



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 8008/3  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: BHP Billiton Nickel West Pty Ltd

### 1.3. Property details

Property: Mining Lease 36/87  
Mining Lease 36/102  
Mining Lease 36/103  
Mining Lease 36/131  
Mining Lease 36/439  
General Purpose Lease 36/50  
General Purpose Lease 36/51

Local Government Area: Shire of Leonora

Colloquial name: Camelot Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
502		Mechanical Removal	Mineral Production, Mineral Exploration, Mining Related Infrastructure and Associated Activities

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 5 December 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:

18: Low woodland; mulga (*Acacia aneura*); and  
39: Shrublands; mulga scrub (GIS Database).

A Level 2 flora and vegetation survey was conducted over the application area by Western Botanical during March, August and September 2017. The following vegetation associations were recorded within the application area (Western Botanical, 2018):

- WABS: Wanderrie Bank Grassy Shrubland
- SMS: Stony Mulga Shrubland
- PoUS: *Ptilotus obovatus* (upright form) Shrubland on outcropping carbonate soil
- SIMS: Stony Ironstone Mulga Shrubland
- SSS: Stony *Senna* sp. Shrubland
- MgS: *Maireana glomerifolia* Shrubland
- CSS: *Cratystylis subspinescens* low open Shrubland
- CP: Drainage Clay Pan
- GRMU: Mulga Grove Shrubland
- HPMS: Hardpan Mulga Shrubland
- SAES: Scattered *Acacia eremophila* Shrubland
- DRMS: Open Drainage Mulga Shrubland

**Clearing Description** Camelot Project.  
BHP Billiton Nickel West Pty Ltd (hereafter referred to as BHP Nickel West) proposes to clear up to 502 hectares of native vegetation within a boundary of approximately 1,802.26 hectares, for the purpose of mineral production, mineral exploration, mining related infrastructure and associated activities. The project is located approximately 25 kilometres north of Leinster, within the Shire of Leonora.

**Vegetation Condition** Pristine: No obvious signs of disturbance (Keighery, 1994).

To

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

**Comment**

Western Botanical's field survey 'study area' encompassed the entire clearing permit application area, plus an additional ~210 hectares at the northern end of the application area. The Level 2 flora and vegetation field survey program was divided into three phases. Phase 1 was scheduled to be undertaken between 21 and 23 March 2017. However, due to a 1 in 100 year rainfall event, the field survey was interrupted and deferred to between 6 and 12 April 2017. Phase 2 of the field survey program was completed between 10 and 16 August 2017. Phase 3 was conducted on the 17 September 2017.

Clearing permit CPS 8008/1 was granted by the Department of Mines, Industry Regulation and Safety on 19 April 2018 and was valid from 12 May 2018 to 12 May 2023. The permit authorised the clearing of up to 315 hectares of native vegetation, within a boundary of approximately 1,778.2 hectares, for the purpose of mineral production.

Clearing permit CPS 8008/1 was amended on 28 February 2019 for the purpose of increasing the amount of approved clearing from 315 hectares to 458 hectares, and to amend the purpose from 'mineral production' to 'mineral production, mineral exploration, mining related infrastructure and associated activities'.

On 20 September 2019, the Permit Holder applied to amend CPS 8008/2 for the purpose of increasing the amount of approved clearing, increasing the permit boundary and including additional tenure.

### 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 amended clearing permit area is located within the East Murchison subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Murchison Bioregion (GIS Database). The East Murchison subregion is characterised by internal drainage and elevated red desert sandplains, dominated by Mulga Woodland with hummock grasslands and saltbush or *Halosarcia* (now known as *Tecticornia*) shrublands (CALM, 2002).

The vegetation present within the application area was considered to range from 'Pristine' to 'Completely Degraded'. The majority of the vegetation was in pristine condition, with the completely degraded vegetation attributed to a small area of the application area that has undergone clearing for a drilling program (Western Botanical, 2018).

No Threatened Flora or Threatened Ecological Communities (TECs) were recorded within 10 kilometres of the amendment area (Western Botanical, 2018; GIS Database). No flora and vegetation relating to Priority Ecological Communities (PECs) were present within the amendment area (Western Botanical, 2018; GIS Database). The northern section of application area is within the buffer of the Priority 1 (P1) Lake Miranda East Calcrete PEC, however, the amendment area is not located within the Melaleuca land system that is associated with this PEC (Western Botanical, 2018; GIS Database). The Lake Miranda East Calcrete PEC is described as a unique assemblage of invertebrates in the groundwater calcretes, and therefore is unlikely to be impacted by the proposed clearing (DBCA, 2017).

The Violet Range (Perseverance Greenstone Belt) vegetation complexes (banded ironstone formation, BIF) Priority 1 PEC is present approximately 5 kilometres north of the application area (Western Botanical, 2018; GIS Database). The field survey identified that the Stony Ironstone Mulga Shrublands (SIMS) vegetation community shows similarities to the Violet Range PEC. However, only a small section of the SIMS is present within the application area (<1.52%) and therefore, is unlikely to be significantly impacted by the proposed clearing (Western Botanical, 2018).

The desktop study identified 252 known flora species occurring within a 20 kilometre radius of the application area. Seven of these species are listed as Priority Flora, including four Priority 3 species and three Priority 4 species (Western Botanical, 2018).

The field survey recorded 260 endemic flora species from 113 genera and 41 families within 12 vegetation associations. The majority of these species are widespread and well represented in the Murchison bioregion and East Murchison subregion (Western Botanical, 2018). The field survey recorded three Priority Flora species within the application area, however none of these are present within the additional amendment area.

Six introduced weeds were identified during the survey: Buffel Grass (*Cenchrus ciliaris*), Ruby Dock (*Rumex vesicarius*), Afghan Melon (*Citrullus lanatus*), Prickly Paddy Melon (*Cucumis myriocarpus*), Black Berry Nightshade (*Solanum nigrum*) and Caltrop (*Tribulu terrestris*). Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by maintaining the weed management condition.

The vegetation of the application area is common regionally and is not expected to comprise a higher level of diversity than adjacent areas.

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

**Methodology** CALM (2002)  
DBCA (2017)  
Western Botanical (2018)

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**

No targeted fauna surveys have been undertaken within the amendment area. However, no habitats that are known to provide critical habitat to the maintenance of fauna species were identified during previous flora and vegetation surveys (Western Botanical, 2018). Based on the previous flora and vegetation survey and imagery of the application area, there are no significant habitat features such as caves, waterholes, significant creek lines or coastal dunes (Western Botanical, 2018; GIS Database).

The grove Mulga woodlands of the Grove Mulga on Hardpan Plains (GRMU) vegetation association was noted as being the most likely to support and provide refuge to fauna species as it has the ability to retain moisture during the dry periods of the year (Western Botanical, 2018). The GRMU vegetation association is found within the Violet and Jundee land systems that are widespread throughout the region, and therefore the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any indigenous fauna (GIS Database).

According to available databases, four conservation significant species have the potential to occur within the application area (Western Australian Herbarium, 1998-). These include;

- Chuditch (*Dasyurus geoffroi*) (Vulnerable);
- Malleefowl (*Leipoa ocellata*) (Vulnerable);
- Night Parrot (*Pezoporus occidentalis*) (Critical); and
- Princess Parrot (*Polytelis alexandrae*) (Priority 4).

However, the above species have not been previously reported in a 20 kilometre radius of the application area (Western Australian Herbarium, 1998-). The application area may provide habitat for a variety of fauna species but the fauna habitat types are likely to be represented outside the application area. No conservation significant fauna have previously been recorded within the application area (GIS Database) and while the application area may provide foraging habitat for some conservation significant species it is unlikely to provide core habitat for any species (Western Botanical, 2018).

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

**Methodology** Western Australian Herbarium (1998-)  
Western Botanical (2018)

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 amended application area (GIS Database). Flora surveys of the amendment area did not record any species of Threatened flora (Western Botanical, 2018).

The vegetation associations within the amendment area are common and widespread within the region (Western Botanical, 2018; 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** Western Botanical (2018)

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 amended application area (GIS Database).

A flora and vegetation survey of the amendment area did not identify any TECs (Western Botanical, 2018).

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

**Methodology** Western Botanical (2018)

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 amendment area falls within the Murchison Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99.7% 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 18: Low woodland; mulga (*Acacia aneura*); and 39: Shrublands; mulga 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 (see table) (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	~99.7	Least Concern	7.79
Beard vegetation associations – WA					
18	19,892,306	19,843,148	~99.7	Least Concern	6.64
39	6,613,567	6,602,578	~99.8	Least Concern	12.04
Beard vegetation associations – Murchison Bioregion					
18	12,403,172	12,363,252	~99.7	Least Concern	4.97
39	1,148,400	1,138,065	~99.1	Least Concern	3.59

\* 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 amendment area (GIS Database). Several seasonal creek line pass through the amendment area (GIS Database). Creek lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall.

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

**Methodology** 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 majority of the amended application area lies within the Nubev, Jundee and Violet land systems; and to a lesser extent, the Desdemona, Laverton and Sherwood land systems (Western Botanical, 2018; 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 Nubev land system is described as gently undulating stony plains, minor limonitic low rises and drainage floors, supporting mulga and halophytic shrublands. Drainage zones are moderately susceptible to soil erosion, particularly where perennial shrub cover is substantially reduced. Disturbance of the protective stone mantle on saline stony plains is also likely to initiate water erosion (Pringle et al., 1994).
- The Jundee land system is described as hardpan plains with ironstone gravel mantles, supporting mulga shrub lands. The gravel mantles provide effective protection against soil erosion (Pringle et al., 1994).
- The Violet land system is described as undulating stony and gravelly plains and low rises, supporting mulga shrublands. This land system is generally not susceptible to erosion. However, removal of the stony mantles can make soils moderately susceptible to water erosion (Pringle et al., 1994).
- The Desdemona land system is described as extensive plains with deep sandy or loamy soils, supporting mulga and wanderrie grasses. This land system is generally not susceptible to soil erosion (Pringle et al., 1994).
- The Laverton land system is described as greenstone hills and ridges supporting acacia shrublands. The stone mantles protect most of this land system against soil erosion except for the narrow drainage tracts, which are mildly susceptible to water erosion (Pringle et al., 1994).
- The Sherwood Land System is described as granite breakaways and extensive stony granitic plains, with mulga shrublands and minor halophytic shrublands. The foot slopes and drainage tracts have fragile soils that are highly susceptible to water erosion (Pringle et al., 1994).

Given several of these land systems are susceptible to erosion, the proposed clearing has the potential to cause localised erosion. The potential impacts from erosion on the above land systems as a result of the proposed clearing of 502 hectares may be minimised by maintaining the staged clearing condition.

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

**Methodology** Pringle et al. (1994)  
Western Botanical (2018)  
  
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 Wanjarri Nature Reserve which is located approximately 25 kilometres north 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 amendment 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 264.5 millimetres per year (BoM, 2019). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (BoM, 2019).

There are no permanent water courses or waterbodies within the amendment 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 (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 7 October 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 over the area under application (DPLH, 2019). This claim (WC2011/007) has been registered with the National Native Title Tribunal 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, 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, Leinster Aero. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/> (Accessed 25 November 2019).
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DBCA (2017) Priority Ecological Communities for Western Australia Version 27. Current as of June 2017. WA Department of Biodiversity, Conservation and Attractions. [https://www.dpaw.wa.gov.au/images/documents/plants-animals/threatened-species/Listings/priority\\_ecological\\_communities\\_list.pdf](https://www.dpaw.wa.gov.au/images/documents/plants-animals/threatened-species/Listings/priority_ecological_communities_list.pdf) (Accessed 25 November 2019).
- DPLH (2019) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <http://maps.daa.wa.gov.au/AHIS/> (Accessed 25 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>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Pringle, H.J.R., Van Vreeswyk, A.M.E., Gillian, S.A. (1994) An Inventory and Condition Survey of Rangelands in the north-eastern Goldfields, Western Australia. Department of Agriculture, Western Australia.
- Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <https://florabase.dpaw.wa.gov.au/> (Accessed 25 November 2019).
- Western Botanical (2018) Level 2 Flora and Vegetation Assessment of the Camelot Proposal Study Area. Report Prepared by Western Botanical for BHP Billiton Nickel West Pty Ltd, January 2018.

## 5. Glossary

### Acronyms:

<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>DBCA</b>	Department of Biodiversity, Conservation and Attractions, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia (now DBCA and DWER)
<b>DoEE</b>	Department of the Environment and Energy, Australian Government
<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>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
<b>DoE</b>	Department of the Environment, Australian Government (now DoEE)
<b>DoW</b>	Department of Water, Western Australia (now DWER)
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia (now DBCA)
<b>DSEWPaC</b>	Department of Sustainability, Environment, Water, Population and Communities (now DoEE)
<b>DWER</b>	Department of Water and Environmental Regulation, Western Australia
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
<b>TEC</b>	Threatened Ecological Community

### Definitions:

{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.