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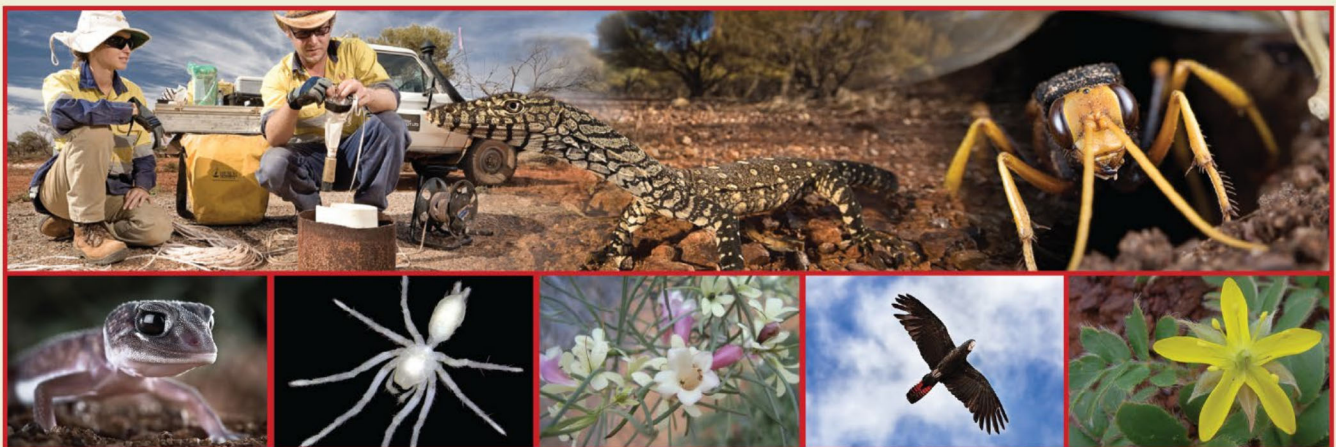
ENVIRONMENTAL SCIENCES

Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project

Prepared for Northern Star Resources Ltd

May 2025

Final



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Version history

Author/s	Reviewer/s	Version	Version number	Date submitted	Submitted to
P. Strickland	A. Jacks	Draft for client comments	0.1	05-Mar-25	C. Bennison
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1 INTRODUCTION

Northern Star Resources Ltd (Northern Star) is seeking to develop the Kalgoorlie Regional Renewable Energy Project (the Project), located 8 km east of the Kalgoorlie-Boulder townsite in Western Australia (WA; Figure 1-1). The Project is a wind and solar farm to provide power to the region.

The Project and surrounds were surveyed for Malleefowl during a series of basic and targeted fauna surveys conducted in 2022, 2023, 2024 and 2025 (Figure 1-1). The purpose of the surveys was to inform planning and environmental approvals for future development in the region.

In July 2022, Phoenix Environmental Sciences Pty Ltd (Phoenix) was first commissioned by Northern Star to undertake a basic and targeted terrestrial fauna survey for a portion of the Project. In August 2023 and February 2024, Phoenix was commissioned to survey additional areas of the Project. Then in 2025, an additional targeted survey was conducted to search a preliminary Development Envelope to improve search effort within a potential impact area and improve confidence in Malleefowl habitat and activity mapping from the area.

The study area is located in the City of Kalgoorlie-Boulder, on the border of the Eastern Goldfields subregion of the Coolgardie bioregion and the Eastern Murchison subregion of the Murchison bioregion and in both the Eremaean and South-West Interzone Climatic Region as defined by EPA (2020).

1.1 SCOPE OF WORK

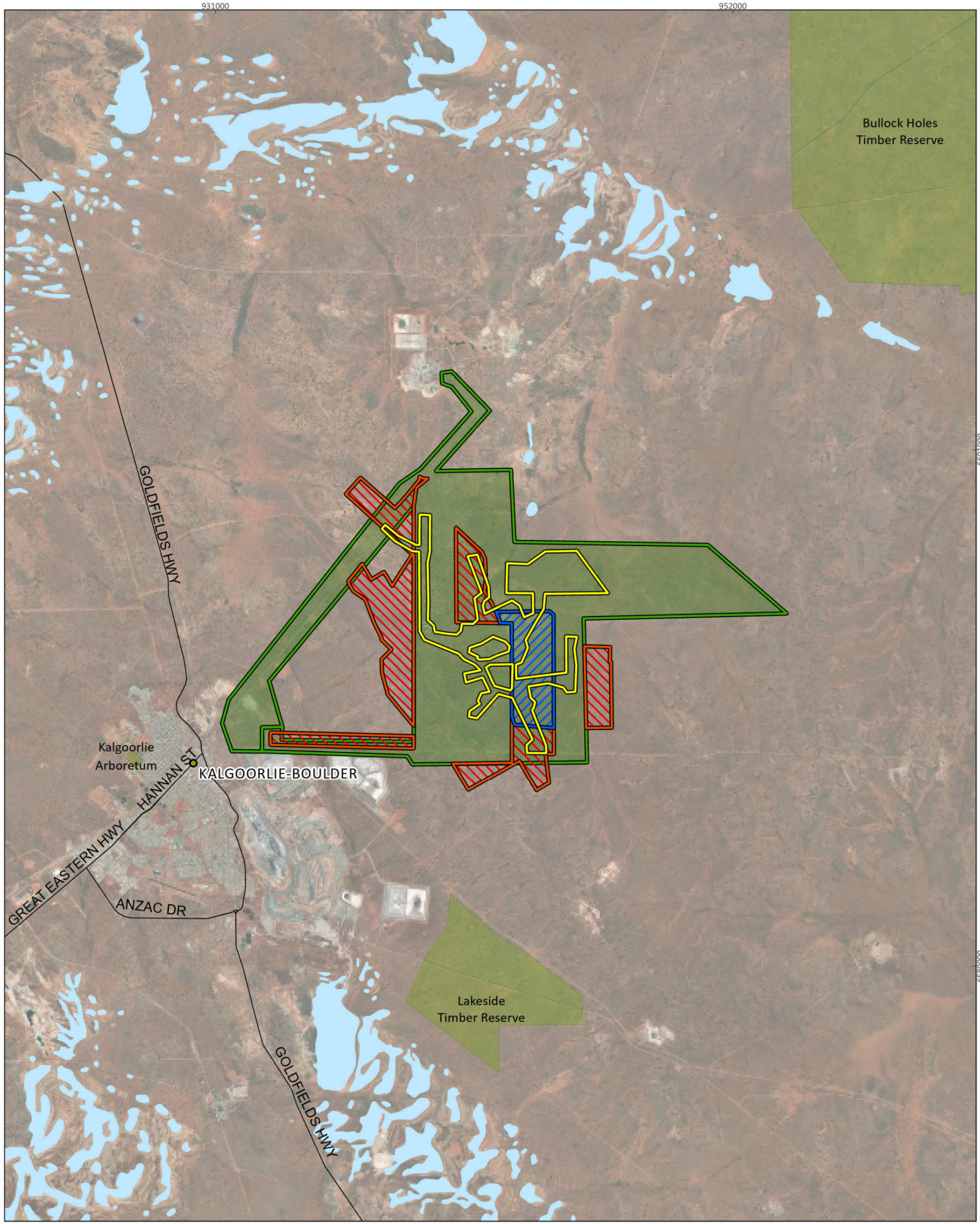
The scope of work for the targeted Malleefowl surveys was as follows:

- habitat assessment and mapping
- opportunistic and low intensity fauna sampling
- determine requirement for further surveys
- targeted survey for evidence of Malleefowl presence/Malleefowl mounds
- high intensity Malleefowl habitat assessment of the 2025 study area
- ground-truth LiDAR mound points in the vicinity of the 2025 study area.

1.2 STUDY AREA

In combination, the study areas for the Project cover a total of 13,189 ha (Figure 1-1). The study areas for the individual field surveys are:

- the 2022 study area
 - 11,413 ha which comprises linear corridors along existing roadways, a large Project area, and a corridor which links the Kanowna Belle Gold Mine to Kalgoorlie.
- the 2023 study area
 - 2,759 ha which comprises additional areas infilling gaps within the 2022 study area and extending particular areas north-west, south, and south-east.
- the 2024 study area
 - 814 ha single area within the original Project area.
- the 2025 study area
 - 1,948 ha single area which falls within the previous surveyed study areas and aligned with a preliminary Development Envelope.



Northern Star Resources Limited
 Kalgoorlie Regional Renewable Energy Project

Project No 1700
 Date 22/05/2025
 Drawn by JL
 Map author PS

0 2.5 5
 Kilometers

1:199,000 (at A4) GDA 1994 MGA Zone 51

Study area

- 2022
- 2023
- 2024
- 2025

- Lakes
- DBCA managed land
- Roads

Figure 1-1
Project location and study area



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2 METHODS

The targeted Malleefowl surveys were conducted in accordance with relevant survey guidelines and guidance, including:

- *EPA Environmental Factor Guideline: Terrestrial fauna* (EPA 2016)
- *EPA Technical Guidance: Technical Guidance: Terrestrial vertebrate fauna surveys for environmental impact assessment* (EPA 2020)
- National Malleefowl Monitoring Manual (NMRT 2022)
- National Recovery Plan for the Malleefowl (*Leipoa ocellata*) (DCCEEW 2024).

2.1 FIELD SURVEYS

2.1.1 Survey timing

Field survey dates are provided in Table 2-1.

Table 2-1 Survey dates

Survey type	Season	Dates
Basic and targeted fauna survey	Spring	12 – 16 September 2022
Basic and targeted fauna survey	Spring	21 – 27 November 2023
Basic and targeted fauna survey	Winter	11 – 13 June 2024
Targeted Malleefowl assessment	Summer	3 – 7 February 2025

2.1.2 Survey personnel

The personnel involved in the surveys are listed in Table 2-2. All survey work was carried out under relevant licences issued by DBCA under the BC Act (Table 2-2).

Table 2-2 Survey personnel

Year	Name	Permit	Qualifications	Role/s
2022	Caitlin Nagle	Fauna taking (biological assessment) licence no. BA27000705 and TFA no. 2223-0071	BSc (Zool. & Cons. Biol.) MSc (Cons. Biol.)	Project manager, field survey, reporting
2022	Brooke Quick		BSc (Env. Sci.)	Field survey, reporting
2023	Kerryn Fox	Fauna taking (biological assessment) licence no. BA27000930 and TFA no. 2223-0071	BSc (Cons., Wildlife & Marine Biol.) MSc (Wildlife Health & Cons.)	Field survey, reporting
2023, 2024	Rod Eastwood		Ph.D. (Env. Sci.)	Field survey
2024, 2025	Paula Strickland	Fauna taking (biological assessment) licence no. BA27001065	BSc (Cons. Biol. & Zool.) MSc (Trop. Biol. & Cons.)	Field survey, reporting, and report review
2025	Seth Capon		BSc (Cons. & Wildlife Mgt)	Field survey
	Anna Jacks	NA	BSc (Hons) (Env. Sci.)	Project manager, reporting, report review
	Brigitte Kovar	NA	BSc, MSc (Geospatial Intelligence)	Mapping

2.1.3 Field methods

Field methods for the fauna surveys of the study area included:

- habitat assessment (see 2.1.3.1)
- Malleefowl habitat assessment (2.1.3.2)
- active diurnal searches (2.1.3.3)
- Targeted Malleefowl surveys and ground-truthing LiDAR points (2.1.3.4).

A total of 32 sites were surveyed in 2022, 17 sites were surveyed in 2023, 9 sites were surveyed in 2024 and 58 were surveyed in 2025 (Figure 2-1; Appendix 1).

2.1.3.1 Fauna habitat assessment

Initial habitat characterisation was undertaken using various remote geographical tools, including aerial photography (Google Earth®), land system maps and topographic maps. Habitats with the potential to support Malleefowl were identified based on known habitats of such species within the Coolgardie and Murchison bioregions. Tentative sites were selected for the terrestrial fauna surveys to represent all habitat types. Final survey site selection was conducted after ground-truthing of site characteristics.

At the broadest scale, site selection considered aspect, topography, and land systems. At the finer scale, consideration was given to proximity to water bodies (drainage lines and creek), vegetation complexes and condition, and soil type. Sites were primarily chosen to represent the best example of distinct habitats within the broader habitat associations of the study area with a focus on Malleefowl. Habitat descriptions and characteristics were recorded at all survey sites (Figure 2-1; Table 2-3; Appendix 2).

Mapping of broad fauna habitats was undertaken based on mapped vegetation types, site-based habitat assessments, and additional habitat data points collected during the field surveys. Mapping of habitat for Malleefowl was derived from broad fauna habitat classifications.

Table 2-3 Survey effort

Survey year	Site	Habitat assessment (#)	Active searches (hrs)	Malleefowl records (#)
2022	KO-001	1	1.1	
	KO-002	1	2	
	KO-003	1	2	
	KO-004	1		
	KO-005	1	2	
	KO-006	1		
	KO-007	1	0.8	
	KO-008	1	1.2	
	KO-009	1		
	KO-010	1		
	KO-011	1	1.7	
	KO-012	1		
	KO-013	1		
	KO-014	1		
	KO-015	1		

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Survey year	Site	Habitat assessment (#)	Active searches (hrs)	Malleefowl records (#)
2022	KO-016	1		
	KO-017	1		
	KO-018	1		
	KO-019	1	0.9	
	KO-020	1		1
	KO-021	1		
	KO-022	1		
	KO-023	1	1	
	KO-024	1		
	KO-025	1		
	KO-026	1		
	KO-027	1		
	KO-028	1		
	KO-029	1		
	KO-MF1	1	2	1
	KO-MF2	1		3
	KO-Opp04	1		
2023	BF001	1	0.7	
	BF002	1	0.7	
	BF003	1	2	
	BF004	1	0.7	
	BF005	1	0.7	
	BF006	1		
	BF007	1		
	BF008	1		
	BF009	1		
	BF010	1	0.3	
	BF011	1	0.7	
	BF012	1	0.7	
	BF013	1	0.7	
	BF014	1		
	BF015	1		
	BF016	1		
	BF018	1		
	2024	BF01 to BF08	8	
BF_MF_Mound		1		1
2025	BF_01 to BF_55	55		1
	MF_Mound01	1		1
	MF_Mound02	1		1
	MF_Mound03	1		1
	MF_Track01			1
Total		116	21.9	11

2.1.3.2 Malleefowl habitat assessment

Malleefowl habitat was assessed in the field using a set of environmental variables based on features of critical Malleefowl habitat in Western and Central Australia, as described in the National Recovery Plan (Benshemesh 2007; DCCEEW 2024). Individual sites were assessed with a numerical score as a basis for mapping areas of suitable habitat in the study area. The score used is an unweighted sum of values for the attributes presented in Table 2-4, with a maximum achievable score of 12.

Malleefowl assessments undertaken in 2022 were subject to a presence (1) and absence (0) score of attributes, and these scores have been re-adjusted based on data obtained from the habitat assessments.

Malleefowl habitat was assigned an overall habitat suitability depending on the sum and combination of habitat attributes:

- High suitability habitat (score of 9 or more) is characterised by dense vegetation that provides screening and is defined as primary nesting, foraging, and dispersal habitat, that is regarded as habitat critical for the survival of the species
- Moderate suitability habitat (score of 4 to 8) can be split into 2 subcategories based on the habitat attributes:
 - i. suitable for foraging, dispersal, and may contain marginally suitable breeding habitat depending on the combination of the environmental variables
 - ii. suitable for foraging and dispersal (not suitable for breeding)
- Low suitability habitat (score of 3 or less) does not contain enough habitat features for it to be considered suitable for breeding, however it may still be used for dispersal and occasional foraging.

Scores attributed to a site were applied to vegetation type polygons and the entire polygon (usually) assigned as the corresponding suitability (High, Moderate, or Low). Where 2 or more sites were assessed within a single polygon, the higher score was applied unless features of the lower-scored site(s) were more representative. Where no site occurred within a polygon, polygons were classified based on scores for similar vegetation nearby and inspection of relative vegetation density. Habitat suitability was validated by the presence/absence of ground-truthed mounds obtained from LiDAR (Anditi 2025).

Table 2-4 Malleefowl habitat assessment criteria

Attribute	Description	Score and suitability		
		0 - low/unsuitable	1 - moderate	2 - high
Substrate	Suitability of substrate to build a mound. Easily workable/moveable substrates regarded as more suitable.	Rocky/hard substrate	Clay, large gravel	Sand, sandy loam, sandy clay, small gravel (e.g. laterite)
Slope	Suitability of slope to build a mound. Level ground less susceptible to soil and leaf litter disturbance from rainfall runoff.	Steep	Moderate	Flat/gentle
Leaf litter	Availability of leaf litter suitable for mound construction and foraging.	Sparse/none	Moderate	Abundant
Canopy cover	Amount of canopy cover. Higher canopy cover contributes to protection from aerial predators.	Sparse/none	Moderate	Continuous/near continuous
Vegetation screening	Amount of horizontal vegetation screening between ground level and 2m	Sparse/none	Moderate	Dense

Attribute	Description	Score and suitability		
		0 - low/unsuitable	1 - moderate	2 - high
	high. Dense vegetation screening provides greater protection from ground-dwelling predators.			
Vegetation type	Presence of suitable vegetation such as Mulga- type <i>Acacia</i> , Mallee, <i>Casuarina</i> , <i>Melaleuca</i> , <i>Callitris</i> or similar.	Not present	Present but not dominant	Dominant

2.1.3.3 Active searches

Active searches were undertaken at 19 sites throughout the study area (Table 2-3; Figure 2-2; Figure 4-1). Active searches focused on direct sightings and secondary evidence of Malleefowl and other vertebrate fauna.

Secondary evidence includes tracks, diggings, scats, predation or feeding sites, and fauna constructed structures such as mounds. A total of 21.9 hours were spent active searching over the duration of the field surveys.

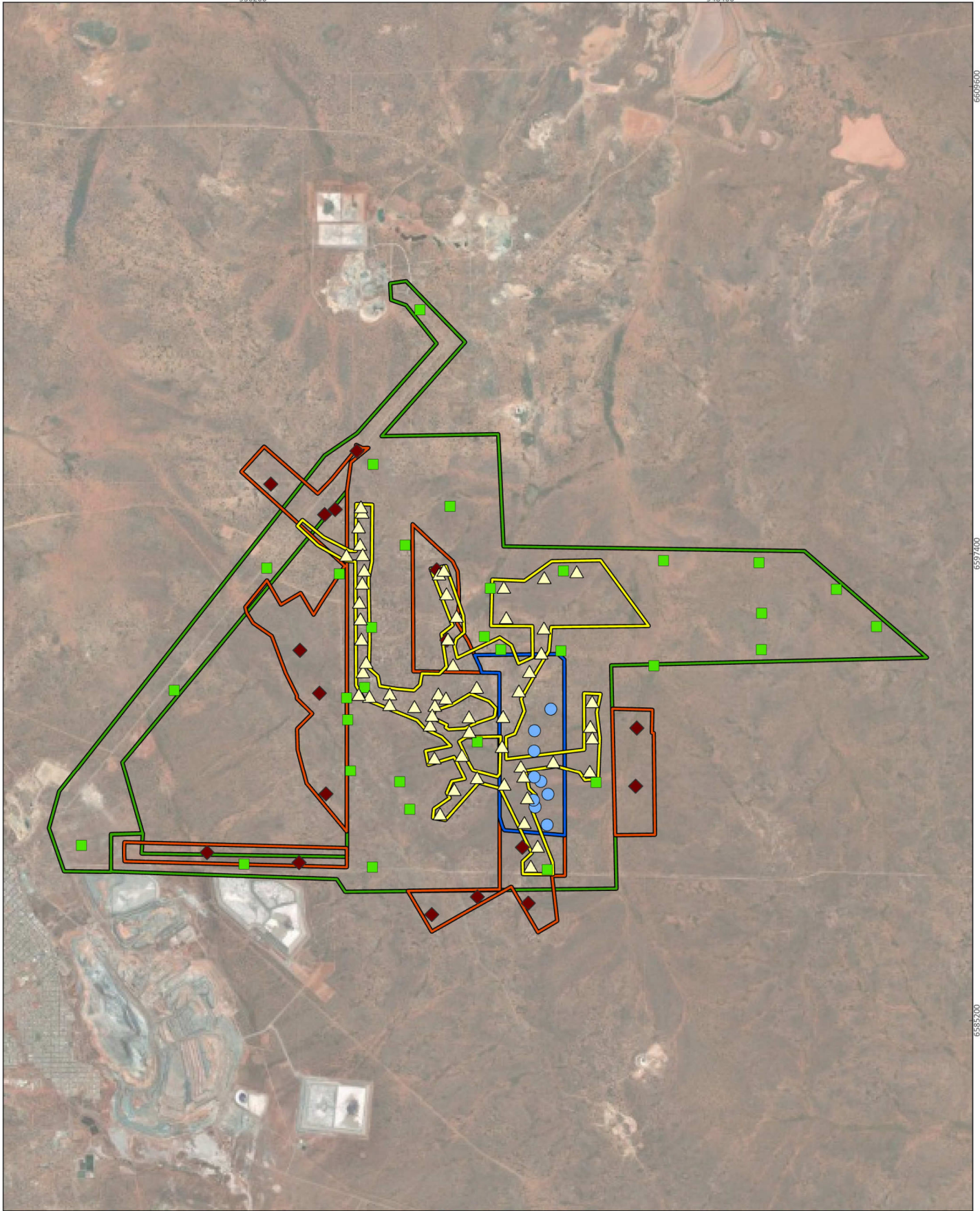
2.1.3.4 Targeted surveys for Malleefowl and LiDAR ground-truthing

In areas where the habitat assessments indicated potential Malleefowl habitat, the team searched for signs of Malleefowl presence including tracks, scats, scrapings and mounds. Searches were conducted on foot while walking to and from sites, using low intensity transect lines or during active searches (Figure 2-2). Large portions of the study area were covered by low intensity transects as part of separate surveys for Arid Bronze Azure Butterfly (ABAB) and Inland Hairstreak Butterfly (IHB) within the study area (Figure 2-2), during which the field staff were vigilant for Malleefowl mounds (Phoenix 2022).

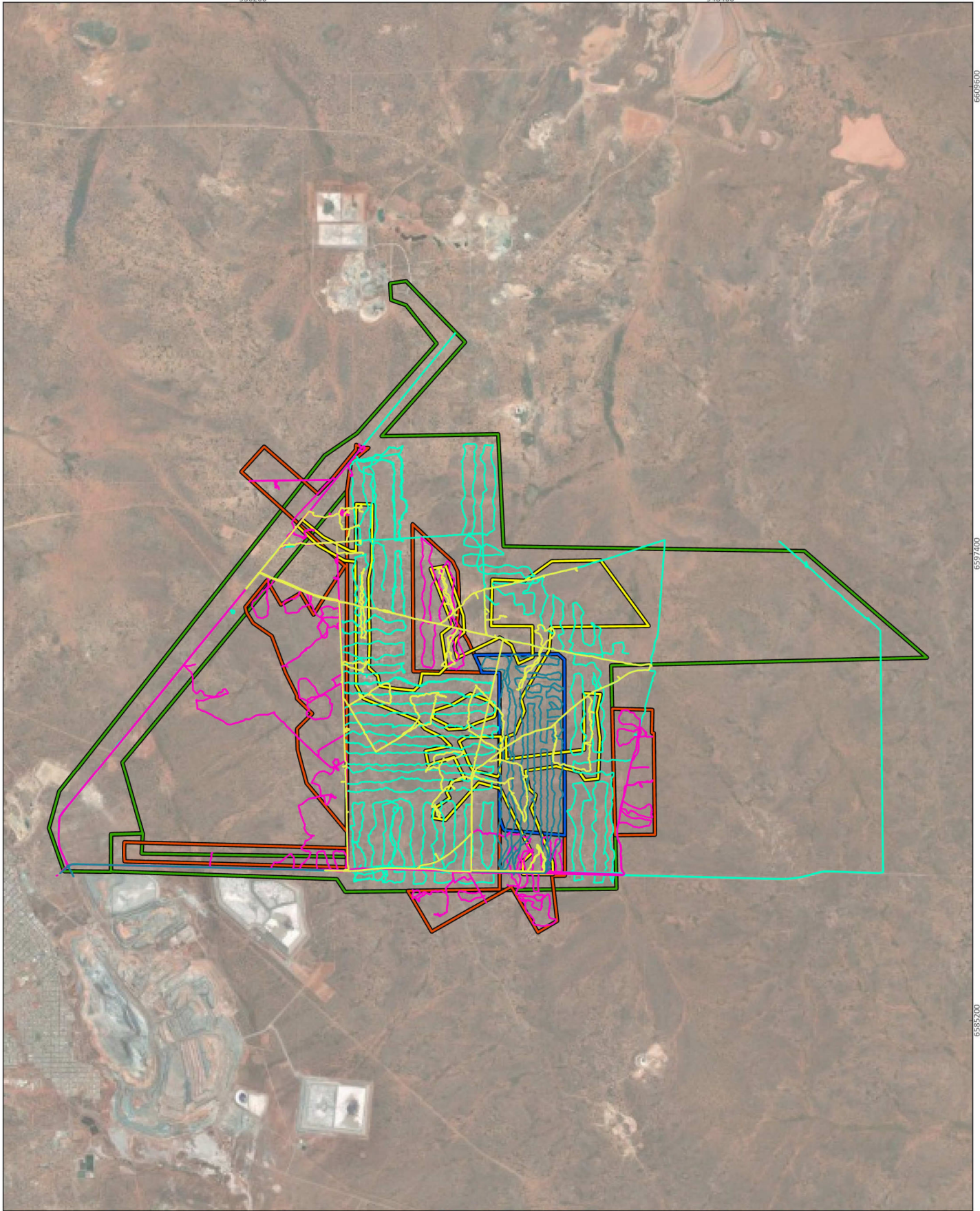
During the 2025 survey the team visited 47 LiDAR points provided by Northern Star (Anditi 2025) in the vicinity of the study area to ground-truth whether the points were Malleefowl mounds or not (Figure 2-1; Appendix 2).




All mounds found during the targeted searches and LiDAR ground-truthing were assessed for recent breeding activity. The activity assessment process followed the definitions:

- Active - Currently being used by Malleefowl as an incubator for their eggs and are likely to contain eggs
- Inactive (subclass 1) - Mound shows signs of recent Malleefowl activity, such as fresh scats, tracks or fresh scrapings
- Inactive (subclass 2) - No evidence of recent activity but mound remains well formed and in good condition for future use
- Long unused/extinct - Evidence of an extended period of inactivity such as a dense shrubs or trees growing from hollow or mound very degraded/poorly formed. Highly unlikely to become active in the future.



<p>Western Australia</p> <p>PERTH</p>	<p>Northern Star Resources Limited Kalgoorlie Regional Renewable Energy Project</p> <p>Project No 1700 Date 22/05/2025 Drawn by JL Map author PS</p>	<p>Study area</p> <ul style="list-style-type: none"> 2022 2023 2024 2025 	<p>Sites</p> <ul style="list-style-type: none"> ■ 2022 ◆ 2023 ● 2024 ▲ 2025 	<p>Figure 2-1 Terrestrial fauna survey sites</p>
	<p>0 2.5 5 Kilometers</p>			
	<p>1:127,700 (at A4) GDA 1994 MGA Zone 51</p> <p><small>All information within this map is current as of 22/05/2025. This product is subject to COPYRIGHT and is property of Phoenix Environmental Sciences (Phoenix). While Phoenix has taken care to ensure the accuracy of this product, Phoenix make no representations or warranties about its accuracy, completeness or suitability for any particular purpose.</small></p>			



 <p>Western Australia</p> <p>PERTH</p>	<p>Northern Star Resources Limited Kalgoorlie Regional Renewable Energy Project</p> <p>Project No 1700 Date 26/05/2025 Drawn by BK Map author PS</p>  <p>0 2.5 5 Kilometers</p> <p>1:127,700 (at A4) GDA 1994 MGA Zone 51</p>	<p>Study area</p> <ul style="list-style-type: none"> 2022 2023 2024 2025 	<p>Tracks</p> <ul style="list-style-type: none"> 2022 ABAB transects 2023 2024 2025 	<p>Figure 2-2 Terrestrial fauna survey tracks</p>  <p>PHOENIX ENVIRONMENTAL SCIENCES</p>
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2.1.3.5 Regional Malleefowl Habitat Assessment

To determine the potential extent of Malleefowl habitat throughout the surrounding region, mapping was undertaken on a broader scale and lower resolution than in the 2022, 2023 and 2024 basic and targeted surveys (Phoenix 2025).

The following datasets were combined using the Union tool in Esri ArcMap:

- study area with a 40 km buffer
- pre-European vegetation mapping (DAFWA 2017)
- Native vegetation extent (DPIRD 2020), and
- surface hydrology (Geoscience Australia 2020).

Each resultant polygon was inspected over aerial imagery (ESRI *et al.* 2024) to confirm habitat type, density, and boundary. Where the imagery showed differences to the spatial union output, the attributes or boundary was amended (e.g. recently cleared areas). Each polygon attributed the following information:

- “MF_desc” – a general description of the habitat type e.g. woodland/shrubland, outcrop, salt lake.
- “MF_Class” – a class of habitat and delineating suitability for Malleefowl:
 - **Cleared** – areas cleared for roads (other than single-lane unsealed access tracks), mines, and associated infrastructure, water storage dams etc., some partially regenerating as very low or open shrubland; negligible habitat value for Malleefowl
 - **Open** – naturally bare or sparsely vegetated areas including lakes, salt lake playa, extensive rock outcrop, scars of recent or intense fires, and sparse shrubland dominated by chenopods or hummock grass; marginal habitat value, unsuitable for breeding, and of low value for foraging, may be used by Malleefowl infrequently for dispersal between other habitat types but associated with increased predation risk due to visual exposure (e.g. Phoenix 2022c).
 - **Drainage** – drainage lines with distinct channels or relatively dense fringing vegetation, may be used by Malleefowl for foraging but unlikely to support nesting
 - **Suitable** – shrublands and low woodlands not dissected by drainage and with adequate tree/shrub cover to provide leaf litter, thermal shelter and visual screening from predators; presumed to represent foraging and potential nesting habitat for any resident Malleefowl.
 - **Suitable (mosaic)** – areas of suitable shrubland/woodland habitat interspersed with scattered areas of clearing (e.g. exploration drill pads and tracks), naturally open patches, and/or drainage lines
 - **Open/drainage** – open areas dissected by drainage lines with or without dense vegetation; potential foraging and dispersal habitat, not considered suitable for breeding.

3 RESULTS

3.1 FAUNA HABITATS

Seven broad fauna habitat types were identified in the study area (Table 3-1; Figure 3-1) as well as 2 human modified environments. These habitats comprised of the following:



- Fauna habitats
 - open woodland (5,295.4 ha, 40.2%)
 - shrubland (4,005.8 ha, 30.4%)
 - groved woodland (2,100.0 ha, 15.9%)
 - drainage line (622.2 ha, 4.7%)
 - grassland (516.2 ha, 3.9%)
 - floodplain (386.6 ha, 2.9%)
 - minor breakaway supporting open woodland (8.4 ha, 0.1%)
- human modified environments
 - cleared/developed – infrastructure (250.1 ha, 1.9%)
 - farm dam with permanent pools (4.1 ha, 0.03%).

Open woodlands, Shrublands, and Groved woodland were the dominant habitats within the study area, comprising a total of 11,401.2 ha (86.4%). The remaining natural habitats: Drainage lines, Grassland, Floodplain, and Minor breakaway, comprised 1,550.4 ha (11.8%; Table 3-1).



The most significant fauna habitat for Malleefowl is Shrublands, which contains areas of dense screening vegetation, adequate leaf litter, and loose gravel, representing suitable foraging and breeding habitat. Drainage lines provide sheltered dispersal corridors throughout the study area.

Narrow areas of disturbances such as unsealed access tracks or small mine excavations are not distinguished from adjacent natural vegetation due to the coarse scale of mapping and the potential for use by fauna for dispersal and foraging.

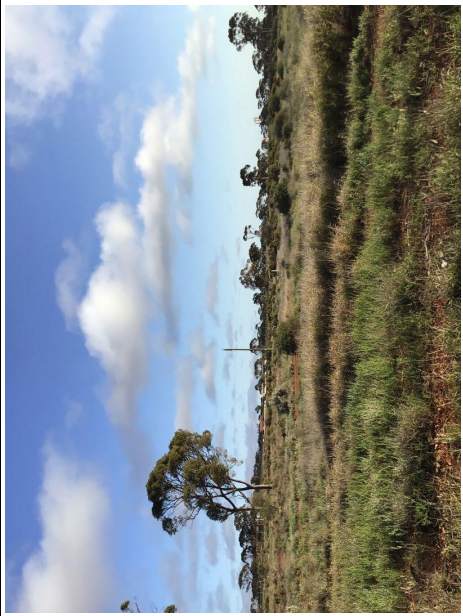
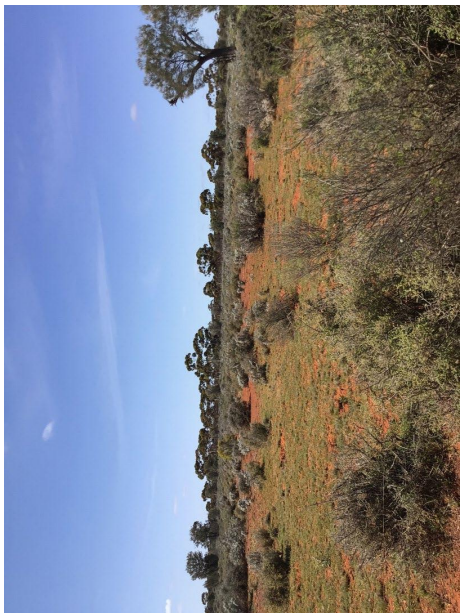
Table 3-1 Extent and description of each fauna habitat in the study area

Habitat type	Site/s	Description	Extent and % of study area	Representative photograph
Open woodland	<p>2022: KO-004, KO-005, KO-006, KO-008, KO-019, KO-022, KO-023, KO-024, KO-028, KO-029</p> <p>2023: BF002, BF003, BF005, BF006, BF008, BF009, BF01, BF011, BF012, BF013, BF014, BF015</p> <p>2024: BF01, BF02, BF05, BF07, BF08</p> <p>2025: BF_12, BF_27, BF_32, BF_33, BF_35, BF_36, BF_37, BF_42, BF_43, BF_45, BF_47, BF_48, BF_50, BF_51, BF_52, BF_53, BF_54, BF_55</p>	<p>Open salmon gum or gimlet <i>Eucalyptus</i> woodland over mixed low shrubs of <i>Maireana</i> and <i>Atriplex</i> on clay loam or sandy clay plain.</p> <p>High abundance of large fallen logs, large trees with hollows and leaf litter.</p> <p>MF: Low to Moderate suitability depending on vegetation density.</p>	<p>5,295.4 ha 40.2%</p>	
Shrubland	<p>2022: KO-007, KO-009, KO-014, KO-020, KO-025, KO-026, KO-MF1, KO-MF2, KO-Opp04</p> <p>2023: BF001, BF004</p> <p>2024: BF_MFmound</p> <p>2025: BF_01, BF_05, BF_09, BF_10, BF_18, BF_44, MF_Mound02, MF_Mound03</p>	<p>Mulga shrubland with scattered mallee <i>Eucalyptus</i> and <i>Allocasurina</i> over <i>Eremophila</i> and <i>Senna</i> on clay loam or sandy clay with gravel or sparse sand.</p> <p>Dense shrubby understory provides cover from predators. High abundance of flowering/seeding shrubs.</p> <p>MF: Low to High suitability depending on vegetation density.</p>	<p>4,005.8 ha 30.4%</p>	


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Habitat type	Site/s	Description	Extent and % of study area	Representative photograph
Groved woodland	<p>2022: KO-010, KO-011, KO-013, KO-015</p> <p>2023: BF016, BF018</p> <p>2025: BF_02, BF_03, BF_04, BF_06, BF_07, BF_08, BF_11, BF_13, BF_14, BF_15, BF_16, BF_17, BF_19, BF_20, BF_21, BF_22, BF_23, BF_24, BF_25, BF_26, BF_28, BF_29, BF_30, BF_31, BF_38, BF_39, BF_40, BF_41, MF_Mound01, MF_Track01</p>	<p>Groved Gimlet <i>Eucalyptus</i> woodland over mixed shrubs of <i>Eremophila</i>, <i>Senna</i>, <i>Atriplex</i> and <i>Maireana</i> on sandy clay plains and low hills.</p> <p>Areas of dense woodland interspersed with open patches of low shrubs.</p> <p>MF: Low to Moderate suitability.</p>	<p>2,100.0 ha 15.9%</p>	
Drainage line	<p>2022: KO-002, KO-003, KO-016</p> <p>2023: BF007</p> <p>2024: BF03, BF04, BF06</p> <p>2025: BF_34, BF_46, BF_49</p>	<p>Drainage lines or surface watershed with Gimlet <i>Eucalyptus</i> over mixed shrubs of <i>Eremophila</i>, <i>Senna</i>, <i>Atriplex</i> and <i>Maireana</i> on clay loam soils.</p> <p>Thick patches of transported leaf litter.</p> <p>MF: Low to High suitability depending on vegetation density and potential for surface water flow.</p>	<p>622.2 ha 4.7%</p>	


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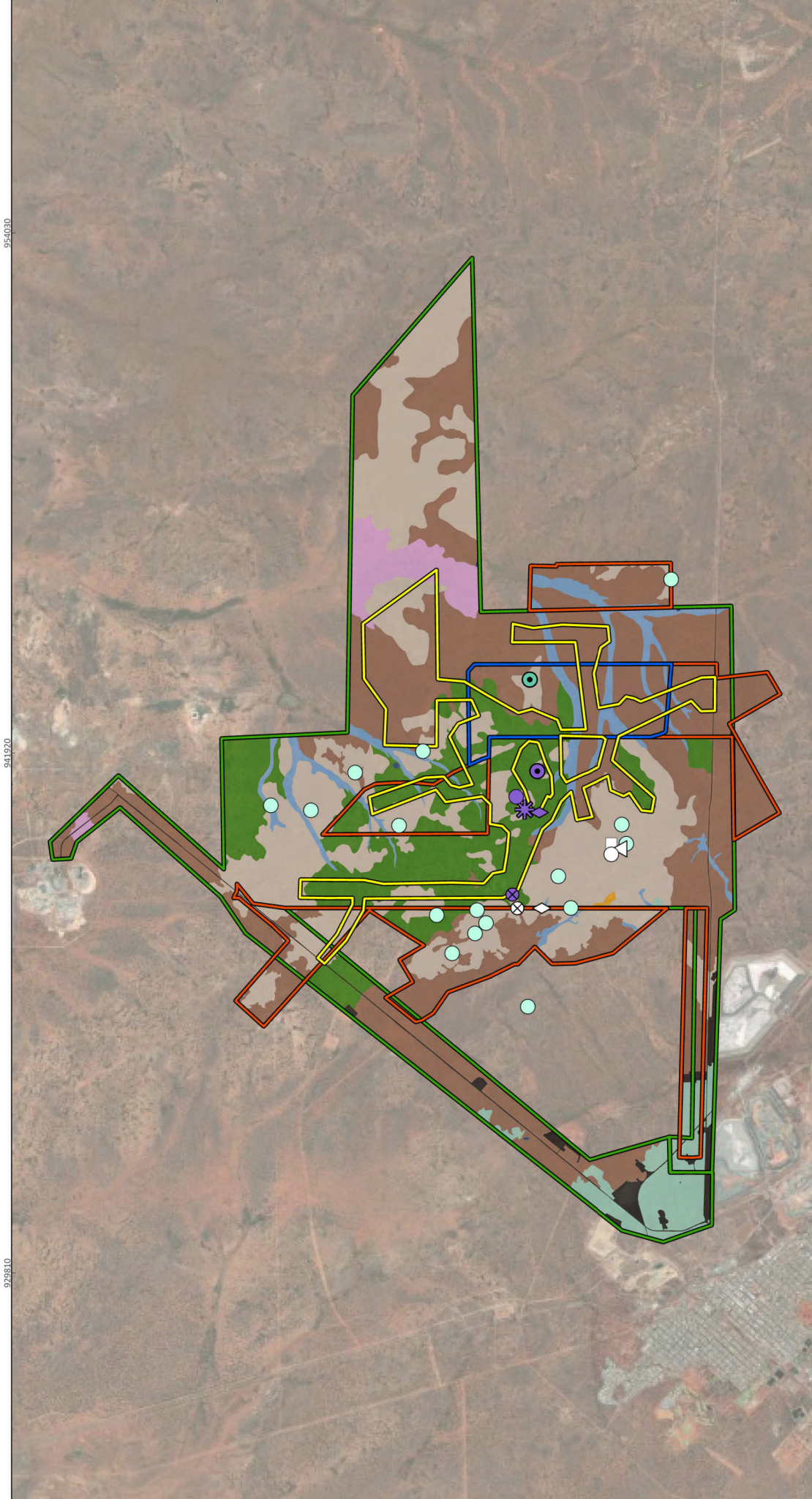
Habitat type	Site/s	Description	Extent and % of study area	Representative photograph
Grassland	2022: KO-021	Grassland cleared of nearly all upper story vegetation. Sparse <i>Eucalyptus</i> and mulga shrubs. MF: Low suitability.	516.2 ha 3.9%	
Floodplain	2022: KO-018, KO-027	Floodplain with scattered trees, chenopod shrubs and grasses on clay loam. Likely to be seasonally inundated. MF: Low suitability.	386.6 ha 2.9%	

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Prepared for Northern Star Resources Ltd

Habitat type	Site/s	Description	Extent and % of study area	Representative photograph
Minor breakaway supporting open woodland	2022: KO-001	Open <i>Eucalyptus</i> woodland over scattered shrubs on stony hill slopes with minor breakaway. MF: Low suitability.	8.4 ha 0.1%	
Cleared/developed – infrastructure		Cleared mining or residential infrastructure areas including major roads, the Yarri Road Waste Disposal Facility, Pilbara Cement Supplies, Ningamia Community and mining areas along Bullong Road. Unsuitable for MF.	250.1 ha 1.9%	

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Habitat type	Site/s	Description	Extent and % of study area	Representative photograph
Farm dam with permanent pools	2022: KO-017	Farm dams with permanent water with fringing vegetation including <i>Eucalyptus</i> , scattered low to mid high shrubs and grasses on dam walls. MF: Low suitability.	4.1 ha 0.03%	
Total			13,188.9 ha	



928810

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Northern Star Resources Limited
Kalgoorlie Regional Renewable Energy Project

Project No 1704
 Date 22/05/2025
 Drawn by JL JL

0 2.5 5
 Kilometers

1:121,100 (at A4) GDA 1994 MGA Zone 51

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Study area

- 2022
- 2023
- 2024
- 2025

Habitat

- Cleared - infrastructure
- Drainage line
- Farm dam with permanent pools
- Floodplain
- Grassland

Malleefowl records

- 2022
- Calling
- Foraging evidence
- MF Mound active
- MF Mound inactive - (subclass 2)

Tracks

- 2024
- MF Mound inactive - (subclass 1)
- 2025
- MF Mound active
- MF Mound inactive - (subclass 1)
- MF Mound inactive - (subclass 2)
- Tracks
- Northern Star verified mounds

Figure 3-1
Fauna habitats and Malleefowl records from the field surveys

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3.2 MALLEEFOWL RECORDS

Malleefowl were recorded during 3 of the 4 field surveys (Table 3-2; Figure 3-1).

In the 2022 field survey:

- an Inactive (Subclass 2) Malleefowl mound was recorded on an old exploration track surrounded by closed canopy mallee-mulga Shrubland at site KO-MF1.
- an Active Malleefowl mound was recorded in mallee-mulga Shrubland habitat at site KO-MF2. Foraging signs were observed in nearby leaf litter, and one individual was heard calling.
- a single set of recent Malleefowl tracks were recorded in sandy substrate of mulga Shrubland during transect searches at site KO-020.

In the 2024 field survey:

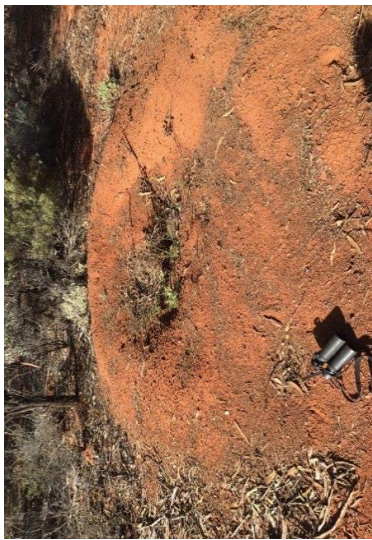

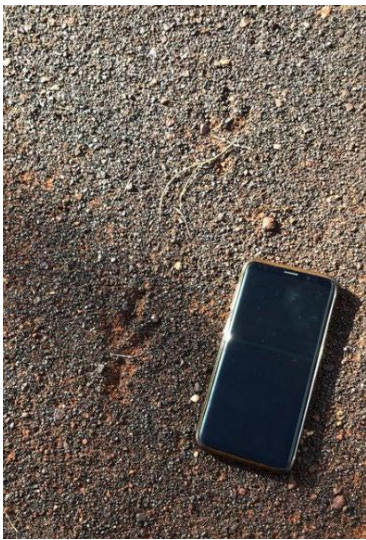

- an Inactive (Subclass 1) Malleefowl mound was found in mallee-mulga Shrubland along an old vehicle track at site BF_MFmound.

In the 2025 field survey:




- 3 of the LiDAR points visited by the survey team were Malleefowl mounds:
 - an Inactive (Subclass 1) Malleefowl mound at MF_Mound01 at the transition between Eremophila Shrubland and Groved woodland of gimlet *Eucalyptus* with *Melaleuca*.
 - an Inactive (Subclass 2) Malleefowl mound at MF_Mound02 in mulga Shrubland.
 - an Active Malleefowl mound at MF_Mound03 in mulga Shrubland.
- a Malleefowl feather was recorded at BF_18 in mulga Shrubland, 400 m southwest of MF_Mound03.
- a single set of recent Malleefowl tracks were recorded at MF_Track01 in groved woodland, 600 m southwest of MF_Mound03.

In 2025, staff from the Northern Star environment department ground-truthed and verified 16 mounds of variable status within and nearby the study area (Figure 3-1; Figure 3-2).




Table 3-2 Details of Malleefowl recorded during the field survey

Site	Survey records	Photograph	Site	Survey records	Photograph
2022			2022		
KO-MF1	Malleefowl mound - Inactive (Subclass 2) Habitat - Shrubland		KO-MF2	Malleefowl mound - Active Calling Habitat - Shrubland	
KO-020	Single tracks traversing study area from SE to NW. Habitat - Shrubland/ Drainage line			Foraging signs in leaf litter Habitat - Shrubland	

Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Site	Survey records	Photograph	Site	Survey records	Photograph
2024					
BF_MFmound	Malleefowl mound – Inactive (Subclass 1) Showed signs of scraping following recent heavy rainfall. Habitat - Shrubland				
2025			2025		
MF_Mound01	Malleefowl mound – Inactive (Subclass 1) Habitat – Shrubland/ Groved woodland		MF_Mound02	Malleefowl mound – Inactive (Subclass 2) Habitat - Shrubland	

Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Site	Survey records	Photograph	Site	Survey records	Photograph
MF_Mound03	Malleefowl mound – Active Habitat - Shrubland		MF_Track01	Single set of tracks	
BF_18	Malleefowl feather				

3.3 MALLEEFOWL HABITAT ASSESSMENT

Malleefowl habitat assessments were conducted at 116 sites within the study areas (Table 3-3), with 5 sites classified as High suitability (Critical habitat with potential for breeding as well as primary foraging; score of 9 or more), 9 as Moderate (i) suitability (secondary breeding habitat and foraging, dispersal; scores of 7-8 where specific attributes are met), both highlighted in green (Table 3-4).

Malleefowl habitat suitability scores from assessed sites were used to extrapolate suitability for the entirety of the study area (Figure 3-2). Habitat of High suitability comprised 231.6 ha (1.8%) of the study area, and Moderate (i) comprised 1,753.6 ha (13.3%). The majority of the study area was assessed as Moderate (ii) suitability (foraging and dispersal habitat, unsuitable for breeding; scores of 4 to 8; 5,539.3 ha, 42.0%), and Low suitability (potential dispersal or low quality foraging; scores of 3 or less; 5,414.3 ha, 41.1%), with the remaining 250.1 ha (1.9%) comprised of cleared and developed areas which are not suitable for Malleefowl (Table 3-3).

High and Moderate (i) suitability sites were mostly located in Shrubland habitat type (Table 3-3).

Table 3-3 Summary of Malleefowl habitat assessment scores

Malleefowl habitat suitability	Score	Survey sites	Total sites	Habitat type/s
None 250.1 ha	0			Cleared/developed areas
Low 5,414.3 ha Marginal foraging and dispersal habitat	1	2022: KO-017 2025: BF_12	2	Farm dam with permanent pools, Open woodland
	2	2022: KO-007, KO-013, KO-018, KO-019, KO-021, KO-027 2023: BF004 2025: BF_52	8	Groved woodland, Open woodland, Shrubland, Floodplain, Grassland
	3	2022: KO-001, KO-002, KO-003, KO-005, KO-006, KO-022, KO-028 2023: BF002, BF006, BF007, BF009, BF011, BF012 2024: BF07, BF08 2025: BF_13, BF_27, BF_29, BF_35, BF_39, BF_48, BF_54	22	Minor breakaway supporting open woodland, Open woodland, Groved woodland, Drainage line, Floodplain
Moderate 7,292.9 ha	4	2022: KO-012, KO-023, KO-024, KO-025 2025: BF_05, BF_09, BF_10, BF_15, BF_16, BF_20, BF_21, BF_22, BF_28, BF_36, BF_37, BF_40, BF_41, BF_42, BF_45, BF_46, BF_47, BF_50, BF_53, BF_55	24	Shrubland, Open woodland, Groved woodland, Drainage line
	Moderate (ii) 5,539.3 ha Foraging and dispersal habitat (not suitable for breeding)	5	2022: KO-014, KO-015, KO-016, KO-Opp04 2023: BF001, BF014 2024: BF04, BF06 2025: BF_02, BF_03, BF_04, BF_06, BF_07, BF_08, BF_11, BF_14, BF_17, BF_19, BF_24, BF_25, BF_26, BF_31, BF_32, BF_38, BF_43, BF_49, BF_51	27
Moderate (i) 1,753.6 ha Foraging and dispersal habitat, marginal breeding habitat		6	2022: KO-010, KO-011, KO-029 2023: BF010 2024: BF01, BF02, BF03 2025: BF_01, BF_30, BF_33	10
	7	2022: KO-004, KO-026 2023: BF005, BF013, BF015, BF016, BF018 2024: BF05 2025: BF_44, MF_Mound02	10	Drainage line, Shrubland
	8	2022: KO-008, KO-009, KO-020, KO-MF1	8	Drainage line, Shrubland

**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Malleefowl habitat suitability	Score	Survey sites	Total sites	Habitat type/s
		2023: BF003, BF008 2025: BF_23, MF_Mound01		
High (Critical habitat) 231.6 ha Breeding and foraging habitat	9	2022: KO-MF2 2024: BF_MFmound 2025: BF_18, BF_34, MF_Mound03	5	Shrubland
	10			
	11			
	12			
Total number of sites			116	

Table 3-4 Malleefowl habitat assessment scores

Survey year	Site	Substrate	Slope	Leaf litter	Canopy cover	Veg. screening	Veg. type	Score	Habitat suitability
2022	KO-001	0	0	1	1	0	1	3	Low
	KO-002	1	1	1	0	0	0	3	Low
	KO-003	0	0	1	1	0	1	3	Low
	KO-004	2	2	1	0	1	1	7	Moderate (ii)
	KO-005	1	0	1	0	0	1	3	Low
	KO-006	1	0	1	0	0	1	3	Low
	KO-007	1	0	0	0	0	1	2	Low
	KO-008	2	2	1	1	1	1	8	Moderate (ii)
	KO-009	1	2	1	1	1	2	8	Moderate (i)
	KO-010	2	0	1	1	1	0	6	Moderate (ii)
	KO-011	2	0	1	1	1	0	6	Moderate (ii)
	KO-012	1	1	1	1	0	0	4	Moderate (ii)
	KO-013	1	0	0	0	0	0	2	Low
	KO-014	1	1	1	1	0	1	5	Moderate (ii)
	KO-015	1	0	1	1	1	1	5	Moderate (ii)
	KO-016	1	0	1	1	1	1	5	Moderate (ii)
	KO-017	0	0	0	0	0	0	1	Low
	KO-018	2	0	0	0	0	0	2	Low
	KO-019	2	0	0	0	0	0	2	Low
	KO-020	1	2	1	1	1	2	8	Moderate (i)
	KO-021	2	0	0	0	0	0	2	Low
	KO-022	1	0	0	1	0	0	3	Low
	KO-023	2	2	0	0	0	0	4	Moderate (ii)
	KO-024	1	0	0	0	1	1	4	Moderate (ii)
	KO-025	2	2	0	0	0	0	4	Moderate (ii)

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Survey year	Site	Substrate	Slope	Leaf litter	Canopy cover	Veg. screening	Veg. type	Score	Habitat suitability
2022	KO-026	1	2	1	1	1	1	7	Moderate (ii)
	KO-027	2	0	0	0	0	0	2	Low
	KO-028	1	0	1	0	0	1	3	Low
	KO-029	2	0	1	1	1	1	6	Moderate (ii)
	KO-MF1	2	2	1	1	1	1	8	Moderate (i)
	KO-MF2	2	2	1	1	2	1	9	High
	KO-Opp04	2	0	0	1	1	1	5	Moderate (ii)
	BF001	2	2	0	0	0	1	5	Moderate (ii)
	BF002	2	1	0	0	0	0	3	Low
	BF003	2	2	1	1	1	0	8	Moderate (ii)
2023	BF004	0	1	0	0	0	1	2	Low
	BF005	1	2	1	1	1	1	7	Moderate (i)
	BF006	0	1	1	0	0	1	3	Low
	BF007	1	1	0	0	0	1	3	Low
	BF008	2	2	1	1	1	1	8	Moderate (ii)
	BF009	1	1	0	0	0	1	3	Low
	BF010	2	2	1	1	0	1	6	Moderate (ii)
	BF011	1	1	0	0	0	1	3	Low
	BF012	1	1	0	0	0	1	3	Low
	BF013	1	2	1	1	1	1	7	Moderate (i)
2024	BF014	2	2	0	0	0	1	5	Moderate (ii)
	BF015	2	2	1	1	1	1	7	Moderate (ii)
	BF016	2	2	1	1	0	1	7	Moderate (ii)
	BF018	1	2	1	1	1	1	7	Moderate (i)
	BF_MFmound	1	2	1	1	2	2	9	High
	BF01	1	2	1	0	1	1	6	Moderate (ii)
	BF02	1	2	1	1	1	1	6	Moderate (ii)

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Survey year	Site	Substrate	Slope	Leaf litter	Canopy cover	Veg. screening	Veg. type	Score	Habitat suitability
2024	BF03	1	2	1	1	0	1	6	Moderate (ii)
	BF04	1	2	1	1	0	0	5	Moderate (ii)
	BF05	1	2	1	1	1	1	7	Moderate (ii)
	BF06	1	2	1	1	0	0	5	Moderate (ii)
	BF07	1	2	0	0	0	0	3	Low
	BF08	1	2	0	0	0	0	3	Low
	BF_01	1	2	0	0	0	1	2	Moderate (ii)
	BF_02	1	2	0	0	1	0	1	Moderate (ii)
2025	BF_03	1	2	0	1	0	1	5	Moderate (ii)
	BF_04	1	2	0	1	0	1	5	Moderate (ii)
	BF_05	1	2	0	1	0	1	5	Moderate (ii)
	BF_06	1	2	0	0	0	1	4	Moderate (ii)
	BF_07	1	2	0	0	1	1	5	Moderate (ii)
	BF_08	1	2	0	0	1	1	5	Moderate (ii)
	BF_09	1	2	0	0	0	1	4	Moderate (ii)
	BF_10	1	2	0	0	0	1	4	Moderate (ii)
	BF_11	1	2	0	0	1	1	5	Moderate (ii)
	BF_12	0	1	0	0	0	0	1	Low
	BF_13	1	2	0	0	0	0	3	Low
	BF_14	1	2	0	0	1	1	5	Moderate (ii)
	BF_15	1	2	0	0	0	1	4	Moderate (ii)
BF_16	1	2	0	0	0	0	4	Moderate (ii)	
BF_17	1	2	0	0	1	1	5	Moderate (ii)	
BF_18	1	2	1	1	1	2	9	High	
BF_19	1	2	0	0	0	1	5	Moderate (ii)	
BF_20	1	2	0	0	0	1	4	Moderate (ii)	
BF_21	1	2	0	0	0	1	4	Moderate (ii)	

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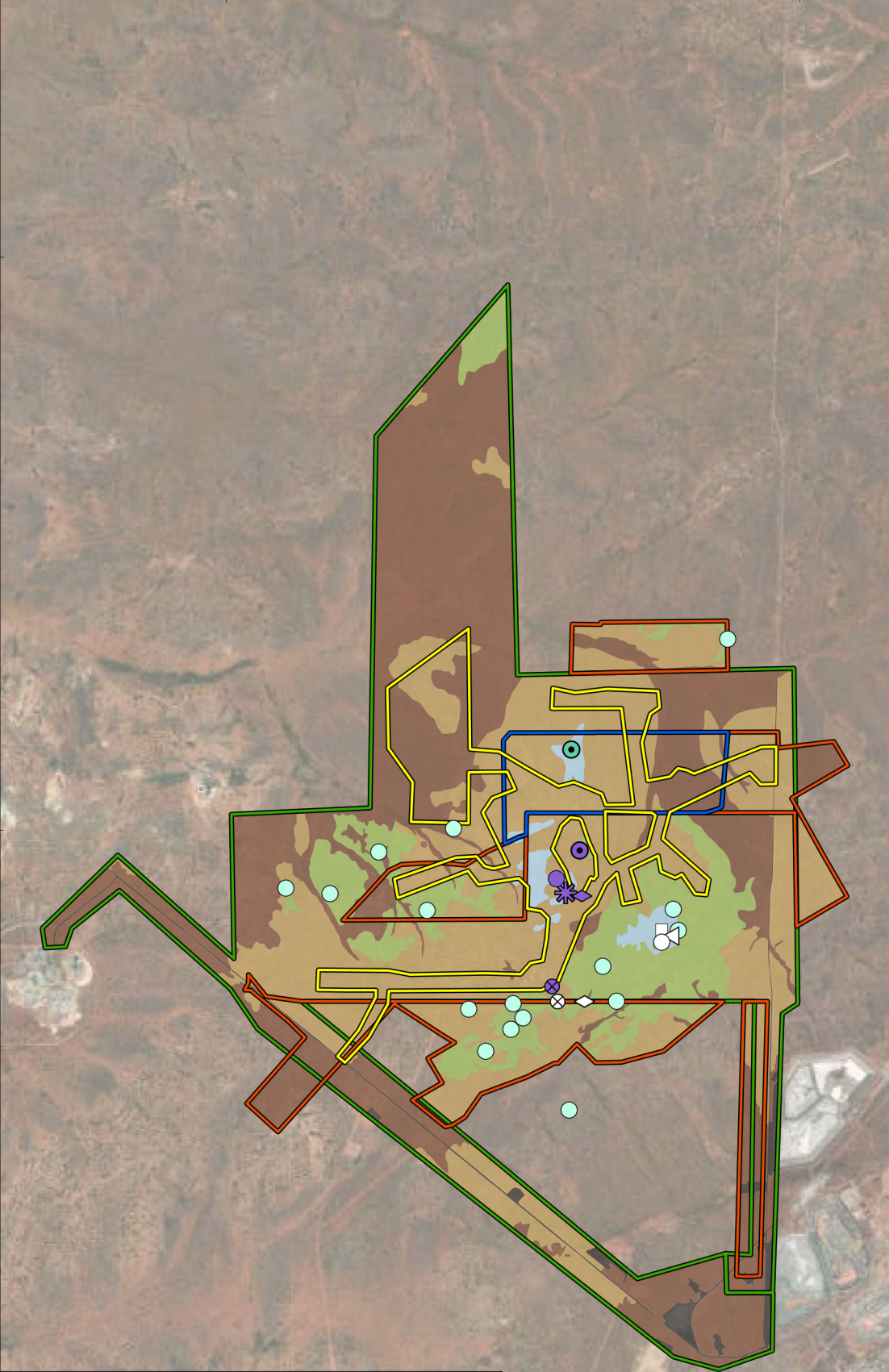
Survey year	Site	Substrate	Slope	Leaf litter	Canopy cover	Veg. screening	Veg. type	Score	Habitat suitability
2025	BF_22	1	2	0	0	1	0	4	Moderate (ii)
	BF_23	1	2	1	0	2	2	8	Moderate (i)
	BF_24	1	2	0	0	1	1	5	Moderate (ii)
	BF_25	1	2	0	0	1	1	5	Moderate (ii)
	BF_26	1	2	0	0	1	1	5	Moderate (ii)
	BF_27	1	2	0	0	0	0	3	Low
	BF_28	1	2	0	0	0	1	4	Moderate (ii)
	BF_29	1	2	0	0	0	0	3	Low
	BF_30	1	2	1	2	0	0	6	Moderate (ii)
	BF_31	1	2	0	0	1	1	5	Moderate (ii)
	BF_32	1	2	0	0	1	1	5	Moderate (ii)
	BF_33	1	2	0	1	1	1	6	Moderate (ii)
	BF_34	1	2	1	2	2	1	9	High
	BF_35	1	2	0	0	0	0	3	Low
	BF_36	1	2	0	0	0	1	4	Moderate (ii)
	BF_37	1	2	0	0	1	0	4	Moderate (ii)
	BF_38	1	2	0	0	1	1	5	Moderate (ii)
	BF_39	1	2	0	0	0	0	3	Low
	BF_40	1	2	0	0	1	0	4	Moderate (ii)
	BF_41	1	2	0	0	1	0	4	Moderate (ii)
	BF_42	1	2	0	0	0	1	4	Moderate (ii)
	BF_43	1	2	0	0	0	1	5	Moderate (ii)
	BF_44	1	2	0	0	2	2	7	Moderate (ii)
	BF_45	1	2	0	0	0	1	4	Moderate (ii)
BF_46	1	2	0	0	0	1	4	Moderate (ii)	
BF_47	1	2	0	0	0	1	4	Moderate (ii)	
BF_48	1	2	0	0	0	0	3	Low	

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Survey year	Site	Substrate	Slope	Leaf litter	Canopy cover	Veg. screening	Veg. type	Score	Habitat suitability
2025	BF_49	1	2	1	1	0	0	5	Moderate (ii)
	BF_50	1	2	0	0	0	1	4	Moderate (ii)
	BF_51	1	2	1	0	0	1	5	Moderate (ii)
	BF_52	0	1	0	0	0	1	2	Low
	BF_53	1	2	0	0	0	1	4	Moderate (ii)
	BF_54	1	2	0	0	0	0	3	Low
	BF_55	1	2	0	0	0	1	4	Moderate (ii)
	MF_Mound01	1	2	1	1	2	1	8	Moderate (i)
	MF_Mound02	1	2	0	1	1	2	7	Moderate (i)
	MF_Mound03	1	2	1	1	2	2	9	High

Malleefowl records

- 2022**
- Calling
- △ Foraging evidence
- MF Mound active
- ⊗ MF Mound inactive - (subclass 2)
- ◇ Tracks
- 2024**
- MF Mound inactive - (subclass 1)
- 2025**
- ✱ Feathers
- MF Mound active
- MF Mound inactive - (subclass 1)
- ⊗ MF Mound inactive - (subclass 2)
- ◇ Tracks
- Northern Star verified mounds



Northern Star Resources Limited
Kalgoorlie Regional Renewable Energy Project

Project No 1704
 Date 28/05/2025
 Drawn by JL
 Map author JL

0 2.5 5
 Kilometers

1:121,100 (at A4)
 GDA 1994 MGA Zone 51

- Habitat suitability**
- High - Breeding and foraging habitat
 - Moderate (i) - Foraging and dispersal habitat, marginal breeding habitat
 - Moderate (ii) - Foraging and dispersal habitat (not suitable for breeding)
 - Low - Marginal foraging and dispersal habitat
 - None
- Study area**
- 2022
 - 2023
 - 2024
 - 2025

Figure 3-2
Malleefowl habitat suitability within the study area



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3.4 REGIONAL MALLEEFOWL HABITAT

Approximately 50% of habitat within 40 km of the study area is Suitable (mosaic), meaning that these areas contain suitable shrubland/woodland habitat interspersed with scattered areas of unsuitable habitat (e.g. cleared areas, naturally open patches, and/or drainage lines. A quarter of the extrapolation area is Open, most of which is comprises of salt lakes and their associated riparian chenopod shrubland and flats (Table 3-5; Figure 3-3).

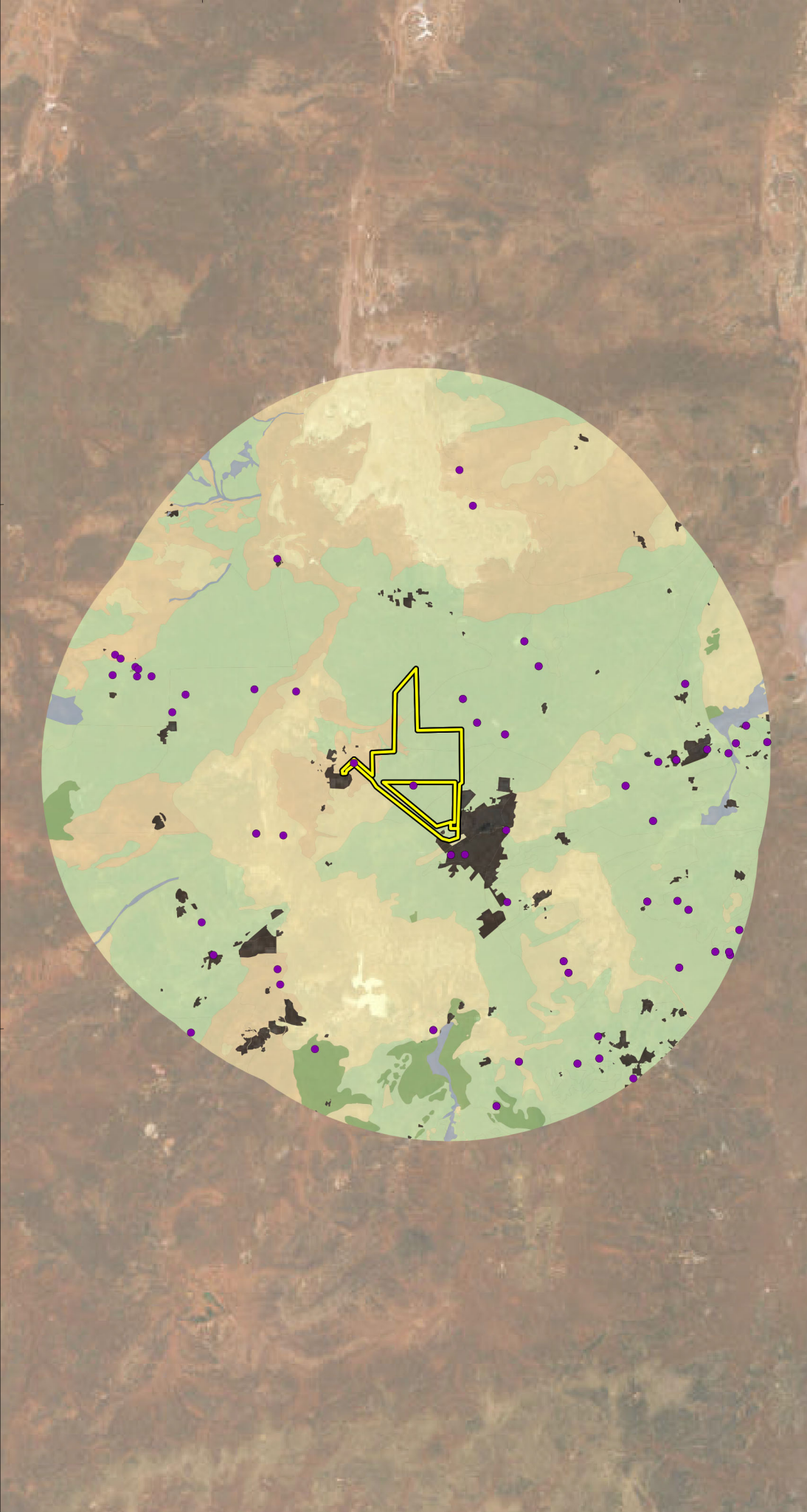
Table 3-5 Malleefowl habitat within the regional assessment area

MF Class	Area (ha)	Area (%)
Drainage	8,669	1.1
Suitable	19,105	2.5
Cleared	20,494	2.7
Open/drainage	131,267	17.2
Open	196,720	25.7
Suitable (mosaic)	388,739	50.8
Total	764,993	100.0%

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Northern Star Resources Limited
Kalgoorlie Regional Renewable Energy Project

Project No	1704
Date	26/05/2025
Drawn by	JL
Map author	BK

0 15 30
Kilometers

1:698,200 (at A4) GDA 1994 MGA Zone 51

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Study area

MF class

- Cleared
- Drainage
- Open
- Open/drainage
- Suitable

- Suitable (mosaic)
- Desktop Malleefowl records

Figure 3-3

Regional Malleefowl habitat

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4 DISCUSSION

The study area lies on the border of the East Murchison and Eastern Goldfields subregion (Cowan 2001a, b) within the northern boundary of the Great Western Woodlands (DEC 2010). This location roughly coincides with the mulga-eucalypt line, within a transitional zone where mulga shrublands and eucalypt woodlands form a complex mosaic.

4.1 FAUNA HABITATS

Of the 9 fauna habitat types identified in the study area, Open woodland and Shrubland are the most abundant, respectively occupying 40.2% and 30.4% of the study area. The south-western portion of the study area is close to Kalgoorlie-Boulder; as such, obvious signs of disturbance are notable. A higher proportion of this area has been cleared for infrastructure purposes, and vegetation has been almost entirely cleared of upper story vegetation and is dominated by tussock grassland and invasive weeds.

Fauna habitats identified and mapped in the study area match broadly with those in the surrounding area and most are widespread in the region. Restricted natural habitats in the study area include 'minor breakaway supporting open woodland', 'grassland' and 'floodplain'. However, these habitats also occur outside the study area and do not represent critical habitat for Malleefowl.

Habitats within the study area most likely to represent an important life history component for Malleefowl (i.e., used for breeding, dispersal, refuge and foraging) are those with high productivity or structural complexity. This includes Shrubland, Drainage lines, and Groved woodland.

Shrubland occurs patchily throughout the study area, and more broadly in the region as shown by the abundance of Suitable (mosaic) habitat (50.8%) and presence of Suitable habitat (2.5%) in the regional habitat assessment. The dense shrubby understory, extensive leaf litter and abundance of flowering/seeding shrubs provide cover from predators and productive foraging. Shrubland habitat is likely to be regularly utilised by Malleefowl for nesting, foraging, and dispersal.

Drainage lines have higher vegetation complexity and density than surrounding habitats due to the availability of water. The dense vegetation provides sheltered dispersal corridors and foraging habitat for Malleefowl. Drainage areas are not suitable for Malleefowl breeding as surface water flow would inundate and wash away mounds. The regional habitat assessment shows few major Drainage lines (1.1%) in the vicinity of Kalgoorlie, but Suitable (mosaic) habitat (50.8%) and Open/drainage habitat (17.2%) both include minor drainage lines which are common in the landscape.

Groved woodland may provide dispersal and some foraging for Malleefowl as it provides connected areas of canopy cover that shield Malleefowl from aerial predators and the abundant bark litter within wooded stands may provide foraging. Groved woodland is generally not suitable for Malleefowl breeding due to the lack of understorey vegetation required to provide cover from predators. Woodlands are widespread within the regional habitat assessment area within the Suitable (mosaic) habitat (50.8%) and Suitable habitat (2.5%) classes.

The remaining habitats are widespread or are unlikely to represent important habitat to Malleefowl.

4.2 MALLEEFOWL RECORDS

Malleefowl were recorded at 9 different locations within the study area over the duration of the surveys. The records include 6 mounds (2 Active, 2 Inactive (Subclass 1) and 2 Inactive (Subclass 2)) as well as tracks, foraging evidence, shed feathers, and calls. Northern Star staff verified an additional 16 LiDAR mounds within and nearby the study area.

High suitability Malleefowl habitat (breeding habitat) occurs in small patches through the centre of the study area and is associated with Shrubland with dense canopy and horizontal screening which reduces visibility to predators, and suitable substrate, and leaf litter abundance required for mound building and foraging.

High suitability habitat occupies only a small area of the study area (231.6 ha; 1.8%) while Moderate (i) suitability habitat is more extensive (1,753.6 ha; 13.3%). Moderate (i) habitat represents secondary or marginally suitable breeding habitat as it can contain the required attributes for breeding; however, the habitat is generally of lower quality and contains a mosaic of habitats with variable degrees of suitability for breeding. Therefore, not all Moderate (i) habitat represents suitable breeding habitat. Moderate (i) habitat does represent good quality foraging habitat, supporting the breeding that is confirmed in the area. The majority of the study area is classified as Moderate (ii) habitat (5,539.3 ha; 42%) which represents foraging and dispersal habitat through open and groved woodlands and shrublands without sufficient vegetation cover for breeding. These habitat types are common and widespread in the region.

The occurrence of Malleefowl in the study area is consistent with their known distribution at a local and regional scale, and their tendency to nest and forage in shrublands dominated by mallee and acacia (NMRT 2022). These habitats are widespread in the region as shown in the regional habitat assessment. Malleefowl are not restricted to the study area and known to occur patchily in WA from Shark Bay to the southwest Nullarbor (DCCEEW 2024). Locally, there is an abundance of Malleefowl records, including mounds/breeding sites within 40 km of the study area (DBCA 2024; Phoenix 2024b).

4.3 CONCLUSION

The fauna habitats identified and mapped in the study area are broadly consistent with those known from the region and most are considered widespread. All habitats also occur outside the study area.

Malleefowl was recorded several times during the surveys, including evidence of breeding (6 mounds). Malleefowl habitat suitability in the study area was mapped and comprised of 231.6 ha (1.8%) of High suitability habitat and 1,753.6 ha (13.3%) of Moderate (i) suitability habitat. The majority of the study area was considered Moderate (ii) (5,539.3 ha, 42%), or Low suitability habitat (5,414.3 ha, 41.1%), suitable only for foraging and dispersal of Malleefowl. The remaining 250.1 ha (1.9%) consisted of Cleared or developed areas which are unsuitable for Malleefowl.

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Appendix 1 Survey site locations

Site name	Latitude	Longitude
2022		
KO-001	-30.7191	121.5689
KO-002	-30.7127	121.6036
KO-003	-30.6765	121.6076
KO-004	-30.743	121.6222
KO-005	-30.6713	121.6808
KO-006	-30.6832	121.6814
KO-007	-30.6918	121.6812
KO-008	-30.6778	121.7018
KO-009	-30.6866	121.7126
KO-010	-30.6995	121.573
KO-011	-30.6854	121.5751
KO-012	-30.6727	121.5665
KO-013	-30.6662	121.5846
KO-014	-30.6572	121.5969
KO-015	-30.6879	121.6058
KO-016	-30.7226	121.6357

Site name	Latitude	Longitude
2022		
KO-017	-30.6952	121.6519
KO-018	-30.6705	121.6548
KO-019	-30.6727	121.6276
KO-020	-30.7071	121.5683
KO-021	-30.7359	121.4954
KO-022	-30.7408	121.5396
KO-023	-30.7419	121.5745
KO-024	-30.6915	121.6266
KO-025	-30.7284	121.5849
KO-026	-30.647	121.5761
KO-027	-30.6108	121.5894
KO-028	-30.6711	121.5468
KO-029	-30.6996	121.5212
KO-MF1	-30.7019	121.5681
KO-MF2	-30.7219	121.5823
KO-Opp04	-30.691	121.6102

2023		
BF001	-30.6439	121.5732
BF002	-30.6514	121.5496
BF003	-30.6576	121.5671
BF004	-30.6587	121.5642
BF005	-30.6906	121.557
BF006	-30.7008	121.5621
BF007	-30.7246	121.5636
BF008	-30.7407	121.556
BF009	-30.738	121.531

2023		
BF010	-30.7492	121.6044
BF011	-30.7533	121.592
BF012	-30.7509	121.6183
BF013	-30.7377	121.6169
BF014	-30.7099	121.6484
BF015	-30.7237	121.6479
BF016	-30.6721	121.5945
BF018	-30.6887	121.597

2024		
BF_MFmound	-30.7052	121.6237
BF01	-30.7282	121.6191
BF02	-30.7266	121.6186
BF03	-30.7212	121.6189
BF04	-30.715	121.619

2024		
BF05	-30.7102	121.6192
BF06	-30.7222	121.6207
BF07	-30.7253	121.6226
BF08	-30.7325	121.6223

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Site name	Latitude	Longitude
2025		
BF_01	-30.6568	121.5726
BF_02	-30.6581	121.573
BF_03	-30.6615	121.572
BF_04	-30.6656	121.5723
BF_05	-30.6681	121.5685
BF_06	-30.668	121.573
BF_07	-30.6717	121.5733
BF_08	-30.6747	121.5728
BF_09	-30.6792	121.5719
BF_10	-30.6832	121.5722
BF_11	-30.6879	121.5723
BF_12	-30.6934	121.5735
BF_13	-30.6956	121.5726
BF_14	-30.7014	121.5743
BF_15	-30.7009	121.5799
BF_16	-30.7034	121.5798
BF_17	-30.7083	121.5907
BF_18	-30.7037	121.5921
BF_19	-30.7011	121.5931
BF_20	-30.7039	121.5865
BF_21	-30.6775	121.5957
BF_22	-30.6728	121.5937
BF_23	-30.672	121.595
BF_24	-30.6828	121.5983
BF_25	-30.6881	121.5959
BF_26	-30.6942	121.5972
BF_27	-30.6859	121.6221
BF_28	-30.6917	121.6213
BF_29	-30.696	121.618
BF_30	-30.7294	121.5931

Site name	Latitude	Longitude
2025		
BF_31	-30.7006	121.615
BF_32	-30.7237	121.5971
BF_33	-30.7033	121.6349
BF_34	-30.7091	121.6344
BF_35	-30.7118	121.6348
BF_36	-30.7197	121.6341
BF_37	-30.7173	121.6241
BF_38	-30.7136	121.6103
BF_39	-30.7065	121.6106
BF_40	-30.6996	121.6036
BF_41	-30.71	121.6014
BF_42	-30.7156	121.5993
BF_43	-30.7161	121.5918
BF_44	-30.6833	121.6118
BF_45	-30.721	121.6034
BF_46	-30.7226	121.6107
BF_47	-30.7317	121.6161
BF_48	-30.7258	121.617
BF_49	-30.7207	121.616
BF_50	-30.7184	121.6153
BF_51	-30.742	121.6177
BF_52	-30.7373	121.6196
BF_53	-30.6761	121.6113
BF_54	-30.674	121.6223
BF_55	-30.6727	121.6312
MF_Mound01	-30.7065	121.6014
MF_Mound02	-30.7009	121.5714
MF_Mound03	-30.702	121.5951
MF_Track01	-30.706	121.5913

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Appendix 2 LiDAR point locations

Site name	Latitude	Longitude
MF_Mound01	-30.7065	121.6014
MF_Mound02	-30.7009	121.5714
MF_Mound03	-30.7020	121.5951
NotAMound01	-30.6616	121.5548
NotAMound02	-30.6581	121.5597
NotAMound03	-30.6589	121.5609
NotAMound04	-30.6582	121.5692
NotAMound05	-30.6584	121.5694
NotAMound06	-30.6591	121.5682
NotAMound07	-30.6680	121.5688
NotAMound08	-30.6655	121.5549
NotAMound09	-30.6653	121.5530
NotAMound10	-30.7094	121.5687
NotAMound11	-30.6943	121.5732
NotAMound12	-30.6981	121.5667
NotAMound13	-30.6988	121.5798
NotAMound14	-30.6800	121.5955
NotAMound15	-30.6946	121.5941
NotAMound16	-30.6876	121.6088
NotAMound17	-30.6897	121.6212
NotAMound18	-30.6871	121.6197
NotAMound19	-30.6867	121.6196
NotAMound20	-30.6856	121.6203
NotAMound21	-30.6853	121.6210

Site name	Latitude	Longitude
NotAMound22	-30.6868	121.6224
NotAMound23	-30.6860	121.6239
NotAMound24	-30.6859	121.6241
NotAMound25	-30.6872	121.6249
NotAMound26	-30.6975	121.6421
NotAMound27	-30.7002	121.6374
NotAMound28	-30.7390	121.5918
NotAMound29	-30.7273	121.5918
NotAMound30	-30.7062	121.6354
NotAMound31	-30.7132	121.6326
NotAMound32	-30.7040	121.6014
NotAMound33	-30.7232	121.5935
NotAMound34	-30.7184	121.5915
NotAMound35	-30.7197	121.5894
NotAMound36	-30.7169	121.5956
NotAMound37	-30.7165	121.5943
NotAMound38	-30.7214	121.6132
NotAMound39	-30.7209	121.6170
NotAMound40	-30.7209	121.6170
NotAMound41	-30.7377	121.6193
NotAMound42	-30.7288	121.5681
NotAMound43	-30.7218	121.5664
NotAMound44	-30.7181	121.5668

Appendix 3 Survey site descriptions

Site details			
Site	KO-001	Position (WGS84)	121.5689, -30.7192
Slope	moderate	Topography	breakaway
Soil colour	black	Soil texture	alluvium
Rock cover (%)	30	Rock type	limestone, laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	16 Sep 2022	16 Sep 2022
1	Site description	12 Sep 2022	12 Sep 2022

Site description - visit 1 (12 Sep 2022)			
Low hills and breakaways with limestone and laterite supporting mixed low open Eucalyptus woodland over Melaleuca over scattered mixed low shrubs.			
Habitat	woodland		
Disturbance	vehicle tracks, litter		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	66	Litter distribution	
Tree cover (%)	30	Litter depth (cm)	3.0
Shrub cover (%)	35	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	1



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Site details			
Site	KO-002	Position (WGS84)	121.6033, -30.7137
Slope	Negligible	Topography	drainage line
Soil colour	orange	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	15 Sep 2022	15 Sep 2022
1	Site description	12 Sep 2022	12 Sep 2022

Site description - visit 1 (12 Sep 2022)			
Tall Eucalyptus forest of gimlet in drainage line over mixed low shrubs including Eremophila, Senna, greybush and bluebush on orange clay loam soils.			
Habitat	woodland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	131	Litter distribution	
Tree cover (%)	70	Litter depth (cm)	4.0
Shrub cover (%)	60	Litter cover (%)	60
Grass cover (%)	0	Herb cover (%)	1

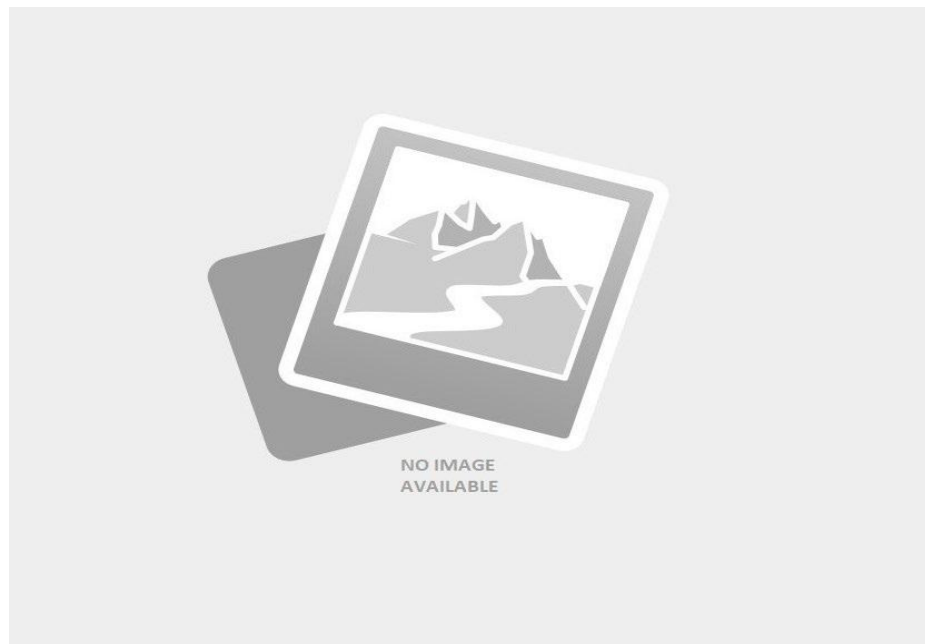


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Site details			
Site	KO-003	Position (WGS84)	121.6076, -30.6765
Slope	gentle	Topography	drainage line
Soil colour	orange, red	Soil texture	clay loam
Rock cover (%)		Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	14 Sep 2022	14 Sep 2022
1	Site description	12 Sep 2022	12 Sep 2022

Site description - visit 1 (12 Sep 2022)			
Drainage line with scattered Eucalyptus over mulga over mixed low shrubs on red orange clay loam. Puddles of standing water in drainage.			
Habitat	shrubland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	97	Litter distribution	even/continuous
Tree cover (%)	10	Litter depth (cm)	3.0
Shrub cover (%)	80	Litter cover (%)	70
Grass cover (%)	5	Herb cover (%)	2



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Site details			
Site	KO-004	Position (WGS84)	121.6221, -30.7428
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	13 Sep 2022	13 Sep 2022

Site description - visit 1 (13 Sep 2022)			
Open Eucalyptus woodland of gimlet over low succulent shrubs, Eremophila and greybush on orange clay loam.			
Habitat	open woodland		
Disturbance	none evident		
Vegetation condition	Very Good	Fire age	>5
Total veg. cover (%)	81	Litter distribution	under vegetation
Tree cover (%)	40	Litter depth (cm)	2.0
Shrub cover (%)	40	Litter cover (%)	35
Grass cover (%)	0	Herb cover (%)	1



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Site details			
Site	KO-005	Position (WGS84)	121.6807, -30.6713
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	13 Sep 2022	13 Sep 2022
1	Site description	13 Sep 2022	13 Sep 2022

Site description - visit 1 (13 Sep 2022)			
Tall open Eucalyptus woodland over Eremophila, Senna, greybush and wattle over Ptilotus on orange clay loam soil plain.			
Habitat	woodland		
Disturbance	vehicle tracks,litter,livestock tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	72	Litter distribution	under vegetation
Tree cover (%)	30	Litter depth (cm)	5.0
Shrub cover (%)	40	Litter cover (%)	30
Grass cover (%)	0	Herb cover (%)	2



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Site details			
Site	KO-006	Position (WGS84)	121.6814, -30.6832
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	13 Sep 2022	13 Sep 2022

Site description - visit 1 (13 Sep 2022)			
Low Eucalyptus open woodland of gimlet over greybush on orange clay loam plain.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	72	Litter distribution	under vegetation
Tree cover (%)	30	Litter depth (cm)	3.0
Shrub cover (%)	40	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	2



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Site details			
Site	KO-007	Position (WGS84)	121.6812, -30.6917
Slope	gentle	Topography	hill slope
Soil colour	orange	Soil texture	gravel,clay loam and laterite
Rock cover (%)	0	Rock type	basalt, laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	13 Sep 2022	13 Sep 2022
1	Site description	13 Sep 2022	13 Sep 2022

Site description - visit 1 (13 Sep 2022)			
Scattered smooth bark Eucalyptus and Allocasuarina over Melaleuca shrubland over saltbush and bluebush over orange clay loam and gravel on low hill.			
Habitat	shrubland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>5
Total veg. cover (%)	44	Litter distribution	scattered
Tree cover (%)	3	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	5
Grass cover (%)	0	Herb cover (%)	1



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Site details			
Site	KO-008	Position (WGS84)	121.7015, -30.6781
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	13 Sep 2022	13 Sep 2022
1	Site description	13 Sep 2022	13 Sep 2022

Site description - visit 1 (13 Sep 2022)			
Open mallee woodland over mulga and tall Eremophila over mixed low shrubs on orange clay loam plain.			
Habitat	shrubland		
Disturbance	vehicle tracks,litter		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	85	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	4.0
Shrub cover (%)	70	Litter cover (%)	70
Grass cover (%)	0	Herb cover (%)	0



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Site details			
Site	KO-009	Position (WGS84)	121.7126, -30.6866
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	13 Sep 2022	13 Sep 2022

Site description - visit 1 (13 Sep 2022)			
Scattered mallee over Allocasuarina and mulga over mixed low shrubs on orange clay loam plain.			
Habitat	shrubland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	55	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	3.0
Shrub cover (%)	40	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



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Site details			
Site	KO-010	Position (WGS84)	121.5731, -30.6995
Slope	Negligible	Topography	undulating plain
Soil colour	yellow	Soil texture	clay loam,sand
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	14 Sep 2022	14 Sep 2022

Site description - visit 1 (14 Sep 2022)			
Low closed woodland dominated by gimlet over Eremophila shrub land on yellow clay loam with minor sand.			
Habitat	woodland		
Disturbance	vehicle tracks,exploration (drill pads and access tracks)		
Vegetation condition	Very Good	Fire age	>5
Total veg. cover (%)	150	Litter distribution	under vegetation
Tree cover (%)	70	Litter depth (cm)	1.0
Shrub cover (%)	75	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	5



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Site details			
Site	KO-011	Position (WGS84)	121.5752, -30.6854
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay loam,sand
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	14 Sep 2022	14 Sep 2022
1	Site description	14 Sep 2022	14 Sep 2022

Site description - visit 1 (14 Sep 2022)			
Tall semi-closed Eucalypts woodland of gimlet over dense Eremophila shrubland on orange clay loam plain with minor sand.			
Habitat	woodland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	121	Litter distribution	under vegetation
Tree cover (%)	40	Litter depth (cm)	3.0
Shrub cover (%)	80	Litter cover (%)	40
Grass cover (%)	0	Herb cover (%)	1



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Site details			
Site	KO-012	Position (WGS84)	121.5666, -30.6727
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	14 Sep 2022	14 Sep 2022

Site description - visit 1 (14 Sep 2022)			
Tall mixed Eucalyptus woodland over Senna, Eremophila and greybush on orange clay loam plain with minor sand.			
Habitat	woodland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	81	Litter distribution	under vegetation
Tree cover (%)	40	Litter depth (cm)	
Shrub cover (%)	40	Litter cover (%)	50
Grass cover (%)	0	Herb cover (%)	1



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Site details			
Site	KO-013	Position (WGS84)	121.5845, -30.6662
Slope	gentle	Topography	hill slope
Soil colour	orange	Soil texture	gravel,clay loam
Rock cover (%)	0	Rock type	quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	14 Sep 2022	14 Sep 2022

Site description - visit 1 (14 Sep 2022)			
Very open Eucalyptus woodland over mixed low shrubs on low stony hill.			
Habitat	woodland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	51	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	10
Grass cover (%)	0	Herb cover (%)	1



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-014	Position (WGS84)	121.5969, -30.6571
Slope	gentle	Topography	plain
Soil colour	red-orange	Soil texture	clay loam,gravel
Rock cover (%)	0	Rock type	quartz, laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	14 Sep 2022	14 Sep 2022

Site description - visit 1 (14 Sep 2022)			
Scattered mallee and Allocasuarina over mulga shrubland over low mixed shrubs on gravel clay loam on low hill.			
Habitat	shrubland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	65	Litter distribution	under vegetation
Tree cover (%)	5	Litter depth (cm)	2.0
Shrub cover (%)	60	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-015	Position (WGS84)	121.6058, -30.6879
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay loam,sand,alluvium
Rock cover (%)	0	Rock type	quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	14 Sep 2022	14 Sep 2022

Site description - visit 1 (14 Sep 2022)			
Groved Eucalyptus woodland over small green succulent shrubs and Eremophila on orange clay loam plain with alluvial sand and gravel.			
Habitat	woodland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	57	Litter distribution	
Tree cover (%)	20	Litter depth (cm)	3.0
Shrub cover (%)	35	Litter cover (%)	10
Grass cover (%)	0	Herb cover (%)	2



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-016	Position (WGS84)	121.6357, -30.7226
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay loam,sand,gravel
Rock cover (%)	0	Rock type	laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	15 Sep 2022	15 Sep 2022

Site description - visit 1 (15 Sep 2022)			
Open Eucalyptus woodland of gimlet over Acacia, Eremophila and greybush on red clay loam plain with minor sand.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	75	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	2.0
Shrub cover (%)	35	Litter cover (%)	15
Grass cover (%)	5	Herb cover (%)	15



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-017	Position (WGS84)	121.6519, -30.6952
Slope	Negligible	Topography	plain
Soil colour	red-orange	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	15 Sep 2022	15 Sep 2022

Site description - visit 1 (15 Sep 2022)			
Farm dam surrounded by clumps of grass, low shrubs and Eucalyptus trees on plain of red orange clay loam.			
Habitat	waterhole		
Disturbance	excavation		
Vegetation condition	Degraded	Fire age	>10
Total veg. cover (%)	46	Litter distribution	NONE
Tree cover (%)	5	Litter depth (cm)	2.0
Shrub cover (%)	20	Litter cover (%)	5
Grass cover (%)	20	Herb cover (%)	1



**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd**

Site details			
Site	KO-018	Position (WGS84)	121.6548, -30.6705
Slope	Negligible	Topography	floodplain
Soil colour	red-orange	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	15 Sep 2022	15 Sep 2022

Site description - visit 1 (15 Sep 2022)			
Floodplain with scattered Allocasuarina over halophytic shrubland over grasses and herbs on red orange clay loam.			
Habitat	shrubland		
Disturbance	vehicle tracks,grazing-medium,livestock tracks		
Vegetation condition	Poor	Fire age	>10
Total veg. cover (%)	145	Litter distribution	under vegetation
Tree cover (%)	5	Litter depth (cm)	1.0
Shrub cover (%)	70	Litter cover (%)	5
Grass cover (%)	40	Herb cover (%)	30



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-019	Position (WGS84)	121.6275, -30.6727
Slope	Negligible	Topography	plain
Soil colour	red-orange	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	15 Sep 2022	15 Sep 2022
1	Site description	15 Sep 2022	15 Sep 2022

Site description - visit 1 (15 Sep 2022)			
Tall open Eucalyptus woodland over low mixed shrubs including greybush and Eremophila on red orange clay loam plain.			
Habitat	woodland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	72	Litter distribution	under vegetation
Tree cover (%)	30	Litter depth (cm)	4.0
Shrub cover (%)	40	Litter cover (%)	40
Grass cover (%)	0	Herb cover (%)	2



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-020	Position (WGS84)	121.5683, -30.7071
Slope	gentle	Topography	undulating plain
Soil colour	red-orange	Soil texture	clay loam,sand
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Opportunistic sighting	15 Sep 2022	15 Sep 2022
1	Site description	15 Sep 2022	15 Sep 2022

Site description - visit 1 (15 Sep 2022)			
Scattered mallee and Allocasuarina over mulga shrubland on red orange clay loam with sand.			
Habitat	shrubland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	77	Litter distribution	under vegetation
Tree cover (%)	5	Litter depth (cm)	
Shrub cover (%)	70	Litter cover (%)	50
Grass cover (%)	0	Herb cover (%)	2



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-021	Position (WGS84)	121.4954, -30.7359
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	gravel,clay loam
Rock cover (%)	0	Rock type	laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	16 Sep 2022	16 Sep 2022

Site description - visit 1 (16 Sep 2022)			
Sparse Eucalyptus over Acacia greybush and Eremophilla low open shrubland over tussock grasses and invasive weeds on clay loam with gravel.			
Habitat	grassland		
Disturbance	vehicle tracks,historic clearing,weed infestation		
Vegetation condition	Poor	Fire age	>5
Total veg. cover (%)	98	Litter distribution	under vegetation
Tree cover (%)	3	Litter depth (cm)	1.0
Shrub cover (%)	15	Litter cover (%)	3
Grass cover (%)	70	Herb cover (%)	10



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-022	Position (WGS84)	121.5396, -30.7408
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay,sand,loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	16 Sep 2022	16 Sep 2022

Site description - visit 1 (16 Sep 2022)			
Open Eucalyptus woodland over Allocasurina, mulga, Acacia, Eremophilla and greybush over mixed herbs on orange clay loam with minor sand			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	78	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	2.0
Shrub cover (%)	50	Litter cover (%)	10
Grass cover (%)	3	Herb cover (%)	5



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-023	Position (WGS84)	121.5745, -30.7419
Slope	gentle	Topography	undulating plain
Soil colour	orange	Soil texture	clay loam,gravel
Rock cover (%)	1	Rock type	laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	16 Sep 2022	16 Sep 2022
1	Site description	16 Sep 2022	16 Sep 2022

Site description - visit 1 (16 Sep 2022)			
Open Eucalyptus woodland over mulga, Melaleuca and Eremophilla shrubs on gravel and clay loam hilltop.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>5
Total veg. cover (%)	83	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	2.0
Shrub cover (%)	60	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	3



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-024	Position (WGS84)	121.6266, -30.6915
Slope	Negligible	Topography	plain
Soil colour	red-orange	Soil texture	gravel,clay loam
Rock cover (%)	0	Rock type	quartz, laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	16 Sep 2022	16 Sep 2022

Site description - visit 1 (16 Sep 2022)			
Open Eucalyptus woodland over sparse mulga shrubs over greybush, Acacia and Senna on gravel, quartz and clay loam plain.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	50	Litter distribution	scattered
Tree cover (%)	15	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	5



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-025	Position (WGS84)	121.5849, -30.7284
Slope	moderate	Topography	undulating plain
Soil colour	orange	Soil texture	gravel, laterite, clay loam
Rock cover (%)	5	Rock type	laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	16 Sep 2022	16 Sep 2022

Site description - visit 1 (16 Sep 2022)			
Scattered Eucalyptus and Allocasurina over closed mulga shrubland over Acacia, greybush and saltbush on gravel and clay loam undulating plain.			
Habitat	shrubland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	78	Litter distribution	under vegetation
Tree cover (%)	3	Litter depth (cm)	2.0
Shrub cover (%)	75	Litter cover (%)	10
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-026	Position (WGS84)	121.5761, -30.6471
Slope	gentle	Topography	plain
Soil colour	orange	Soil texture	sand,clay loam,gravel
Rock cover (%)	1	Rock type	laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	16 Sep 2022	16 Sep 2022

Site description - visit 1 (16 Sep 2022)			
Scattered Allocasurina and Eucalyptus over mulga shrubland over mixed shubs over scattered herbs on orange laterite and clay loam with sparse sand.			
Habitat	shrubland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>5
Total veg. cover (%)	70	Litter distribution	under vegetation
Tree cover (%)	10	Litter depth (cm)	2.0
Shrub cover (%)	55	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	5



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Site details			
Site	KO-027	Position (WGS84)	121.5894, -30.6108
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay loam
Rock cover (%)	1	Rock type	laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	16 Sep 2022	16 Sep 2022

Site description - visit 1 (16 Sep 2022)			
Scattered Eucalyptus over greybush and Acacia shrubland over scattered herbs on clay loam plain.			
Habitat	shrubland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	65	Litter distribution	under vegetation
Tree cover (%)	5	Litter depth (cm)	1.0
Shrub cover (%)	50	Litter cover (%)	2
Grass cover (%)	5	Herb cover (%)	5



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-028	Position (WGS84)	121.5468, -30.6711
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay loam,gravel
Rock cover (%)	1	Rock type	quartz, laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	16 Sep 2022	16 Sep 2022

Site description - visit 1 (16 Sep 2022)			
Open Eucalyptus woodland over greybush and Acacia over scattered herbs on orange clay loam and gravel.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	80	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	5.0
Shrub cover (%)	60	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	5



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-029	Position (WGS84)	121.5205, -30.7003
Slope	Negligible	Topography	plain
Soil colour	orange	Soil texture	clay loam,gravel
Rock cover (%)	0	Rock type	laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	16 Sep 2022	16 Sep 2022

Site description - visit 1 (16 Sep 2022)			
Eucalyptus woodland of gimlet over Acacia, greybush and Eremophilla over scattered herbs on orange clay loam and gravel.			
Habitat	woodland		
Disturbance	exploration (drill pads and access tracks),vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	105	Litter distribution	under vegetation
Tree cover (%)	50	Litter depth (cm)	3.0
Shrub cover (%)	50	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	5



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-MF1	Position (WGS84)	121.5682, -30.7020
Slope	gentle	Topography	undulating plain
Soil colour	orange	Soil texture	clay loam
Rock cover (%)	0	Rock type	not recorded

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	15 Sep 2022	15 Sep 2022
1	Opportunistic sighting	14 Sep 2022	14 Sep 2022
1	Site description	14 Sep 2022	14 Sep 2022

Site description - visit 1 (14 Sep 2022)			
Closed Eucalyptus mallee woodland over mixed Acacia and Eremophila and mixed shrubs over orange clay loam.			
Habitat	woodland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>5
Total veg. cover (%)	160	Litter distribution	under vegetation
Tree cover (%)	70	Litter depth (cm)	3.0
Shrub cover (%)	80	Litter cover (%)	80
Grass cover (%)	0	Herb cover (%)	10



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-MF2	Position (WGS84)	121.5823, -30.7219
Slope	moderate	Topography	undulating plain
Soil colour	red-orange	Soil texture	clay loam
Rock cover (%)	1	Rock type	quartz, laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Opportunistic sighting	20 Sep 2022	20 Sep 2022
1	Site description	20 Sep 2022	20 Sep 2022

Site description - visit 1 (20 Sep 2022)			
Open Eucalyptus woodland over mulga and Melaleuca shrubland over Acacia, greybush and saltbush on gravel and clay loam undulating plain.			
Habitat	shrubland		
Disturbance	vehicle tracks		
Vegetation condition	KVG	Fire age	>10
Total veg. cover (%)	80	Litter distribution	under vegetation
Tree cover (%)	5	Litter depth (cm)	2.0
Shrub cover (%)	75	Litter cover (%)	10
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	KO-Opp04	Position (WGS84)	121.6103, -30.6910
Slope	gentle	Topography	hill slope
Soil colour	red-orange	Soil texture	clay loam and laterite
Rock cover (%)	2	Rock type	laterite

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Opportunistic sighting	16 Sep 2022	16 Sep 2022
1	Site description	16 Sep 2022	16 Sep 2022

Site description - visit 1 (16 Sep 2022)			
Scattered mallee over Allocasuarina over Acacia and Eremophila on stony hill slope.			
Habitat	shrubland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	>10
Total veg. cover (%)	71	Litter distribution	under vegetation
Tree cover (%)	10	Litter depth (cm)	
Shrub cover (%)	60	Litter cover (%)	
Grass cover (%)	0	Herb cover (%)	1

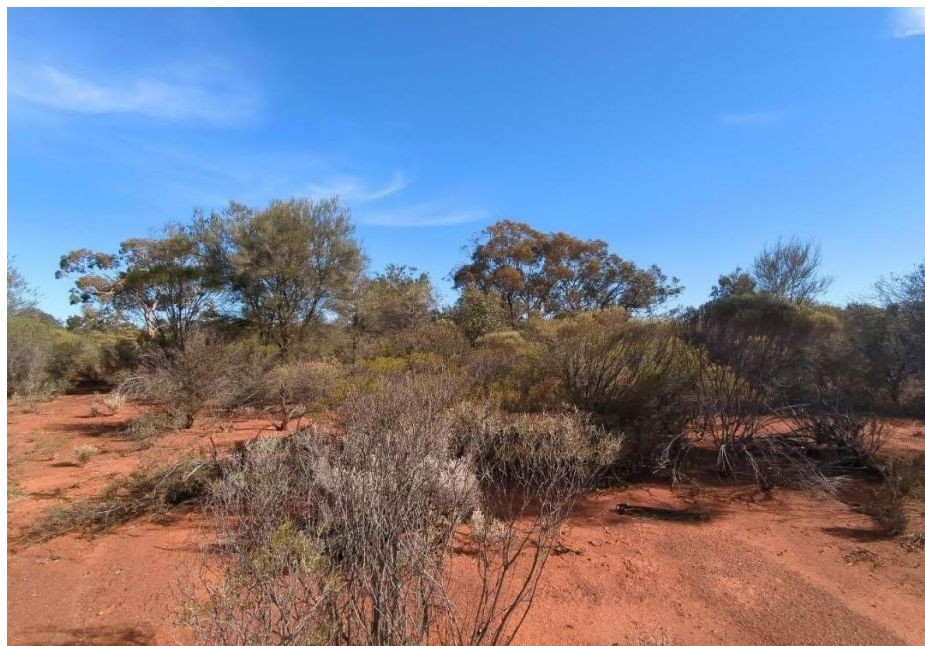


Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF001	Position (WGS84)	121.5732, -30.6439
Slope	Negligible	Topography	undulating plain
Soil colour	orange	Soil texture	sandy loam
Rock cover (%)		Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	21 Nov 2023	21 Nov 2023
1	Site description	21 Nov 2023	21 Nov 2023

Site description - visit 1 (21 Nov 2023)			
Salmon gum and gimlet over allocasurina, eremophila, senna artemisioides sub. filifolia, acacia tetragonophylla and other senna sp. Over blue bush and salt bush. Understorey is open on sandy loam.			
Habitat	open woodland		
Disturbance	erosion channels, vehicle tracks		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	74	Litter distribution	under vegetation
Tree cover (%)	25	Litter depth (cm)	1.0
Shrub cover (%)	45	Litter cover (%)	1
Grass cover (%)	2	Herb cover (%)	2



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF002	Position (WGS84)	121.5496, -30.6514
Slope	gentle	Topography	undulating plain
Soil colour	orange,brown	Soil texture	loam
Rock cover (%)	5	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	21 Nov 2023	21 Nov 2023
1	Site description	21 Nov 2023	21 Nov 2023

Site description - visit 1 (21 Nov 2023)			
Salmon gum over open middle and sparse understorey. The lower storey is open consisting of small shrubs of blue bush atop substrate.			
Habitat	open woodland		
Disturbance	erosion channels,vehicle tracks		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	52	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	1.0
Shrub cover (%)	35	Litter cover (%)	2
Grass cover (%)	1	Herb cover (%)	1



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF003	Position (WGS84)	121.5671, -30.6576
Slope	gentle	Topography	foot slope
Soil colour	orange	Soil texture	loam
Rock cover (%)	0	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	22 Nov 2023	22 Nov 2023
1	Site description	22 Nov 2023	22 Nov 2023

Site description - visit 1 (22 Nov 2023)			
Open mallee woodland consisting of salmon gums and gimlet over blue bush and acacia. Understorey is open with small herbs.			
Habitat	open woodland		
Disturbance	erosion channels, vehicle tracks		
Vegetation condition	Good	Fire age	>5
Total veg. cover (%)	120	Litter distribution	under vegetation
Tree cover (%)	45	Litter depth (cm)	1.0
Shrub cover (%)	60	Litter cover (%)	10
Grass cover (%)	10	Herb cover (%)	5



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF004	Position (WGS84)	121.5639, -30.6585
Slope	moderate	Topography	breakaway
Soil colour	orange	Soil texture	gravel
Rock cover (%)		Rock type	granite - outcropping

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	22 Nov 2023	22 Nov 2023
1	Site description	22 Nov 2023	22 Nov 2023

Site description - visit 1 (22 Nov 2023)			
Allocasurina and sparse mallee over acacia, blue bush, and senna. Little understorey atop rocky substrate.			
Habitat	open woodland		
Disturbance	litter		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	96	Litter distribution	under vegetation
Tree cover (%)	30	Litter depth (cm)	1.0
Shrub cover (%)	60	Litter cover (%)	2
Grass cover (%)	5	Herb cover (%)	1



**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd**

Site details			
Site	BF005	Position (WGS84)	121.5570, -30.6906
Slope	Negligible	Topography	undulating plain
Soil colour	orange	Soil texture	loam
Rock cover (%)	0	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	22 Nov 2023	22 Nov 2023
1	Site description	22 Nov 2023	22 Nov 2023

Site description - visit 1 (22 Nov 2023)			
Malle eucalypts over acacia and blue bush. Understorey is open with little grasses or herbs atop loam substrate.			
Habitat	open woodland		
Disturbance	litter, vehicle tracks		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	119	Litter distribution	under vegetation
Tree cover (%)	50	Litter depth (cm)	1.0
Shrub cover (%)	65	Litter cover (%)	5
Grass cover (%)	2	Herb cover (%)	2



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF006	Position (WGS84)	121.5621, -30.7007
Slope	moderate	Topography	foot slope
Soil colour	orange	Soil texture	loam
Rock cover (%)	2	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	22 Nov 2023	22 Nov 2023

Site description - visit 1 (22 Nov 2023)			
Open eucalypts and allocasurina over acacia and eremophila. Understorey is open atop rocky substrate.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	83	Litter distribution	scattered
Tree cover (%)	35	Litter depth (cm)	1.0
Shrub cover (%)	45	Litter cover (%)	30
Grass cover (%)	2	Herb cover (%)	1



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF007	Position (WGS84)	121.5636, -30.7246
Slope	gentle	Topography	hill slope
Soil colour	orange	Soil texture	loam
Rock cover (%)	1	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	22 Nov 2023	22 Nov 2023

Site description - visit 1 (22 Nov 2023)			
Eucalypts and allocasurina over young allocasurina, eremophila and acacia. Middle storey is more dense than canopy or understorey. Substrate is rocky loam.			
Habitat	shrubland		
Disturbance	erosion channels,litter		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	62	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	1
Grass cover (%)	1	Herb cover (%)	1



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF008	Position (WGS84)	121.5560, -30.7407
Slope	gentle	Topography	hill slope
Soil colour	orange	Soil texture	clay loam
Rock cover (%)	1	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	22 Nov 2023	22 Nov 2023

Site description - visit 1 (22 Nov 2023)			
Open mallee woodland over allocasurina younger eucalypts and acacia. Understorey is sparse atop clay loam substrate.			
Habitat	open woodland		
Disturbance	litter,erosion channels,vehicle tracks		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	79	Litter distribution	scattered
Tree cover (%)	30	Litter depth (cm)	1.0
Shrub cover (%)	45	Litter cover (%)	25
Grass cover (%)	2	Herb cover (%)	2

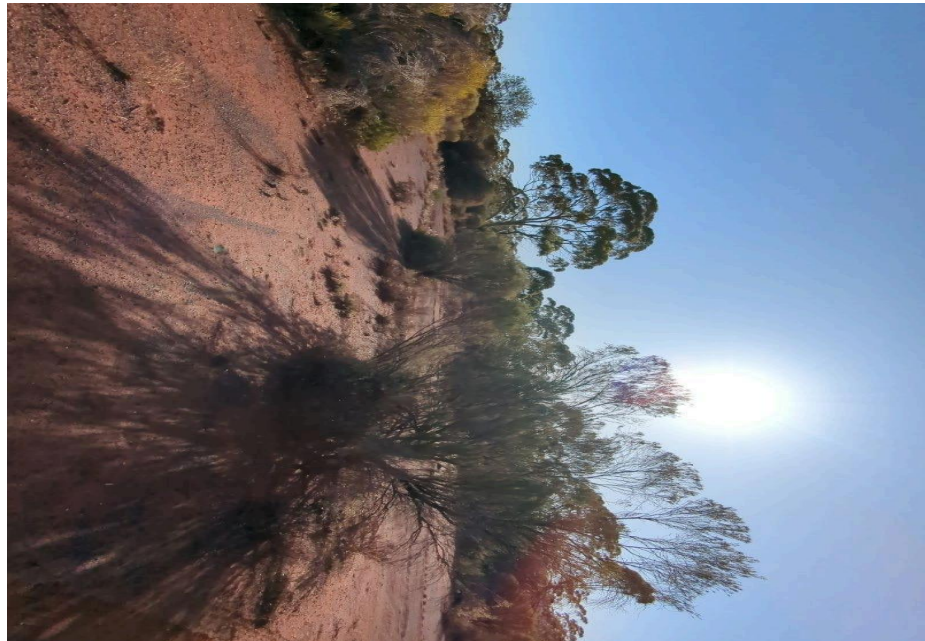


Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF009	Position (WGS84)	121.5310, -30.7380
Slope	Negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	1	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	23 Nov 2023	23 Nov 2023

Site description - visit 1 (23 Nov 2023)			
Open eucalypt woodland, substantially cleared with obvious signs of litter and vehicle tracks. middlestorey consists of acacia and eremophila, while understorey is limited atop clay loam substrate.			
Habitat	open woodland		
Disturbance	erosion channels, historic clearing, litter, vehicle tracks, weed infestation		
Vegetation condition	Degraded	Fire age	>10
Total veg. cover (%)	29	Litter distribution	under vegetation
Tree cover (%)	2	Litter depth (cm)	1.0
Shrub cover (%)	25	Litter cover (%)	2
Grass cover (%)	1	Herb cover (%)	1



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF010	Position (WGS84)	121.6044, -30.7492
Slope	gentle	Topography	hill slope
Soil colour	red-orange	Soil texture	clay loam
Rock cover (%)	1	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	23 Nov 2023	23 Nov 2023
1	Site description	23 Nov 2023	23 Nov 2023

Site description - visit 1 (23 Nov 2023)			
Open eucalypt woodland over acacia and eremophila. Understorey is open and small atop clay loam.			
Habitat	open woodland		
Disturbance	erosion channels, vehicle tracks		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	87	Litter distribution	under vegetation
Tree cover (%)	35	Litter depth (cm)	1.0
Shrub cover (%)	50	Litter cover (%)	10
Grass cover (%)	1	Herb cover (%)	1



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF011	Position (WGS84)	121.5914, -30.7532
Slope	Negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	1	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	23 Nov 2023	23 Nov 2023
1	Site description	23 Nov 2023	23 Nov 2023

Site description - visit 1 (23 Nov 2023)			
Eucalypt and allocasurina over eremophila, blue bush and acacia. Large cleared areas atop rocky clay loam and quartz.			
Habitat	open woodland		
Disturbance	erosion channels, historic clearing, vehicle tracks		
Vegetation condition	Degraded	Fire age	>10
Total veg. cover (%)	47	Litter distribution	sparse
Tree cover (%)	15	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	1
Grass cover (%)	1	Herb cover (%)	1



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF012	Position (WGS84)	121.6183, -30.7509
Slope	Negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	1	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	23 Nov 2023	23 Nov 2023
1	Site description	23 Nov 2023	23 Nov 2023

Site description - visit 1 (23 Nov 2023)			
Open eucalypt woodland over acacia and younger eucalypts. Middle and understorey very open atop clay loam substrate.			
Habitat	open woodland		
Disturbance	erosion channels,litter,vehicle tracks		
Vegetation condition	Degraded	Fire age	>10
Total veg. cover (%)	45	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	2
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF013	Position (WGS84)	121.6168, -30.7377
Slope	Negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Foraging - vertebrates	23 Nov 2023	23 Nov 2023
1	Site description	23 Nov 2023	23 Nov 2023

Site description - visit 1 (23 Nov 2023)			
Eucalypt woodland over eremophila, senna, acacia and blue bush. Understorey is open with scattered shrubs atop clay loam.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	64	Litter distribution	scattered
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	35
Grass cover (%)	2	Herb cover (%)	2



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF014	Position (WGS84)	121.6484, -30.7099
Slope	Negligible	Topography	undulating plain
Soil colour	orange	Soil texture	clay loam
Rock cover (%)	0	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	23 Nov 2023	23 Nov 2023

Site description - visit 1 (23 Nov 2023)			
Eucalypts over acacia, eremophila and salt bush. Understorey is bare with little leaf litter atop clay loam.			
Habitat	open woodland		
Disturbance	erosion channels,livestock tracks,litter,vehicle tracks		
Vegetation condition	Degraded	Fire age	>10
Total veg. cover (%)	42	Litter distribution	under vegetation
Tree cover (%)	10	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	2
Grass cover (%)	1	Herb cover (%)	1



**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd**

Site details			
Site	BF015	Position (WGS84)	121.6479, -30.7236
Slope	Negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	1	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	23 Nov 2023	23 Nov 2023

Site description - visit 1 (23 Nov 2023)			
Open eucalypt woodland over blue bush, tea tree and eucalypt saplings. Large cleared areas atop clay loam.			
Habitat	open woodland		
Disturbance	vehicle tracks, historic clearing		
Vegetation condition	Degraded	Fire age	>10
Total veg. cover (%)	82	Litter distribution	scattered
Tree cover (%)	38	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	30
Grass cover (%)	2	Herb cover (%)	2



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF016	Position (WGS84)	121.5944, -30.6721
Slope	Negligible	Topography	undulating plain
Soil colour	orange	Soil texture	clay loam
Rock cover (%)	1	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	24 Nov 2023	24 Nov 2023

Site description - visit 1 (24 Nov 2023)			
Open eucalypt woodland and allocasurina over eremophila and acacias. Understorey is open atop clay loam			
Habitat	open woodland		
Disturbance	erosion channels, livestock tracks		
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	52	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	15
Grass cover (%)	1	Herb cover (%)	1



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF018	Position (WGS84)	121.5970, -30.6886
Slope	Negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	1	Rock type	granite - rocks

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	24 Nov 2023	24 Nov 2023

Site description - visit 1 (24 Nov 2023)			
Open eucalypt woodland over blue bush, acacia and eremophila. Understorey is open atop clay loam substrate.			
Habitat	open woodland		
Disturbance			
Vegetation condition	Good	Fire age	>10
Total veg. cover (%)	70	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	35	Litter cover (%)	20
Grass cover (%)	10	Herb cover (%)	5



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_MFmound	Position (WGS84)	121.6236, -30.7052
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay loam, gravel
Rock cover (%)	0	Rock type	laterite quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Transect	14 Jun 2024	14 Jun 2024
1	Site description	05 Jul 2024	05 Jul 2024

Site description - visit 1 (05 Jul 2024)			
Open eucalyptus woodland over medium high shrubs of mulga form acacia, senna, acacia tetragonaphila, maireanna, dononaea on red brown clay loam with laterite and quartz gravel.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition		Fire age	long-unburnt (>10 years)
Total veg. cover (%)	85	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	65	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF01	Position (WGS84)	121.6191, -30.7282
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay,gravel
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	12 Jun 2024	12 Jun 2024

Site description - visit 1 (12 Jun 2024)			
Scattered eucalypts over shrubs of eremophila, Atriplex, pearl blue bush on red brown clay with black gravel.			
Habitat	shrubland		
Disturbance	evidence of feral animals,grazing-low,livestock tracks,vehicle tracks		
Vegetation condition	Excellent	Fire age	>10
Total veg. cover (%)	40	Litter distribution	under vegetation
Tree cover (%)	10	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd**

Site details			
Site	BF02	Position (WGS84)	121.6188, -30.7248
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay,clay loam,gravel,rocks
Rock cover (%)	0	Rock type	sandstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	12 Jun 2024	12 Jun 2024

Site description - visit 1 (12 Jun 2024)			
Gimlet eucalyptus over acacia tetragonaphilia, eremophila, Atriplex on large sandstone cobbles on red brown clay loam.			
Habitat	open woodland		
Disturbance	grazing-low,livestock tracks		
Vegetation condition	Excellent	Fire age	>10
Total veg. cover (%)	55	Litter distribution	under vegetation
Tree cover (%)	25	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF03	Position (WGS84)	121.6189, -30.7212
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay,clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	12 Jun 2024	12 Jun 2024

Site description - visit 1 (12 Jun 2024)			
Open gimlet eucalyptus woodland over low shrubs of eremophila, pearl blue bush, Atriplex, exocarpus on red brown clay loam.			
Habitat	open woodland		
Disturbance	grazing-low,livestock tracks,vehicle tracks		
Vegetation condition	Excellent	Fire age	>10
Total veg. cover (%)	35	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	15	Litter cover (%)	10
Grass cover (%)	0	Herb cover (%)	0

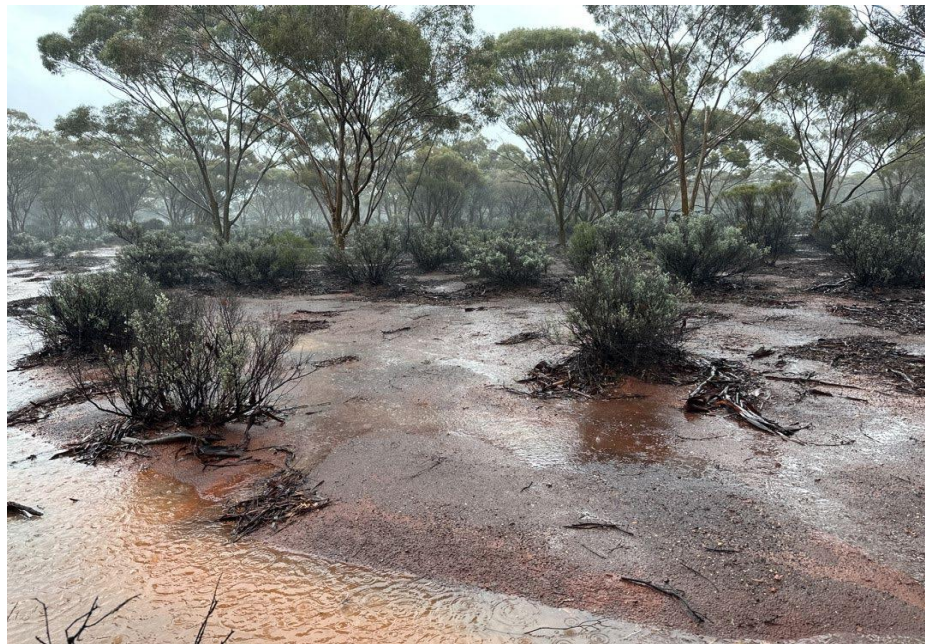


Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF04	Position (WGS84)	121.6190, -30.7150
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay,clay loam,gravel
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	12 Jun 2024	12 Jun 2024

Site description - visit 1 (12 Jun 2024)			
Gimlet eucalyptus woodland over low atriplex and pearl blue bush and eremophila on red brown clay loam.			
Habitat	open woodland		
Disturbance	grazing-low,livestock tracks,vehicle tracks		
Vegetation condition	Excellent	Fire age	>10
Total veg. cover (%)	70	Litter distribution	under vegetation
Tree cover (%)	30	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF05	Position (WGS84)	121.6193, -30.7039
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay,clay loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	12 Jun 2024	12 Jun 2024

Site description - visit 1 (12 Jun 2024)			
Gimlet eucalyptus over shrubs of eremophila, acacia tetragonaphilia, santalum, atriplex and pearl blue bush on red brown clay loam.			
Habitat	open woodland		
Disturbance	evidence of feral animals,grazing-low,livestock tracks		
Vegetation condition	Excellent	Fire age	>10
Total veg. cover (%)	85	Litter distribution	under vegetation
Tree cover (%)	25	Litter depth (cm)	1.0
Shrub cover (%)	60	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF06	Position (WGS84)	121.6225, -30.7173
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay,clay loam,gravel
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	12 Jun 2024	12 Jun 2024

Site description - visit 1 (12 Jun 2024)			
Open gimlet eucalyptus woodland over pearl blue bush, eremophila, santalum and exocarpus on red brown clay loam with black gravel.			
Habitat	open woodland		
Disturbance	evidence of feral animals,grazing-low,livestock tracks,vehicle tracks		
Vegetation condition	Excellent	Fire age	>10
Total veg. cover (%)	45	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	25	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF07	Position (WGS84)	121.6225, -30.7268
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay,clay loam,gravel
Rock cover (%)		Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	12 Jun 2024	12 Jun 2024

Site description - visit 1 (12 Jun 2024)			
Scattered gimlet eucalyptus over low shrubs of eremophila, atriplex, pearl blue bush, acacia tetragonaphilia on red brown clay loam with black gravel.			
Habitat	shrubland		
Disturbance	evidence of feral animals,grazing-low,livestock tracks,vehicle tracks		
Vegetation condition	Excellent	Fire age	>10
Total veg. cover (%)	45	Litter distribution	sparse
Tree cover (%)	10	Litter depth (cm)	1.0
Shrub cover (%)	35	Litter cover (%)	5
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF08	Position (WGS84)	121.6223, -30.7336
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay,clay loam,gravel
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	12 Jun 2024	12 Jun 2024

Site description - visit 1 (12 Jun 2024)			
Open gimlet eucalyptus woodland over Atriplex, eremophila, exocarpus, pearl blue bush and senna on red brown clay loam with black gravel.			
Habitat	open woodland		
Disturbance	grazing-low,livestock tracks,vehicle tracks		
Vegetation condition	Excellent	Fire age	>10
Total veg. cover (%)	50	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	5
Grass cover (%)	0	Herb cover (%)	0



**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd**

Site details			
Site	BF_01	Position (WGS84)	121.5726, -30.6568
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay, gravel
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	03 Feb 2025	03 Feb 2025

Site description - visit 1 (03 Feb 2025)

Senna shrubland with scattered Eucalyptus and tall Allocasuarina over Eremophila, Acacia, Exocarpus and Santalum over low myrtaceae and Atriplex on hard red brown sandy clay with ironstone gravel and cobbles.

Habitat	shrubland		
Disturbance	vehicle tracks, evidence of feral animals		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	80	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	60	Litter cover (%)	30
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_02	Position (WGS84)	121.5730, -30.6581
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	03 Feb 2025	03 Feb 2025
1	Opportunistic sighting	03 Feb 2025	03 Feb 2025

Site description - visit 1 (03 Feb 2025)			
Gimlet Eucalyptus with open patches of shrubs including Eremophila, Senna, Atriplex and Maireana on hard red brown sandy clay.			
Habitat	open woodland		
Disturbance	evidence of feral animals, litter, vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	90	Litter distribution	under vegetation
Tree cover (%)	45	Litter depth (cm)	1.0
Shrub cover (%)	45	Litter cover (%)	35
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_03	Position (WGS84)	121.5720, -30.6615
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	03 Feb 2025	03 Feb 2025

Site description - visit 1 (03 Feb 2025)

Stands of gimlet and other eucalypts over mixed shrubs of Eremophila, Senna, Maireana and Atriplex on red-brown sandy clay.

Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	95	Litter distribution	under vegetation
Tree cover (%)	45	Litter depth (cm)	2.0
Shrub cover (%)	50	Litter cover (%)	40
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_04	Position (WGS84)	121.5723, -30.6656
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	03 Feb 2025	03 Feb 2025

Site description - visit 1 (03 Feb 2025)			
Gimlet eucalyptus over shrubs of eremophila, exocarpos, maineana, atriplex on red-brown sandy clay soil.			
Habitat	open woodland		
Disturbance	firebreak, vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	125	Litter distribution	under vegetation
Tree cover (%)	60	Litter depth (cm)	1.0
Shrub cover (%)	65	Litter cover (%)	55
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_05	Position (WGS84)	121.5685, -30.6681
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	03 Feb 2025	03 Feb 2025

Site description - visit 1 (03 Feb 2025)			
Goldfields Blackbutt over eremophila and acacia over maireana and mixed myrtaceae shrubs on hard red brown sandy clay with ironstone gravel.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	70	Litter distribution	under vegetation
Tree cover (%)	30	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	30
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_06	Position (WGS84)	121.5730, -30.6680
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay, sandy loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	03 Feb 2025	03 Feb 2025

Site description - visit 1 (03 Feb 2025)			
Gimlet and Goldfields Blackbutt eucalyptus with eremophila, santalum, atriplex, exocarpus and maireana on red-brown sandy clay.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	80	Litter distribution	under vegetation
Tree cover (%)	35	Litter depth (cm)	1.0
Shrub cover (%)	45	Litter cover (%)	25
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_07	Position (WGS84)	121.5733, -30.6717
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Stands of Gimlet eucalyptus, over shrubs of eremophila, maireana and atriplex on red-brown sandy clay. Open clearings between gimlet stands.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	85	Litter distribution	under vegetation
Tree cover (%)	35	Litter depth (cm)	1.0
Shrub cover (%)	50	Litter cover (%)	40
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_08	Position (WGS84)	121.5728, -30.6747
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Stands of gimlet eucalyptus, over patchy allocasuarina, over exocarpus and santalum, over eremophila, maireanna, atriplex and saltbush fringing clearings.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	65	Litter distribution	under vegetation
Tree cover (%)	25	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	35
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_09	Position (WGS84)	121.5719, -30.6793
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	calcrete, ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Scattered salmon gum and tall casuarina over eremophila, senna, acacia, dodonea, maireana and ptilotus on stony red-brown clay.			
Habitat	shrubland		
Disturbance	evidence of feral animals, vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	40	Litter distribution	under vegetation
Tree cover (%)	10	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	25
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_10	Position (WGS84)	121.5722, -30.6832
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Open woodland of salmon gum, over eremophila and senna over maireana, atriplex and acacia on a red-brown sandy clay.			
Habitat	open woodland		
Disturbance	exploration (drill pads and access tracks), vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	45	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_11	Position (WGS84)	121.5723, -30.6879
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Groved Gimlet eucalyptus over minor drainage line. Shrubs of eremophila, dodonea, acacia and maireana over atriplex on red-brown sandy clay.			
Habitat	open woodland		
Disturbance	evidence of feral animals, litter		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	90	Litter distribution	concentrated in drifts
Tree cover (%)	50	Litter depth (cm)	4.0
Shrub cover (%)	40	Litter cover (%)	40
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_12	Position (WGS84)	121.5735, -30.6934
Slope	moderate	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	15	Rock type	granite - rocks, quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Open gimlet woodland over low shrubs of eremophila, acacia and some saltbush.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	20	Litter distribution	under vegetation
Tree cover (%)	10	Litter depth (cm)	1.0
Shrub cover (%)	10	Litter cover (%)	10
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_13	Position (WGS84)	121.5726, -30.6956
Slope	negligible	Topography	undulating plain
Soil colour	whitish	Soil texture	gravel, sandy clay
Rock cover (%)	5	Rock type	quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Stony quartz clearing surrounded by open gimlet woodland, over low shrubs of eremophila, maireana and atriplex.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	65	Litter distribution	under vegetation
Tree cover (%)	35	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	25
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_14	Position (WGS84)	121.5743, -30.7015
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	1	Rock type	quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Open gimlet woodland over shrubs of eremophila, senna, exocarpus, atriplex and maireana on red-brown sandy clay with quartz gravel.			
Habitat	open woodland		
Disturbance	exploration (drill pads and access tracks)		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	80	Litter distribution	under vegetation
Tree cover (%)	35	Litter depth (cm)	2.0
Shrub cover (%)	45	Litter cover (%)	40
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_15	Position (WGS84)	121.5799, -30.7009
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Mixed eucalyptus over dominant eremophila shrubs with some acacia, atriplex, exocarpus and maireana.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	55	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	35	Litter cover (%)	35
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_16	Position (WGS84)	121.5798, -30.7034
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone, quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Open mixed eucalyptus including gimlet and tall salmon gum over eremophila and exocarpus with atriplex and maireana in surrounding clearings.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	50	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	1.0
Shrub cover (%)	35	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_17	Position (WGS84)	121.5907, -30.7084
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Groved Gimlet eucalyptus over Eremophila shrubs with santalum, senna, maireana, atioplex and saltbush.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	105	Litter distribution	under vegetation
Tree cover (%)	55	Litter depth (cm)	1.0
Shrub cover (%)	50	Litter cover (%)	40
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_18	Position (WGS84)	121.5921, -30.7037
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone, quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025
1	Opportunistic sighting	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Acacia shrubland with scattered tall allocasuarina, salmon gum and santalum, with eremophila, senna and atriplex on hard red brown sandy clay.			
Habitat	shrubland		
Disturbance	none evident		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	65	Litter distribution	under vegetation
Tree cover (%)	5	Litter depth (cm)	1.0
Shrub cover (%)	60	Litter cover (%)	35
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Site details			
Site	BF_19	Position (WGS84)	121.5931, -30.7011
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Groved gimlet eucalyptus woodland over eremophila, exocarpus, senna and acacia with atriplex and maireana in clearings on red brown sandy clay.			
Habitat	open woodland		
Disturbance	evidence of feral animals		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	90	Litter distribution	under vegetation
Tree cover (%)	40	Litter depth (cm)	1.0
Shrub cover (%)	50	Litter cover (%)	30
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Site details			
Site	BF_20	Position (WGS84)	121.5865, -30.7040
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Open gimlet woodland over eremophila with santalum, saltbush, atriplex, maireana on hard red-brown sandy clay.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	60	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Site details			
Site	BF_21	Position (WGS84)	121.5956, -30.6774
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	05 Feb 2025	05 Feb 2025

Site description - visit 1 (05 Feb 2025)			
Open Gimlet and salmon gum eucalyptus, over eremophila, senna, exocarpus, acacia, maireana, atriplex and saltbush on hard red-brown clay.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	60	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Site details			
Site	BF_22	Position (WGS84)	121.5937, -30.6728
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	05 Feb 2025	05 Feb 2025

Site description - visit 1 (05 Feb 2025)			
Gimlet and salmon gum open woodland over scattered tall allocasuarina over shrubs dominated by eremophila with santalum, maireana and atriplex on hard red brown clay.			
Habitat	open woodland		
Disturbance	evidence of feral animals, vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	65	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	45	Litter cover (%)	25
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_23	Position (WGS84)	121.5950, -30.6720
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone, quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	05 Feb 2025	05 Feb 2025

Site description - visit 1 (05 Feb 2025)			
Senna and acacia shrubland with scattered salmon gum and tall allocasuarina with eremophila, maireana, atriplex and saltbush on hard red-brown sandy clay with surface gravel of quartz and ironstone.			
Habitat	shrubland		
Disturbance	livestock tracks, vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	65	Litter distribution	under vegetation
Tree cover (%)	5	Litter depth (cm)	1.0
Shrub cover (%)	60	Litter cover (%)	35
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_24	Position (WGS84)	121.5983, -30.6828
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	05 Feb 2025	05 Feb 2025

Site description - visit 1 (05 Feb 2025)			
Open gimlet woodland over shrubs of eremophila and senna with clearings of maireana, atriplex and saltbush on hard red-brown sandy clay.			
Habitat	open woodland		
Disturbance	evidence of feral animals, vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	60	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_25	Position (WGS84)	121.5959, -30.6881
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone, quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	05 Feb 2025	05 Feb 2025

Site description - visit 1 (05 Feb 2025)			
Open gimlet woodland over shrubs dominated by eremophila with senna, santalum and scattered exocarpus with clearings of maireana, atriplex and saltbush on red-brown sandy clay with quartz and ironstone gravel.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	50	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	1.0
Shrub cover (%)	35	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_26	Position (WGS84)	121.5972, -30.6942
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	05 Feb 2025	05 Feb 2025

Site description - visit 1 (05 Feb 2025)			
Mixed open woodland of salmon gum and gimlet with scattered allocasuarina over shubs dominated by senna and acacia with eremophila, atriplex and scattered santalum and exocarpus on red-brown sandy clay.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	70	Litter distribution	under vegetation
Tree cover (%)	25	Litter depth (cm)	1.0
Shrub cover (%)	45	Litter cover (%)	25
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_27	Position (WGS84)	121.6221, -30.6859
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	05 Feb 2025	05 Feb 2025

Site description - visit 1 (05 Feb 2025)			
Open salmon and gimlet woodland with wide clearings dominated by atriplex and maireana with eremophila and acacia sp? on red-brown sandy clay.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	50	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	1.0
Shrub cover (%)	35	Litter cover (%)	10
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Site details			
Site	BF_28	Position (WGS84)	121.6213, -30.6917
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	05 Feb 2025	05 Feb 2025

Site description - visit 1 (05 Feb 2025)			
Groved gimlet woodland over shrubs dominated by maireana with eremophila, senna, atriplex and saltbush in open areas on red-brown sandy clay.			
Habitat	open woodland		
Disturbance	evidence of feral animals, litter, vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	50	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Site details			
Site	BF_29	Position (WGS84)	121.6180, -30.6960
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	05 Feb 2025	05 Feb 2025

Site description - visit 1 (05 Feb 2025)			
Mixed eucalyptus open woodland including gimlet and Goldfields Blackbutt with large clearings of low sparse shrubs between them. Over eremophila, maireana, atriplex and saltbush on red-brown clay with quartz gravel.			
Habitat	open woodland		
Disturbance	none evident		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	45	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	25	Litter cover (%)	10
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Site details			
Site	BF_30	Position (WGS84)	121.5931, -30.7294
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	05 Feb 2025	05 Feb 2025

Site description - visit 1 (05 Feb 2025)			
Grove of gimlet woodland over sparse shrubs of senna and eremophila. Near continuous layer of gimlet bark.			
Habitat	woodland		
Disturbance	exploration (drill pads and access tracks), litter		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	65	Litter distribution	under vegetation
Tree cover (%)	60	Litter depth (cm)	4.0
Shrub cover (%)	5	Litter cover (%)	80
Grass cover (%)	0	Herb cover (%)	0



**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd**

Site details			
Site	BF_31	Position (WGS84)	121.6150, -30.7006
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	05 Feb 2025	05 Feb 2025

Site description - visit 1 (05 Feb 2025)			
Open salmon gum eucalyptus woodland with wide open clearings over shrubs of primarily eremophila and senna with saltbush, atriplex and maireana in the clearings and scattered santalum and exocarpus on red brown sandy clay.			
Habitat	open woodland		
Disturbance	none evident		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	55	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	2.0
Shrub cover (%)	40	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_32	Position (WGS84)	121.5971, -30.7237
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	05 Feb 2025	05 Feb 2025

Site description - visit 1 (05 Feb 2025)			
Open woodland of mixed eucalyptus of gimlet and Goldfields Blackbutt over senna, eremophila, maireana and atriplex on red-brown sandy clay with ironstone gravel.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	75	Litter distribution	under vegetation
Tree cover (%)	35	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	30
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Site details			
Site	BF_33	Position (WGS84)	121.6348, -30.7033
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone, none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Open gimlet woodland over scattered melaleuca, over shrubs of eremophila and senna with maireana in clearings on red-brown sandy clay with ironstone gravel.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	65	Litter distribution	under vegetation
Tree cover (%)	25	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
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Site details			
Site	BF_34	Position (WGS84)	121.6344, -30.7091
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Band of surface water flow with no distinct channel. Supporting dense shrubs of tall eremophila, allocasuarina and acacia (some with mistletoe), over low shrubs of the same with senna on red-brown sandy clay.			
Habitat	shrubland		
Disturbance	evidence of feral animals, vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	100	Litter distribution	concentrated in drifts
Tree cover (%)	60	Litter depth (cm)	3.0
Shrub cover (%)	40	Litter cover (%)	25
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_35	Position (WGS84)	121.6348, -30.7118
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Open woodland of mixed Gimlet and salmon gum eucalyptus over sparse eremophila with abundant maireana on red-brown sandy clay with ironstone gravel.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	50	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	1.0
Shrub cover (%)	35	Litter cover (%)	10
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_36	Position (WGS84)	121.6341, -30.7197
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Open gimlet woodland with scattered salmon gum, over eremophila with scattered mulga with maireana in clearings on red-brown sandy clay with ironstone gravel.			
Habitat	open woodland		
Disturbance	livestock tracks, vehicle tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	40	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	1.0
Shrub cover (%)	25	Litter cover (%)	10
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_37	Position (WGS84)	121.6241, -30.7173
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Open gimlet and salmon gum woodland, over eremophila and scattered santalum with maireana and atriplex in clearings on red-brown sandy clay with ironstone gravel.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	60	Litter distribution	under vegetation
Tree cover (%)	25	Litter depth (cm)	1.0
Shrub cover (%)	35	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	0



**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd**

Site details			
Site	BF_38	Position (WGS84)	121.6103, -30.7136
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Open Gimlet woodland with scattered salmon gum over eremophila and senna with some santulum and exocarpus with maireana and atriplex in clearings on red-brown sandy clay.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	90	Litter distribution	under vegetation
Tree cover (%)	40	Litter depth (cm)	1.0
Shrub cover (%)	50	Litter cover (%)	30
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_39	Position (WGS84)	121.6106, -30.7065
Slope	gentle	Topography	undulating plain
Soil colour	light-brown, orange	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Groved gimlet woodland over eremophila, wide open clearings of saltbush with scattered eucalyptus on light-brown, orange sandy clay.			
Habitat	open woodland		
Disturbance	litter, livestock tracks		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	30	Litter distribution	under vegetation
Tree cover (%)	10	Litter depth (cm)	1.0
Shrub cover (%)	20	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_40	Position (WGS84)	121.6036, -30.6996
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy loam
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Open gimlet woodland, over eremophila with maireana, atriplex and saltbush in clearings and scattered exocarpus.			
Habitat	open woodland		
Disturbance	none evident		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	75	Litter distribution	under vegetation
Tree cover (%)	30	Litter depth (cm)	1.0
Shrub cover (%)	45	Litter cover (%)	25
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_41	Position (WGS84)	121.6014, -30.7100
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Groved gimlet woodland over eremophila with atriplex, maireana and salt bush in clearings on red brown sandy clay.			
Habitat	open woodland		
Disturbance	none evident		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	75	Litter distribution	under vegetation
Tree cover (%)	30	Litter depth (cm)	2.0
Shrub cover (%)	45	Litter cover (%)	25
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_42	Position (WGS84)	121.5993, -30.7156
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Open mixed eucalyptus of Goldfields Blackbutt with scattered melaleuca, over senna and eremophila shrubs with atriplex in clearings on red-brown sandy clay.			
Habitat	open woodland		
Disturbance	none evident		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	75	Litter distribution	under vegetation
Tree cover (%)	35	Litter depth (cm)	1.0
Shrub cover (%)	40	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_43	Position (WGS84)	121.5918, -30.7161
Slope	negligible	Topography	undulating plain
Soil colour	red-orange	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Open salmon gum woodland over senna and eremophila with scattered mulga and exocarpus, and atriplex and maireana in clearings on red-brown clay with ironstone gravel.			
Habitat	open woodland		
Disturbance	none evident		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	55	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	35	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_44	Position (WGS84)	121.6118, -30.6833
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	granite - rocks, quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Acacia shrubland with scattered tall allocasuarina and eucalyptus with atriplex and eremophila on stony red-brown clay.			
Habitat	shrubland		
Disturbance	exploration (drill pads and access tracks), litter		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	65	Litter distribution	under vegetation
Tree cover (%)	5	Litter depth (cm)	1.0
Shrub cover (%)	60	Litter cover (%)	10
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_45	Position (WGS84)	121.6033, -30.7210
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	07 Feb 2025	07 Feb 2025

Site description - visit 1 (07 Feb 2025)			
Open Goldfields Blackbutt woodland with scattered salmon gum over senna and eremophila shrubs with scattered santalum with atriplex and maireana on red-brown sandy clay.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	90	Litter distribution	under vegetation
Tree cover (%)	25	Litter depth (cm)	1.0
Shrub cover (%)	65	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_46	Position (WGS84)	121.6107, -30.7226
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	07 Feb 2025	07 Feb 2025

Site description - visit 1 (07 Feb 2025)			
Open gimlet woodland with scattered salmon gum over shrubs of eremophila and scattered mulga, senna and exocarpus with atriplex and maireana on red-brown sandy clay with ironstone gravel.			
Habitat	open woodland		
Disturbance	litter, vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	55	Litter distribution	under vegetation
Tree cover (%)	25	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_47	Position (WGS84)	121.6161, -30.7317
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	07 Feb 2025	07 Feb 2025

Site description - visit 1 (07 Feb 2025)			
Open salmon gum woodland over shrubs of eremophila and mulga with scattered santalum and allocasuarina with atriplex and maireana in clearings on red-brown sandy clay with ironstone gravel.			
Habitat	open woodland		
Disturbance	litter, vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	40	Litter distribution	under vegetation
Tree cover (%)	10	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	5
Grass cover (%)	0	Herb cover (%)	0



**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd**

Site details			
Site	BF_48	Position (WGS84)	121.6169, -30.7258
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	07 Feb 2025	07 Feb 2025

Site description - visit 1 (07 Feb 2025)			
Open woodland of gimlet with scattered tall salmon and santalum over shrubs of eremophila with atriplex and maireana in clearings on red-brown sandy clay with continuous ironstone gravel.			
Habitat	open woodland		
Disturbance	none evident		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	41	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	1.0
Shrub cover (%)	25	Litter cover (%)	10
Grass cover (%)	1	Herb cover (%)	0



**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd**

Site details			
Site	BF_49	Position (WGS84)	121.6160, -30.7207
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel / alluvial, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	07 Feb 2025	07 Feb 2025

Site description - visit 1 (07 Feb 2025)			
Wide shallow drainage with no distinct channel. Open gimlet woodland with scattered tall salmon gum, over open shrubs of maireana with eremophila and senna on red-brown sandy clay with ironstone gravel.			
Habitat	open woodland		
Disturbance	none evident		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	70	Litter distribution	concentrated in drifts
Tree cover (%)	55	Litter depth (cm)	3.0
Shrub cover (%)	15	Litter cover (%)	45
Grass cover (%)	0	Herb cover (%)	0



**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd**

Site details			
Site	BF_50	Position (WGS84)	121.6153, -30.7183
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	07 Feb 2025	07 Feb 2025

Site description - visit 1 (07 Feb 2025)			
Open mixed eucalyptus woodland with clumps of melaleuca, over eremophila and senna with maireana and scattered mulga in clearings on red-brown sandy clay with ironstone gravel.			
Habitat	open woodland		
Disturbance	litter, vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	50	Litter distribution	under vegetation
Tree cover (%)	25	Litter depth (cm)	1.0
Shrub cover (%)	25	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_51	Position (WGS84)	121.6177, -30.7420
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	07 Feb 2025	07 Feb 2025

Site description - visit 1 (07 Feb 2025)			
Open gimlet woodland over eremophila with senna, maireana and atriplex on red-brown sandy clay.			
Habitat	open woodland		
Disturbance	livestock tracks, vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	80	Litter distribution	under vegetation
Tree cover (%)	35	Litter depth (cm)	2.0
Shrub cover (%)	45	Litter cover (%)	30
Grass cover (%)	0	Herb cover (%)	0



**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd**

Site details			
Site	BF_52	Position (WGS84)	121.6196, -30.7373
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	5	Rock type	granite - rocks, quartz

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	07 Feb 2025	07 Feb 2025

Site description - visit 1 (07 Feb 2025)			
Open Goldfields Blackbutt woodland with isolated melaleuca over sparse shrubs of eremophila, senna and atriplex (which increase density downslope) on stony red-brown clay with gravel and cobblestones.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	35	Litter distribution	under vegetation
Tree cover (%)	25	Litter depth (cm)	1.0
Shrub cover (%)	10	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_53	Position (WGS84)	121.6113, -30.6760
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay, gravel
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	07 Feb 2025	07 Feb 2025

Site description - visit 1 (07 Feb 2025)			
Open eucalyptus woodland over open shrubs of senna and eremophila with Maireana, atriplex and scattered mulga on hard, red brown sandy clay with ironstone gravel.			
Habitat	open woodland		
Disturbance	vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	50	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	2.0
Shrub cover (%)	35	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	0



**Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd**

Site details			
Site	BF_54	Position (WGS84)	121.6223, -30.6740
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	07 Feb 2025	07 Feb 2025

Site description - visit 1 (07 Feb 2025)			
Open salmon gum woodland, over shrubs of maireana and atriplex with eremophila on red-brown sandy clay with near continuous ironstone gravel.			
Habitat	open woodland		
Disturbance	livestock tracks, vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	50	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	30	Litter cover (%)	10
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	BF_55	Position (WGS84)	121.6311, -30.6727
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	07 Feb 2025	07 Feb 2025

Site description - visit 1 (07 Feb 2025)			
Salmon gum open woodland over maireana, senna and eremophila with scattered santalum and mulga on red-brown sandy clay with near continuous ironstone gravel.			
Habitat	open woodland		
Disturbance	livestock tracks, vehicle tracks		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	55	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	35	Litter cover (%)	15
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	MF_Mound01	Position (WGS84)	121.6014, -30.7065
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	06 Feb 2025	06 Feb 2025
1	Malleefowl mound assessment	06 Feb 2025	06 Feb 2025

Site description - visit 1 (06 Feb 2025)			
Groved gimlet woodland over clumps of melaleuca over low eremophila shrubs with atriplex, maireana and saltbush on red brown sandy clay.			
Habitat	open woodland		
Disturbance	litter		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	125	Litter distribution	under vegetation
Tree cover (%)	65	Litter depth (cm)	2.0
Shrub cover (%)	60	Litter cover (%)	50
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	MF_Mound02	Position (WGS84)	121.5714, -30.7009
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	gravel, sandy clay
Rock cover (%)	1	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025
1	Malleefowl mound assessment	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Acacia shrubland with salmon gums over senna and eremophila shrubs on red brown sandy clay with ironstone gravel.			
Habitat	shrubland		
Disturbance	exploration (drill pads and access tracks)		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	60	Litter distribution	under vegetation
Tree cover (%)	15	Litter depth (cm)	1.0
Shrub cover (%)	45	Litter cover (%)	20
Grass cover (%)	0	Herb cover (%)	0



Targeted Malleefowl survey for the Kalgoorlie Regional Renewable Energy Project
Prepared for Northern Star Resources Ltd

Site details			
Site	MF_Mound03	Position (WGS84)	121.5952, -30.7021
Slope	gentle	Topography	undulating plain
Soil colour	red-brown	Soil texture	sandy clay, gravel
Rock cover (%)	0	Rock type	ferrous - ironstone

Sample and effort summary			
Visit	Sample method	Date start	Date stop
1	Site description	04 Feb 2025	04 Feb 2025
1	Malleefowl mound assessment	04 Feb 2025	04 Feb 2025

Site description - visit 1 (04 Feb 2025)			
Acacia shrubland with salmon gums and tall allocasuarina over senna and eremophila shrubs over maireana and atriplex on red brown sandy clay with ironstone gravel.			
Habitat	shrubland		
Disturbance	none evident, evidence of feral animals		
Vegetation condition	Pristine	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	80	Litter distribution	under vegetation
Tree cover (%)	20	Litter depth (cm)	1.0
Shrub cover (%)	60	Litter cover (%)	25
Grass cover (%)	0	Herb cover (%)	0

