Government of Western Australia
Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4711/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

1.3. Property details

Property: Miscellaneous Licence 45/194
Local Government Area: Town of Prot Hedland
Colloquial name: Mooka Ore Car Repair Shop Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
550		Mechanical Removal	Railway Siding and Associated Infrastructure

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 9 February 2012

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

Beard vegetation associations have been mapped for the whole of Western Australia. Two Beard vegetation associations have been mapped within the application area (GIS Database; Shepherd, 2009):

93: Hummock grasslands, shrub stepe; kanji over soft spinifex; and

647: Hummock grasslands, dwarf-shrub steppe; *Acacia translucens* over soft spinifex.

A flora and vegetation survey of the central and southern section of the application area was conducted by Maia (2010) in August 2010. This survey identified the following three vegetation associations within the appliction area (Maia, 2010):

- Te.HG - *Triodia epactia* and *Triodia lanigera* hummock grassland with *Acacia inaequilatera* tall spare shrubland, *Acacia ancistrocarpa* and *Acacia stellaticeps* mid open shrubland +/- *Corymbia hamersleyana* isolated low trees on sandplains;

- Ts.HG - *Triodia secunda* hummock grassland on low lying seasonally inundated areas; and

- At.SL - High Shrubland of *Acacia tumida* var. *pilbarensis* and *Acacia colei* var. *colei* with a low open shrubland of *Hybanthus aurantiacus* with very open hummock grassland of *Triodia epactia* on flood plains and at the base of granite domes and tors.

A regional flora and vegetation survey of the Port Hedland area was conducted by ENV (2011) in February 2011. This survey covered a section in the north of the application area and identified the following two vegetation types within the applicaiton area (ENV, 2011):

- Sandplain N – Low open *Corymbia zygophylla* woodland over open *Acacia ancistrocarpa, Acacia inaequilatera, Acacia tumida* var. *pilbarensis* and *Acacia sericophylla* shrubland over *Acaica stellaticeps* low open shrubland over *Triodia epactia* and *Triodia lanigera* hummock grassland; and

- Sandplain Q – Scattered low *Corymbia flavescens* trees over an open *Acacia ancistrocarpa* and *Acacia bivenosa* shrubland over scattered low *Acacia stellaticeps* shrubs over a *Triodia epactia* and *Triodia lanigera* hummock grassland.

Clearing Description

BHP Billiton Iron Ore Pty Ltd is proposing to clear up to 550 hectares of native vegetation within a broader boundary of approximately 1,576 hectares for the purpose of constructing a railway siding and associated infrastructure.

Clearing will be conducted using mechanical means.

Vegetation Condition

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994);

To

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

Comment

The application area is located within the Pilbara region of Western Australia and is situated approximately 17 kilometres south of Port Hedland.

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 may be at variance to this Principle

The proposed clearing is located approximately 17 kilometres south of Port Hedland in the Chichester subregion of the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). At a broad scale, vegetation can be described as Undulating Archaean granite and basalt plains including significant areas of basaltic ranges (CALM, 2002). The plains support a shrub steppe characterised by *Acacia inaequilatera* over *Triodia wiseana* hummock grasslands, while *Eucalyptus leucophloia* tree steppe occurs on the ranges (CALM, 2002).

A flora and vegetation survey of the application area and the immediate surrounding areas was conducted by Maia (2010) in August 2010. A total of 170 flora taxa from 37 families and 92 genera were recorded within the survey area (Maia, 2010). This is considered to be consistent with other surveys previously conducted nearby to the application area (Maia, 2010).

Eight introduced taxa, *Aerva javanica, Cenchrus ciliaris, Cenchrus setiger, Citrullus colocynthis, Echinochloa colona, Malvastrum americanum, Stylosanthes hamata* and *Portulaca oleracea,* were recorded within the application area during the flora and vegetation survey conducted by Maia (2010). Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. This can in turn lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. None of these species are listed as 'Declared Plant' species under the *Agriculture and Related Resources Protection Act 1976* by the Department of Agriculture and Food. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

There are no known Priority Ecological Communities (PEC's) within the application area (GIS Database). The nearest known PEC is approximately 79 kilometres east of the application area (GIS Database). At this distance, there is little likelihood of any impact to the PEC as a result of the proposed clearing.

One Priority 1 flora species, *Heliotropium muticum*, was recorded during flora and vegetation surveys of the application area conducted by Maia (2010) in August 2010 and ENV (2011) between April and July 2011. A total of 1290 individuals of *Heliotropium muticum* from 142 locations were recorded during these flora surveys (EnviroWorks, 2011). BHP Billiton have committed to avoiding this species where possible however given the numerous location of this species recorded outside of the application area it is considered unlikely that the proposed clearing will impact on the conservation of this species.

A two part fauna survey of the application area conducted by Biologic (2010) recorded a total of 72 vertebrate fauna taxa, comprised of 17 mammal, 40 bird and 15 reptile species. Within the application area there were five species of conservation significance recorded, including the *Environment Protection and Biodiversity Conservation Act* 1999 listed Northern Quoll (*Dasyurus* hallucatus) (Biologic, 2010). There were seven natural and two artificial habitats identified within the application area, four of which were considered to be of 'high significance' due to their potential to support conservation significant fauna (Biologic, 2010). All of the habitats within the application area are well represented across the Pilbara bioregion, however, the presence of the Northern Quoll represents an important biodiversity value.

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

Methodology

Biologic (2010)
CALM (2002)
ENV (2011)
EnviroWorks (2011)
Maia (2010)
GIS Database:
- IBRA WA (regions – subregions)
- Threatened Ecological Sites Buffered

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

Comments

Proposal may be at variance to this Principle

A two part fauna survey was conducted over the application area by Biologic (2010) in July 2010 and then in November 2010. This survey identified the following six habitat types within the application area (Biologic, 2010):

- Sandy Plains with spinifex hummock grasslands and mixed *Acacia* shrublands;
- Stony Plains with open shrubland of *Acacia inaequilatera* and Spinifex hummock grasslands;
- Granite Outcrops: containing boulder piles, seasonal gnamma holes, moist depressions and fringing *Acacia* thickets;
- Rocky Ridges: a series of linear Quartz ridges extend north to south on the eastern and western margins of the survey area;
- Low Lying drainage depressions: supporting Spinifex grassland with seasonal small waterholes on sandy clay loam; and
- Occasional minor rocky outcrops (including Quartz, Calcrete, Silcrete) occurring within the sandy and stony plains.

A total of five conservation significant fauna species were recorded in the application area during fauna surveys conducted by Biologic (2010) in July and November (2010):

- Australian Bustard (*Ardeotis australis*) Priority 4 – tracks of this species were found throughout the application area therefore indicating it is a regular visitor. This species is nomadic and may roam over very large areas;
- Bush Stone-curlew (*Burhinus grallarius*) Priority 4 – recorded within the application area, however is predominantly associated with Bore Creek, south of the application area. The proposed clearing is not likely to impact on Bore Creek and therefore it is considered unlikely that the proposed clearing will impact on the conservation of this species;
- Oriental Plover (*Charadrius veredus*) Migratory – this species is a non-breeding visitor to Australia occurring in both coastal and inland areas. Seven individuals were recorded within the application area, however, given the wide distribution of this species it is considered unlikely that the proposed clearing of 550 hectares of native vegetation will impact on the conservation of this species;
- Northern Quoll (*Dasyurus hallucatus*) Schedule 1, Endangered – recorded at two locations within the application area however no dens have been identified. Suitable habitat for Northern Quoll dens is present within the area. Potential impacts to the Northern Quoll as a result of the proposed clearing may be minimised by the implementation of a condition requiring further surveys to ascertain the presence of Northern Quoll should clearing be planned within 50 metres of potential habitat;
- Western Pebble-mound Mouse (*Pseudomys chapmani*) Priority 4 – four inactive mounds and one active mound were recorded within the application area. The Western Pebble-mound Mouse is confined to, but common throughout the Pilbara. It is unlikely that the proposed clearing will impact the conservation of this species.

One further conservation significant species, Pilbara Olive Python (*Liasis olivaceus barroni*) Schedule 1, Vulnerable, is considered likely to reside within the application area (EnviroWorks, 2011). Biologic (2010) indicates that suitable habitat for this species is associated with Bore Creek which is located approximately 500 metres south of the application area. It is therefore considered unlikely that the proposed clearing will impact on the conservation of this species.

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

Methodology

Biologic (2010)
EnviroWorks (2011)

(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

No Declared Rare Flora (DRF) species are known to occur within the application area (GIS Database).

Two flora and vegetation surveys have been conducted over the application area with Maia (2010) covering the central and southern sections and ENV (2011) covering the northern section. No DRF species were recorded during either of these surveys (ENV, 2011; Maia, 2010).

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

Methodology

ENV (2011)
Maia (2010)
GIS Database:
- 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 records of Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest known TEC is approximately 185 kilometres south west of the application area (GIS Database). At this distance, there is little likelihood of any impact to the TEC as a result of the proposed clearing.

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

Methodology

GIS Database:
- Threatened Ecological Sites 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 is located within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). Shepherd (2009) reports that approximately 99.89% of the pre-European vegetation remains in the Pilbara bioregion.

The vegetation within the application area has been broadly mapped as the following two Beard vegetation associations:

93: Hummock grasslands, shrub steppe; kanji over soft spinifex; and
647: Hummock grasslands, dwarf shrub steppe: *Acacia translucens* over soft spinifex.

According to Shepherd (2009) approximately 100% of Beard vegetation associations 93 and 647 remain within the Pilbara bioregion (see table below).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion – Pilbara	17,804,193	17,785,000	~99.9	Least Concern	~6.3
Beard veg assoc. – State					
93	3,044,308	3,044,249	~100	Least Concern	~0.4
647	196,372	196,372	~100	Least Concern	n/a
Beard veg assoc. – Bioregion					
93	3,042,113	3,042,064	~100	Least Concern	~0.4
647	196,371	196,371	~100	Least Concern	n/a

* Shepherd (2009)
** Department of Natural Resources and Environment (2002)

The vegetation within the application area is not considered to be a remnant of native vegetation in an area that has been extensively cleared.

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

Methodology

Department of Natural Resources and Environment (2002)
Shepherd (2009)
GIS Database:
- IBRA WA (regions – subregions)
- 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 not likely to be at variance to this Principle

There are no permanent or non-perennial wetlands or watercourses within the application area (GIS Database).

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

Methodology GIS Database:
- 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 application area has been mapped as occurring on the Macroy and Uaroo land systems (GIS Database). Both of these land systems are generally not prone to erosion (Van Vreeswyk et al., 2004). The large scale of the proposed clearing, 550 hectares, increases the potential of land degradation issues. Potential land degradation may be minimised by the implementation of a staged clearing condition.

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

Methodology Van Vreeswyk et al., (2004)
GIS Database:
- Rangeland Land System Mapping

(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 proposed clearing is not located within a conservation reserve (GIS Database). The nearest onshore conservation reserve is the Mungaroona Range Nature Reserve, located approximately 93 kilometres south-south-west of the application area (GIS Database). At this distance it is unlikely that the proposed clearing will impact on the environmental values of any conservation areas.

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

Methodology GIS Database:
- DEC 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**
The application is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is the Turner River Water Reserve, located approximately 5.5 kilometres west of the application area (GIS Database). At this distance it is unlikely that the proposed clearing will impact on the quality of the Turner River Water Reserve.

The groundwater salinity within the application area is approximately 1,000 – 3,000 milligrams/Litre total Dissolved Solids (TDS) (GIS Database). Given the proposed clearing is for 550 hectares within the Pilbara Groundwater Province (5,557,665 hectares), the proposed clearing is not likely to cause salinity levels within the application area to alter significantly.

The application area experiences an average annual rainfall of approximately 315.8 millimetres while the average annual evaporation rate is approximately 3,400 - 3,600 millimetres (BoM, 2012; GIS Database). It is therefore considered unlikely that any surface water will be present for extended periods of time.

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

Methodology BoM (2012)
GIS Database:
- Evaporation Isopleths
- Groundwater Provinces
- Groundwater Salinity, Statewide
- Public Drinking Water Source Areas (PDWSAs)

(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 application area experiences a semi-desert-tropical climate with an average annual rainfall of 315.8 millimetres and an average annual evaporation rate of 3,400 – 3,600 millimetres (BoM, 2012; CALM, 2002; GIS Database). During normal seasonal rainfalls it is likely there will be little surface flow. Whilst large rainfall events may result in the flooding of the area, the proposed clearing is not likely to lead to an increase in the incidence or intensity of flooding.

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

Methodology BoM (2012)
CALM (2002)
GIS Database:
- Evaporation Isopleths

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

Comments

There is one Native Title Claim (WC99/3) over the area under application (GIS Database). This claim has been registered with the 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 are no registered Aboriginal Sites of Significance within the application area (GIS Database). 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 Environment and Conservation and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit was advertised on 5 December 2011 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received stating no objection to the proposed clearing.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims – Registered with the NNTT

4. References

Biologic (2010) Mooka Siding, Level 1 / Targeted Fauna Survey Prepared for FAST JV. Unpublished Report Dated December 2010.

BoM (2012) BoM Website - Climate Averages by Number, Averages for PORT HEDLAND AIRPORT. www.bom.gov.au/climate/averages/tables.shtml (Accessed 6 February 2012)

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

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.

ENV (2011) Port Hedland Regional Flora and Vegetation Assessment. Unpublished Report prepared for BHP Billiton Iron Ore Pty Ltd dated October 2011. ENV Australia.

EnviroWorks (2011) Mooka Ore Car Repair Shop Vegetation Clearing Permit Application. Unpublished Report prepared for BHP Billiton Iron Ore Pty Ltd dated November 2011. EnviroWorks Consulting.

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

Maia (2010) BHPBIO Mooka Siding. Level One Flora and Vegetation Assessment. Unpublished Report Dated December 2010.

Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

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
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia

DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
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
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005.* Department of Conservation and Land Management, Como, Western Australia} :-

P1	**Priority One - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P2	**Priority Two - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P3	**Priority Three - Poorly Known taxa**: taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
P4	**Priority Four – Rare taxa**: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
R	**Declared Rare Flora – Extant taxa** *(= Threatened Flora = Endangered + Vulnerable)*: taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
X	**Declared Rare Flora - Presumed Extinct taxa**: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

Schedule 1	**Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
Schedule 2	**Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
Schedule 3	**Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
Schedule 4	**Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna.* Department of Conservation and Land Management, Como, Western Australia} :-

P1	**Priority One: Taxa with few, poorly known populations on threatened lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
P2	**Priority Two: Taxa with few, poorly known populations on conservation lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
P3	**Priority Three: Taxa with several, poorly known populations, some on conservation lands**: Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
P4	**Priority Four: Taxa in need of monitoring**: Taxa which are considered to have been adequately surveyed,

or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.

P5 **Priority Five: Taxa in need of monitoring**: Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999)*

EX **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.

EX(W) **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.

CR **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.

EN **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

VU **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

CD **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.