			
Redthroat	*Pyrrholaemus brunneus*																							1												
Grey Fantail	*Rhipidura albiscapa*																																			
Willie Wagtail	*Rhipidura leucophrys*	2					1	3						1																						
Zebra Finch	*Taeniopygia guttata*	2	33		1					5			11	57		10		4						5			2					3		4		

Common name	Scientific name	Survey sites																																					
		141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
Spiny-cheeked Honeyeater	*Acanthagenys rufogularis*														2			2																		
Slaty-backed Thornbill	*Acanthiza robustirostris*											2																								
Chestnut-rumped Thornbill	*Acanthiza uropygialis*		2									4		1				3																		1
Collared Sparrowhawk	*Accipiter cirrocephalus*																																			
Australasian Pipit	*Anthus australis*																													1						
Southern Whiteface	*Aphelocephala leucopsis*																							2												
Banded Whiteface	*Aphelocephala nigricinata*																																			
Wedge-tailed Eagle	*Aquila audax*																																			
Australian Bustard	*Ardeotis australis*																										1									
Black-faced Woodswallow	*Artamus cinereus*												2								2	2			3			2				5				
Little Woodswallow	*Artamus minor*																																			
Masked Woodswallow	*Artamus personatus*																																			
Australian Ringneck	*Barnardius zonarius*																																			
Bush Thick-knee	*Burhinus grallarius*																																			
Little Corella	*Cacatua sanguinea*																																			
Pied Honeyeater	*Certhionyx variegatus*																																			
Western Quail-thrush	*Cinclosoma marginatum*																	2		1																
Grey Shrike-thrush	*Colluricincla harmonica*																																		1	
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*																																			
Torresian Crow	*Corvus orru*																																			
Pied Butcherbird	*Cracticus nigrogularis*										1																									
Grey Butcherbird	*Cracticus torquatus*						1																													1
Varied Sittella	*Daphoenositta chrysoptera*																																			
Galah	*Eolophus roseicapilla*	4	27																											2						
Crimson Chat	*Ephthianura tricolor*												3					1																		
Brown Falcon	*Falco berigora*																																			
Nankeen Kestrel	*Falco cenchroides*																																			
Singing Honeyeater	*Gavicalis virescens*											1	1	1	2			1							2					2			1			
Diamond dove	*Geopelia cuneata*																							2												
Spinifex Pigeon	*Geophaps plumifera*													9																						
Western Gerygone	*Gerygone fusca*				1									1																						
Whistling Kite	*Haliastur sphenurus*																																			
White-winged Triller	*Lalage tricolor*													1																						
Purple-backed Fairywren	*Malurus assimilis*																																			
White-winged Fairywren	*Malurus leucopterus*																																			
Splendid Fairywren	*Malurus splendens*																																			
Yellow-throated Miner	*Manorina flavigula*																								1											
Hooded Robin	*Melanodryas cucullata*			1									3																							
Budgerigar	*Melopsittacus undulatus*	1					2				4																									

		Survey sites																																			
Common name	**Scientific name**	**141**	**142**	**143**	**144**	**145**	**146**	**147**	**148**	**149**	**150**	**151**	**152**	**153**	**154**	**155**	**156**	**157**	**158**	**159**	**160**	**161**	**162**	**163**	**164**	**165**	**166**	**167**	**168**	**169**	**170**	**171**	**172**	**173**	**174**	**175**
Rainbow Bee-eater	*Merops ornatus*																																			
Bourke's Parrot	*Neopsephotus bourkii*																																			
Australian Boobook	*Ninox boobook*																																			
Cockatiel	*Nymphicus hollandicus*																																		7	
Crested Pigeon	*Ocyphaps lophotes*	1	2								16																								1	
Crested Bellbird	*Oreoica gutturalis*								1	1			2		2	1																			1	
Rufous Whistler	*Pachycephala rufiventris*			1									1		1			2						1						1		1	1	2	
Tree Martin	*Petrochelidon nigricans*																																			
Red-capped Robin	*Petroica goodenovii*												1		1			1	1				1										1		1	2
Common Bronzewing	*Phaps chalcoptera*																																			
Mulga Parrot	*Platycercus varius*																																			
White-browed Babbler	*Pomatostomus superciliosus*						1				4													1							3	2			
Grey-crowned Babbler	*Pomatostomus temporalis*																																			
Chiming Wedgebill	*Psophodes occidentalis*					1																														
White-plumed Honeyeater	*Ptilotula penicillata*																																			
Grey-fronted Honeyeater	*Ptilotula plumula*																																			
Redthroat	*Pyrrholaemus brunneus*													1			1													2						
Grey Fantail	*Rhipidura albiscapa*																																			
Willie Wagtail	*Rhipidura leucophrys*		1	1						1		1	1	2											1					1		1	1	1	1
Zebra Finch	*Taeniopygia guttata*		40											50									8	60						8				20		

		Survey sites																																				
Common name	**Scientific name**	**176**	**177**	**178**	**179**	**180**	**181**	**182**	**183**	**184**	**185**	**186**	**187**	**188**	**189**	**190**	**191**	**192**	**193**	**194**	**195**	**196**	**197**	**198**	**199**	**200**	**201**	**202**	**203**	**204**	**205**	**206**	**207**	**208**	**209**	**210**
Spiny-cheeked Honeyeater	*Acanthagenys rufogularis*																													1						
Slaty-backed Thornbill	*Acanthiza robustirostris*			1													1																			
Chestnut-rumped Thornbill	*Acanthiza uropygialis*																																			
Collared Sparrowhawk	*Accipiter cirrocephalus*																																			
Australasian Pipit	*Anthus australis*																										4			1						
Southern Whiteface	*Aphelocephala leucopsis*																																			
Banded Whiteface	*Aphelocephala nigricinata*																																			
Wedge-tailed Eagle	*Aquila audax*																																			
Australian Bustard	*Ardeotis australis*																																			
Black-faced Woodswallow	*Artamus cinereus*		2																										4							
Little Woodswallow	*Artamus minor*			2			1																													
Masked Woodswallow	*Artamus personatus*																																			
Australian Ringneck	*Barnardius zonarius*																																			
Bush Thick-knee	*Burhinus grallarius*																																			
Little Corella	*Cacatua sanguinea*																																			
Pied Honeyeater	*Certhionyx variegatus*																																			
Western Quail-thrush	*Cinclosoma marginatum*			1											1																					
Grey Shrike-thrush	*Colluricincla harmonica*						1																													
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*																																			
Torresian Crow	*Corvus orru*																																			
Pied Butcherbird	*Cracticus nigrogularis*	1							1																											
Grey Butcherbird	*Cracticus torquatus*													1																						
Varied Sittella	*Daphoenositta chrysoptera*																																			
Galah	*Eolophus roseicapilla*								2								2																			
Crimson Chat	*Ephthianura tricolor*			1																																
Brown Falcon	*Falco berigora*																																			
Nankeen Kestrel	*Falco cenchroides*																				1															
Singing Honeyeater	*Gavicalis virescens*													1	1	1		1																		
Diamond dove	*Geopelia cuneata*																																			
Spinifex Pigeon	*Geophaps plumifera*																																			
Western Gerygone	*Gerygone fusca*																																			
Whistling Kite	*Haliastur sphenurus*																																			
White-winged Triller	*Lalage tricolor*																																			
Purple-backed Fairywren	*Malurus assimilis*		3																																	
White-winged Fairywren	*Malurus leucopterus*																																			
Splendid Fairywren	*Malurus splendens*																																			
Yellow-throated Miner	*Manorina flavigula*				7					2																										
Hooded Robin	*Melanodryas cucullata*			1			1																					1								
Budgerigar	*Melopsittacus undulatus*																																			

		Survey sites																																				
Common name	**Scientific name**	**176**	**177**	**178**	**179**	**180**	**181**	**182**	**183**	**184**	**185**	**186**	**187**	**188**	**189**	**190**	**191**	**192**	**193**	**194**	**195**	**196**	**197**	**198**	**199**	**200**	**201**	**202**	**203**	**204**	**205**	**206**	**207**	**208**	**209**	**210**
Rainbow Bee-eater	*Merops ornatus*																																			
Bourke's Parrot	*Neopsephotus bourkii*																																			
Australian Boobook	*Ninox boobook*																																			
Cockatiel	*Nymphicus hollandicus*																																			
Crested Pigeon	*Ocyphaps lophotes*																		2	9				4											3	
Crested Bellbird	*Oreoica gutturalis*					1	1			1	1			1					1				1													
Rufous Whistler	*Pachycephala rufiventris*			2	1					2						2																				
Tree Martin	*Petrochelidon nigricans*																																			
Red-capped Robin	*Petroica goodenovii*													1								2					1							2		
Common Bronzewing	*Phaps chalcoptera*																																			
Mulga Parrot	*Platycercus varius*																3																			
White-browed Babbler	*Pomatostomus superciliosus*		3	1						5	1																									
Grey-crowned Babbler	*Pomatostomus temporalis*																																			
Chiming Wedgebill	*Psophodes occidentalis*																																			
White-plumed Honeyeater	*Ptilotula penicillata*																																			
Grey-fronted Honeyeater	*Ptilotula plumula*																				2															
Redthroat	*Pyrrholaemus brunneus*		1													1																			2	
Grey Fantail	*Rhipidura albiscapa*																																			
Willie Wagtail	*Rhipidura leucophrys*		1				1				1		1					1	1		1															
Zebra Finch	*Taeniopygia guttata*			4		2			5							4		12	5																	

		Survey sites																																						
Common name	**Scientific name**	**211**	**212**	**213**	**214**	**215**	**216**	**217**	**218**	**219**	**220**	**221**	**222**	**223**	**224**	**225**	**226**	**227**	**228**	**229**	**230**	**231**	**232**	**233**	**234**	**235**	**236**	**237**	**238**	**239**	**240**	**241**	**242**	**243**	**244**	**245**
Spiny-cheeked Honeyeater	*Acanthagenys rufogularis*																						2													
Slaty-backed Thornbill	*Acanthiza robustirostris*																																			
Chestnut-rumped Thornbill	*Acanthiza uropygialis*					2																	1													
Collared Sparrowhawk	*Accipiter cirrocephalus*																																			
Australasian Pipit	*Anthus australis*		1									5																								
Southern Whiteface	*Aphelocephala leucopsis*																																			
Banded Whiteface	*Aphelocephala nigricinata*																																			
Wedge-tailed Eagle	*Aquila audax*																																			
Australian Bustard	*Ardeotis australis*																																			
Black-faced Woodswallow	*Artamus cinereus*		1		1	2																												2		
Little Woodswallow	*Artamus minor*																																			
Masked Woodswallow	*Artamus personatus*																																			
Australian Ringneck	*Barnardius zonarius*																																			
Bush Thick-knee	*Burhinus grallarius*																																			
Little Corella	*Cacatua sanguinea*																																			
Pied Honeyeater	*Certhionyx variegatus*																																			
Western Quail-thrush	*Cinclosoma marginatum*															2		2																		
Grey Shrike-thrush	*Colluricincla harmonica*																																			
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*																																			
Torresian Crow	*Corvus orru*																																			
Pied Butcherbird	*Cracticus nigrogularis*																																			
Grey Butcherbird	*Cracticus torquatus*																						1													
Varied Sittella	*Daphoenositta chrysoptera*																																			
Galah	*Eolophus roseicapilla*																																			
Crimson Chat	*Ephthianura tricolor*																																			
Brown Falcon	*Falco berigora*																																			
Nankeen Kestrel	*Falco cenchroides*																																			
Singing Honeyeater	*Gavicalis virescens*					1																	6							1	1			1	1	
Diamond dove	*Geopelia cuneata*																																			
Spinifex Pigeon	*Geophaps plumifera*																																			
Western Gerygone	*Gerygone fusca*																														2					
Whistling Kite	*Haliastur sphenurus*																																			
White-winged Triller	*Lalage tricolor*																																			
Purple-backed Fairywren	*Malurus assimilis*																																	12		
White-winged Fairywren	*Malurus leucopterus*																																			
Splendid Fairywren	*Malurus splendens*													5					2																	
Yellow-throated Miner	*Manorina flavigula*																						2													
Hooded Robin	*Melanodryas cucullata*																																			
Budgerigar	*Melopsittacus undulatus*																																			

		Survey sites																																				
Common name	**Scientific name**	**211**	**212**	**213**	**214**	**215**	**216**	**217**	**218**	**219**	**220**	**221**	**222**	**223**	**224**	**225**	**226**	**227**	**228**	**229**	**230**	**231**	**232**	**233**	**234**	**235**	**236**	**237**	**238**	**239**	**240**	**241**	**242**	**243**	**244**	**245**
Rainbow Bee-eater	*Merops ornatus*																																			
Bourke's Parrot	*Neopsephotus bourkii*																																			
Australian Boobook	*Ninox boobook*																																			
Cockatiel	*Nymphicus hollandicus*																																			
Crested Pigeon	*Ocyphaps lophotes*						8																3								2	12				
Crested Bellbird	*Oreoica gutturalis*					1																														
Rufous Whistler	*Pachycephala rufiventris*																																			
Tree Martin	*Petrochelidon nigricans*																																			
Red-capped Robin	*Petroica goodenovii*		1					1						1	1		1			1											1	1				
Common Bronzewing	*Phaps chalcoptera*																																			
Mulga Parrot	*Platycercus varius*																																			
White-browed Babbler	*Pomatostomus superciliosus*																																			
Grey-crowned Babbler	*Pomatostomus temporalis*																																			
Chiming Wedgebill	*Psophodes occidentalis*																																			
White-plumed Honeyeater	*Ptilotula penicillata*																																			
Grey-fronted Honeyeater	*Ptilotula plumula*																																			
Redthroat	*Pyrrholaemus brunneus*											2		2		1																1		2		
Grey Fantail	*Rhipidura albiscapa*																																			
Willie Wagtail	*Rhipidura leucophrys*																						1									1				
Zebra Finch	*Taeniopygia guttata*												9	9	15																					

Common name	Scientific name	Survey sites																																							
		246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280
Spiny-cheeked Honeyeater	*Acanthagenys rufogularis*																1			1												1			1	
Slaty-backed Thornbill	*Acanthiza robustirostris*		1													2											1									
Chestnut-rumped Thornbill	*Acanthiza uropygialis*																		2	3	2						1		2							2
Collared Sparrowhawk	*Accipiter cirrocephalus*																																			
Australasian Pipit	*Anthus australis*																																			
Southern Whiteface	*Aphelocephala leucopsis*																			5		3							3							
Banded Whiteface	*Aphelocephala nigricinata*																						1													
Wedge-tailed Eagle	*Aquila audax*																																			
Australian Bustard	*Ardeotis australis*																																			
Black-faced Woodswallow	*Artamus cinereus*										2		4									5	2	5					3							
Little Woodswallow	*Artamus minor*																																			
Masked Woodswallow	*Artamus personatus*																																			
Australian Ringneck	*Barnardius zonarius*									2																				1						
Bush Thick-knee	*Burhinus grallarius*																																			
Little Corella	*Cacatua sanguinea*																																			
Pied Honeyeater	*Certhionyx variegatus*																																			
Western Quail-thrush	*Cinclosoma marginatum*															1									1		2				1					
Grey Shrike-thrush	*Colluricincla harmonica*																																			
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*																																			
Torresian Crow	*Corvus orru*					2																								2						
Pied Butcherbird	*Cracticus nigrogularis*																																			
Grey Butcherbird	*Cracticus torquatus*																																			
Varied Sittella	*Daphoenositta chrysoptera*																					3														
Galah	*Eolophus roseicapilla*																																			
Crimson Chat	*Ephthianura tricolor*																																			
Brown Falcon	*Falco berigora*											1														1										
Nankeen Kestrel	*Falco cenchroides*																																			
Singing Honeyeater	*Gavicalis virescens*		1			1												1			2	2						1	1						1	
Diamond dove	*Geopelia cuneata*																																			
Spinifex Pigeon	*Geophaps plumifera*																																			
Western Gerygone	*Gerygone fusca*																									1						1		1		
Whistling Kite	*Haliastur sphenurus*																																			
White-winged Triller	*Lalage tricolor*																																			
Purple-backed Fairywren	*Malurus assimilis*	5		4										3																3						2
White-winged Fairywren	*Malurus leucopterus*																																			
Splendid Fairywren	*Malurus splendens*			2				7												2																
Yellow-throated Miner	*Manorina flavigula*																																			
Hooded Robin	*Melanodryas cucullata*																																			
Budgerigar	*Melopsittacus undulatus*																																			
Rainbow Bee-eater	*Merops ornatus*																																			

		Survey sites																																				
Common name	**Scientific name**	**246**	**247**	**248**	**249**	**250**	**251**	**252**	**253**	**254**	**255**	**256**	**257**	**258**	**259**	**260**	**261**	**262**	**263**	**264**	**265**	**266**	**267**	**268**	**269**	**270**	**271**	**272**	**273**	**274**	**275**	**276**	**277**	**278**	**279**	**280**
Bourke's Parrot	*Neopsephotus bourkii*																													9						
Australian Boobook	*Ninox boobook*																																			
Cockatiel	*Nymphicus hollandicus*																																			
Crested Pigeon	*Ocyphaps lophotes*						1		13										1					8												
Crested Bellbird	*Oreoica gutturalis*										1							2		1				1				1	1							
Rufous Whistler	*Pachycephala rufiventris*										1				1							1								3	1			1		
Tree Martin	*Petrochelidon nigricans*																																	7		
Red-capped Robin	*Petroica goodenovii*	1	1		1				1	2	1				1			2	1		1	1					2			1	1					
Common Bronzewing	*Phaps chalcoptera*																																			
Mulga Parrot	*Platycercus varius*																			1																
White-browed Babbler	*Pomatostomus superciliosus*												4									5														
Grey-crowned Babbler	*Pomatostomus temporalis*																											4		3						
Chiming Wedgebill	*Psophodes occidentalis*																																			
White-plumed Honeyeater	*Ptilotula penicillata*																																	2		
Grey-fronted Honeyeater	*Ptilotula plumula*																																			
Redthroat	*Pyrrholaemus brunneus*	1						1						1		1				1		1		1		2		1	2	1	1	1				
Grey Fantail	*Rhipidura albiscapa*																										1						1			
Willie Wagtail	*Rhipidura leucophrys*																1	1				2		2						2		2		2		
Zebra Finch	*Taeniopygia guttata*							10	2	6	6										7	8					3	2								

Common name	Scientific name	Survey sites																																				
		281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315
Spiny-cheeked Honeyeater	*Acanthagenys rufogularis*																																		1	
Slaty-backed Thornbill	*Acanthiza robustirostris*										4																						2	3		
Chestnut-rumped Thornbill	*Acanthiza uropygialis*		3									1					3	2	1	3								2	2				3	3		
Collared Sparrowhawk	*Accipiter cirrocephalus*																				1														1	
Australasian Pipit	*Anthus australis*																																			2
Southern Whiteface	*Aphelocephala leucopsis*											2			3				5																	
Banded Whiteface	*Aphelocephala nigricinata*																																			
Wedge-tailed Eagle	*Aquila audax*																									1										
Australian Bustard	*Ardeotis australis*																																			
Black-faced Woodswallow	*Artamus cinereus*																			2		2						1								2
Little Woodswallow	*Artamus minor*																																			
Masked Woodswallow	*Artamus personatus*																																			
Australian Ringneck	*Barnardius zonarius*																																			
Bush Thick-knee	*Burhinus grallarius*																																			
Little Corella	*Cacatua sanguinea*																																		3	
Pied Honeyeater	*Certhionyx variegatus*																																			
Western Quail-thrush	*Cinclosoma marginatum*																		1																	
Grey Shrike-thrush	*Colluricincla harmonica*																																			
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*																																			
Torresian Crow	*Corvus orru*																							2	1											
Pied Butcherbird	*Cracticus nigrogularis*																																			
Grey Butcherbird	*Cracticus torquatus*																																			
Varied Sittella	*Daphoenositta chrysoptera*																																			
Galah	*Eolophus roseicapilla*											1			10																					
Crimson Chat	*Ephthianura tricolor*																																			
Brown Falcon	*Falco berigora*									1																									1	
Nankeen Kestrel	*Falco cenchroides*																				1															
Singing Honeyeater	*Gavicalis virescens*		1													1	2	1														1				1
Diamond dove	*Geopelia cuneata*																																			
Spinifex Pigeon	*Geophaps plumifera*																					4														
Western Gerygone	*Gerygone fusca*							1									2																		1	
Whistling Kite	*Haliastur sphenurus*																															1				
White-winged Triller	*Lalage tricolor*																	1																		
Purple-backed Fairywren	*Malurus assimilis*										2																									
White-winged Fairywren	*Malurus leucopterus*																	2																		
Splendid Fairywren	*Malurus splendens*										2	2																								
Yellow-throated Miner	*Manorina flavigula*																8																			
Hooded Robin	*Melanodryas cucullata*	1			1																															
Budgerigar	*Melopsittacus undulatus*																																			
Rainbow Bee-eater	*Merops ornatus*																																			

		Survey sites																																				
Common name	**Scientific name**	**281**	**282**	**283**	**284**	**285**	**286**	**287**	**288**	**289**	**290**	**291**	**292**	**293**	**294**	**295**	**296**	**297**	**298**	**299**	**300**	**301**	**302**	**303**	**304**	**305**	**306**	**307**	**308**	**309**	**310**	**311**	**312**	**313**	**314**	**315**
Bourke's Parrot	*Neopsephotus bourkii*	7		5																																
Australian Boobook	*Ninox boobook*																																			
Cockatiel	*Nymphicus hollandicus*																																			
Crested Pigeon	*Ocyphaps lophotes*																				7		14	1	30							2				
Crested Bellbird	*Oreoica gutturalis*									1					1		1												1		1					
Rufous Whistler	*Pachycephala rufiventris*			1							1				1	1	1													2				1		
Tree Martin	*Petrochelidon nigricans*																																			
Red-capped Robin	*Petroica goodenovii*									1	2	1			2	1	2	3				1	1							1			1	2		
Common Bronzewing	*Phaps chalcoptera*																																			
Mulga Parrot	*Platycercus varius*																																			
White-browed Babbler	*Pomatostomus superciliosus*																													5						
Grey-crowned Babbler	*Pomatostomus temporalis*																																			
Chiming Wedgebill	*Psophodes occidentalis*																																			
White-plumed Honeyeater	*Ptilotula penicillata*												6			1										1		5								
Grey-fronted Honeyeater	*Ptilotula plumula*																																			
Redthroat	*Pyrrholaemus brunneus*									4	2				1				3	1					1							2	1	2	2	
Grey Fantail	*Rhipidura albiscapa*																																			
Willie Wagtail	*Rhipidura leucophrys*	1											2		1			2							1					1						1
Zebra Finch	*Taeniopygia guttata*				14	11																2												8		

		Survey sites																												
Common name	**Scientific name**	**316**	**317**	**318**	**319**	**320**	**321**	**322**	**323**	**324**	**325**	**326**	**327**	**328**	**329**	**330**	**331**	**332**	**333**	**334**	**335**	**336**	**337**	**338**	**339**	**340**	**341**	**342**	**343**	**344**
Spiny-cheeked Honeyeater	*Acanthagenys rufogularis*												2								1			2						
Slaty-backed Thornbill	*Acanthiza robustirostris*																													
Chestnut-rumped Thornbill	*Acanthiza uropygialis*			2	2		2							6						4	2		1						1	
Collared Sparrowhawk	*Accipiter cirrocephalus*																													
Australasian Pipit	*Anthus australis*																					1								
Southern Whiteface	*Aphelocephala leucopsis*																			5	3					1				
Banded Whiteface	*Aphelocephala nigricinata*																													
Wedge-tailed Eagle	*Aquila audax*																													
Australian Bustard	*Ardeotis australis*																													
Black-faced Woodswallow	*Artamus cinereus*	6																							6					
Little Woodswallow	*Artamus minor*																													
Masked Woodswallow	*Artamus personatus*																													
Australian Ringneck	*Barnardius zonarius*							3												2										
Bush Thick-knee	*Burhinus grallarius*																													
Little Corella	*Cacatua sanguinea*																													
Pied Honeyeater	*Certhionyx variegatus*																									1				
Western Quail-thrush	*Cinclosoma marginatum*																1													
Grey Shrike-thrush	*Colluricincla harmonica*																							2						
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*																													
Torresian Crow	*Corvus orru*			3																										
Pied Butcherbird	*Cracticus nigrogularis*																													
Grey Butcherbird	*Cracticus torquatus*																													
Varied Sittella	*Daphoenositta chrysoptera*													3																
Galah	*Eolophus roseicapilla*																													
Crimson Chat	*Ephthianura tricolor*																													
Brown Falcon	*Falco berigora*			1																										
Nankeen Kestrel	*Falco cenchroides*						1																							
Singing Honeyeater	*Gavicalis virescens*							1		1				1		2				3		2	3		1	1	2			
Diamond dove	*Geopelia cuneata*																													
Spinifex Pigeon	*Geophaps plumifera*																													
Western Gerygone	*Gerygone fusca*						1			1					1												1			1
Whistling Kite	*Haliastur sphenurus*																													
White-winged Triller	*Lalage tricolor*																													
Purple-backed Fairywren	*Malurus assimilis*	2								3														3						
White-winged Fairywren	*Malurus leucopterus*																													
Splendid Fairywren	*Malurus splendens*																				3									
Yellow-throated Miner	*Manorina flavigula*																									5				
Hooded Robin	*Melanodryas cucullata*																													2
Budgerigar	*Melopsittacus undulatus*																													

		Survey sites																												
Common name	**Scientific name**	**316**	**317**	**318**	**319**	**320**	**321**	**322**	**323**	**324**	**325**	**326**	**327**	**328**	**329**	**330**	**331**	**332**	**333**	**334**	**335**	**336**	**337**	**338**	**339**	**340**	**341**	**342**	**343**	**344**
Rainbow Bee-eater	*Merops ornatus*																													
Bourke's Parrot	*Neopsephotus bourkii*																													
Australian Boobook	*Ninox boobook*																													
Cockatiel	*Nymphicus hollandicus*																													
Crested Pigeon	*Ocyphaps lophotes*								1																					1
Crested Bellbird	*Oreoica gutturalis*							1	1																	1				
Rufous Whistler	*Pachycephala rufiventris*									1				1	2			1	1			1	1		3			2		1
Tree Martin	*Petrochelidon nigricans*				3																2									
Red-capped Robin	*Petroica goodenovii*				2	2		1		2				1		1	2			1	1	2		1		1			2	1
Common Bronzewing	*Phaps chalcoptera*																													
Mulga Parrot	*Platycercus varius*																													
White-browed Babbler	*Pomatostomus superciliosus*	5				3								4									8			2				
Grey-crowned Babbler	*Pomatostomus temporalis*																													
Chiming Wedgebill	*Psophodes occidentalis*																													
White-plumed Honeyeater	*Ptilotula penicillata*				2		2														2	1		4						3
Grey-fronted Honeyeater	*Ptilotula plumula*																													
Redthroat	*Pyrrholaemus brunneus*																3			1	1			1			1		1	
Grey Fantail	*Rhipidura albiscapa*																													1
Willie Wagtail	*Rhipidura leucophrys*	2	1			1								1				1		3		1			2					
Zebra Finch	*Taeniopygia guttata*		3				11				8									3				3						

Appendix C. Fauna habitat photos at bird survey sites

Southern Whiteface and Grey Falcon Survey
Yinnetharra Lithium Project Area

Site 1

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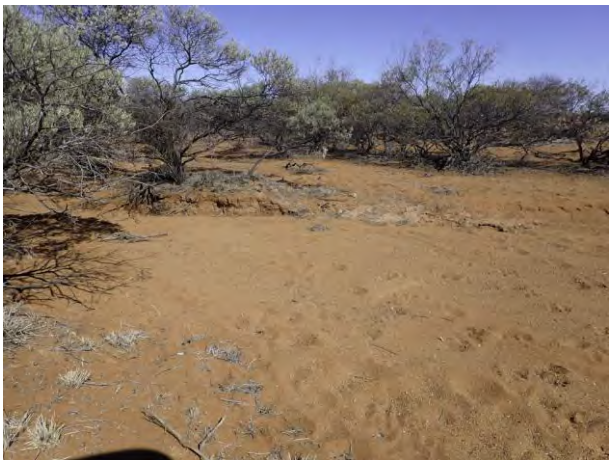

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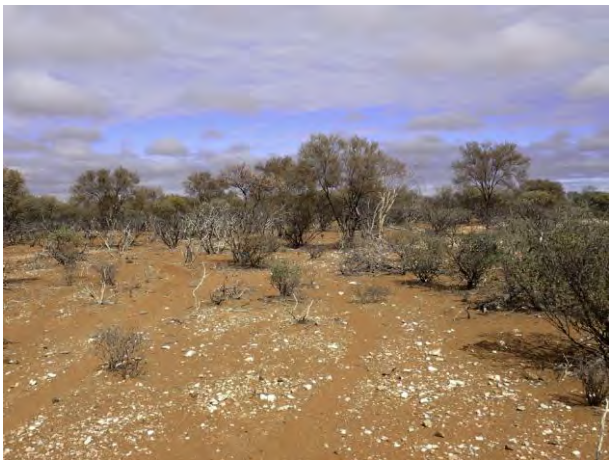

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Appendix D.
ARU locations

Southern Whiteface and Grey Falcon Survey
Yinnetharra Lithium Project Area

D.1 ARU LOCATIONS

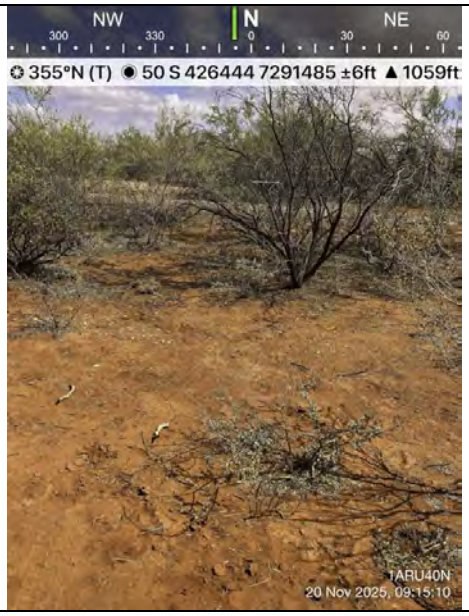
ARU #	UTM Zone	Easting	Northing	Date in	Date out
1	50	426443	7291490	4/04/2025	19/04/2025
2	50	426744	7290628	4/04/2025	19/04/2025
3	50	426740	7289870	4/04/2025	19/04/2025
4	50	426381	7289150	4/04/2025	19/04/2025
5	50	425360	7289777	4/04/2025	19/04/2025
6	50	428423	7288571	4/04/2025	19/04/2025
7	50	427519	7287113	4/04/2025	19/04/2025
8	50	423946	7288563	4/04/2025	19/04/2025
9	50	423130	7286302	4/04/2025	19/04/2025
10	50	425139	7285940	4/04/2025	19/04/2025
11	50	425530	7291770	19/04/2025	21/05/2025
12	50	427593	7290692	19/04/2025	21/05/2025
13	50	427301	7289645	19/04/2025	21/05/2025
14	50	426278	7288347	19/04/2025	21/05/2025
15	50	425546	7289293	19/04/2025	21/05/2025
16	50	428591	7289310	19/04/2025	21/05/2025
17	50	427363	7286196	19/04/2025	21/05/2025
18	50	424109	7287899	19/04/2025	21/05/2025
19	50	421847	7285236	19/04/2025	21/05/2025
20	50	425040	7284348	19/04/2025	21/05/2025
21	50	425958	7291451	21/05/2025	1/06/2025
22	50	427144	7290628	21/05/2025	1/06/2025
23	50	427052	7289664	21/05/2025	1/06/2025
24	50	426381	7288850	21/05/2025	1/06/2025
25	50	425535	7289577	21/05/2025	1/06/2025
26	50	427381	7288900	21/05/2025	1/06/2025
27	50	426630	7287202	21/05/2025	1/06/2025
28	50	424366	7288356	21/05/2025	1/06/2025
29	50	423230	7286002	21/05/2025	1/06/2025
30	50	425032	7286699	21/05/2025	1/06/2025
31	50	426640	7291233	1/06/2025	15/06/2025
32	50	427805	7290527	1/06/2025	15/06/2025
33	50	426803	7289760	1/06/2025	15/06/2025
34	50	426394	7289506	1/06/2025	15/06/2025
35	50	425273	7290112	1/06/2025	15/06/2025
36	50	427059	7288868	1/06/2025	15/06/2025
37	50	426955	7287384	1/06/2025	15/06/2025
38	50	424394	7288725	1/06/2025	15/06/2025
39	50	423962	7286825	1/06/2025	15/06/2025
40	50	425367	7287211	1/06/2025	15/06/2025
41	50	425242	7291823	15/06/2025	30/06/2025
42	50	426451	7290653	15/06/2025	30/06/2025
43	50	426435	7290200	15/06/2025	30/06/2025
44	50	426493	7288248	15/06/2025	30/06/2025
45	50	425751	7289417	15/06/2025	30/06/2025
46	50	426987	7288943	15/06/2025	30/06/2025
47	50	426785	7287483	15/06/2025	30/06/2025
48	50	424553	7288852	15/06/2025	30/06/2025
49	50	423726	7286606	15/06/2025	30/06/2025
50	50	425234	7287085	15/06/2025	30/06/2025
51	50	424922	7291803	30/06/2025	13/07/2025
52	50	426254	7290727	30/06/2025	13/07/2025
53	50	426235	7290358	30/06/2025	13/07/2025
54	50	426771	7288230	30/06/2025	13/07/2025
55	50	426084	7289528	30/06/2025	13/07/2025
56	50	426684	7288965	30/06/2025	13/07/2025
57	50	426524	7287499	30/06/2025	13/07/2025
58	50	424704	7289050	30/06/2025	13/07/2025
59	50	423110	7286291	30/06/2025	13/07/2025
60	50	425241	7287396	30/06/2025	13/07/2025
61	50	424578	7292179	13/07/2025	30/07/2025
62	50	426766	7291159	13/07/2025	29/07/2025
63	50	425992	7290445	13/07/2025	29/07/2025
64	50	426819	7288397	13/07/2025	28/07/2025
65	50	426395	7289255	13/07/2025	30/07/2025
66	50	426362	7288785	13/07/2025	30/07/2025
67	50	426651	7287812	13/07/2025	28/07/2025
68	50	424956	7288919	13/07/2025	28/07/2025
69	50	422107	7285533	13/07/2025	28/07/2025
70	50	425619	7287857	13/07/2025	28/07/2025
71	50	426843	7291140	30/07/2025	22/08/2025
72	50	426144	7290778	30/07/2025	22/08/2025
73	50	426640	7290170	30/07/2025	22/08/2025
74	50	426781	7288700	11/08/2025	22/08/2025
75	50	426293	7289518	30/07/2025	22/08/2025
76	50	426286	7288745	30/07/2025	22/08/2025
77	50	426526	7287068	30/07/2025	22/08/2025
78	50	423966	7288258	30/07/2025	22/08/2025
79	50	422730	7285802	30/07/2025	22/08/2025
80	50	425530	7286902	30/07/2025	22/08/2025
81	50	414295.78	7302858	22/08/2025	20/09/2025
82	50	413976.88	7302384.87	22/08/2025	20/09/2025

ARU #	UTM Zone	Easting	Northing	Date in	Date out
83	50	414094.35	7301532.4	22/08/2025	20/09/2025
84	50	423577.9	7294128.81	22/08/2025	20/09/2025
85	50	425155.91	7295426.44	22/08/2025	20/09/2025
86	50	426381.99	7294261.63	22/08/2025	20/09/2025
87	50	429863.48	7292727.84	22/08/2025	20/09/2025
88	50	430580.22	7292222.83	22/08/2025	20/09/2025
89	50	431793.38	7291710.58	22/08/2025	20/09/2025
90	50	436267.88	7290882.59	22/08/2025	20/09/2025
91	50	423690	7290636	20/09/2025	20/10/2025
92	50	423355	7289850	20/09/2025	20/10/2025
93	50	422679	7289426	20/09/2025	20/10/2025
94	50	420947	7286378	20/09/2025	20/10/2025
95	50	425663	7289002	20/09/2025	20/10/2025
96	50	424009	7284908	20/09/2025	20/10/2025

ARU #	UTM Zone	Easting	Northing	Date in	Date out
97	50	426343	7286916	20/09/2025	20/10/2025
98	50	422433	7286702	20/09/2025	20/10/2025
99	50	420224	7284788	20/09/2025	20/10/2025
100	50	423833	7285599	20/09/2025	20/10/2025
101	50	423107	7290454	20/10/2025	1/11/2025
102	50	422564	7288252	20/10/2025	1/11/2025
103	50	427496	7289269	20/10/2025	1/11/2025
104	50	426984	7288198	20/10/2025	1/11/2025
105	50	420868	7284967	20/10/2025	1/11/2025
106	50	424230	7286077	20/10/2025	1/11/2025
107	50	426063	7286692	20/10/2025	1/11/2025
108	50	423956	7287563	20/10/2025	1/11/2025
109	50	421522	7285080	20/10/2025	1/11/2025
110	50	424747	7285987	20/10/2025	1/11/2025

Appendix E. Fauna habitat photos at ARU survey sites

Southern Whiteface and Grey Falcon Survey
Yinnetharra Lithium Project Area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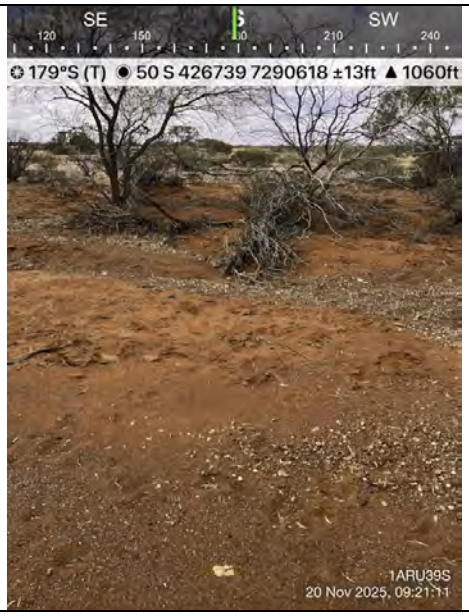
Site 1_1ARU40	Site 1_1ARU40

TERRESTRIAL ECOSYSTEMS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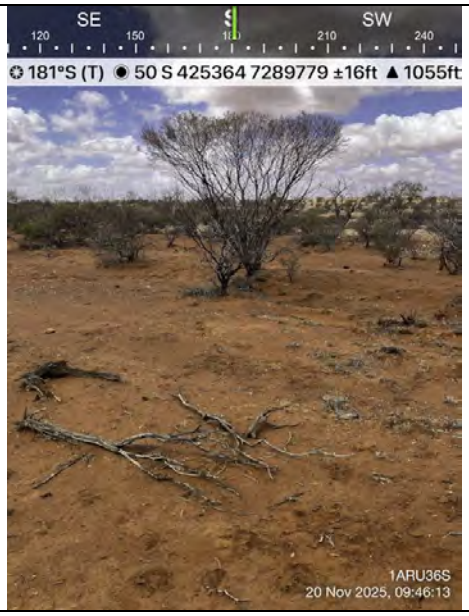
Site 3_1ARU38

Site 3_1ARU38

Site 3_1ARU38

Site 4_1ARU37	Site 4_1ARU37
Site 4_1ARU37	Site 4_1ARU37

TERRESTRIAL ECOSYSTEMS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	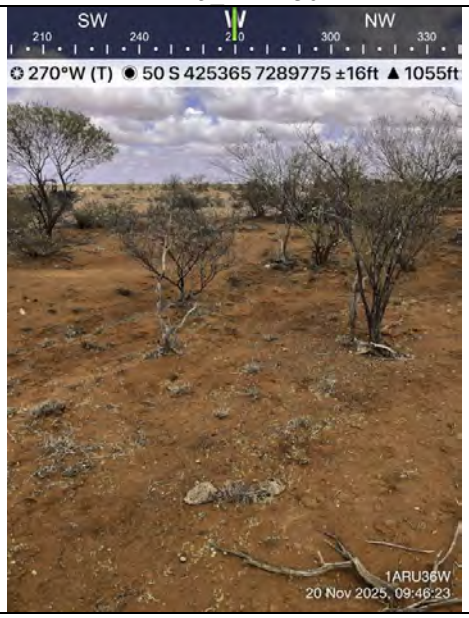
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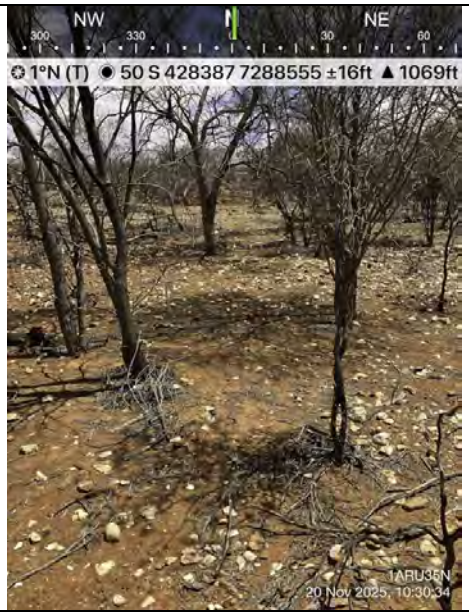
TERRESTRIAL ECOSYSTEMS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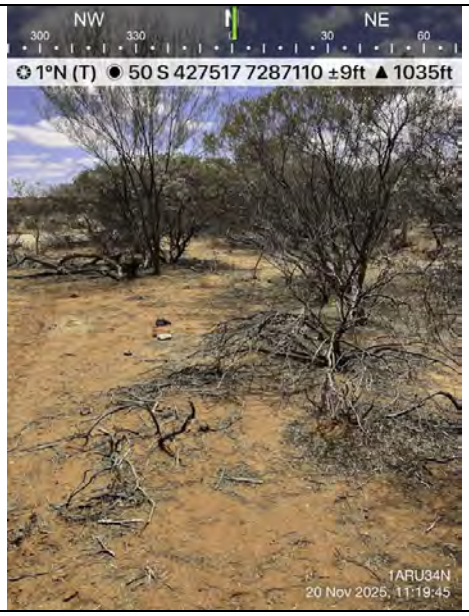
Site 6_1ARU35	Site 6_1ARU35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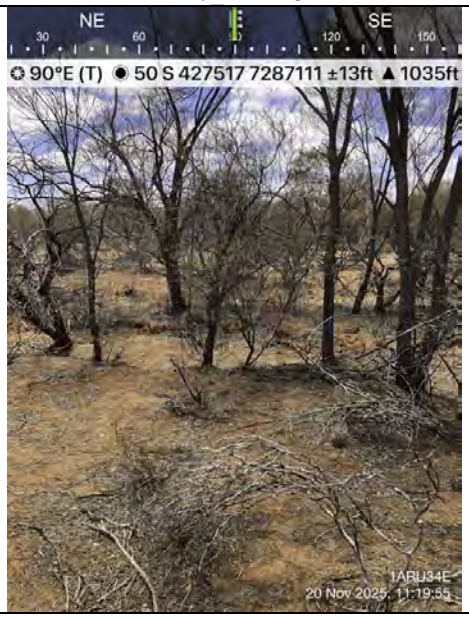	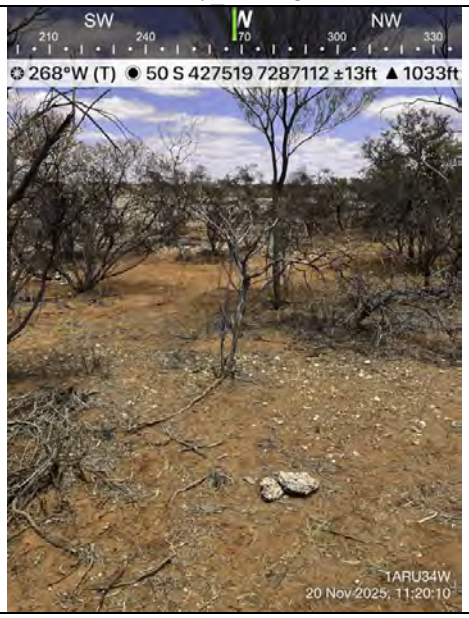
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TERRESTRIAL ECOSYSTEMS

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	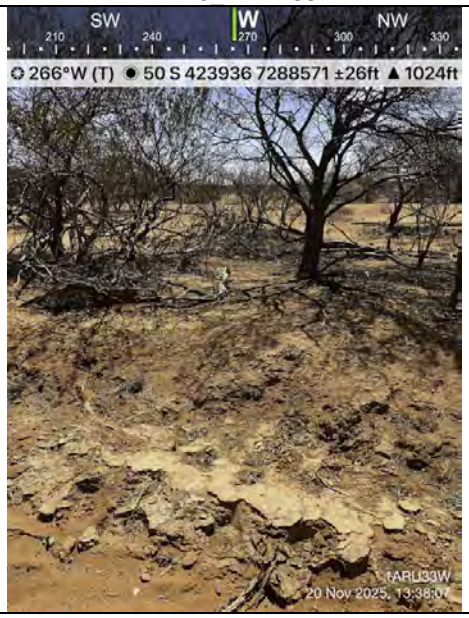
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TERRESTRIAL ECOSYSTEMS

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	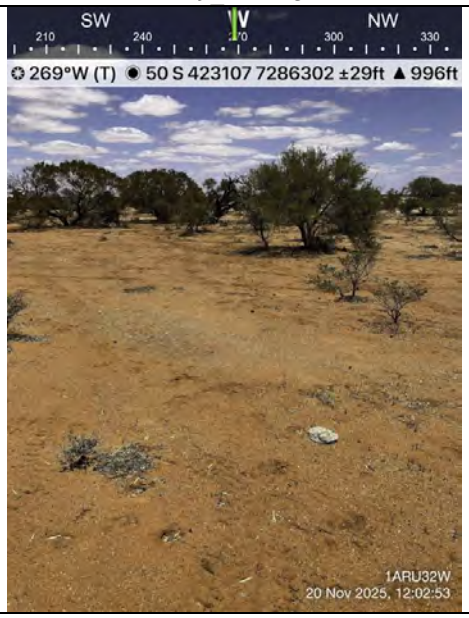
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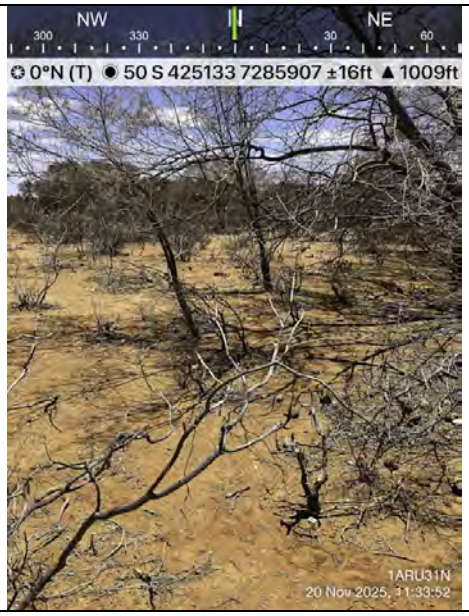	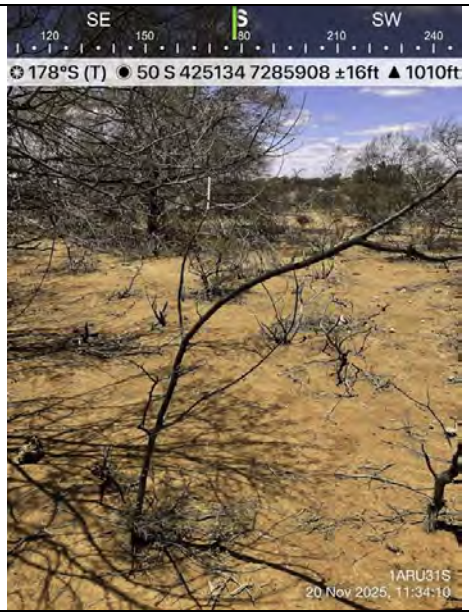
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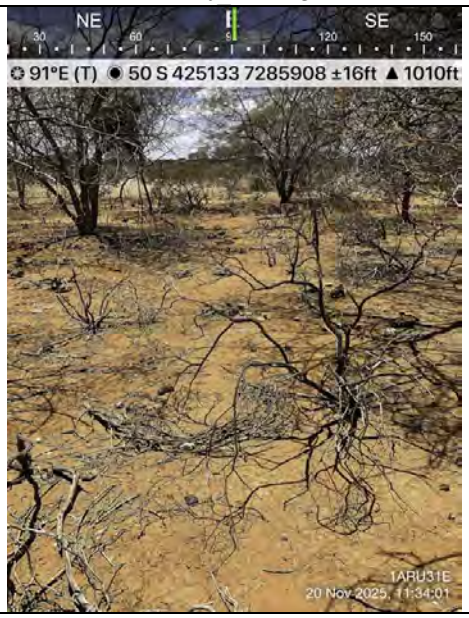	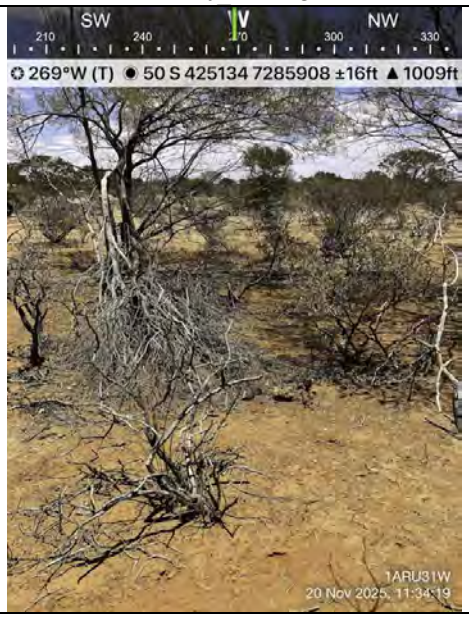
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TERRESTRIAL ECOSYSTEMS

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	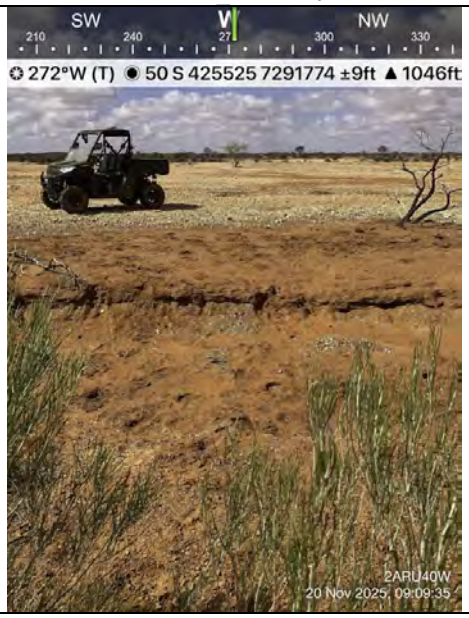
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TERRESTRIAL ECOSYSTEMS

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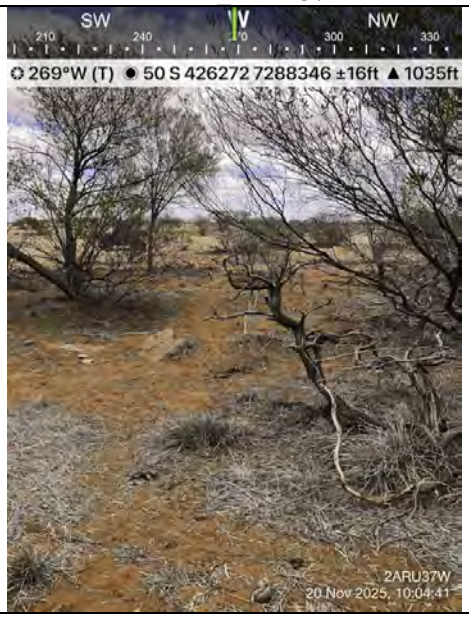
Site 12_2ARU39	Site 12_2ARU39

Site 13_2ARU38	Site 13_2ARU38
Site 13_2ARU38	Site 13_2ARU38

Site 14_2ARU37	Site 14_2ARU37
	
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	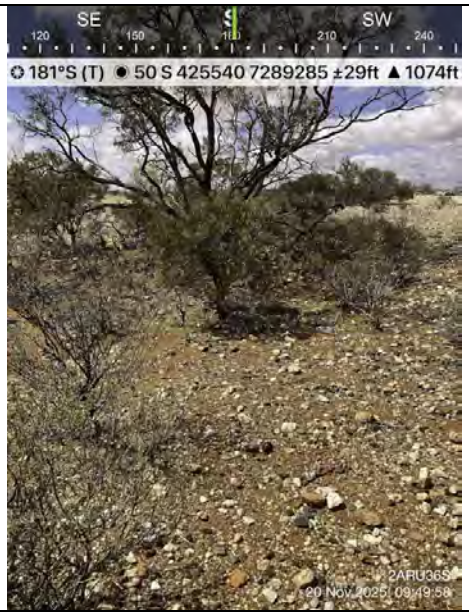
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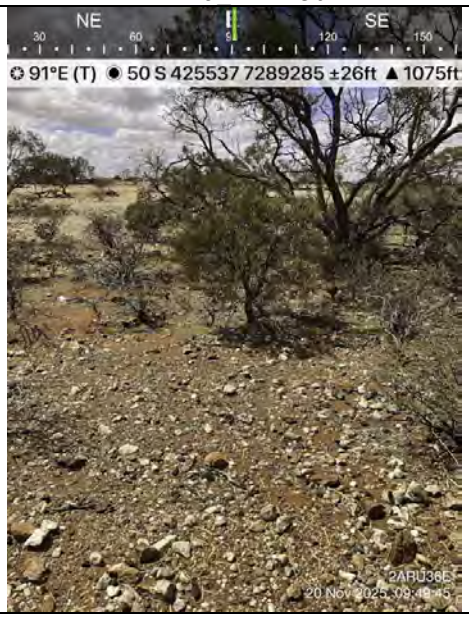	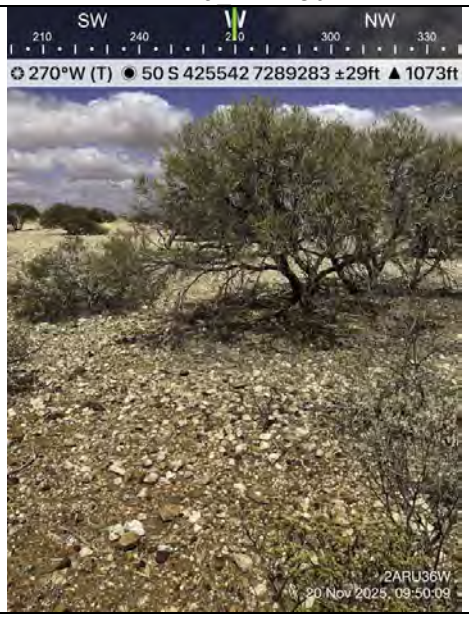
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	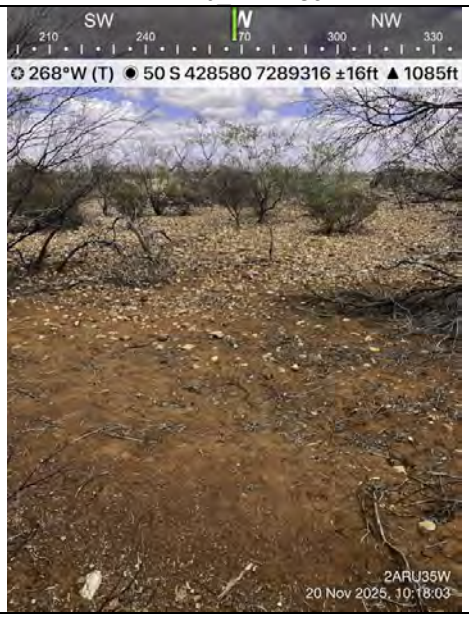
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	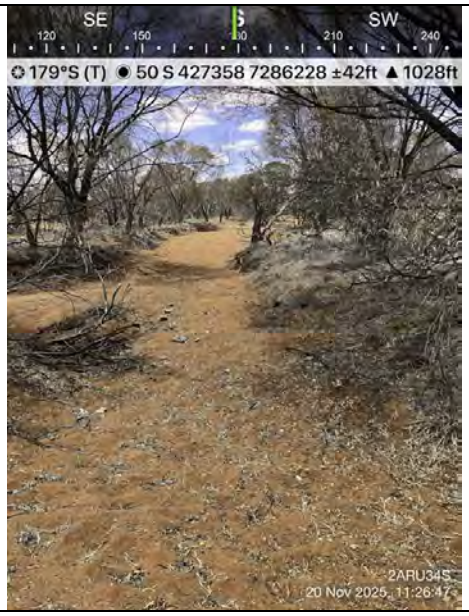
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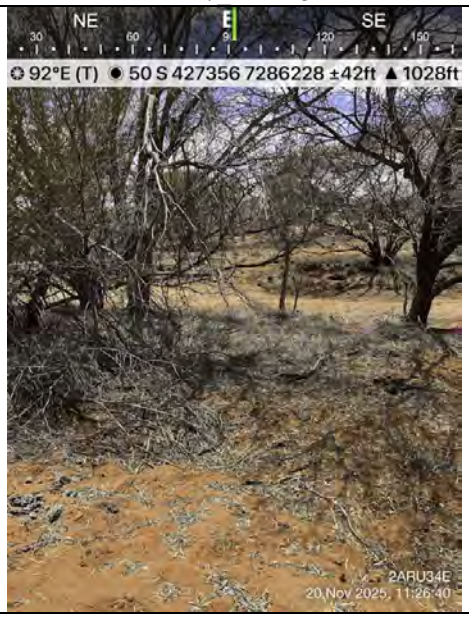	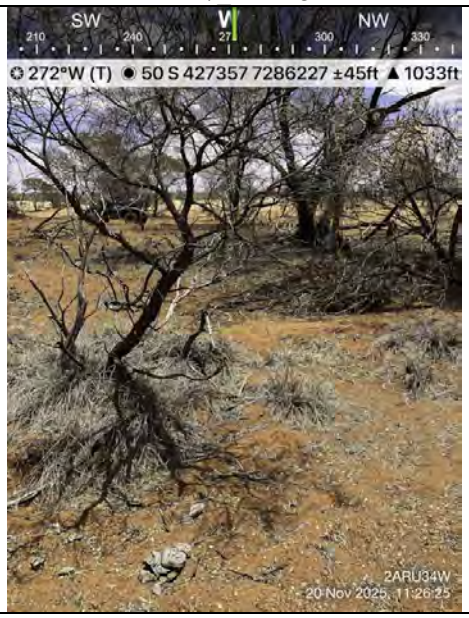
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	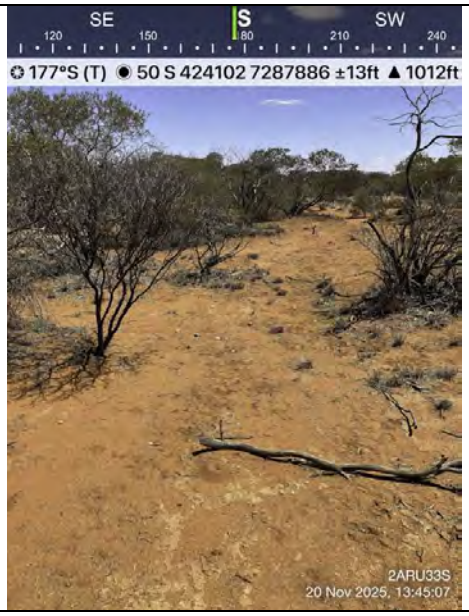
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	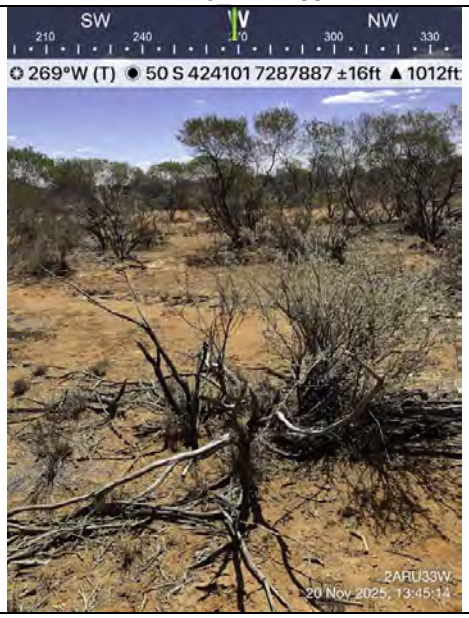
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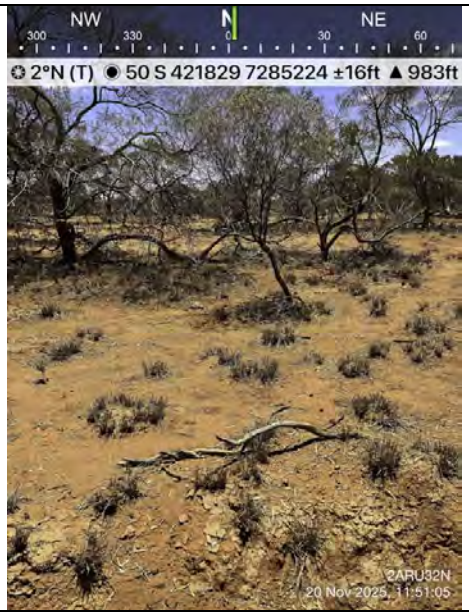
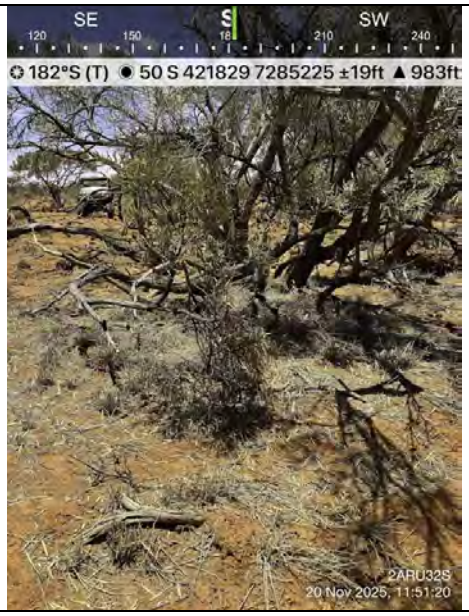
TERRESTRIAL ECOSYSTEMS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	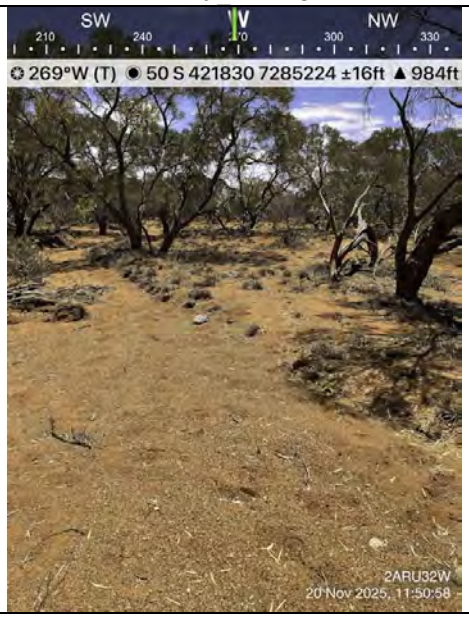
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	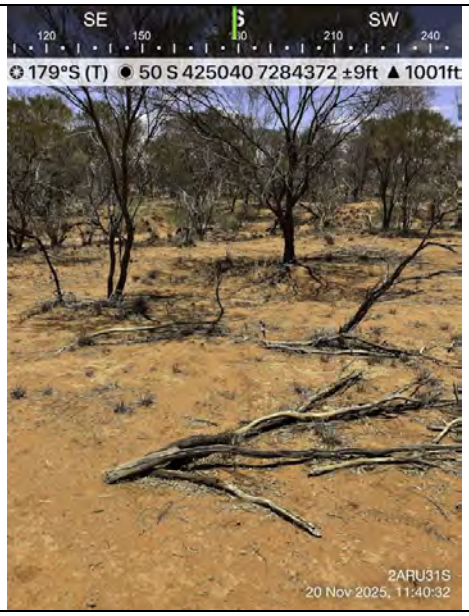
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	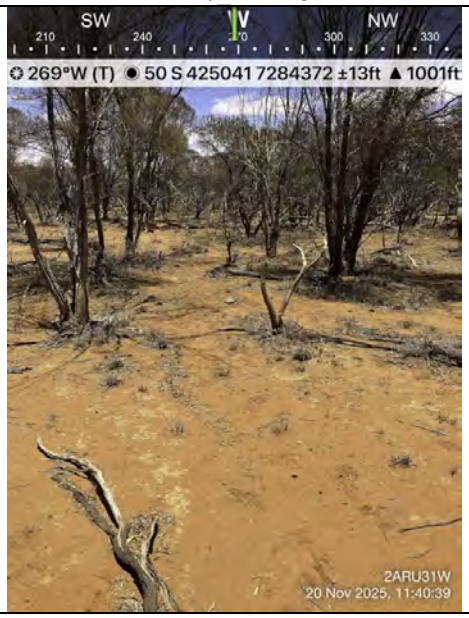
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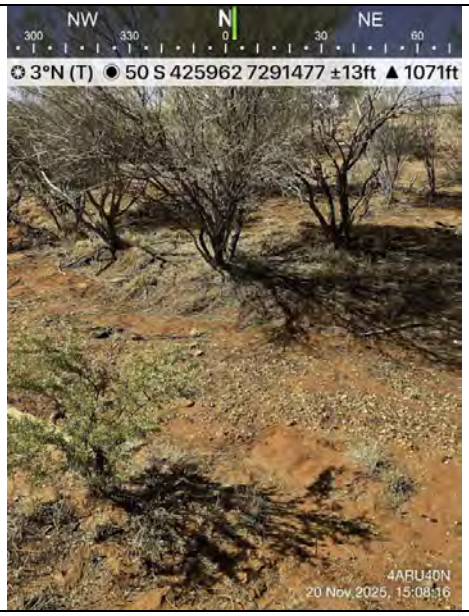
<td> 
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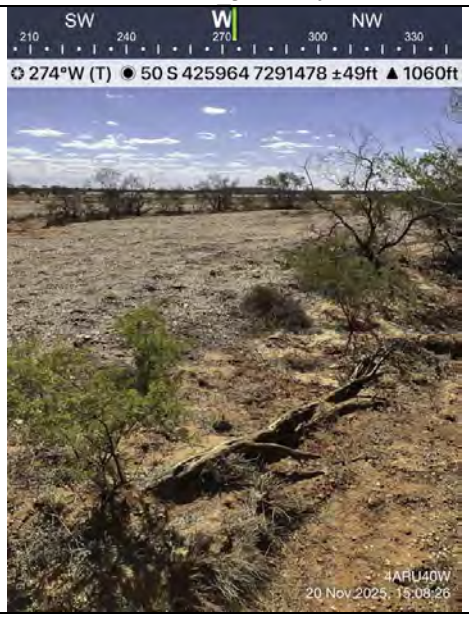
<td> 
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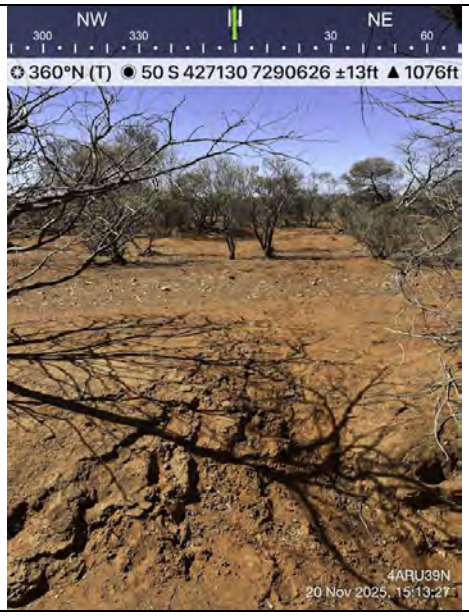

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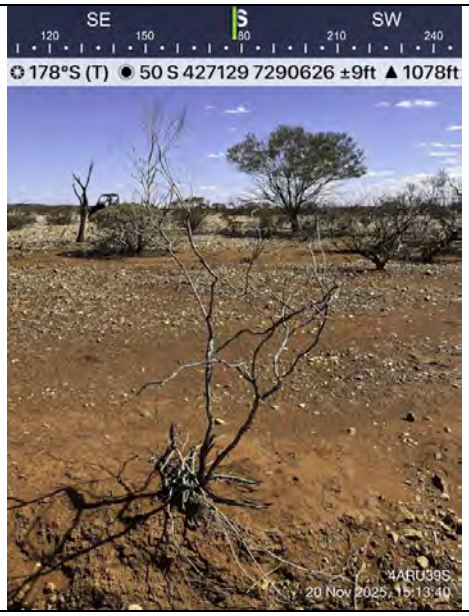
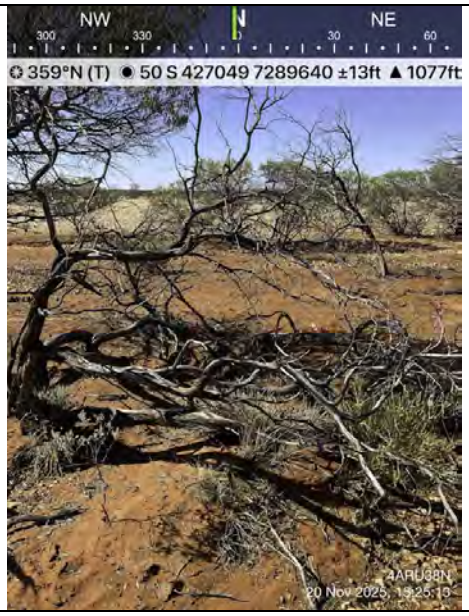


Site 22_3ARU39

Site 22_3ARU39

Site 22_3ARU39

TERRESTRIAL ECOSYSTEMS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	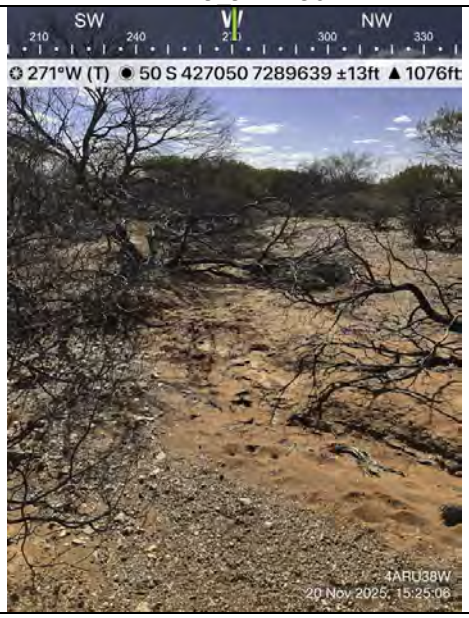
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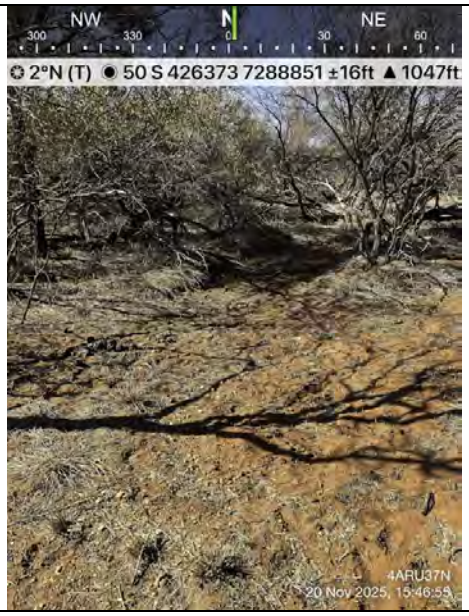	
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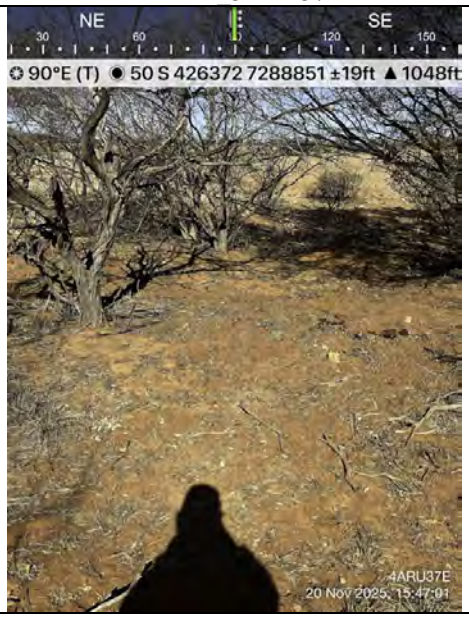	
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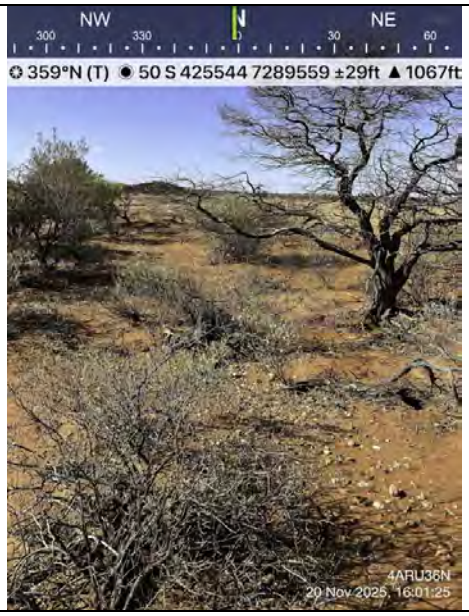
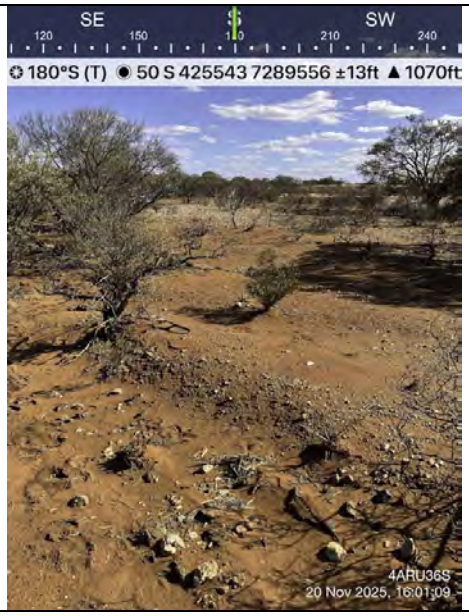
TERRESTRIAL ECOSYSTEMS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	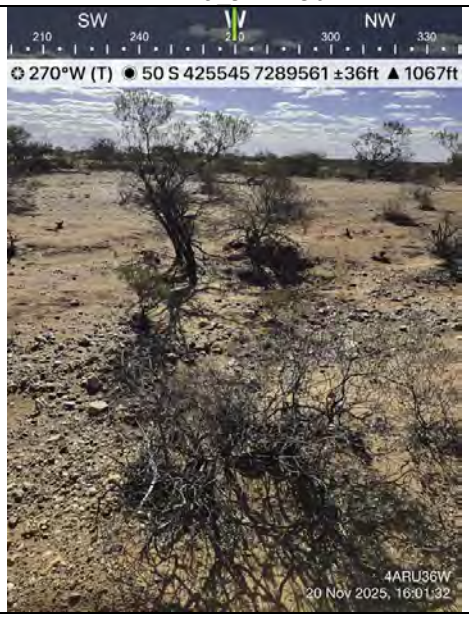
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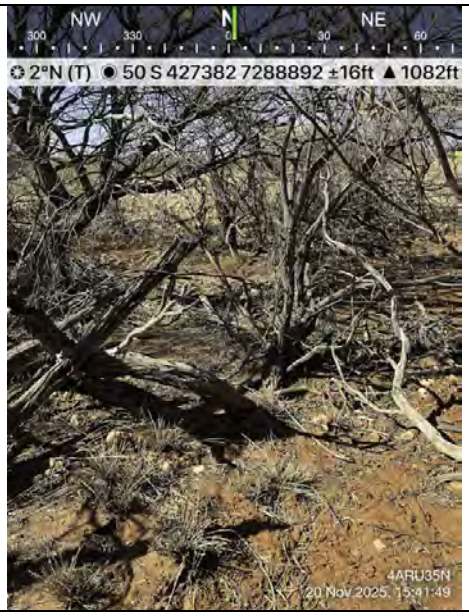	
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	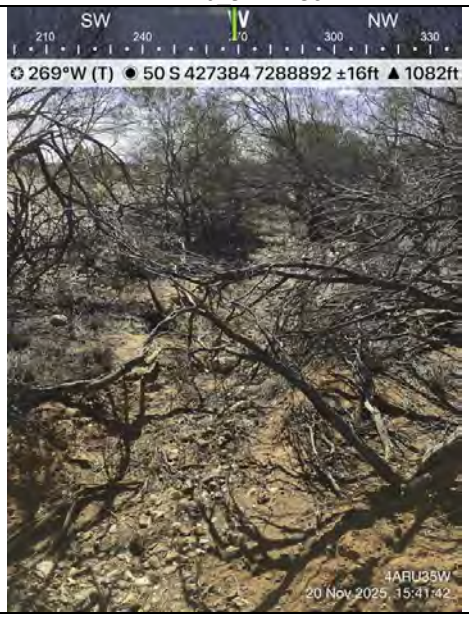
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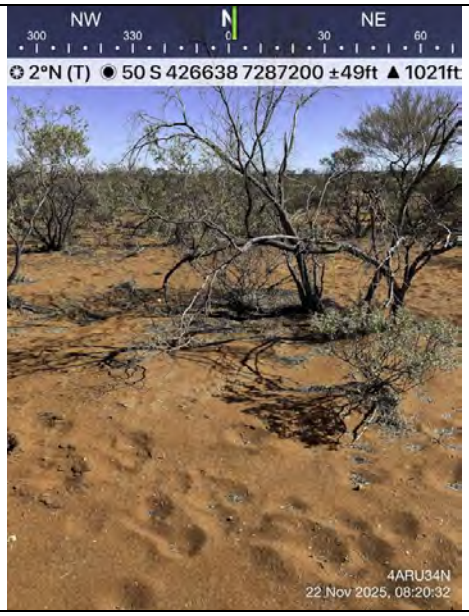

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Site 27_3ARU34

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	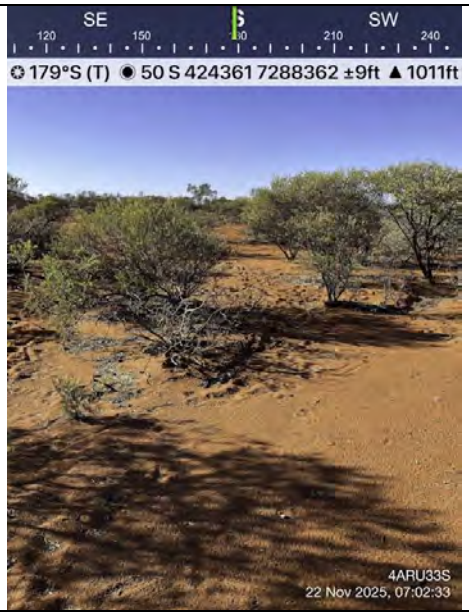
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	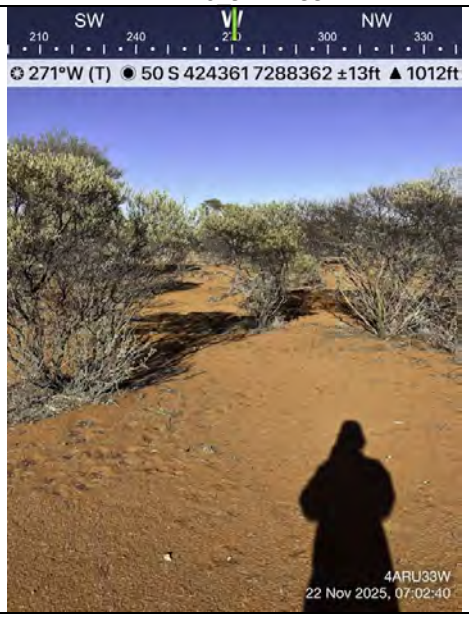
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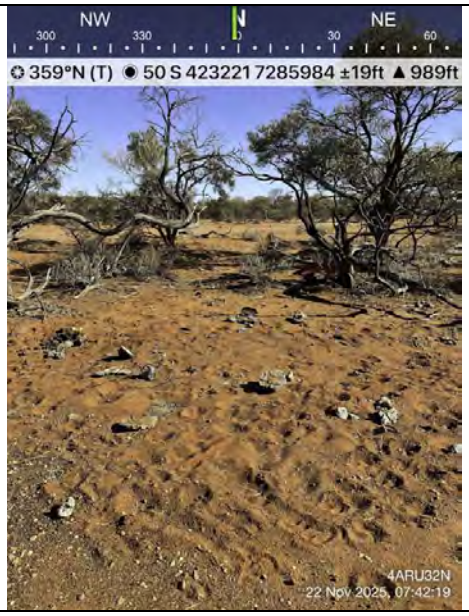	
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	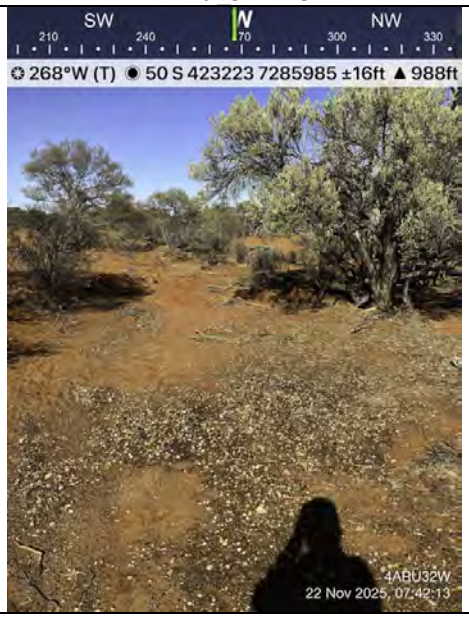
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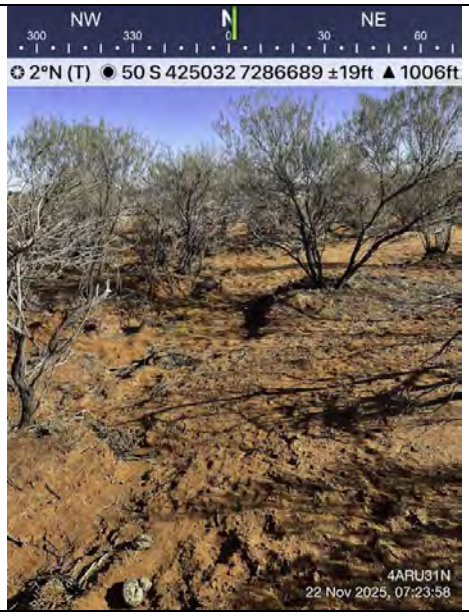	
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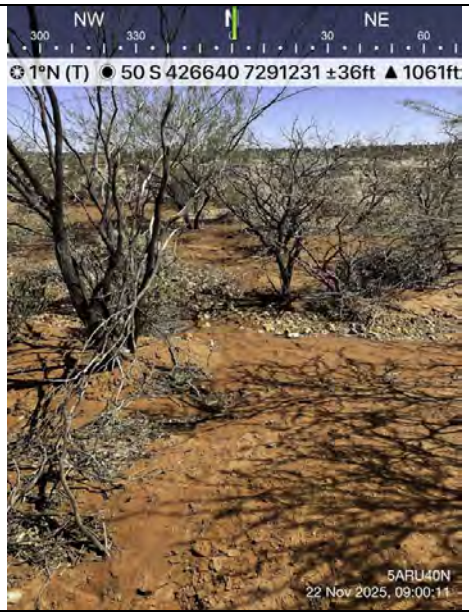	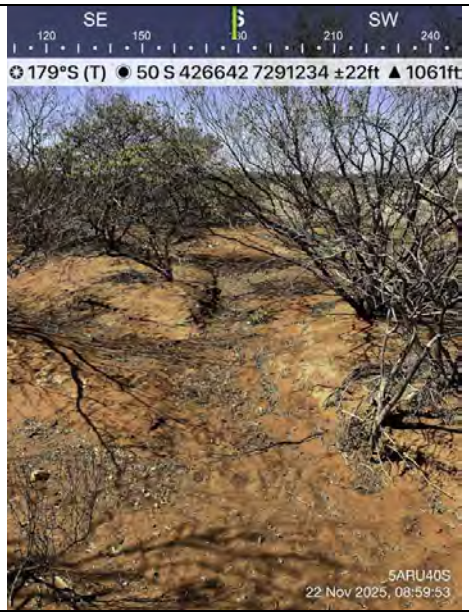
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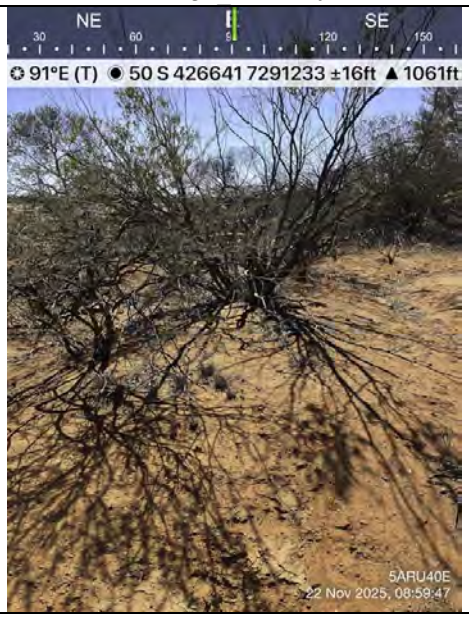	
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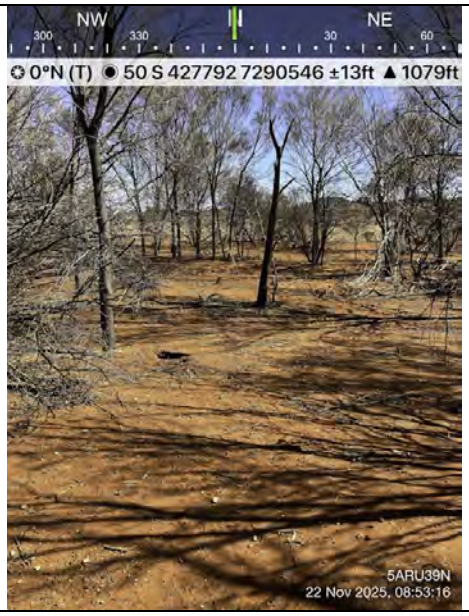	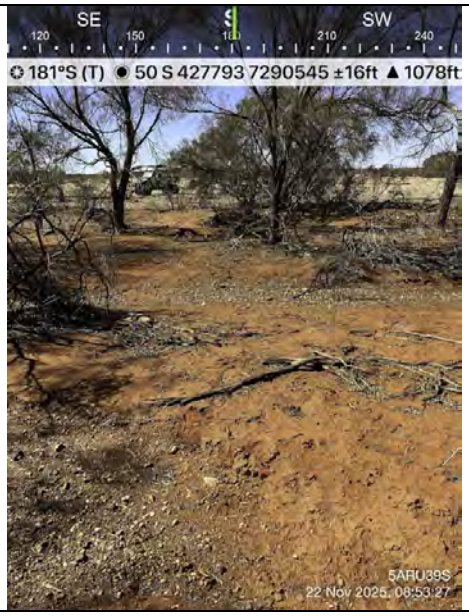
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	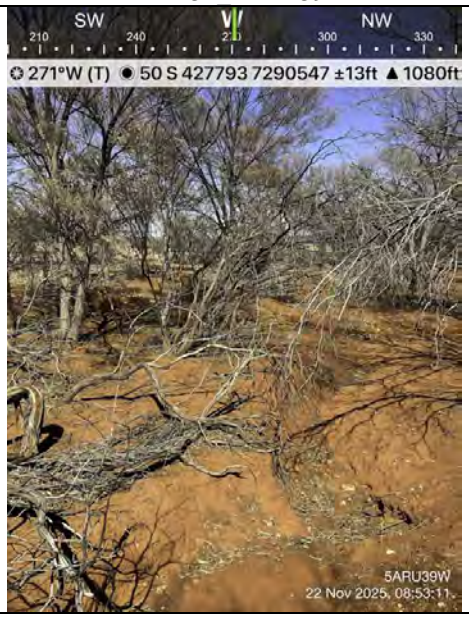
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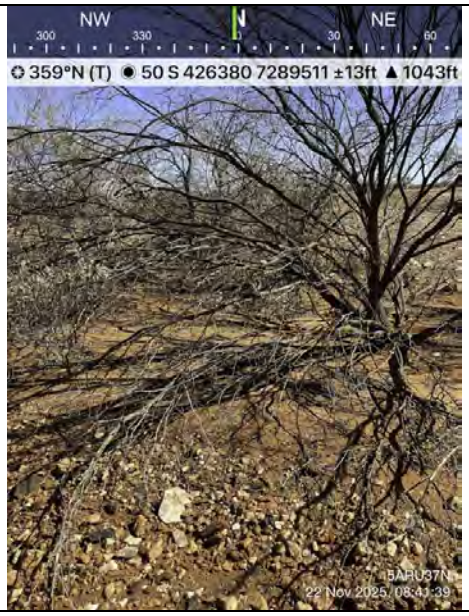	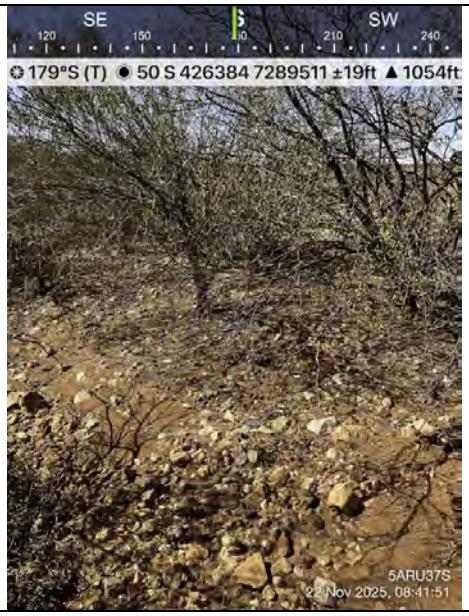
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	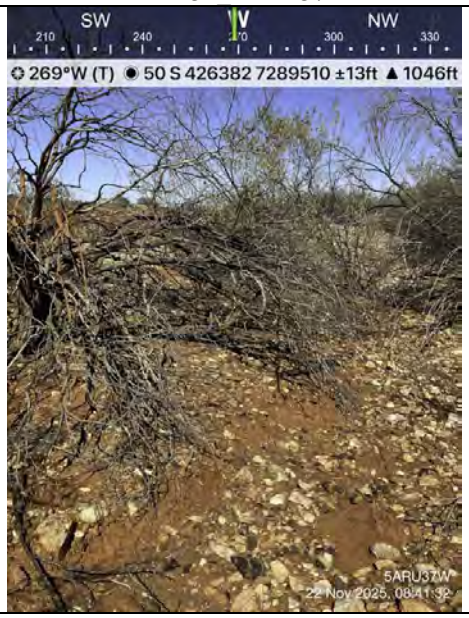
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TERRESTRIAL ECOSYSTEMS

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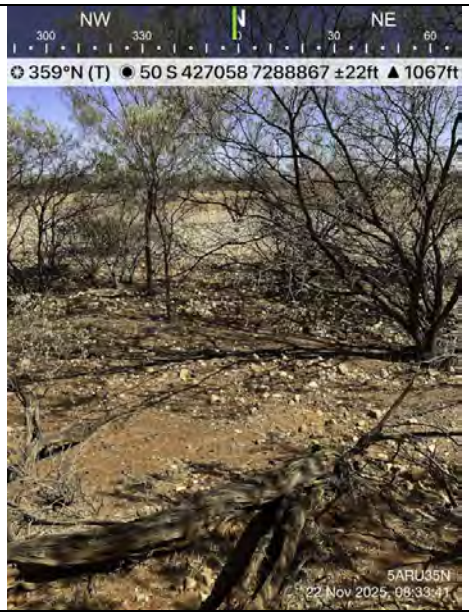	
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	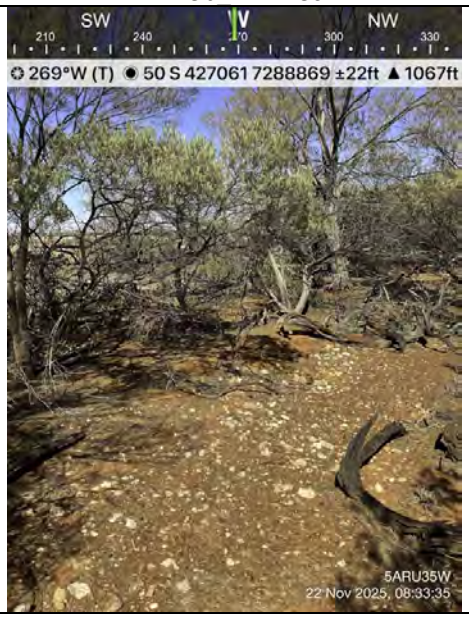
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TERRESTRIAL ECOSYSTEMS

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Site 37_4ARU34

Site 37_4ARU34

Site 37_4ARU34

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	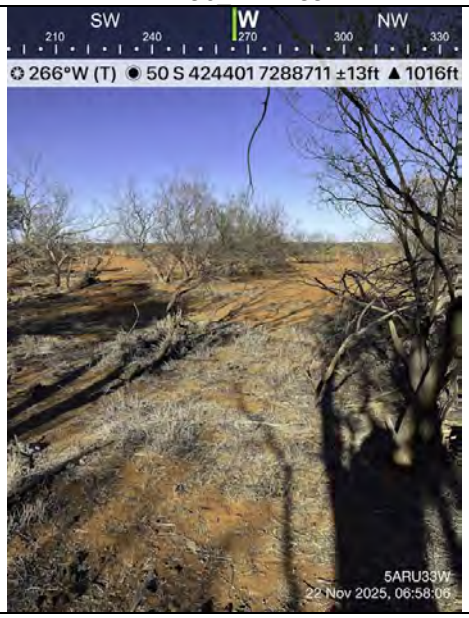
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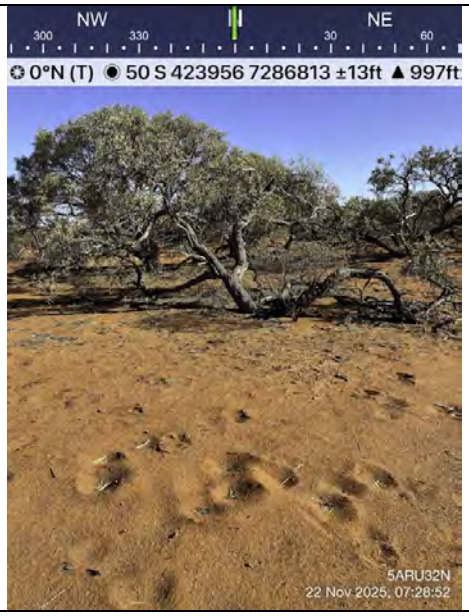	
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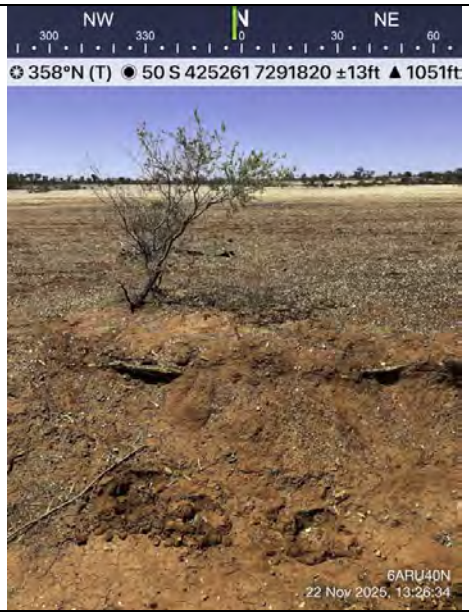

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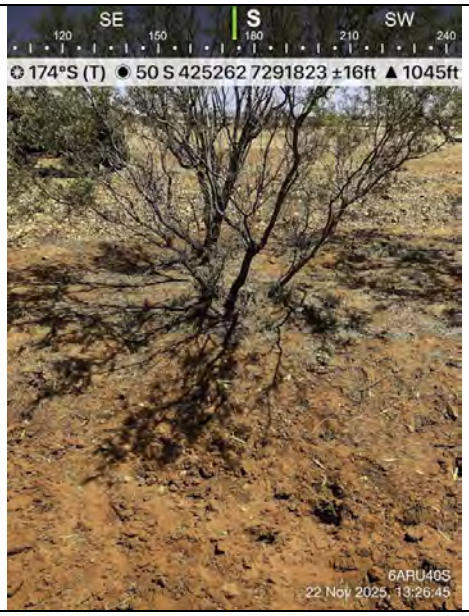

Site 41_5ARU40

Site 41_5ARU40

Site 41_5ARU40

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	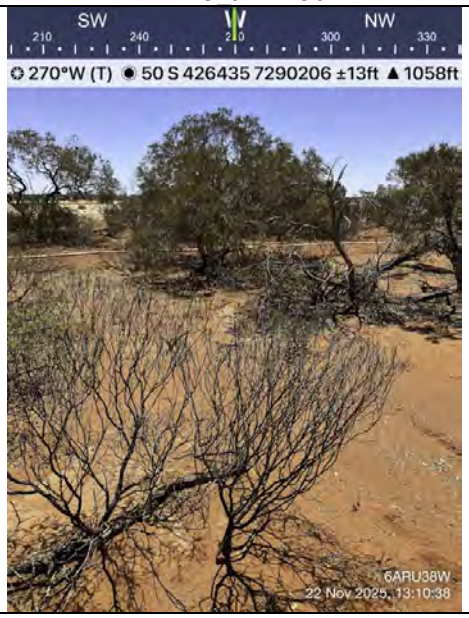
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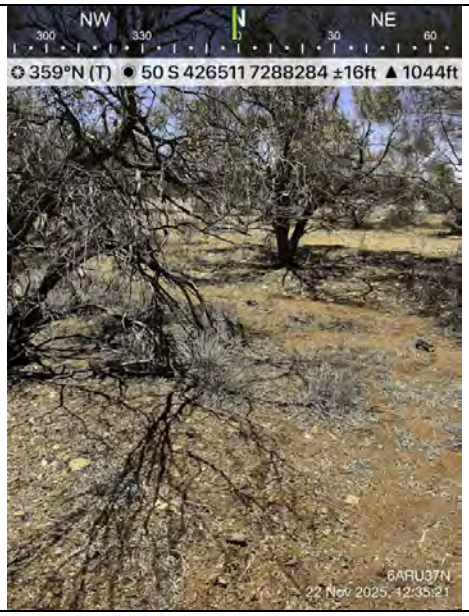	
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	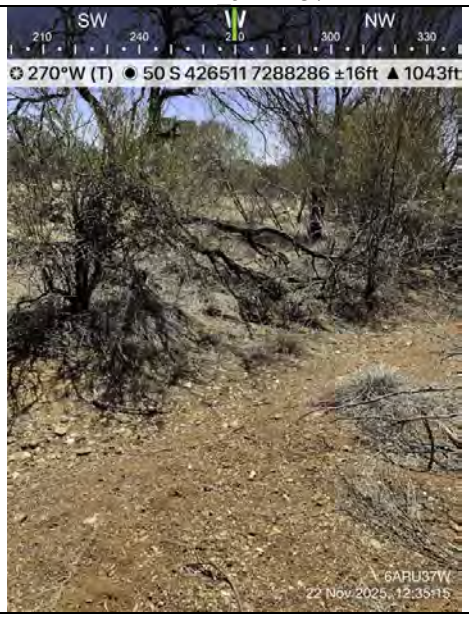
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Site 45_5ARU36	Site 45_5ARU36
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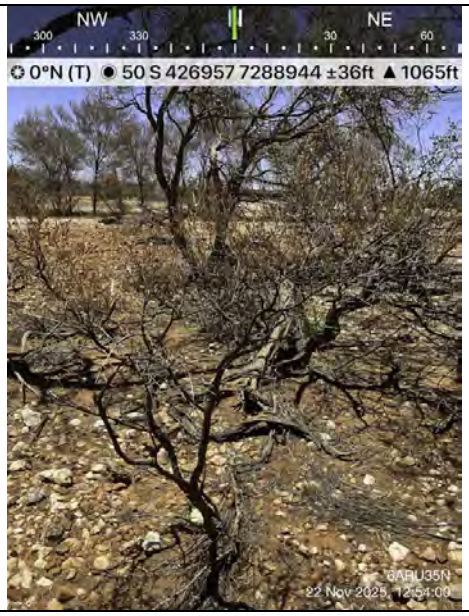
TERRESTRIAL ECOSYSTEMS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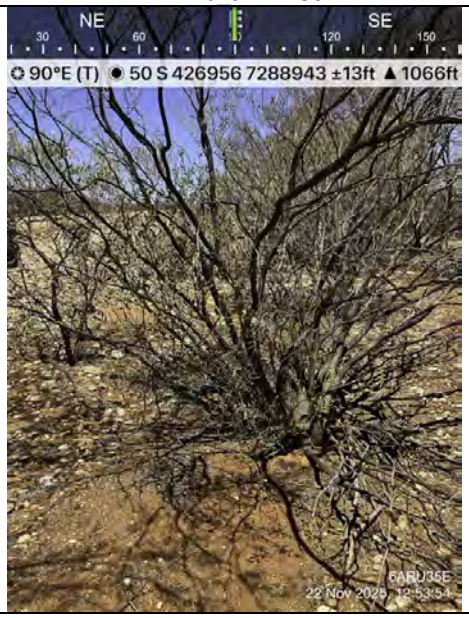	
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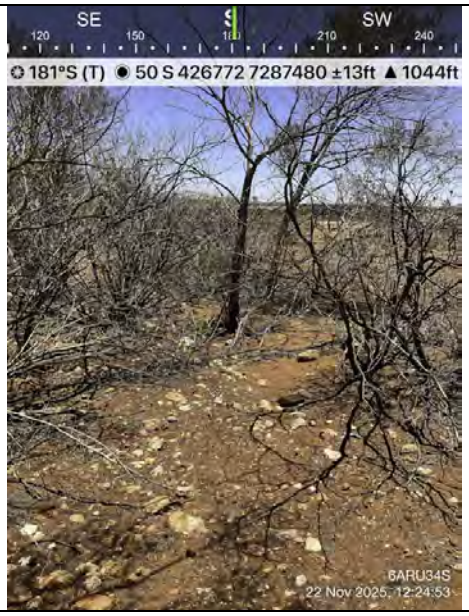
TERRESTRIAL ECOSYSTEMS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	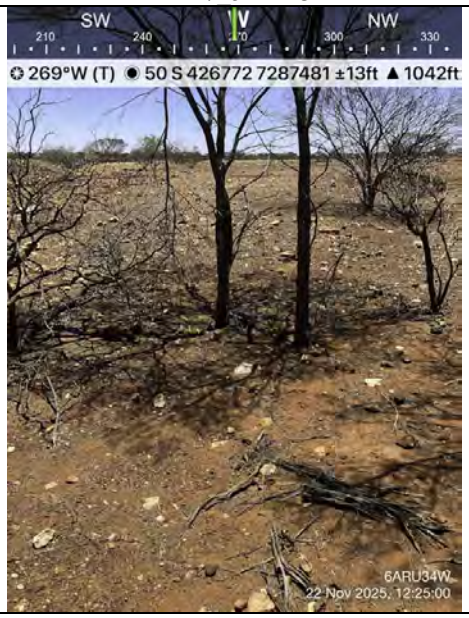
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	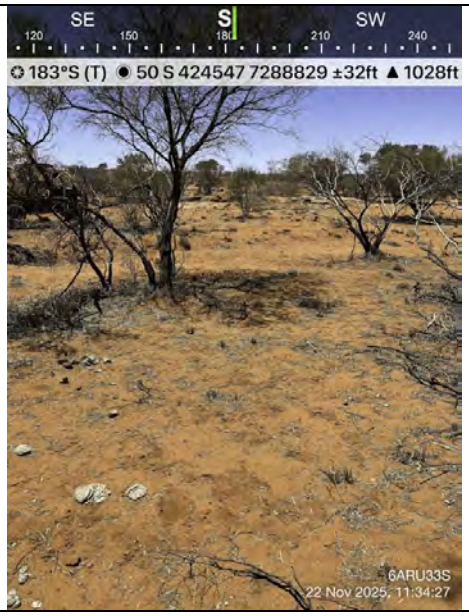
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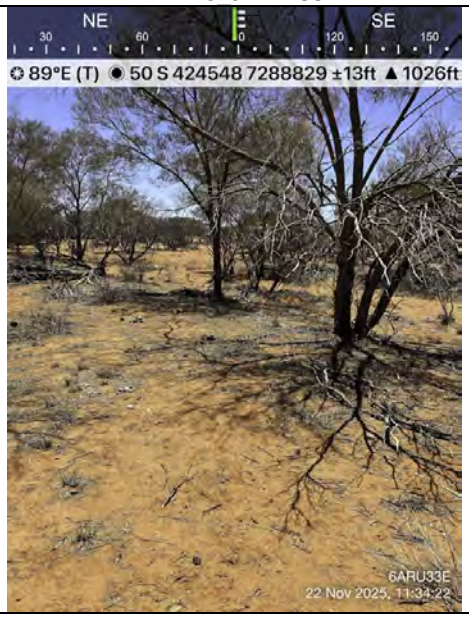	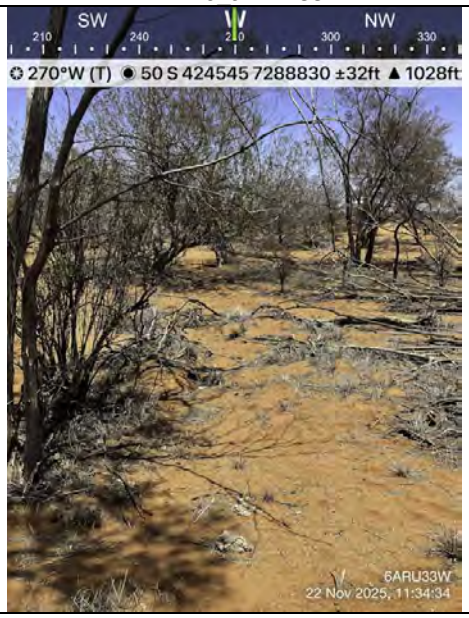
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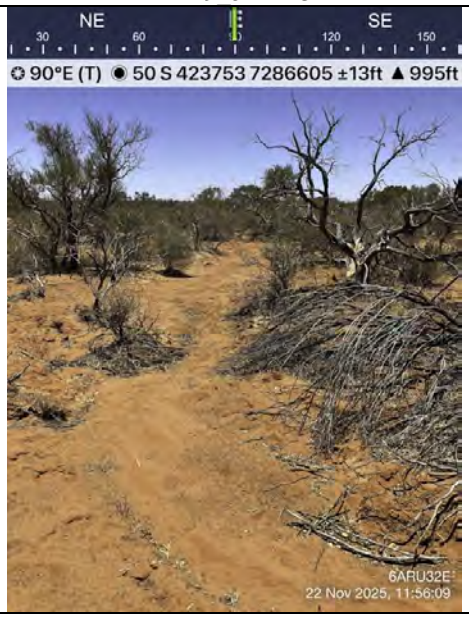
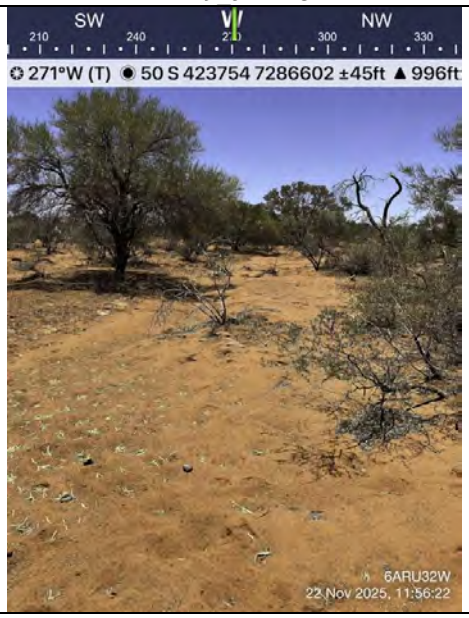
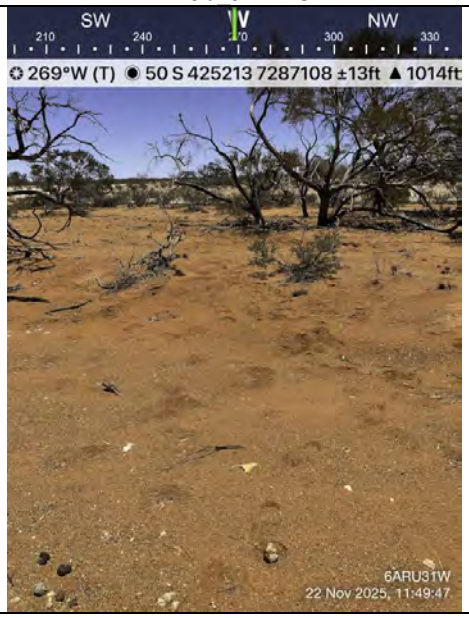
TERRESTRIAL ECOSYSTEMS

Site 49_5ARU32	Site 49_5ARU32
	
Site 49_5ARU32	Site 49_5ARU32

Site 50_5ARU31	Site 50_5ARU31
	
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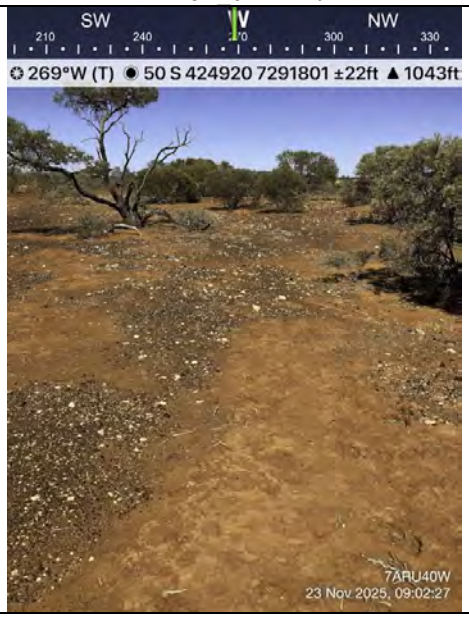
TERRESTRIAL ECOSYSTEMS

Site 51_6ARU40	Site 51_6ARU40
	
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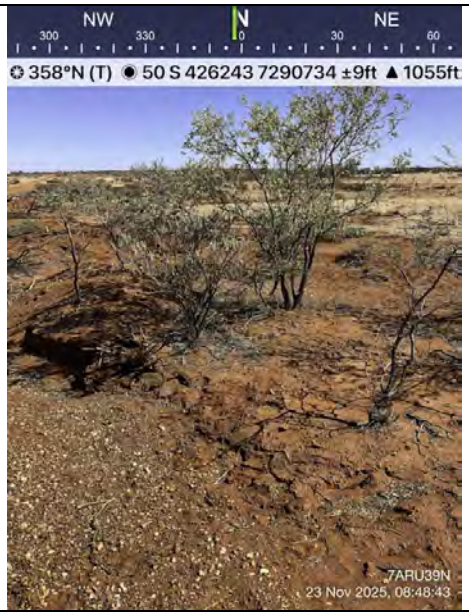
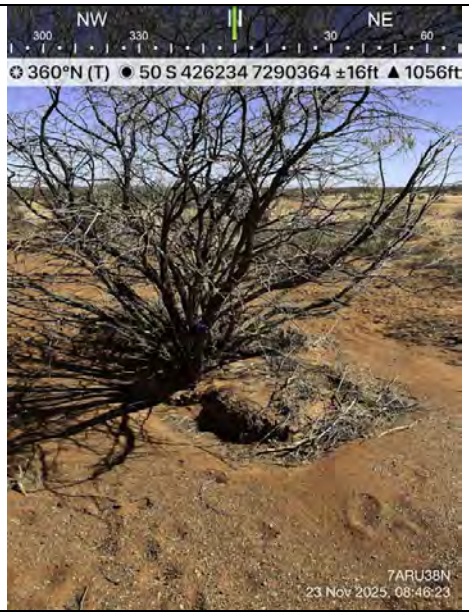
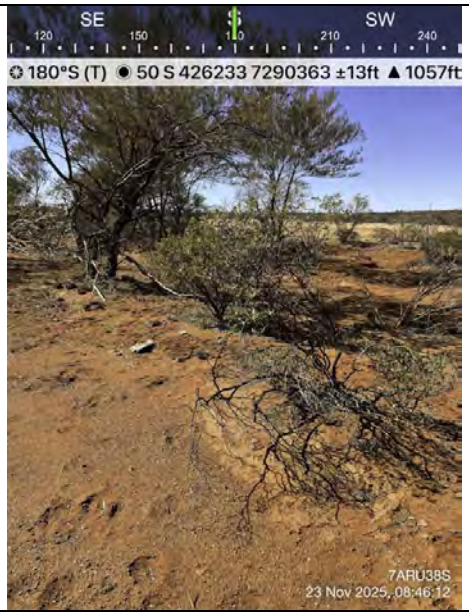
	
Site 52_6ARU39	Site 52_6ARU39
Site 52_6ARU39	Site 52_6ARU39

TERRESTRIAL ECOSYSTEMS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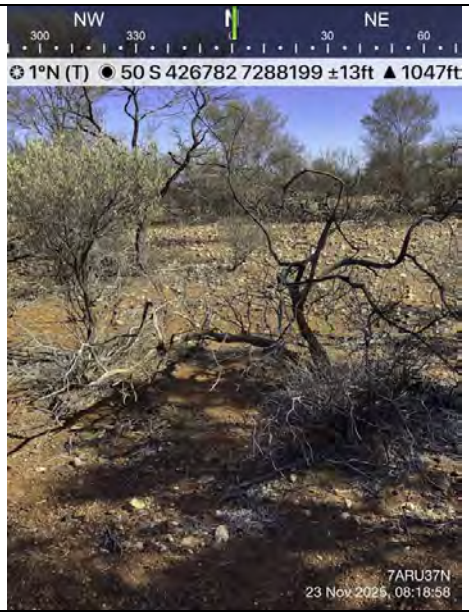
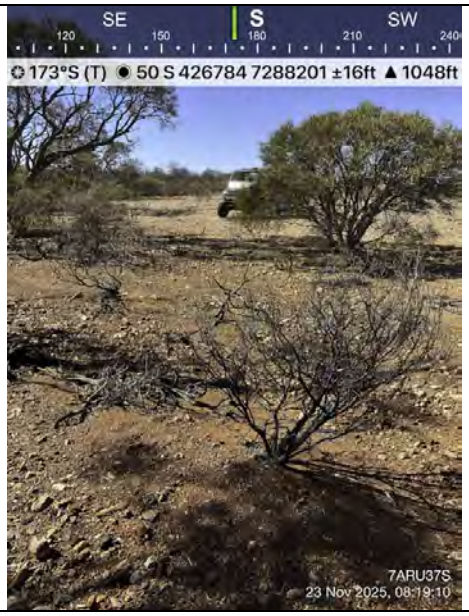
Site 53_6ARU38	Site 53_6ARU38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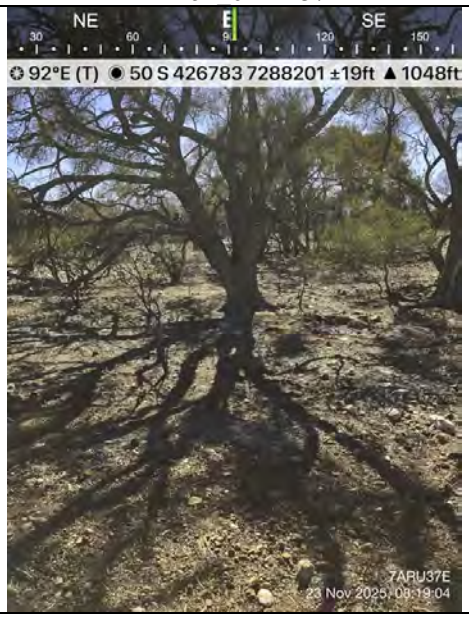
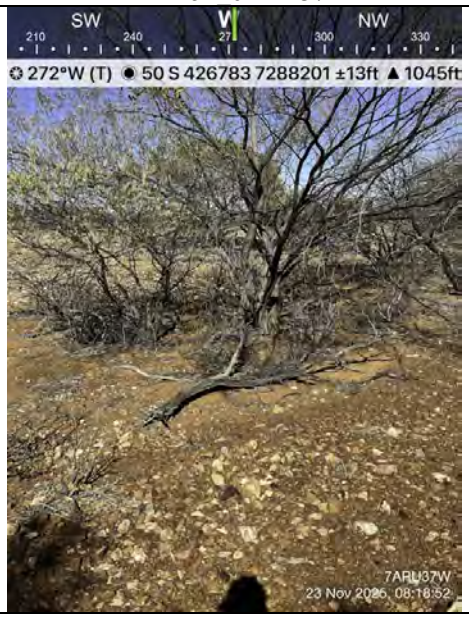
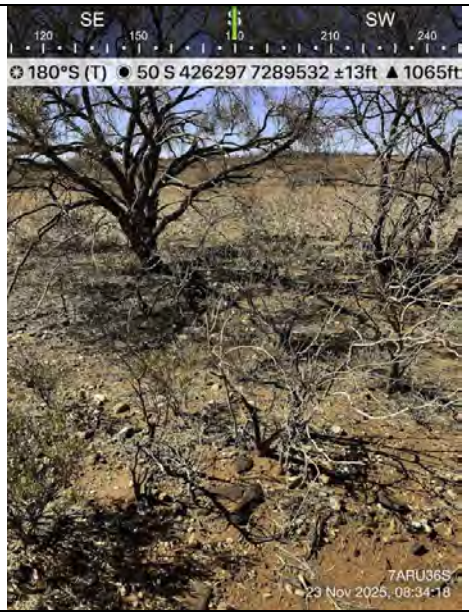
	
Site 54_6ARU37	Site 54_6ARU37

TERRESTRIAL ECOSYSTEMS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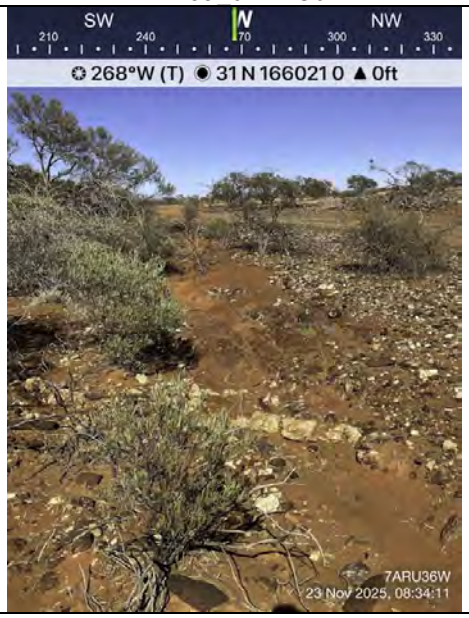
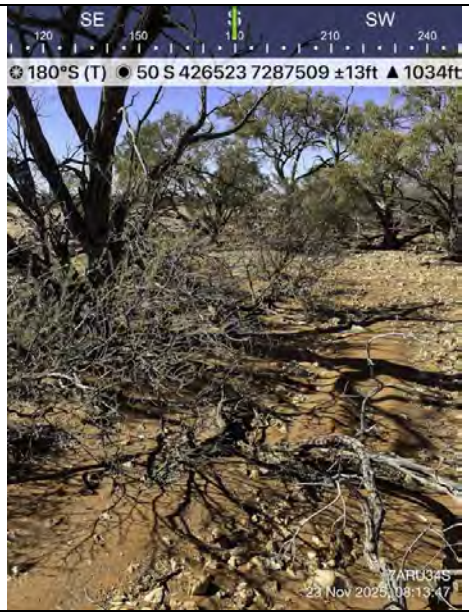
	
Site 55_6ARU36	Site 55_6ARU36

Site 56_6ARU35	Site 56_6ARU35
Site 56_6ARU35	Site 56_6ARU35

TERRESTRIAL ECOSYSTEMS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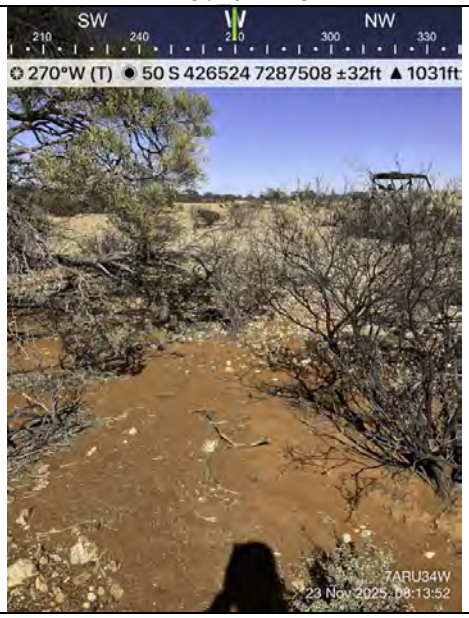
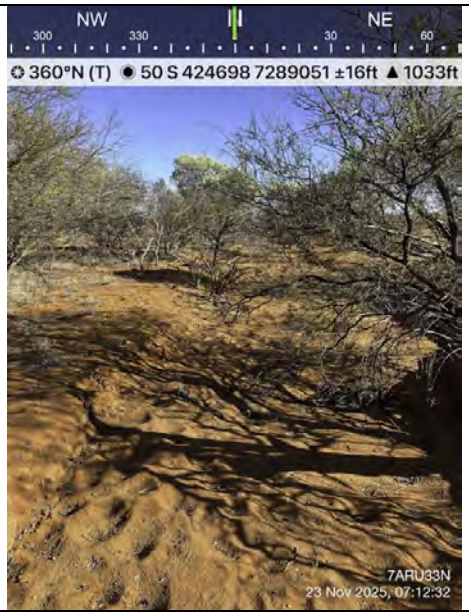
	
Site 57_6ARU34	Site 57_6ARU34

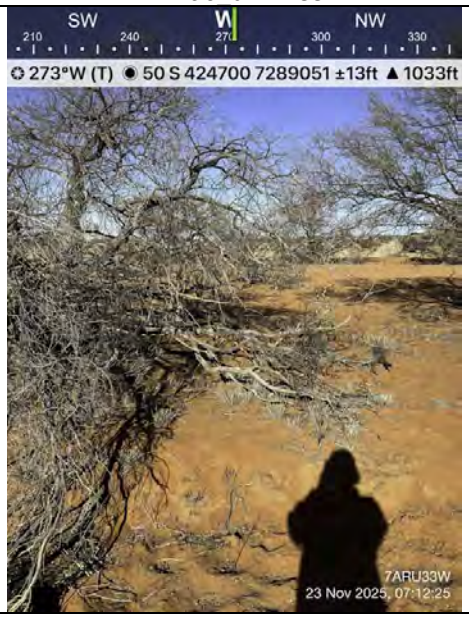
TERRESTRIAL ECOSYSTEMS



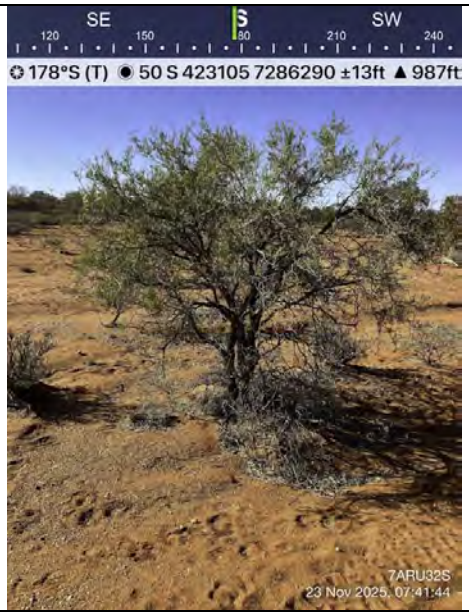
Site 58_6ARU33

Site 58_6ARU33

Site 58_6ARU33



Site 58_6ARU33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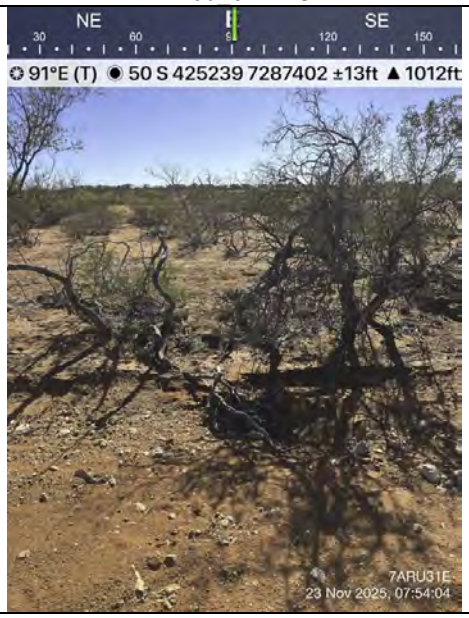
Site 59_6ARU32	Site 59_6ARU32

TERRESTRIAL ECOSYSTEMS

Site 60_6ARU31	Site 60_6ARU31
	
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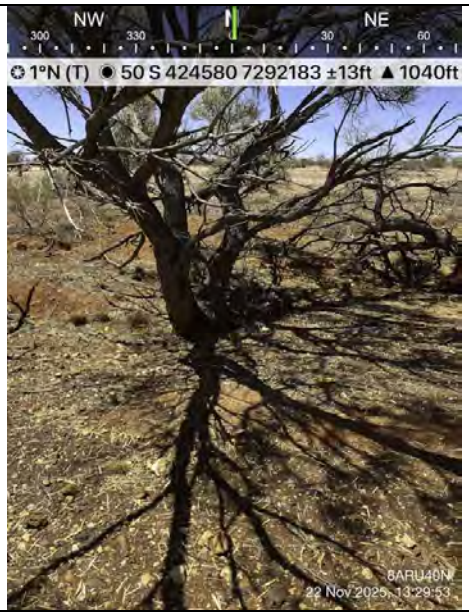
TERRESTRIAL ECOSYSTEMS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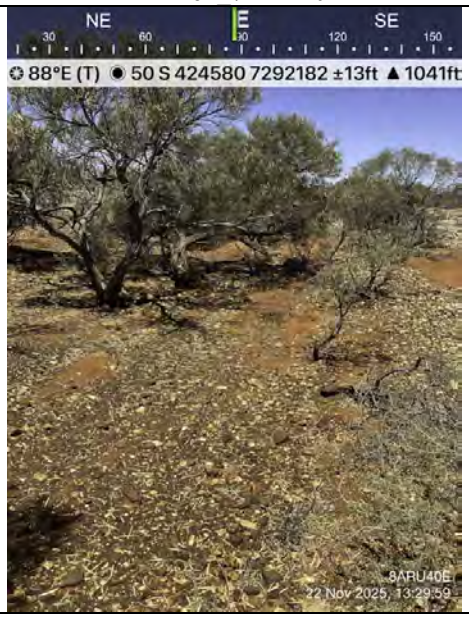
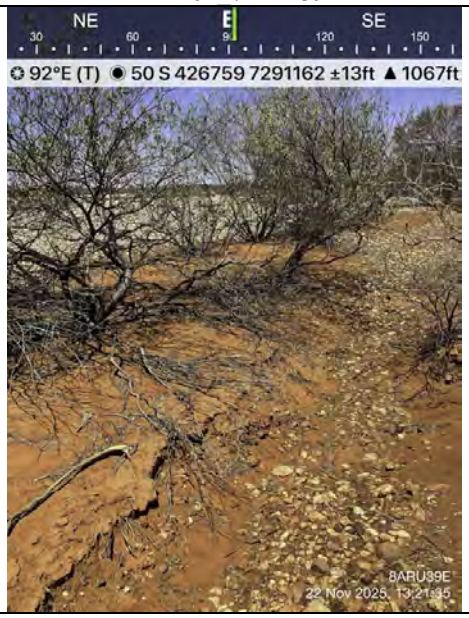
	
Site 61_7ARU40	Site 61_7ARU40

Site 62_7ARU39	Site 62_7ARU39
	
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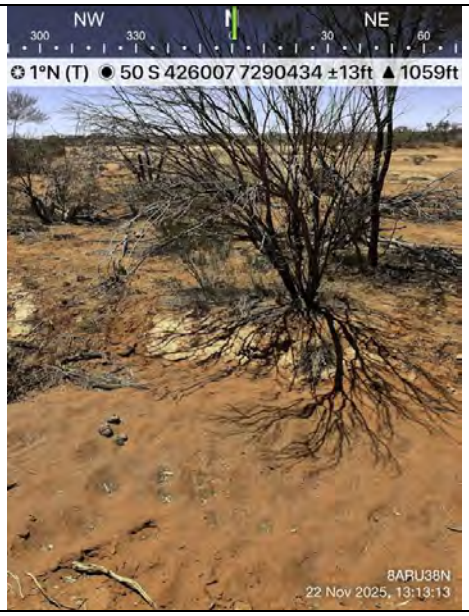	
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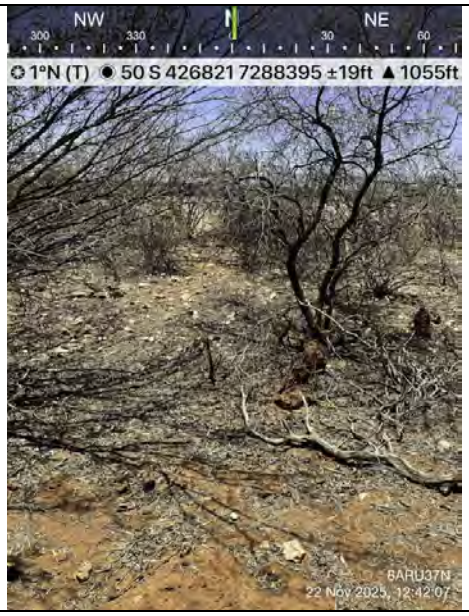
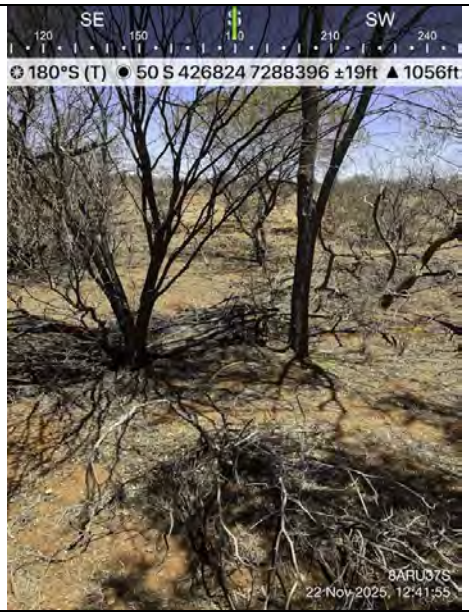
Site 63_7ARU38	Site 63_7ARU38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	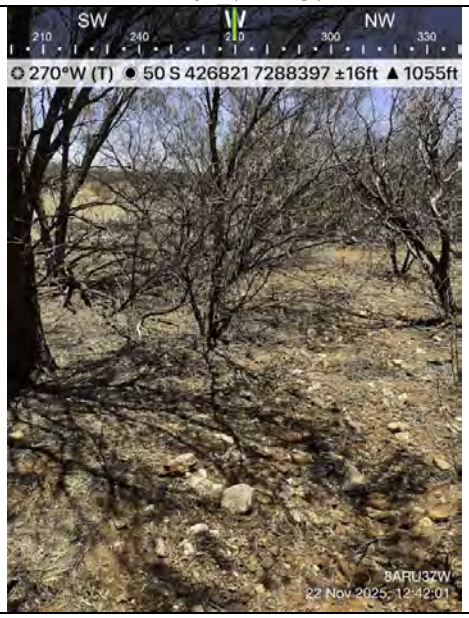
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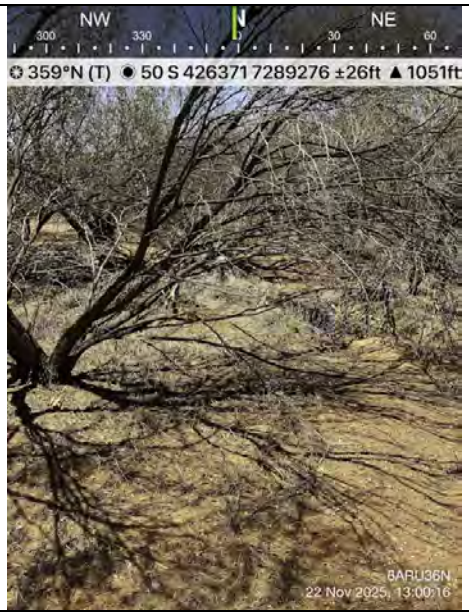	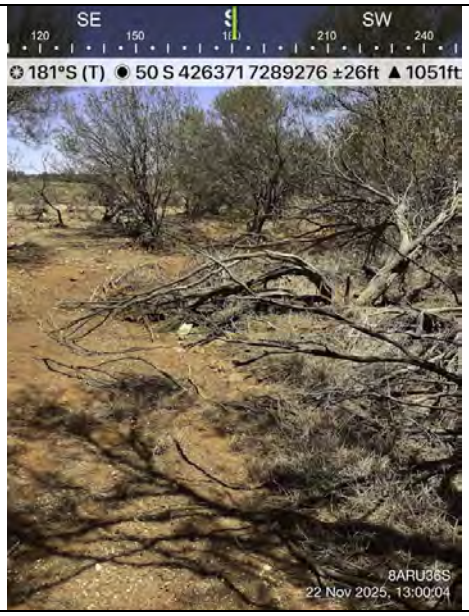
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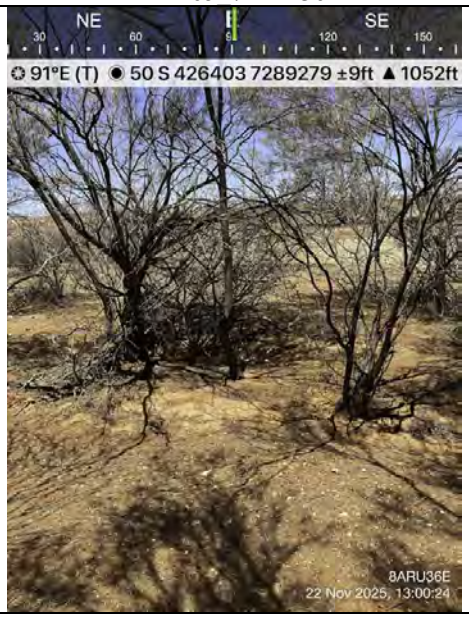	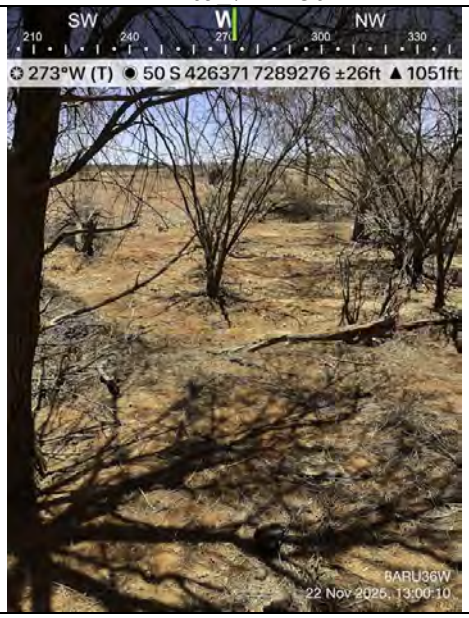
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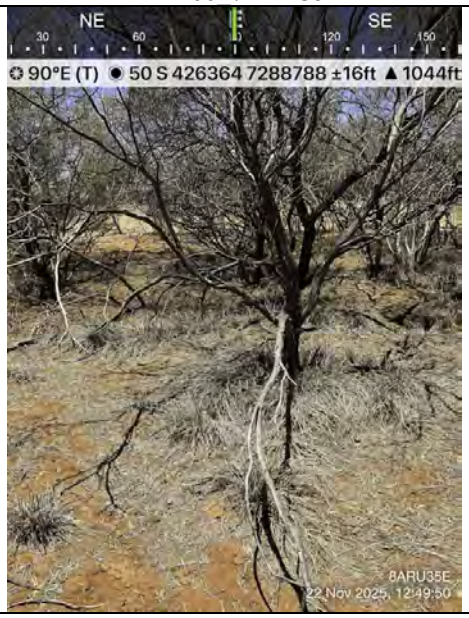
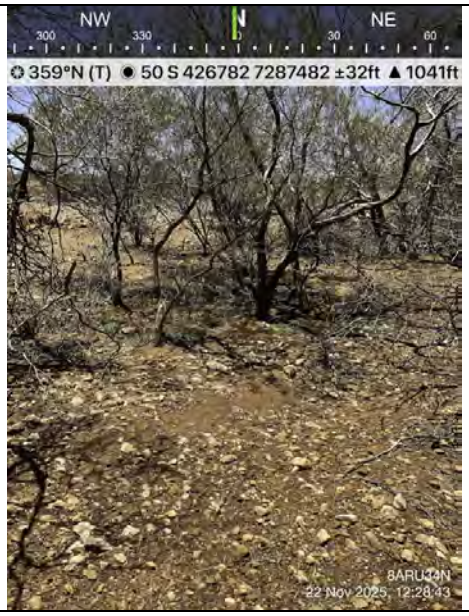
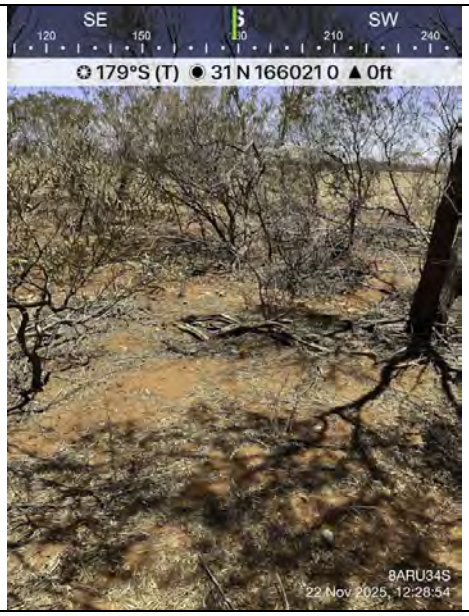
Site 66_7ARU35	Site 66_7ARU35
	
Site 66_7ARU35	Site 66_7ARU35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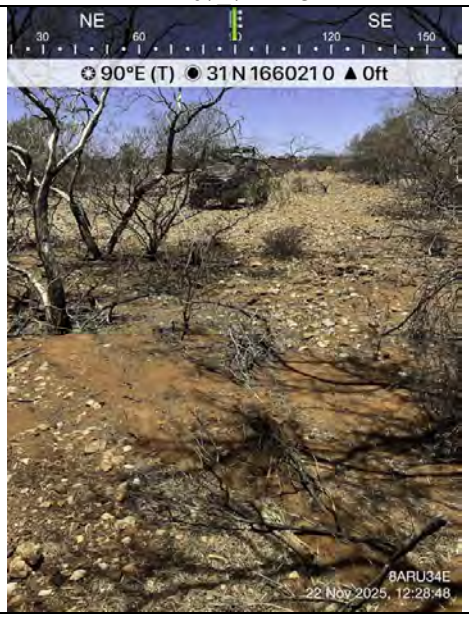
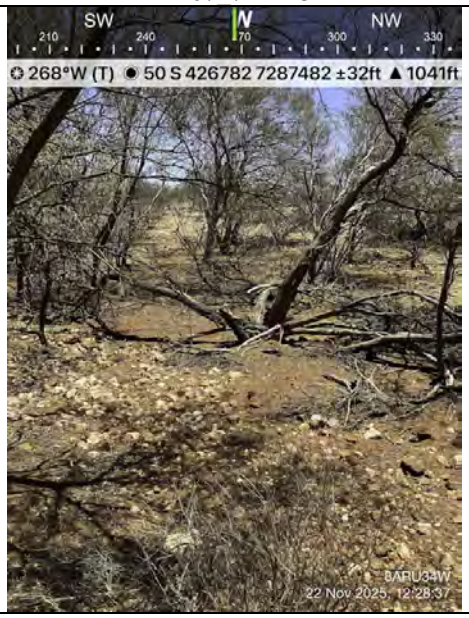
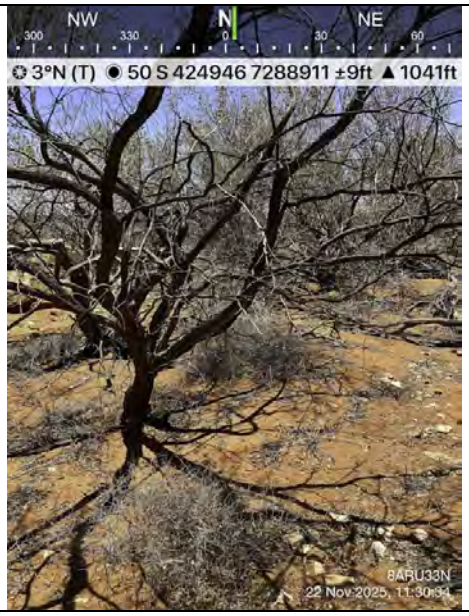
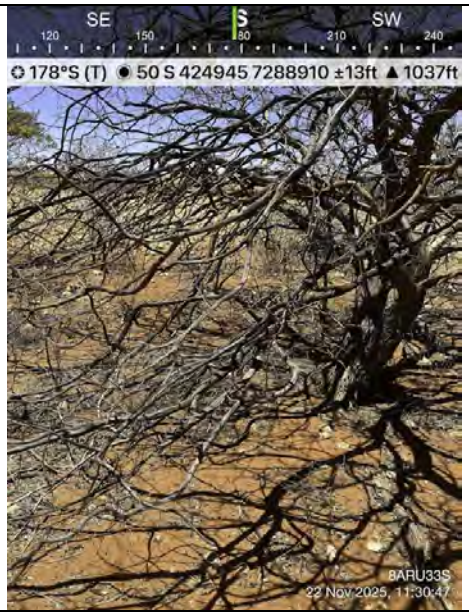
	
Site 67_7ARU34	Site 67_7ARU34

TERRESTRIAL ECOSYSTEMS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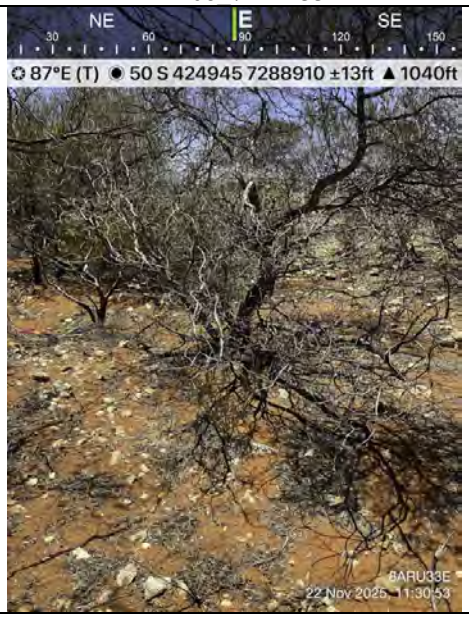	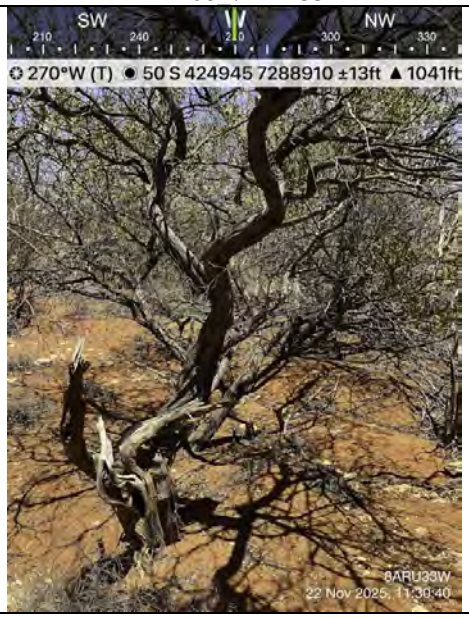
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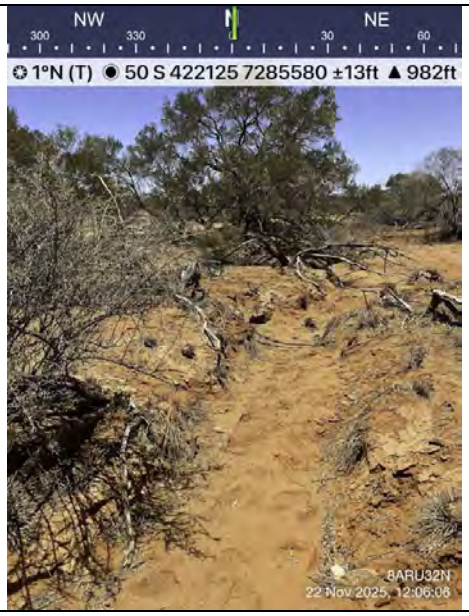
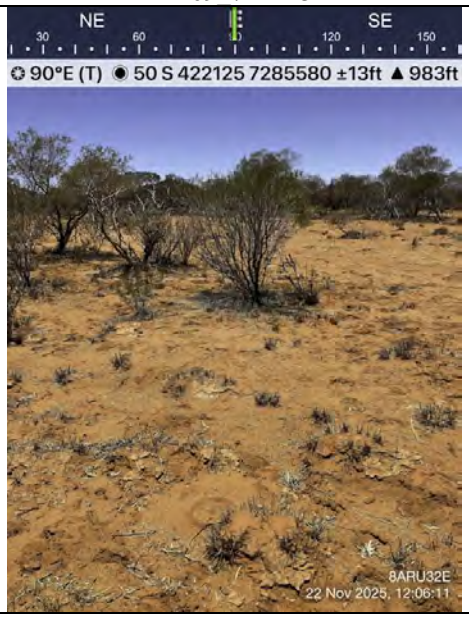
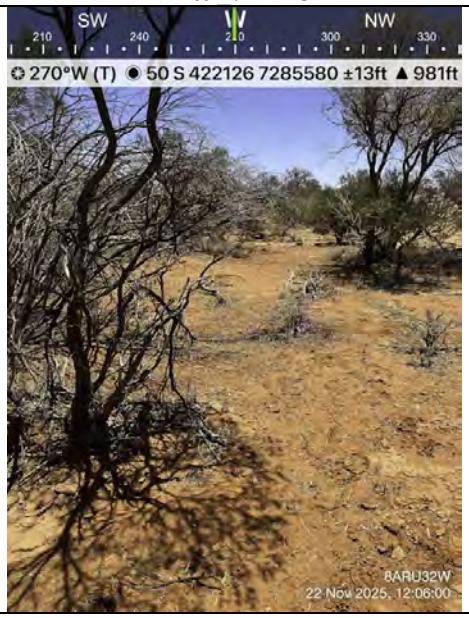
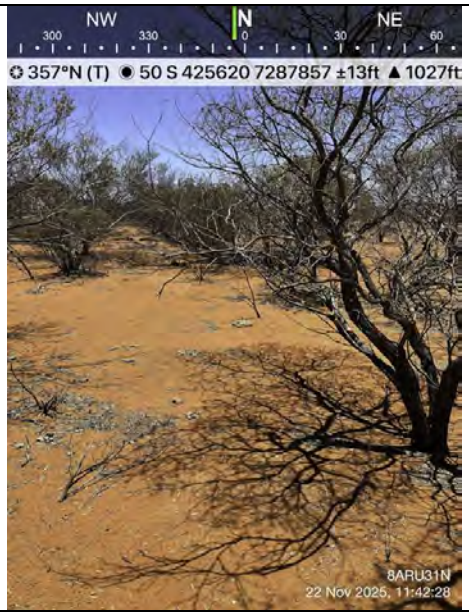
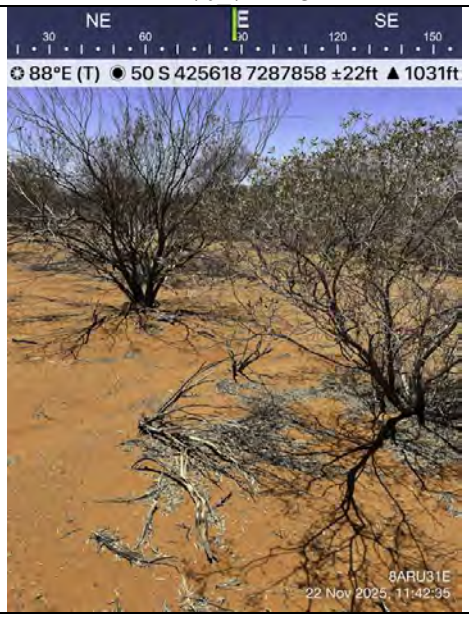
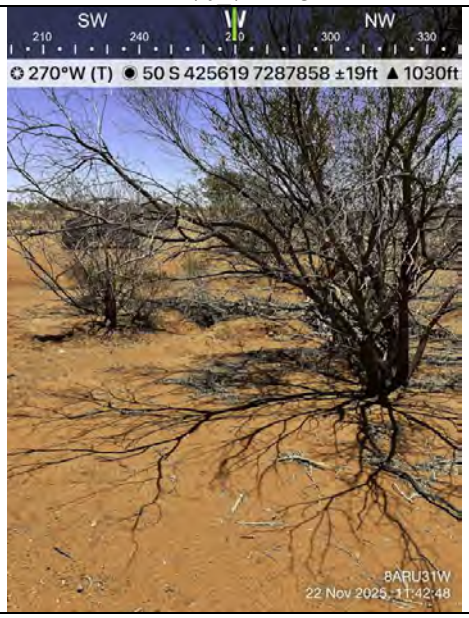
TERRESTRIAL ECOSYSTEMS

	
Site 69_7ARU32	Site 69_7ARU32
	
Site 69_7ARU32	Site 69_7ARU32

	
Site 70_7ARU31	Site 70_7ARU31
	
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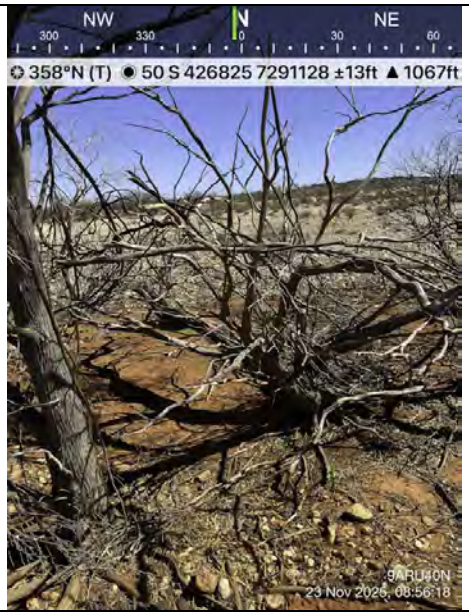
TERRESTRIAL ECOSYSTEMS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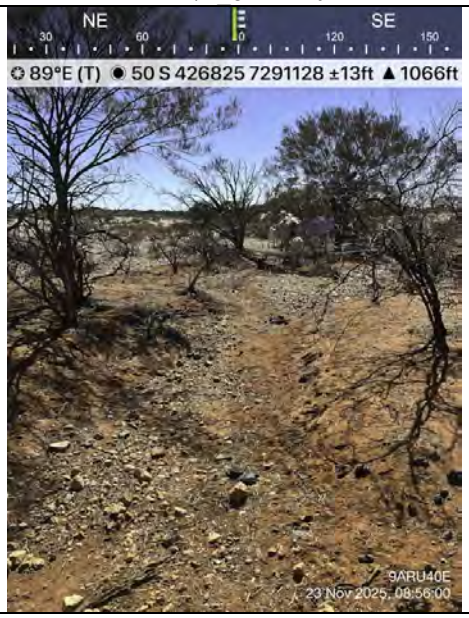
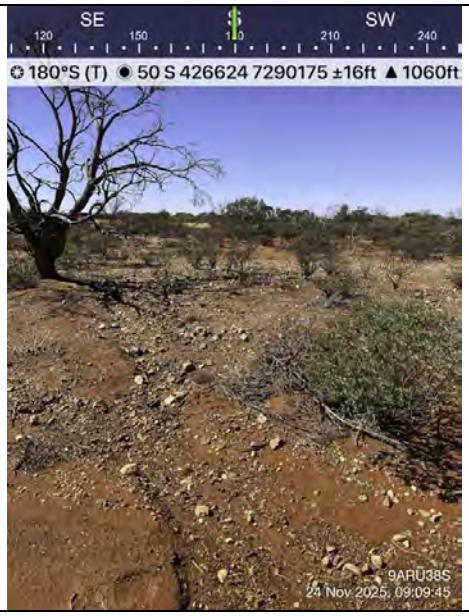
	
Site 71_8ARU40	Site 71_8ARU40

TERRESTRIAL ECOSYSTEMS

Site 72_8ARU39	Site 72_8ARU39
Site 72_8ARU39	Site 72_8ARU39

TERRESTRIAL ECOSYSTEMS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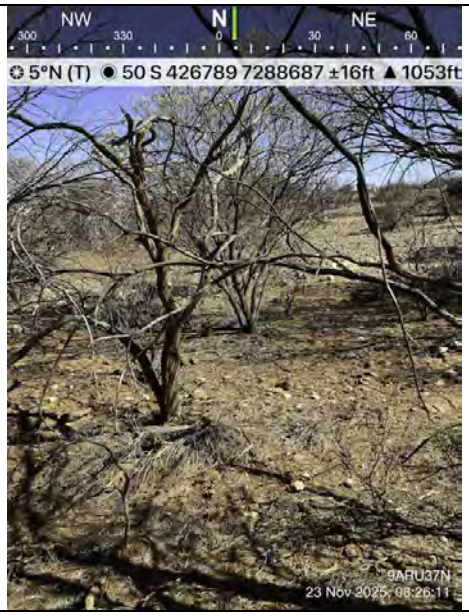
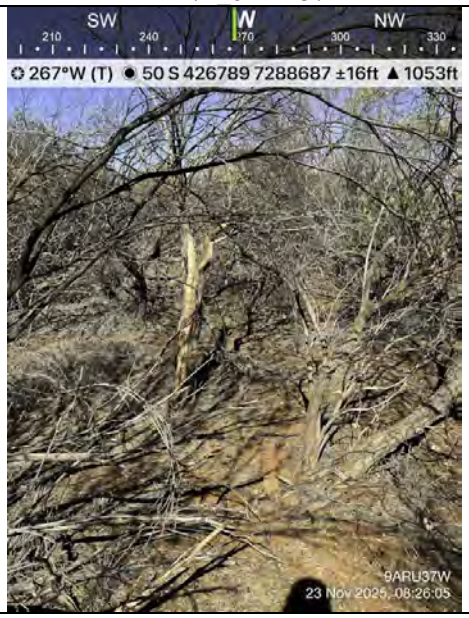
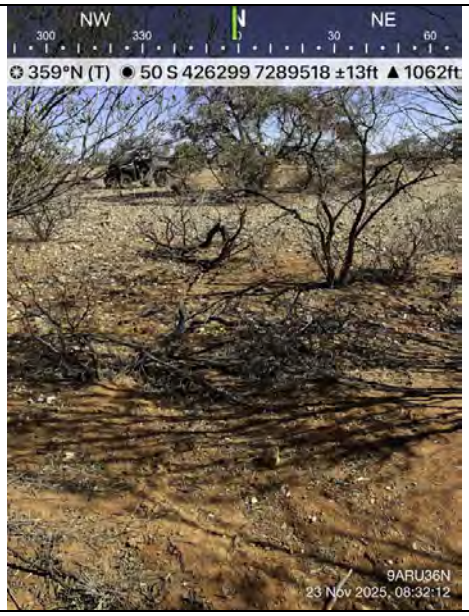
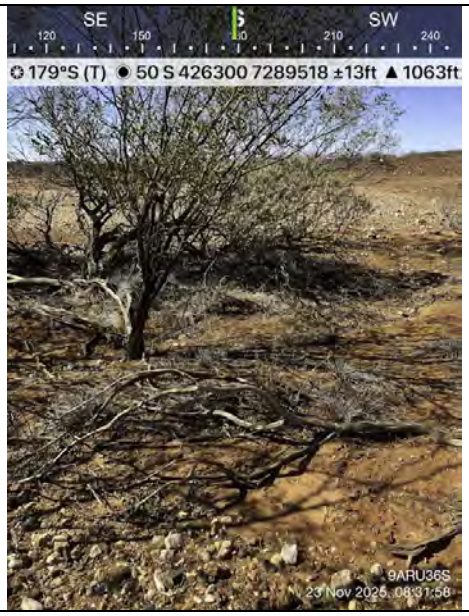
Site 73_8ARU38	Site 73_8ARU38

	
Site 74_8ARU37	Site 74_8ARU37
	
Site 74_8ARU37	Site 74_8ARU37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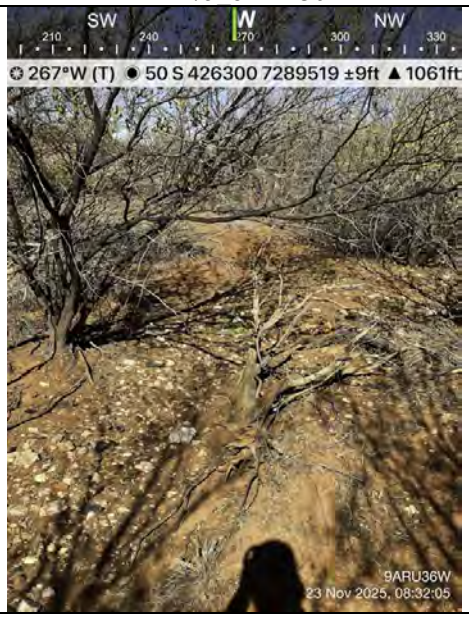
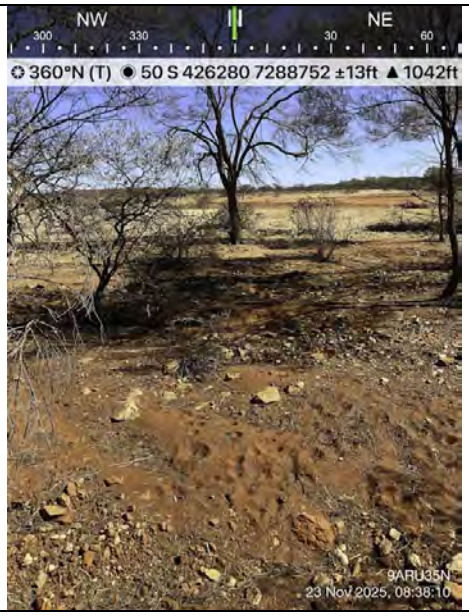
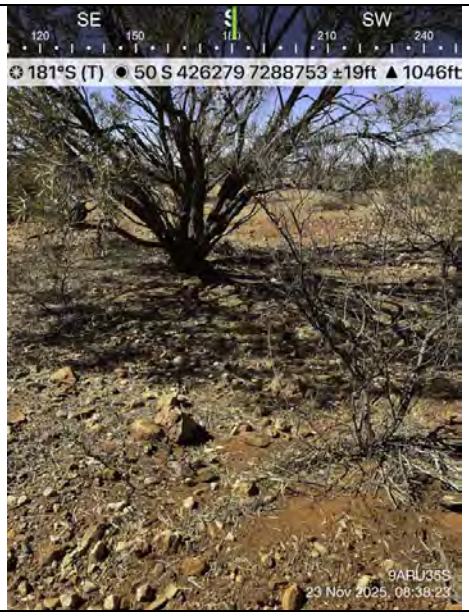
	
Site 75_8ARU36	Site 75_8ARU36

TERRESTRIAL ECOSYSTEMS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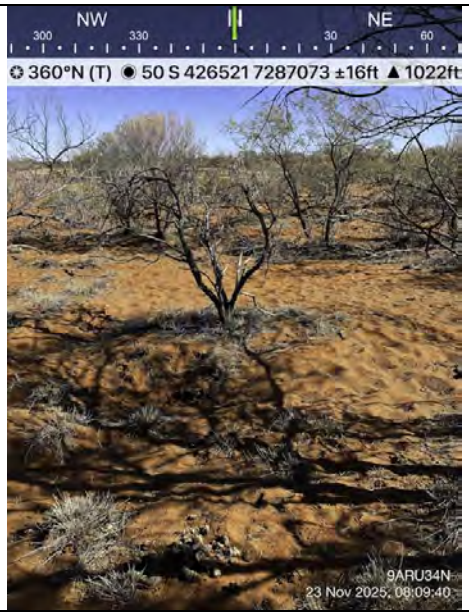
Site 76_8ARU35	Site 76_8ARU35

TERRESTRIAL ECOSYSTEMS

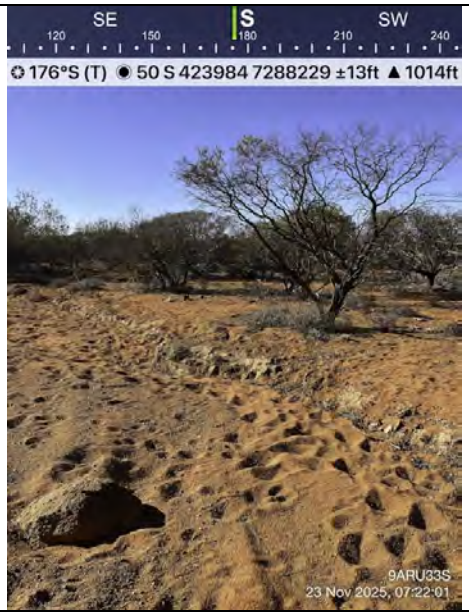


Site 77_8ARU34

Site 77_8ARU34

Site 77_8ARU34

Site 77_8ARU34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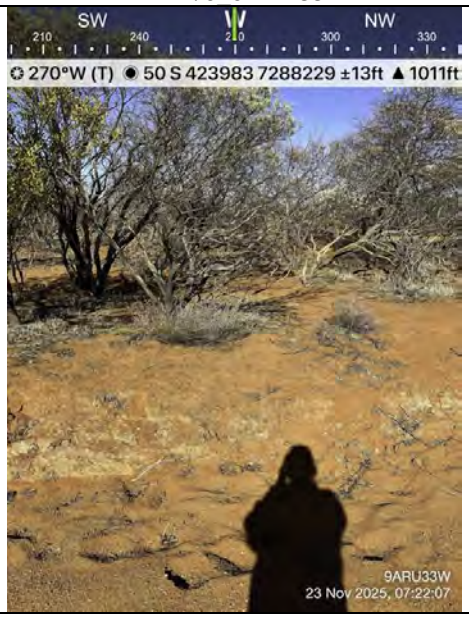
	
Site 78_8ARU33	Site 78_8ARU33

Site 79_8ARU32	Site 79_8ARU32
Site 79_8ARU32	Site 79_8ARU32

Site 80_8ARU31	Site 80_8ARU31
Site 80_8ARU31	Site 80_8ARU31

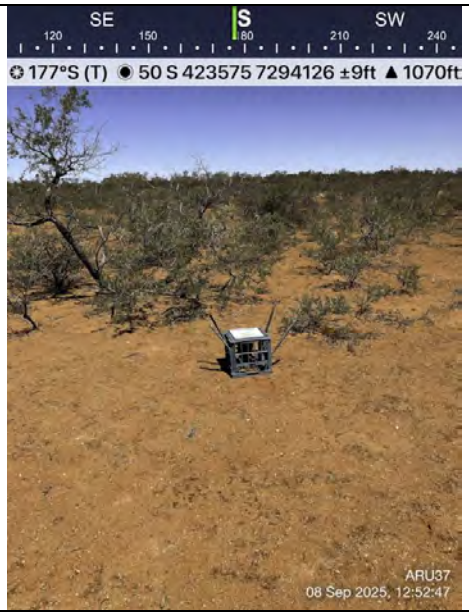
TERRESTRIAL ECOSYSTEMS

Site 81_9ARU40	Site 81_9ARU40
Site 81_9ARU40	Site 81_9ARU40

Site 82_9ARU39	Site 82_9ARU39
Site 82_9ARU39	Site 82_9ARU39

TERRESTRIAL ECOSYSTEMS

Site 83_9ARU38	Site 83_9ARU38
Site 83_9ARU38	Site 83_9ARU38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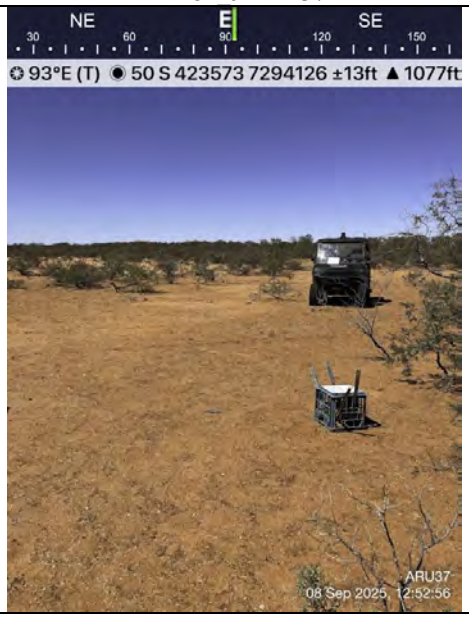
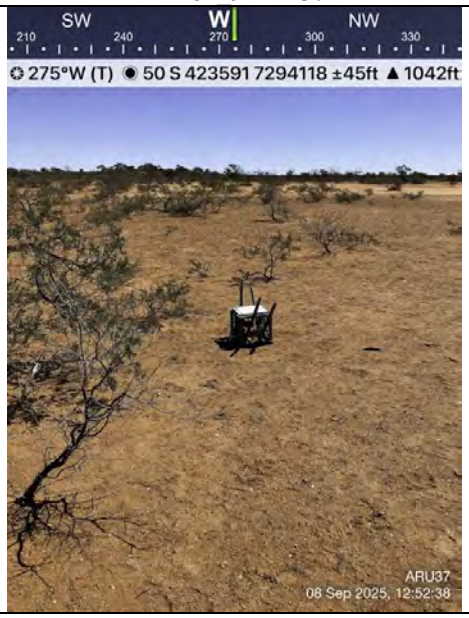
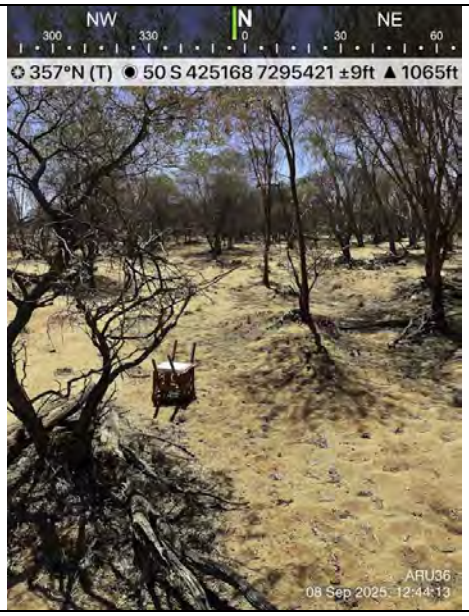
	
Site 84_9ARU37	Site 84_9ARU37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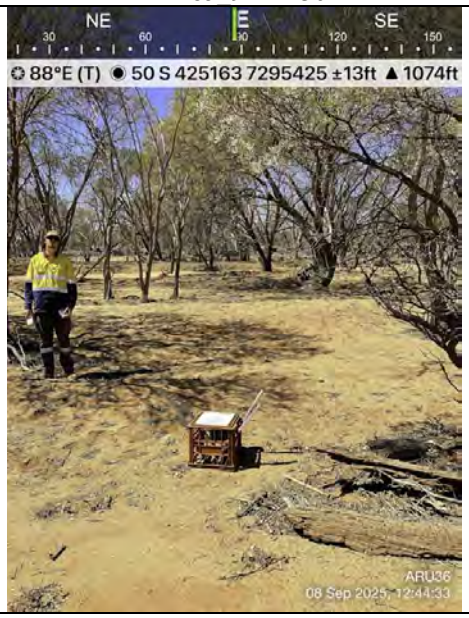
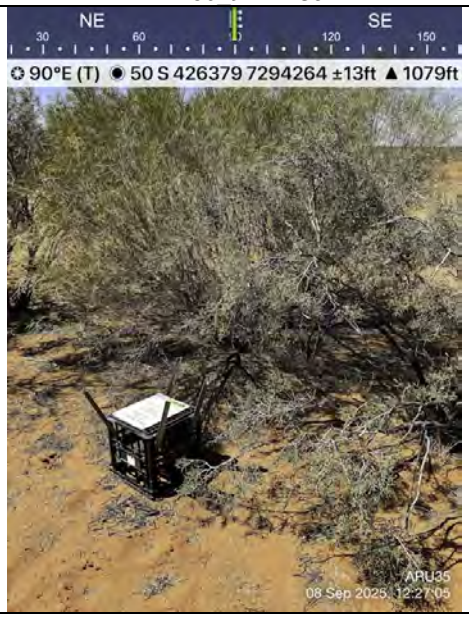
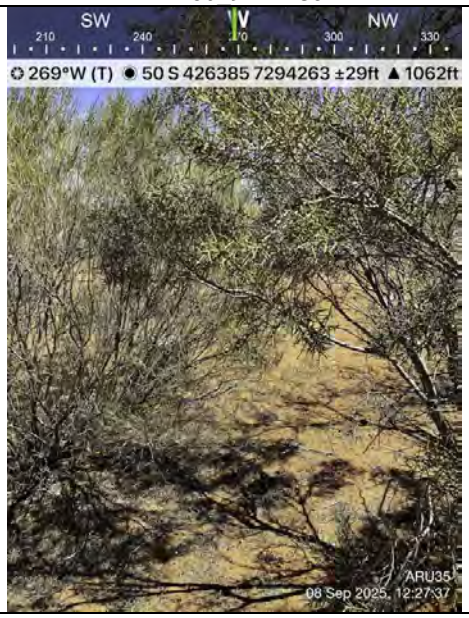
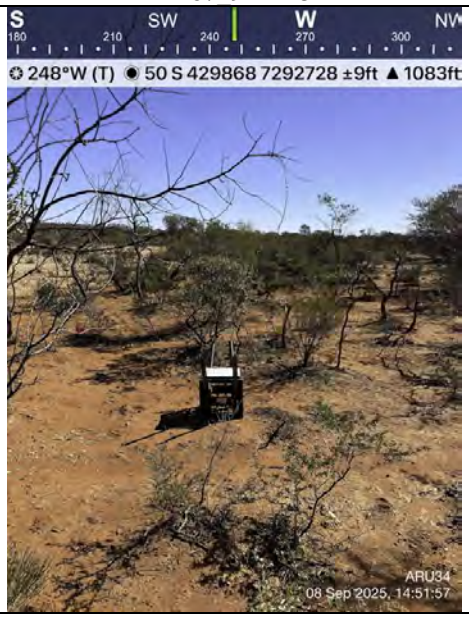
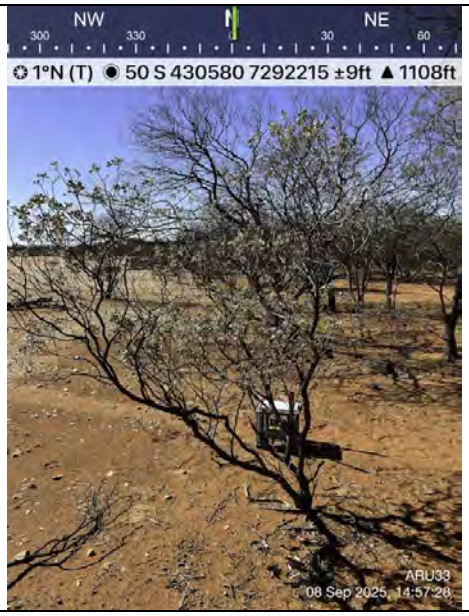
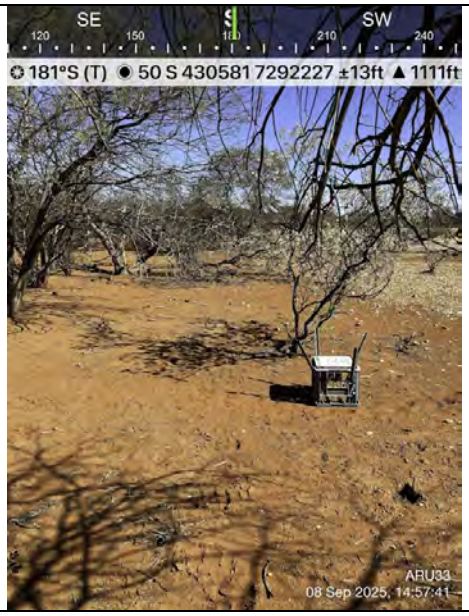
	
Site 85_9ARU36	Site 85_9ARU36

Site 86_9ARU35	Site 86_9ARU35
	
Site 86_9ARU35	Site 86_9ARU35

TERRESTRIAL ECOSYSTEMS

Site 87_9ARU34	Site 87_9ARU34
	
Site 87_9ARU34	Site 87_9ARU34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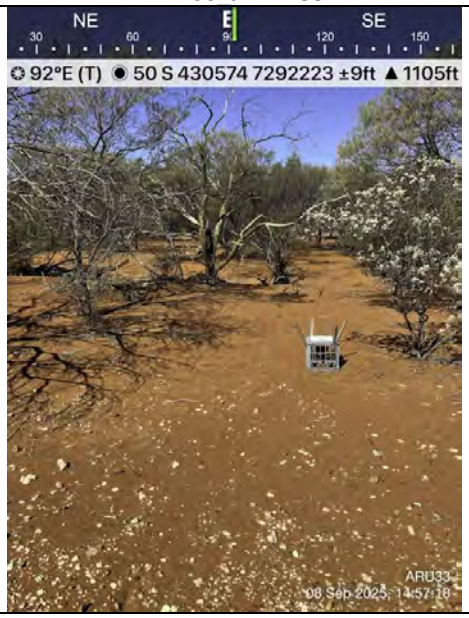	
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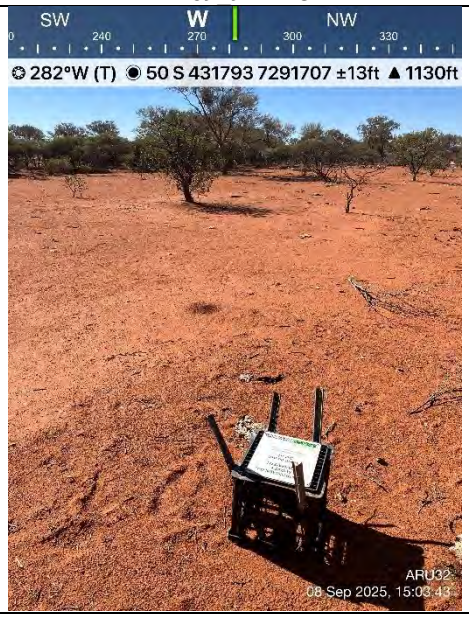
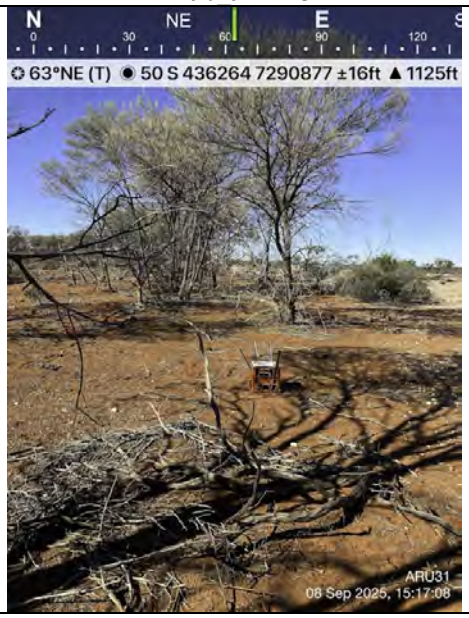
Site 89_9ARU32	Site 89_9ARU32
	
Site 89_9ARU32	Site 89_9ARU32

Site 90_9ARU31	Site 90_9ARU31
	
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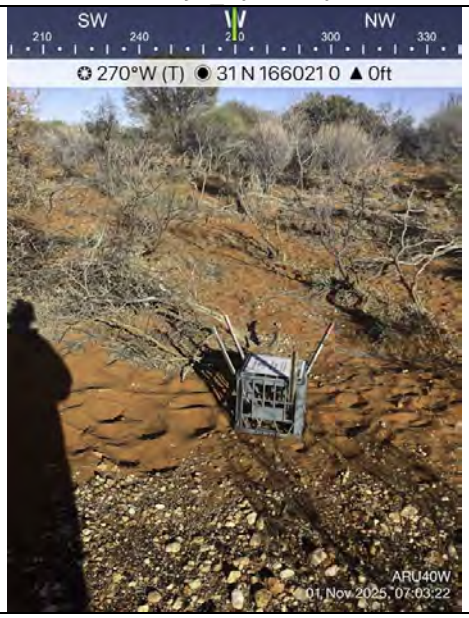
Site 91_10ARU40	Site 91_10ARU40
	
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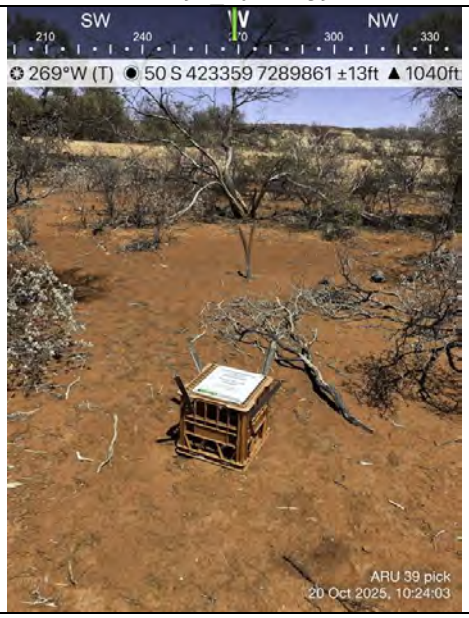
Site 92_10ARU39	Site 92_10ARU39
	
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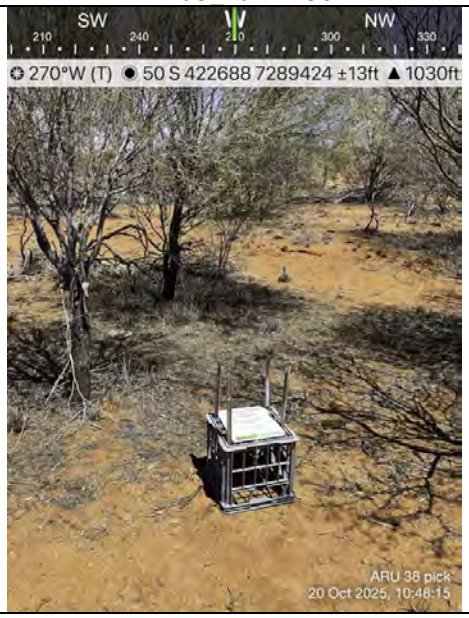
Site 93_10ARU38	Site 93_10ARU38
	
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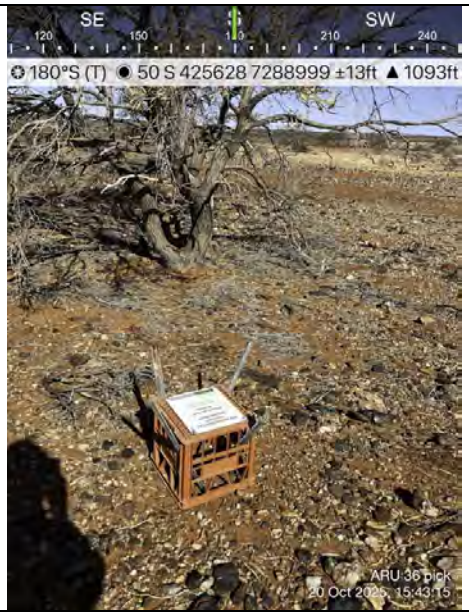
Site 94_10ARU37	Site 94_10ARU37
Site 94_10ARU37	Site 94_10ARU37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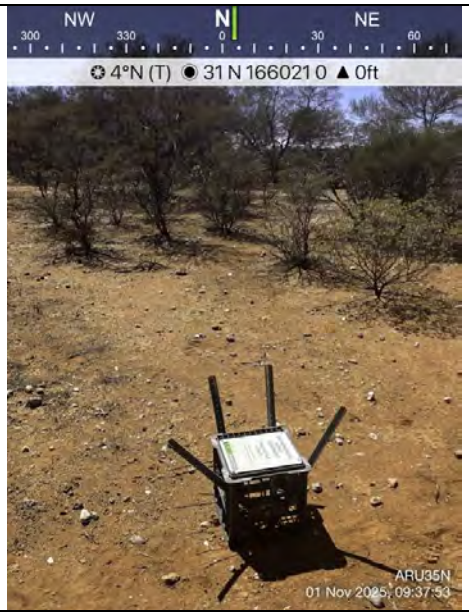
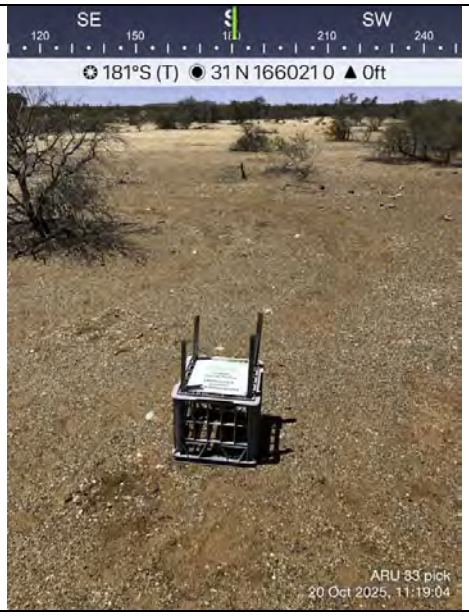
Site 95_10ARU36	Site 95_10ARU36

	
Site 96_10ARU35	Site 96_10ARU35
Site 96_10ARU35	Site 96_10ARU35

TERRESTRIAL ECOSYSTEMS

Site 97_10ARU34	Site 97_10ARU34
Site 97_10ARU34	Site 97_10ARU34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	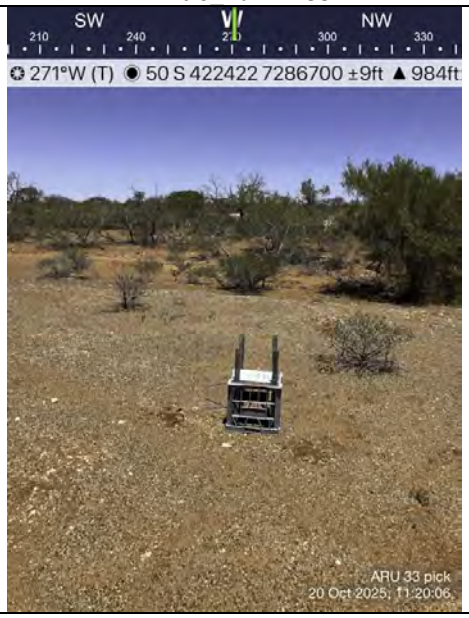
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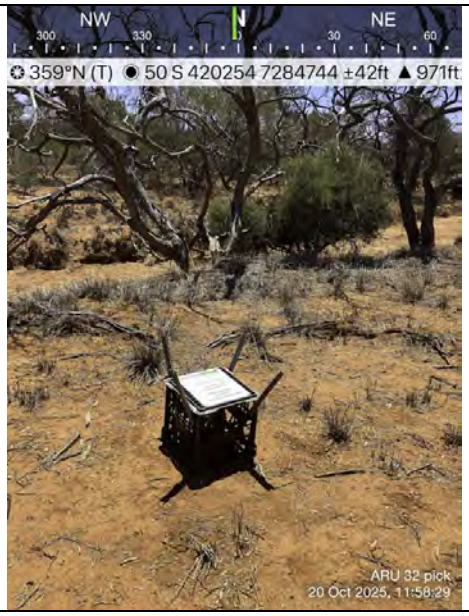	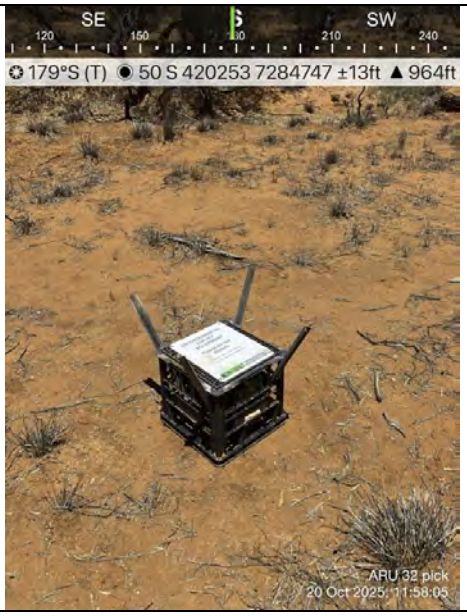
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	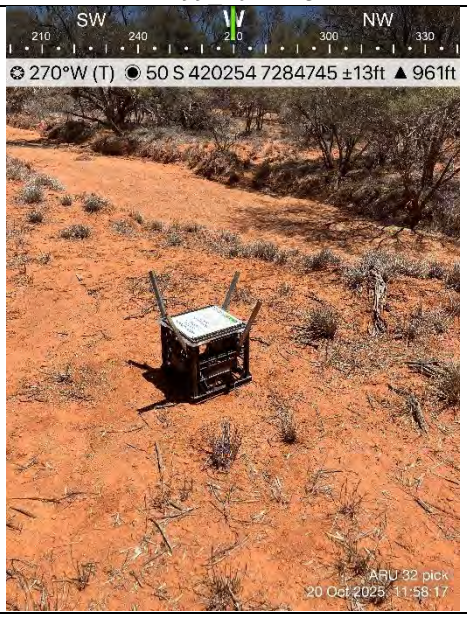
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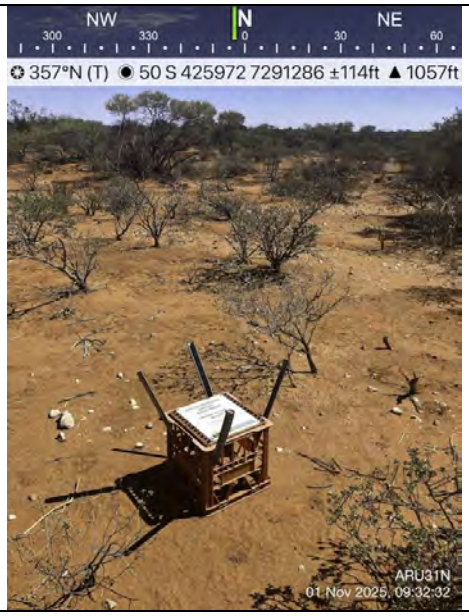	
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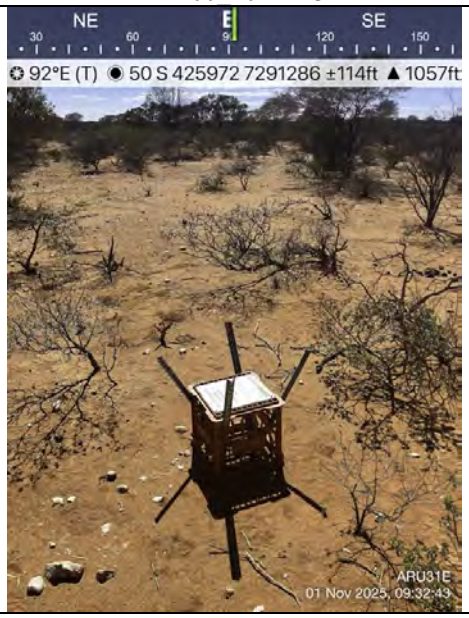	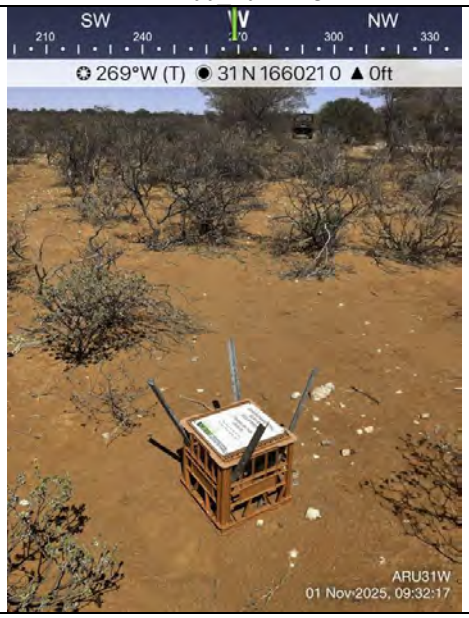
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TERRESTRIAL ECOSYSTEMS

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	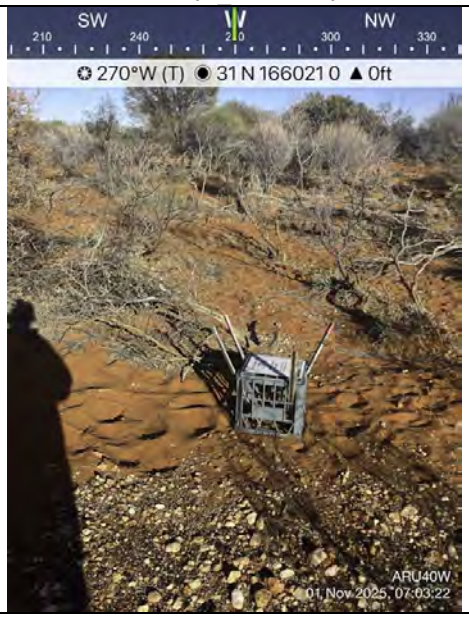
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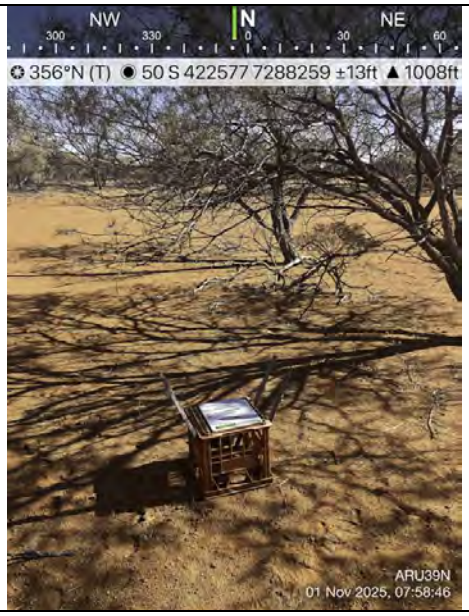
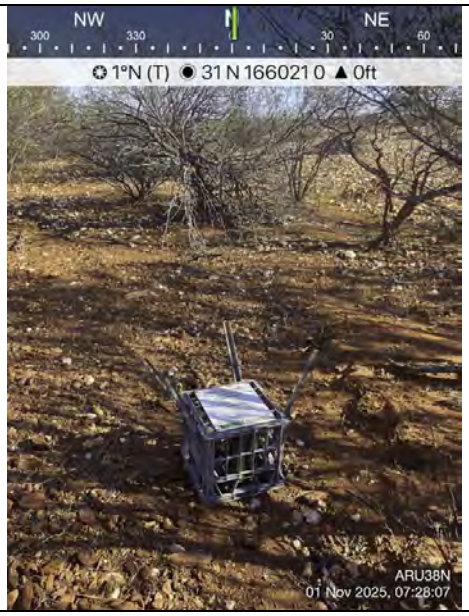
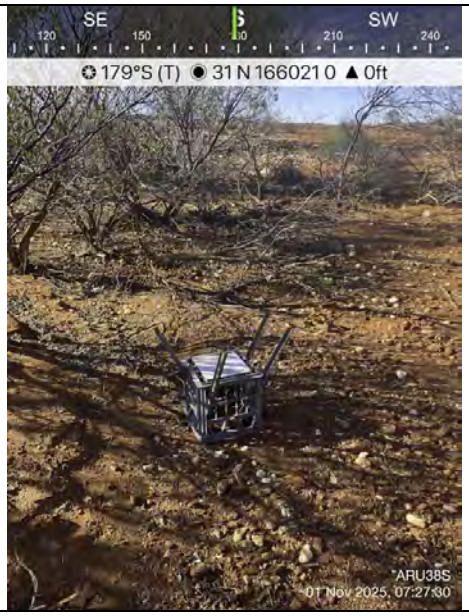
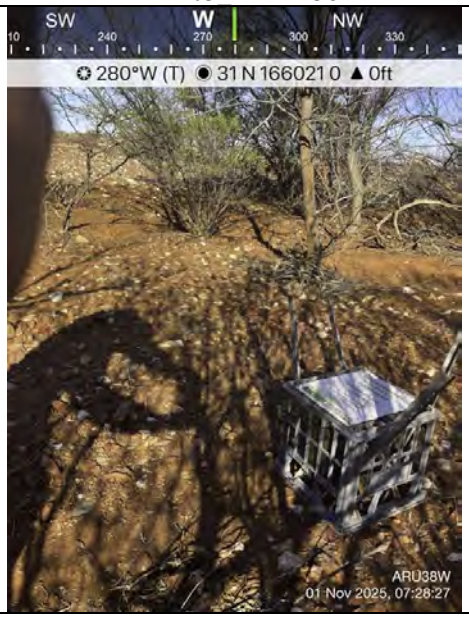
	
Site 102_11ARU39	Site 102_11ARU39
Site 102_11ARU39	Site 102_11ARU39

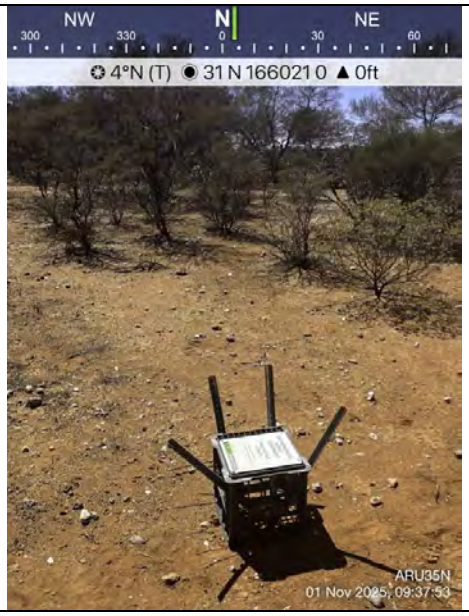
	
Site 103_11ARU38	Site 103_11ARU38
	
Site 103_11ARU38	Site 103_11ARU38

TERRESTRIAL ECOSYSTEMS

Site 104_11ARU37	Site 104_11ARU37
Site 104_11ARU37	Site 104_11ARU37

Site 105_11ARU36	Site 105_11ARU36
Site 105_11ARU36	Site 105_11ARU36

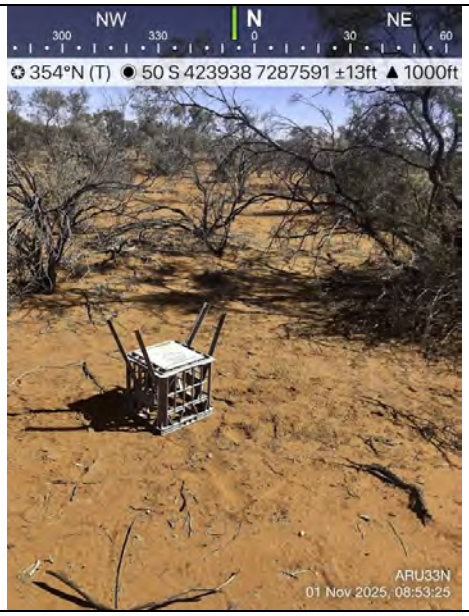
TERRESTRIAL ECOSYSTEMS

	
Site 106_11ARU35	Site 106_11ARU35
Site 106_11ARU35	Site 106_11ARU35

TERRESTRIAL ECOSYSTEMS

Site 107_11ARU34	Site 107_11ARU34
Site 107_11ARU34	Site 107_11ARU34

TERRESTRIAL ECOSYSTEMS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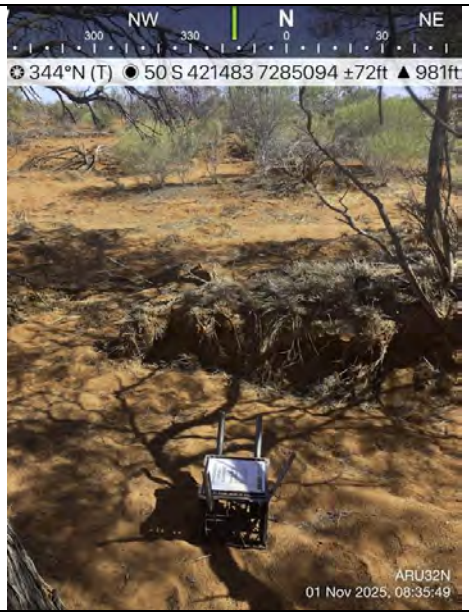	
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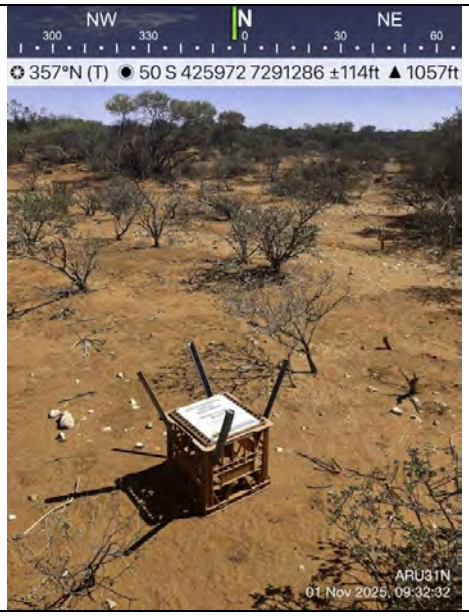
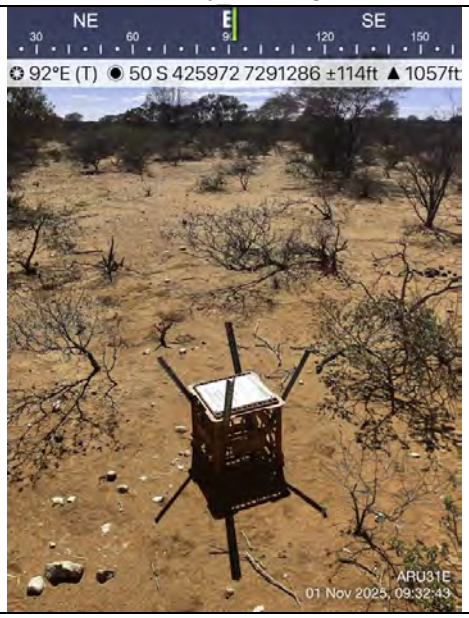
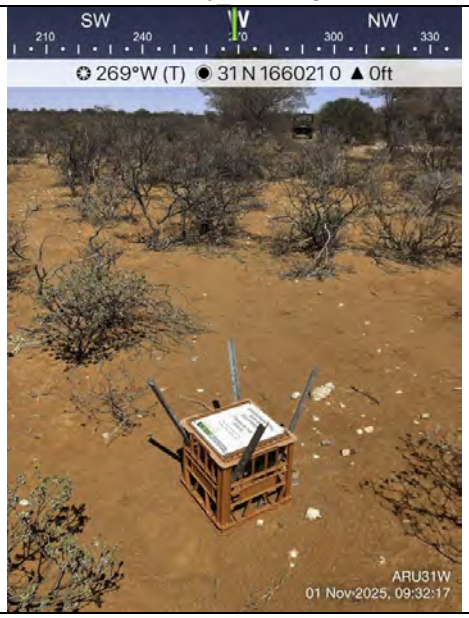
	
Site 110_11ARU31	Site 110_11ARU31
	
Site 110_11ARU31	Site 110_11ARU31

TERRESTRIAL ECOSYSTEMS

DETECTION DOG