



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 3281/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Hamersley Iron Pty Ltd

### 1.3. Property details

Property: Iron Ore (Hamersley Range) Agreement Act 1963, Mineral Lease 246SA (AML 70/246)  
Local Government Area: Shire of Ashburton  
Colloquial name: Paraburdoo 11 West Pit and Waste Dump

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|--------------------|-----------|--------------------|---------------------|
| 2                  |           | Mechanical Removal | State Agreement     |

## 2. Site Information

### 2.1. Existing environment and information

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

| Vegetation Description  | Clearing Description   | Vegetation Condition   | Comment  |
|---|--|--|--|
| <p>Beard Vegetation Associations have been mapped at a 1:250,000 scale for the whole of Western Australia. One Beard Vegetation Association has been mapped within the application area (GIS Database):</p> <p>82: Hummock grasslands, low tree steppe; snappy gum over <i>Triodia wiseana</i> (Kendrick, 2001).</p> <p>Rio Tinto (2009) conducted a vegetation survey over the application area and surrounding vegetation on the 12th March, 2009. Two vegetation types were identified within the application area (Rio Tinto, 2009). These are:</p> <p>1) <i>Acacia hamersleyensis</i> scattered tall shrubs over <i>Acacia hamersleyensis</i> open shrubland over <i>Ptilotus incanus</i> open low shrubland over <i>Triodia epactia</i> hummock grassland over <i>Ptilotus drummondii</i> scattered herbs</p> <p>2) Disturbed Vegetation: Sparse regrowth of some colonising native flora species such as <i>Acacia bivenosa</i> and <i>Cleome viscosa</i>.</p> | <p>Hamersley Iron has applied to clear up to 2 hectares of native vegetation for the purpose of mineral production. Native vegetation is required to be cleared in order to extend the 11 West Pit and Waste Dump in a northerly direction toward Pirraburdu Creek. The proposed clearing lies adjacent to the existing mine footprint, which through historical mining activities is heavily disturbed to the south. Existing haul roads and access tracks will be utilised to access the application area (Rio Tinto, 2009). Vegetation will be cleared using a bulldozer with its blade down, and vegetation and topsoil will be stockpiled and used in later rehabilitation (Rio Tinto, 2009).</p> | <p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).</p> <p>To</p> <p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).</p> | <p>The vegetation descriptions were derived from descriptions by Rio Tinto (2009).</p> |

## 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 proposed clearing area is located approximately 12 kilometres west, south-west of the township of Paraburdoo in the Hamersley subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Hamersley subregion is extensive, covering approximately 6.215 million hectares (Kendrick, 2001). The subregion is well reserved, with approximately 14.1% of the total land area in

conservation reserves (Kendrick, 2001). At a broad scale, vegetation of the Hamersley subregion can be described as Mulga low woodlands over bunch grasses on fine textured soils in valley floors and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges (Kendrick, 2001).

Based on broad scale Beard Vegetation Association mapping, the proposed clearing area is characterised by hummock grasslands, low tree steppe; Snappy Gum over *Triodia wiseana* - a common and widespread vegetation association both locally and regionally (GIS Database; Kendrick, 2001). There are no known records of Declared Rare Flora (DRF), Priority Flora or Threatened Ecological Communities (TEC's) in the application area or surrounding area (GIS Database; Rio Tinto, 2009). The proposed clearing area does not contain any conservation category wetlands, nor is it located within or adjacent to any areas managed for the conservation of biological diversity (GIS Database).

A total of 35 native and introduced flora species from 25 genera representing 16 families were recorded within the application area (Rio Tinto, 2009). Species richness is therefore considered to be low and this can be attributed to the substantial proportion of land already disturbed from mining activity and the proximity of the survey area to an active mining area (Rio Tinto, 2009).

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

**Methodology** Kendrick (2001)  
Rio Tinto (2009)  
Gis Database:  
-Declared Rare and Priority Flora List  
-Interim Biogeographic Regionalisation of Australia  
-Interim Biogeographic Regionalisation of Australia (Subregions)  
-Pre European Vegetation  
-Threatened Fauna

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

**Comments** **Proposal is not likely to be at variance to this Principle**  
No targeted fauna surveys were undertaken within the application area, although databases held by the Department of Environment and Conservation and the Western Australian Museum were searched for Schedule and Priority fauna (Rio Tinto, 2009). A search for the Protected Matters in the locality according to the Environmental Protection and Biodiversity Conservation (EPBC) Act 1999, was also conducted (Rio Tinto, 2009).

These searches identify that a number of Schedule and Priority fauna species, could potentially utilise the application area. However, an assessment of each species found that habitat within the application area was largely inadequate or restricted to marginal foraging habitat (Rio Tinto, 2009). The application area did not contain 'core habitat' for any of the listed species (Rio Tinto, 2009).

Fauna habitat within the application area is dominated by a rocky slope supporting scattered to open shrubland and hummock grasslands (Rio Tinto, 2009). This vegetation may provide foraging and shelter opportunities for a variety of species that feed on *Triodia* and *Acacia* species (Rio Tinto, 2009). However, no significant fauna habitats such as caves, waterholes, major creek lines, gorges, large tree hollows or termite mounds were observed within the application area (GIS Database; Rio Tinto, 2009).

The vegetation proposed to be removed does not contain any special floristics or structure which is unusual to the Hamersley Ranges region (Rio Tinto, 2009). The proposal is unlikely to result in a significant impact on fauna or fauna habitat of the area.

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

**Methodology** Rio Tinto (2009)  
GIS Database:  
-Paraburdoo 50cm Orthomosaic

**(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**  
According to available GIS databases there are no known records of Declared Rare Flora (DRF) or Priority Flora within the proposed clearing area (GIS Database).

Rio Tinto (2009) conducted a review of databases maintained by the Department of Environment and Conservation (DEC), Western Australian Herbarium and the Western Australian Museum. A flora and vegetation survey was also carried out in March 2009 by Rio Tinto. According to the above searches, no DRF or Priority Flora was identified within the application area.

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

**Methodology** Rio Tinto (2009)  
GIS Database:  
-Declared Rare and Priority Flora List

**(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**  
According to available GIS databases, there are no known Threatened Ecological Communities (TEC's) within the proposed clearing area (GIS Database; Rio Tinto, 2009)). The nearest known TEC is located approximately 92 kilometres north-east of the application area (GIS Database). Given the distance between the proposal and the nearest known TEC, the proposed clearing is not likely to be at variance to this Principle.

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

**Methodology** Rio Tinto (2009)  
GIS Database:  
-Threatened Ecological Communities  
-Clearing Regulations - Environmentally Sensitive Areas

**(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 (2007) report that approximately 99.95% 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; Kendrick, 2001). According to Shepherd (2007) there is approximately 100% of this vegetation type remaining in the Pilbara Bioregion and the State (see table below).

According to the Bioregional Conservation Status of Ecological Vegetation Classes the conservation status for the Pilbara Bioregion and Beard Vegetation Association 82 is of 'Least Concern' (Department of Natural Resources and Environment, 2002).

Although several large scale mining operations are located within a 50 kilometre radius of the application area, the Pilbara Bioregion remains largely uncleared (GIS Database). Hence, the vegetation proposed to be cleared 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 IUCN Class I-IV Reserves |
|------------------------------|-------------------------|----------------------|--------------|-----------------------|--|
| IBRA Bioregion - Pilbara     | 17,804,188              | 17,794,647           | ~99.95       | Least Concern         | ~6.32                                      |
| Beard veg assoc. - State     |                         |                      |              |                       |  |
| 82                           | 2,565,901               | 2,565,901            | ~100         | Least Concern         | ~10.2                                      |
| Beard veg assoc. - Bioregion |                         |                      |              |                       |  |
| 82                           | 2,563,583               | 2,563,583            | ~100         | Least Concern         | ~10.2                                      |

\* Shepherd (2007)

\*\* 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)  
Kendrick (2001)  
Shepherd (2007)  
GIS Database:  
-Interim Biogeographic Regionalisation of Australia  
-Pre European Vegetation  
-Rangeland Land System Mapping

**(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**

According to available datasets, there are no permanent wetlands or watercourses within the application area (GIS Database; Rio Tinto, 2009). One minor ephemeral watercourse traverses the application area (GIS Database). These ephemeral watercourses are minor natural drainage channels that are widespread across the Pilbara landscape and are responsible for quickly dispersing floodwaters after significant rainfall events (ANRA, 2007).

Pirraburdu Creek, an ephemeral creekline, runs east-west with its boundary approximately 100 metres north of the application area (GIS Database). The rocky slopes making up the northern boundary of the 11 West mine are stable, and have been terraced through historical mining activities, reducing the gradient, thereby preventing large scale erosion from rainfall events (Rio Tinto, 2009). It is unlikely the small amount of clearing within the application area will result in sediment loads affecting this watercourse. Riparian vegetation growing in association with this watercourse is not present within the application area (GIS Database).

As there is a watercourse within the application area, the proposed clearing is at variance to this Principle. However, the vegetation communities growing in association with the watercourse are not unique and are considered common and widespread in the Pilbara bioregion (GIS Database; Rio Tinto, 2009; Shepherd, 2007). The proposed clearing is unlikely to significantly impact on vegetation communities growing in association with these minor ephemeral creek systems.

**Methodology** ANRA (2007)  
Rio Tinto (2009)  
Shepherd (2007)  
GIS Database:  
-Hydrography, Lakes (Course Scale, 1m GA)  
-Hydrography, Linera (Hyd\_Type)  
-Paraburdoo 50cm Orthomosaic  
-Rivers

**(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**

Land system mapping by the Department of Agriculture Western Australia has mapped a variety of land systems for the Pilbara Bioregion. Land systems are mapped based on biophysical features such as soil and landform type, geology, geomorphology and vegetation type (Van Vreeswyk et al., 2004). The proposed clearing area includes the Newman land system which is characterised by hills and ranges, supporting hard Spinifex grasslands. The Newman land system is generally not prone to erosion (Van Vreeswyk et al., 2004).

The proposed clearing will be undertaken using a dozer, blade down, with vegetation and top soil being stockpiled and used in later rehabilitation (Rio Tinto, 2009). The small scale of the proposal is unlikely to result in appreciable land degradation.

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

**Methodology** Rio Tinto (2009)  
Van Vreeswyk et al. (2004)

**(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 known conservation reserve is the Karijini National Park, located approximately 45 kilometres east 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**

There are no permanent watercourses or wetlands within the application area, however, Pirraburdu Creek is located approximately 150 metres north of the application area (GIS Database). Assessment of aerial imagery and Geographic Information System (GIS) hydrography data demonstrates that Pirraburdu Creek is a minor, non-perennial watercourse which is only likely to support surface water for short periods following significant rainfall events.

Groundwater resources in the area are recharged via streams such as Pirraburdu Creek and via infiltration to fractured rock aquifers. Given the small size of the application area, it is unlikely that the proposal would have an impact on groundwater recharge or quality (Rio Tinto, 2009).

According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is Millstream Water Reserve which is located approximately 100 kilometres north of the application area (GIS Database). Given the distance separating the application area and the nearest water supply areas, the proposed clearing is unlikely to impact on the water quality of the Millstream Water Reserve.

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

**Methodology** Rio Tinto (2009)  
GIS Database:  
-Hydrography, Linear (Hyd\_Type)  
-Paraburdoo 50 cm Orthomosaic  
-Public Drinking Water Source Areas (PDWSA)

**(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 proposed clearing is located within the Ashburton River catchment area (GIS Database). The size of the area to be cleared (2 hectares) in relation to the size of the Ashburton River catchment area (7,877,743 hectares) is not likely to lead to an increase in flood height or duration (GIS Database).

The application area is not associated with any permanent wetlands or watercourses (GIS Database). Pirraburdu Creek, located 150 metres to the north of the application area, would experience natural seasonal flooding from runoff of surface water from the rocky slopes of the area, including the application area. With only 2 hectares of vegetation disturbance, it is unlikely to significantly alter the intensity of flooding of Pirraburdu Creek.

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

**Methodology** GIS Database:  
-Hydrographic Catchments - Catchments  
-Hydrography, Linear (Hyd\_Type)

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

**Comments**

There are two native title claims over the area under application: WC98/069 and WC97/043 (GIS Database). These claims have been registered with the National Native Title Tribunal on behalf of the claimant groups. However, the 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*.

There are no known 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 Sites of Aboriginal Significance are damaged through the clearing process.

One submission was received raising no objections to this Proposal.

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 licenses or approvals are required for the proposed works.

**Methodology** GIS Database:  
-Aboriginal Sites of Significance  
-Native Title Claims

## 4. Assessor's comments

### Comment

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

It is recommended that should a permit be granted, conditions be imposed on the permit for the purposes of weed management, retention of topsoil and vegetative material, record keeping and permit reporting.

## 5. References

- ANRA (2007) Australian Natural Resources Atlas: Rangelands Overview; Pilbara. Available online from: <http://www.anra.gov.au/topics/rangelands/overview/wa/ibra-pil.html> Accessed 4 October 2009.
- 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.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Kendrick, P. (2001) Pilbara (PIL3 - Hamersley subregion). In a Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management, pp 568-580.
- Rio Tinto (2009) Flora and Vegetation Survey of the Paraburdoo 11 West Mine Development & Supporting Documentation for the Native Vegetation Clearing Permit Application (Purpose Permit). Rio Tinto, Western Australia.
- Shepherd, D.P. (2007). 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A., and Hennig, P. (2004) Technical Bulletin: An inventory and condition survey of rangelands in Pilbara Region, Western Australia, No 92. Department of Agriculture, Western Australia.

## 6. Glossary

### Acronyms:

|                 |   |
|-----------------|---|
| <b>BoM</b>      | Bureau of Meteorology, Australian Government.   |
| <b>CALM</b>     | Department of Conservation and Land Management, Western Australia.  |
| <b>DAFWA</b>    | Department of Agriculture and Food, Western Australia.  |
| <b>DA</b>       | Department of Agriculture, Western Australia.   |
| <b>DEC</b>      | Department of Environment and Conservation  |
| <b>DEH</b>      | Department of Environment and Heritage (federal based in Canberra) previously Environment Australia                       |
| <b>DEP</b>      | Department of Environment Protection (now DoE), Western Australia.  |
| <b>DIA</b>      | Department of Indigenous Affairs  |
| <b>DLI</b>      | Department of Land Information, Western Australia.  |
| <b>DMP</b>      | Department of Mines and Petroleum, Western Australia.   |
| <b>DoE</b>      | Department of Environment, Western Australia.   |
| <b>DoIR</b>     | Department of Industry and Resources, Western Australia.  |
| <b>DOLA</b>     | Department of Land Administration, Western Australia.   |
| <b>DoW</b>      | Department of Water   |
| <b>EP Act</b>   | Environment Protection Act 1986, Western Australia.   |
| <b>EPBC Act</b> | Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)   |
| <b>GIS</b>      | Geographical Information System.  |
| <b>IBRA</b>     | Interim Biogeographic Regionalisation for Australia.  |
| <b>IUCN</b>     | International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union |
| <b>RIWI</b>     | Rights in Water and Irrigation Act 1914, Western Australia.   |
| <b>s.17</b>     | Section 17 of the Environment Protection Act 1986, Western Australia.   |
| <b>TECs</b>     | Threatened Ecological Communities.  |

### 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} :-

|           |  |
|-----------|--|
| <b>P1</b> | <b>Priority One - Poorly Known taxa:</b> 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.