



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3769/1
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 Mine

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.8		Mechanical Removal	Road construction

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
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; Shepherd, 2007): 181: Shrublands; mulga and snakewood scrub. A vegetation survey of the application area was undertaken by Rio Tinto botanists between 11 to 16 March and on 21 May 2009 (Rio Tinto, 2009). The following vegetation type was identified within the application area:	Hamersley Iron Pty Ltd has applied to clear up to 0.8 hectares of native vegetation for the purpose of road construction. The application area is located approximately 10 kilometres east, north-east of Paraburdoo at the Paraburdoo minesite (GIS Database). Vegetation will be cleared through the use of a dozer, blade down. Cleared vegetation will be stockpiled and used for rehabilitation.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994). To Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).	Vegetation descriptions were derived from descriptions by Rio Tinto Pty Ltd (Rio Tinto, 2009).

Hillslopes: *Acacia hamersleyensis*, *Acacia aneura* var. *pilbarana*, *Grevillea berryana* scattered low trees over *Acacia tetragonophylla*, *Senna artemisioides* subsp. *olygophylla*, *Eremophila cuneifolia* scattered shrubland over *Ptilotus omcanus* low open shrubland over *Triodia longiceps* open hummock grassland (Rio Tinto, 2009).

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 is located within the Hamersley subregion of the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). This subregion generally consists of mountainous areas of Proterozoic sedimentary ranges and plateaux, dissected by gorges (basalt, shale and dolerite) (Kendrick, 2001). The Hamersley subregion generally contains 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 (Kendrick, 2001).

The vegetation within the application area consists of Beard Vegetation Associations 82 and 181, which are considered both common and widespread throughout the Pilbara region, with approximately 100% of these pre-European vegetation types remaining in both the State and the Pilbara Bioregion (GIS Database; Shepherd, 2007).

A vegetation survey was conducted over the application area and its surrounding vegetation by Rio Tinto botanists between 11 to 16 March and on 21 May 2009 (Rio Tinto, 2009). Rio Tinto (2009) identified a total of 136 native and introduced flora species from 74 genera representing 38 families within the study area. Rio Tinto (2009) reports that this represents fairly low species richness for the Pilbara region and attributes this to the high proportion of disturbed land within the survey area. Furthermore, the rocky slopes and hilltop habitats are typically dry for most of the year and hence do not exhibit high flora species richness (Rio Tinto, 2009). Rio Tinto (2009) states that the low diversity of habitat types, and on a broader scale land systems, represented within the survey area is also considered to contribute to low species richness.

Two weed species have been identified within the application area: *Aerva javanica* and *Cenchrus ciliaris* (Rio Tinto, 2009). The presence of introduced weed species lowers the biodiversity value of the proposed clearing area. Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. The risk of spreading weed species can be mitigated by imposing a condition for the purpose of weed management.

A fauna survey of the application area was not conducted, however, Rio Tinto (2009) reviewed databases held by the Department of Environment and Conservation, the Department of Environment, Heritage and the Arts, the Western Australian Museum and Rio Tinto. A total of 13 listed threatened or migratory fauna species were identified as potentially occurring within the application area, however, an assessment of each species found that habitat within the study area was largely inadequate or restricted to marginal foraging habitat (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)
Shepherd (2007)
GIS Database:
- IBRA WA (Regions - Sub Regions)
- Pre European Vegetation
- Register of National Estate

(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**

According to available databases, there are no known records of threatened fauna within the application area (GIS Database). No formal fauna assessments have been conducted within the application area, however, databases held by the Department of Environment and Conservation, the Department of Environment, Heritage and the Arts, the Western Australian Museum and Rio Tinto have been reviewed as well as habitats observed during the vegetation survey recorded (Rio Tinto, 2009).

Two fauna habitats have been identified within the application area:

- Rocky breakaway and overhang habitat;
- Stony plains habitat.

The 'Rocky breakaway and overhang habitat' provides potential temporary shelter for macropod species and some reptiles (Rio Tinto, 2010). Elevated positions located within the application area may be utilised by raptors, although the proximity to an active mine pit with large areas of ground devoid of vegetation and foraging habitat would make it less ideal for permanent fauna populations (Rio Tinto, 2010).

The 'Stony plains habitat' may provide potential foraging and shelter opportunities for a variety of species moving through the landscape, although it is considered unlikely this small area would constitute core habitat for fauna due to the surrounding disturbance (Rio Tinto, 2010).

A total of 13 listed threatened or migratory fauna species have been identified as potentially occurring within the application area, however, an assessment of each species found that habitat within the study area was largely inadequate or restricted to marginal foraging habitat (Rio Tinto, 2009).

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

Methodology Rio Tinto (2009)
GIS Database:

(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 datasets there are no known records of Declared Rare Flora (DRF) or Priority Flora species within the application area (GIS Database). The nearest recorded location of a DRF (*Lepidium catapycnon*) is approximately 56 kilometres north, north-east of the application area (GIS Database).

A flora and vegetation survey of the application area was conducted by Rio Tinto across seven days from 11 to 16 March and on 21 May 2009. This survey was conducted by traversing the application area on foot mapping vegetation communities and recording the locations of conservation significant flora, weeds and other flora of interest (Rio Tinto, 2009).

No DRF or Priority Flora species were recorded within the application area during the flora and vegetation survey (Rio Tinto, 2009).

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

Methodology Rio Tinto (2009)

(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) or Priority Ecological Communities (PEC's) within or in the vicinity of the application area (GIS Database; Rio Tinto, 2009). There are no known TEC's within a 100 kilometre radius of the application area and the nearest PEC located approximately 92 kilometres north-east (GIS Database). Given the distance between the proposal and the nearest known TEC and PEC, the proposed clearing is not likely to impact on the conservation of these communities.

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

(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 of 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 181: Shrublands; mulga and snakewood scrub (Shepherd, 2007). According to Shepherd (2007) there is approximately 100% of this vegetation type remaining in the State and the Pilbara Bioregion (see table below).

According to Bioregional Conservation Status of Ecological Vegetation Classes the conservation status for Beard Vegetation Association 181 within the Pilbara Bioregion 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). As a result, the conservation of the vegetation associations within the bioregion are not likely to be impacted upon by the proposal.

	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					
181	1,697,291	1,697,291	~100	Least Concern	~2.4
Beard veg assoc. - Bioregion					
181	65,091	65,091	~100	Least Concern	~4.9

* 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 - Sub Regions)
- Pre European Vegetation
- Paraburdoo 50cm Orthomosaic

(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 may be at variance to this Principle

There are no permanent wetlands or watercourses within the application area (GIS Database; Rio Tinto, 2009). Two drainage lines traverse the application area, which may result in the loss of vegetation associated with a watercourse (GIS Database). These drainage lines are ephemeral in nature and only flow following significant rainfall events (Rio Tinto, 2009).

The proposed clearing is likely to have a negligible impact on minor watercourses outside the application area (Rio Tinto, 2009). The loss of vegetation is not likely to significantly increase runoff or sediment transport to the watercourses nor is the removal of riparian vegetation likely to destabilise creek banks (Rio Tinto, 2009).

As there are watercourses within the application area, the proposed clearing may be at variance to this Principle. However these creek systems largely act as minor drainage lines that are widespread across the Pilbara region and responsible for quickly dispersing floodwaters after significant rainfall events (GIS Database; ANRA, 2007). The two watercourses present within the application area currently suffer from varying levels of degradation associated with weed infestations, creation of vehicle tracks and altered hydrology caused by mining activities (Rio Tinto, 2009). The vegetation communities growing in association with the watercourses are not unique and are considered common and widespread in the Pilbara bioregion (GIS Database; Rio Tinto, 2009).

Methodology ANRA (2007)
Rio Tinto (2009)
GIS database:
- Hydrography, Linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

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

The application area has been mapped as occurring within the Newman and River Land Systems (GIS Database; Rio Tinto, 2009).

The Newman Land System consists of rugged jaspilite plateaux, ridges and mountains with hard spinifex which typify much of the Pilbara (GIS Database; Rio Tinto, 2009). The Newman Land System is common and widespread in the Pilbara bioregion, and is the second largest land system occupying an area of approximately 1,993,742 hectares (Rio Tinto, 2009). The Newman Land System is comprised of four landform units: Plateaux, ridges, mountains and hills; Lower slopes; Stony plains; and Narrow drainage floors with channels (Payne et al., 1998). Analysis of aerial photography indicates the application area is most likely to occur within the landform units: Plateaux, ridges, mountains and hills; and Narrow drainage floors with channels (Payne et al., 1988). The Newman Land System has stony surface materials which are likely to show high resistance to erosion (Payne et al., 1988). The proposed clearing may expose surface mantles which may cause an increase in surface

water runoff, however, given the stony nature of the surface materials water and/or wind erosion is unlikely to occur.

The River land system is described by Payne et al. (1988) as consisting of active flood plains and major rivers supporting grassy eucalypt woodlands, tussock grasslands and soft spinifex grasslands. This system is largely stabilised by buffel grass and spinifex and accelerated erosion is uncommon, however, susceptibility to erosion is high or very high if vegetative cover is removed (Payne et al., 1988). The River Land System is primarily located around the southern section of the application area (GIS Database). Aerial imagery indicates that this section of the proposal has been highly modified and the vegetation quite sparse (GIS Database). Rio Tinto (2009) reports that this area of the proposal is in a good to poor condition as a result of previous impacts of clearing topsoil, grading and drilling activities.

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

Methodology Payne et al. (1998)
Rio Tinto (2009)
GIS Database:
- Paraburdoo 50cm Orthomosaic
- Rangeland Land System Mapping

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

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

The proposed clearing is not located within any conservation areas (GIS Database). The nearest Department of Environment and Conservation managed land is Karijini National Park located approximately 42 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:
- Environmentally Sensitive Areas
- Schedule One Areas
- DEC Tenure

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

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

The application area is located in a semi-desert-tropical region, within the Ashburton River catchment. The Paraburdoo area has an average annual rainfall of approximately 283.8 millimetres (BoM, 2010) falling mainly during the summer months, although rainfall may vary widely from year to year (ANRA, 2007). With an average annual pan evaporation rate of 3200-4000 millimetres, the presence of surface water resulting from significant rain events is relatively short lived (Eberhard et al., 2004).

There are no permanent watercourses or wetlands within the application area (GIS Database; Rio Tinto, 2009). Two minor watercourses traverse the application area (GIS Database). None of these watercourses are perennial.

It is likely that existing surface water quality within the minor drainage lines traversing the site have been affected by previous clearing activities within the Paraburdoo mine site. It is unlikely that the proposed clearing activity will significantly increase runoff or sediment transport to the watercourses present within and surrounding the application area (GIS Database; Rio Tinto, 2009).

The proposed clearing is unlikely to have any impacts on the quality of underground water due to the small size (0.8 hectares) of the area applied to be cleared.

The application is not located within a Public Drinking Water Source Area (GIS Database).

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

Methodology ANRA (2007)
BoM (2010)
Eberhard et al. (2004)
Rio Tinto (2009)
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). The small area to be cleared (0.8 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).

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

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

Comments

There are two native title claims over the area under application; (WC97/043) and (WC98/069) (GIS Database). These claims have been registered with the National Native Title Tribunal on behalf of the claimant group. 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 (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a permit is not a future act under the *Native Title Act 1993*.

According to available databases 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 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 application was advertised on 31 May 2010 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received during the public comment period raising no objections.

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 s51O of the *Environmental Protection Act 1986*, and the proposed clearing may be 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

- ANRA (2007) Australian Natural Resources Atlas: Rangelands overview; Pilbara. Available online from: <http://www.anra.gov.au/tropics/rangelands/overview/wa/ibra-pil.html> Last accessed 14 July, 2010.
- BoM (2010) Bureau of Meteorology. Climate Statistics for Australian Locations - Paraburdoo. Available online from: http://www.bom.gov.au/climate/averages/tables/cw_007178.shtml Last accessed 14 July, 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.
- Eberhard, S.M., Halse, S.A., Scanlon, M.D., Cocking, J.S., and Barron H.J. (2004) Assessment and conservation of aquatic life in the subsurface of the Pilbara region, Western Australia. Available online from: http://www.subterraneanecology.com.au/file%20downloads/Pascalis_proceedings_CALM.pdf Last accessed 14 July, 2010.
- 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 3 (PIL3 - Hamersley subregion). In a Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management, pp 568-580.
- Payne, A.L., Mitchell, A.A., and Holman, W.F. (1988) Technical Bulletin No. 62; An inventory and condition survey of rangelands in the Ashburton River catchment, Western Australia. Department of Agriculture, Western Australia.
- Rio Tinto (2009) Flora and Vegetation Survey of the Paraburdoo Mine Development & Supporting Documentation for a Native Vegetation Clearing Permit Application. Native Vegetation Clearing Permit Supporting Report prepared by Rio Tinto Botanists, December 2009.
- 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.

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 in 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.