

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	9614/3
Permit type:	Purpose Permit
Applicant name:	Regis Resources Limited
Application received:	17 February 2022
Application area:	1,330 hectares
Purpose of clearing:	Mineral Production and Associated Activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Leases 38/114, 38/160, 38/237, 38/250, 38/262, 38/283, 38/292, 38/302, 38/303, 38/316, 38/317, 38/319, 38/341, 38/343, 38/344, 38/352, 38/354, , 38/407, 38/498, 38/499, 38/500, 38/589, 38/630, 38/802, 38/837, 38/939, 38/940, 38/943, 38/1091, 38/1092, 38/1247, 38/1249, 38/1250, 38/1251, 38/1257, 38/1258, 38/1259, 38/1260, 38/1261, 38/1262, 38/1263, 38/1264, 38/1268, 38/1269, 38/1270, 38/1277, 38/1297; Miscellaneous Licences 38/20, 38/29, 38/133, 38/182, 38/201, 38/202, 38/203, 38/204, 38/206, 38/216; 38/226, 38/234, 38/364, 38/365, 38/238, 38/239, 38/242, 38/348, 38/315, 38/364, 38/365
Location (LGA area/s):	Shire of Laverton
Colloquial name:	Duketon Gold Project

1.2. Description of clearing activities

Regis Resources Limited proposes to clear up to 1,330 hectares of native vegetation within a boundary of approximately 21,694.084 hectares, for the purpose of mining related infrastructure. The project is located approximately 47 kilometres north of Laverton, within the Shire of Laverton.

The application is to allow for expansion of mining operations at the Duketon Gold Project.

The majority of the application area has had previous clearing permit approval under clearing permit CPS 6657/10. Clearing permit CPS 6657/10 authorised the clearing of up to 5,148 hectares of clearing within a permit boundary 15,217 hectares for the purpose of mineral production and associated activities.

Clearing permit CPS 9614/1 was granted by the Department of Mines, Industry Regulation and Safety on 9 September 2022 and was valid from 1 October 2022 to 30 April 2027. The permit authorised the clearing of up to 1,330 hectares of native vegetation within a boundary of approximately 20,872 hectares, for the purpose of mineral production and associated activities.

On 28 March 2023, the Permit Holder applied to amend CPS 9614/1 to increase the permit boundary by 822.084 hectares, and to include Mining Lease 38/1297 which is superseding Mining Lease 38/339.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	10 August 2023
Decision area:	1,330 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Mines, Industry Regulation and Safety (DMIRS) on 28 March 2023. DMIRS advertised the application for a public comment for a period of 21 days, and one submission was received raising no objection.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix D), supporting information provided by the applicant including the results of a flora and vegetation survey, the clearing principles set out in Schedule 5 of the EP Act (Appendix B), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3).

The assessment identified that:

- the clearing has the potential for the introduction and spread of weeds into adjacent vegetation, which could impact on
- the quality of the adjacent vegetation and its habitat values;
- the clearing is not likely to have a significant impact on habitat for Priority flora species;
- the vegetation is not likely to represent significant habitat for fauna species;
- the clearing will impact several minor ephemeral drainage lines however, it will not impact surface water flow at a broad level.

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 can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values.

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;
- staged clearing to minimise wind erosion.

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)
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Mining Act 1978* (WA)

Relevant agreements (treatys) 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 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

No evidence of avoidance or mitigation measures was provided to support the application.

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 the impacts of the proposed clearing are limited and able to be managed to be environmentally acceptable with standard avoid and minimise / hygiene / staged clearing / erosion management conditions.

3.2.1. Biological values and conservation areas / Land and water resources

Assessment

The amendment areas are located within the East Murchison subregion of the Murchison Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The East Murchison subregion is characterised by internal drainage, extensive areas of elevated red desert sandplains with minimal dune development, salt lake systems associated with the occluded paleo drainage system, broad plains of red-brown soils and breakaway complexes, as well as red sandplains (CALM, 2002). Vegetation is dominated by Mulga woodlands which are often rich in ephemerals; hummock grasslands, saltbush shrublands and *Halosarcia* shrublands (CALM, 2002).

Several level 2 flora and vegetation surveys have been conducted by Mattiske Consulting Pty Ltd over the Duketon Project, including the amendment areas, with the most recent being a detailed flora and vegetation assessment undertaken in July, 2022 (Mattiske, 2016; 2017a; 2017b; 2021; 2022; Regis, 2023). No Threatened flora species were recorded within the amendment areas, however one Priority flora species has been identified within the amendment areas (Mattiske, 2022; Regis, 2023).

The Priority 4 taxon, *Eremophila pungens* was recorded from nine locations within the Ventnor area and seven within the Commonwealth area (the amendment areas) of the Project (Regis, 2023). This does not represent an extension to the current known populations of *Eremophila pungens*, with populations being recorded in previous surveys within the Duketon Gold Project (Mattiske, 2021; 2022). Records of this taxon also exist within several nature reserves, including both De La Poer Nature Reserve, and Wanjarri Nature Reserve (Regis, 2023). Given the large distribution of *Eremophila pungens* and its protection in two nature reserves, there are unlikely to be significant risks to this taxon associated with the proposed development of both Commonwealth and Ventnor Project Areas. Based on available survey data and records, large scale impacts to flora species of conservation significance (including Priority flora species) are considered unlikely, therefore it is not anticipated that the proposed clearing will adversely impact on Priority flora species at a population or species level.

The fauna habitats present within the amendment areas are common and widespread in the landscape and bioregion, with vast tracts of similar habitat in adjacent areas (Regis, 2023; Terrestrial Ecosystems, 2016a; 2016b; 2017). The vegetation within the application area is not considered to be providing, or contributing to, important ecological linkages or fauna movement corridors (Terrestrial Ecosystems, 2016a; 2016b; 2017).

No fauna species of conservation significance were recorded within the application area during fauna surveys (Terrestrial Ecosystems, 2016a; 2016b; 2017), however a number of species were identified as having the potential to persist or occur within the application area and surrounds. Following further analysis of these species and the habitat on offer, Terrestrial Ecosystems (2012; 2016a; 2016b; 2017) considered that the proposed clearing (and previous clearing activities undertaken under clearing permit CPS 6657/10) is unlikely to impact on any species of conservation significance. Conservation significant species identified as potentially occurring in the vicinity are either migratory, able to relocate easily into neighbouring areas, or preferred habitat is not present (Terrestrial Ecosystems, 2012; 2016a; 2016b; 2017).

Ten introduced flora have previously been recorded in the vicinity of the broader application area (Mattiske, 2022; Regis, 2023). Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the continued implementation of a weed management condition.

Numerous non-perennial watercourses have been mapped within the application area (GIS Database) and a number of the vegetation communities identified within the application area are considered to be growing in association with minor drainage lines (Mattiske, 2016; Regis, 2023). Potential impacts to vegetation growing in association with a watercourse as a result of the proposed clearing may also be minimised by the implementation of a watercourse management condition.

Five land systems have been mapped within the amendment area; Bevon, Felix, Gransal, Jundee, and Violet (GIS Database). Several of these land systems are susceptible to erosion in areas where perennial shrub cover is substantially reduced or the soil surface is disturbed (Pringle et al. 1994). Potential land degradation as a result of the proposed clearing may be minimised by the continued implementation of a staged clearing condition.

The amendment areas are located within an arid environment with an average annual rainfall of approximately 235.2 millimetres and experiences mean annual evaporation of approximately 3,400 millimetres (BoM, 2023). Although there are a number of minor ephemeral watercourses located in the application area, it is likely these drainage lines would only flow for short periods following significant rainfall events (Regis, 2023). Considering there are no permanent watercourses within the application area, the proposed clearing is unlikely to impact on surface water quality.

Groundwater quality within the application area is considered to be brackish (1,000-3,000 milligrams per litre total dissolved solids) (GIS Database).

Conclusion

Based on the above assessment, the proposed clearing may have on surface water flow, and there is potential for localised impacts associated with weeds and erosion if areas are cleared of vegetation.

Conditions

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

- A staged clearing condition to ensure that only areas that are needed are cleared at any one time.
- A watercourse management condition to minimise impacts to surface water flow.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 20 April 2023 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There are no native title claims over the area under application (DPLH, 2023). However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are numerous registered Aboriginal Sites of Significance within the application area (DPLH, 2023). 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 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. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part an expansive tract of native vegetation in the extensive land use zone of Western Australia. It is surrounded by the active Duketon Gold Project. The proposed clearing area is a small isolated remnant in a highly cleared landscape.
Ecological linkage	According to available databases, the application area does not contain any known or mapped ecological linkages (GIS Database).
Conservation areas	The nearest conservation area is De La Poer Range Nature Reserve located approximately 20 kilometres north-east of the application area (GIS Database).
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation associations:</p> <p>Beard vegetation association 18: Low woodland; mulga (<i>Acacia aneura</i>); Beard vegetation association 39: Shrublands; mulga scrub (GIS Database).</p> <p>A total of five vegetation communities were identified within the amendment areas during the detailed flora and vegetation assessments (Mattiske, 2022; Regis, 2023). The following vegetation associations were recorded within the application area (Mattiske, 2022; Regis, 2023):</p> <p>Acacia shrublands</p> <ul style="list-style-type: none"> <u>A5</u>: Mid-sparse shrubland of <i>Acacia aptaneura</i> and <i>Acacia tetragonophylla</i> over low sparse shrubland of <i>Senna artemisioides</i> on sandy red clay in minor drainage lines; <u>A22</u>: Tall open shrubland of <i>Acacia</i> sect. <i>Juliflorae</i> (<i>A. aneura</i>, <i>A. aptaneura</i>, and <i>A. fuscaneura</i>) over mid-sparse shrubland of <i>A. tetragonophylla</i>, <i>Eremophila pungens</i> (Priority 4), and <i>Psydrax suaveolens</i> over isolated ferns of <i>Cheilanthes sieberi</i> subsp. <i>sieberi</i> on red clay loam in minor drainage lines; <u>A23</u>: Tall open shrubland of <i>Acacia</i> sect. <i>Juliflorae</i> (<i>A. aneura</i>, <i>A. aptaneura</i>, and <i>A. fuscaneura</i>) over mid-sparse shrubland of <i>A. tetragonophylla</i> and <i>Psydrax suaveolens</i> over isolated ferns of <i>Cheilanthes sieberi</i> subsp. <i>sieberi</i> on flats or slopes of red clay with ironstone gravel; <u>A31</u>: Tall sparse shrubland of <i>Acacia duriuscula</i> and <i>Eremophila oppositifolia</i> subsp. <i>angustifolia</i> over mid-sparse shrubland of <i>Eremophila platycalyx</i> subsp. <i>platycalyx</i>, over low sparse shrubland of <i>Scaevola spinescens</i> and <i>Maireana glomerifolia</i> on saline red clay flats with quartz pebbles; <p>Chenopod Shrublands</p> <ul style="list-style-type: none"> <u>CH1</u>: Mid-isolated shrubs of <i>Acacia aneura</i> and <i>Acacia aptaneura</i> over low sparse chenopod shrubland of <i>Sclerolaena cuneata</i>, <i>Sclerolaena ericantha</i>, and <i>Maireana georgei</i> on red clay flats with quartz pebbles.
Vegetation condition	<p>The vegetation survey indicates the vegetation within the proposed clearing area is in 'Excellent' to 'Completely Degraded' (Keighery, 1994) condition.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix C.</p>
Climate and landform	The application area is mapped within elevations of 480 to 560 metres AHD (GIS Database). The annual average rainfall (Laverton) is 235.2 millimetres (BoM, 2022).
Soil description	The soil is mapped as soil unit BE8 which is described as 'Partially dissected pediments extending out from areas of unit Fa7; there may be a surface cover of gravels. Earthy loams are dominant; with red-brown hardpan at shallow depth are also present as well as small areas of (Dr2.72) and (Dr2.52) soils (Northcote 1960-68).
Land degradation risk	The application area has been mapped as the Bevon, Felix, Gransal, Jundee, and Violet land systems (GIS Database). There is the potential for soil erosion to occur within these land systems.
Waterbodies	The desktop assessment and aerial imagery indicated that numerous minor, non-perennial watercourses transect the area proposed to be cleared (GIS Database).
Hydrogeography	The mapped groundwater salinity is 1,000-3,000 milligrams per litre total dissolved solids which is described as brackish (GIS Database).
Flora	One Priority flora species has been recorded within the amendment areas, however this species has been found in larger populations in the surrounding areas and region (Regis, 2023).

Characteristic	Details
Ecological communities	There are no known Threatened or Priority Ecological Communities within the application area (GIS Database).
Fauna	There are no significant habitat features within the application area.

A.2. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix D.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 to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Eremophila pungens</i>	Priority 4	Y	Y	Y	>1km	~850	Y

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

A.3. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]
Princess Parrot	Vulnerable	Y	Y	>20km	Y
Fork-tailed Swift	Migratory	Y	Y	>20km	Y
Peregrine Falcon	Other Specially Protected Species	Y	Y	>20km	Y
Long-tailed Dunnart	P 4	Y	Y	>20km	Y
Brush-tailed Mulgara	P 4	Y	Y	>20km	Y

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

Appendix B. 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>There are no Threatened or Priority Ecological Communities located within the application area (GIS Database). There are no records of any Threatened flora within the application area (Mattiske, 2016; 2017a; 2017b; 2021; 2022; Regis, 2023; GIS Database). One Priority flora species was identified within the amendment areas, <i>Eremophila pungens</i> (Priority 4). Given the large distribution of <i>Eremophila pungens</i> and its protection in two nature reserves (Regis, 2023), it is considered unlikely that the proposed clearing will impact on the conservation status of this species. The fauna habitats within the application area are common in the local area and are not likely to support a high level of faunal diversity (Regis, 2023).</p>	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?
<p><u>Principle (b):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is not likely to contain foraging, roosting, breeding, critical, or significant habitat for conservation significant fauna.</p>	Not likely to be at variance	No
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>There are no known Threatened Ecological Communities (TECs) located within or in close proximity to the permit area (GIS Database).</p> <p>The flora and vegetation surveys over the permit area have not identified any TECs (Regis, 2023).</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The application area is broadly mapped as Beard vegetation associations 18 and 39, within the Murchison Bioregion of the Interim Biogeographic Regionalisation for Australia (GIS Database). Approximately 99% of the pre-European extent of these vegetation associations remain uncleared at both the state and bioregional level (Government of Western Australia, 2019).</p>	Not at variance	No
<p><u>Principle (h):</u> <i>“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></p> <p><u>Assessment:</u></p> <p>The nearest conservation area is De La Poer Range Nature Reserve located approximately 20 kilometres north-east of the application area (GIS Database). Given the distance between the application area and De La Poer Range Nature Reserve, the proposed clearing is not likely to impact on a conservation area.</p>	Not likely to be at variance	No
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>Available datasets show the application area is intersected by numerous minor, ephemeral watercourses (GIS Database).</p> <p>Vegetation surveys undertaken by Mattiske Consulting (Mattiske, 2021; 2022; Regis, 2023) recorded vegetation growing in association with minor drainage lines. It was noted in these surveys that the vegetation types recorded are common and widespread across the Murchison region. The proposed clearing is not likely to significantly impact on riparian vegetation. Any</p>	At variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
potential impacts to riparian vegetation may be minimised by maintaining the watercourse management condition on the permit.		
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The application area has been mapped as the Bevon, Felix, Gransal, Jundee, and Violet land systems (GIS Database). The soil is mapped as soil unit BE8 which is described as ‘Partially dissected pediments extending out from areas of unit Fa7; there may be a surface cover of gravels. Earthy loams are dominant; with red-brown hardpan at shallow depth are also present as well as small areas of (Dr2.72) and (Dr2.52) soils (Northcote et al., 1960-68).</p> <p>The proposed clearing has the potential to cause soil erosion by breaking protective stony mantles and exposing underlying soils that may be susceptible to erosion. Potential impacts from soil erosion may be minimised by maintaining the staged clearing condition on the permit.</p>	May be at variance	No
<p><u>Principle (i):</u> <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.”</i></p> <p><u>Assessment:</u></p> <p>There are no Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database). There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). The proposed clearing is unlikely to result in significant changes to surface water flows or to cause deterioration in the quality of underground water.</p>	Not likely to be at variance	No
<p><u>Principle (j):</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>The climate of the region is semi-arid, with a low average rainfall of approximately 235.2 millimetres per year (BoM, 2022). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall.</p> <p>Given these climatic conditions, surface water is unlikely to persist in the proposed permit boundary for extended periods of time.</p>	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 Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.

Condition	Description
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. Sources of information

D.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- Clearing Regulations – Schedule One Areas (DWER-057)
- 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)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- IBRA Vegetation Statistics
- Native Title (ILUA) (LGATE-067)
- Pre-European Vegetation Statistics
- Interim Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Rangelands (DPIRD-064)
- WA Now Aerial Imagery

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)

D.2. References

- BoM (2023) Bureau of Meteorology Website – Climate Data Online, Laverton. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/> (Accessed 20 July 2023).
- Department of Environment Regulation (DER) (2013) *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management.
- Department of Planning, Lands and Heritage (DPLH) (2023) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 20 July 2023).
- 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>

- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske (2016) Flora and Vegetation Survey of the Dogbolter and Coopers Project Area. Report prepared for Regis Resources Limited, by Mattiske Consulting Pty Ltd, March 2016.
- Mattiske (2017a) Flora and Vegetation Survey of the Anchor Project Area. Report prepared for Regis Resources Limited, by Mattiske Consulting Pty Ltd, March 2017.
- Mattiske (2017b) Flora and Vegetation Survey of the Banyego Haul Road Project Area. Report prepared for Regis Resources Limited, by Mattiske Consulting Pty Ltd, July 2017.
- Mattiske (2021) Assessment of Flora and Vegetation Values – Ben Hur Survey Area and Haul Road Alignment. Report prepared for Regis Resources Limited, by Mattiske Consulting Pty Ltd, December 2021.
- Mattiske (2022) Detailed Flora and Vegetation Survey: Ventnor and Commonwealth Project Areas, Western Australia. Report prepared for Regis Resources Limited, by Mattiske Consulting Pty Ltd, September 2022.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68) Atlas of Australian Soils, Sheets 1 to 10, with explanatory data. CSIRO and Melbourne University Press: Melbourne.
- Regis (2023) Purpose Permit Amendment Application – CPS 9614/2 Ventnor Extension and New Ben Hur Tenement. Unpublished report prepared by Regis Resources Limited, March 2023.
- Terrestrial Ecosystems (2012) Level 1 Fauna Risk Assessment for the Anchor Project. Report prepared for Regis Resources Limited, by Terrestrial Ecosystems, February 2012.
- Terrestrial Ecosystems (2016a) Level 1 Fauna Risk Assessment for the Dogbolter-Coopers Project. Report prepared for Regis Resources Limited, by Terrestrial Ecosystems, December 2016.
- Terrestrial Ecosystems (2016b) Level 1 Fauna Risk Assessment for the Tooheys Project. Report prepared for Regis Resources Limited, by Terrestrial Ecosystems, December 2016.
- Terrestrial Ecosystems (2017) Level 1 Fauna Risk Assessment for the Proposed Haul Road to the Banyego Project. Report prepared for Regis Resources Limited, by Terrestrial Ecosystems, July 2017.

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)
DAWE	Department of Agriculture, Water and the Environment, Australian Government
DFCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia
DMP	Department of Mines and Petroleum, Western Australia (now DMIRS)
DoEE	Department of the Environment and Energy (now DAWE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DFCA)
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> (Federal 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:

{DFCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:-

T Threatened species:

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 that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

Threatened flora is that subset of 'Rare Flora' listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

- 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. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.
- 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. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.
- 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. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

Extinct Species:

- 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).
Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.
- 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. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

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).
Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and 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.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

CD Species of special conservation interest (conservation dependent fauna)
Fauna of special conservation need being species 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).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

OS Other specially protected species
Fauna 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).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

P Priority species:

Possibly threatened species that do not meet survey criteria, 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 priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

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

Assessment of Priority codes 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
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, e.g. 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 and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

P2 Priority Two - Poorly-known species
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, e.g. 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 and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

P3 Priority Three - Poorly-known species
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. Such species are in need of 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 Conservation Dependent.
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

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.