

# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 9417/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Newcam Minerals Pty Ltd

### 1.3. Property details

Property: Mining Lease 52/236  
Local Government Area: Shire of Meekatharra  
Colloquial name: Mt Gould Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
95.6		Mechanical Removal	Mineral Production and Associated Activities

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 19 May 2022

## 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:  
29: Sparse low woodland; mulga, discontinuous in scattered groups; and  
202: Shrublands; mulga & *Acacia quadrimarginea* scrub (GIS Database).

Several flora and vegetation surveys have been conducted over the application area by Woodman between 2008 and 2012. MBS Environmental has subsequently undertaken desktop reviews of the application area in August 2021 and March 2022. The following vegetation associations were recorded within the application area (MBS, 2021):

- 1: Open tall shrubland of *Acacia aneura* over sparse low shrubland of *Ptilotus obovatus* over open low forbland of *Goodenia tenuiloba*.
- 2: Sparse tall shrubland of mixed *Acacia* species over sparse low shrubland of *Ptilotus obovatus* and *Eremophila* species over open low forbland of *Goodenia tenuiloba*.
- 3: Sparse tall shrubland isolated shrubs of *Acacia aneura* over isolated mid shrubs of *Eremophila fraseri* subsp. *parva* over isolated low shrubs of *Ptilotus obovatus* over open low forbland of mixed species including *Ptilotus aevoides* and *Goodenia tenuiloba*.
- 4: Open tall shrubland of isolated shrubs of *Acacia aneura* over open to sparse mid shrubland of *Eremophila latrobei* subsp. and *Philothea brucei* subsp. *cinerea* over open to sparse low shrubland and low tussock grassland of *Ptilotus obovatus* and *Cymbopogon ambiguus*.
- 5: Isolated tall shrubland of *Acacia aneura* and or *Grevillea berryana* over sparse low shrubland of *Eremophila latrobei* subsp. *latrobei*, *Philothea brucei* subsp. *cinerea* and *Ptilotus obovatus* over low hummock grassland of *Triodia melvillei*.
- 6a: Open tall shrubland of *Acacia ramulosa* var. *linophylla* and *Acacia kempeana* over sparse mid shrubland of *Eremophila forrestii* subsp. *forrestii* over isolated low shrubland of *Corchorus crozophorifolius* over sparse low grassland and forbland of mixed species including *Eriachne mucronata* and *Ptilotus aevoides*.
- 6b: Tall sparse shrubland of *Acacia ramulosa* var. *linophylla* and *Acacia citrinoviridis* over open mid shrubland of *Halgania gustafsenii* var. *Murchison* over sparse low forbland of *Goodenia tenuiloba*.

**Clearing Description** Mt Gould Project.  
Newcam Minerals Pty Ltd proposes to clear up to 95.6 hectares of native vegetation within a boundary of approximately 270.212 hectares, for the purpose of mineral production and associated activities. The project is located approximately 150 kilometres north-west of Meekatharra, within the Shire of Meekatharra.

**Vegetation Condition** Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).  
To

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

**Comment**

The vegetation condition was derived from a vegetation survey conducted by Woodman (2009).

During the clearing permit application process, Newcam Minerals Pty Ltd reduced the amount of proposed clearing from 136.5 hectares to 96.6 hectares and reduced the permit boundary from 309.552 hectares to 270.212 hectares.

**3. Assessment of application against Clearing Principles**

**(a) Native vegetation should not be cleared if it comprises a high level of biodiversity.**

**Comments**

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

The clearing permit application area is located within the Western Murchison subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Murchison Bioregion (GIS Database). The Murchison bioregion is characterised by Mulga low woodlands, often rich in ephemerals (usually with bunch grasses), on outcrop and fine textured Quaternary alluvial and eluvial surfaces (extensive hardpan washplains that dominate and characterise the subregion) mantling granitic and greenstone strata of the northern part of the Yilgarn Craton. Surfaces associated with the occluded drainage occur throughout with hummock grasslands on Quaternary sandplains, saltbush shrublands on calcareous soils and Tecticornia low shrublands on saline alluvia. The bioregion experiences an arid climate with bimodal rainfall that usually falls in winter (CALM, 2002).

Several flora and vegetation surveys have been conducted over the application area by Woodman between 2008 and 2012. MBS Environmental has subsequently undertaken desktop reviews of the application area in August 2021 and March 2022 to quantify potential impacts. No Threatened flora or Threatened Ecological Communities have been recorded within the application area (MBS Environmental, 2022).

Four Priority flora species have been recorded within the broader survey area, with three identified within the application area (MBS Environmental, 2022). During the assessment of the proposed impacts in relation to CPS 9417/1, Newcam Minerals Pty Ltd reduced the amount of proposed clearing and the permit boundary to minimise impacts to flora and priority ecological communities (PEC). The table below identifies impacts to Priority flora before the clearing proposal was reduced, and post:

Significant Flora Taxa	Revised Total Surveyed Population* (#)	Potential Impact of Clearing from the Original Application (#/%)	Potential Impact of Clearing from the Revised Application (#/%)
<i>Eremophila warnesii</i> (P1)	14,047	3,920 (27.9%)	59 (0.4%)
<i>Halgania gustafsenii</i> (P1)	13,352	2,586 (19.4%)	1,008 (7.5%)
<i>Rhodanthe sphaerocephala</i> (P1)	20	0 (0%)	0 (0%)
<i>Tribulus adelacanthus</i> (P3)	2,379	284 (11.9%)	306 (12.9%)
<b>Total (#)</b>	<b>29,798</b>	<b>6,790</b>	<b>1,372</b>

*Halgania gustafsenii* is a shrub, with purple to blue flowers standing between 0.2 metres to 1 metre tall. *Halgania gustafsenii* flowers during June to December and is found in sand, gravel, laterite and ironstone soils on stony hills and ridges (Western Australian Herbarium, 1998–). There are eleven recorded populations of *Halgania gustafsenii* between Mount Gould and Meekatharra ridges (Western Australian Herbarium, 1998–). Potential impacts of this clearing proposal to this species would be approximately 7.5% of the local population, which is not likely to be a significant impact.

*Tribulus adelacanthus* is a prostrate herb, plants villous standing 10 to 14 millimetres tall (Western Australian Herbarium, 1998–). There are seventeen records of *Tribulus adelacanthus* in the Goldfields region of Western Australia (Western Australian Herbarium, 1998–). Potential impacts of this clearing proposal to this species would be approximately 12.9% of the local population, which is not likely to be a significant impact.

The Delegated Officer notes that the proponent has taken all reasonable measures to avoid and minimise potential impacts to the above Priority flora, and the potential impacts to Priority flora are considered acceptable.

The application area intercepts the Priority 1 Mount Gould vegetation complex (banded ironstone formation) PEC. The banded ironstone formation (BIF) ranges are of significant biodiversity value, supporting distinct and restricted plant communities which are often unique to a specific range (DEC and DoIR, 2007). It is expected that some vegetation associations of the area may be regionally restricted, particularly those associated with the geology of the BIF ranges and associated laterite caps and the erosion products from these ranges. These will most likely be widespread within similar landforms. This PEC is mapped as being 879.4 hectares, with the application area intercepting approximately 39.7 hectares (4.5%). As the permit boundary extends outside of the PEC, and the proposal is for clearing 95.6 hectares of native vegetation within a boundary of approximately 270.212 hectares, it is likely the proposed impacts will be lower than 4.5% (GIS Database). The Delegated Officer is satisfied that the proponent has taken all reasonable measures to avoid and minimise potential

impacts to the PEC. The proposed clearing is considered unlikely to have any significant impact on the continued existence of the PEC.

Three introduced flora species have the potential to occur within the application area (MBS Environmental, 2021). Weeds 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.

Five fauna habitats have been identified within the application area. Two habitat types within the application area are known to support conservation or locally significant fauna (MBS Environmental, 2021). However, the small amount of proposed clearing in these habitat types is unlikely to have a significant impact on any conservation significant species and there is equal or better representation of these habitat types in the surrounding area (MBS Environmental, 2022).

The vegetation associations, fauna habitats and landform types present within the application area, are well represented in surrounding areas (MBS Environmental, 2022; GIS Database). The application area is unlikely to represent an area of higher biodiversity than surrounding areas, in either a local or regional context.

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

**Methodology** CALM (2002)  
MBS Environmental (2021)  
MBS Environmental (2022)  
Western Australian Herbarium (1998–)

GIS Database:

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

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

Two fauna surveys have been undertaken over the application area and its surrounds (Biologic, 2012a; Biologic, 2012b) in 2012, followed up with a desktop analysis undertaken by MBS Environmental in 2021. In total, 125 fauna species were recorded during the surveys comprising 15 native and seven introduced mammal, 75 bird, 27 reptile and one amphibian species.

The following seven fauna habitats have been recorded within the broader survey area (MBS Environmental, 2021):

Habitat ID	Habitat Type	Mapped Extent (ha)	Potential Impact of Clearing from the Original Application (ha/%)	Potential Impact of Clearing from the Revised Application (ha/%)
1	Spinifex Hummock Grasslands on Ironstone Hills and Ridges	25.3	18.4 (72.9%)	3.7 (14.7%)
2	Open Mulga shrublands over Tussock Grassland on Ironstone Hills and Ridges	103.7	25.5 (24.5%)	2.6 (2.5%)
3	Stony lower slopes and plains below hill systems	205.3	43.1 (21.0%)	33.4 (16.3%)
4	Mixed Acacia shrublands on sandplain	146.4	25.5 (17.5%)	31.7 (21.7%)
5	Sparse Mulga shrublands on hardpan	82.2	4.3 (5.2%)	6.0 (7.3%)
6	Sparse Acacia shrublands on stony undulating plains	26.6	0 (0)	0 (0)
7	Breakaway systems of deep crevices, caves and rock ledges	1.1	0 (0)	0 (0)
C	Cleared/ Historic Disturbance	22.5	19.6 (87.2%)	18.1 (80.5%)
<b>Total</b>		<b>613.0</b>	<b>136.5 (22.7%)</b>	<b>95.6 (15.6%)</b>

Three of these habitats (1, 2 and 7) are known to support conservation or locally significant fauna (Biologic 2012a).

Conservation Significant fauna identified during the fauna survey as potentially utilising the application area include:

- Peregrine Falcon (*Falco peregrinus*) – Other Specially Protected Species
- Rainbow Bee-eater (*Merops ornatus*) – Migratory; and
- Long-tailed Dunnart (*Sminthopsis longicaudata*) – Priority 4.

Conservation and locally significant fauna, whilst primarily occurring within the restricted Habitats 1, 2 and 7, have been recorded throughout the surrounding region or are considered mobile and highly versatile in habitat utilisation (MBS Environmental, 2021). It is not considered likely that the proposed clearing will have an impact on the conservation status of the above species or their habitat.

During the assessment of the proposed impacts in relation to CPS 9417/1, Newcam Minerals Pty Ltd reduced the amount of proposed clearing and the permit boundary. The revised boundary intercepts habitats 1 to 5, however habitat types 6 and 7 will no longer be impacted (MBS Environmental (2022)). The majority of clearing will be undertaken in habitats 3 and 4, which are both common and widespread in the local and regional area. A large portion of the proposed clearing will also be undertaken within cleared/historic disturbance (MBS Environmental, 2022). The proposed impact to habitat 1 of 3.7 hectares, and proposed impact of 2.6 hectares to habitat 2 is unlikely to have a significant impact on any conservation significant species or their habitat. The Delegated Officer is satisfied that the proponent has taken all reasonable measures to avoid and minimise potential impacts to fauna and their habitat.

A total of 31 invertebrate specimens were collected during the baseline studies (Biologic 2012a, Biologic 2012b) which comprised 26 pseudoscorpions, three isopods, one spider and one land snail. No known short range endemic taxa were recorded during the survey (MBS Environmental, 2021).

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

**Methodology** Biologic (2012a)  
Biologic (2012b)  
MBS Environmental (2021)  
MBS Environmental (2022)

GIS Database:  
- Imagery  
- Pre-European Vegetation  
- Threatened Fauna

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened 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). Flora surveys of the application area did not record any species of Threatened flora (MBS Environmental, 2021; Woodman, 2012).

The vegetation associations within the application area are common and widespread within the region (MBS Environmental, 2021; GIS Database), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened flora.

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

**Methodology** MBS Environmental (2021)  
Woodman (2012)

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 (TECs) located within or in close proximity to the application area (GIS Database).

A flora and vegetation survey of the application area did not identify any TECs (MBS Environmental, 2022; Woodman, 2009).

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

**Methodology** MBS Environmental (2022)  
Woodman (2009)

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, 2019). The application area is broadly mapped as Beard vegetation associations 29: Sparse low woodland; mulga, discontinuous in scattered groups; and 202: Shrublands; mulga & *Acacia quadrimarginea* scrub (GIS Database). Approximately 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, 2019).

Therefore, the application area does not represent a significant remnant of native vegetation in an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DBCA managed lands
IBRA Bioregion – Murchison	28,120,587	28,044,823	~99	Least Concern	7.77
Beard vegetation associations – WA					
29	7,903,991	7,898,973	~99	Least Concern	6.28
202	448,529	448,344	~99	Least Concern	22.91
Beard vegetation associations – Murchison Bioregion					
29	2,956,382	2,955,695	~99	Least Concern	3.15
202	339,743	339,641	~99	Least Concern	21.25

\* Government of Western Australia (2019)

\*\* 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 (2019)

GIS Database:

- IBRA Australia
- Pre-European Vegetation

**(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 (BoM, 2022; GIS Database). Four seasonal creek lines pass through the application area (GIS Database). Creek lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall (BoM, 2022).

Based on the above, the proposed clearing is at variance to this Principle. However the vegetation survey of the application area did not identify any riparian vegetation (MBS Environmental, 2021), and impacts from the proposed clearing to vegetation growing in association with watercourses is likely to be minimal.

**Methodology** BoM (2022)  
MBS Environmental (2021)

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

The application area lies within the Cole and Peak Hill 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 Cole land system is described as hardpan wash plains with reticulate patterns of wanderrie banks and mulga groves and more concentrated drainage tracts, supporting mixed mulga and wanderrie shrublands. This land system is generally not susceptible to erosion as it has dense stony mantles and skeletal soils (Curry et al., 1994).

The Peak Hill land system is described as rugged, sinuous ranges and rounded hills of Proterozoic banded ironstone and hematitic shale, supporting stunted Mulga and Cottonbush shrublands. This land system is generally not susceptible to erosion as it has dense stony mantles and skeletal soils (Curry et al., 1994).

The proposed clearing of up to 95.6 hectares of native vegetation within a boundary of approximately 270.212 hectares, for the purpose of mineral production and associated activities is unlikely to cause appreciable land degradation.

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

**Methodology** Curry et al. (1994)

GIS Database:  
- Landsystem Rangelands  
- 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 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 Doolgunna Pastoral Lease which is located approximately 147 kilometres east 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** 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 is not likely to be at variance to this Principle**

There are no Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database). There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). Creek lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall. The proposed clearing is unlikely to result in significant changes to surface water flows.

The proposed clearing is unlikely to cause deterioration in the quality of underground water.

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

**Methodology** GIS Database:  
- Hydrography, Linear  
- Public Drinking Water Source 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 climate of the region is semi-arid, with a low average rainfall of approximately 233.7 millimetres per year (BoM, 2022). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (BoM, 2022).

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 heavy 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 BoM (2022)**

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 14 September 2021 by the Department of Mines, Industry Regulation and Safety (DMIRS), inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the area under application (DPLH, 2022). This claim has been determined by the Federal Court on behalf of the claimant group. 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 is one registered Aboriginal Site 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.

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 (2022)**

**4. References**

- BoM (2022) Bureau of Meteorology Website – Climate Data Online, Meekatharra. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/> (Accessed 16 May 2022).
- Biologic (2012a) Mount Gould Vertebrate Fauna Study. Unpublished report prepared for Atlas Iron Limited by Biologic Environmental Survey, January 2012.
- Biologic (2012b) Mount Gould Short-range Endemic Invertebrate Survey Report. Unpublished report prepared for Atlas Iron Limited by Biologic Environmental Survey, July 2012.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- Curry, P.J., Payne, A.L., Leighton, K.A., Hennig, P. and Blood, D.A. (1994) An Inventory and Condition Survey of the Murchison River Catchment and Surrounds, Western Australia.
- DEC and DoIR (2007) Strategic Review of the Banded Iron Formation Ranges of the Midwest and Goldfields. Department of Environment and Conservation, Department of Industry and Resources, Western Australia. [024311.pdf \(dbca.wa.gov.au\)](#) (Accessed 4 March 2022).
- 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.
- DPLH (2022) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 16 May 2022).
- Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

MBS Environmental (2021) Native Vegetation Clearing Permit Mount Gold Iron Project, M52/236. Unpublished report prepared for Newcam Minerals Pty Ltd by MBS Environmental, August 2021.

MBS Environmental (2022) Amendment to Native Vegetation Clearing Permit Application CPS 9417/1 for the Mt Gould Iron Ore Project. Unpublished report prepared for Newcam Minerals Pty Ltd by MBS Environmental, March 2022.

Woodman (2009) Mount Gould DSO Project Flora and Vegetation Assessment. Unpublished report prepared for Atlas Iron Limited by Woodman Environmental Consulting, May 2009.

Woodman (2012) Mount Gould DSO Project – Local and Regional Significant Flora Assessment and Regional Vegetation Review. Unpublished report prepared for Atlas Iron Limited by Woodman Environmental Consulting, April 2012.

## 5. 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).

**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.