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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3855/1
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*, Special Lease for Mining Operations Document I 123612 L, Lot 175 on Deposited Plan 26146
Iron Ore (Hamersley Range) Agreement Act 1963, Special Lease for Mining Operations Document I 126349 L, Lot 215 on Deposited Plan 216769
Iron Ore (Hamersley Range) Agreement Act 1963, Special Lease for Mining Operations Document I 195323 L, Lot 32 on Deposited Plan 47815
Local Government Area: Shire of Roebourne
Colloquial name: 7 Mile Rail Yard Expansion

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
81		Mechanical Removal	Railway construction and associated activities

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 at a 1:250,000 scale for the whole of Western Australia and are useful to look at vegetation in a regional context.

The following Beard Vegetation Association has been mapped within the application area (GIS Database):

589: Mosaic: Short bunch grassland – savanna/grass plain (Pilbara)/Hummock grasslands, grass steppe; soft spinifex.

A flora and vegetation survey of the application area was conducted by Rio Tinto in April 2010. The following seven vegetation communities were identified (Rio Tinto Iron Ore, 2010):

Stony Clay Plain

1. AmixCcil: Mixed *Acacia* open to very open shrubland over *Cenchrus ciliaris* tussock grassland;

Clay Plain

2. AmixElCwTeTwCcilHmix: Mixed *Acacia* open to very open shrubland over *Eremophila longifolia, Corchorus walcottii* scattered low shrubs over *Triodia epactia, T. wiseana* open to very open hummock grassland over *Cenchrus ciliaris* very open tussock grassland over scattered mixed herbland;

3. AtCcil: *Acacia trachycarpa* open scrub over *Cenchrus ciliaris* closed tussock grassland;

4. AxTeGmixHmix: *Acacia xiphophylla*

Clearing Description
Hamersley Iron Pty Ltd has applied to clear up to 81 hectares within an application area of approximately 284.6 hectares (GIS Database). The application area is located approximately 10 kilometres west of Karratha (GIS Database).

The application is part of the 7 Mile Rail Yard project to expand the existing 7 Mile Rail Yard (Hamersley Iron, 2010). This includes geotechnical investigations, borrow pits, laydown areas, workshop facilities, rail tracks and unloading facilities (Hamersley Iron, 2010). Clearing will be by mechanical means.

Vegetation Condition
Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

to

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

Comment
The vegetation condition was assessed by botanists from Rio Tinto Iron Ore. The vegetation condition was described using a scale based on Trudgen (1988) and has been converted to the corresponding condition from the Keighery (1994) scale.

open shrubland over *Triodia epactia* scattered hummock grassland over mixed scattered tussock grassland over mixed scattered herbland

Gilgai Clay Plain

5. ApAbSpCcilHmix: *Acacia pyrifolia, A. bivenosa* very open to scattered low shrubland over *Sorghum plumosum, Cenchrus ciliaris* tussock grassland over mixed open herbland;

6. GmixHmix: Mixed tussock grassland over mixed herbland; and

7. ApGmixHmix: *Acacia pyrifolia* scattered low shrubs over mixed tussock grassland over mixed open herbland.

There are also areas mapped as heavily disturbed some of which are completely devoid of native vegetation, often consisting of monocultures Buffel Grass (*Cenchrus ciliaris*).

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

A flora and vegetation survey of the application area identified seven vegetation communities and areas that are 'heavily disturbed' (Rio Tinto Iron Ore, 2010). The vegetation condition of the application area ranged from 'excellent' to 'completely degraded' (Rio Tinto Iron Ore, 2010). The majority of the application area would be considered to be in 'completely degraded' condition due to the existing rail yard and invasion of Buffel Grass (*Cenchrus ciliaris*).

The flora survey of the application area recorded 70 native flora species from 51 genera and 22 families (Rio Tinto Iron Ore, 2010). There were three weed species recorded within the application area; Buffel Grass (*Cenchrus ciliaris*), Kapok Bush (*Aerva javanica*) and Speedy Weed (*Flaveria trinervia*) (Rio Tinto Iron Ore, 2010).

Species richness within the application area was relatively low for the Pilbara, which can be attributed to the high proportion of disturbed land within the application area (Rio Tinto Iron Ore, 2010). No Declared Rare or Priority Flora was recorded within the application area (Rio Tinto Iron Ore, 2010).

The vegetation units GmixHmix and ApGmixHmix have been identified as forming part of the Priority 1 Roebourne Plain coastal grasslands with gilgai microrelief on deep cracking clays (Roebourne Plains gilgai grasslands) Priority Ecological Community (PEC) (Rio Tinto Iron Ore, 2010). This PEC is restricted to the Karratha area. There has been 60 hectares of the Roebourne Plains gilgai grasslands PEC identified within the application area (Rio Tinto Iron Ore, 2010). There has been an additional 1,114 hectares of this PEC mapped in the Karratha area (Rio Tinto Iron Ore, 2010). Of the 60 hectares identified, up to 6 hectares is proposed to be cleared (Rio Tinto Iron Ore, 2010). Based on the mapped extent and the proposed impact on the PEC, the proposed clearing is not expected to have a significant impact on this PEC.

In addition, the Priority 3 Horseflat land system of the Roebourne Plains PEC has also been identified within the application area (Rio Tinto Iron Ore, 2010). This PEC makes up approximately 186 hectares of the application area, however, a large portion of this would be considered be heavily disturbed (Rio Tinto Iron Ore, 2010). Up to 70 hectares of this PEC is proposed to be cleared (Rio Tinto Iron Ore, 2010). Of these 70 hectares, 26 hectares is considered to be heavily disturbed (Rio Tinto Iron Ore, 2010). A vegetation survey in an adjacent area mapped approximately 1,401 hectares of this PEC in the local area (Biota Environmental Sciences, 2008). The Horseflat land system covers a broad area outside the application area and ranges in extent from Cape Preston to Whim Creek (a distance of over 400 kilometres). Given this PEC covers such a large area the clearing of 70 hectares is not expected to significantly impact the conservation of this PEC.

The presence of PEC's within the application area raises the diversity of the area from a floristic perspective, however, the PEC's have been recorded outside of the application area in both the local area and throughout the Roebourne subregion. However, it is important to note that the distribution and extents of the PEC's outside of the survey and application areas are not accurately known.

The application area has the potential to support several fauna species of conservation significance. The application area has been previously disturbed and has rail infrastructure running through it. Given this disturbance and habitat fragmentation, the application area is not likely to comprise a high level of faunal diversity.

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

Methodology Biota Environmental Sciences (2008)
Rio Tinto Iron Ore (2010)

(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 have been conducted over the application area. Broad fauna habitats within the application area have been identified as broad coastal plains supporting mixed *Acacia* shrublands over open spinifex grassland or scattered tussock grassland, and clay plains supporting mixed annual forbs and tussock grasses (Rio Tinto Iron Ore, 2010). The value of these habitats has been somewhat diminished as a result of historical clearing and fragmentation from existing rail infrastructure and access roads (Rio Tinto Iron Ore, 2010).

Searches of available databases identified 13 species of conservation significance as potentially occurring within the application area (Rio Tinto Iron Ore, 2010). The Lakeland Downs Mouse (*Leggadina lakedownensis*) (Priority 4) has been identified as being likely to occur (Rio Tinto Iron Ore, 2010). Whilst the clearing will result in the loss of some habitat, the application area is not likely to represent significant habitat for this or the other 12 conservation significant fauna species.

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

Methodology Rio Tinto Iron Ore (2010)

(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 within 50 kilometres of the application area (GIS Database). Rio Tinto Iron Ore (2010) conducted a flora survey of the application area on 13-14 April 2010. No DRF was recorded during this survey (Rio Tinto Iron Ore, 2010).

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

Methodology Rio Tinto Iron Ore (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**
According to available databases, there are no Threatened Ecological Communities (TEC's) within the application area (GIS Database). A vegetation survey of the application area was conducted by Rio Tinto Iron Ore (2010) on 13-14 April 2010. No TECs were recorded during this survey (Rio Tinto Iron Ore, 2010).

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

Methodology Rio Tinto Iron Ore (2010)
GIS Database
- Threatened Ecological Sites Bufferred

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments **Proposal is not at variance to this Principle**
The application area falls within the Pilbara Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 99.9% of the Pre-European vegetation remains (see table) (GIS Database, Shepherd, 2007).

The vegetation of the application area has been mapped as the following Beard vegetation association (GIS Database):

589: Mosaic: Short bunch grassland – savanna/grass plain (Pilbara)/Hummock grasslands, grass steppe; soft spinifex.

According to Shepherd (2007) approximately 100% of this Beard vegetation association remains at both a state and bioregional level. Therefore the area proposed to be cleared does not represent a significant remnant of native vegetation within 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	17,804,187	17,794,646	~99.9	Least Concern	6.3
Beard veg assoc. – State					
589	809,754	809,637	~100	Least Concern	1.6
Beard veg assoc. – Bioregion					
589	730,718	730,683	~100	Least Concern	1.8

* Shepherd (2007)
** Department of Natural Resources and Environment (2002)

Options to select from: Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment 2002)

Presumed extinct	Probably no longer present in the bioregion
Endangered	<10% of pre-European extent remains
Vulnerable	10-30% of pre-European extent exists
Depleted	>30% and up to 50% of pre-European extent exists
Least concern	>50% pre-European extent exists and subject to little or no degradation over a majority of this area

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 – Sub Regions)
- 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**
According to available databases, there is one minor ephemeral watercourse that passes through the southern tip of the application area (GIS Database). This watercourse has already been impacted by the current railway and access road (GIS Database). The proposed clearing is not likely to cause any significant additional impacts to this watercourse.

The application area is also known to become waterlogged following significant rainfall events (Rio Tinto Iron Ore, 2010). The application area is likely to only support water for short periods after rainfall events. Similar habitat exists over much of the Pilbara coastal plain (Rio Tinto Iron Ore, 2010).

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

Methodology Rio Tinto Iron Ore (2010)
GIS Database
- Hydrograpgy, linear
- Dampier and Extensions 50cm Orthomosaic – Landgate 2008

(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**
According to available databases, the application area is comprised of the Horseflat, Cherrawarra and Ruth land systems (GIS Database). The Ruth land system has a low erosion risk, parts of the Horseflat land system are prone to erosion and the Cheerawarra land system is highly susceptible to wind erosion if vegetation cover is removed (Payne and Tille, 1992). The large majority of the application area consists of the Horseflat land system (GIS Database).

No substantial land degradation is currently evident within the application area (Rio Tinto Iron Ore, 2010). The fringes of the northern boundary are at the junction of the Dampier Salt fields where soil erosion is evident, however, this area is not proposed to be cleared (Rio Tinto Iron Ore, 2010).

The northern portion and the southern tip of the application area have been mapped as having a moderate to low risk of having acid sulphate soils (GIS Database). The majority of these areas have been mapped as being 'Disturbed Vegetation' devoid of native vegetation (Rio Tinto Iron Ore, 2010). However, there will be some

clearing of vegetation within these acid sulphate soil risk areas.

Potential land degradation impacts may be minimised by the implementation of a staged clearing and rehabilitation condition.

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

Methodology Payne and Tille (1992)
Rio Tinto Iron Ore (2010)
GIS Database
- Acid Sulphate Soil Risk Map, Pilbara Coastline
- 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 databases, the application area is not located within any conservation areas or DEC managed lands (GIS Database). The nearest onshore conservation area is the ex pastoral lease Mardie Station located approximately 35 kilometres west of the application area (GIS Database). Based on this distance the environmental values of any conservation areas are not likely to be impacted.

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**
According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). There is one minor ephemeral watercourse that passes through the southern tip of the application area (GIS Database). The application area is also known to become waterlogged following significant rainfall events (Rio Tinto Iron Ore, 2010). These areas would only support surface water for short periods following significant rainfall events.

The groundwater salinity within the application area is between 1,000 – 3,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be brackish. The clearing of 81 hectares of vegetation within the application area is not likely to have a significant impact on the quality of groundwater in the local area.

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

Methodology Rio Tinto Iron Ore (2010)
GIS Database
- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSA's)

(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**
With an average annual rainfall of 276.1 millimetres and an average annual evaporation rate of 3,400 millimetres there is likely to be little surface flow during normal seasonal rains (BoM, 2010; GIS Database). However, the application area has some low lying depressions that may be flooded following cyclonic activity and sporadic thunderstorms (Rio Tinto Iron Ore, 2010). Whilst large rainfall events may result in the flooding of the area, the proposed clearing is not likely to lead to an increase in incidence or intensity of flooding.

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

Methodology GIS Database
- Evaporation Isopleths

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

Comments

There is one native title claim over the application area under application; WC99/014 (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.*

According to available databases, there are no 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 the 9 August 2010 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

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

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 may be at variance to Principles (a) and (g), is not likely to be at variance to Principles (b), (c), (d), (f), (h), (i) and (j) and is not at variance to Principle (e).

5. References

Biota Environmental Sciences (2008). A Vegetation and Flora Survey of the Proposed Dampier Salt Saltfield Expansion, unpublished report prepared for Dampier Salt Limited, prepared by Biota Environmental Sciences Pty Ltd.

Bureau of Meteorology (2010) BOM Website - Climate statistics for Australian locations, Averages for Karratha Aero. Available online at: http://www.bom.gov.au/climate/averages/tables/cw_004083.shtml Accessed on 22 September 2010.

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.

Hamersley Iron (2010) Application for clearing permit application CPS 3855/1. Received by the Department 22/7/10.

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

Payne, A.L and Tille, P.J (1992) Technical Bulletin No. 83: An inventory and condition survey of the Roebourne Plains and Surrounds, Western Australia. Department of Agriculture, South Perth, Western Australia.

Rio Tinto Iron Ore (2010) Flora and Vegetation Survey of the 7 Mile Rail Yard Expansion. Supporting documentation for clearing permit application CPS 3855/1.

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.

Trudgen M.E. (1988) A Report on the Flora and Vegetation of the Port Kennedy Area. Unpublished report prepared for Bowman Bishaw and Associates, West Perth.

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.