GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 11471/1
Permit Holder:	Northern Star Resources (EGP) Pty Ltd
Duration of Permit:	From 8 August 2026 to 8 August 2036

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of the construction and development of a wind and solar farm.

2. Land on which clearing is to be done

Lot 32 on Deposited Plan 203390, Brown Hill

Lot 486 on Deposited Plan 39358, [Crown Reserve 35662 (R35662)], Brown Hill

Lot 473 on Deposited Plan 39818 [Unallocated Crown Land (PIN 11222734)], Brown Hill

Lot 218 on Deposited Plan 27467 (Pastoral Lease LPL N049574) (PIN 693047) (PIN 693049), Kanowna

Lot 428 on Deposited Plan 28432, Kanowna

Lot 302 on Deposited Plan 52825 [Crown Reserve 8767 (R8767)], Parkeston

Lot 425 on Deposited Plan 28431, Parkeston

Lot 474 on Deposited Plan 39818, Williamstown

Unallocated Crown Land (PIN 693025), Brown Hill

Unallocated Crown Land (PIN 693050), Kanowna

Brown Hill Road Reserve (PIN 1188395), Williamstown

Bulong Road (PIN 11714449), Brown Hill/Parkeston

Tenements: G27/3, G27/4, G27/5, L26/297, M26/383, M26/489, M26/495, M26/496, M26/503, M26/577, M26/625, M26/646, L26/321, L27/105 and L27/107

3. Clearing authorised

The permit holder must not clear more than 621 hectares of *native vegetation*, within the area cross-hatched yellow in Figure 1 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 8 August 2031.

5. Authorised persons

This permit allows the permit holder to authorise persons, including employees, contractors, and agents of the permit holder, to clear native vegetation for the purposes of this permit subject to compliance with the conditions of this permit and approval from the permit holder.

PART II – MANAGEMENT CONDITIONS

6. Avoid, minimise and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

(a) avoid the clearing of *native vegetation,*

(b) minimise the amount of *native vegetation* to be cleared; and

(c) reduce the impact of clearing on any environmental value.

7. Weed management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

(b) ensure that no known *weed*-affected soil, *mulch, fill*, or other material is brought into the area to be cleared; and

(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

8. Directional clearing

The permit holder must:

(a) conduct clearing activities authorised under this permit in one direction towards adjacent native vegetation; and

(b) allow a reasonable time for fauna present within the area being cleared to move into adjacent *native vegetation* ahead of the clearing activity.

9. Fauna management – Pre-clearance survey

Where *clearing* authorised under this permit is to occur between 1 September and 31 January, the permit holder shall:

(a) within two weeks prior to undertaking any *clearing*, engage an *environmental specialist* to conduct an inspection of the areas to be cleared to identify *active (in use) Malleefowl (Leipoa ocellata) mounds*.

(b) where an *active (in-use) Malleefowl mound* is identified under condition 9(a) of this permit, the permit holder shall ensure that no *clearing* occurs within 50 metres

of the mound, during the months of September through to January, unless approved by the *CEO*.

10. Revegetation and rehabilitation (temporary works)

The permit holder must:

(a) retain the vegetative material and topsoil removed by *clearing* authorised under this permit and stockpile the vegetative material and topsoil in an area that has already been cleared;

(b) within 12 months following *clearing* authorised under this permit, *revegetate* and *rehabilitate* the area(s) that are no longer required for the operation of the wind and solar farm by:

(i) ripping the ground on the contour to remove soil compaction;

(ii) laying the vegetative material and topsoil retained under condition 10(a) on the cleared area(s); and

(iii) undertake *weed* control activities on an 'as needed' basis to reduce *weed* cover within the cleared areas to no greater than the *weed* cover within the surrounding five metres of uncleared land.

(c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 10(b) of this permit:

(i) engage an environmental specialist to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and

(ii) where, in the opinion of an environmental specialist, the composition structure and density determined under condition 10(c)(i) of this permit will not result in similar species composition, structure and density to that of pre-referral *clearing* vegetation types in that area, revegetate the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.

PART III - RECORD KEEPING AND REPORTING

11. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings

No.	Relevant matter	Specifications
		and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 6; and (f) actions taken to minimise the risk of the introduction and spread of *weeds* in accordance with condition 7; and (g) actions taken to minimise impacts on fauna in accordance with condition 8 of this permit.
2.	In relation to the pre-clearing survey pursuant to condition 9	(a) the time (s) and date(s) that the survey was undertaken (b) the name and qualification of the *environmental specialist* performing the survey (c) the methodology used to survey the Permit Area and to identify the mound/s; (d) the location of each *Leipoa ocellata* (Malleefowl) mound recorded using a GPS unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings or decimal degrees.
3.	In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 10 of this Permit	(a) the location of any areas *revegetated* and *rehabilitated*, recorded using a GPS unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings or decimal degrees; (b) a description of the *revegetation* and *rehabilitation* activities undertaken; and (c) the size of the area *revegetated* and *rehabilitated* (in hectares).

12. Reporting

(a) The permit holder must provide to the *CEO*, on or before 30 June of each calendar year, a written report containing:

(i) the records required to be kept under condition 11; and

(ii) records of activities done by the permit holder under this permit between 1 January and 31 December of the preceding calendar year.

(b) If no *clearing* authorised under this permit has been undertaken, a written report confirming that no *clearing* under this permit has been undertaken, must be provided to the *CEO* on or before 30 June of each calendar year.

(c) The permit holder must provide to the *CEO*, no later than 90 calendar days prior to the expiry date of the permit, a written report of records required under condition 11, where these records have not already been provided under condition 12(a).

DEFINITIONS

In this permit, the terms in Table 2 have the meanings defined.

Table 2: Definitions

Term	Definition
active (in use) Malleefowl mound	means a mound with evidence of current Malleefowl (*Leipoa ocellata*) activity, such as: working of the mound; scratching; litter trails leading to the mound; or loose uncompacted surfaces. The form and structure of the mound will show that it is currently being prepared for egg laying or it already contains eggs.
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
direct seeding	means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species.
EP Act	*Environmental Protection Act 1986* (WA)
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit, or who is approved by the CEO as a suitable environmental specialist.
fill	means material used to increase the ground level, or to fill a depression.
local provenance	means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same IBRA subregion of the area cleared.
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
rehabilitate, rehabilitated and rehabilitation	means actively managing an area containing native vegetation in order to improve the ecological function of that area.
revegetate, revegetated and revegetation	means the re-establishment of a cover of native vegetation in an area such that the species composition, structure and density is similar to pre-clearing vegetation types in that area, and can involve regeneration, direct seeding and/or planting
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness

Term	Definition
	ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

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by Juraj Galba
Date: 2026.07.16
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Juraj Galba
MANAGER
GREEN ENERGY APPROVALS

Officer delegated under Section 20
of the Environmental Protection Act 1986

16 July 2026

Schedule 1

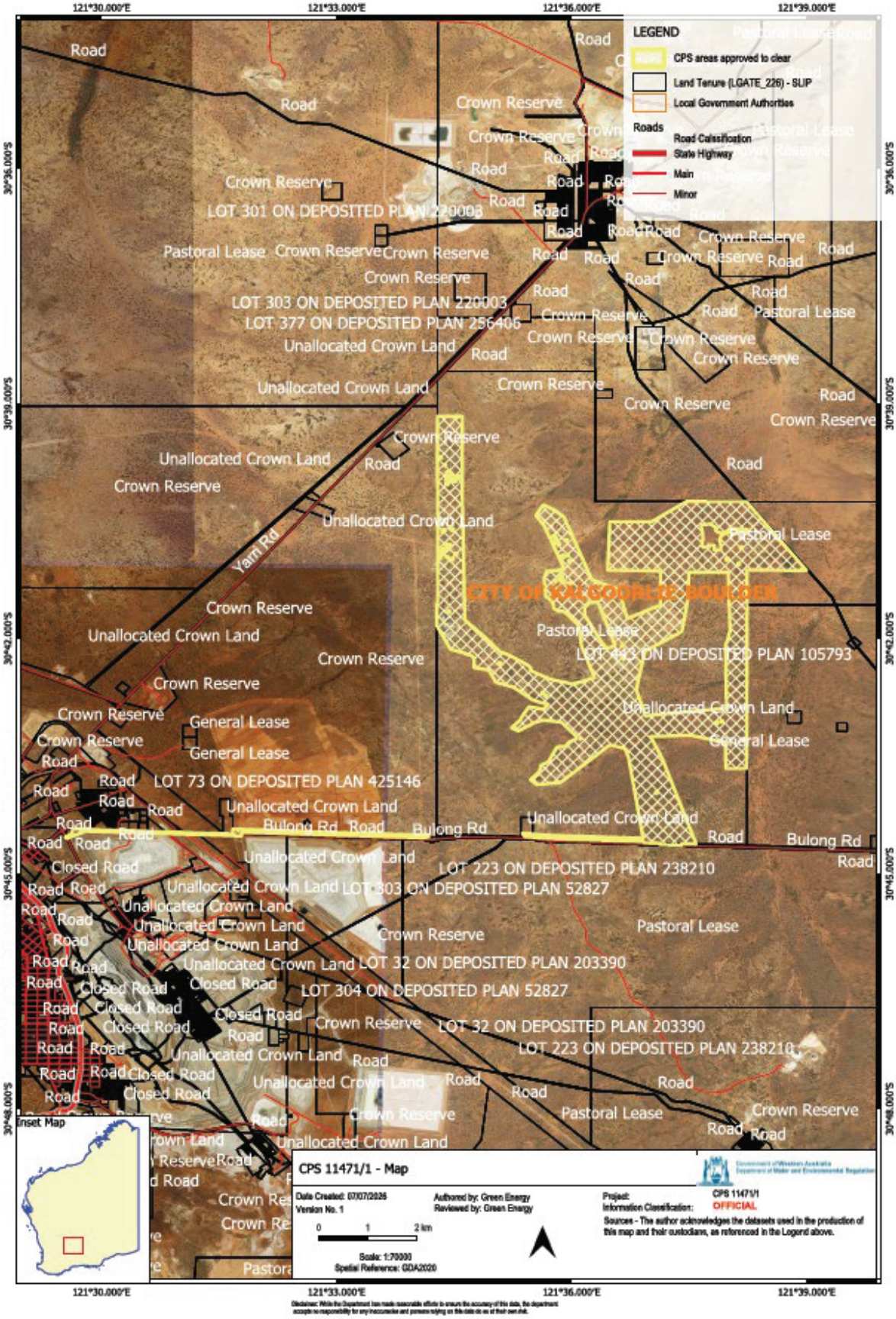


Figure 1: Map of the boundary of the area within which clearing may occur

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 11471/1
Permit type:	Purpose permit
Applicant name:	Northern Star Resources (EGP) Pty Ltd
Application received:	18 February 2026
Application area:	621 ha hectares of native vegetation clearing within a 2,264 hectare clearing footprint
Purpose of clearing:	Construction and operation of wind and solar farm
Method of clearing:	Mechanical (earthmoving equipment)
Property:	See Appendix G
Location (LGA area/s):	City of Kalgoorlie-Boulder
Localities (suburb/s):	Brown Hill, Kanowna, Parkeston, Williamstown

1.2. Description of clearing activities

The application is to clear up to 621 hectares of native vegetation within a 2,264 hectare clearing area. This clearing includes approximately 257 ha that is temporary and can be rehabilitated following construction (NSR 20226b). Construction will take approximately 24 months (NSR 2026c). The vegetation proposed to be cleared lies within a relatively intact landscape, characterised by contiguous vegetation. Following baseline surveys, the applicant excised 54 exclusion zones from the development envelope to avoid:

- breeding habitat and nesting mounds of the Vulnerable *Leipoa ocellata* (malleefowl),
- breeding shrubs for the Priority 1 *Jalmenus aridus* (inland hairstreak butterfly)
- the Priority 2 flora species *Eremophila praecox* and its 10-metre buffer, and
- Aboriginal cultural heritage sites.

The applicant considers that an additional 21.5 hectares will be cleared under clearing permit exemptions and 10 hectares of land disturbance is proposed within previously cleared land that will not require clearing of native vegetation (NSR 2026b). This predicted clearing is not covered by this application.

1.3. Decision on application

Decision:	Granted
Decision date:	16 July 2026
Decision area:	621 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for:

- the site characteristics (see Appendix A)
- relevant datasets (see Appendix H.1)
- the findings of flora and vegetation surveys and fauna surveys (see Appendix D)
- mitigation measures implemented by the applicant following baseline surveys to avoid impacts to malleefowl breeding habitat, inland hairstreak butterfly breeding habitat, and *Eremophila praecox* individuals and their buffers
- the clearing principles set out in Schedule 5 of the EP Act (see Appendix B); and
- relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The Delegated Officer also considered that the objective of the proposal is to support an increase in the supply of renewable energy in Western Australia and is aligned with the State's objective to develop a cleaner, more diverse, and affordable electricity network.

The assessment identified that the proposed clearing will result in:
- the loss of 621 hectares of native vegetation in good to excellent condition including approximately three per cent of the mapped extent of the locally restricted low Melaleuca woodland vegetation type MsMsEpa (see Appendix D for a detailed description)
- the loss of foraging and dispersal habitat for *Leipoa ocellata* (malleefowl)
- the potential loss of *Jalmenus aridus* (inland hairstreak butterfly) habitat
- the potential introduction and spread of weeds into adjacent vegetation.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing impacts on flora and vegetation and fauna values which can be minimised and managed to unlikely lead to an unacceptable risk to environmental values. The applicant has suitably demonstrated avoidance and minimisation measures.

The Delegated Officer decided to grant a clearing permit subject to conditions to:
- avoid, minimise to reduce the impacts and extent of clearing
- take hygiene steps to minimise the risk of the introduction and spread of weeds
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity
- undertake pre-clearing surveys of suitable habitat for malleefowl mounds
- undertake revegetation and rehabilitation of areas not needed for the operation of the wind and solar farm.

1.5. Site map

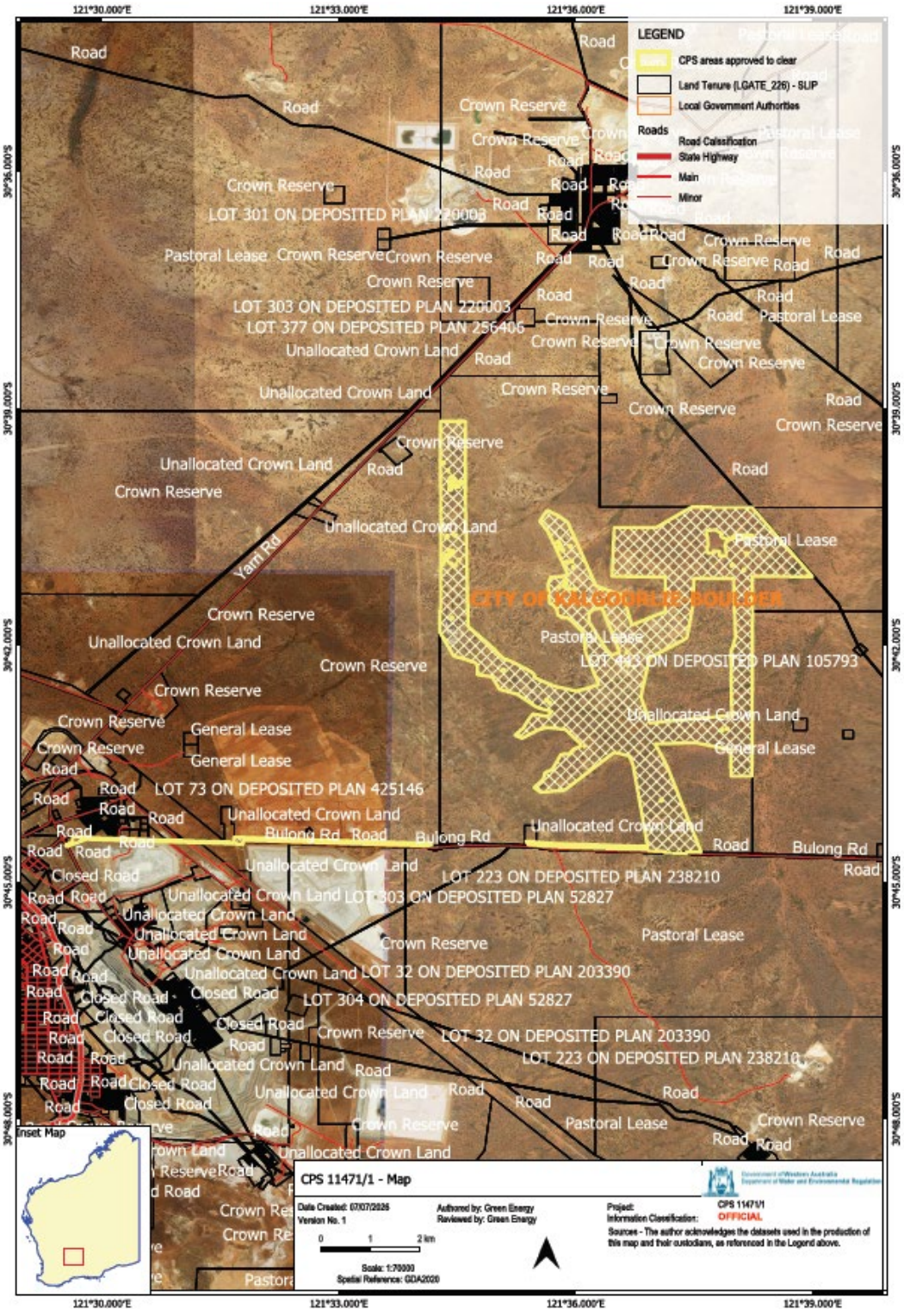


Figure 1: Map of the application area. The area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.

2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity

- the principle of the conservation of biological diversity and ecological integrity

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Aboriginal Heritage Act 1972* (WA)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016).

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant has used detailed flora and fauna surveys performed over the area as a guide to avoid and minimise environmental impacts. For example, these mitigation measures include:

- amending the application area to avoid the flora species *Eremophila praecox*, breeding mounds for the bird species *Leipoa ocellata* (malleefowl) and breeding areas for *Jalmenus aridus* (Inland Hairstreak Butterfly (IHB)). Individuals of *E. praecox* will have a minimum 10 metre buffer. The malleefowl and IHB have a minimum 50 metre buffer
- minimise indirect impacts to the flora species *E. praecox*, vegetation type MsMsEpa, malleefowl and IHB through the implementation of management measures such as hygiene protocols, weed management, dust suppression and maintenance of surface water drainage.

The applicant has and Environmental Management Plan which will be applied to the proposed clearing activities. These management actions include awareness training, plans, procedures and forms to avoid, minimise and ensure the effective management of environmental values (NSR 2026c).

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see Appendix B) identified that the impacts of the proposed clearing present a risk to biological values (fauna, flora and vegetation. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values – biodiversity and flora – Clearing Principle (a)

Assessment

Vegetation and condition

The proponent commissioned three flora and vegetation investigations which included desktop surveys, reconnaissance, detailed and targeted surveys over a 13,193-hectare survey area. No threatened ecological community (TEC) or priority ecological community (PEC) were mapped or identified during the surveys. Despite the application area falling within two pastoral leases the surveys indicate that the native vegetation in mainly (99 percent) in good to excellent condition.

The Phoenix surveys (2022, 2024, 2025a) mapped 43 vegetation types which were consolidated into nine broad vegetation communities (see appendix G for further details). Within the application area five vegetation types are considered to have some local significance. Four vegetation types are habitat for the Priority 2 *Eremophila praecox.* Impacts to this flora species is discussed in the subsequent section. The vegetation type MsMsEpa, identified over 18.33 hectares in the survey area, is locally restricted and was not identified outside the application area in the 2024 or 2022 reconnaissance surveys. The proposal will clear 0.5 hectares which is a 2.7 percent reduction in the local area. Due to its locally restricted distribution further direct impacts should be avoided and indirect impacts such as deposition of dust managed.

Flora
No threatened flora were mapped or surveyed in the local area or identified in the study area.

The Phoenix Surveys (2022, 2024, 2025a) identified *Eremophila praecox* within the survey and the application area. Two populations of *Streptoglossa cylindriceps* were also identified in the application area. *S. cylindriceps* is not a threatened or priority flora species but represents a range extension.

FloraBase (WA Herbarium 1998-) indicates that *E. praecox* can be found in low to mid *Eucalyptus* and/or *Casuarina pauper* woodland over mixed shrubland within a range of soil types and has been recorded in the Eastern Goldfield and Eastern Murchison IBRA sub regions.

The flora and vegetation report (Phoenix 2025a) indicates that there is a total of 785 known plants of *E. praecox,* with 227 plants (28.9 percent) recorded in conservation estate such as Bullock Holes Timber Reserve, Kangaroo Hills Timber Reserve, Kurrawang Nature Reserve, Lakeside Timber Reserve, Majestic Timber Reserve and Yallari Timber Reserve. *E. praecox* is known to be distributed in the across several land systems (BB5, Campsite, Doney, Gumland, Kanowna, Moriarty, Mx43, Yilgangi).

E. praecox was identified during surveys with a total of 51 plants identified in the survey area (Phoenix 2025a). Low *Eucalyptus* ad *Casuarina pauper* woodland over mix shrubland vegetation types (CpSafMs, CpSsAe, ElSsMt, ErEpMt) were identified as potential habitat for *E. praecox.* These vegetation types covered over 1,036.23 hectares of the survey area. Up to 302 hectares (29 percent) of these vegetation types will be impacted (NSR 2026b).

The applicant has amended the design of the application area to avoid impacts to all identified *E. praecox* individuals and provide a minimum buffer area of 10 metres. Other indirect impact measures include weed management and dust suppression. Impacts to *E. praecox* are unlikely to be significant due to these mitigation measures, distribution across two subregions and the known number of suitable habitats and land systems that extend both locally and regionally.

Streptoglossa cylindriceps is located approximately 80 kilometres from the nearest known record and is know from only two records within the 2025 survey area. These individuals may be cleared as part of the application. Based on field observation and aerial imagery it is likely that *S. cylindriceps* could be found outside of the study area as similar habitat occurs in the broader landscape (Phoenix 2025a).

It is considered that clearing of these individuals will not have a significant impact on the biological diversity of the region or the conservation status of the species as the range of this species extends throughout Western Australia, South Australia and the Northern Territory.

Mapping, FloraBase and the survey reports (Phoenix 2022, Phoenix 2024, Phoenix 2025a) identified seven other conservation significant species as likely to occur in the application area:

- *Allocasuarina eriochlamys* subsp. *grossa* (P3), occurs in *Melaleuca, Acacia* and *Allocasuarina* thickets, tall shrublands and *Eucalyptus* mallee woodland on hill crests and slopes in loose red granitic soil or brown sandy loam over granite
- *Elachanthus pusillus* (P2), occurs in Sparse *Eucalyptus* spp. woodland over open mixed shrubland over open mixed herbs or Chenopod shrubland in bare lateritic gravel – red loamy clay soils or red loam over limestone on low plain.
- *Eremophila xantholaemus* (P1), occurs in *Eucalyptus* and/or *Casuarina* woodland on stony, brown loam soils
- *Notisia intonsa* (P3), occurs in Eucalyptus woodlands over shrubland in red-orange clayey sand with ironstone and quartz gravel on plains, floodplains and shallow depressions.
- *Ptilotus procumbens* (P1), occurs in open *Acacia* shrubland over mixed forbland in red clay and in mulga shrub on plain with lateritic gravel
- *Rhodanthe uniflora* (P1), occurs in open *Eucalyptus* woodland in brown soil and mid sparse shrubland dominated by *Maireana pyramidata* over low sparse chenopod shrubland of mixed species including *Maireana georgei, Sclerolaena diacantha* and *Sclerolaena patenticuspis* on a stony plain in red clay.
- *Xanthoparmelia dayiana* (P3), occurs in *Eucalyptus* woodland with Acacia shrubs in rocky areas

Phoenix (2025a) considers that *A. eriochlamys* subsp. *grossa, E. pusillus, N. intonsa and P. procumbens* are likely to occur in the majority of vegetation types identified in the surveys, with *E. xantholaemus* possibly occurring in many of vegetation types when hill slopes are present. The survey reports do not consider that *R. uniflora or X. dayiana* are likely to be present within the survey, however, there are Herbarium records within the local area and habitat (vegetation type and soil types) is present. Habitat for the seven species listed above are present within the local area including the application area and is also found regionally. Despite detailed and targeted surveys these species

were not recorded within the application area. Clearing of any individuals not identified in surveys is unlikely. Any unpredicted impact from the application is unlikely to significantly impact the conservation status of these species.

Surveys identified the following six introduced flora species, *Mesembryanthemum nodiflorum*, *Centaurea melitensis*, *Carrichtera annua*, *Salvia verbenaca*, *Pentameris airoides* subsp. *airoides* and *Lysimachia arvensis*. None of these species are considered to be a Weed of National Significance or Declared Pest. The applicant intends to implement weed control measures when needed (NSR 2026b).

Conclusion

The application will result in the loss of 621 hectares of native vegetation including 0.5 hectares of the locally restricted vegetation type MsMSEpa. All recorded *Eremophila praecox* plants have been avoided, however, indirect impacts such as the introduction and/or spread of weeds may indirectly impact this Priority 2 species. These impacts are considered minor and can be managed through the conditions set out in the clearing permit. With mitigation measures in place, the proposal is not expected to have significant impacts on biological diversity.

Conditions

To mitigate the potential impacts, the following conditions will be required in the clearing permit:

- avoid, minimise and reduce impacts and extent of clearing
- weed management
- rehabilitation of approximately 257 ha of temporary cleared areas.

3.2.2. Biological values – Fauna – Clearing Principle (b)

Assessment

Basic and detailed terrestrial fauna surveys were undertaken in September 2022, November 2023 and June 2024 covering a 13,185 ha area (Phoenix 2025b). These surveys identified the presence or likely presence of:

- Eight bird species:
    - *Leipoa ocellata* (malleefowl) listed as vulnerable under the *Biodiversity Conservation Act 2016* and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), recorded
    - *Aphelocephala leucopsis* (southern whiteface) listed as vulnerable under the BC Act and EPBC Act, likely to occur
    - *Apus pacificus* (fork-tailed swift) listed as Migratory under the BC Act and EPBC Act, *Merops ornatus* (rainbow bee-eater) listed as Migratory under the EPBC Act, both recorded
    - *Cacomantis flabelliformis* (fan-tailed cuckoo) and *Cacomantis pallidus* (pallid cuckoo), listed as Marine under the EPBC Act, recorded
    - *Falco peregrinus* (peregrine falcon), listed as Other Specially Protected under the BC Act, likely to occur
    - *Platycercus icterotis* subsp. *xanthogenys* (western rosella) Priority 4, likely to occur
- *Jalmenus aridus* (Inland Hairstreak Butterfly), Priority 2, recorded
- *Nyctophilus major* subsp. *tor* (central long-eared bat) Priority 3, likely to occur
- four potential invertebrate Short Range Endemic (SRE) invertebrates, recorded
- four introduced mammals (cat, fox, rabbit, dog/dingo), recorded.

As the detailed surveys identified the presence of the conservation significant fauna species *Leipoa ocellata* (malleefowl) and *Jalmenus aridus* (Inland Hairstreak Butterfly) subsequent targeted surveys were undertaken.

Malleefowl

Malleefowl were recorded during the 2022, 2024 and 2025 detailed and targeted surveys from sightings, and secondary evidence such as calls, scat, tracks, scrapings, feathers and nesting mounds. These surveys identified two active and four inactive malleefowl nesting mounds with a further 16 mounds verified within the local area in 2025 (Phoenix 2025c). The application area has been modified to avoid all known malleefowl mounds and provide a minimum 50 metre buffer. This is consistent with past advice the Department of Biodiversity, Conservation and Attractions.

The *National Recovery Plan for Malleefowl (Leipoa ocellata)* (National Malleefowl Recovery Plan) states that this fauna species is found principally in the semi-arid to arid zone in shrublands and low woodlands dominated by mallee (Frith 1962a, Frith1962b) and associated habitats (Commonwealth Government 2024) such as Broombush (*Melaleuca uncinata*) (Woinarski 1989b, Woinarski 1989a) and Scrub Pine (*Callitris verrucosa*). In Western Australia they are also found in some shrublands dominated by acacia, and occasionally in woodlands dominated by eucalypts such as Wandoo (*E. wandoo*), Marri (*Corymbia calophylla*) and Mallet (*E. astringens*) (Storr 1985b, Storr 1985a,

Storr 1986, Storr 1987, Storr & Johnstone 1988,Benshemesh et al. 2008, Parsons 2008a, Parsons 2008b). The National Malleefowl Recovery Plan notes that habitat loss has been and continues to be the major factor in the decline of malleefowl in southern Australia. Habitat fragmentation and isolation and predation are also listed as major threats to malleefowl.

Malleefowl habitat within the survey area aligns with that described in the National Malleefowl Recovery Plan as surveys identified shrubland habitat including acacia species and eucalyptus woodland habitat. The habitats were classified as high, moderate (i), moderate (ii), low and none (Phoenix 2025c), see Appendix G for further detail. The application area has been modified to avoid all high and moderate (i) value habitats that contain breeding habitat and some foraging habitat (high and moderate(i)). The clearing footprint contains 1,664.31 hectares (30.04 percent) of the mapped 5,541 hectares of foraging and dispersal habitat (moderate (ii)) and 586.79 hectares (10.83 percent) of the mapped 5,417 hectare marginal foraging and dispersal (low) habitat.

Given, avoidance of all known malleefowl mounds and a minimum 50 m buffer, and the malleefowl is a mobile species that has the ability to transit to other areas without assistance, the impact of the proposed clearing is unlikely to be significant at a species level. However, the proposed clearing is likely to result in the loss of 621 ha of potential foraging and dispersal habitat, contribute to the degradation of habitat left behind and increase accessibility of the area to feral predators (foxes and feral cats) through the clearing of tracks.

Inland Hairstreak Butterfly

The preferred habitat for the Inland Hairstreak Butterfly (IHB) is open woodland with mature *Senna artemisioides* ssp. *filifolia* as well as mixed flowering shrubs with open areas of well drained exposed ground adjoining the hostplants. *Froggattella kirbii* (Lowne, 1865) must be present. The IHB has an obligate mutualistic association with the *F. kirbii* ant as the ant feeds on secretions from the IHB during the larval stage of its life cycle and the ant protects the larvae form predators and parasitoids. The ant can survive without the IHB but IHB cannot survive without protection of the ant (Eastwood *et al*. 2023).

As of October 2025, the IHB is known to occur from 28 subpopulations across an extent of over 1,500,000 hectares (NSR 2026b).

The omnivorous *Iridomyrmex purpureus* (meat ants) may be introduced into the application area via earth moving vehicles and heavy equipment (NSR 2026c). They are widespread and usually coexist with other ant species when the ecology is stable. However, with the changes in food resources (dead insect, bird and bat carcasses) near wind turbines, the numbers of meat ants would likely increase and could out-compete the *F. kirbii* ant and displacing them from the habitat of the IHB.

The study area is located within the known range of the Inland Hairstreak Butterfly (IHB). The study area was surveyed in 2022, 2023, 2024 and 2025 and covers an area of 13,185 hectares. A total of 5,025.5 hectares of suitable habitat was identified in the study area based on the presence of host shrubs *S. artemisioides* ssp*. Filifolia and Acacia tetragonophylla,* and the *F. kirbii* ant (Phoenix 2025d). The application may result in the maximum clearing of 621 hectares of suitable habitat. This represents 12 percent of the potential habitat within the survey area.

The targeted IHB surveys conducted in 2024 and 2025 identified five breeding sites in the survey area (Phoenix 2025d). These sites have been excluded from the application area with a minimum buffer size of 50 metres. The applicant has also proposed reducing indirect impacts such as dust and changes to surface water drainage. Hygiene measures will also be implemented to prevent the introduction of *Iridomyrmex purpureus* (meat ants) as well as implementing a carcass/carrion removal program for birds and bats. These measures will reduce the impacts to the five local sub populations of IBH. Although the risk of the introduction of meat ants has been lowered the impacts would be high for the local populations.

Other fauna species of conservation significance

The application area contains habitat for seven bird and one mammal that are conservation significant species. The peregrine falcon, fan-tailed cuckoo, pallid cuckoo and rainbow bee-eater are widely distributed throughout mainland Australia. The southern whiteface and central long-eared bat occur across most of the southern half of Australia. Woodland habitat for these species is available in the survey and application area, this habitat is also widely available locally and regionally (DCCEEW 2026, Australian Museum 2026). The western rosella is endemic to the Wheatbelt of Western Australia and is found in open eucalypt forest (Australian Museum 2026). Given the Local and regional distribution of these species and the presence of habitat outside of the study area significant impacts to these bird species are unlikely.

The fork-tailed swift is an aerial species and is not known to land in Australia. Therefore, impacts from land clearing are not anticipated.

Habitat suitable for Short Range Endemic (SRE) invertebrates was identified in the study are and included the drainage line and minor breakaway habitat types. Only 148.52 hectares of drainage line habitat is located in the clearing footprint this is 23 percent of the 621 hectares of habitat in the survey area. Other lower potential habitat is located in the study and application area and includes open woodland and shrubland (Phoenix 2025b).

Of the 22 SRE taxa collected during surveys none were confirmed SRE. Four taxa recorded during surveys were considered potential SRE due to taxonomic data deficiencies. The trapdoor spider *Idisoma* 'MYG244' and the pseudoscorpion *Beierolpium* sp. indent 'Phoenix 0187' were collected in the drainage line habitat. The other two pseudoscorpion taxa, *Chernetidae* sp. indent and *Chernetidae* 'Phoenix 0185', were located in woodland habitat. All taxa were located both inside and outside of the application area in habitat that extend throughout the region.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on malleefowl and IHB habitat can be managed by taking steps to minimise the risk of the introduction and spread of weeds, the introduction of meat ants, slow directional clearing to allow malleefowl to move into adjacent vegetation, pre-clearance malleefowl surveys during its breeding season and rehabilitating the site post extraction to ensure the habitat is not permanently lost.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- avoid, minimise and reduce impacts and extent of clearing
- if clearing occurs during the breeding season a preclearance survey is required to ensure no malleefowl have constructed mounds in the application area since the last survey undertaken for the application (Phoenix 2025c)
- slow, directional clearing, which allows malleefowl to move to adjacent vegetation ahead of the clearing activity and minimises impact to individuals
- weed management to assist in mitigation impacts to fauna habitat, these hygiene measures will also mitigate the risk of the introduction of meat ants; and
- rehabilitation of temporary cleared areas to ensure habitat is not permanently lost.

3.3. Relevant planning instruments and other matters

The application area is not located within a surface water area proclaimed under the *Rights in Water Irrigation Act 1914* (RIWI Act). As the application does not involve the taking or diverting of surface water then an abstraction licence or permit to interfere with bed and banks are not required under the RIWI Act.

The Shire of Kalgoorlie-Boulder was sent a request for advice but did not respond. The proposed clearing is consistent with the Shire's Local Planning Scheme No.2 as it is broadly compatible with the Rural zone and meets the objective of "to provide for a range of non-rural land uses where they have demonstrated benefit and are compatible with surrounding rural land use."

The Department of Planning, Lands and Heritage (DPLH) provided advice on 11 June 2026 (DPLH 2026) that the application area intersects with the boundaries of two Aboriginal sites (Miirrida Parna (ID41813) and MG2574-001 (ID 42787)). Should activities occur in the boundaries of these areas it is the applicant's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) (AH Act) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Should the proposed activity be suitable for approval under Regulations 7 and 10 of the Aboriginal Heritage Regulations 1974 (AHR), it is recommended that the applicant contact the Marlinyu Ghoorlie Native Title claimants to provide them with the opportunity to respond to the proposal and the potential impact to Aboriginal heritage. Alternatively, should the activity require consent under section 18 of the AH Act, please refer to the consultation policy for section 18 applications.

The DPLH noted that the proposed activity area may not have been comprehensively surveyed, so there may be unrecorded Aboriginal heritage in the area. The AH Act protects all Aboriginal sites in Western Australia, regardless of their presence on the Register or not. Should the applicant become aware of unreported Aboriginal heritage while undertaking an activity or project, they are required to report it to the DPLH.

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is a part of an expansive tract of native vegetation in the extensive land use zone of Western Australia. It is 10 kilometres (km) northeast of the Kalgoorlie-Boulder townsite. The area is located in the Eastern Murchison subregion of the Murchison bioregion, and the Eastern Goldfield subregion of the Coolgardie bioregion of Western Australia. The dominant land use within the Eastern Goldfields subregion is Unallocated Crown Land, Crown reserves and grazing on native pastures. The remainder of land use is freehold, conservation and mining. The dominant land use within the Eastern Murchison subregion is grazing on native pastures, with Unallocated Crown Land, Crown reserves, mining and conservation making up the remainder. The land use of the application area is predominantly grazing on native pastures and it is located on two pastoral leases. Spatial data indicates the local area (20 km radius from the centre of the area proposed to be cleared) retains approximately 90 per cent of the original native vegetation cover.
Ecological linkage	The application area is not within any mapped linkages or within a formal ecological linkage.
Conservation areas	The application area is not located within a conservation area. The closest conservation areas to the application area are the Lakeside Timber Reserve 6 km to the south and the Kalgoorlie Arboretum 3.8 km to the west. The closest Environmentally Sensitive Area is located approximately 66 km north of the clearing area.
Vegetation description	The flora and vegetation survey reports (Phoenix Environmental Sciences, 2023, 2024, 2025) indicate that within the survey and proposed clearing area vegetation consists of the following vegetation communities: 1. Low *Casuarina* woodlands 2. Low *Eucalyptus* woodlands 3. Mid *Eucalyptus* woodlands 4. Low *Melaleuca* woodland 5. *Eremophila* shrubland 6. Tall *Acacia* shrubland 7. *Marieana* shrubland 8. Low mixed woodland A survey description is available in Appendix G. This is consistent with the Beard mapped vegetation types: • Barlee 20, which is described as, 'Low woodland; mulga mixed with *Allocasurina cristata* & *Eucalyptus* sp.' • Coolgardie 468, which is described as, 'Medium woodland; salmon gum & goldfields blackbutt' • Randelll 468, which is described as, 'Medium woodland; salmon gum & goldfields blackbutt' • Coolgardie 1294, which is described as 'Medium woodland; coral gum' or Low woodland; Mulga mixed with *Allocasuarina cristata* & *Eucalyptus* sp. The mapped vegetation associations retain over 96.1 percent regionally and 91.6 percent locally of the pre European extent (Government of Western Australia, 2019). Locally significant vegetation include: • Vegetation community Low Melaleuca (VT MsMsEpa) is locally restricted with 18.33 ha located in the application area

Characteristic	Details
	• Vegetation community Low Casuarina (VT CpSafMs and VT CpSsAe) 126.98 ha and vegetation community Low Eucalyptus (VT ElSsMt and VT ErEpMt) 909.25 ha provide potential habitat for priority flora species.
Vegetation condition	Vegetation surveys (Phoenix 2022 and Phoenix 2025a) indicate that vegetation within the proposed clearing area is in Good to Excellent condition (Trudgen, 1991). The full Trudgen (1991) condition rating scale is provided in Appendix E. The survey descriptions and mapping are available in Appendix G.
Climate and landform	The City of Kalgoorlie-Boulder is situated within the Eastern Goldfields subregion and is characterised by undulating plains, greenstone ridges, playa lakes, and scattered exposed bedrock. The subregion lies on the Yilgarn Craton's Eastern Goldfields Terrain and comprises of gently undulating plains interrupted in the west by Archaean greenstone ridges and low hills, while the east contains a horst of Proterozoic granulite. In the western half there are a series of large playa lakes which are remnants of an ancient major drainage line. Climate data for was obtained from the Bureau of meteorology (BoM) weather stating at the Kalgoorlie-Boulder Airport (012038) located 6 km southwest of the clearing area and are considered representative of local climatic conditions: • The highest mean maximum monthly temperature of 33.7oC in January and lowest in July at 16.9oC (BoM 2025) • Kalgoorlie-Boulder receives an average annual rainfall of approximately 308.4 mm, with the highest median annual rainfall for occurring between June and July of 18.8 mm and 20.0 mm, respectively (BoM 2025).
Soil description	The soil is mapped across the following soil systems: • BB5 (265BB) described as, "' Rocky ranges and hills of greenstones-basic igneous rocks" • Graves System (265Gr) described as, 'Basalt and greenstone rises and low hills supporting eucalypt woodlands with prominent saltbush and bluebush understoreys • Gumland System (265Gm) described as, 'Extensive pedeplains supporting eucalypt woodlands with halophytic and non-halophytic shrub understoreys' • Moriarty System (265Mo) described as, 'Low greenstone rises and stony plains supporting chenopod shrublands with patchy eucalypt overstoreys' • Mx43 (265Mx) described as, 'Gently undulating valley plains and pediments; some outcrop of basic rock' • Zed System (265Ze) described as, 'Low hills, rises and gently undulating stony plains based on metasedimentary rocks supporting acacia shrublands.'
Land degradation risk	Mapping is not available for land degradation risk factor mapping (wind, water, salinity phosphorus etc) in the area. Soil testing has been undertaken within the application area. Samples were rated on the Emerson scale with eight samples considered to be Class 3 [moderate slaking, intermediate dispersivity, structural stability] and 19 samples considered to be Class 4 [Moderate slaking, moderate dispersion and intermediate stability] (NSR 2025b).
Waterbodies	The desktop assessment and aerial imagery indicated that the application area lies within the Western Plateau Division with 97.43 % within the Raeside-Ponton catchment and the remaining 2.57 % within the Lake Lefroy catchment. minor non-perennial watercourses transect the area proposed to be cleared. These water courses, when flowing, would drain east to a main drainage channel that discharges northwards to non-perennial lakes including Lake Gwynne. This supports the Applicants assessment provided in the NVCP Supporting Document (NSR 2025b). The surface water assessment of the proposal indicates that surface water flows within the clearing area are predominantly concentrated sheet flow with poorly defined drainage corridors (AQ2 2025).

Characteristic	Details
Hydrogeography	The application area has been identified as an unproclaimed surface water area and the proclaimed Goldfields Groundwater Area under the RIWI Act. *Ground water within the area is characterised by salinity levels mapped as total dissolved solids (TDS) concentration of approximately 14,000 – 35,000 mg/L.* There are no Public Drinking Water Source Areas located within 20 kms of the application area and location is not a *Country Areas Supply Act 1947* clearing control catchment.
Flora	A total of 131 flora taxa across 62 genera were recorded including 124 native species, six introduced species and one unidentified species (Phoenix 2025a) Mapping and surveys did not identify any species listed under the BC Act. Surveys (Phoenix 2022; 2024; 2025) identified four flora taxon in the survey area that area recorded as Priority flora by the Department of Biodiversity Conservation and Attractions: • *Allocasuarina eriochlamys* subsp. *grossa* (P3) • *Eremophila xantholaema* (P1) • *Eremophila praecox* (P2) • *Notisia intonsa* (P2). The application area was modified prior to submission to ensure all areas containing recorded *E. praecox* were excised with a minimum buffer area radius of 10 m. The other Priority species are located over 500 m from the boundary of the application area. Mapping identified 15 Priority flora species in the local area with surveys identifying an additional species. Due to factors such as soil type, vegetation type, habitat and distribution four Priority flora species are considered as possibly occurring in the application area: • *Elachanthus pusillus* (P2) • *Ptilotus procumbens* (P1) • *Rhodanthe uniflora* (P1) • *Xanthoparmelia dayiana* (P3). The surveys also identified *Streptoglossa cylindriceps*. Although this species is not considered to be a threatened or priority flora it is a range extension of 80 kilometres. Six introduced flora species were identified within the application are by Phoenix (2025). None of these species are classified as Declared Pests or Weeds of national Significance (WoNS). The nearest known WoNS is *Lycium ferocissimum* (African boxthorn) recorded in two locations, 343 m and 141 m north of the application area.
Ecological communities	No Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) were identified within the application area. The Priority 3 PEC, Emu Land System is located 13.5 km from the application area within the local area (20 km from the application area). Indirect impacts to the PEC are unlikely at this distance.
Fauna	Fauna desktop, basic, targeted and shortrange endemic surveys were conducted within and surrounding the application area (Phoenix 2025b; Phoenix 2025c; Phoenix 2025d, DES 2025). A total of 10 fauna species of conservation significance were considered to possibly occur in the application area, four were likely to occur and six were recorded. The surveys recorded the presence of malleefowl, sightings, signs and mounds in the survey area. Habitats suitable for breeding foraging and dispersal were also recorded.

Characteristic	Details
	Surveys also identified the presence of the Priority 2 invertebrate species inland hairstreak butterfly and 5,025 ha of suitable habitat within the survey area (Phoenix 2025d). The remaining four recorded species were the bird species fork-tailed swift, fain-tailed cuckoo, pallid cuckoo and rainbow bee-eater which are listed under the BC Act and EPBC Act as Migratory and/or Marine. The four species likely to be present included the Priority 2 central long-eared bat and the bird species, southern whiteface, peregrine falcon, western rosella. Desk top surveys (Phoenix 2023, Phoenix 2025b) indicated an unconfirmed chuditch scat had previously been recorded within the survey area. The surveys included camera trapping for chuditch, however, no sightings were recorded and the area is likely to be a marginal habitat for nearby populations and is unlikely to currently support significant populations (Phoenix 2025b). Based this information the Chudich is considered unlikely to occur in the study and application area. Mapping identified one occurrence of the mammal *Myrmecobius fasciatus* (numbat) 2.6 km from the application area. This is record is considered to be erroneous as it is located in the town of Kalgoorlie-Boulder and is outside of current known range which is restricted to isolated populations in the southwest (DCCEEW 2026). The 2022 survey identified drainage line and minor breakaway habitat types and found four possible SREs within the application area.

A.2. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), and biological survey information, impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record (km)	Number of known records in local area (total)	Are surveys adequate to identify? [Y, N, N/A]
Allocasuarina eriochlamys sbsp. *Grossa*	P3	Y	Y	Y	0.84	29	Y
Elachanthus pusillus	P2	Y	Y	Y	10.7	7	Y
Eremophila praecox	P2	Y	Y	Y	0	47	Y
Eremophila xantholaemus	P1	Y	Y	Y	5.5	4	Y
Notisia intonsa	P3	Y	Y	Y	0.6	29	Y
Ptilotus procumbens	P1	Y	Y	Y	11.9	5	Y
Rhodanthe uniflora	P1	Y	Y	Y	0.26	1	Y
Xanthoparmelia dayiana	P3	Y	Y	Y	14.3	1	Y

P: priority

A.3. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), and biological survey information, impacts to the following conservation significant fauna required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Distance from application area (Km)	Number of known records in the survey area (total)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence
Birds						
Aphelocephala leucopsis (southern whiteface)	VU	Y	Not available	1	Y	Y
Apus pacificus (fork-tailed swift)	MI	N	Not available	1	Y	Y
Falco peregrinus (peregrine falcon)	OS	Y	3	1	Y	Y
Leipoa ocellata (malleefowl)	VU	Y	0.08	27	Y	Y
Platycercus icterotis subsp. *xanthogenys* (western rosella)	P4	Y	1.1	multiple	Y	Y
Cacomantis flabelliformis (fan-tailed cuckoo)	MA	Y	Not available	1	Y	Y
Cacomantis pallidus (palid cuckoo)	MA	Y	Not available	1	Y	Y
Merops ornatus (rainbow bee-eater)	MI	Y	Not available	1	Y	Y
Mammals						
Nyctophilus major subsp. *tor* (central long-eared bat)	P3	Y	17	1	Y	Y
Invertebrates						
Jalmenus aridus (inland hairstreak butterfly	P1	Y	0.05	40	Y	Y

VU: vulnerable, MI Migratory, MA marine, OS other specially protected, P: priority

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The application area does not include vegetation representing PECs and priority flora.	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The area proposed to be cleared contains potential foraging and roosting habitat for conservation significant fauna including malleefowl, western rosella, inland hairstreak butterfly and the central long-eared bat.	May be at variance	Yes *Refer to Section 3.2.2, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: Mapping and surveys did not identify any species listed under the BC Act. The area proposed to be cleared is unlikely to contain flora species listed under the BC Act.	Not at variance	No
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: The nearest threatened ecological community is located over 300 km from the application area. The area proposed to be cleared does not contain species that can indicate a threatened ecological community.	Not at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The study area is located across two Interim Biogeographic Regionalisation for Australia (IBRA) subregions, the vegetation of these sub regions is described as: • East Murchison subregion is primarily composed of Mulga woodlands, often with rich ephemeral species, along with hummock grasslands, saltbush shrublands, and *Halosarcia* (*Tecticornia*) shrublands • Eastern Goldfields subregion includes a mix of Mallees, Acacia thickets, shrubland heaths, Eucalyptus woodlands, and dwarf samphire shrublands (NSR 2026b). The mapped vegetation associations retain over 96.1 percent regionally and 91.6 percent locally. This is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.	Not at variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not at variance	No
Environmental value: land and water resources		

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: No permanent watercourses or wetlands are recorded in the application area. The non-perennial watercourses in the application area are only likely to flow under heavy rainfall conditions. The vegetation types identified in the application area are not associated with riverine ecosystems. The proposed clearing is unlikely to impact vegetation associated with water courses and wetlands. Given the above, the proposed clearing is unlikely to impact hydrology and water quality on or off site.	Not likely to be at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: Noting the mapped soil types and location of the application area the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	No
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: There are no permanent water courses, wetlands or Public Drinking Water Sources Areas or other groundwater or surface water protection zones recorded within 20 kilometres of the application area. Groundwater in the Goldfields is hypersaline and will not support groundwater dependent ecosystems. This was confirmed by the surveys which did not identify any groundwater dependent ecosystems. The non-perennial watercourses in the application area are only likely to flow under heavy rainfall conditions. The proposal is unlikely to impact surface or groundwater quality, with no Bend and Bank permit required. The referral of the proposal to the EPA under Part IV of the EP Act (NSR 2025) indicated that water would be sourced from offsite. If this is the case then no permits would be required under the RIWI Act The proposed clearing is unlikely to impact surface or ground water quality.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The surveyed soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Given several minor non-perennial watercourses are recorded within the application area. Flood modelling indicates that these water courses are not prone to flooding and management measures can be implemented to ensure risk of interrupting flow paths is low (AQ2 2025). These suggested measures have been incorporated into the EMP (NSR 2026c). Therefore, the proposed clearing is unlikely to contribute to waterlogging.	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

Measuring vegetation condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Very poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. Biological survey information

Flora and vegetation survey description

Three vegetation surveys were conducted by Phoenix Environmental Sciences:

- September 2022 – reconnaissance survey covering 11,419.7 hectares. The survey area included the entire clearing area.
- March 2024 – reconnaissance flora and vegetation survey covering 1776.5 hectares adjacent to the clearing area.
- March 2025 – detailed flora and vegetation survey covering 2,296.5 ha. The survey covered the majority of the clearing area envelope and a small area outside. The transmission line was not included in this survey.

The surveys overlap. For the purposes of this assessment a union survey area was calculated at 13,193 hectares (overlapping areas were not double counted).

All surveys included a desktop survey and a field survey. The application is located on the boundary of the Ermeaen province with a recommended post wet season survey (March to June) and South-Western Interzone province with a recommended spring survey (September to November). The timing of the surveys meets this requirement.

All surveys were conducted in accordance with the relevant EPA guidelines.

Results

No TECs or PECs were identified either in desktop searches or as part of the field surveys.

The number of vegetation types identified in each survey varied with the 2022 survey identifying 13, the 2024 survey identifying 17 and the 2025 survey identifying 14. These have been summarised in the following table which is adapted from the supporting document (NSR 2026b).

Vegetation Community	**Vegetation Types in survey area**		
	Phoenix 2022	**Phoenix 2024**	**Phoenix 2025**
Low *Casuarina* woodlands	CDP, CEP	CEP	CpSafMs, CpSsAe, CpAbEgPo
Low *Eucalyptus* woodlands	EES	EEA, EES	ErEpMt, ElSsMt, EsaluTdAv, EsaluEiiMsMt, EsppAbSafPo
Mid *Eucalyptus* woodlands	EA, EAE, EEE, EM, ET	EA, EAE, EEE, EM	EsalmAnsMt, EsalmMsMt, EivSc, EsaluAhPo
Low *Melaleuca* woodland	-	-	MsMsEpa
Eremophila shrubland	-	EP	EsAvSd
Tall *Acacia* shrubland	AEP	AE, AEP, AS	-
Marieana shrubland	MS	MS, MA	-
Low mixed woodland		ECAE	-
Mid *Eucalyptus* mallee	EmA, EmAE	EmA, EmAE	-
Cleared	Disturbed	Disturbed	Cleared

The 2025 detailed flora and vegetation survey indicate that the Low Eucalyptus vegetation community is the most widespread in the clearing area. This is supported by the 2022 and 2024 recognisance surveys which cover a larger area, see vegetation type descriptions below.

Vegetation types of the survey area (Phoenix 2022)

Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
AEP	R009, R020	Tall *Acacia* shrubland over mid open *Eremophila* shrubland over isolated low *Ptilotus* shrubs	57.5, 0.5%	
CDP	R007, R047, R057	Isolated low *Casuarina* trees over mid *Dodonaea* and *Senna* shrubland over isolated low *Ptilotus* shrubs	948.9, 8.3%	
CEP	R017, R032, R044, R048	Low *Casuarina* woodland over mid to tall *Eremophila* and *Senna* shrubland over isolated low *Ptilotus* shrubs	2191.3, 19.2%	
Disturbed		infrastructure mostly devoid of vegetation	335.4, 2.9%	NA
EA	R001, R008, R024, R030, R031, R058	Mid *Eucalyptus* woodland over mid open *Atriplex* and *Maireana* shrubland over isolated low shrubs	1204.0, 10.5%	

EAE	R004, R006, R014, R016, R018, R019, R025, R027, R042, R049, R050, R051, R053, R055	Mid *Eucalyptus* woodland over sparse tall *Acacia* shrubland over mid *Eremophila* and *Senna* shrubland	2083.2, 18.2%	
EEA	R022, R028, R036, R037, R041	Low open *Eucalyptus* woodland over mid open *Eremophila* shrubland over low sparse *Atriplex* shrubland	1317.3, 11.5%	
EEE	R011, R012, R013, R023, R044B, R056	Mid *Eucalyptus* woodland over mid sparse *Eremophila* and *Maireana* shrubland over isolated low *Eremophila* shrubs	1087.8, 9.5%	
EES	R021, R034, R052	Low open *Eucalyptus* woodland over mid open *Eremophila* shrubland over isolated low *Scaevola* shrubs	1087.2, 9.5%	

EM	R026	Mid *Eucalyptus* woodland over tall open *Melaleuca* shrubland isolated clumps of low forbs	340.2, 3.0%	
EMA	R003	Mid *Eucalyptus* mallee woodland over mid open *Maireana* shrubland over low *Atriplex* shrubland	158.1. 1.4%	
EmAE	R033, R035, R040	Mid *Eucalyptus* mallee woodland over tall *Acacia* shrubland over mid sparse *Eremophila* shrubland	149.9, 1.3%	
ET	R054	Isolated mid *Eucalyptus* trees over low open *Tecticornia* shrubland over isolated clumps of low forbs	168.9, 1.5%	
MS	R002, R005, R015	*Maireana* and *Atriplex* shrubland over isolated low *Sclerolaena* forbs	293.8, 2.5%	

Vegetation types of the survey area (Phoenix 2024)

Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
AE	KOR013	Tall *Acacia* shrubland over isolated mid *Eremophila* shrubs	7.43, 0.42%	
AEP	KOR028, KOR033	Tall *Acacia* shrubland over mid open *Eremophila* shrubland over isolated low *Ptilotus* shrubs	56.84, 3.20%	
AS	KOR029, KOR035	Tall *Acacia* shrubland over mid open *Senna* shrubland	41.14, 2.32%	
CDP	KOR042	Isolated low *Casuarina* trees over mid *Dodonaea* and *Senna* shrubland over isolated low *Ptilotus* shrubs	185.07, 10.42%	
CEP	KOR002, KOR005, KOR019, KOR025	Low *Casuarina* woodland over mid to tall *Eremophila* and *Senna* shrubland over isolated low *Ptilotus* shrubs	211.70, 11.92%	
EA	01LF01, KOR004, KOR009, KOR016, KOR020, KOR027, KOR036, KOR024	Mid *Eucalyptus* woodland over mid open Atriplex and *Maireana* shrubland over isolated low shrubs	325.34, 18.31%	

EAE	01EP01, 01EP02, 01EP05, 03EP03, KOR023, KOR030, KOR039, KOR040, KOR043, KOR044	Mid *Eucalyptus* woodland over sparse tall *Acacia* shrubland over mid *Eremophila* and *Senna* shrubland	167.70, 9.44%	
ECAE	KOR011, KOR031	Low *Eucalyptus* and *Casuarina* woodland over *Acacia* and *Eremophila* shrubland	198.88, 11.19%	
EEA	KOR003, KOR006, KOR010, KOR022, KOR026, KOR037, KOR038	Low open *Eucalyptus* woodland over mid open *Eremophila* shrubland over low sparse *Atriplex* shrubland	280.56, 15.79%	
EEE	KOR012, KOR018, KOR041, KOR045	Mid *Eucalyptus* woodland over mid sparse *Eremophila* and *Maireana* shrubland over isolated low *Eremophila* shrubs	42.51, 2.39%	
EES	KOR046	Low open *Eucalyptus* woodland over mid open *Eremophila* shrubland over isolated low *Scaevola* shrubs	51.24, 2.88%	
EM	KOR015, KOR032	Mid *Eucalyptus* woodland over tall open *Melaleuca* shrubland isolated clumps of low forbs	70.20, 3.95%	

EmA	01EP06	Mid *Eucalyptus* mallee woodland over mid open *Maireana* shrubland over low *Atriplex* shrubland	2.72, 0.15%	
EmAE	KOR014	Mid *Eucalyptus* mallee woodland over tall *Acacia* shrubland over mid sparse *Eremophila* shrubland	23.65, 1.33%	
EP	KOR001	Tall *Eremophila* shrubland over isolated low *Ptilotus* shrubs	10.02, 0.56%	
MA	KOR034	Mid open *Maireana* shrubland over low Asteraceae forbland	5.52, 0.31%	
MS	KOR017	*Maireana* and *Atriplex* shrubland over isolated low *Sclerolaena* forbs	74.26, 4.18%	
Disturbed		Cleared areas, major tracks mostly devoid of vegetation	21.76, 1.22%	

Vegetation types of the survey area (Phoenix 2025)

Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
CpSafMs	KD001, KD008, KD043	Low open woodland of *Casuarina pauper* and *Santalum spicatum*, over mid open shrubland of *Senna artemisioides* subsp. *filifolia*, *Acacia kalgoorliensis*, and *Eremophila oldfieldii*, over low sparse chenopod shrubland of *Maireana sedifolia*, *M. georgei*, and *M. trichoptera*.	43.70 ha (1.90%)	
CpSsAe	KD003, KD004, KD005, KD016, KD044, KD051	Low woodland of *Casuarina pauper*, over mid open shrubland of *Scaevola spinescens*, *Senna artemisioides* subsp. *filifolia*, and *Eremophila oppositifolia*, over low sparse shrubland of *Acacia erinacea*, *Maireana georgei* and *M. trichoptera*.	130.09 ha (5.67%)	
ErEpMt	KD002, KD006, KD009, KD010, KD017, KD018, KD021, KD035, KD042	Low woodland of *Eucalyptus ravida* and *E. celastroides*, over mid open shrubland of *Eremophila pustulata*, *E. scoparia*, and *Exocarpos aphyllus*, over low sparse chenopod shrubland of *Maireana triptera* and *Atriplex vesicaria*, with *Acacia erinacea*.	502.40 ha (21.88%)	
ElSsMt	KD007, KD015_w, KD022, KD024, KD037, KD041, KD047, KD055	Low open woodland of *Eucalyptus lesouefii* and *E. transcontinentalis*, occasionally with *E. ravida*, over mid sparse to open shrubland of *Scaevola spinescens*, *Senna artemisioides* subsp. *filifolia*, and *Eremophila interstans* subsp. *interstans*, over low sparse shrubland of variably present *Maireana trichoptera*, *Eremophila parvifolia* subsp. *auricampa*, and *Acacia erinacea*.	434.84 ha (18.94%)	

EsalmAnsMt	KD012, KD014, KD046	Mid open woodland of *Eucalyptus salmonophloia* with variably present *E. celastroides* and *E. salubris*, over mid sparse chenopod shrubland of *Atriplex nummularia* subsp. *spathulata*, *Maireana sedifolia*, and *M. pyramidata*, over low sparse chenopod shrubland of *Maireana triptera* with *Ptilotus obovatus* and *M. trichoptera*.	27.08 ha (1.18%)	
EivSc	KD040, KD049	Variably present mid isolated trees of *Eucalyptus salmonophloia*, over mid open shrubland of *Eremophila interstans* subsp. *virgata*, *Exocarpos aphyllus*, and *Atriplex nummularia* subsp. *spathulata*, over low sparse forbland of *Streptoglossa cylindriceps*, *Sclerolaena fusiformis*, and *Sclerolaena diacantha*.	61.13 ha (2.66%)	
EsaluTdAv	KD013, KD033, KD056	Low open woodland of *Eucalyptus salubris* with *E. celastroides* and *E. ravida*, over mid open chenopod shrubland of *Tecticornia disarticulata*, *Maireana sedifolia*, and *Atriplex nummularia* subsp. *spathulata*, over low sparse chenopod shrubland of *Atriplex vesicaria* and *Maireana triptera*, with *Sclerolaena diacantha*.	193.02 ha (8.41%)	
EsaluEiiMsMt	KD025, KD028, KD029, KD054, KD058	Low open woodland of *Eucalyptus salubris*, over tall isolated shrubs of *Eremophila interstans* subsp. *interstans*, over mid open shrubland of *Maireana sedifolia*, *Senna artemisioides* subsp. *filifolia*, and variably present *Maireana pyramidata*, over low isolated shrubs of *Maireana triptera* and *M. trichoptera*.	431.06 ha (18.78%)	

EsaluAhPo	KD034, KD038	Mid open woodland of *Eucalyptus salubris* and *E. salmonophloia*, occasionally with *E. transcontinentalis*, over mid open shrubland of *Acacia hemiteles*, *Eremophila scoparia*, and *Senna artemisioides* subsp. *filifolia*, over low isolated shrubs of *Ptilotus obovatus*, *Rhagodia drummondii*, and *Eremophila decipiens* subsp. *decipiens*.	53.37 ha (2.32%)	
MsMsEpa	KD015_e, KD039	Low open woodland of *Melaleuca sheathiana*, with *Eucalyptus lesouefii* or *E. oleosa* subsp. *oleosa*, over mid sparse to open shrubland of *Maireana sedifolia* with *Eremophila scoparia*, over low sparse shrubland of *Eremophila parvifolia* subsp. *auricampa* or *Atriplex vesicaria*.	18.33 ha (0.80%)	
EsAvSd	KD019, KD023, KD031, KD036, KD057	Mid sparse shrubland of *Eremophila scoparia*, *Maireana pyramidata*, and *Senna artemisioides* subsp. *filifolia*, over low sparse to open chenopod shrubland of *Atriplex vesicaria*, *Maireana triptera*, and *M. trichoptera*, over low isolated forbs of *Sclerolaena diacantha* and **Carrichtera annua*.	97.16 ha (4.23%)	

CpAbEgPo	KD011, KD026, KD045	Low open woodland of *Casuarina pauper* with variably present *Eucalyptus griffithsii*, over tall open shrubland of *Acacia burkitii*, *Exocarpos aphyllus*, and *Acacia hemiteles*, over mid sparse shrubland of *Eremophila granitica*, *Scaevola spinescens*, and *Senna artemisioides* subsp. *filifolia* low isolated shrubs of *Ptilotus obovatus*, *Maireana triptera*, and *Rhagodia drummondii*.	64.38 ha (2.80%)	
EsppAbSafPo	KD027, KD050, KD052, KD053	Low open woodland to woodland of variably present *Eucalyptus griffithsii*, *E. oleosa* subsp. *oleosa*, or *E. salubris*, over tall open shrubland to shrubland of *Acacia burkitii*, over mid sparse to open shrubland of *Senna artemisioides* subsp. *filifolia*, *Eremophila granitica*, and variably present *E. alternifolia*, over low isolated shrubs of *Ptilotus obovatus*, *Enchylaena tomentosa*, and *Rhagodia drummondii*.	45.39 ha (1.98%)	
Cleared	N/A	N/A	6.58 ha (0.29%)	N/A

Although discussed in the Survey report (Phoenix 2025) a vegetation type EsalmMsMt was not included in Table 5-8, Vegetation types, description and extent in the survey area (Phoenix 2025).

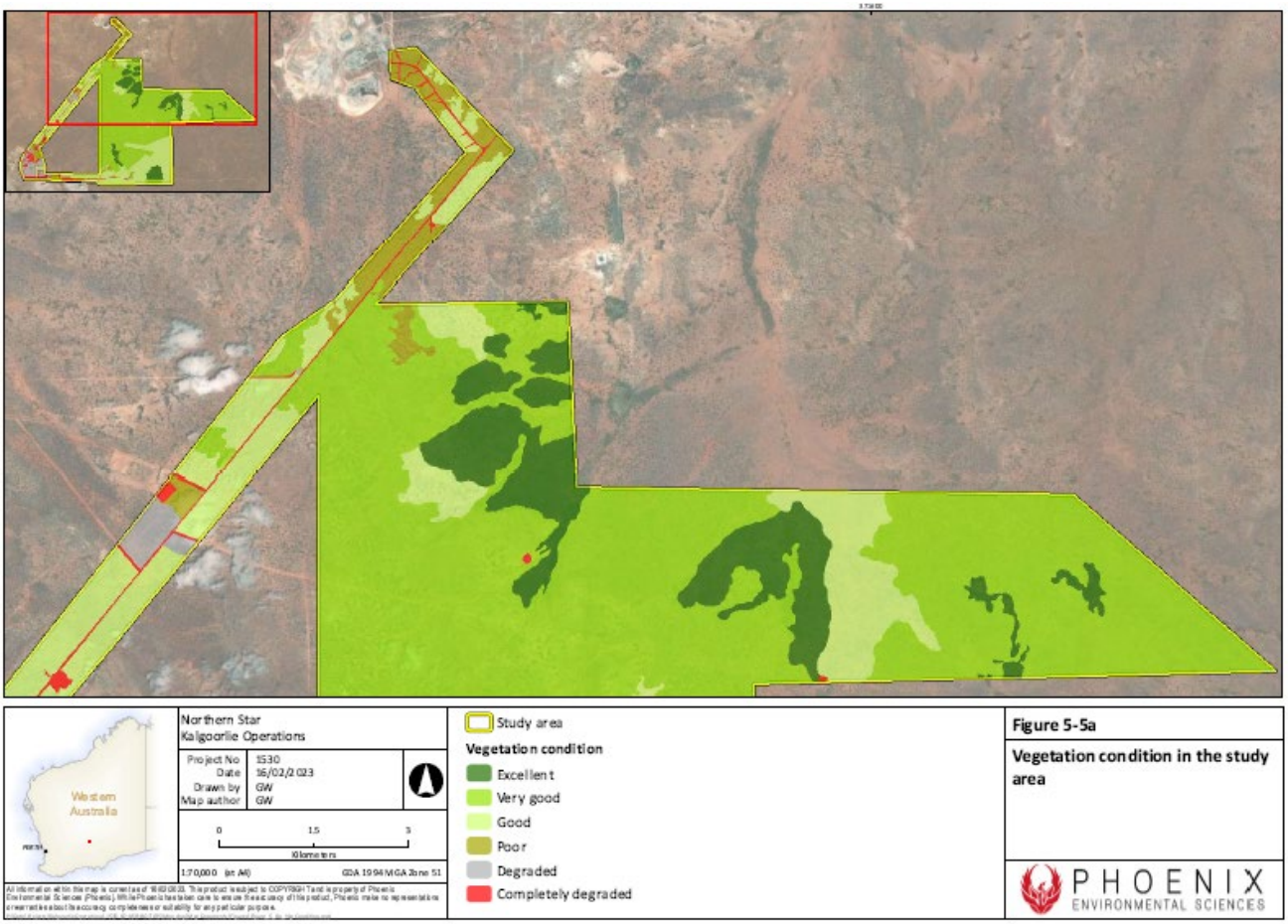
Vegetation condition of the survey area and clearing area

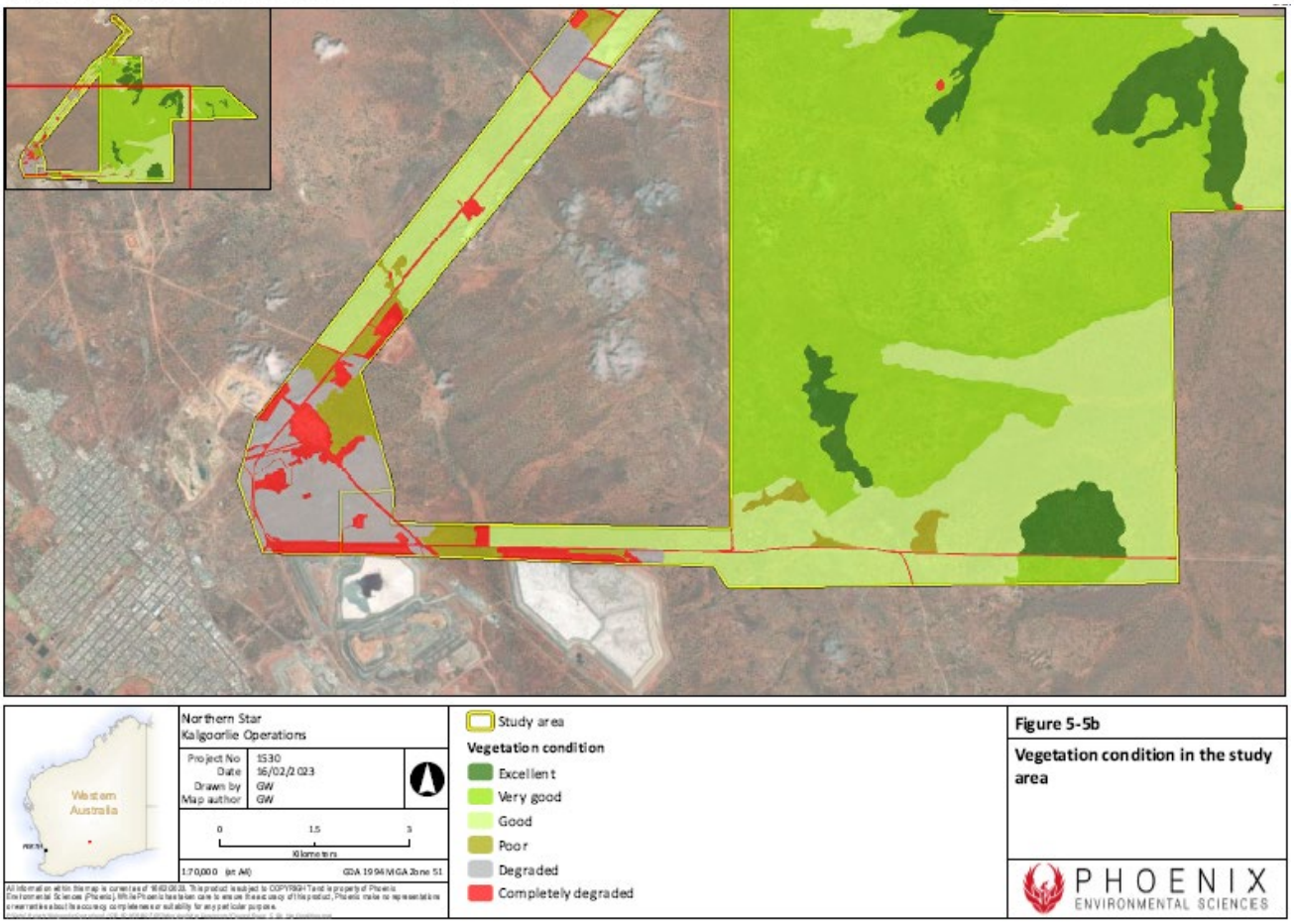
Vegetation condition was provided in the recognisance surveys undertaken by Phoenix in 2022 and 2024 covering 11,413.4 hectares and 1,776.51 hectares of the survey area respectively. The Phoenix 2025 detailed flora and vegetation report provided the vegetation condition for its 2,295.76 hectare survey area which mainly focussed on the clearing area. The vegetation condition is provided in the following table and mapping below.

Vegetation condition	Phoenix 2022 survey area		Phoenix 2024 survey area		Phoenix 2025 survey area	
	hectares	% of survey area	hectares	% of survey area	hectares	% of survey area
'Good to Excellent'	10,179.3	89.0	1,717.94	96.71	2,275.98	99.14
'Poor'	446.6	3.9	20.19	1.14	0.42	0.02
'Degraded'	452.1	4.0	16.62	0.94	12.78	0.56
'Completely Degraded'	335.4	2.9	21.76	1.22	6.58	0.29

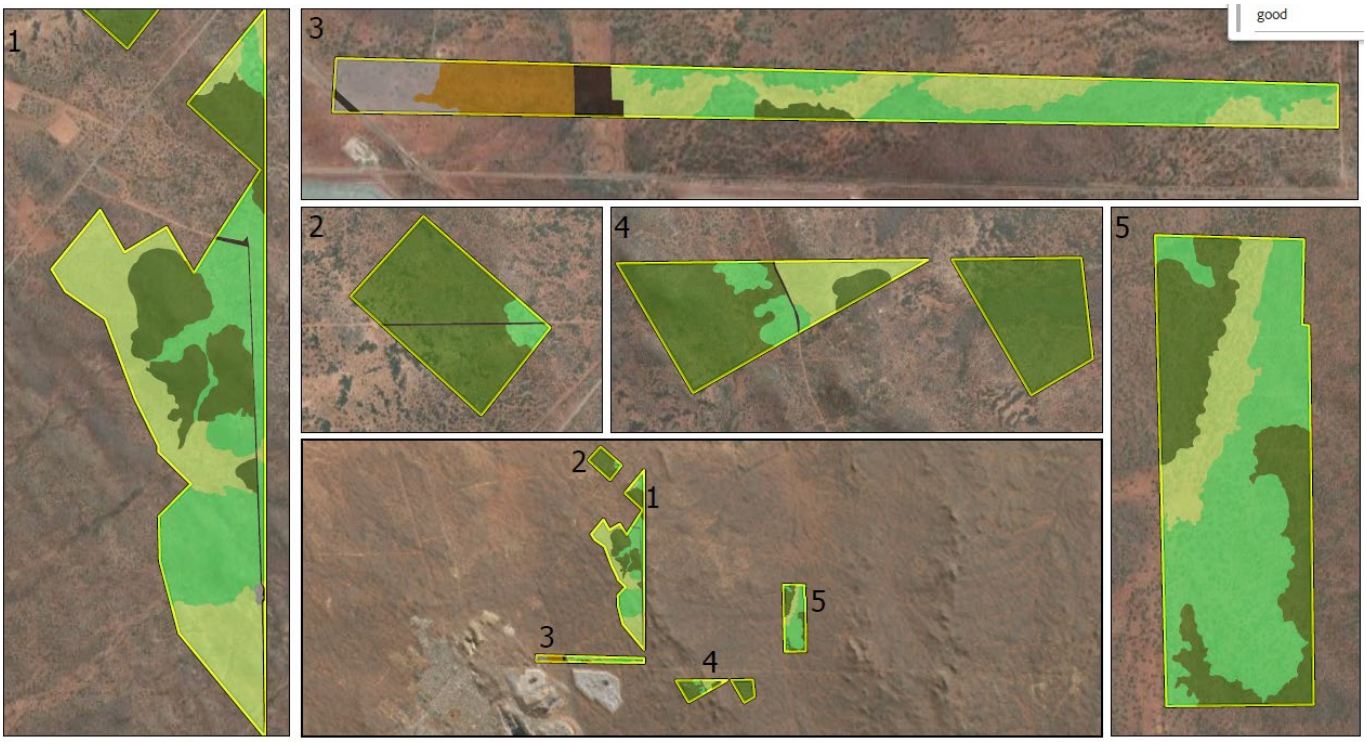
The Supporting Document (NSR 2025b) indicates that the 'Good to Excellent' condition vegetation in the application area covers 2,226.11 hectares which is 16.87 percent of the 13,191 hectare survey area and 18.6 percent of the 11,964 'Good to Excellent' condition vegetation in the survey area. The remaining vegetation in the application area includes 'poor' (3.68 ha or 0.16%), 'degraded' (11.99 ha (0.53%) and 'completely degraded' (21.76 ha or 0.96%) vegetation condition.

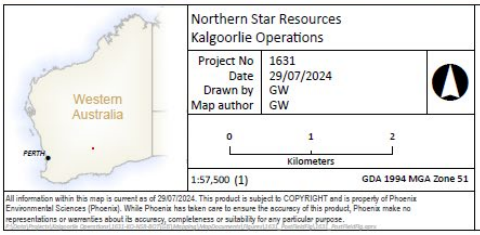
Pheonix 2022





Pheonix 2024





Northern Star Resources
Kalgoorlie Operations

Project No	1631
Date	29/07/2024
Drawn by	GW
Map author	GW

0 1 2
Kilometers

1:57,500 (1) GDA 1994 MGA Zone 51

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Study area

Vegetation condition

- Excellent
- Very Good
- Good
- Poor
- Degraded
- Completely Degraded

Figure 5-5

Vegetation condition recorded in the field survey

PHOENIX ENVIRONMENTAL SCIENCES



Fauna surveys

Basic and targeted terrestrial fauna surveys were undertaken in September 2022, November 2023 and June 2024 covering a 13,185 ha area (Phoenix 2025b). The Donato Environmental Services Report (DES 2025) undertook a desktop review over a wider 50 km area identifying additional species.

The 2022, 2024 fauna surveys recorded the presence of malleefowl and in 2025 a targeted survey was undertaken.

Targeted surveys for ant species *Camponotus* sp. nr. *terebrans*, host and of the critically endangered *Ogyris petrina* (Arid Bronze Asure Butterfly (ABAB)) and the inland hair streak butterfly were undertaken in October 2024 (spring), and April and October 2025 (autumn and spring). As no guidelines exist for surveying inland hairstreak butterfly a similar survey method to that of the ABAB was used with habitat suitability assessments conducted throughout the study area (Phoenix 2025c).

The surveys are generally consistent with the Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment (EPA 2020).

Results

The surveys (Phoenix 2025b; DES 2025) identified the following significant fauna in the survey area:

- malleefowl,
- inland hairstreak butterfly,
- fork-tailed swift,
- fan-tailed cuckoo,
- pallid cuckoo, and
- rainbow bee-eater.

Based on a desktop review identified 25 bird species, four mammals and one reptile possibly occurring in the survey area. Of these the following significant species were determined as likely to occur in the survey area (Phoenix 2025b):

- southern whiteface,
- peregrine falcon,
- western rosella, and
- central long-eared bat.

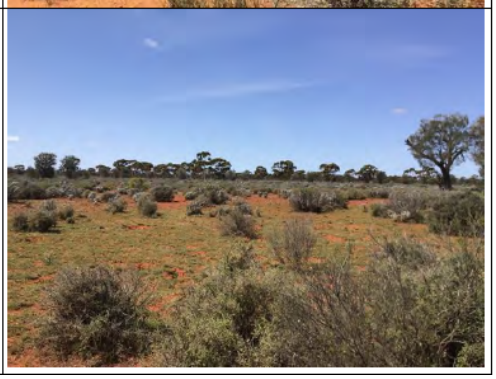
The Critically Endangered *Ogyris subterrestris petrina* (Arid Bronze Azure Butterfly) or its host ants were not identified during surveys. Therefore study area does not contain suitable habitat for the ABAB.

The terrestrial fauna surveys mapped eight broad habitat types across the study area, with the shrubland, open woodland and drainage line regionally widespread and contiguous cross the Eastern Goldfileds region (Phoenix 2025b):

- Open woodland (40.5%)
- Shrubland (30.5%)
- Groved woodland (15.6%)
- Floodplain (2.9%)
- Drainage line (4.7%)
- Minor breakaway (0.06%)
- Grassland (3.8%)
- Farm Dam (0.01%)
- Cleared (1.9%)

Mapping was provided in the Phoenix 2025b report and presented below.

Fauna habitat across the survey area (Pheonix 2025b)

Habitat type	Site/s	Description	Extent and % of study area	Representative photograph
Open woodland	KO-004, KO-005, KO-008, KO-019, KO-022, KO-023 KO-029, BF001, BF002, BF003, BF004, BF005, BF006, BF008, BF009, BF010, BF011, BF012, BF013, BF014, BF015, BF017, BFOP003, BFOP004, BFOP006, BF01, BF02, BF05, BF06, BF07, BF08,	Open woodland over low mixed shrubs on clay loam plain. High abundance of large fallen logs, large trees with hollows and leaf litter. MF: low to medium suitability depending on density	5,334 ha 40.53%	
Shrubland	KO-007, KO-009, KO-012, KO-014, KO-020, KO-025, KO-026, KO-MF1, KO-MF2, KO-Opp02, KO-Opp04, BF001, BF004, BFOP001, BFOP002, BF_MFmound	Shrubland with scattered mallee, *Eucalyptus* and *Allocasurina* on clay loam with gravel or sparse sand. Dense shrubby understory provides cover from predators. High abundance of flowering/seeding shrubs. MF: low to high suitability depending on density	4,017 ha 30.5%	
Groved woodland	KO-010, KO-011, KO-013, KO-015, KO-Opp01, KO-Opp03, KO-Opp01, BF016, BF018	Grover *Eucalyptus* woodland over mixed shrubs on plains and low hills. Areas of dense vegetation interspersed with open patches. MF: low to medium suitability	2051 ha 15.6%	
Floodplain	KO-018, KO-027	Floodplain with scattered trees, shrubs and grasses on clay loam. Likely to be seasonally inundated. MF: low suitability	387 ha 2.9%	

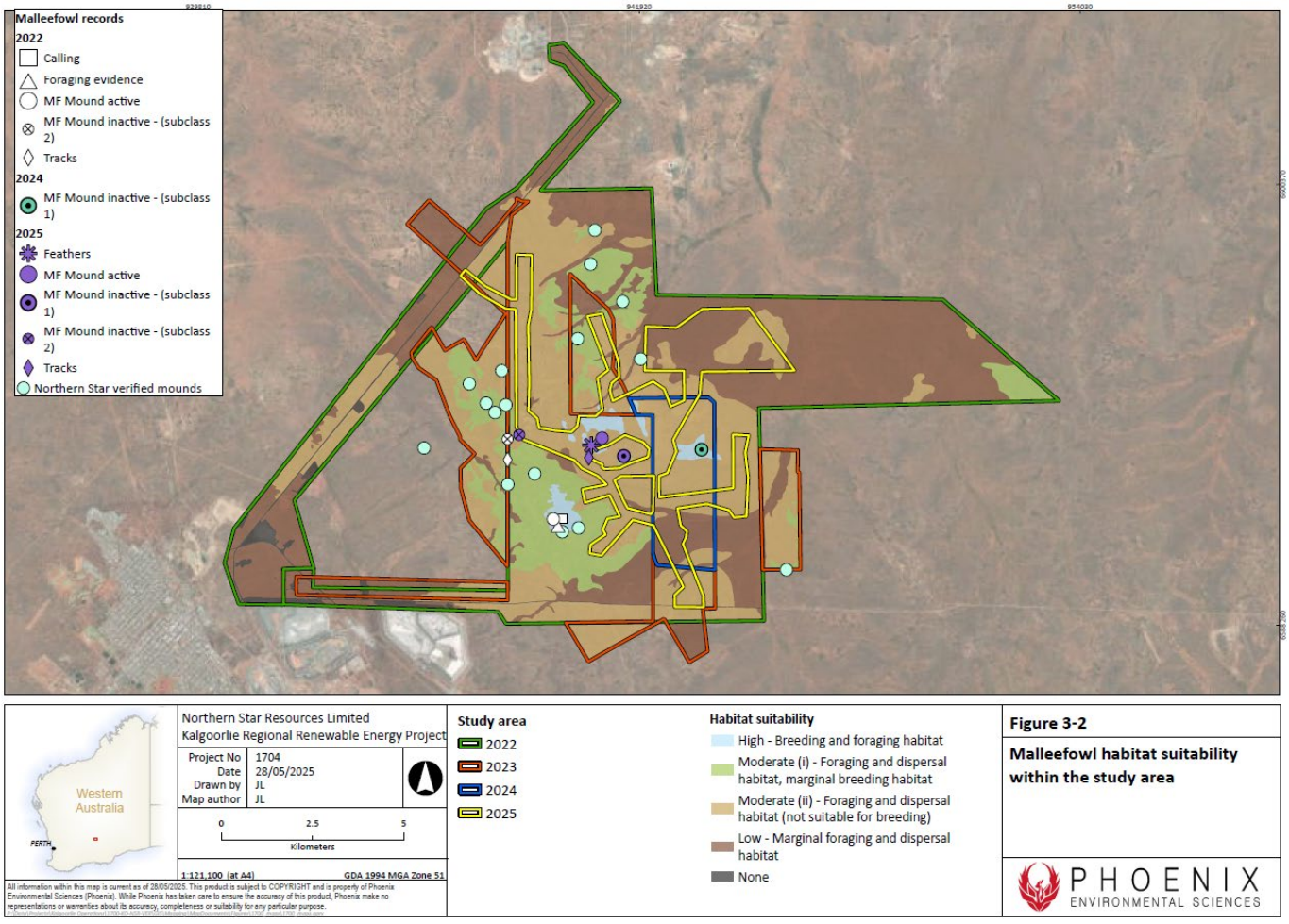
Drainage line	KO-002, KO-003, KO-016, BF03, BF04, BF007	Drainage line with *Eucalyptus* over mixed shrubs on clay loam soils. Thick patches of leaf litter. MF: low to high suitability depending on density and potential for surface water flow	621 ha 4.7%	
Farm dam with permanent pools	KO-017	Farm dams with permanent pools with scattered low-mid shrubs and grasses on dam walls. MF: low suitability	2 ha 0.01%	
Minor breakaway supporting open woodland	KO-001	Open *Eucalyptus* woodland over scattered shrubs on stony hill slopes with minor breakaway. MF: low suitability	8 ha 0.06%	
Grassland	KO-021	Grassland cleared of nearly all upper story vegetation. Sparse *Eucalyptus* and mulga shrubs. MF: low suitability	516 ha 4%	
Cleared – infrastructure	NA	Cleared infrastructure areas Unsuitable for MF	250 ha 2%	

The 2022, 2024 fauna surveys and 2025 targeted malleefowl survey were undertaken in a 13,189 ha survey area. These surveys identified two active mounds, four inactive mounds as well as other evidence such as feathers and track marks. In 2025 the Northern Star environment department ground-truthed and verified a further 16 mounds previously identified by LiDAR within and nearby the study area (Phoenix 2025d).

Malleefowl habitat assessments were conducted at 116 sites within the study areas and suitability scores used to extrapolate suitability over the survey area (see the following table and Figure 2) (Phoenix 2025c).

Habitat suitability	Habitat types	Extent within study area	Extent within clearing footprint
High Breeding	Shurbland	232 ha (1.8 %)	0 ha (0 %)
Moderate (i) Marginal breeding habitat / foraging	Shrubland, Open woodland, Groved woodland, Drainage line	1,754 ha (13.3 %)	0 ha (0 %)
Moderate (ii) Foraging and dispersal	Shrubland, Open woodland, Groved woodland, Drainage line	5,541 ha (42.0 %)	1,664.31 ha (73.53 %)
Low Marginal foraging and dispersal	Farm dam, Open woodland, Groved woodland, Shrubland, Floodplain, Grassland, Minor breakaway, Drainage line	5,417 ha (41.0 %)	586.79 ha (25.92 %)
None	Cleared/developed areas	251 ha (1.9 %)	10.15 ha (0.87 %)
Total		**13,194 ha**	**2,263.54 ha**

Figure 2: Malleefowl habitat and survey records (Phoenix 2025d)



Subclass 1 – mound shows signs of recent malleefowl activity such as fresh scats, tracks or fresh scrapings

Subclass 2 – no evidence of recent activity but mound remains well formed and in good condition for future use

The targeted inland hairstreak butterfly surveys identified 5,025 ha of suitable habitat in the study area with four breeding sites being identified. An additional breeding site was identified outside of the study area during a regional survey in 2022 (Phoenix 2025c).

Appendix E. List of properties within which clearing is authorised

- Lot 32 on Deposited Plan 203390, Brown Hill
- Lot 486 on Deposited Plan 39358, [Crown Reserve 35662 (R35662)], Brown Hill
- Lot 473 on Deposited Plan 39818 [Unallocated Crown Land (PIN 11222734)], Brown Hill
- Lot 218 on Deposited Plan 27467 (Pastoral Lease LPL N049574) (PIN 693047) (PIN 693049), Kanowna
- Lot 428 on Deposited Plan 28432, Kanowna
- Lot 302 on Deposited Plan 52825 [Crown Reserve 8767 (R8767)], Parkeston
- Lot 425 on Deposited Plan 28431, Parkeston
- Lot 474 on Deposited Plan 39818, Williamstown
- Unallocated Crown Land (PIN 693025), Brown Hill
- Unallocated Crown Land (PIN 693050), Kanowna
- Brown Hill Road Reserve (PIN 1188395), Williamstown
- Bulong Road (PIN 11714449), Brown Hill/Parkeston

Appendix F. Sources of information

F.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Pre-European Vegetation Statistics
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems

Restricted GIS Databases used:

- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

F.2. References

AQ2 (2025). East Kalgoorlie Solar and Wind Farm: Surface Water Assessment, July 2025. AQ2 Pty Ltd, Western Australia.

Bureau of Meteorology (BoM) (2025). *Climate Statistics for Australian locations, Summary statistics for Kalgoorlie-Boulder*. Available from: Climate statistics for Australian locations.

Commonwealth Government (2024) *National Recovery Plan for the Malleefowl (Leipoa ocallata),* Department of Climate Change, Energy, the Environment and Water. Canberra.

Department of Climate Chante, Energy, the Environment and Water (DCCEEW) (2026). *Species Profile and Threats Database*. Canberra. Available from: Species Profiles (SPRAT) (Accessed 20 June 2026)

Department of Environment and Conservation (DEC) (2012) *Chuditch Dasyurus geoffroii Recovery Plan,* Western Australia.

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