Government of **Western Australia**
Department of **Mines and Petroleum**

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7525/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **BHP Billiton Iron Ore Pty Ltd**

1.3. Property details

Property: *Iron Ore (Mount Newman) Agreement Act 1964*, Mineral Lease 244SA (AML 70/244)
Local Government Area: Shire of East Pilbara
Colloquial name: Eastern Ridge to Whaleback Infrastructure Corridor

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
15		Mechanical Removal	Mining related infrastructure

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 18 May 2017

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
82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana* (GIS Database).

Numerous flora and vegetation surveys have been conducted over BHP Billiton land tenure over many years (including over the current application area), and results from the various survey reports have been reviewed and consolidated by Onshore Environmental (2014). The consolidated survey report identified the following four broad floristic communities and seven vegetation associations within the application area (BHP Billiton, 2017):

***Cenchrus* Tussock Grassland**
MA CcCs: Tussock Grassland **Cenchrus ciliaris* and **Cenchrus setiger* with Low Woodland of *Eucalyptus victrix*, *Acacia citrinoviridis* and *Atalaya hemiglauca* on brown sandy loam on major drainage lines and adjacent flood plains;

MA CcTtEa ChCa AbAtpAsc: Tussock Grassland of **Cenchrus ciliaris*, *Themeda triandra* and *Eulalia aurea* with Low Open Woodland of *Corymbia hamersleyana* and *Corymbia aspera* over High Open Shrubland of *Acacia bivenosa*, *Acacia tumida* var. *pilbarensis* and *Acacia sclerosperma* subsp. *sclerosperma* on brown loamy sand on levee banks of major drainage lines;

***Corymbia* Low Open Woodland**
MI CcAa CcCs Tb: Low Open Woodland of *Corymbia candida* subsp. *dipsodes* and *Acacia aptaneura* over Open Tussock Grassland of **Cenchrus ciliaris* and **Cenchrus setiger* and Very Open Hummock Grassland of *Triodia basedowii* on red brown loam on floodplains and minor drainage lines;

***Triodia* Hummock Grassland**
FP Tb AaApr Eff: Hummock Grassland of *Triodia basedowii* with Low Open Woodland of *Acacia aptaneura* and *Acacia pruinocarpa* over Open Shrubland of *Eremophila forrestii* subsp. *forrestii* on red sandy loam on floodplains;

HC TwTbrTp ElCh AmaGwAb: Hummock Grassland of *Triodia wiseana*, *Triodia brizoides* and *Triodia pungens* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* over High Open Shrubland of *Acacia maitlandii*, *Grevilllea wickhamii* subsp. *hispidula* and *Acacia bivenosa* on red brown sandy loam on hill crests and upper hill slopes;

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HS TsTwTp ElCh AhiAad: Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835), *Triodia wiseana* and *Triodia pungens* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* over Low Open Shrubland of *Acacia hilliana* and *Acacia adoxa* var. *adoxa* on red brown sandy loam on hill slopes;

***Triodia* Open Hummock Grassland**
SA Tl AanApa ApaAprCh: Open Hummock Grassland of *Triodia lanigera* with Open Shrubland of *Acacia ancistrocarpa* and *Acacia pachyacra* and Scattered Low Trees of *Acacia paraneura*, *Acacia pruinocapra* and *Corymbia hamerselyana* on red sandy loam on stony plains.

* Denotes a weed species

Clearing Description

Eastern Ridge to Whaleback Infrastructure Corridor project.
BHP Billiton Iron Ore Pty Ltd (BHP Billiton) proposes to clear up to 15 hectares of native vegetation within a boundary of approximately 180 hectares, for the purpose of mining related infrastructure. The project is located approximately two kilometres north of Newman, within the Shire of East Pilbara.

Vegetation Condition

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (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 review conducted by Onshore Environmental (2014).

The proposed clearing is for construction and maintenance of various mining related infrastructure, including: water and gas pipelines, powerlines, telecommunications, roads, and an existing Ammonium Nitrate Storage Facility.

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 Hamersley subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Pilbara Bioregion (GIS Database).

The application area is located in close proximity to the Newman townsite and large scale mining operations and has suffered some previous disturbance from existing roads and mining related infrastructure (BHP Billiton, 2017; GIS Database).

A review of flora and vegetation surveys which included the application area, was conducted by Onshore Environmental (2014). Onshore Environmental (2014) described the vegetation condition within the application area as Excellent to Completely Degraded on the Keighery scale. No flora species or ecological communities of conservation significance are known to occur within the application area (BHP Billiton, 2017).

Eleven weed species have been recorded within the application area (BHP Billiton, 2017). Weeds have the potential to out-compete native flora and reduce the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The landforms, vegetation associations and fauna habitat types found within the application area are well represented within the region (BHP Billiton, 2017; Onshore Environmental, 2014; GIS Database). The application area is unlikely to represent an area of higher biodiversity than surrounding areas, in either a local or regional context.

The proposed clearing of up to 15 hectares for mining related infrastructure, is unlikely to have any significant impact on the biological diversity of the region.

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

Methodology

BHP Billiton (2017)
Onshore Environmental (2014)

GIS Database:
- Threatened and Priority Flora
- Pre-European Vegetation
- Threatened Ecological Sites Buffered
- Threatened Fauna

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments

Proposal is not likely to be at variance to this Principle

The application area is located in close proximity to the Newman townsite, the Mount Whaleback minesite, and is bounded on the eastern side by the Great Northern Highway (GIS Database). The application area includes some areas of existing disturbance for mining related infrastructure and access roads (BHP Billiton, 2017; GIS Database).

The following five fauna habitats have been recorded within the application area (BHP Billiton, 2017):

1. **Crest / Slope:** These fauna habitats tend to be more open and structurally simple due to their recent depositional history than other fauna habitats, and are dominated by varying species of spinifex. A common feature of these habitats is a rocky substrate, often with exposed bedrock, and skeletal red soils. These are usually dominated by *Eucalyptus* woodlands, *Acacia* and *Grevillea* scrublands and *Triodia* spp. low hummock grasslands.

2. **Drainage Area:** Characterised by *Eucalyptus xerothermica* and *Corymbia hamersleyana* woodland over broad-leafed *Acacia* shrubland on sandy loam soils sometimes with exposed rocky areas. These can have high vegetation density, complexity and diversity, and because they tend to occur on accretional or depositional areas, often have deeper and richer soils than other fauna habitats. Grasses tend to be dominated by tussock grasses rather than spinifex, or the weed Buffel Grass.

3. **Major Drainage Line:** Major Drainage Lines comprise mature River Red Gums, Coolibahs and stands of Silver Cadjeput over river pools. Open, sandy or gravelly riverbeds characterise this habitat type. In ungrazed areas, the vegetation adjacent to the main channel or channels is denser, taller and more diverse than adjacent terrain and can include reed beds around pools.

4. **Mulga:** This habitat includes woodlands and other ecosystems in which Mulga is dominant, either as the principal *Acacia* species or mixed with others. It consists of disintegrating groves on stony soils with spinifex. This habitat type is grouped with other habitat occurring on the plains; however it is noted that small groves of Mulga occur on ridgelines.

5. **Sand Plain:** Sand Plain habitat is characterised by relatively deep sandy soils supporting dense spinifex grasslands and sparse shrubs. Contains patches of pebbles and the sandy soil is hard and compact in some places.

The fauna habitats found within the application area are widespread in the Pilbara region and substantial areas of better quality fauna habitat exist outside of the application area (BHP Billiton, 2017; GIS Database).

One fauna species of conservation significance, the Rainbow Bee-Eater (*Merops ornatus*) has been recorded within the application area (BHP Billiton, 2017). This migratory bird species is wide-ranging and relatively common within the Pilbara region. Although this species may forage within the application area, there is extensive suitable habitat outside of the application area (BHP Billiton, 2017; GIS Database), and the proposed clearing is unlikely to have any significant impact on the available habitat for this species.

The proposed clearing is unlikely to have any significant impact on fauna habitat at either a local or regional level. However, an existing clearing permit (CPS 3373/3) overlaps the southern portion of the application area for CPS 7525/1. CPS 3373/3 authorises clearing for similar purposes to the current application and includes a permit condition prohibiting clearing within a small area which was considered to provide higher habitat value for fauna. To ensure consistency between the two overlapping permits, a similar condition has been applied to this permit over the same area.

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

Methodology BHP Billiton (2017)

GIS Database:
Imagery
- Pre-European Vegetation

(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, Priority flora or other flora species of conservation significance (BHP Billiton, 2017).

The vegetation associations within the application area are common and widespread within the region (BHP Billiton, 2017; 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 BHP Billiton (2017)

GIS Database:
- Threatened and Priority Flora
- Pre-European Vegetation

(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

The application area is partly within the buffer zone of the Ethel Gorge aquifer stygobiont community (GIS Database). This Threatened Ecological Community (TEC) is located approximately four kilometres southeast of the proposed clearing, at its nearest point (GIS Database). Groundwater drawdown is listed as a threatening process for the Ethel Gorge stygofauna (CALM, 2002), however the proposed clearing is not expected to have any effect on groundwater levels or on the TEC.

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

Methodology

CALM (2002)

GIS Database:
- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffered

(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, 2016). The majority of the application area is broadly mapped as Beard vegetation association 82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*; with a small section at the south-eastern corner mapped as Beard vegetation association 18: Low woodland; mulga (*Acacia aneura*) (GIS Database). Approximately 99% of the pre-European extent of each of these vegetation associations remains uncleared at both the state and bioregional level (Government of Western Australia, 2016).

Although large scale mining operations are located in close proximity to the application area, the region in which the clearing is proposed to occur has not undergone broad scale clearing. 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 DPaW managed lands
IBRA Bioregion – Pilbara	17,808,657	17,733,583	~99	Least Concern	10.1
Beard vegetation associations – WA					
18	19,892,304	19,843,727	~99	Least Concern	6.6
82	2,565,901	2,553,217	~99	Least Concern	11.5
Beard vegetation associations – Pilbara Bioregion					
18	676,556	672,424	~99	Least Concern	25.2
82	2,563,583	2,550,898	~99	Least Concern	11.5

* Government of Western Australia (2016)
** 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 (2016)

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 (GIS Database). There are several ephemeral creek lines passing through the application area, including the Whaleback Creek (GIS Database). Creek lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall (BHP Billiton, 2017).

Based on the above, the proposed clearing is at variance to this Principle. However, the proposed clearing is unlikely to have any significant impact on vegetation growing in association with the Whaleback Creek or any other watercourse or wetland.

Methodology

BHP Billiton (2017)

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 Elimunna, McKay, Newman, and River 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 Agriculture and Food).

The Newman Land system consists of lower slopes, with stony soils and some red loamy earths; narrow drainage floors up to 400 metres in width with stony mantles on shallow red loam soils; and lower stony plains with stony soils, shallow loams or loamy earth soils. The Newman Land System soils are not particularly prone to soil erosion (Van Vreeswyk et al., 2004).

The McKay land system is described as hills, ridges, plateaux remnants and breakaways of meta sedimentary and sedimentary rocks supporting hard spinifex grasslands. This land system is not generally susceptible to erosion (Van Vreeswyk et al., 2004).

The Elimunna Land System consists of hills and low rises with stony soils on shallow red loams; groves land unit on red loamy earth soils; and drainage floors with self mulching cracking clay soils. The Elimunna Land System is also reasonably resistant to soil erosion, however soil disturbance or altered water flows may cause localised soil erosion (Van Vreeswyk et al., 2004).

The River land system is described as active flood plains and major rivers supporting grassy eucalypt woodlands, tussock grasslands and soft spinifex grasslands. Significant erosion is generally uncommon, however accelerated erosion may occur if vegetation cover is removed (Van Vreeswyk et al., 2004).

The proposed clearing of up to 15 hectares of native vegetation within a boundary of approximately 180 hectares, for the purpose of mining related infrastructure 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

BHP Billiton (2017)
Van Vreeswyk et al. (2004)

GIS Database:
- Landsystem Rangelands

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments

Proposal is not likely to be at variance to this Principle

There are no conservation areas in the vicinity of the application area. The nearest DPaW managed lands are the Collier National Park, approximately 120 kilometres south of the application area; and the Karijini National Park, approximately 120 kilometres northwest of the application area (GIS Database). The proposed clearing is unlikely to impact on the environmental values of any conservation area.

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

Methodology

GIS Database:
- DPaW Tenure

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments

Proposal is not likely to be at variance to this Principle

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, and the proposed clearing is unlikely to result in significant changes to surface water flows.

The application area is located within the Newman Water Reserve, a Priority 1 Public Drinking Water Source Area (PDWSA) (GIS Database). DoW (2017) has advised that the proposed activities are compatible with the conditions in a Priority 1 PDWSA, and that the proposed clearing is unlikely to have a significant impact on the quality or quantity of groundwater, provided activities are carried out in accordance with DoW guidelines.

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

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

Methodology

DoW (2017)

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 200-300 millimetres per year (Van Vreeswyk et al., 2004). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (BHP Billiton, 2017).

There are no permanent water courses or waterbodies within the application area (GIS Database). Several ephemeral creek lines pass through the application area, 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

BHP Billiton (2017)
Van Vreeswyk et al. (2004)

GIS Database:
- Hydrography, linear

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

The clearing permit application was advertised on 3 April 2017 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (WC2005/006) over the area under application (DAA 2017). This claim has been registered with the National Native Title Tribunal. 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 two registered Aboriginal Sites of Significance located within or in close proximity to the application area (DAA, 2017). 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.

The application area is also located within the Pilbara Groundwater Area as proclaimed in the *Rights in Water and Irrigation Act 1914*. Any groundwater abstraction within this proclaimed area will require a Groundwater Licence issued by the Department of Water (DoW, 2017).

It is the proponent's responsibility to liaise with the Department of Environment Regulation, the Department of Water, and the Department of Parks and Wildlife, 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

DAA (2017)
DoW (2017)

4. References

BHP Billiton (2017) Eastern Ridge to Whaleback Infrastructure NVCP. Native Vegetation Clearing Permit Application Supporting Document. BHP Billiton Iron Ore Pty Ltd, Western Australia, March 2017.

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

DAA (2017) Aboriginal Heritage Enquiry System. Department of Aboriginal Affairs. http://maps.dia.wa.gov.au/AHIS2/ (Accessed 8 May 2017).

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.

DoW (2017) Advice received in relation to Clearing Permit Application CPS 7525/1. Department of Water, Western Australia, April 2017.

Government of Western Australia (2016) 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2016. WA Department of Parks and Wildlife, Perth.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Onshore Environmental (2014) Consolidation of Regional Vegetation Mapping BHP Billiton Iron Ore Pilbara Tenure. Report prepared for BHP Billiton Iron Ore Pty Ltd by Onshore Environmental.

Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DPaW and DER)
DEE	Department of the Environment and Energy, Australian Government
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DoE	Department of the Environment, Australian Government (now DEE)
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
EPA	Environmental Protection Authority, Western Australia
EP Act	*Environmental Protection Act 1986*, 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:

{DPaW (2015) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T **Threatened species:**
Published as Specially Protected under the *Wildlife Conservation Act 1950,* listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened fauna is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the Wildlife Conservation Act.

Threatened flora is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the Wildlife Conservation Act.

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. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EN **Endangered species**
Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

VU **Vulnerable species**
Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EX **Presumed extinct species**
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.

IA **Migratory birds protected under an international agreement**
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 the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

CD **Conservation dependent fauna**
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.

OS **Other specially protected fauna**
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.

P **Priority species**
Species which are poorly known; or
Species that are adequately known, are rare but not threatened, and 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.