



# Clearing Permit Decision Report

## 1. Application details and outcomes

### 1.1. Permit application details

Permit number:	9648/1
Permit type:	Purpose Permit
Applicant name:	Regan Scott Grant
Application received:	9 March 2022
Application area:	70 hectares
Purpose of clearing:	Gypsum extraction and associated activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Lease 70/1382 Miscellaneous Licence 70/193
Location (LGA area/s):	Shire of Lake Grace
Colloquial name:	Lake Lockhart Project

### 1.2. Description of clearing activities

Regan Scott Grant proposes to clear up to 70 hectares of native vegetation within a boundary of approximately 79.1 hectares, for the purpose of gypsum extraction and associated activities. The project is located approximately 19 kilometres south of Newdegate, within the Shire of Lake Grace.

The application is to allow for gypsum extraction over a 20 year period. Approximately 66 hectares of native vegetation is proposed to be cleared within Mining Lease 70/1382 and four hectares within Miscellaneous Licence 70/193.

### 1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	25 August 2022
Decision area:	70 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 9 March 2022. DMIRS 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 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, proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3).

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 loss of native vegetation that is suitable habitat for malleefowl and the western brush wallaby;
- the loss of vegetation growing in association with a lake;
- potential land degradation in the form of wind erosion.

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 managed by conditions and is not likely 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;
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- a pre-clearance survey for Malleefowl mounds, where areas proposed to be cleared during the Malleefowl breeding season must be inspected to identify any active Malleefowl mounds;
- staged clearing to minimise wind erosion; and
- avoid the clearing of riparian vegetation and ensure that the existing surface flow of Lake Lockhart is 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 area indicates the area within which conditional authorised clearing can occur under the granted clearing permit.**

## 2. Legislative context

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

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

- the precautionary principle

- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Mining Act 1978* (WA)

The key guidance documents which inform this assessment are:

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

### 3. Detailed assessment of application

#### 3.1. Avoidance and mitigation measures

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. Accendo (2022) advised that:

- the applicant undertook an assessment of the area prior to determining the suitability of the clearing footprint, and using a flora and vegetation survey, all identified priority flora and significant vegetation communities will be avoided during the clearing process (a 20 metre buffer to all conservation significant flora and vegetation will be demarcated); and
- clearing will be undertaken on an as needs basis and clearing areas will be progressively rehabilitated at the end of each mining season (November to April).

#### 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 identified that the impacts of the proposed clearing present a risk to biological values (flora, vegetation and fauna) and land resources. 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, vegetation) - Clearing Principle (a)

###### Assessment

###### **Priority Flora**

Rick (2019) recorded a total of 128 plant species within the application area, however time and seasonal constraints meant that not all the flora of the area were recorded. No Threatened flora species were recorded within the application area (Rick, 2019). The Threatened species *Acacia lanuginophylla* has been recorded in the adjacent Lockhart Nature Reserve, and though the survey was undertaken during the flowering period of this species, was not recorded within the survey area (Rick, 2019; Western Australian Herbarium, 1998–). There were five Priority flora species were recorded within the survey area, three of which occur within the application area;

- Two individuals of *Fitzwillia axilliflora* (Priority 2);
- Four individuals of *Dampiera orchardii* (Priority 2); and
- Six individuals of *Frankenia drummondii* (Priority 3).

Both *D. orchardii* and *F. drummondii* were recorded within the proposed access track (L 70/193). The width of this lease is approximately 70 metres wide and the clearing for the access track will be approximately 6 to 7 metres wide, therefore any priority flora or significant Eucalypt trees identified the access track corridor will be avoided where possible (Rick, 2019). The species *F. axilliflora* was located within the Mining Lease, and will be avoided where possible. However, these species and *F. axilliflora* have a wide distribution with several records within Nature Reserves (Western Australian Herbarium, 1998–). The proposed clearing of these species is not likely to impact the conservation significance of these species.

The flora and vegetation survey by Rick (2019) was adequate to identify the remaining Priority flora species within Appendix A.3 below, however no other species were recorded. Given the sparse nature of the vegetation within the application area within Lake Lockhart, and the narrow, linear nature of the proposed access track, it is unlikely that the proposed clearing will have a significant impact on the conservation status of these species if they were to occur.

There were 13 weed species recorded within the application area (Rick, 2019). Clearing activities should be undertaken in a manner that reduces the risk of further spreading weeds to the surrounding areas, including the nearby Lockhart Nature Reserve (GIS Database).

###### **Priority Ecological Community**

The application area (in particular the access track corridor) is adjacent to small areas mapped as the Priority 3 Ecological Community 'Eucalypt Woodlands of the Western Australian Wheatbelt' (Federally listed TEC). Rick (2019) undertook a flora and vegetation survey within the application area and did not find any vegetation that met the key diagnostic characteristics of a Priority Ecological Community.

#### Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on Priority flora is not likely to be significant. There are weeds present within the application area and the proposed clearing has the potential to exacerbate the spread of weeds.

#### Conditions

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

- take hygiene steps to minimise the risk of the introduction and spread of weeds and annual spraying.

### 3.2.2. *Biological values (fauna habitat) - Clearing Principle (b)*

#### Assessment

No fauna survey was undertaken over the application area. There are five conservation significant fauna species which have been recorded in the local area (20 kilometre radius) (GIS Database). Based on the vegetation type present, the application area is not likely to be core habitat for these species. Carnaby's Cockatoo has been recorded in the local area however, there is no suitable breeding or roosting present within the application area (GIS Database). The *Melaleuca* shrubland that occurs within the access track portion of the application area may provide some foraging species for these birds, given that suitable breeding habitat may occur within the nearby eucalypt woodlands (GIS Database). A 20 metre buffer to the Eucalypt woodlands from the application area will be maintained at all times (Accendo, 2022).

Both the Western Brush Wallaby and Malleefowl are known within the local area and may utilise the shrublands within the access track portion of the application area (GIS Database). Potential impacts to Malleefowl and the Western Brush Wallaby as a result of the proposed clearing may be minimised by the implementation of fauna management conditions. For Malleefowl, this will require a pre-clearing inspection for mounds during the breeding season, and the avoidance of any active mounds, and for the Western Brush Wallaby, a directional clearing condition which requires slow progressive one directional clearing to allow the species to disperse ahead of the clearing activity.

The Western whipbird and Hooded plover are likely pass through the application area to utilise Lake Lockhart when inundated, however the vegetation is not likely to represent significant habitat. The proposed clearing within the lakebed will be undertaken when the lake is dry (Accendo, 2022).

#### Conclusion

Based on the above assessment, the proposed clearing will result in some loss in habitat for conservation significant fauna species. Individuals may be impacted by the proposed clearing however, the impact to fauna may be minimised by the implementation of conditions on the permit.

#### Conditions

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

- directional clearing, which requires slow, progressive, one directional clearing to allow terrestrial fauna to disperse ahead of the clearing activity should they occur on site at the time of clearing; and
- a pre-clearance survey for Malleefowl mounds, where areas proposed to be cleared during the Malleefowl breeding season must be inspected to identify any active Malleefowl mounds, and where mounds have been identified, no clearing occurs within 50 metres of the mound.

### **3.3. Relevant planning instruments and other matters**

The clearing permit application application was advertised on 26 April 2022 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 several native title claims over the area under application (DPLH, 2022). These claims have been registered with the National Native Title Tribunal on behalf of the claimant groups. 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 no registered Aboriginal Sites of Significance within the application area (DPLH, 2022). 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.

It is noted that the proposed clearing may impact on Malleefowl, which is protected matter under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). The proponent may be required to refer the project to the (Federal) Department of Agriculture, Water and the Environment for environmental impact assessment under the EPBC Act. The proponent is advised to contact the Department of Agriculture, Water and the Environment for further information regarding notification and referral responsibilities under the EPBC Act.

**End**

## **Appendix A. Site characteristics**

### **A.1. Site characteristics**

<b>Characteristic</b>	<b>Details</b>
Local context	The application area is located approximately 21 kilometres south of Newdegate. The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia. The site is surrounded in the immediate vicinity by vegetated reserves and salt lakes. The land use beyond the reserves is annual agriculture (GIS Database).
Ecological linkage	According to available databases, the application area does not contain any known or mapped ecological linkages.
Conservation areas	The closest conservation area is the Lockhart Nature Reserve which is located approximately 300 metres west of the application area at its closest point.
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation associations:</p> <p>125: Bare areas; salt lakes;            511: Medium woodland; salmon gum &amp; morrel; and            519: Shrublands; mallee scrub, <i>Eucalyptus eremophila</i> (GIS Database).</p> <p>A flora and vegetation survey was conducted over the application area by Anne Rick (Rick, 2019) on 22, 25 and 27 October 2018. The following vegetation associations were recorded within the application area (Rick, 2019):</p> <p><b><u>Mining Lease 70/1382</u></b>            Tf – Samphire shrubland/forbland; and            Te – Samphire shrubland.</p> <p><b><u>Miscellaneous Licence 70/193</u></b>            Me – <i>Melaleuca</i> shrubland; and            Sf – Shrubland/forbland.</p>
Vegetation condition	<p>The vegetation survey (Rick, 2019) indicate the vegetation within the proposed clearing area is in very good to excellent (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 with an elevation of 290 metres AHD. The annual average rainfall (Newdegate Research Station) is 366.4 millimetres (BoM, 2022).
Soil description	The soils within the application are have been mapped as 250La_1sal and 250La_1sl. The soil mapped as 250La_1sal is described as soils that are mainly saline wet soils within minor grey duplex soils and calcareous loamy earth (access track) (DPIRD, 2022b). The soil mapped as 250La_1sl is described as large seasonally dry salt lakes within the Lagan 1 subsystem, consisting of saline and gypsiferous clay and silts (DPIRD, 2022b).
Land degradation risk	The application area has a high risk of wind erosion (DPIRD, 2022a).
Waterbodies	The majority of the application area intersects Lake Lockhart (GIS Database).
Hydrogeography	The application area is not within any public drinking water source areas. The mapped groundwater salinity is greater than 35,000 milligrams per litre total dissolved solids which is described as hypersaline (GIS Database).
Flora	There are numerous records of Threatened and Priority flora species within the local area (20 kilometres), including the application area (Rick, 2019; GIS Database).

Characteristic	Details
Ecological communities	There are no records of any Threatened or Priority Ecological Communities (TEC/PEC) within the application area (GIS Database). There is a known TEC in the local area.
Fauna	There are several records of any conservation significant fauna species within the local area (20 kilometre radius).

## A.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent Remaining %	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA Managed Lands
IBRA Bioregion - Mallee	7,395,894	4,180,938	~56.53	1,289,384	18.03
IBRA Subregion - Western Mallee	3,981,718	1,471,048	~36.95	364,866	10.03
Local Government - Shire of Lake Grace	1,188,460	456,516	~38.41	182,116	16.98
Beard vegetation associations - State					
125	3,485,785	3,146,487	~90.27	265,740	9.29
511	700,693	520,615	~74.30	105,109	15.37
519	2,333,414	1,440,062	~61.71	244,096	10.54
Beard vegetation associations - Bioregion					
125	160,327	107,845	~67.27	25,031	26.79
511	139,877	67,473	~48.24	12,343	10.49
519	2,100,314	1,248,661	~59.45	225,928	10.85
Beard vegetation associations - subregion					
125	81,605	31,802	~38.97	18,448	43.98
511	139,877	67,472	~48.24	12,343	10.49
519	1,563,571	783,034	~50.08	196,334	12.68

Government of Western Australia (2019)

## A.3. 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)	Are surveys adequate to identify? [Y, N, N/A]
<i>Acacia lanuginophylla</i>	T	Y	Y	Y	<10	Y
<i>Eucalyptus mimica</i> subsp. <i>continens</i>	P1	Y	Y	Y	<1	Y
<i>Fitzwillia axilliflora</i>	P2	Y	Y	Y	0	Y
<i>Pimelea halophila</i>	P2	Y	Y	Y	<1	Y
<i>Dampiera orchardii</i>	P2	Y	Y	Y	0	Y

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)	Are surveys adequate to identify? [Y, N, N/A]
<i>Frankenia</i> sp. southern gypsum (M.N. Lyons 2864)	P3	Y	Y	Y	<1	Y
<i>Angianthus halophilus</i>	P3	Y	Y	Y	<1	Y
<i>Frankenia drummondii</i>	P3	Y	Y	Y	0	Y
<i>Eucalyptus sargentii</i> subsp. <i>onesia</i>	P3	Y	Y	Y	<1	Y
<i>Eremophila serpens</i>	P4	Y	Y	Y	<1	Y
<i>Haegiela tatei</i>	P4	Y	Y	Y	<1	Y
<i>Eremophila veneta</i>	P4	Y	Y	Y	<2	Y

#### A.4. 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)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Carnaby's cockatoo ( <i>Zanda latirostris</i> )	EN	Y	Y	<2	3	N/A
Mallefowl ( <i>Leipoa ocellata</i> )	VU	Y	Y	<2	21	N/A
Western whipbird ( <i>Psophodes nigrogularis</i> subsp. <i>oberon</i> )	P4	Y	Y	<1	5	N/A
Western brush wallaby ( <i>Notamacropus irma</i> )	P4	Y	N	<2	3	N/A
Hooded plover ( <i>Thinornis rubicollis</i> )	P4	Y	Y	<5	2	N/A

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?
<b>Environmental value: biological values</b>		
<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 may contain habitat for conservation significant flora species and a Priority Ecological Community (Priority 3).</p>	May be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<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 foraging habitat for conservation significant fauna.</p>	May be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<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>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



Assessment against the clearing principles	Variance level	Is further consideration required?
<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>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
<b>Environmental value: significant remnant vegetation and conservation areas</b>		
<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 extent of the mapped vegetation types (Beard vegetation associations 125, 511 and 519) are consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001). The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.</p>	Not likely to be 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>Given the distance to the nearest conservation area, the proposed clearing may have an impact on the environmental values of the nearby Lockhart Nature Reserve through the increased degradation of the adjoining vegetation and increased weed infestation.</p> <p><u>Condition:</u></p> <p>Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.</p>	May be at variance	No
<b>Environmental value: land and water resources</b>		
<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>The application area intersects Lake Lockhart, and the proposed clearing will impact some Samphire shrublands growing in association with this lake (Rick 2019; GIS Database). However, given that the proposed clearing of 70 hectares is over a 20 year period, the removal of some riparian vegetation it is unlikely to impact Lake Lockhart.</p> <p><u>Condition:</u></p> <p>Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a vegetation management condition.</p>	At variance	No
<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 site is naturally prone to wind erosion, as a high proportion of its surface is devoid of significant vegetation. The removal of remaining vegetation will increase the wind erosion hazard and will possibly result in an increased airborne dust load during high wind events if the land surface is dry at the time. The hazard can be effectively managed by wetting the surface to generate a surface crust, as gypsum and calcium carbonate form effective crusts on wetting and drying. The crust will develop further on each rainfall event, and can be maintained by limiting traffic to defined pathways (DPIRD, 2022).</p> <p><u>Condition:</u></p> <p>Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.</p>	At variance	No



Assessment against the clearing principles	Variance level	Is further consideration required?
<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.</p> <p>The site is naturally highly saline and clearing of minimal vegetation and modification of bare surfaces is unlikely to contribute to further salinity (DPIRD, 2022). The proposed clearing is unlikely to impact surface or ground water quality.</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</p> <p><u>Assessment:</u></p> <p>Removal of native vegetation will not contribute to further flooding. The site is a salt lake and naturally floods intermittently (DPIRD, 2022).</p> <p>Removal of native vegetation will not contribute to further waterlogging. The site is a salt lake so is naturally at extreme risk of waterlogging. Significant areas are naturally waterlogged for most of the year, over most years (DPIRD, 2022).</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.
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](http://www.data.wa.gov.au)):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)

- Aboriginal Heritage Places (DPLH-001)
- Bush Forever (Regional Scheme) (DPLH-022)
- 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)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- 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 Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Rangelands (DPIRD-064)
- WA Now Aerial Imagery
- Wheatbelt Wetlands Stage 1 (DBCA-021)

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

- Accendo (2022) Clearing Permit Application – M70/1382 & L70/193 Lake Lockhart, Newdegate. Prepared for Regan Scott Grant, by Accendo Australia, March 2022.
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## 4. Glossary

### Acronyms:

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

### Definitions:

{DBCA (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.