

## **Clearing Permit Decision Report**

## 1. Application details

1.1. Permit application details

Permit application No.: 2352/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

1.3. Property details

Property: Mineral Lease 244SA (AML 70/244), Iron Ore (Mt Newman) Agreement Act 1964

Local Government Area: Shire of East Pilbara

Colloquial name: Whaleback Security Gate access road

1.4. Application

Clearing Area (ha) No. Trees Method of Clearing For the purpose of: 0.45 Mechanical Removal State Agreement

## 2.1. Existing environment and information

### 2.1.1. Description of the native vegetation under application

### **Vegetation Description**

**Site Information** 

The vegetation of the application area is broadly mapped as Beard Vegetation Association 82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana* (GIS Database).

BHP Billiton (2008) describe the vegetation of the application area as consisting of the following two vegetation associations:

- 1. Sparse tall shrubland dominated by Acacia inaequilatera, over patches of moderately dense Acacia ancistrocarpa low shrubland, over Triodia pungens/T. basedowii open low hummock grassland; and
- 2. Scattered *Eucalyptus leucophloia* subsp. *leucophloia*, over mixed *Acacia* spp medium to dwarf shrubs, over *Triodia wiseana/T. pungens*.

One weed species, Buffel grass, *Cenchrus ciliaris* was recorded within the application area (BHP Billiton, 2008).

## Clearing Description

BHP Billiton Iron Ore Pty Ltd have applied to clear up to 0.45 hectares (ha) of native vegetation within a total application area of approximately 0.5 ha. The proposed clearing is for the purposes of constructing a heavy vehicle bypass road around the proposed gatehouse at the Newman Amonium Nitrate Storage Facility, approximately 2.5km north of Newman, in the Pilbara region (BHP Billiton, 2008; GIS Database).

### **Vegetation Condition**

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

### Comment

The vegetation condition was derived from a description by BHP Billiton (2008).

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

The application area is a long narrow corridor approximately 200m long by approximately 25m wide, located on relatively flat land, running immediately adjacent to an existing road, and in close proximity to the existing Newman Amonium Nitrate Storage Facility and other mining related infrastructure (GIS Database).

A flora survey (Ecologia, 2006b) was conducted over the application area in 2006, and two other surveys (Ecologia, 2006a; ENV, 2007) were conducted over adjacent areas during 2006 and 2007. All surveys

concluded that the vegetation associations and fauna habitats in the survey areas were common and widespread within the Pilbara region (BHP Billiton, 2008; Ecologia, 2006a; Ecologia, 2006b; ENV, 2007).

A flora survey of the application area and surrounding areas conducted by Ecologia (2006b) recorded a total of 122 plant taxa within the survey area, representing 30 families and 58 genera. No restricted vegetation types or significant fauna habitat features have been recorded within the application area (BHP Billiton, 2008). No flora or fauna species of conservation significance are known to occur within the application area (BHP Billiton, 2008; Ecologia, 2006b), and the application area is unlikely to represent an area of high biodiversity.

The small area of proposed clearing 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 (2008).

Ecologia (2006a).

Ecologia (2006b).

ENV (2007).

GIS Database:

- Interim Biogeographic Regionalisation of Australia (subregions)
- Pastoral Leases
- Pre-European Vegetation
- Western Australia ETM 25m 543

## (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 i

### Proposal is not likely to be at variance to this Principle

A fauna survey covering a large area surrounding the Mount Whaleback minesite was conducted by ENV Australia environmental consultants in August 2006 (ENV, 2006). The Mount Whaleback minesite is located approximately three kilometres to the south-west of the current application area, and the 2006 fauna survey extended to within approximately two kilometres of the current application area.

The area proposed to clear is relatively flat and there are no restricted fauna habitat features (eg. caves, rock crevices, water sources) within the application area (BHP Billiton, 2008). The landforms, vegetation types and fauna habitats found in the application area are well represented in surrounding areas (BHP Billiton, 2008; Ecologia, 2006a; Ecologia, 2006b; ENV, 2007), and are likely to be representative of the habitat types recorded during the 2006 survey. ENV (2006) reported that all of the habitat types recorded in the Mt Whaleback survey were well represented within the wider Pilbara region, and none were of specific conservation significance.

No fauna species of conservation significance have been recorded within the vicinity of the current application area (BHP Billiton, 2008).

The application area is a narrow corridor adjacent to an existing road and mine-related infrastrucure, and is unlikely to represent significant fauna habitat, in comparison to less disturbed sites in the surrounding area. The small area of proposed clearing is unlikely to have any significant impact on fauna habitat at either a local or regional level.

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

### Methodology

BHP Billiton (2008).

Ecologia (2006a).

Ecologia (2006b).

ENV (2006).

ENV (2007).

## (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

The nearest known Declared Rare Flora are six populations of *Lepidium catapycnon* which occur fairly close together approximately seven kilometres west of the application area (GIS Database). Department of Environment and Conservation (DEC) databases have no records of any other populations of Declared Rare or Priority flora within a 50km radius of the area applied to clear (GIS Database).

A flora survey (Ecologia, 2006b) was conducted over the application area in 2006, and two other surveys (Ecologia, 2006a; ENV, 2007) were conducted over adjacent areas during 2006 and 2007. No species of Declared Rare, Priority Flora or species of restricted distribution were recorded during any of these vegetation surveys (BHP Billiton, 2008; Ecologia, 2006a; Ecologia, 2006b; ENV, 2007).

The vegetation associations within the application area are common and widespread within the Pilbara region (BHP Billiton, 2008; Ecologia, 2006b), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of rare flora.

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

### Methodology BHP Billiton (2008).

Ecologia (2006a). Ecologia (2006b). ENV (2007). GIS Database:

- Declared Rare and Priority Flora List
- 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

There are no known Threatened Ecological Communities (TEC's) within the area applied to clear (GIS Database). The nearest known TEC is the Ethel Gorge aquifer stygobiont community which is located approximately 12 km east/north-east of the application area (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.

Ecologia (2006b) reported that no TEC's were identified during the flora survey of the application area.

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

### Methodology CALM (2002).

Ecologia (2006b). GIS Database:

- Threatened Ecological Communities

## (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 Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Shepherd et al. (2001) report that approximately 99.9% of the pre-European vegetation still exists in the Pilbara Bioregion. The vegetation in the application area is broadly mapped as Beard Vegetation Association 82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana* (GIS Database). According to Shepherd et al., (2001) there is approximately 100% of this vegetation type remaining.

Although several large scale mining operations are located within a 50km radius of the application area (BHP Billiton, 2008; GIS Database), on a broader scale the Pilbara region has not been extensively cleared. Hence the area applied to clear is not considered to 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**	% of Pre- European area in IUCN Class I- IV Reserves
IBRA Bioregion - Pilbara	17,804,164	17,794,164	~99.9	Least Concern	6.3
Beard vegetation associations - WA					
82	2,565,930	2,565,930	~100	Least Concern	10.2
Beard vegetation associations - Pilbara Bioregion					
82	2,563,610	2,563,610	~100	Least Concern	10.2

<sup>\*</sup> Shepherd et al. (2001) updated 2005

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

<sup>\*\*</sup> Department of Natural Resources and Environment (2002)

#### Methodology

Department of Natural Resources and Environment (2002).

Shepherd et al. (2001).

GIS Database:

- Interim Biogeographic Regionalisation of Australia (subregions)
- Pre-European Vegetation
- Western Australia ETM 25m 543 AGO 2004

## (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 within the application area (GIS Database). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (BHP Billiton, 2008). One minor ephemeral drainage line crosses the application area (GIS Database). BHP Billiton (2008) advise that culverts will not be required for the project, however surface drainage management will be incorporated into the road construction. The proponent is advised to consult with the Department of Water to determine whether a Bed and Banks Permit is required for the creek crossing.

Based on the above, the proposal is at variance to this Principle. However, the proposed clearing is unlikely to result in any significant impact to any watercourse or wetland.

### Methodology

BHP Billiton (2008).

GIS Database:

- Hydrography, Linear
- Lakes, 1M
- Rivers 250K
- Western Australia ETM 25m 543 AGO 2004

## (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 falls predominantly within the Newman Land System, with a very small section of the application area mapped as the McKay Land System (GIS Database).

The Newman Land System consists of lower slopes, with stony soils and some red loamy earths; narrow drainage floors up to 400m 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 consists of hills, ridges, plateaux remnants and breakaways of meta sedimentary rocks supporting hard spinifex grasslands. This land system is not prone to degradation or soil erosion (Van Vreeswyk et al., 2004).

Based on the above, the proposed clearing is not likely to 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

There are no conservation areas in the vicinity of the application area. The nearest DEC managed land is the Karijini National Park, approximately 120km north-west of 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:

- CALM Managed Lands and Waters

## (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 area is located within the Newman Water Reserve, a Public Drinking Water Source Area (PDWSA) (GIS Database). All activities conducted within the PDWSA, should be in accordance with the Department of Water (DoW) Land Use Compatibility Tables (DoW, 2008). The proponent is advised to follow the Water Quality Protection Guidelines for the mining and mineral industry, produced by the DoW, to minimise any risk that the proposed clearing and associated activities may pose to the Water Reserve (DoW, 2008).

The application area is located within the Pilbara Groundwater Area, as proclaimed under the *Rights in Water and Irrigation Act 1914*. Any groundwater abstraction within this area will require a Water Licence from the Department of Water (DoW, 2008). Groundwater quality monitoring is conducted as part of the existing mine operations at the nearby Mt Whaleback minesite (BHP Billiton, 2008). The Department of Water has advised that the proposed clearing is unlikely to have any significant impact on groundwater levels or quality (DoW, 2008).

One minor ephemeral drainage line crosses the application area (GIS Database). The small area of proposed clearing is unlikely to result in increased sedimentation of any watercourse.

The comparatively small area of 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

BHP Billiton, 2008

DoW (2008).

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

There are no permanent watercourses within the application area. One minor ephemeral drainage line crosses the application area. Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (BHP Billiton, 2008).

The application area drains into the Fortescue River Upper catchment area (GIS Database). Natural flooding occurs occasionally within this catchment area during the wet season (November to March) following significant rainfall (BHP Billiton, 2008). However, the small area to be cleared (0.45 hectares) in relation to the size of the catchment area (2,975,192 ha) (GIS Database), is unlikely to cause or exacerbate the incidence or intensity of flooding (DoW, 2008).

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

### Methodology

BHP Billiton (2008).

DoW (2008). GIS Database:

- Hydrographic Catchments - Catchments

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

### Comments

One public submission was received for this clearing permit application. The submission suggested that the vegetation proposed to be cleared should be considered as a significant remnant of native vegetation in an area that has been extensively cleared. This issue has been addressed under Principle (e).

The submission also raised concerns regarding potential impacts of the proposed clearing on Aboriginal Heritage sites and Native Title Rights within the application area. Aboriginal Sites of Significance are protected under the *Aboriginal Heritage Act 1972*. The proponent is committed to the management and protection of Aboriginal heritage sites (BHP Billiton, 2005). BHP Billiton has a heritage protocol agreement with the Nyiyaparli people (traditional owners of the Newman area), and regularly consult with the Nyiyaparli people to undertake Aboriginal heritage surveys in and around Newman (BHP Billiton, 2008). BHP Billiton also has an internal process; the Project Environment and Aboriginal Heritage Review (PEAHR), which is designed to prevent inadvertent disturbance of Aboriginal heritage sites within BHP Billiton operations. Prior to the commencement of any land disturbance activity, a PEAHR must be completed and submitted to BHP Billiton's Aboriginal Affairs Department for assessment. All land disturbance activities must be approved by BHP

Billiton's Environment and Aboriginal Heritage staff (BHP Billiton, 2005).

There are no known Aboriginal Sites of Significance within the application area. The nearest known Aboriginal Site of Significance is approximately 500m east of the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

There is one native title claim over the area under application. This claim (WC99-004) has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenement has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (ie. 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*.

The application area is located within the Newman Water Reserve, a Public Drinking Water Source Area (PDWSA) (GIS Database). The Department of Water (DoW) has advised that all activities conducted within the PDWSA should be compatible with the DoW's Land Use Compatibility Tables (DoW, 2007). The proponent is advised to seek further advice from the DoW to ensure compliance in this regard.

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.

### Methodology

BHP Billiton (2005).

BHP Billiton (2008).

DoW (2007).

GIS Database:

- Aboriginal Sites of Significance
- Native Title Claims
- Public Drinking Water Source Areas

### 4. Assessor's comments

### Comment

The proposal has been assessed against the Clearing Principles, and is at variance to Principle (f), is not at variance to Principle (e), and is not likely to be at variance to Principles (a), (b), (c), (d), (g), (h), (i) and (j).

Should the permit be granted, it is recommended that conditions be imposed on the permit for the purposes of record keeping and permit reporting.

### 5. References

BHP Billiton (2005) Aboriginal Heritage Induction Handbook. BHP Billiton Iron Ore Pty Ltd, Western Australia.

BHP Billiton (2008) Mount Whaleback - Newman Clearing Permit Application. BHP Billiton Iron Ore Pty Ltd, Western Australia. 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.

DoW (2008) Public Drinking Water Source Area (PDWSA) Advice. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Industry and Resources (DoIR). Department of Water, Western Australia.

Ecologia (2006a) Newman Ammonium Nitrate Storage Facility Conservation Significant Flora Survey. Ecologia Environment, Western Australia.

Ecologia (2006b) Newman Ammonium Nitrate Storage Facility - Phase 2 Conservation Significant Flora Survey. Ecologia Environment, Western Australia.

ENV (2006) Mount Whaleback Fauna Assessment Survey - Phase 111 Summary Report. ENV Australia, Western Australia. ENV (2007) Security Fence, Mount Whaleback, Newman - Declared Rare and Priority Flora Search. ENV Australia, Western Australia.

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

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia (updated 2005).

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.

### 6. Glossary

### Acronyms:

**BoM** Bureau of Meteorology, Australian Government.

**CALM** Department of Conservation and Land Management, Western Australia.

**DAFWA** Department of Agriculture and Food, Western Australia.

DA Department of Agriculture, Western Australia.

DEC Department of Environment and Conservation

**DEH** Department of Environment and Heritage (federal based in Canberra) previously Environment Australia

**DEP** Department of Environment Protection (now DoE), Western Australia.

**DIA** Department of Indigenous Affairs

DLI Department of Land Information, Western Australia.DoE Department of Environment, Western Australia.

DolR Department of Industry and Resources, Western Australia.Dola Department of Land Administration, Western Australia.

**DoW** Department of Water

**EP Act** Environment Protection Act 1986, Western Australia.

EPBC Act Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)

**GIS** Geographical Information System.

**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** Rights in Water and Irrigation Act 1914, Western Australia.

**s.17** Section 17 of the Environment Protection Act 1986, Western Australia.

**TECs** Threatened Ecological Communities.

### **Definitions:**

P2

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

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.

**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

Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

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 — 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 — 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 — 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 — 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.
- 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.
- 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.