



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 7275/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Blackham Resources Ltd

### 1.3. Property details

Property: Mining Lease 53/130  
Mining Lease 53/131  
Mining Lease 53/205  
Mining Lease 53/1097  
Local Government Area: Shire of Wiluna

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
120		Mechanical Removal	Mineral production

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 1 December 2016

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

**Vegetation Description** Beard vegetation associations have been mapped for the whole of Western Australia. Three Beard vegetation association are located within the application area (GIS Database):

**Beard vegetation association 18:** Low woodland; mulga (*Acacia aneura*)

**Beard vegetation association 28:** Open low woodland; mulga

**Beard vegetation association 29:** Sparse low woodland; mulga, discontinuous in scattered groups

The application area is composed of two separate areas. The northern area is comprised of Beard vegetation association 18 & 29, the southern area is comprised of Beard vegetation association 28. Less than 1% of the clearing permit boundary is mapped as Beard vegetation association 29.

Animal Plant Mineral (2015) conducted a Level 1 biological (flora, vegetation and fauna) survey over the application area and described 9 vegetation communities:

- *Acacia* aff. *incurvaneura* mid-dense tall shrubs over, mixed sparse shrubs over, *Eriachne mucronata* and *Monachather paradoxa* very sparse tussock grasses.;
- *Acacia* aff. *incurvaneura* and *Acacia rhodophloia* mid-dense tall shrubs over *Triodia melvillei* mid-dense hummock grass;
- *Acacia incurvaneura* dense tall shrubs over *Eragrostis leptoclada* dense tussock grass and *Bidens bipinnata* mid-dense herbs;
- *Acacia pruinocarpa* emergent trees over *Acacia incurvaneura*, mid-dense tall shrubs over *Aristida contorta* very sparse tussock grass;
- *Acacia aptaneura* very sparse tall shrubs over mixed very sparse shrubs over *Aristida contorta* very sparse tussock grass;
- *Acacia incurvaneura* dense tall shrubs over *Eragrostis leptoclada* dense tussock grass and *Bidens bipinnata* mid-dense herbs;
- *Acacia aneura* (*Acacia incurvaneura*) very sparse tall shrubs over *Ptilotus obovatus* and *Senna artemisioides* subsp. *helmsii* very sparse shrubs;
- *Acacia aneura* very sparse tall shrubs over *Scaevola spinescens* and *Sida ectogama* very sparse shrubs over *Aristida contorta* very sparse tussock grass; and  
*Eremophila galeata* very sparse shrubs over *Aristida contorta* very sparse tussock grass.

**Clearing Description** Blackham Resources Ltd proposes to clear up to 120 hectares of native vegetation within a total boundary of approximately 275 hectares, for the purpose of mineral production. The project is located approximately 2 kilometres north of Wiluna in the Shire of Wiluna.

**Vegetation Condition** Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).  
To:

Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

**Comment** The condition of the vegetation under application was determined via a biological survey conducted over the application area by Animal Plant Mineral (2015).

### 3. Assessment of application against Clearing Principles

#### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

**Comments** **Proposal is at variance to this Principle**

The application area occurs within the Eastern Murchison (MUR1) subregion of the Murchison Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). This subregion is characterised by its internal drainage, and extensive areas of elevated red desert sandplains with minimal dune development. (CALM, 2002). Vegetation is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands (CALM, 2002).

A Level 1 biological (flora, vegetation and fauna) survey was conducted over the application area in November 2015 by Animal Plant Mineral Pty Ltd (APM). The condition of the vegetation within the application area is considered to range from 'Very Good' to 'Good' (APM, 2015; 2016a). The diversity and condition of the flora and vegetation of the application area reflects that of the surrounding landscape. There were no unique ecological attributes or attributes of conservation significance determined to be present, with the exception of the Priority 1 flora species *Eremophila congesta*.

The Department of Parks and Wildlife (DPaW) advised that *Eremophila congesta* is known from approximately 49,416 plants. The current application area represents one location for this species consisting of approximately 10,317 plants. Based on estimates of plants density, the initial proposal would impact approximately 4,800 plants from this local population of 10,317 plants represent 46.5%. This level of impact would be considered to be significant on a local scale (DPaW, 2016a). The impact of the proposed clearing on a species level represents approximately 9.7% of the total number of plants.

Blackham Resources revaluated impacts to *Eremophila congesta* and indicated that proposed impacts would be reduced to 2,827 individuals out of 28,436 surveyed in the region (Blackham Resources Ltd, 2016). The entire Matilda project area (which includes the application area) is predicted to impact on 3,027 individuals (Blackham Resources Ltd, 2016). The vegetation community mapping suggests that the vegetation communities containing *Eremophila congesta* are contiguous with the disturbance areas and are highly likely to contain similar densities as the areas inside the disturbance areas (APM, 2016b; Blackham Resources Ltd, 2016). The total impact to the species has now been reduced from 9.7% to 6.1% of the total number of plants of this species (DPaW, 2016b). Despite this overall reduction, based on available information, the local impact to the species still remains high at approximately 27% (DPaW, 2016b).

In order to determine whether the proposed clearing will have significant impacts on the conservation of *Eremophila congesta*, the abundance and extent of this species in the local area needs to be determined. This will then enable the proposed clearing of this species to be put into a local context. It is recommended that surveys in the local area of the application area be undertaken to determine whether this species is present outside the application area (DPaW, 2016a). If this species is found to be adequately represented in extent and abundance in the local area outside the application area, then the proposed clearing of this species would be acceptable (DPaW, 2016a). If it is found that this species is not adequately represented in the local area outside of the application area then it is recommended that a targeted survey be undertaken within the application area for this species (DPaW, 2016a).

Impacts to *Eremophila congesta* habitat may also be significant (DPaW, 2016b). Given that the plant count estimates are based on the area of vegetation types present (extrapolation from relevés), the proposed clearing will have a similar percentage impact on the estimated area of occupancy for this species in the local area. This would be significant as the area of habitat appears to be more restricted than the species itself (DPaW, 2016b). Further survey work is required to obtain a local and regional understanding of the distribution of this species in order to inform impact assessments (DPaW, 2016b). Potential impacts to Priority flora as a result of the proposed clearing may be minimised by the implementation of a flora management condition, which restricts clearing of *Eremophila congesta* until further information shows greater representation in the local area.

No Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) are known within the application area (GIS Database) and none were identified during the flora and vegetation survey. The closest community of conservation significance is a PEC, which is located approximately 4.5 kilometres east.

The Beard vegetation units mapped within the application area (Beard vegetation associations 18, 28 and 29) are well represented and the six broad fauna habitats identified within the application are considered to be abundance in adjacent areas (APM, 2016a).

A number of introduced (weed) species were recorded within the application area during the flora survey (APM, 2016). The introduction and/or spread of weeds must be controlled as 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 implementation of a weed management condition.

Based on the above, the proposed clearing is at variance to this Principle.

**Methodology** APM (2015)  
APM (2016a)  
APM (2016b)  
CALM (2002)  
DPaW (2016a)  
DPaW (2016b)

GIS Database:  
- IBRA WA (Regions - Sub Regions)  
- Imagery  
- Pre-European vegetation  
- Threatened and Priority Ecological Communities Buffers  
- Threatened and Priority Ecological Communities Boundaries

**(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 indigenous to Western Australia.**

**Comments Proposal is not likely to be at variance to this Principle**

Six broad fauna habitats were identified within the application area during the fauna survey (APM, 2015; 2016)

- Open Mulga shrubland on stony slopes and plains;
- Mid dense Mulga shrubland on stony slopes and plains;
- Mid dense Mulga shrubland over low spinifex on gravelly loam;
- Low breakaways and rocky outcrops; and
- Drainage tracts and associated fringing vegetation;

Following the completion of a Level 1 fauna assessment, APM (2015; 2016a) concluded that only two species of conservation significance were likely to occur within the application area; the Rainbow Bee-eater (*Merops ornatus* - Migratory) and the Long-tailed Dunnart (*Sminthopsis longicaudata* – P4). The Rainbow Bee-eater is likely to utilise drainage lines present within the application area, but is also regularly recorded in disturbed habitats including roadside vegetation and in quarries, mines or gravel pits, where they often breed (DEE, 2016). This species is widely distributed and is unlikely to be significantly impacted by the proposed clearing activities. Clearing during breeding season should be avoided (DPaW, 2016c).

One Long-tailed Dunnart was captured in the open Mulga low stony slope habitat (APM, 2015). The Long-tailed Dunnart is considered capable of utilising all but one of the six broad habitats identified in the application area and there is an abundance of similar habitat in adjacent area (APM, 2015; 2016a).

DPaW (2016c) advised that while unlikely, it is possible that the Malleefowl (*Leipoa ocellata* - VU) may occur in the area. If active mounds are identified, then a 50 metre buffer should be placed around the mound and clearing should not commence until chicks have fledged and dispersed from the area (DPaW, 2016c).

The proponent has committed to the implementation of a number of fauna management measures to reduce potential impacts on local fauna species, including species of conservation significance (Blackham Resources, 2016). Provided appropriate fauna management measures are implemented, impacts to local fauna species are not anticipated to be significant.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** APM (2015)  
APM (2016a)  
DEE (2016)  
DPaW (2016c)

GIS Database:  
- DPaW Tenure  
- Imagery

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

**Comments Proposal is not likely to be at variance to this Principle**

According to available databases, no species of Threatened flora species have been recorded within the local area (20 kilometre radius) (DPaW, 2016d). A Level 1 flora survey was conducted over the application area in 2015 by Animal Plant Mineral and no Threatened flora were identified (APM, 2016a).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** APM (2016a)

DPaW (2016d)

GIS Database  
- Threatened and Priority 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.**

**Comments Proposal is not at variance to this Principle**

According to available datasets, there are no Threatened Ecological Communities (TECs) within the application area (GIS Database). During a level 1 flora and vegetation survey of the application area, no TECs were recorded and none of the vegetation units mapped within the application area were identified as being representative of a TEC (APM, 2016).

Based on the above, the proposed clearing is not at variance to this principle.

**Methodology APM (2016a)**

GIS Database:  
- Threatened and Priority Ecological Communities Buffers  
- Threatened and Priority Ecological Communities Boundaries

**(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.**

**Comments Proposal is not at variance to this Principle**

The application area occurs within the Murchison Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, in which approximately 99.7% of the pre-European vegetation remains (see table below) (GIS Database; Government of Western Australia, 2015).

The vegetation within the application area has been mapped as Beard vegetation associations 18, 28 and 29 (GIS Database). All of which retain at least 98% of pre-European level of vegetation at a state and bioregional level respectively (Government of Western Australia, 2015). Given the amount of vegetation remaining in the local area and bioregion, the vegetation under application is not considered to be significant as a remnant within an extensively cleared area.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPaW Managed Lands*
IBRA Bioregion - Murchison	28,120,587	28,044,823	99.7	Least Concern	~ 7.8
IBRA Bioregion – Eastern Murchison	21,135,084	21,065,968	99.7	Least Concern	~ 8.2
Beard veg assoc. – State					
18	19,892,305	19,843,727	99.8	Least Concern	~ 6.6
28	395,895	392,172	99.0	Least Concern	~ 0.0
29	7,903,991.47	7,900,200	99.9	Least Concern	~ 6.3
Beard veg assoc. – Bioregion					
18	12,403,172	12,363,252	99.7	Least Concern	~ 5.0
28	224,292	220,584	98.4	Least Concern	~ 0.0
29	2,956,382	2,955,695	99.9	Least Concern	~ 3.2

\* Government of Western Australia (2015)

\*\* Department of Natural Resources and Environment (2002)

Based on the above, the proposed clearing is not at variance to this principle.

**Methodology Department of Natural Resources and Environment (2002)  
Government of Western Australia (2014)**

GIS Database:  
- DPaW Tenure  
- IBRA Australia  
- Imagery

**(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**

**Comments Proposal is at variance to this Principle**

According to available databases there are no major permanent wetlands or watercourses mapped within the application area, although several minor non-perennial watercourses intersect the application area (GIS Database). Areas of dense vegetation can be seen growing in association with drainage lines within the application area, especially in the southern section (GIS Database) and fringing vegetation been identified growing in association with drainage tracts (APM, 2016a). Therefore, the proposed clearing is considered to be at variance to Principle (f). The proponent has committed to avoiding drainage lines where possible (APM, 2016a). There is limited disturbance proposed to drainage lines mapped within both the northern and southern sections of the application area. A road is proposed within the southern section of the application area and will cross the drainage line at a single location. A small drainage line in the northern section of the application area will be impacted by mining infrastructure. Potential impacts to vegetation growing in association with a watercourse as a result of the proposed clearing may be minimised by the implementation of a watercourse management condition.

Based on the above, the proposed clearing is at variance to this Principle.

**Methodology APM (2016a)**

GIS Database:  
- Hydrography, linear  
- Hydrography, linear (hierarchy)

**(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**

**Comments Proposal may be at variance to this Principle**

Areas of erosion are widespread in the Murchison region, although where areas of good or better condition vegetation remain; erosion is much less prevalent (DAWA, 1994). Given that the local area (including parts of the application area) has been subject to historical disturbance including historical mining, land degradation issues may arise as a result of the proposed clearing. Areas of new disturbance may be prone to erosion following large rain events if left open for extended periods. Potential land degradation as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

Based on the above, the proposed clearing may be at variance to this Principle.

**Methodology DAWA (1994)**

GIS Database  
- Soils, Statewide

**(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.**

**Comments Proposal is not at variance to this Principle**

The proposed clearing is not located within a conservation area and there are no conservation areas within 50 kilometres of the application area (GIS Database).

Based on the above, the proposed clearing is not at variance to this Principle.

**Methodology GIS Database:  
- DPaW Tenure  
- Imagery**

**(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.**

**Comments Proposal is not likely to be at variance to this Principle**

The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is the Wiluna Water Reserve which is located approximately 5.5 kilometres east of the application area (GIS Database).

Several minor non-perennial watercourses intersect the application area (GIS Database). Areas of dense vegetation can be seen growing in association with drainage lines within the application area, especially in the southern section (GIS Database). There is limited disturbance proposed to drainage lines mapped within both the northern and southern sections of the application area. A road is proposed within the southern section of the application area and will cross the drainage line at a single location. A small drainage line in the northern section of the application area will be impacted by mining infrastructure.

Given the location and general lack of existing natural ground cover, negligible impacts to surface water quality are anticipated. It is expected that surface water will remain similar to the current water quality with minimal increase in sediment or cation mobilization (APM, 2015). The proponent has developed and will implement management strategies in order to reduce the impacts of erosion and runoff on surface water quality (APM, 2016a). Potential impacts to the quality of surface water as a result of the proposed clearing may be further minimised by the implementation of a watercourse management condition.

Groundwater salinity within the application area is between 500 – 1,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). While other mining related activities may impact on the quality of local groundwater, the proposed clearing of 120 hectares of native vegetation within the Lake Carey catchment area (11,378,092 hectares), in the vicinity of existing mining disturbance, is unlikely to result in any significant adverse impacts to groundwater quality.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** APM (2015)  
APM (2016a)

GIS Database:  
- Groundwater Salinity, Statewide  
- Hydrography, linear  
- Public Drinking Water Source Areas (PDWSAs)  
- RIWI Act, Groundwater Areas

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.**

**Comments Proposal is not likely to be at variance to this Principle**

The Murchison region experiences an arid climate, experiencing both summer and winter rain (BoM, 2016). Mean annual rainfall for Cue (nearest recording site) is approximately 234 mm and evaporation far exceeds rainfall (BoM, 2016).

Dominant soils are mapped as shallow stony earthy loams (Northcote et al. 1960-68; GIS Database), which are likely to have a high permeability and be free draining. Flooding issues are unlikely to arise as a result of clearing.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** BoM (2016)  
Northcote et al. 1960-68

GIS Database:  
- Hydrography, linear

**Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.**

**Comments**

There are two native title claims over the application area (WC1999/024 & WR2016/001) (DAA, 2016). 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*.

According to available datasets, one Site of Aboriginal Significance is located within the application area (DAA, 2016). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

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

The clearing permit application was advertised on 10 October 2016 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this application.

**Methodology** DAA (2016)

**4. References**

APM (2015) Level One Biological Survey, Matilda Gold Project. Prepared for Blackham Resources Ltd by Animal Plant Mineral Pty Ltd, November 2015.

APM (2016a) Galaxy & Caledonian Haul Road Project. Native Vegetation Clearing Permit Application Supporting Document. Prepared for Blackham Resources Ltd by Animal Plant Mineral Pty Ltd, September 2016.

APM (2016b) Galaxy & Caledonian Haul Road Project. Native Vegetation Clearing Permit Application – Additional Supporting

- Information. Prepared for Blackham Resources Ltd by Animal Plant Mineral Pty Ltd, November 2016.
- Blackham Resources Limited (2016) Galaxy & Caledonian Haul Road Project. Native Vegetation Clearing Permit Application – Additional Information on Fauna Management and Impacts to Priority Flora, Blackham Resources Limited, November 2016.
- BoM (2016) Climate Statistics for Australian Locations. A Search for Climate Statistics, Australian Government Bureau of Meteorology. <<http://www.bom.gov.au>> (Accessed November 2016).
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management.
- DAA (2016) Aboriginal Heritage Inquiry System, Department of Aboriginal Affairs, Perth, Western Australia < <http://maps.dia.wa.gov.au>> (Accessed November 2016).
- DAWA (1994) Technical Bulletin No.84: An inventory and condition survey of the Murchison River Catchment and surrounds, Western Australia. Department of Agriculture, South Perth, Western Australia.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- DEE (2016) *Merops ornatus* in Species Profile and Threats Database, Department of the Environment and Energy, Canberra < <http://www.environment.gov.au> > (Accessed November 2016).
- DPaW (2015a) Flora Advice for CPS 7275/1 – Blackham Resources Ltd – Clearing of 120 ha of native vegetation within Mining Leases 53/130, 53/131, 53/205 & 53/1097. Department of Parks and Wildlife, Species and Communities Branch, Kensington, Western Australia.
- DPaW (2015b) Additional Flora Advice for CPS 7275/1 – Blackham Resources Ltd – Clearing of 120 ha of native vegetation within Mining Leases 53/130, 53/131, 53/205 & 53/1097. Department of Parks and Wildlife, Species and Communities Branch, Kensington, Western Australia.
- DPaW (2015c) Fauna Advice for CPS 7275/1 – Blackham Resources Ltd – Clearing of 120 ha of native vegetation within Mining Leases 53/130, 53/131, 53/205 & 53/1097. Department of Parks and Wildlife, Species and Communities Branch, Kensington, Western Australia.
- DPaW (2016) NatureMap, Department of Parks and Wildlife <<http://naturemap.dec.wa.gov.au>> (Accessed November 2016).
- Government of Western Australia (2015) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2015. WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- 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.

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia (now DPaW and DER)
<b>DER</b>	Department of Environment Regulation, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DRF</b>	Declared Rare Flora
<b>DotE</b>	Department of the Environment, Australian Government
<b>DoW</b>	Department of Water, Western Australia
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia
<b>DSEWPaC</b>	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , 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:

{DPaW (2015) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

<b>T</b>	<b>Threatened species:</b> Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , listed under Schedules 1
----------	---

to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

**Threatened fauna** is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the Wildlife Conservation Act.

**Threatened flora** is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the Wildlife Conservation Act.

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. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- EN Endangered species**  
Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- VU Vulnerable species**  
Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- EX Presumed extinct species**  
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.
- IA Migratory birds protected under an international agreement**  
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 the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- CD Conservation dependent fauna**  
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- OS Other specially protected fauna**  
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P Priority species**  
Species which are poorly known; or  
Species that are adequately known, are rare but not threatened, and 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.