



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 8354/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Blackham Resources Ltd

### 1.3. Property details

Property: Mining Lease 53/26  
Mining Lease 53/32  
Mining Lease 53/40  
Mining Lease 53/43  
Mining Lease 53/44  
Mining Lease 53/50  
Mining Lease 53/64  
Mining Lease 53/69  
Mining Lease 53/71  
Mining Lease 53/95  
Mining Lease 53/96  
Mining Lease 53/200

Local Government Area: Shire of Wiluna  
Colloquial name: Matilda Gold Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
375		Mechanical Removal	Mineral Production and associated activities

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 28 March 2019

## 2. Site Information

### 2.1. Existing environment and information

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

**Vegetation Description** The vegetation of the application area is broadly mapped as the following Beard vegetation associations:

**28:** Open low woodland; mulga;  
**29:** Sparse low woodland; mulga, discontinuous in scattered groups; and  
**204:** Succulent steppe with open scrub; scattered mulga and *Acacia sclerosperma* over saltbush and bluebush.

A flora and vegetation survey was conducted over the application area by Animal Plant Mineral (APM) in October 2017 and November 2018. The survey identified and described the following seven vegetation communities within the application area (APM, 2019b):

1. Open Mulga Shrubland over Open Shrubland (AiLpPo): *Acacia incurvaneura* and *Acacia pruinocarpa* very sparse tall shrubs over emergent *Eremophila* spp., *Ptilotus obovatus*, *Solanum lasiophyllum* and *Senna artemisioides* spp.;
2. Open Mulga Shrubland over Spinifex Grassland (AiTm): *Acacia incurvaneura* and *Acacia caesaneura* over a sparse spinifex grassland of *Triodia melvillei*;
3. Impacted Open Mulga Shrubland (AaE): *Acacia aneura* over open low shrubland of *Eremophila* sp., *Ptilotus obovatus* and *Senna* spp.;
4. Western Degraded Open Shrubland (LpS): *Lepidium platypetalum* over *Enneapogon caeruleus* and *Enteropogon ramosus* very sparse tussock grasses and *Maireana* aff. *tomentosa* very open chenopod shrubs;
5. Eastern Degraded Open Shrublands (LpP): *Lepidium platypetalum*, *Ptilotus* spp. and *Solanum lasiophyllum*;
6. Depression Open Shrubland (AiLpEf): *Acacia incurvaneura* and *Acacia tetragonophylla* over low shrubland of *Lepidium platypetalum*, *Solanum lasiophyllum* and *Ptilotus nobilis* and grassland of *Eragrostis falcata* and *\*Cenchrus ciliaris*; and

7. Drainage Channel Mulga Shrubland (Aa): *Acacia aneura*, *Acacia incurvaneura* and *Acacia ramulosa* ssp. *ramulosa* mid dense tall shrubs over *Acacia tetragonophylla* very sparse shrubs over *Sida calyxhymenia* very sparse mixed herbs.

\* denotes introduced species

<b>Clearing Description</b>	Matilda Gold Project. Blackham Resources Pty Ltd proposes to clear up to 375 hectares of native vegetation within a boundary of approximately 610 hectares, for the purpose of a mineral production and associated infrastructure. The project is located approximately one kilometre south of Wiluna.
<b>Vegetation Condition</b>	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).  To:  Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).
<b>Comment</b>	The vegetation condition was derived from a vegetation survey conducted by APM (2019b).  The proposed clearing is for mining activities and mining related infrastructure, including an access road (APM, 2019a). The application area includes some areas historically cleared for mining activities, and some areas that were previously rehabilitated (APM, 2019a).

### 3. Assessment of application against Clearing Principles

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

<b>Comments</b>	<p><b>Proposal is not likely to be at variance to this Principle</b></p> <p>The clearing permit application area is located within the Eastern Murchison subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Murchison Bioregion (GIS Database). The Eastern Murchison subregion is characterised by its internal drainage and extensive areas of red sandplains, supporting Mulga woodlands, hummock grasslands, saltbush shrublands and Halosarcia shrublands (CALM, 2002).</p> <p>A biological (flora, vegetation and fauna) and targeted flora survey of the application area was undertaken in October 2017 and November 2018 by APM. The survey recorded a total of 114 flora taxa (species, subspecies and varieties), from 56 genera and 27 families in the broader survey area (APM, 2019a). No Threatened or Priority flora were identified in the application area (APM, 2019b). The survey found that the diversity and condition of the flora and vegetation of the application area is similar to that of the surrounding area (APM, 2019a).</p> <p>The following weed species were recorded in the application area: <i>Cenchrus ciliaris</i> (Buffel Grass), <i>Bidens bipinnata</i> (Bipinnate Beggartick), and <i>Cuscuta planiflora</i> (APM, 2019b). None of these species are listed as declared plants under the <i>Biosecurity and Agriculture Management Act 2007</i> (DPIRD, 2019). Clearing activities may spread or introduce weeds, which have the potential to out-compete native flora and reduce the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.</p> <p>Six fauna habitats were identified within the application area (APM 2019b). APM reported that the six fauna habitats also occurred throughout the surrounding areas (APM, 2019b).</p> <p>Several fauna species of conservation value have the potential to occur in the application area (APM 2019b). Further analysis found that only one species: Rainbow Bee eater (<i>Merops ornatus</i>) (Marine), a medium sized migratory bird, was likely to occur. However, investigations found that the application area lacks suitable soils for the species to make nests in burrows, therefore, it is unlikely that the species occurs in the application area (APM 2019b).</p> <p>There are Priority Ecological Communities (PEC's), recorded in the vicinity of the application area (GIS Database). The Wiluna BF, Uramurdah Lake, Lake Violet South and Lake Violet, PEC's are unique assemblages of invertebrates (stygo fauna) in the groundwater calcretes (DBCA, 2019). The buffer boundaries for the PEC's are within 0.2 to 1.5 kilometres, at the nearest point, from the application area (GIS Database). However, none of the PEC's are within the application area, and the proposed clearing of native vegetation is unlikely to impact on stygo fauna. The flora and vegetation survey did not record any TEC's or PEC's within the application area (APM, 2019a).</p> <p>The vegetation communities, fauna habitats and landform types present within the application area, are well represented in surrounding areas (APM, 2019b; GIS Database). The application area is unlikely to represent an area of higher biodiversity than surrounding areas, in either a local or regional context.</p> <p>Based on the above, the proposed clearing is not likely to be at variance to this Principle.</p>
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**Methodology** APM (2019a)  
APM (2019b)  
CALM (2002)  
DBCA (2019)  
DPIRD (2019)

GIS Database:

- IBRA Australia
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers
- Threatened Fauna

**(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**

The following six fauna habitats have been recorded within the application area (APM, 2019a; APM 2019b):

1. Open Mulga Shrubland over Open Shrubs;
2. Open Mulga Shrubland over Spinifex Grasslands;
3. Impacted Mulga Shrublands;
4. Degraded Open Shrubland;
5. Depression Open Shrubland; and
6. Drainage Chanel Mulga Shrubland.

Assessment of fauna habitats of the application area found that the habitat for fauna was considered marginal (APM, 2019b).

The fauna distributed in or around the application area are not likely to depend specifically on the vegetation and or habitats within the application area. The vegetation and fauna habitats recorded in the application area are well represented at a local and regional level (APM 2019a; APM, 2019b).

There are Priority Ecological Communities (PECs), unique assemblages of invertebrates (stygo fauna) in groundwater calcretes, in the vicinity of the application area (DBCA, 2019; GIS Database). However, none of the PECs are within the application area (GIS Database), and clearing within the application area will not impact the stygo fauna habitat (APM, 2019a).

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

**Methodology** APM (2019a)  
APM (2019b)  
DBCA (2019)

GIS Database:

- Imagery
- Pre-European Vegetation
- Threatened Fauna
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers

**(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**

There are no known records of Threatened flora within the application area (GIS Database). Surveys of the application area did not record any species of Threatened flora (APM 2019a).

The vegetation associations within the application area are common and widespread within the region (APM 2019b; GIS Database), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened (rare) flora.

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

**Methodology** APM (2019a)  
APM (2019b)

GIS Database:

- Pre-European Vegetation
- 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 likely to be at variance to this Principle**  
 There are no known Threatened Ecological Communities (TEC's) located within the application area (GIS Database). A flora and vegetation survey of the application area did not identify any TEC's within or adjacent to the application area (APM, 2019a).

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

**Methodology**    APM (2019a)

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

**(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 falls within the Murchison Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99% of the pre-European vegetation still exists in the IBRA Murchison Bioregion (Government of Western Australia, 2018). The application area is broadly mapped as Beard vegetation associations: 28: Open low woodland; mulga; 29: Sparse low woodland; mulga, discontinuous in scattered groups; and 204: Succulent steppe with open scrub, scattered mulga and *Acacia sclerosperma* over saltbush and bluebush (GIS Database). Approximately 98% - 99% of the pre-European extent of each of these vegetation associations remains uncleared at both the state and bioregional level (Government of Western Australia, 2018).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DBCA managed lands
IBRA Bioregion – Murchison	28,120,586	28,044,823	99	Least Concern	20
<b>Beard vegetation associations – WA</b>					
28	395,895	392,171	99	Least Concern	0
29	7,903,991	7,900,200	99	Least Concern	6
204	199,475	198,735	99	Least Concern	6
<b>Beard vegetation associations – Murchison Bioregion</b>					
28	224,291	220,583	98	Least Concern	0
29	2,956,382	2,955,695	99	Least Concern	3
204	185,601	184,861	99	Least Concern	7

\* Government of Western Australia (2018)  
 \*\* 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 (2018)

GIS Database:  
 - IBRA Australia  
 - Pre-European Vegetation Statistics

**(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**

There are no permanent watercourses or wetlands within the area proposed to clear (APM, 2019a; GIS Database). There is vegetation described as Drainage Channel Mulga growing in association with several seasonal creeks, drainage channels and wash areas that pass through the application area (APM, 2019a; GIS Database).

Based on the above, the proposed clearing is at variance to this Principle. Potential impacts to vegetation growing in association with watercourses may be minimised by the implementation of a watercourse management condition.

**Methodology APM (2019a)**

GIS Database:

- Hydrography, Lakes
- Hydrography, linear

**(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**

The application area lies predominately within the Wiluna land system, with a small area in the Violet and Carnegie land systems (GIS Database). These land systems have been mapped and described in technical bulletins produced by the former Department of Agriculture (now the Department of Primary Industries and Regional Development).

The Wiluna land system is described as low greenstone hill belts and stony lower slopes, lower saline stony plains and dense drainage, supporting sparse groved mulga and other acacia shrublands with patches of chenopods (Mabbutt et al., 1963). This land system is moderately susceptible to erosion if vegetation cover is removed and or degraded (APM, 2019b).

The Violet land system consists of gently undulating gravelly plains on greenstone, supporting groved mulga and bowgada shrublands and patchy halophytic (Mabbutt et al., 1963). This land system may be susceptible to erosion if vegetation cover is removed (Pringle et al., 1994).

The Carnegie land system is described as salt lakes with fringing saline flats and dunes supporting low halophytic shrublands and scattered tall acacia shrublands (Pringle et al., 1994). This land system is generally not susceptible to erosion (Pringle et al., 1994).

Where possible, vegetation should be progressively cleared to prevent soil erosion, dust generation and weed introduction. Potential erosion 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 APM (2019b)**

Mabbutt et al. (1963)  
Pringle et al. (1994)

GIS Database:

- Landsystem Rangelands

**(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 likely to be at variance to this Principle**

There are no conservation areas in the vicinity of the application area. The nearest DBCA (formerly DPaW) managed land is the former Mooloogool Pastoral Lease, located approximately 70 kilometres northwest of the application area (GIS Database). The proposed clearing is unlikely to impact on the environmental values of any conservation area.

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

**Methodology GIS Database:**

- DPaW Tenure

**(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 may be at variance to this Principle**

There are no Public Drinking Water Source Areas (PDWSAs) within the application area (GIS Database). The Wiluna Water Reserve, Public Drinking Water Source Area (PDWSA) is approximately two kilometres northeast of the application area at its nearest point. The proposed clearing is unlikely to impact on the PDWSA.

There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). There are seasonal drainage lines, and wash areas associated with drainage channel vegetation communities. These drainage lines and wash areas may feed into Lake Violet which is 0.5 to 2.0 kilometres south to south west of the application area (GIS Database). However, the proposed clearing is unlikely to result in significant changes to surface water flows.

Potential impacts to surface water may be minimised by the implementation of a drainage line management condition and a staged clearing condition.

There are three Priority Ecological Communities (PEC's) recorded in the vicinity of the application area (GIS Database). The Wiluna BF, Uramurdah Lake, Lake Violet South and Lake Violet, Priority one PEC's are unique assemblages of invertebrates (stygo fauna) in the groundwater calcretes (DBCA, 2019). The buffer boundaries for the PEC's are within 0.2 to 1.5 kilometres at the nearest point from the application area (GIS Database).

The proposed clearing of up to 375 hectares of native vegetation within a boundary of approximately 610 hectares, for the purpose of mineral production activities is unlikely to cause deterioration in the quality of underground water.

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

**Methodology DBCA (2019)**

GIS Database:

- Hydrography, Linear
- Public Drinking Water Source Areas
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers

**(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 climate of the region is semi-arid, with a low average rainfall of approximately 261 millimetres per year (BoM, 2019). Drainage lines in the area are dry for most of the year, only flowing immediately following high intensity storms (APM, 2019b).

There are no permanent water courses or waterbodies within the application area (GIS Database). Seasonal drainage lines are common in the region and temporary localised flooding may occur briefly following high rainfall events. However, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.

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

**Methodology APM (2019b)  
BoM (2019)**

GIS Database:

- Hydrographic Catchments - Catchments
- Hydrography, linear

## Planning Instrument, Native Title, previous EPA decision or other matter.

### Comments

The clearing permit application was advertised on 18 February 2019 by the Department of Mines, Industry Regulation and Safety (DMIRS), inviting submissions from the public. A submission was received in relation to this application, raising concerns over potential impacts to a registered heritage building (the Mine Manager's House); potential impacts to the operation of the nearby Wiluna Airport; and potential flooding caused by the clearing. The potential flooding is addressed under Principle (j) of this report. The proponent has advised that they will liaise with the Wiluna Airport to ensure that clearing activities do not impact on airport operations.

Mining Lease 53/200 has an active tenement endorsement stating that the lease does not include Special Residential Purposes Lease 3116, 9624 Nabberu Location 21 and Special Residential Lease 3116, 9017 Nabberu Location 19, except that below 30 metres from the natural surface of the land. The area under the tenement endorsement is the same as the area defined on the Register of Heritage Places (Database No. 05507) as the Mine Manager's House, Wiluna (1929) (Heritage Council, 2019; GIS Database). This area has been excluded from the clearing permit application area.

There are two native title claims (WR2016/001, WC1999/024) over the area under application (DPLH, 2019). These claims have been determined by the Federal Court 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 four registered Aboriginal Sites of Significance within the application area (DPLH, 2019). 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.

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.

**Methodology** DPLH (2019)  
Heritage Council (2019)

GIS Database:  
- Register of Heritage Places

## 4. References

- APM (2019a) Native Vegetation Clearing Permit (Purpose Permit) Application for Matilda Gold Project, Wiluna Gold Mine. Report prepared for Blackham Resources Ltd, by Animal Plant Mineral Pty Ltd, January 2019.
- APM (2019b) Matilda Gold Project Biological Survey Wiluna, WA. Report prepared for Blackham Resources Ltd, by Animal Plant Mineral Pty Ltd, January 2019.
- BoM (2019) Bureau of Meteorology Website – Climate Data Online. Bureau of Meteorology.  
<http://www.bom.gov.au/climate/data/> (Accessed 5 March 2019).
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DBCA (2019) Priority Ecological Communities for Western Australia Version 28. Species and Communities Program. Department of Biodiversity, Conservation and Attractions, Western Australia.
- DPIRD (2019) Declared Plants. Department of Primary Industries and Regional Development.  
<https://www.agric.wa.gov.au/pests-weeds-diseases/weeds/declared-plants> (Accessed 27 March 2019).
- DPLH (2019) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage.  
<http://maps.daa.wa.gov.au/AHIS/> (Accessed 1 March 2019).
- Government of Western Australia (2018) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions.  
<https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Heritage Council (2019) Register of Heritage Places. Mine Manager's House, Wiluna. Place Number 05507. Heritage Council of Western Australia. <http://www.stateheritage.wa.gov.au/state-heritage-register> (accessed 14 March 2019)
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc.). Nedlands, Western Australia.
- Mabbutt J.A., Litchfield W.H., Speck N.H., Sofoulis J., Wilcox D.G., Arnold J.M., Brookfield M., and Wright R.L. (1963) General Report on Lands of the Wiluna - Meekatharra Area, Western Australia, 1958. Land Research Series No.7. CSIRO, Melbourne.
- Pringle H.J.R., Van Vreeswyk, A.M.E., and Gilligan S.A. (1994) An Inventory and Condition Survey of rangelands in the north-eastern Goldfields, Western Australia, Department of Agriculture, Western Australia.

## 5. Glossary

### Acronyms:

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)
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DBCA and DWER)
DEE	Department of the Environment and Energy, Australian Government
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)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora
DoE	Department of the Environment, Australian Government (now DEE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
DWER	Department of Water and Environmental Regulation, Western Australia
EPA	Environmental Protection Authority, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , 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:

{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.