



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3948/1
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:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
15		Mechanical Removal	Constructing a magazine explosives compound, dangerous goods storage area, and associated works.

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>.</p> <p>Rio Tinto (2010) conducted a flora and vegetation survey over the application area on 16-18 November 2008. The following vegetation types were identified within the application area:</p> <p>Low rocky hills and slopes - shrubland: <i>Acacia tetragonophylla</i> scattered tall shrubs over <i>Senna artemisioides</i> subsp. <i>oligophylla</i> shrubland and other scattered tussock grasses.</p> <p>Low hills and rises - tall open shrubland: <i>Acacia tetragonophylla</i> scattered tall open shrubland over mixed (<i>Acacia</i> spp., <i>Senna</i> spp. and <i>Eremophila</i> spp.) shrubland over <i>Triodia epactia</i> open hummock grassland over <i>Cenchrus ciliaris</i> very open tussock grassland- disturbed.</p> <p>Footslopes - open shrubland: <i>Acacia pyrifolia</i>, <i>A. synchronicia</i> open shrubland over <i>Senna artemisioides</i> subsp. <i>oligophylla</i> low open shrubland over <i>Triodia epactia</i> scattered hummock grasses to open hummock grassland.</p> <p>Ridge slopes and crests - scattered tall shrubs and spinifex grassland: <i>Acacia pyrifolia</i> scattered tall shrubs over <i>Senna artemisioides</i> subsp. <i>oligophylla</i> x <i>helmsii</i>, <i>Eremophila phyllopoda</i>, <i>Eremophila cuneifolia</i> open shrubland over <i>Triodia epactia</i> hummock grassland with mixed low shrubs (<i>Indigofera monophylla</i>) and herbs.</p> <p>Rocky south ridge slope - open shrubland: <i>Acacia pyrifolia</i> scattered tall shrubs over <i>Eremophila fraseri</i>, <i>Senna artemisioides</i> subsp. <i>oligophylla</i> x <i>helmsii</i> open shrubland over mixed</p>	<p>Hamersley Iron Pty Ltd has applied to clear up to 15 hectares of native vegetation within an application area of approximately 21 hectares. The clearing is to allow for construction work, including bulk earthworks, construction of roads, drainage and trenching for services. The construction work will be around the existing Paraburdoo magazine explosives and dangerous goods storage areas. The application area is within the Paraburdoo mine site, 10 kilometres south west of the township of Paraburdoo.</p> <p>Vegetation will be cleared using mechanical equipment, specifically a dozer with the blade down. The vegetation will be stockpiled and used for rehabilitation.</p>	<p>Pristine: No obvious signs of disturbance (Keighery, 1994).</p> <p>To</p> <p>Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).</p>	<p>The vegetation condition was assessed by botanists from Rio Tinto. The vegetation conditions were described using a scale based on Trudgen (1988) and have been converted to the corresponding conditions from the Keighery (1994) scale.</p>

low shrubland with scattered herbs over *Paraneurachne muelleri*, *Cymbopogon ambiguus*
open tussock grassland with very open *Triodia epactia* hummock grassland.

Upper ridge slope on banded ironstone - tall open shrubland: *Acacia tetragonophylla* (*A. aneura* var. *tenuis*, *A. pruinocarpa*) tall scattered shrubs over *Senna artemisioides* subsp. *artemisioides* shrubland over mixed low open shrubland over *Triodia epactia* open hummock grassland over scattered tussock grasses and herbs.

Drainage floor with narrow floodplain - tall shrubland: *Acacia citrinoviridis* tall shrubland over *Senna artemisioides* subsp. *oligophylla* x *helmsii*, *Ptilotus incanus*, *Acacia synchronicia* shrubland over mixed low shrubland over very open mixed herbland over *Triodia epactia* open hummock grassland with mixed very open tussock grassland.

Minor flowline - tall shrubland: *Acacia citrinoviridis* tall shrubland to tall open scrub over *Triodia epactia* open hummock grassland over mixed very open tussock grassland.

Regenerating road batters: *Acacia aneura* var. *tenuis*, *Acacia synchronicia*, *Acacia citrinoviridis* tall shrubland over *Senna artemisioides* subsp. *oligophylla*, *Ptilotus obovatus*, *Senna glutinosa* subsp. x *leussenii* open shrubland over *Cenchrus ciliaris* open tussock grassland with *Triodia epactia* open hummock grassland.

Disturbed ground: Areas currently cleared of native vegetation or where the floristic and structural composition of the vegetation has been severely altered (these areas may support a small number of early successional native species).

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 application area occurs within the Hamersley (PIL3) Interim Biogeographic Regionalisation of Australia (IBRA) subregion (GIS Database). This subregion is generally described as Mulga low woodland over bunch grasses on fine textured soils in valley floors, and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges (CALM, 2002).

The vegetation within the application area is broadly mapped as Beard Vegetation Association 82, which is common and widespread throughout the Pilbara region, with approximately 100% of the pre-European vegetation extent remaining (Shepherd, 2007; GIS Database). A flora and vegetation survey conducted in November 2008 recorded 100 native vascular plant taxa from 57 genera belonging to 31 families (Rio Tinto, 2010). The most species rich families recorded were Poaceae, Malvaceae and Amaranthaceae; the genera with the greatest number of taxa were *Acacia*, *Eremophila*, *Ptilotus* and *Senna* (Rio Tinto, 2010). These families and genera are considered typical of inland Pilbara flora (Rio Tinto, 2010).

No Declared Rare Flora, Priority Flora, Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) were recorded within the application area (Rio Tinto, 2010; GIS Database). According to available databases, there are no known TECs or PECs within a 50 kilometre radius of the application area (GIS Database).

Eleven Priority Flora occurred within a 50 kilometre radius of the application area and three of these had potential habitat within the application area: *Ptilotus mitchellii* (Priority 1), *Eremophila coacta* (Priority 3) and *Ptilotus mollis* (Priority 4) (Rio Tinto, 2010). All three species are perennial shrubs and therefore it is unlikely they were overlooked during the flora survey (Rio Tinto, 2010). Four introduced flora species were found in the application area (Rio Tinto, 2010).

The main fauna habitats found within the application area were rocky slopes and ridges of sparse *Acacia* shrubs over hummock grassland, and minor creek lines with tall shrubland of *Acacia* (Rio Tinto, 2010). These habitat types are typical of the vegetation in the greater Paraburdoo area (Rio Tinto, 2010).

There is existing disturbance within the application area from existing roads, fences and buildings associated with magazine explosives and dangerous goods storage areas (Rio Tinto, 2010). Some of the vegetation surrounding these structures is in a disturbed condition (Rio Tinto, 2010). A visual assessment using aerial imagery indicates there are large areas of intact vegetation occurring outside the application area (GIS Database). The application area is not likely to comprise a greater diversity than similar areas either locally or at a bioregional scale.

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

Methodology CALM (2002)
Rio Tinto (2010)
Shepherd (2007)
GIS Database:
- Declared Rare and Priority Flora List
- IBRA WA (Regions-Sub Regions)
- Paraburdoo 50cm Orthomosaic - Landgate 2004
- Pre-European Vegetation
- 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 is not likely to be at variance to this Principle**
No targeted fauna surveys were undertaken within the application area. A desktop search was conducted and during the field work any incidental fauna sightings and observations of fauna habitats were recorded (Rio Tinto, 2010).

The main fauna habitats within the application area are rocky slopes and ridges of sparse *Acacia* shrubs over hummock grassland, and minor creeklines with tall shrubland. These areas may provide habitat for a range of common reptile and mammal species (Rio Tinto, 2010). The quality of the fauna habitat has been reduced due to its close proximity to mining operations and the existing dangerous goods storage areas (Rio Tinto, 2010). The vegetation that constitutes the fauna habitats is typical of vegetation in the greater Paraburdoo area (Rio Tinto, 2010). No significant habitat features such as caves, waterholes, large tree hollows or termite mounds were found within the application area (Rio Tinto, 2010).

There are large areas of intact vegetation outside the application area (GIS Database). Given the extent of suitable vegetation in the surrounding local area, the application area is unlikely to represent an important fauna linkage.

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

Methodology Rio Tinto (2010)
GIS Database:
- Paraburdoo 50cm Orthomosaic - Landgate 2004

(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 databases there are no known records of Declared Rare Flora (DRF) within the application area (GIS Database).

A flora survey of the application area was conducted by Pilbara Iron botanists on 16-18 November 2008. No DRF species were recorded within the survey area (Rio Tinto, 2010).

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

Methodology Rio Tinto (2010)
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**
A search of available databases revealed that there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest recorded TEC is located over 70 kilometres north of the application area (Themeda Grasslands) (GIS Database; DEC, 2010). At this distance there is little likelihood of any impact to the TEC from the proposed clearing.

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

Methodology DEC (2010)
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 clearing application area falls within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) region in which approximately 99.9% of the pre-European vegetation remains (see table) (GIS database; Shepherd, 2007). This gives it a conservation status of "Least Concern" according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002).

The vegetation of the clearing application area has been mapped as Beard vegetation association 82 "Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*" (GIS Database). According to Shepherd (2007) approximately 100% of Beard vegetation association 82 remains at both the state and bioregional level (see table). This vegetation association would be given a conservation status of "Least Concern" at both a state and bioregional level (Department of Natural Resources and Environment, 2002).

The vegetation under application is not a remnant of 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	~99.9	Least Concern	~6.3
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)
Shepherd (2007)
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 at variance to this Principle**

There are no permanent wetlands or watercourses within the application area (GIS Database). There are numerous minor, ephemeral watercourses and the Rio Tinto (2010) vegetation survey reported that two of the ten vegetation types mapped were associated with these watercourses. The larger of these watercourses is already degraded with weeds and vehicle tracks and the clearing is not expected to significantly impact the watercourse any further or significantly impact on any watercourses outside the application area (Rio Tinto, 2010).

Based on the above, the proposed clearing is at variance to the Principle. However, the vegetation types associated with the minor watercourses are widespread within the local and regional area, and the small area of the proposed clearing is unlikely to have any significant impact on any watercourse or wetland.

Methodology Rio Tinto (2010)
GIS Database:
- Hydrography, Linear
- Geodata, Lakes

(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

According to the available datasets the application area is within the Newman Land System (GIS Database). The Newman Land System is characterised by rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands (Van Vreeswyk et al., 2004). The land system is comprised of four land units and three of these occur in the application area (Rio Tinto, 2010):

- Plateaux, ridges, mountains and hills
- Lower slopes
- Narrow drainage floors with channels.

All the land units contain mantles of abundant (to very abundant) pebbles of ironstone and other rocks (Van Vreeswyk et al., 2004), making the Newman Land System unlikely to be susceptible to erosion. During the vegetation survey it was noted that much of the application area was stony to rocky mantle covered soils (Rio Tinto, 2010).

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

Methodology Rio Tinto (2010)
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

According to available datasets the application area is not located within a Department of Environment and Conservation (DEC) managed conservation area (GIS Database). The nearest known conservation area is Karijini National Park, which is located approximately 37 kilometres east of the application area (GIS database). A large proportion of the vegetation in the Pilbara bioregion remains uncleared, approximately 99.9% (Shepherd, 2007), so it is unlikely the application area provides an important buffer or ecological linkage to Karijini National Park.

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

Methodology Shepherd (2007)
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

According to available databases the application area is not located within a Public Drinking Water Source Area (PDWSA). The nearest PDWSA is Millstream Water Reserve, which is approximately 105 kilometres to the north (GIS Database). The proposed clearing is unlikely to have any significant impact on groundwater levels or quality.

There are no permanent watercourses or wetlands within the application area (GIS Database). There are drainage lines within the application area that would flow only for short periods following heavy rain (Rio Tinto, 2010). The proposed clearing is unlikely to cause deterioration in the quality of surface water in the local area.

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

Methodology Rio Tinto (2010)
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 application area is located within the Ashburton River catchment area (GIS Database). Given the size of the area to be cleared (15 hectares) in relation to the size of the catchment area (7,877,743 hectares) (GIS Database), the proposed clearing is not likely to increase the potential of flooding on a local or catchment scale.

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

Methodology GIS Database:
- Hydrographic Catchments - Catchments

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

Comments

The clearing permit application was advertised on 13 September 2010 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

There is one Native Title Claim (WC96/61) over the area under application (GIS Database). This claim has been registered with the National 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.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title NNTT

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*, and the proposed clearing is at variance to Principle (f), is not likely to be at variance to Principles (a), (b), (c), (d), (g), (h), (i) and (j) and is not at variance to Principle (e).

5. References

- DEC (2010) List of Threatened Ecological Communities on the Department and Conservation's Threatened Ecological Community (TEC) Database endorsed by the Minister for the Environment. Species and Communities Branch, Department of Environment and Conservation.
- Department of Conservation and Land Management (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions.
- 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.
- Rio Tinto (2010) Flora and Vegetation of the Proposed Paraburdoo Magazine Explosives Compound Construction Area and ANFO Shed Relocation, Paraburdoo. Native Vegetation Clearing Permit Supporting Report. Unpublished report dated August 2010.
- 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.
- 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, Government of Western Australia, Perth, 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.
DMP	Department of Mines and Petroleum, Western Australia.
DoE	Department of Environment, Western Australia.
DoIR	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:

{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.