Government of Western Australia
Department of Mines, Industry Regulation and Safety

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 9473/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **DBNGP (WA) Nominees Pty Ltd**

1.3. Property details

Property: Petroleum Pipeline Licence PL40
Local Government Area: Shire of Ashburton
Colloquial name: CS2 Backflow Interconnect Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
49.11		Mechanical Removal	Pipeline Operation and Maintenance

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 13 January 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:
158: Hummock grasslands, shrub steppe; kanji over *Triodia basedowii*;
608: Mosaic: Shrublands; *Acacia victoriae* & snakewood scrub patches / Short bunch grassland - savanna /grass plain (Pilbara); and
646: Hummock grasslands, shrub steppe; snakewood over *Triodia basedowii* (GIS Database).

A reconnaissance flora and vegetation survey was conducted over the application area by Focused Vision Consulting during May 2021. The following vegetation associations were recorded within the application area (Focused Vision, 2021):

- AtTeTo: *Acacia trachycarpa* and *Grevillea stenobotrya* Tall Open Shrubland over *Triodia epactia* Open Hummock Grassland over *Tribulus occidentalis* Low Open Forbland;
- AvTlCc: *Acacia victoriae*, *A. trachycarpa* and *A. inaequilatera* Open Shrubland over *Triodia lanigera* and *T. glabra* over **Cenchrus ciliaris* Open Tussock Grassland;
- AxCcDr: *Acacia xiphophylla*, *A. victoriae* and *A. tetragonophylla* Open Shrubland over **Cenchrus ciliaris* Sparse Tussock Grassland over *Dactyloctenium radulans* and *Boerhavia coccinea* Isolated Forbland;
- AxEcTg: *Acacia xiphophylla* and *A. victoriae* Shrubland over *Eremophila cuneifolia* and *Senna glutinosa* Low Open Shrubland over *Triodia glabra* Sparse Hummock Grassland;
- CzAaTl: *Corymbia zygophylla* Low Woodland over *Acacia ancistrocarpa*, *Acacia inaequilatera* and *Hakea lorea* Sparse Shrubland over *Triodia lanigera* and *Triodia glabra* Hummock Grassland;
- EvAcCc: *Eucalyptus victrix* Low Open Woodland over *Acacia citrinoviridis*, *A. sclerosperma* subsp. *sclerosperma* and *Acacia victoriae* Tall Open Shrubland over **Cenchrus ciliaris*, *Chloris barbata* and **C. setiger* Tussock Grassland;
- EvTgTt: *Eucalyptus victrix*, *Acacia citrinoviridis* and *Acacia xiphophylla* Low Woodland over *Triodia glabra* Sparse Hummock Grassland over *Themeda triandra* and **Cenchrus ciliaris* Low Sparse Tussock Grassland; and
- VfCcAn: **Vachellia farnesiana* and *Sesbania cannabina* Tall Shrubland over **Cenchrus setiger* Open Tussock Grassland over *Alternanthera nodiflora* and *Malvastrum americanum* Sparse Forbland.
  (* Denotes weed species)

Clearing Description

CS2 Backflow Interconnect Project.
DBNGP (WA) Nominees Pty Ltd proposes to clear up to 49.11 hectares of native vegetation within a boundary of approximately 49.11 hectares, for the purposes of pipeline operation and maintenance. The project is located approximately 132 kilometres east, south-east of Exmouth, within the Shire of Ashburton.

Vegetation Condition

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

To

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

Comment

The vegetation condition was derived from a vegetation survey conducted by Focused Vision (2021).

The proposed clearing is to allow for the construction of a backflow interconnect pipeline, a 16.5 kilometre buried natural gas pipeline. The proposed alignment will be directly adjacent to the existing Dampier to Bunbury Natural Gas Pipeline (DBNGP) and will form part of the expanded DBNGP pipeline system. The pipeline will be constructed within the existing DBNGP corridor.

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 Hamersley subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Pilbara Bioregion (GIS Database). This subregion is characterised by mountainous area of Proterozoic ranges and plateaux with Mulga (*Acacia aneura*) low woodland over bunch grasses on fine textured soils, and Snappy Gum low trees over *Triodia brizoides* hummock grasslands on the skeletal sandy soils of the ranges (CALM, 2002).

A flora, vegetation and fauna habitat survey was conducted by Focused Vision Consulting during May 2021. A total of 100 flora species, from 62 genera and 23 families were recorded during the field assessment. The dominant families were Fabaceae (25 taxa), Poaceae (16 taxa), and Amaranthaceae (eight taxa). The dominant genera comprised *Acacia* (13 taxa), *Ptilotus* (five taxa), and *Senna* (four taxa). The total comprises of 91 native species and nine introduced (weed) species. Compared to other surveys within the Pilbara, the average number of species found at each site indicates that the application area has a relatively low species diversity.

No Threatened flora, Priority flora, Threatened Ecological Communities or Priority Ecological Communities have been recorded within the application area (GIS Database), and none were found during the flora and vegetation survey (Focused Vision, 2021).

Nine introduced flora species have been identified within the application area (Focused Vision, 2021). Weeds have the potential to out-compete native species and reduce the biodiversity of an area, and care should be taken to prevent the introduction and spread of weeds to the application area and surrounding areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Five broad fauna habitats have been recorded within the application area. These habitat types are common and widespread in the local and regional area (Focused Vision, 2021).

The vegetation associations, fauna habitats and landform types present within the application area, are well represented in surrounding areas (Focused Vision, 2021; 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)
Focused Vision (2021)

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

A terrestrial vertebrate fauna field assessment was conducted during May 2021. The following five broad fauna habitats have been recorded within the application area (Focused Vision, 2021):

- Drainage
- River (ephemeral)
- Mixed *Acacia* over Spinifex Grassland
- Calcrete Rise
- Degraded/disturbed

The condition of the fauna habitats range from ‘Excellent’ to ‘Degraded’ condition, where the degraded areas have been impacted upon by previous clearing, pastoral use, weed invasion and recent fire (within the last few

years) (Focused Vision, 2021). The most widespread habitat in the study area is the 'Mixed Acacia over Spinifex Grassland', which is also widespread throughout the region (Focused Vision, 2021). Despite recent rainfall over the two months preceding the field survey, the 'River' and the 'Drainage Area' habitats remained dry, since upstream rainfall was inadequate to result in surface flows (Focused Vision, 2021). The remaining habitat types, 'Calcrete Rise' and the 'Degraded/Disturbed' areas provide limited shelter, with minimal vegetative cover for fauna species.

A total of 13 conservation significant fauna species have the potential to occur within the study area. These species are:

- *Pezoporus occidentalis* (Night Parrot) – Critically Endangered;
- *Dasyurus hallucatus* (Northern Quoll) – Endangered;
- *Falco hypoleucos* (Grey Falcon) – Vulnerable;
- *Liasis olivaceus barroni* (Pilbara Olive Python) – Vulnerable;
- *Macroderma gigas* (Ghost Bat) – Vulnerable;
- *Rhinonicteris aurantia* (Pilbara Leaf-nosed Bat) – Vulnerable;
- *Falco peregrinus* (Peregrine Falcon) – Specially Protected;
- *Hirundo rustica* (Barn Swallow) – Migratory;
- *Pandion cristatus* (Osprey) – Migratory;
- *Lerista planiventralis maryani* (Maryan's Keeled Slider (Ashburton)) – Priority 1;
- *Dasycercus blythi* (Brush-tailed Mulgara) – Priority 4;
- *Leggadina lakedownensis* (Northern Short-tailed Mouse) – Priority 4; and
- *Pseudomys chapmani* (Western Pebble-mound Mouse) – Priority 4.

Of the above species, only one was considered likely to utilise the application area, this being the Northern Short-tailed Mouse (*Leggadina lakedownensis*). The Northern Short-tailed Mouse has been recorded within seven kilometres of the application area (Focused Vision, 2021). However, due to the linear nature of the proposed clearing, mobile nature of the Short-tailed Mouse, and better quality habitat outside of the application area, it is considered unlikely to have a significant impact their habitat.

A targeted night parrot (*Pezoporus occidentalis*) search was undertaken, with the application area being traversed on foot and by vehicle to search for areas of suitable habitat (Focused Vision, 2021). Based on observations made and the habitat types described and mapped, the application area is considered unsuitable for this species. There is a lack large, long-unburnt spinifex hummocks, which is the species preferred roosting and nesting habitat (Focused Vision, 2021).

Whilst the proposed clearing may potentially impact habitat for conservation significant fauna, the disturbance in each habitat is relatively minor as it will be in a narrow corridor over a large distance. Given the nature of the disturbance and the representation of the habitats outside the application area, the proposed clearing is not likely to significantly impact native fauna species or their habitats.

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

Methodology Focused Vision (2021)

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). The flora survey of the application area did not record any species of Threatened flora (Focused Vision, 2021).

The vegetation associations within the application area are common and widespread within the region (Focused Vision, 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 Focused Vision (2021)

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 (Focused Vision, 2021).

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

Methodology

Focused Vision (2021)

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 Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99% of the pre-European vegetation still exists in the IBRA Pilbara Bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation associations 158: Hummock grasslands, shrub steppe; kanji over *Triodia basedowii*; 608: Mosaic: Shrublands; *Acacia victoriae* & snakewood scrub patches / Short bunch grassland - savanna /grass plain (Pilbara); and 646: Hummock grasslands, shrub steppe; snakewood over *Triodia basedowii* (GIS Database). Approximately 100% 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 – Pilbara	17,808,657	17,731,765	~99	Least Concern	10.12
Beard vegetation associations – WA					
158	331,211	331,211	~100	Least Concern	51.13
608	313,611	313,611	~100	Least Concern	0.65
646	47,556	47,556	~100	Least Concern	26.88
Beard vegetation associations – Pilbara Bioregion					
158	34,360	34,360	~100	Least Concern	76.25
608	775	775	~100	Least Concern	NA
646	47,547	47,547	~100	Least Concern	26.89

* 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 (Focused Vision, 2021; GIS Database). Several seasonal creek line passes 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 (Focused Vision, 2021).

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

Methodology

Focused Vision (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 Boolaloo, Capricorn, Globe, Uaroo, and Yankagee 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 Boolaloo land system is described as granite hills, domes and tor fields and sandy plains with shrubby spinifex grasslands. This land system is not generally susceptible to erosion (Payne et al., 1988).

The Capricorn land system is described as hills and ridges of sandstone and dolomite supporting low shrublands or shrubby spinifex grasslands. This land system may be susceptible to erosion if vegetation cover is removed (Payne et al., 1988).

The Globe land system consists of 'Degraded alluvial plains supporting snakewood shrublands and minor tussock grasslands. This land system is not generally susceptible to erosion (Payne et al., 1988).

The Uaroo land system is described as Broad sandy plains supporting shrubby hard and soft spinifex grasslands. This land system may be susceptible to erosion if vegetation cover is removed (Payne et al., 1988).

The Yankagee land system is described as Plains with dunes and numerous claypans, soft spinifex and snakewood shrublands; in the west of the area. This land system may be susceptible to erosion if vegetation cover is removed (Payne et al., 1988).

Whilst some of the land systems mapped within the application area have erosion susceptibility, it is noted that the proposed clearing is narrow and linear, and therefore not concentrated in a particular location. The proposed clearing for the purpose of pipeline operation and maintenance is considered unlikely to cause appreciable land degradation. As a precaution, potential erosion risks may be minimised by the implementation of a staged clearing condition.

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

Methodology

Payne et al. (1988)

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

The northern half of the application area is located within an excised section of the DBCA managed former Nanutarra Pastoral Lease which is located either side of the application area (GIS Database). As the proposed clearing is for pipeline operation and maintenance within a previously cleared pipeline corridor, it is considered 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 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 arid, with a low average rainfall of approximately 250 millimetres per year (BoM, 2021). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (Focused Vision, 2021).

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 (2021)
Focused Vision (2021)

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 12 November 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 (WC1999/045) 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 are several registered Aboriginal Sites 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 should be noted that the application area has been previously cleared during construction of the DBNGP pipeline and more recently as part of the looping expansion project which was subject to an approval under Part IV of the *Environmental Protection Act 1986*. Additionally, sections within the pipeline corridor have been routinely cleared since construction as part of normal maintenance activities and these areas are not likely to have high biological diversity.

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 (2021) Bureau of Meteorology Website – Climate Data Online, Exmouth. Bureau of Meteorology. http://www.bom.gov.au/climate/data/ (Accessed 20 December 2021).

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

DPLH (2022) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS (Accessed 10 January 2022).

Focused Vision (2021) Flora, Vegetation and Fauna Assessment, Nanutarra Pipeline Corridor – Australian Gas Infrastructure Group (AGIG). Unpublished report prepared for AGIG and Jacobs Group (Australia) Pty Ltd, by Focused Vision Consulting Pty Ltd, August 2021.

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.

Payne, A.L., Mitchell, A.A. and Holman, W.F. (1988) An Inventory and Condition Survey of Rangelands in the Ashburton River Catchment, Western Australia. Department of Agriculture, Western Australia.

5. Glossary

Acronyms:

BC Act	*Biodiversity Conservation Act 2016,* Western Australia
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)
DAWE	Department of Agriculture, Water and the Environment, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
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)
DoEE	Department of the Environment and Energy (now DAWE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	*Environmental Protection Act 1986*, Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (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	*Rights in Water and Irrigation Act 1914*, 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.