



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5189/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Pilbara Manganese Pty Ltd**

1.3. Property details

Property: Mining Lease 45/430
Mining Lease 45/431
Mining Lease 45/1218
Local Government Area: Shire of East Pilbara
Colloquial name: Hunter Manganese Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
62		Mechanical Removal	Mineral Production and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 11 October 2012

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 for the whole of Western Australia. One Beard vegetation association has been mapped within the application area (GIS Database):

177: Hummock grasslands, sparse shrub steppe; *Acacia bivenosa* over hard spinifex, *Triodia brizoides* (GIS Database).

Surveys of the application area have been conducted by Mattiske Consulting in May and June 2007 and by MBS Environmental in 2010 (MBS Environmental, 2012). These surveys identified the following six vegetation communities within the application area (MBS Environmental, 2012):

3 - Scrub or Thicket of *Carissa lanceolata*, *Petalostylis labicheoides*, *Acacia bivenosa* and *Acacia ancistrocarpa* over *Triodia pungens*, *Triodia basedowii*, **Cenchrus ciliaris* and *Chrysopogon fallax* along minor watercourses;

5 - Scrub or Low Shrubland of *Acacia ancistrocarpa*, *Acacia arida*, *Acacia acradenia*, *Petalostylis labicheoides*, *Gossypium australe*, *Acacia synchronica* and *Acacia inaequilatera* over *Triodia longiceps* and *Triodia wiseana* with patches of **Cenchrus ciliaris* on flats, often associated with major watercourses;

6 - Low Shrubland of *Acacia arida* and *Acacia hilliana* over *Triodia wiseana* and *Dampiera candidans* on slopes and hilltops;

7 - Hummock Grassland of *Triodia longiceps* with scattered *Acacia bivenosa*, *Acacia synchronica* and *Acacia Ptychophylla* on flats and lower slopes;

8 - Hummock Grassland of *Triodia longiceps* and *Triodia wiseana* with occasional *Grevillea wickhamii* subsp. *hispidula* on flats and lower slopes; and

10 - Hummock Grassland of *Triodia basedowii*, *Triodia pungens* and *Triodia wiseana* with *Acacia bivenosa*, *Acacia pyrifolia* var. *morrisonii*, *Acacia synchronica*, *Hakea lorea* subsp. *lorea* and emergent *Corymbia hamersleyana* and *Corymbia aspera* on undulating plains and slopes.

Clearing Description Pilbara Manganese Pty Ltd is proposing to clear up to 62 hectares of native vegetation within a broader boundary of approximately 177.7 hectares for the purpose of mineral operations including open pits, waste rock landforms, topsoil stockpiles, haul roads, sedimentation ponds and associated infrastructure.

Clearing will be conducted using a bulldozer and the vegetation and topsoil will be stockpiled for rehabilitation.

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

Comment The application area is located within the Pilbara region of Western Australia and is situated approximately 116 kilometres east north east of Nullagine.

2.1.2.

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 lies within the Chichester (PIL1) sub-region of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This sub-region is characterised by undulating Archaen granite and basalt plains with significant areas of basaltic ranges (CLM, 2002). Broadly, the plains support a shrub steppe characterised by *Acacia inaequilatera* over *Triodia wiseana* hummock grasslands on plains, while *Eucalyptus leucophloia* tree steppes occur on ranges (CALM, 2002).

A total of 18 flora and vegetation surveys have been conducted over the Woodie Woodie tenements with a total of 335 taxa from 136 genera and 48 families being recorded within the area (MBS Environmental, 2012). A total of 17 vegetation communities have been identified within the Woodie Woodie tenements, six of which occur within the application area (MBS Environmental, 2012). These communities are well represented throughout the region and are not considered to be locally or regionally significant (MBS Environmental, 2012).

The application area is located within the buffer zone of a Priority 3 Ecological Community (PEC) - Stony saline clay plains of the Mosquito Land System (GIS Database). The application area is not located within the Mosquito Land System (GIS Database). The Mosquito Land System is approximately 55 kilometres south west of the application area at its closest point (GIS Database). At this distance it is considered unlikely that the proposed clearing will impact upon this PEC.

According to available databases, there are no Threatened or Priority Flora within the application area (GIS Database). Flora and vegetation surveys conducted over the application area have not identified any Threatened or Priority Flora species (MBS Environmental, 2012).

Ten introduced flora species, *Aerva javanica*, *Cenchrus ciliaris*, *Chloris barbata*, *Citrullus lanatus*, *Cynodon dactylon*, *Datura leichhardtii*, *Flaveria trinervia*, *Malvastrum americanum*, *Portulaca oleracea* and *Vachellia farnesiana*, have been recorded within the Woodie Woodie tenements during numerous flora and vegetation surveys (MBS Environmental, 2012). Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. This can in turn lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. None of these species are listed as 'Declared Plant' species under the *Agriculture and Related Resources Protection Act 1976* by the Department of Agriculture and Food. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Western Wildlife (2009) have undertaken two detailed spring and autumn fauna surveys over the Woodie Woodie tenements in 2006/2007 and 2008/2009 as well as a spring survey in 2008. A total of 274 fauna species have the potential to occur within the Woodie Woodie area. This includes up to seven amphibians, 78 reptiles, 138 birds and 51 mammal species. Of these, five amphibian, 60 reptile, 93 bird and 23 (19 native) mammal species have been observed within the Woodie Woodie tenements (Western Wildlife, 2009). The fauna habitats within the application area are common and widespread regionally (MBS Environmental, 2012). It is considered unlikely that the proposed clearing will impact upon faunal diversity locally or regionally.

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

Methodology CALM (2002)
MBS Environmental (2012)
Western Wildlife (2009)
GIS Database:
- IBRA WA (regions – subregions)
- Rangeland Land System Mapping
- Threatened and Priority Flora
- 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**

Western Wildlife (2009) have undertaken two detailed spring and autumn fauna surveys over the Woodie Woodie tenements in 2006/2007 and 2008/2009 as well as a spring survey in 2008. Methods used to survey the fauna of the Woodie Woodie tenements include:

- Trapping for reptiles, amphibians and small mammals;
- Spotlighting and head-torching;
- Bat surveys;

- Bird surveys; and
- Recoding of opportunistic sightings.

Four fauna habitat types have been identified within the application area (MBS Environmental, 2012):

- Spinifex on rocky hills;
- Spinifex on low stony hills;
- Spinifex on lower slopes and flats; and
- Minor creek-lines.

These habitats are common both locally and regionally (MBS Environmental, 2012).

A total of 274 fauna species have the potential to occur within the Woodie Woodie area. This includes up to seven amphibians, 78 reptiles, 138 birds and 51 mammal species. Of these, five amphibian, 60 reptile, 93 bird and 23 (19 native) mammal species have been observed within the Woodie Woodie tenements (Western Wildlife, 2009).

Fauna surveys of the Woodie Woodie tenements conducted by Western Wildlife (2009) have recorded one conservation significant fauna species, Rainbow Bee-eater (*Merops ornatus*) within the application area (MBS Environmental, 2012). The Rainbow Bee-eater is a common species which migrates southwards in summer to breed (MBS Environmental, 2012). The proposed clearing of 62 hectares of native vegetation adjacent to existing mining operations is unlikely to impact on the conservation of this species.

Based on the Western Wildlife (2009) fauna surveys and the habitats present within the application area, five additional conservation significant species are considered moderately to highly likely to occur within the application area (MBS Environmental, 2012):

- Western Pebble-mound Mouse (*Pseudomys chapmani*) - DEC Priority 4 - Inactive mounds have been recorded within Woodie Woodie tenements, however, no mounds were recorded within the application area (Western Wildlife, 2009);
- Australian Bustard (*Ardeotis australis*) – DEC Priority 4;
- Bush Stone-curlew (*Burhinus grallarius*) – DEC Priority 4;
- Lakelands Downs Mouse (*Leggadina lakedownensis*) – DEC Priority 4; and
- Spectacled Hare-Wallaby (*Lagorchestes conspicillatus*) – DEC Priority 3;

Suitable habitat for these species is common within the Woodie Woodie area and regionally therefore the proposed clearing is considered unlikely to impact upon the conservation of this species (Western Wildlife, 2009).

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

Methodology MBS Environmental (2012)
Western Wildlife (2009)

(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 Threatened Flora species within the application area (GIS Database).

Numerous flora surveys have been conducted over the Woodie Woodie tenements (MBS Environmental, 2012). No Threatened Flora species have been recorded within the Woodie Woodie tenements (MBS Environmental, 2012).

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

Methodology MBS Environmental (2012)
GIS Database:
- Threatened and Priority Flora

(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 records of Threatened Ecological Communities (TEC's) within the application area (GIS Database). The nearest known TEC is located approximately 120 kilometres south west of the application area (GIS Database). At this distance there is little likelihood of any impact to the TEC as a result of the proposed

clearing.

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

Methodology 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 application area is located within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The Government of Western Australia (2011) reports that approximately 99.58% of the pre-European vegetation remains in the Pilbara bioregion.

The vegetation in the application area has been broadly mapped as Beard vegetation association:

177: Hummock grasslands, sparse shrub steppe; *Acacia bivenosa* over hard spinifex, *Triodia brizoides* (GIS Database).

According to the Government of Western Australia (2011) approximately 99.82% of Beard vegetation association 177 remains within the Pilbara bioregion (see table below).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,804,427	17,729,352	~99.58	Least Concern	~6.32
Beard vegetation associations - State					
177	169,446	169,141	~99.82	Least Concern	~0.00
Beard vegetation associations - Bioregion					
177	169,446	169,141	~99.82	Least Concern	~0.00

* Government of Western Australia (2011)

** Department of Natural Resources and Environment (2002)

The vegetation within the application area is not considered to be a remnant of vegetation in an area that has been extensively cleared.

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

Methodology Department of Natural Resources and Environment (2002)
Government of Western Australia (2011)
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

According to available databases there are no permanent wetlands or watercourses within the application area however, several non-perennial watercourses are present (GIS Database).

MBS Environmental (2012) has identified one vegetation community within the application area growing in association with watercourses. This vegetation community and minor non-perennial watercourses are common throughout the Woodie Woodie tenements, therefore the small amount of clearing (62 hectares) is considered unlikely to impact upon this vegetation community.

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

Methodology MBS Environmental (2012)
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 may be at variance to this Principle

According to the available databases the application area intersects the Coongimah and Paterson land systems (GIS Database).

The Coongimah land system is characterised by plateau surfaces, low hills with steep slopes and undulating uplands supporting hard Spinifex grasslands (Van Vreeswyk et al, 2004). This system has a very low erosion risk (Van Vreeswyk et al, 2004).

The Paterson land system is characterised by stony and sandy plains with isolated low hills of sandstone or conglomerate supporting hard spinifex (and occasionally soft spinifex) grasslands and minor tussock grasslands (Van Vreeswyk et al, 2004). This land system is generally not prone to erosion however, the alluvial plains and some drainage floors are moderately susceptible if vegetation cover is depleted (Van Vreeswyk et al., 2004).

Both land systems within the application area have slight to moderate potential of soil erosion. Potential erosion impacts as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

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

Methodology Van Vreeswyk et al. (2004)
GIS Database:
- Rangeland Land System Mapping

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

Comments Proposal is not at variance to this Principle

The application area is not located within a conservation reserve (GIS Database). The nearest conservation reserve is the Meentheena Former Leasehold located approximately 43 kilometres west of the application area (GIS Database).

Based on the above, the proposed clearing is not 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

The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is the Nullagine Water Reserve, approximately 109 kilometres west south west of the application area (GIS Database). At this distance it is considered unlikely that the proposed clearing will impact on the quality of the Nullagine Water Reserve.

The groundwater salinity within the application area is between 500 - 1,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). Given the proposed clearing is for 62 hectares within the Hamersley Groundwater Province (10,166,832 hectares), the proposed clearing is not likely to cause salinity levels within the application area to alter significantly.

There are no permanent wetlands or watercourses within the application area (GIS Database). It is therefore considered unlikely that the proposed clearing will impact on the quality of any surface water.

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

Methodology GIS Database:
- Groundwater Provinces
- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)

(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 East Pilbara region is an arid environment with an average annual rainfall of approximately 366.8 millimetres and an average annual evaporation rate of approximately 3,800 millimetres (BoM, 2012; GIS Database). Rainfall within the region is characterised by high intensity associated with thunderstorms and

cyclones (MBS Environmental, 2012). Natural flooding does occur within the Pilbara region following such high intensity rainfall, however the proposed clearing of approximately 62 hectares of native vegetation is not expected to increase the incidence or intensity of such events.

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

Methodology BoM (2012)
MBS Environmental (2012)
GIS Database:
- Evaporation Isopleths

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

Comments

There is one Native Title Claim (WC99/8) over the area under application (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*.

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.

The clearing permit application was advertised on 20 August 2012 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received in relation to the proposed clearing requesting a map of all clearing permits granted within the Shire of East Pilbara. A map was provided to the submission party.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims – Registered with the NNTT

4. References

- BoM (2012) BoM Website - Climate Averages by Number, Averages for TELFER
AERO.www.bom.gov.au/climate/averages/tables.shtml (Accessed 27 September 2012)
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management
- 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.
- Government of Western Australia (2011) 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- MBS Environmental (2012) Woodie Woodie Operations Clearing Permit (Purpose Permit) Application, Hunter Project Area - Native Vegetation Management Plan and Assessment of Clearing Principles, Unpublished report prepared for Pilbara Manganese Pty Ltd dated July 2012.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia, Department of Agriculture, Western Australia.
- Western Wildlife (2009) Woodie Woodie Project Area: Fauna Survey October 2008 and April 2009. Unpublished report prepared for MBS Environmental dated June 2009.

5. Glossary

Acronyms:

BoM Bureau of Meteorology, Australian Government
CALM Department of Conservation and Land Management (now DEC), Western Australia
DAFWA Department of Agriculture and Food, Western Australia
DEC Department of Environment and Conservation, Western Australia
DEH Department of Environment and Heritage (federal based in Canberra) previously Environment Australia

DEP	Department of Environment Protection (now DEC), 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 (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
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 Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

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.