



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8636/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Mincor Resources NL

1.3. Property details

Property: Mining Lease 15/90
Mining Lease 15/1457
Miscellaneous Licence 15/235
Local Government Area: Shire of Coolgardie
Colloquial name: Cassini-Redross Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 14 November 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: **522**: Medium woodland; redwood (*Eucalyptus transcontinentalis*) and merrit (*Eucalyptus floctoniae*); and **936**: Medium woodland; salmon gum (GIS Database).

A flora and vegetation survey was conducted over the application area by Botanica Consulting (Botanica) during October 2018 and July 2019. The following nine vegetation associations were recorded within the application area and surrounds, associated with five different landforms (Botanica, 2019):

Clay-Loam Plain

CLP-EW1: Mid woodland of *Eucalyptus salmonophloia* / *Eucalyptus lesouefii* / *Eucalyptus oleosa* over tall shrubland of *Melaleuca pauperiflora* and low open shrubland of *Olearia muelleri* / *Scaevola spinescens* on clay-loam plain.

CLP-EW2: Mid woodland of *Eucalyptus salubris* over mid shrubland of *Eremophila scoparia* / *Senna artemisioides* subsp. *filifolia* and low open chenopod shrubland of *Atriplex vesicaria* on clay-loam plain.

Closed Depression

CD-CSSSF1: Low samphire shrubland of *Tecticornia indica* subsp. *bidens* / *Tecticornia pergranulata* on playa / playa edge.

Hillslope

HS-EW1: Mid woodland of *Eucalyptus lesouefii* / *Eucalyptus urna* over tall open shrubland of *Melaleuca sheathiana* and low shrubland of *Cratystylis conocephala* / *Eremophila scoparia* / *Scaevola spinescens* on greenstone hillslope.

HS-EW2: Low woodland of *Eucalyptus torquata* over tall open shrubland of *Melaleuca sheathiana* and low open shrubland of *Scaevola spinescens* / *Westringia rigida* on greenstone hillslope.

HS-MWS1: Mid Mallee woodland of *Eucalyptus griffithsii* over tall shrubland of *Acacia acuminata* and low shrubland of *Eremophila dempsteri* / *Westringia rigida* on granite hillslope. This vegetation association was recorded in the wider survey area but was not present within the application area.

Sand Dune

SD-AS1: Mid shrubland of *Acacia acuminata* over low open shrubland of *Eremophila glabra* on sand dune.

SD-OS1: Tall shrubland of *Melaleuca zeteticorum* over low shrubland of *Darwinia* sp. Karonie (K. Newbey 8503) on sand dune.

Sand-Loam Plain

SLP-MWS1: Mid open Mallee forest of *Eucalyptus salicola* over mid shrubland of *Eremophila caperata* and low tussock grassland of *Triodia desertorum* on sand-loam plain.

Clearing Description Cassini-Redross Project

Mincor Resources NL proposes to clear up to 90.2 hectares of native vegetation within a boundary of approximately 90.2 hectares, for the purpose of mineral production and associated activities. The project is located approximately 55 kilometres north of Norseman, within the Shire of Coolgardie.

Vegetation Condition	Very Good: Vegetation structure altered; obvious signs of disturbance (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 Botanica (2019).

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 not likely to be at variance to this Principle**

The clearing permit application area is located within the Eastern Goldfield subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Coolgardie Bioregion (GIS Database). The Eastern Goldfields subregion is characterised by undulating plains interrupted by low hills and ridges, supporting mallees, *Acacia* thickets and shrub-heaths on sandplains, and diverse *Eucalyptus* woodlands around salt lakes, on ranges, and in valleys. Salt lakes support dwarf shrublands of samphire. The subregion is rich in endemic *Acacia* species (CALM, 2002).

The application area falls within the area known as the Great Western Woodlands, which represents the largest and most intact eucalypt woodland remaining in southern Australia and is one of the best examples of its type in the world (DEC, 2010). The Great Western Woodlands covers a total area of approximately 16 million hectares, and is recognised for its flora and fauna species richness and high number of endemic flora species (DEC, 2010). However, at approximately 90.2 hectares in size, the clearing permit application area represents less than 0.001% of the area covered by the Great Western Woodlands, and the proposed clearing is unlikely to have any significant impact on the conservation values of the Great Western Woodlands.

The vegetation of the application area consists of a combination of *Eucalyptus* woodlands on plains and hillslopes, *Melaleuca* and *Acacia* shrublands on sand dunes, and *Tecticornia* shrublands in saline depressions (Botanica, 2019). The vegetation associations within the application area are well represented outside of the application area and are not locally restricted (Botanica, 2019; GIS Database).

A desktop assessment identified a total of 295 flora species recorded within 20 kilometres of the application area (Botanica, 2019). A total of 93 flora species from 46 genera and 27 families were recorded within the application area (Botanica, 2019). A desktop assessment identified two Threatened and 19 Priority flora with the potential to occur within the application area, two species identified as occurring and 14 possibly occurring due to the presence of suitable habitat (Botanica, 2019). No Threatened flora species were identified during the field assessment of the application area (Botanica, 2019). Four Priority flora species were recorded during the field assessment of the application area and surrounding areas, including *Acacia dorsenna* (P1), *Allocasuarina eriochlamys* subsp. *grossa* (P3), *Diocirea acutifolia* (P3) and *Pityrodia scabra* subsp. *dendrotricha* (P3) (Botanica, 2019). *Acacia dorsenna* was recorded in vegetation association CLP-EW2 at two locations, totalling four plants, with both locations existing outside of the application area (Botanica, 2019). *Allocasuarina eriochlamys* subsp. *grossa* was recorded in vegetation association HS-EW2 at two locations, totalling over 500 plants, with both locations existing outside of the application area (Botanica, 2019). *Diocirea acutifolia* was recorded in vegetation association CLP-EW2 at five locations, totalling over 6200 plants, all recorded outside of the application area (Botanica, 2019). *Pityrodia scabra* subsp. *dendrotricha* was recorded in vegetation association SLP-MWS1 with two plants at one location, outside of the application area. Botanica (2019) has advised that no Priority flora taxa are proposed to be cleared, including no clearing within a 10 metre radius of any recorded Priority flora locations.

Three species of weeds were identified during the field survey of the application area; *Asphodelus fistulosus* (Onion Weed), *Carrichtera annua* (Wards Weed) and *Salvia verbenaca* (Wild Sage) (Botanica, 2019). All recorded locations of these weeds were along access tracks or the railway line in the north-west section of the application area (Botanica, 2019). 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 introduction of weeds may be minimised by the implementation of a weed management condition.

A NatureMap search identified a total of 85 vertebrate fauna species recorded within 20 kilometres of the application area, including 45 birds, seven mammals and 33 reptiles (Botanica, 2019). During the field assessment of the application area a total of two reptiles and seven mammal species (including five bat species) were recorded (Botanica, 2019). When the habitat types recorded within the application area were considered, a desktop assessment and literature review identified 33 mammals (including nine bat species), 109 birds, 79 reptiles and five frogs possibly occurring in the application area due to suitable habitat (Botanica, 2019). This includes three conservation significant fauna species; Malleefowl, *Leipoa ocellata* (VU at both state and federal level); Peregrine Falcon, *Falco peregrinus* (OS); and Central Long-eared Bat, *Nyctophilus*

major tor (P3) (Botanica, 2019). Due to the highly mobile nature of the Peregrine Falcon and Central Long-eared Bat, potential impacts as a result of the proposed clearing are likely to be minimal. No threatened or priority fauna species were identified during the field assessment of the application area, however three inactive Malleefowl mounds were recorded. Advice from DBCA (2019) indicates that the application area is within the known breeding range of the species and Malleefowl may potentially be breeding in the area. Potential impacts to Malleefowl as a result of the clearing may be minimised by the implementation of a fauna management condition.

The vegetation associations, fauna habitats and landform types present within the application area, are well represented in surrounding areas (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 Botanica (2019)
CALM (2002)
DBCA (2019)
DEC (2010)

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 may be at variance to this Principle

The following five fauna habitats have been recorded within the application area (Botanica, 2019):
Clay loam plain – Eucalypt woodlands;
Closed depression – samphire shrublands/playa;
Hillslope – Eucalypt woodlands/mallee woodlands;
Sand dune – *Acacia* shrublands/other shrublands; and
Sand-loam plain – Mallee woodlands.

When the habitat types recorded within the application area were considered, a desktop assessment and literature review identified 33 mammals (including nine bat species), 109 birds, 79 reptiles and five frogs possibly occurring in the application area due to suitable habitat (Botanica, 2019). Three inactive Malleefowl mounds were recorded during the field assessment of the application area suggesting that the area is suitable breeding habitat for the species (Botanica, 2019). Potential impacts to the breeding habitat of Malleefowl as a result of the clearing may be minimised by the implementation of a fauna management condition.

DBCA identified the potential for the proposed clearing to impact the threatened Arid Bronze Azure Butterfly (*Ogyris subterrestris petrina*, CR at both state and federal level) based on the vegetation types within the application area and presence of smooth-barked eucalypt tree species, which provide potentially suitable habitat for the butterflies host ant species (DBCA, 2019). However, a targeted field survey did not record the butterfly or host ant species, despite searching potentially suitable habitat within the application area on 15 and 16 October 2019, which coincides with the main flight period for the species (September to May) (Harewood, 2019). To complement the field survey, Harewood (2019) undertook a desktop review of available information on the Arid Bronze Azure Butterfly, with key findings including: The species is only known to be extant at two locations within the Wheatbelt region (300-350 kilometres from the Cassini-Redross Project area) and is presumed extinct at another location within the Goldfields region (90 kilometres north of the Cassini-Redross Project area). The associated ant (*Camponotus terebrans*) on which the Arid Bronze Azure Butterfly depends, is sporadically distributed across southern Australia, from Shark Bay (WA) to Newcastle (NSW) (Harewood, 2019). Available information suggests floristically diverse habitats are needed to sustain high densities of the host ant (Harewood, 2019). Based on the findings of the field survey and the literature review, Harewood (2019) concluded it is unlikely that the Arid Bronze Azure Butterfly would occur within the proposed clearing area.

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

Methodology Botanica (2019)
DBCA (2019)
Harewood (2019)

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, 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). Flora surveys of the application area did not record any species of Threatened flora (Botanica, 2019).

The vegetation associations within the application area are common and widespread within the region (Botanica, 2019; 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 Botanica (2019)

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 (Botanica, 2019).

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

Methodology Botanica (2019)

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 Coolgardie Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 97% of the pre-European vegetation still exists in the IBRA Coolgardie Bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation associations 522: Medium woodland; redwood (*Eucalyptus transcontinentalis*) and merrit (*Eucalyptus floctoniae*); and 936: Medium woodland; salmon gum (GIS Database). Approximately 96 to 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 – Coolgardie	12,912,204	12,648,491	~97	Least Concern	16
Beard vegetation associations – WA					
522	709,714	709,228	~99	Least Concern	5
936	698,752	676,689	~96	Least Concern	4
Beard vegetation associations – Coolgardie Bioregion					
522	688,406	687,920	~99	Least Concern	5
936	586,792	584,336	~99	Least Concern	3

* 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 watercourses or wetlands within the area proposed to clear (Botanica, 2019; GIS Database). The application area contains one vegetation association growing in association with a salt lake: closed depression: chenopod shrublands, samphire shrublands and forbland (Botanica, 2019).

Based on the above, the proposed clearing is at variance to this Principle. However, the proposed clearing of one hectare of this vegetation association is unlikely to have a significant impact due to the occurrence of the vegetation association in the wider area (GIS Database).

Methodology Botanica (2019)

GIS Database:
- Hydrography, Lakes
- Hydrography, linear
- Imagery

(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 Doney, Johnson and Lakeside land systems (DPIRD, 2019).

The Doney land system is described as gently inclined to level sheetwash plains, negligible drainage development with eucalypt woodlands adjacent to salt lake systems. This land system is not generally susceptible to soil erosion (DPIRD, 2019).

The Johnson land system consists of gently undulating plains with occasional granitic rises supporting eucalypt woodlands and non-halophytic shrublands. The alluvial fans and drainage lines within this land system are mildly susceptible to water erosion (DPIRD, 2019).

The Lakeside land system is described as sandplains with occasional sand dunes and prominent claypans supporting mallee eucalypts with spinifex (DPIRD, 2019).

The proposed clearing of up to 90.2 hectares of native vegetation within a boundary of approximately 90.2 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 DPIRD (2019)

(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 Binaronca Nature Reserve which is located approximately 2 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 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 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 watercourses or wetlands within the area proposed to clear (GIS Database). The proposed clearing is unlikely to result in significant changes to surface water flows.

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 arid to semi-arid, generally with winter rainfall (CALM, 2002). The nearest weather station is Norseman, approximately 55 kilometres south of the application area, with an average rainfall of approximately 298 millimetres per year (BoM, 2019).

There are no water courses or waterbodies within the application area (GIS Database). 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 (2019)
CALM (2002)

GIS Database:
- Hydrography, linear

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

Comments

The clearing permit application was advertised on 19 August 2019 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 (WC1999/002) over the area under application (DPLH, 2019). 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 are no 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)

4. References

- BoM (2019) Bureau of Meteorology Website – Climate Data Online, Norseman Aero. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/> (Accessed 5 November 2019).
- Botanica Consulting (2019) Flora/Vegetation & Fauna Assessment - Cassini/ Redross Project. Report prepared for Mincor Resources NL by Botanica Consulting, October 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) Advice received in relation to Clearing Permit Application CPS 8636/1. Species and Communities Branch, Department of Biodiversity, Conservation and Attractions, Western Australia, September 2019.
- DEC (2010) A Biodiversity and Cultural Conservation Strategy for the Great Western Woodlands. Department of Environment and Conservation, Western Australia.
- DPIRD (2019) Advice received in relation to Clearing Permit Application CPS 8636/1. Deputy Commissioner of Soil and Land Conservation, Department of Primary Industries and Regional Development, Western Australia, September 2019.
- DPLH (2019) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <http://maps.daa.wa.gov.au/AHIS/> (Accessed 5 November 2019).
- 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.
- 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>
- Harewood, G. (2019) Arid Bronze Azure Butterfly Assessment – Clearing Permit Area – Cassini-Redross – Mincor Resources NL. Report prepared for Mincor Resources NL by Greg Harewood, October 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.

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.