

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	11021/1
Permit type:	Purpose Permit
Applicant name:	Rox Resources Limited
Application received:	3 April 2025
Application area:	122.9 hectares
Purpose of clearing:	Mineral production and associated activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Leases 57/10, 57/51, 57/109, 57/135, 57/160A, 57/165 and 57/166
Location (LGA area):	Shire of Sandstone
Colloquial name:	Youanmi Gold Project

1.2. Description of clearing activities

Rox Resources Limited (RRL) proposes to clear up to 122.9 hectares of native vegetation within a boundary of approximately 1,742.5 hectares, for the purpose of mineral production and associated activities (RRL, 2025a). The project is located approximately 80 kilometres southwest of Sandstone, within the Shire of Sandstone (RRL, 2025b; GIS Database).

The application is to allow for the development of a processing plant, tailings storage facility (TSF), evaporation ponds, topsoil stockpiles and laydown/hardstand areas, to allow for the recommencement of the Youanmi Gold Project, which has been in care and maintenance since 2009 (RRL, 2025b).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	7 August 2025
Decision area:	122.9 hectares of native vegetation

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 Energy, Mines, Industry Regulation and Safety (now Department of Mines, Petroleum and Exploration (DMPE)) advertised the application for a public comment for a period of 21 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix B), relevant datasets (Appendix F), supporting information provided by the applicant (Appendix A) including the results of a flora and vegetation survey (Appendix E), the clearing principles set out in Schedule 5 of the EP Act (Appendix C), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3). The Delegated Officer also took into consideration the purpose of the clearing to allow for the recommencement of the Youanmi Gold Project

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- impacts to conservation significant flora;
- the potential clearing of riparian vegetation;
- potential land degradation in the form of water erosion or water starvation; and
- potentially increasing sedimentation in local surface watercourses and water bodies.

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

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;
- avoid identified priority flora with a buffer of ten metres;
- commence construction no later than three months after undertaking clearing to reduce the risk of erosion; and
- avoid the clearing of riparian vegetation and ensure surface water flows are maintained.

1.5. Site map

A site map of proposed clearing is provided in Figure 1 below.

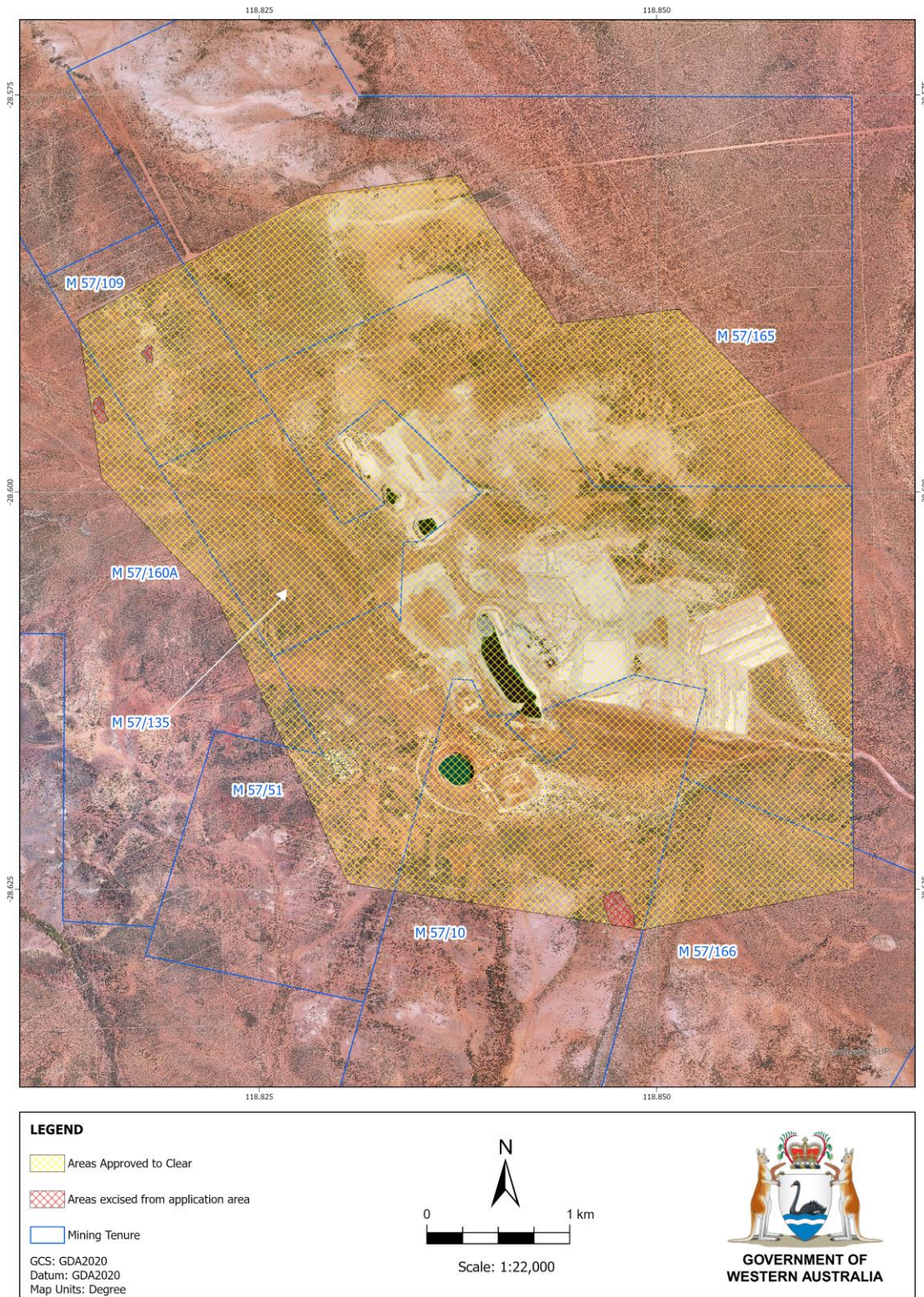


Figure 1. Map of the application area. The yellow crosshatched area indicates the area within which conditional authorised clearing can occur under the granted clearing permit. The red crosshatched area indicates areas which have been removed from the application area. Explanation of the removed areas is provided in Section 3.1.

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 (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)
- *Biosecurity and Agriculture Management Act 2007* (BAM Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Mining Act 1978* (WA)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)

Relevant agreements (treaties) considered during the assessment include:

- Japan-Australia Migratory Bird Agreement
- China-Australia Migratory Bird Agreement
- Republic of Korea-Australia Migratory Bird Agreement

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2014)
- *Procedure: Native vegetation clearing permits* (DWER, October 2021)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016b)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2020)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The original application was for the clearing of 122.9 hectares of native vegetation within a boundary of approximately 1747.5 hectares. During the assessment the scope of the clearing was reviewed, and the clearing boundary was reduced to 1742.5 hectares. The clearing boundary was revised and reduced to minimise the amount of significant long-tailed dunnart habitat within the application area, by excising vegetation group D (banded iron formation outcropping). Changes to the clearing boundary are shown in Figure 1 of Section 1.5.

Additionally, the applicant provided the following mitigation measures in support of their application:

- Avoid impacts to *Calytrix hislopilii*, P3;
- Implement appropriate surface water drainage management to minimise the potential for erosion and flooding (RRL, 2025b).

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 (Appendix C) 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 identified that the impacts of the proposed clearing present a risk to biological values (flora and fauna). 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 (flora) - Clearing Principle (a)

Assessment

A flora and vegetation survey was conducted over the application area by Native Vegetation Solutions (2023) from 27 to 31 May 2022 and 1 November 2022.

The below species were determined to be potentially impacted by the proposed clearing based on known distribution and habitat preferences, and their likelihood of occurrence within the application area, accounting for local environment, age and location of records, ecological knowledge and regional context.

Calytrix hislopilii

Calytrix hislopilii, Priority 3, occurs on ridges, breakaways and rocky areas (Western Australian Herbarium, 1998-). 139 *Calytrix hislopilii* individuals have been recorded from six locations within the application area (NVS, 2023). All of these records are located within Vegetation Group F (mulga over laterite breakaway) (NVS, 2023). There are eight known Western Australian

Herbarium (1998-) records, with the nearest being records being located approximately 100 kilometres north, and 145 kilometres southwest and southeast of the application area. Therefore, the entire known, local population is located within the application area and is potentially impacted by the proposed clearing. Although suitable habitat is widespread in the local area, it is patchily distributed (GIS Database). Therefore, the proposed clearing is likely to impact the species at a local population scale. However, the applicant has committed to avoiding impacts to *Calytrix hislopiae* (RRL, 2025b).

Euryomyrtus recurva

Euryomyrtus recurva, Priority 3, occurs in sandy or sandy clay on gravel pits or catchment slopes (Western Australian Herbarium, 1998-). The nearest Western Australian Herbarium (1998-) record of *Euryomyrtus recurva* is located within the application area, and was recorded in 1975. The flora and vegetation survey concluded that possibly suitable habitat occurs within the application area (NVS, 2023). The application area was extensively searched, with survey spatial data showing that the location of the *Euryomyrtus recurva* record was inspected (NVS, 2023; GIS Database). Although the survey was outside of the flowering period for this species, no other species from this genus were detected, or any other species which would potentially be confused with *Euryomyrtus recurva* when not in flower (NVS, 2023; Trudgen, 2001; Western Australian Herbarium, 1998-). Therefore, it is unlikely that the recorded specimen still occurs, or other individuals of *Euryomyrtus recurva* occur within the application area.

Conclusion

Based on the above assessment, the proposed clearing will result in impacts to *Calytrix hislopiae* without management measures in place. Impacts of the proposed clearing on *Calytrix hislopiae* can be managed by avoiding known locations by 10 metres (as committed to by the applicant) and weed management (RRL, 2025b; Section 3.1).

The proposed clearing is unlikely to impact *Euryomyrtus recurva*.

Conditions

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

- flora management (avoid identified priority flora with a buffer of ten metres); and
- take hygiene steps to minimise the risk of the introduction and spread of weeds.

3.2.2. Biological values (fauna) - Clearing Principles (a) and (b)

Assessment

A fauna habitat field assessment was conducted by Western Ecological (2022) from 5 to 16 October 2022. Based on the fauna habitat field assessment, and the vegetation described within the application area, five broad habitat types were identified:

- Mulga shrubland;
- Open mulga shrubland;
- Drainage line;
- Rocky outcropping; and
- Existing disturbance (NVS, 2023; Western Ecological, 2022).

The below species were determined to be potentially impacted by the proposed clearing based on known distribution and habitat preferences, and their likelihood of occurrence within the application area, accounting for local environment, age and location of records, ecological knowledge and regional context.

Fork-tailed swift

The fork-tailed swift (*Apus pacificus*), Migratory, is an aerial species (Commonwealth of Australia, 2008). It is likely to occur in the airspace above the application area (Western Ecological, 2022).

Peregrine falcon

The peregrine falcon (*Falco peregrinus*), Other Specially Protected, is a migratory species. Within their global range, peregrine falcons can be found in a variety of habitats, including mountains, forests, cities, valleys, deserts, and coastlines (NWF, n.d.). However, the peregrine falcon requires secure nest sites, usually preferring sheltered cliff faces, to lay its eggs (Australian Museum, 2019). This breeding habitat does not occur within the application area (NVS, 2023; Western Ecological, 2022). This species may use the application area as a wider home range, however the area is not considered critical habitat.

Malleefowl

Malleefowl (*Leipoa ocellata*), Vulnerable, occurs within arid and semi-arid woodland south of the 26th parallel (CALM, n.d.). Potentially suitable foraging habitat occurs within the application area (Western Ecological, 2022).

The fauna survey included targeted searches for malleefowl, and no evidence of malleefowl was detected within the application area (Western Ecological, 2022). However, one malleefowl was sighted by survey personnel approximately seven kilometres south of the application area (Western Ecological, 2022).

Malleefowl nesting is associated with areas of dense canopy cover, which provides abundant leaf litter to build their incubator nests (Benshemesh, 2007; DCCEEW, 2024). The habitat of the application area is not suitable for breeding, as canopies are sparser (Western Ecological, 2022). Therefore, this species may use the application area as a wider home range, however the area is not considered critical habitat.

Long-tailed dunnart

The long-tailed dunnart (*Sminthopsis longicaudata*), Priority 4, occurs on rocky outcrops of central Western Australia (IUCN, 2015). Rocky outcropping was not recorded as a habitat in the Western Ecological (2022) fauna habitat field assessment. However, the vegetation survey recorded banded iron formation (BIF) outcropping within the application area (NVS, 2023). Based on the photograph provided of vegetation group D, this vegetation type represents suitable habitat for long-tailed dunnart CPS 11021/1

(NVS, 2023; Appendix E). Therefore, the application area contains 5 hectares of suitable long-tailed dunnart habitat (NVS, 2023). As suitable habitat did not intercept the indicative site layout, Rox Resources Limited (RRL) has agreed to avoid this habitat by excising it from the application area (Section 3.1; Appendix A). As suitable habitat has been excised from the application area, the application area is unlikely to be critical habitat for long-tailed dunnart.

Conclusion

None of the species considered in this assessment are likely to be significantly impacted by the proposed clearing.

For the reasons set out above, it is considered that the proposed clearing does not constitute a significant impact to conservation significant fauna.

Conditions

No fauna management conditions required.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 13 May 2025 by the Department of Energy, Mines, Industry Regulation and Safety (now Department of Mines, Petroleum and Exploration) inviting submissions from the public. No submissions were received in relation to this application.

There are no native title claims and no registered Aboriginal Sites of Significance within the application area (DPLH, 2025). It is the proponent's responsibility to comply with the Aboriginal Heritage Act 1972 and ensure that no Aboriginal Sites of Significance are damaged through the clearing process. There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2025). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Other relevant authorisations required for the proposed land use include:

- A Programme of Work approved under the *Mining Act 1978*
- A Mining Proposal / Mine Closure Plan approved under the *Mining Act 1978*

It is the proponent's responsibility to liaise with the Department of Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

End

Appendix A. Additional information provided by applicant

Summary of comments	Consideration of comment
Amendment of the application to reduce the clearing boundary.	Avoidance and minimisation measures were considered in making a decision for this application.

Appendix B. Site characteristics

B.1. Site characteristics

Characteristic	Details																																												
Local context	<p>The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia. It is part of the Eastern Murchison subregion of the Murchison bioregion (GIS Database).</p> <p>The proposed clearing area contains the existing pit and infrastructure of the Youanmi Gold Project (RRL, 2025b; GIS Database). It is surrounded by mainly gold, copper and vanadium mining operations (GIS Database).</p> <p>Spatial data indicates the local area (50 kilometre radius from the application area) retains approximately 99 per cent of the original native vegetation cover.</p>																																												
Ecological linkage	<p>The application area is not considered a significant ecological linkage. The vegetation immediately surrounding the application area and the majority of the region remains uncleared (GIS Database).</p>																																												
Conservation areas	<p>The application area is not located within any DBCA legislated conservation areas (GIS Database). The nearest legislated conservation area is the Gagarlagu Nature Reserve, located approximately 60 kilometres west of the application area (GIS Database).</p>																																												
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation associations: 18: Low woodland; mulga (<i>Acacia aneura</i>); and 389: Saltbush and/or bluebush with scattered low trees (GIS Database).</p> <p>A flora and vegetation survey was conducted over the application area by Native Vegetation Solutions (2023) from 27 to 31 May 2022 and 1 November 2022. The following vegetation groups were recorded within the application area (NVS, 2023):</p> <table><tr><th>Vegetation group</th><th>Vegetation group code</th><th>Area within original application area (ha)</th><th>Percentage of original application area (%)</th></tr><tr><td>Mulga shrubland with <i>Eucalyptus kingsmillii</i></td><td>A</td><td>958.7</td><td>54.9</td></tr><tr><td><i>Acacia kalgoorliensis</i> shrubland</td><td>B</td><td>5.8</td><td>0.3</td></tr><tr><td>Mulga over chenopod shrubland</td><td>C</td><td>192.8</td><td>11.0</td></tr><tr><td>BIF (banded iron formation) outcropping, Mulga shrubland and <i>Acacia quadrimarginea</i> over <i>Eremophila georgei</i> and <i>Aluta aspera</i> subsp. <i>hesperia</i></td><td>D</td><td>5.0</td><td>0.3</td></tr><tr><td>Mulga drainage vegetation</td><td>E</td><td>59.6</td><td>3.4</td></tr><tr><td>Mulga over laterite breakaway</td><td>F</td><td>17.8</td><td>1.0</td></tr><tr><td>Mulga creek line vegetation</td><td>G</td><td>88.4</td><td>5.1</td></tr><tr><td>Mulga over stony rises</td><td>H</td><td>37.6</td><td>2.2</td></tr><tr><td>Open mulga shrubland over <i>Ptilotus obovatus</i> and <i>Maireana triptera</i></td><td>I</td><td>13.1</td><td>0.7</td></tr><tr><td>Existing disturbance</td><td>Existing disturbance</td><td>368.1</td><td>21.1</td></tr></table> <p>Descriptions and photographs of vegetation groups are provided in Appendix E.</p>	Vegetation group	Vegetation group code	Area within original application area (ha)	Percentage of original application area (%)	Mulga shrubland with <i>Eucalyptus kingsmillii</i>	A	958.7	54.9	<i>Acacia kalgoorliensis</i> shrubland	B	5.8	0.3	Mulga over chenopod shrubland	C	192.8	11.0	BIF (banded iron formation) outcropping, Mulga shrubland and <i>Acacia quadrimarginea</i> over <i>Eremophila georgei</i> and <i>Aluta aspera</i> subsp. <i>hesperia</i>	D	5.0	0.3	Mulga drainage vegetation	E	59.6	3.4	Mulga over laterite breakaway	F	17.8	1.0	Mulga creek line vegetation	G	88.4	5.1	Mulga over stony rises	H	37.6	2.2	Open mulga shrubland over <i>Ptilotus obovatus</i> and <i>Maireana triptera</i>	I	13.1	0.7	Existing disturbance	Existing disturbance	368.1	21.1
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Vegetation condition	<p>The vegetation survey (NVS, 2023) indicates the vegetation within the proposed clearing area is in completely degraded to very good (Keighery, 1994) condition, with most of the vegetation falling into the good category.</p> <p>As the proposed clearing is located within the Eremaean Botanical Province, these condition ratings have been converted to the Trudgen (1991) condition rating scale (GIS Database). Therefore, the vegetation within the proposed clearing area ranges from completely degraded to good (Trudgen, 1991) condition, with most of the vegetation falling into the poor category, described as:</p> <ul style="list-style-type: none">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.																																												

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	<ul style="list-style-type: none">• 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. <p>The full Trudgen (1991) condition rating scale is provided in Appendix D.</p>																					
Climate and landform	<p>The climate of the Murchison bioregion is described as arid, with the nearest weather station (Yuinmery) recording an average rainfall of approximately 244.7 millimetres per year (BoM, 2025; CALM, 2002).</p> <p>The application area is mapped at elevations of 450-480 metres Australian height datum (GIS Database). Land system mapping broadly describes the application area as gently undulating plains, hardpan plains and low hills (DPIRD, 2025; GIS database).</p>																					
Soil description	<p>The soils within the application area are mapped as the following land systems (DPIRD, 2025; GIS Database):</p> <table><tr><th>System</th><th>Area within original application</th><th>Description</th></tr><tr><td>Felix system (279Fx)</td><td>534.0 ha (30.6%)</td><td>Gently undulating plains with quartz mantles, supporting acacia-eremophila shrublands locally with wanderrie grasses</td></tr><tr><td>Jundee system (279Ju)</td><td>476.2 ha (27.3%)</td><td>Hardpan plains with variable gravelly mantles and minor sandy banks supporting weakly groved mulga shrublands</td></tr><tr><td>Violet system (279Vi)</td><td>393.1 ha (22.5%)</td><td>Gently undulating gravelly plains on greenstone, laterite and hardpan, with low stony rises and minor saline plains; supporting groved mulga and bowgada shrublands and occasionally chenopod shrublands</td></tr><tr><td>Rainbow system (279Rb)</td><td>289.7 ha (16.6%)</td><td>Hardpan plains supporting mulga tall shrublands</td></tr><tr><td>Bevon system (279Bv)</td><td>28.3 ha (1.6%)</td><td>Irregular low ironstone hills with stony lower slopes supporting mulga shrublands</td></tr><tr><td>Gransal system (279Gr)</td><td>26.2 ha (1.5%)</td><td>Stony plains and low rises based on granite supporting mainly halophytic low shrublands</td></tr></table>	System	Area within original application	Description	Felix system (279Fx)	534.0 ha (30.6%)	Gently undulating plains with quartz mantles, supporting acacia-eremophila shrublands locally with wanderrie grasses	Jundee system (279Ju)	476.2 ha (27.3%)	Hardpan plains with variable gravelly mantles and minor sandy banks supporting weakly groved mulga shrublands	Violet system (279Vi)	393.1 ha (22.5%)	Gently undulating gravelly plains on greenstone, laterite and hardpan, with low stony rises and minor saline plains; supporting groved mulga and bowgada shrublands and occasionally chenopod shrublands	Rainbow system (279Rb)	289.7 ha (16.6%)	Hardpan plains supporting mulga tall shrublands	Bevon system (279Bv)	28.3 ha (1.6%)	Irregular low ironstone hills with stony lower slopes supporting mulga shrublands	Gransal system (279Gr)	26.2 ha (1.5%)	Stony plains and low rises based on granite supporting mainly halophytic low shrublands
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Land degradation risk	<p>Within the Gransal land system, breakaway foot slopes are highly susceptible to water erosion and alluvial plains are moderately susceptible to water erosion in areas where perennial shrub cover is substantially reduced. Disturbance of soil surface on these units and on saline stony plains is also likely to initiate soil erosion (Pringle, 1994).</p> <p>The Bevon land system is susceptible to soil erosion if perennial shrub cover is substantially reduced or the soil surface is disturbed (Pringle, 1994)</p> <p>The Felix land system is susceptible to soil erosion within drainage lines, particularly when shrub cover is removed (Pringle, 1994).</p> <p>Disruption of natural water flows within the Jundee and Rainbow land systems can result in erosion and water starvation (Pringle, 1994).</p> <p>Within the Violet land system abundant mantles provide effective protection against soil erosion over most of this land system, except where the soil surface has been disturbed. In such circumstances, the soil becomes moderately susceptible to water erosion. Narrow drainage tracts are mildly susceptible to water erosion (Pringle, 1994).</p>																					
Waterbodies	<p>One minor ephemeral drainage line intersects the application area. This watercourse flows east to Lake Noondie (GIS Database). There are also settling and evaporation ponds associated with an existing tailings storage facility (TSF) located within the application area (RRL, 2025b; Western Ecological, 2022; GIS Database).</p>																					
Hydrogeography	<p>The application area is not within any mapped Public Drinking Water Source Areas (PDWSA) or legislated surface water areas. The nearest PDWSA is the Sandstone Water Reserve located approximately 80 kilometres to the northeast of the application area (GIS Database).</p>																					

Characteristic	Details
	<p>The application area is located within the East Murchison Groundwater Area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (GIS Database).</p> <p>The groundwater salinity of the permit area has been broadly mapped as being 1,000-7,000 milligrams per litre total dissolved solids, which is considered brackish (NWGA, 2023; GIS Database).</p>
Flora	<p>The Priority 3 species, <i>Calytrix hislopii</i>, has been recorded within the application area (NVS, 2023). No other Threatened or Priority flora were recorded in the survey by Native Vegetation Solutions (2023).</p> <p>The database search of the local area (50 kilometre radius from the application area) found records of an additional ten Priority flora, with the nearest record located within the application area (GIS Database).</p>
Ecological communities	<p>There are two Priority Ecological Communities (PECs) mapped within a 50 kilometre radius of the application area (GIS Database). These are the:</p> <ul style="list-style-type: none"> Yuinmery north calcrete groundwater assemblage types on Raeside palaeodrainage on Yuinmery Station, Priority 1 PEC; and Windimurra calcrete groundwater assemblage type on Murchison palaeodrainage on Windimurra Station, Priority 1 PEC (GIS Database). <p>These PECs occur approximately 22.5 and 32.9 kilometres from the application area, respectively (GIS Database).</p> <p>One TEC occurs in the Murchison bioregion, being the Depot Springs stygofauna community (DBCA, 2023b).</p>
Fauna	<p>No conservation significant fauna were recorded within the survey area (Western Ecological, 2022). Five conservation significant fauna have records within 50 kilometres of the application area, with the closest being recorded 3.7 kilometres from the application area (GIS Database). An additional eight conservation significant fauna were considered in the desktop assessment (Western Ecological, 2022; GIS Database).</p>
Fauna habitat	<p>A detailed fauna survey was conducted over the application area by Western Ecological (2022) from 5 to 16 October 2022.</p> <p>Four fauna habitats were mapped within the application area being:</p> <ul style="list-style-type: none"> Mulga shrubland; Open mulga shrubland; Drainage line; and Existing disturbance (Western Ecological, 2022). <p>61 hectares of the original application area were not surveyed by Western Ecological (2022). Habitats in this area can be inferred based on the vegetation mapping by Native Vegetation Solutions (2023). Vegetation Groups A, D, G and disturbed areas were recorded in this area (NVS, 2023). Therefore, the habitat of the application area can be described as the following five habitats:</p> <ul style="list-style-type: none"> Mulga shrubland; Open mulga shrubland; Drainage line; Rocky outcropping (excised from application area during assessment); and Existing disturbance (NVS, 2023; Western Ecological, 2022). <p>Descriptions and photographs of vegetation groups are provided in Appendix E.</p>

B.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current extent in all DBCA Managed Land (proportion of pre-European extent) (%)
IBRA Bioregion - Murchison	28,120,587	28,044,823	~99	293,505	1.04
Beard vegetation associations - State					
18	19,892,306	19,843,148	~99	1,317,179	6.62
389	642,356.85	640,468.79	~99	22,954.79	3.57
Beard vegetation associations - Bioregion (Murchison)					

18	12,403,172	12,363,253	~99	45,094	0.36
389	493,977.54	492,089.49	~99	22,954.79	4.65

Government of Western Australia (2019)

B.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (Appendix F.1), and biological survey information, impacts to the following conservation significant fauna required further consideration (NVS, 2023).

The likelihood of occurrence for these species were determined by potentially suitable habitat within the application area and known regional records (DPIRD, 2025; NVS, 2023; Western Australian Herbarium, 1998-; Western Ecological, 2022; GIS Database).

Species name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence
<i>Calytrix hislopilii</i>	P3	Y	0	Y	Recorded within application area – discussed in Section 3.2.1
<i>Euryomyrtus recurva</i>	P3	Y	0	Y	Possible – discussed in Section 3.2.1
<i>Baeckea</i> sp. London Bridge (M.E. Trudgen 5393)	P3	Y	<5	Y	Possible
<i>Alyxia tetanifolia</i>	P3	Y	<27	Y	Possible
<i>Stenanthemum patens</i>	P1	Y	<31	Y	Possible
<i>Grevillea inconspicua</i>	P4	Y	<31	Y	Possible
<i>Lysiandra baeckeoides</i>	P3	Y	<39	Y	Possible
<i>Acacia lapidosa</i>	P1	Y	<39	Y	Possible
<i>Calandrinia operta</i>	P1	N	<23	Y	Unlikely
<i>Ptilotus procumbens</i>	P1	N	<39	Y	Unlikely
<i>Goodenia neogoodenia</i>	P4	N	<50	Y	Unlikely

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

B.4. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (Appendix F.1), and biological survey information, impacts to the following conservation significant fauna required further consideration (Western Ecological, 2022).

The likelihood of occurrence for these species were determined by potentially suitable habitat within the application area and known regional records (Australian Museum, 2019; Benshemesh, 2007; Birdlife Australia, 2025; Burbidge et al., 1988; CALM, n.d.; Commonwealth of Australia, 2008; DBCA, 2023a; 2025; DCCEEW, 2023a; 2023b; 2024; DEPWS, 2021; Higgins, 1999; IUCN, 2015; NESP, 2021; NWF, n.d.; NVS, 2023; Rayner, 2022; RRL, 2025b; SEWPAC, 2011; Western Ecological, 2022; GIS Database).

Species name	Conservation status		Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence
	WA	EPBC				
<i>Apus pacificus</i> (fork-tailed swift)	MA, MI	MA, MI	Y	~68	Y	Likely – discussed in Section 3.2.2
<i>Leipoa ocellata</i> (malleefowl)	VU	VU	Y	~7	Y	Possible – discussed in Section 3.2.2
<i>Falco peregrinus</i> (peregrine falcon)	OS	-	Y	11.0	Y	Possible – discussed in Section 3.2.2
<i>Sminthopsis longicaudata</i> (long-tailed dunnart)	P4	-	Marginal	~83	Y	Unlikely – discussed in Section 3.2.2

Species name	Conservation status		Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence
	WA	EPBC				
<i>Leporillus apicalis</i> (lesser stick-nest rat)	EX	EX	Y	3.7	Y	Unlikely
<i>Idiosoma clypeatum</i> (northern shield-backed trapdoor spider)	P3	-	N	30.7	N	Unlikely
<i>Macrotis lagotis</i> (bilby)	VU	VU	N	41.2	Y	Unlikely
<i>Thinornis cucullatus</i> (hooded plover)	MA	MA	N	~57	Y	Unlikely
<i>Amytornis striatus striatus</i> (striated grasswren)	P4	-	N	~63	Y	Unlikely
<i>Polytelis alexandrae</i> (princess parrot)	VU	VU	N	~69.5	Y	Unlikely
<i>Dasycercus blythi</i> (brush-tailed mulgara)	P4	-	N	~101	Y	Unlikely
<i>Egernia stokesii badia</i> (western spiny-tailed skink)	VU	EN	N	~112	Y	Unlikely
<i>Pezoporus occidentalis</i> (night parrot)	CR	EN	N	~154	Y	Unlikely

CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, MI: migratory, CD: conservation dependent, OS: other specially protected, MA: marine, EX: extinct

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared contains locally significant flora and faunal habitats.</p>	At variance	<p>Yes</p> <p>Refer to Section 3.2.1 and Section 3.2.2, above.</p>
<p><u>Principle (b):</u> "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."</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared contains potential habitat for conservation significant fauna.</p>	May be at variance	<p>Yes</p> <p>Refer to Section 3.2.2, above.</p>
<p><u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</p> <p><u>Assessment:</u></p> <p>Given the local area (50 kilometre radius of the application area) contains no records of Threatened Flora species, the area proposed to be cleared is unlikely to contain flora species listed under the BC Act.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> "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."</p> <p><u>Assessment:</u></p> <p>The only Threatened Ecological Community (TEC) recorded within the Murchison Bioregion is the Depot Springs stygofauna community (DBCA, 2023b). Subterranean fauna communities, such as the Depot Springs stygofauna community, are threatened by changes to groundwater table depth (Humphreys, 2001). As all the vegetation types within the application area were classified as having scrub life forms as the dominant stratum, it is unlikely that the proposed clearing would result in the significant clearing of phreatophytes – which are deep-rooted, groundwater dependent species (DPIE, 2025; Dziki et al., 2016; Muir, 1977). As phreatophytes are most likely to influence groundwater depth, the proposed clearing is unlikely to impact subterranean fauna communities, including the Depot Springs stygofauna community</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
TEC (Benyon et al., 1999; DPIE, 2025; Dzikiti et al., 2016; RRL, 2025b; Zalesny et al., 2021).		
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> “Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</p> <p><u>Assessment:</u></p> <p>The local area has not been extensively cleared (GIS Database). The extent of the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001; Appendix B.2).</p>	Not at variance	No
<p><u>Principle (h):</u> “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.”</p> <p><u>Assessment:</u></p> <p>The application area is not located within any DBCA legislated conservation areas (GIS Database). The nearest legislated conservation area is an unnamed nature reserve approximately 60 kilometres west of the application area (GIS Database). 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.</p>	Not likely to be at variance	No
Environmental value: land and water resources		
<p><u>Principle (f):</u> “Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</p> <p><u>Assessment:</u></p> <p>One minor ephemeral drainage line intersects the application area (GIS Database). Vegetation group G is associated with this watercourse (NVS, 2022; GIS Database; Appendix E). Therefore, the proposed clearing may impact on vegetation associated with a watercourse.</p> <p><u>Condition:</u></p> <p>To address the above impact, the following management measure will be required as a condition on the clearing permit:</p> <ul style="list-style-type: none"> A watercourse management condition requiring that surface water flows are not impacted by the proposed clearing. 	At variance	No
<p><u>Principle (g):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</p> <p><u>Assessment:</u></p> <p>The application area is broadly mapped within the Felix, Jundee, Violet, Rainbow, Bevon and Gransal land systems (DPIRD, 2025; GIS Database). Land systems within the application area are susceptible to erosion when the perennial shrub cover is significantly reduced, particularly in drainage lines (Pringle, 1994). The proposed clearing may, therefore, increase soil erosion, particularly in drainage areas.</p> <p>Additionally, disruption of natural surface water flows in the Jundee and Rainbow land systems could result in downslope water starvation (Pringle, 1994).</p> <p><u>Condition:</u></p> <p>To address the above impact, the following management measure will be required as a condition on the clearing permit:</p> <ul style="list-style-type: none"> A watercourse management condition requiring that surface water flows are not impacted by the proposed clearing; and A staged clearing condition to minimise erosion. 	May be at variance	No
<p><u>Principle (i):</u> “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.”</p> <p><u>Assessment:</u></p> <p>There are no Public Drinking Water Source Areas within the application area (GIS Database). There are no permanent watercourses within the area proposed to clear, however, there is one ephemeral watercourses within the application area. This</p>	May be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p>watercourse flows east to Lake Noondie, located outside the application area (RRL, 2025b; GIS Database). Creek lines in the region are dry for most of the year, only flowing intermittently, briefly immediately following significant rainfall (RRL, 2025b). The proposed clearing may increase erosion and therefore sedimentation in this drainage line, thus causing the deterioration of surface water quality.</p> <p>The clearing of native vegetation is unlikely to impact the groundwater system, therefore is unlikely to impact groundwater quality (RRL, 2025b).</p> <p><u>Condition:</u></p> <p>To address the above impact, the following management measure will be required as a condition on the clearing permit:</p> <ul style="list-style-type: none"> • A watercourse management condition requiring that surface water flows are not impacted by the proposed clearing; and • A staged clearing condition to minimise erosion. 		
<p><u>Principle (i):</u> <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."</i></p> <p><u>Assessment:</u></p> <p>Given the average annual evaporation rate significantly exceeds average annual rainfall, flooding is unlikely to occur in the local area (BoM, 2006; 2025; RRL, 2025b).</p> <p>The proposed clearing is unlikely to contribute to increased incidence or intensity of flooding.</p>	Not likely to be at variance	No

Appendix D. 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 E. Vegetation groups

The following information is adapted from Native Vegetation Solutions (2023):

Mulga shrubland with *Eucalyptus kingsmillii* (A)

This Scrub (Muir, 1977) consisted of 23 Families, 33 Genera and 53 Species. The vegetation group was approximately 958.7 hectares which makes up 54.9 percent of the original application area.



***Acacia kalgoorliensis* shrubland (B)**

This Low Scrub A (Muir, 1977) consisted of 12 Families, 17 Genera and 29 Species. The vegetation group was approximately 5.8 hectares which makes up 0.3 percent of the original application area.



Mulga over chenopod shrubland (C)

This Open Scrub (Muir, 1977) consisted of 12 Families, 20 Genera and 34 Species. The vegetation group was approximately 192.8 hectares which makes up 11.0 percent of the original application area.



BIF (banded iron formation) outcropping, Mulga shrubland and *Acacia quadrimarginea* over *Eremophila georgei* and *Aluta aspera* subsp. *hesperia* (D)

This Thicket (Muir, 1977) consisted of 9 Families, 9 Genera and 14 Species. The vegetation group was approximately 5.0 hectares which makes up 0.3 percent of the original application area.



Mulga drainage vegetation (E)

This Dense Thicket (Muir, 1977) consisted of 17 Families, 27 Genera and 42 Species. The vegetation group was approximately 59.6 hectares which makes up 3.4 percent of the original application area.



Mulga over laterite breakaway (F)

This Open Low Scrub B (Muir, 1977) consisted of 12 Families, 14 Genera and 23 Species. The vegetation group was approximately 17.8 hectares which makes up 1.0 percent of the original application area.

**Mulga creek line vegetation (G)**

This Thicket (Muir, 1977) consisted of 15 Families, 21 Genera and 35 Species. The vegetation group was approximately 88.4 hectares which makes up 5.1 percent of the original application area.

**Mulga over stony rises (H)**

This Open Scrub (Muir, 1977) consisted of 11 Families, 14 Genera and 25 Species. The vegetation group was approximately 37.6 hectares which makes up 2.2 percent of the original application area.



Open mulga shrubland over *Ptilotus obovatus* and *Maireana triptera* (I)

This Open Low Scrub A (Muir, 1977) consisted of 11 Families, 15 Genera and 28 Species. The vegetation group was approximately 13.1 hectares which makes up 0.7 percent of the original application area.



Existing disturbance

Existing disturbance within the survey area consisted of historic mining, exploration clearing and access roads and was approximately 368.1 hectares which makes up 21.1 percent of the original application area.



Appendix F. Sources of information

F.1. GIS datasets

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

- 10 metre contours (DPIRD-073)
- Cadastre (Polygon) (LGATE-217)
- CAWSA Part 2A Clearing Control Catchments (DWER-004)
- Clearing Regulations - Environmentally Sensitive Areas (DWER-046)
- Clearing Regulations - Schedule One Areas (DWER-057)
- DBCA - Lands of Interest (DBCA-012)
- DBCA - Legislated Lands and Waters (DBCA-011)
- DBCA Fire History (DBCA-060)
- EPA Referred Schemes Pending (DWER-121)
- EPA Referred Significant Proposals (DWER-120)
- EPA Referred Significant Proposals Pending (DWER-103)
- Geographic Names (GEONOMA) (LGATE-013)
- Groundwater Salinity Statewide (DWER-026)

- IBRA Vegetation Statistics
- Local Government Area (LGA) Boundaries (LGATE-233)
- Localities (LGATE-234)
- Medium Scale Topo Contour (Line) (LGATE-015)
- Medium Scale Topo Water (Line) (LGATE-018)
- Medium Scale Topo Water (Polygon) (LGATE-016)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- Public Drinking Water Source Areas (DWER-033)
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Rivers (DWER-036)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping - Best Available (DPIRD-027)
- Soil Landscape Mapping - Systems (DPIRD-064)
- Townsites (LGATE-248)
- WA Now Aerial Imagery

Restricted GIS Databases used:

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

F.2. References

- Australian Museum (2019) Peregrine Falcon. Australian Museum, Sydney, 20 March 2019. [Peregrine Falcon - The Australian Museum](#) (Accessed 22 July 2025).
- Benshemesh, J. (2007) National Recovery Plan for Malleefowl (*Leipoa ocellata*). Department for Environment and Heritage, South Australia. [National Recovery Plan for Malleefowl \(Leipoa ocellata\)](#)
- Benyon, R. G., Marcar, N. E., Crawford, D. F. and Nicholson, A. T. (1999) Growth and water use of *Eucalyptus camaldulensis* and *E. occidentalis* on a saline discharge site near Wellington, NSW, Australia. *Agricultural Water Management*, 39(1-2), 229-244. [https://doi.org/10.1016/S0378-3774\(98\)00080-8](https://doi.org/10.1016/S0378-3774(98)00080-8)
- BirdLife Australia (2025) Hooded Plover. BirdLife Australia. [Hooded Plover - BirdLife Australia](#) (Accessed 22 July 2025).
- Burbidge, A. A., Johnson, K. A., Fuller, P. J. and Southgate, R. I. (1988) Aboriginal knowledge of the mammals of the central deserts of Australia. *Australian Wildlife Research*, 15, 9-39. <http://dx.doi.org/10.1071/WR9880009>
- Bureau of Meteorology (BoM) (2006) Map of average pan evaporation – Annual. Bureau of Meteorology. [Average annual, monthly and seasonal evaporation maps, Bureau of Meteorology](#) (Accessed 1 August 2025).
- Bureau of Meteorology (BoM) (2025) Bureau of Meteorology Website – Climate Data Online, Yuinmery. Bureau of Meteorology. <https://reg.bom.gov.au/climate/data/> (Accessed 18 July 2025).
- Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.
- Commonwealth of Australia (2008) Species Profile and Threats Database. Department of Climate Change, Energy, the Environment and Water, Australia. <https://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl> (Accessed 22 July 2025).
- Department of Biodiversity, Conservation and Attractions (DBCA) (2023a) Comments received in relation to Mining Proposal 500052. Species and Communities Branch, Department of Biodiversity, Conservation and Attractions, Western Australia, 17 October 2023
- Department of Biodiversity, Conservation and Attractions (DBCA) (2023b) Threatened Ecological Communities List May 2023. Department of Biodiversity, Conservation and Attractions. <https://www.dbca.wa.gov.au/wildlife-and-ecosystems/threatened-ecological-communities/list-threatened-ecological-communities> (Accessed 21 July 2025).
- Department of Biodiversity, Conservation and Attractions (DBCA) (2025) Advice received in relation to Clearing Permit Application CPS 10833/1. Species and Communities Branch, Department of Biodiversity, Conservation and Attractions, Western Australia, July 2025.
- Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2023a) Night Parrot factsheet. Department of Climate Change, Energy, the Environment and Water, Canberra, April 2023. [Night Parrot - DCCEEW](#) (Accessed 22 July 2025).
- Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2023b) Recovery Plan for the Greater Bilby (*Macrotis lagotis*). Department of Climate Change, Energy, the Environment and Water, Canberra. dcceew.gov.au/sites/default/files/documents/recovery-plan-greater-bilby-2023.pdf
- Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2024) National Recovery Plan for the Malleefowl (*Leipoa ocellata*). Department of Climate Change, Energy, the Environment and Water, Canberra. [National Recovery Plan for the Malleefowl \(Leipoa ocellata\)](#)
- Department of Conservation and Land Management (CALM) (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

- Department of Conservation and Land Management (CALM) (n.d.) Malleefowl: *Leipoa ocellata* (Gould, 1840) Species factsheet. Department of Conservation and Land Management.
- Department of Environment, Parks and Water Security (DEPWS) (2021) Threatened species of the Northern Territory: Princess Parrot (*Polytelis alexandrae*). Department of Environment, Parks and Water Security, Northern Territory Government, November 2021. [Threatened species of the Northern Territory - Princess parrot \(Polytelis alexandrae\)](#)
- Department of Planning, Industry and Environment (DPIE) (2025) Groundwater and the environment: groundwater dependent ecosystems. Department of Planning, Industry and Environment, New South Wales. [Groundwater and the environment | NSW Government Water](#) (Accessed 1 August 2025).
- Department of Planning, Lands and Heritage (DPLH) (2025) Aboriginal Cultural Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/ACHIS/index.html?viewer=ACHIS> (Accessed 1 August 2025).
- Department of Primary Industries and Regional Development (DPIRD) (2025) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. <https://dpiird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f> (Accessed 21 July 2025).
- Department of Sustainability, Environment, Water, Population and Communities (SEWPAC) (2011) Survey guidelines for Australia's threatened reptiles: Guidelines for detecting reptiles listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*. Department of Sustainability, Environment, Water, Population and Communities. [survey-guidelines-reptiles.pdf](#)
- Dzikiti, S., Gush, M. B., Le Maitre, D. C., Maherry, A., Jovanovic, N. Z., Ramoelo, A. and Cho, M. A. (2016) Quantifying potential water savings from clearing invasive alien *Eucalyptus camaldulensis* using in situ and high resolution remote sensing data in the Berg River Catchment, Western Cape, South Africa. *Forest Ecology and Management*, 361, 69-80. <https://doi.org/10.1016/j.foreco.2015.11.009>
- Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Higgins, P. J. (ed.) (1999) Handbook of Australian, New Zealand and Antarctic Birds: Volume Four - Parrots to Dollarbird. Oxford University Press, Melbourne.
- Humphreys, W. F. (2001) Groundwater calcrete aquifers in the Australian arid zone: the context to an unfolding plethora of stygal biodiversity. Western Australian Museum. <https://library.museum.wa.gov.au/internaldocs/57875/Humphreys2001CalcreteAquifersDampierRWAM.pdf>
- IUCN (2015) Long-tailed Dunnart. The IUCN Red List of Threatened Species. <https://www.iucnredlist.org/species/40545/21948982> (Accessed 22 July 2025).
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Muir, B. G. (1977) Biological Survey of the Western Australian Wheatbelt. Pt. 2. Vegetation and habitat of the Bendering Reserve. Records of the Western Australian Museum Supplement 3.
- National Water Grid Authority (NWGA) (2023) Crack the H2O code with our water science glossary. Department of Climate Change, Energy, the Environment and Water, Canberra. <https://www.nationalwatergrid.gov.au/about/news/crack-h2o-code-water-science-glossary> (Accessed 18 July 2025).
- National Wildlife Federation (NWF) (n.d.) Peregrine Falcon. National Wildlife Federation, Virginia. [Peregrine Falcon | National Wildlife Federation](#) (Accessed 22 July 2025).
- Native Vegetation Solutions (NVS) (2023) Reconnaissance Flora and Vegetation Survey of the Youanmi Project Area and Dewatering Pipeline: May and November 2022. Prepared for Rox Resources Limited, by Native Vegetation Solutions, August 2023.
- NESP Threatened Species Recovery Hub (NESP) (2021) Arid Zone Monitoring Species Profile: Brush-tailed mulgara, Project 3.2.5 findings factsheet. nspthreatenedspecies.edu.au/publications-and-tools/arid-zone-monitoring-species-profiles
- Pringle, H. J. (1994) Pastoral resources and their management in the north-eastern goldfields, Western Australia. Report 22/94. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpiird.wa.gov.au/misc_pbnbs/24
- Rayner, A. (2022) A Report of an Aboriginal Heritage Field Inspection of the Youanmi Gold Project Area. Prepared for Rox Resources Limited, by A J Rayner Consulting, July 2022.
- Rox Resources Limited (RRL) (2025a) Clearing permit application form, CPS 11021/1, received 3 April 2025.
- Rox Resources Limited (RRL) (2025b) Youanmi Gold Project Clearing Permit Application Supporting Information. Prepared for Rox Resources Limited, by Ecotec (WA) Pty Ltd, April 2025.
- 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.
- Trudgen, M. E. (2001) Reinstatement and revision of *Euryomyrtus* (Myrtaceae). *Nuytsia: Journal of the Western Australian Herbarium*, 13(3), 543-566. [Nuytsia : bulletin of the Western Australian Herbarium](#)
- Western Ecological (2022) Detailed fauna survey: Youanmi Project. Prepared for Rox Resources Limited, by Western Ecological, December 2022.
- Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dbca.wa.gov.au/> (Accessed 22 July 2025).
- Zalesny, R. S., Jr., Casler, M. D., Hallett, R. A., Lin, C. and Pilipović, A. (2021) Bioremediation and soils. *Soils and Landscape Restoration*, 237-273. <https://doi.org/10.1016/B978-0-12-813193-0.00009-6>

4. Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016</i> , Western Australia
BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DCCEEW	Department of Climate Change, Energy, the Environment and Water, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety (now DMPE)
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DMPE)
DMP	Department of Mines and Petroleum, Western Australia (now DMPE)
DMPE	Department of Mines, Petroleum and Exploration
DoEE	Department of the Environment and Energy (now DCCEEW)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

DBCA (2023) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia:

Threatened species

T Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the Biodiversity Conservation Act 2016 (BC Act).

Threatened fauna is the species of fauna that are listed as critically endangered, endangered or vulnerable threatened species.

Threatened flora is the species of flora that are listed as critically endangered, endangered or vulnerable threatened species.

The assessment of the conservation status of threatened species is in accordance with the BC Act listing criteria and the requirements of [Ministerial Guideline Number 1](#) and [Ministerial Guideline Number 2](#) that adopts the use of the International Union for Conservation of Nature (IUCN) [Red List of Threatened Species Categories and Criteria](#), and is based on the national distribution of the species.

CR Critically endangered species

Threatened species considered to be “*facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines.

EN Endangered species
Threatened species considered to be “*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines.

VU Vulnerable species
Threatened species considered to be “*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines.

Extinct species

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.

EX Extinct species
Species where “*there is no reasonable doubt that the last member of the species has died*”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

EW Extinct in the wild species
Species that “*is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild.

Specially protected species

SP Specially protected species
Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered, or vulnerable) or extinct species under the BC Act cannot also be listed as specially protected species.

MI Migratory species
Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Migratory species include birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) or The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

CD Species of special conservation interest (conservation dependent fauna)
Species of special conservation need that are dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Currently only fauna are listed as species of special conservation interest.

OS Other specially protected species
Species otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Currently only fauna are listed as species otherwise in need of special protection.

Priority species

P Priority species
Priority is not a listing category under the BC Act. The Priority Flora and Fauna lists are maintained by the department and are published on the department's website.

All fauna and flora are protected in WA following the provisions in Part 10 of the BC Act. The protection applies even when a species is not listed as threatened or specially protected, and regardless of land tenure (State managed land (Crown land), private land, or Commonwealth land).

Species that may possibly be threatened species that do not meet the criteria for listing under the BC Act because of insufficient survey or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of prioritisation for survey and evaluation of conservation status so that consideration can be given to potential listing as threatened.

Species that are adequately known, meet criteria for near threatened, or are rare but not threatened, or that have been recently removed from the threatened species list or conservation dependent or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of priority status is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1 Priority One - Poorly-known species – known from few locations, none on conservation lands

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, for example, agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.

P2 Priority Two - Poorly-known species – known from few locations, some on conservation lands

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, for example, national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.

P3 Priority Three - Poorly-known species – known from several locations

Species that are known from several locations and the species does not appear to be under imminent threat or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat.

Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. These species need further survey.

P4 Priority Four - Rare, Near Threatened and other species in need of monitoring

- (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.
- (b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as a conservation dependent specially protected species.
- (c) Species that have been removed from the list of threatened species or lists of conservation dependent or other specially protected species, during the past five years for reasons other than taxonomy.
- (d) Other species in need of monitoring.

Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (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.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.
- (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.
- (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.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

- (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.
- (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.
- (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.