



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3843/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **BHP Billiton Iron Ore Pty Ltd**

1.3. Property details

Property: *Iron Ore (Mt Newman) Agreement Act 1964*, Mineral Lease 244SA (AML70/244)
Miscellaneous Licence 52/109
Local Government Area: Shire of East Pilbara
Colloquial name: Jimblebar Rail Spur Duplication

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
40		Mechanical Removal	Geotechnical Investigations, ancillary rail infrastructure and associated activities

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 and are useful to look at vegetation in a regional context. The following Beard Vegetation Associations are located within the application area (GIS Database):	BHP Billiton Iron Ore Pty Ltd has applied to clear up to 40 hectares within an application area of approximately 246.4 hectares (GIS Database). The application area is located approximately 27 kilometres east of Newman (GIS Database).	Pristine: No obvious signs of disturbance (Keighery, 1994).	The vegetation condition had been assessed by botanists from ENV Australia.
82: Hummock grasslands, low tree steppe; snappygum over <i>Triodia wiseana</i> ; and	The application is part of the Jimblebar Rail Spur Duplication Project (BHP Billiton, 2010). This includes geotechnical investigations, construction of borrow pits, access tracks, laydown areas, fibre optic cable installation an establishment of temporary water pipelines and turkeys nests (BHP Billiton, 2010). Clearing will be by mechanical means.	to	The application area has been subject to previous disturbances from mining related activities (BHP Billiton, 2010).
216: Low woodland; mulga (with spinifex) on rises.		Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).	
A flora and vegetation survey of the application area was conducted by ENV Australia in March 2010. The following six vegetation communities were identified (ENV Australia, 2010a):			

Triodia Hummock Grassland

1. Hummock grassland of *Triodia brizoides*, *Triodia sp.* Shovelanna Hill (S. Van Leeuwen 3855) and *Triodia pungens* with High Open Shrubland of *Acacia synchronica*, *Grevillea wickhamii* and *Hakea lorea var. lorea* with Scattered Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* on Red Brown Loam on Hillslopes;

2. Open Hummock Grassland of *Triodia brizoides* with High Open Shrubland of *Acacia synchronica*, *Hakea chordophylla* and *Grevillea wickhamii* with Low Open Shrubland of *Acacia adoxa var. adoxa*, *Acacia paraneura* and *Acacia melleodoraon* Red Brown Loam on Hills;

Triodia Open Hummock Grassland

3. Open Hummock Grassland of *Triodia*

pungens with Open Shrubland of *Acacia ancistrocarpa*, *Acacia melleodora*, *Acacia coriacea* subsp. *pendens* and *Hakea chordophylla* with Low Open Woodland of *Corymbia deserticola* subsp. *deserticola* on Red Brown Loam on Plains;

Acacia Low Woodland

4. Low Woodland of *Acacia catenulate* subsp. *occidentalis* and *Acacia aneura* var. *macrocarpa* with Very Open Hummock Grassland of *Triodia brizoides* with Scattered Shrubs of *Eremophila forrestii* subsp. *forrestii* on Red Brown Clayey Loam on Plains;

Acacia High Shrubland

5. High Shrubland of *Acacia melleodora* and *Grevillea wickhamii* with Very Open Hummock Grassland of *Triodia brizoides* and *Triodia pungens* with Low Open Woodland of *Corymbia hamersleyana* and *Eucalyptus gamophylla* (mallee) in Drainage Lines; and

6. Completely Degraded/Degraded areas.

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 and surrounds have been subject to numerous flora and vegetation assessments in recent years. ENV Australia's (2010a) vegetation survey of the application area identified five vegetation communities. The condition of the vegetation ranged from 'pristine' to 'completely degraded' (ENV Australia, 2010a).

The flora survey of the application area recorded 89 flora species from 43 genera and 19 families (ENV Australia, 2010a). No introduced species were recorded during the time of the survey, however, there are likely to be some present which may have been absent during the time of the survey, due to the dry conditions at the time of the survey (ENV Australia, 2010a). No Declared Rare or Priority Flora species were recorded during the survey (ENV Australia, 2010a).

Compared to surveys of nearby areas, the application area appears to possess a lower level of species richness (BHP Billiton, 2010). However, this may be attributed to the survey being conducted prior to significant rainfall in the region, where some species may have been absent (BHP Billiton, 2010).

Three fauna species of conservation significance are considered 'likely' to occur within the application area (ENV Australia, 2010b). The fauna habitats present within the application area are considered to be common and widespread within the bioregion (ENV Australia, 2010b). Excluding completely degraded areas the habitats present were rated as having either 'moderate' or 'low' habitat value (ENV Australia, 2010b)

The flora and fauna communities of the application area are considered to be typical of the area and not considered to comprise a higher level of diversity than the surrounding areas (BHP Billiton, 2010).

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

Methodology BHP Billiton (2010)
ENV Australia (2010a)
ENV Australia (2010b)

(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

A Level One fauna survey was undertaken within the application area by ENV Australia on 15-18 March 2010. This survey identified the following four broad habitat types within the application area (ENV Australia, 2010b):

1. Low Hill;
2. Minor Drainage Line;
3. Alluvial Plain; and
4. Stony Plain.

In addition to these habitats there are also some areas that were completely degraded that have no habitat value for native fauna (ENV Australia, 2010b). The Low Hill, Minor Drainage Line and Alluvial Plain habitats were all judged to have 'moderate' habitat value (ENV Australia, 2010b). The Stony Plain habitat occupied the largest area and was rated as having a 'low' habitat value (ENV Australia, 2010b). However, two inactive Western Pebble-mound Mouse (*Pseudomys chapmani*) (DEC Priority 4 listing) mounds were recorded from this habitat (ENV Australia, 2010b).

The Western Pebble-mound Mouse is common to very common in the Pilbara where habitat of scree slopes and stony plains are present (Start et al., 2000). Similar habitat for the Western Pebble-mound Mouse is common throughout the Pilbara and given the relatively small area of habitat proposed to be cleared, the impact on this species is not likely to be significant.

Several other species have the potential to occur within the application area, however, the following two species are considered 'likely' to occur (ENV Australia, 2010b):

Australian Bustard (*Ardeotis australis*) – DEC Priority 4; and
Rainbow Bee-eater (*Merops ornatus*) – Migratory, *Environment Protection and Biodiversity Conservation Act 1999*.

Given the ecology and distribution of both these species, neither is likely to be dependent on the application area and is likely to disperse to neighbouring areas at the onset of clearing (ENV Australia, 2010b).

Whilst the proposed clearing may result in the fragmentation of local habitats, the habitats present are well represented throughout the Pilbara bioregion and are not likely to represent significant habitat for native fauna.

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

Methodology ENV Australia (2010b)
Start et al. (2000)

(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 records of Declared Rare Flora (DRF) within the application area (GIS Database). A flora survey of the application area was conducted by ENV Australia on 15-18 March 2010. This survey did not record any DRF or note any habitat suitable for DRF (ENV Australia, 2010a).

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

Methodology ENV Australia (2010a)
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). The vegetation survey did not identify any vegetation communities described as a TEC (ENV Australia, 2010a).

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

Methodology ENV Australia (2010a)
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 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 Associations (GIS Database):

82: Hummock grasslands, low tree steppe; snappygum over *Triodia wiseana*; and
216: Low Woodland; mulga (with spinifex) on rises.

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 vegetation Associations - State					
82	2,565,901	2,565,901	~100	Least concern	~10.2
216	280,759	280,759	~100	Least concern	No data available
Beard vegetation Associations - Pilbara					
82	2,563,583	2,563,583	~100	Least concern	~10.2
216	26,670	26,670	~100	Least concern	No data available

* 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 may be at variance to this Principle

According to available databases, there are several ephemeral watercourses traversing the application area (GIS Database). The *Acacia* High Shrubland vegetation community has been identified as being associated with ephemeral drainage lines, therefore, the application will result in the clearing of some riparian vegetation (ENV Australia, 2010a). This vegetation community is not considered to be representative of a groundwater dependant ecosystem or phreatophytic vegetation community (BHP Billiton, 2010).

A number of the ephemeral watercourses have been subject to previous disturbance from access roads and railway infrastructure (BHP Billiton, 2010). BHP Billiton have committed to minimising and managing potential impacts to watercourses by maintaining surface flows and avoiding the potential for erosion and scouring (BHP Billiton, 2010).

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

Methodology BHP Billiton (2010)
ENV Australia (2010a)
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

According to available databases, the application area is primarily made up of the Boolgeeda land system, with a smaller part comprising the McKay land system (GIS Database). The vegetation of the Boolgeeda land system is generally not prone to degradation and the system is not susceptible to erosion (Van Vreeswyk et al., 2004). The McKay land system is also not prone to degradation or erosion (Van Vreeswyk et al., 2004).

At a broad scale, the surface soil pH in the application area ranges from 5.5 to 6.0 and there is no known occurrence of acid sulphate soils (CSIRO, 2009). The average annual evaporation rate is over 11 times the average annual rainfall, so it is unlikely the proposed clearing will result in increased groundwater recharge causing raised saline tables (BoM, 2010; GIS Database).

BHP Billiton (2010) will implement the following measures to minimise the risk of erosion during native vegetation clearing:

- strip and stockpile all available topsoil;
- utilise appropriate methods for erosion control where the potential for erosion is high (such as rip rap rock protection and reno mattresses); and
- where practicable, delay the clearing of slopes leading to watercourses until construction is imminent, thus minimising erosion and sedimentation.

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

Methodology BHP Billiton (2010)
BoM (2010)
CSIRO (2009)
Van Vreeswyk et al. (2004)
GIS Database
- Evaporation Isopleths
- 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 within any conservation areas (GIS Database). The nearest conservation area is Collier Range National Park approximately 130 kilometres south-west of the application area (GIS Database). At this distance, there is not expected to be any impacts to environmental values of any conservation areas.

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, approximately half of the proposed clearing area is located within the Newman Water Reserve, a Public Drinking Water Source Area (PDWSA) gazetted under the *Country Areas Water Supply Act 1947* on 21 August 1983. This PDWSA is defined a 'Priority 1 (P1)' under the Water Source Protection Classification System (Department of Water, 2009; GIS Database).

Department of Water advice has previously been provided for numerous clearing permit applications for railway construction and maintenance activities within the Newman Water Reserve, stating the following:

'Clearing activities for mineral production are compatible with conditions in a P1 PDWSA. All activities associated with the clearing including infrastructure, laydown areas, refuelling and topsoil storage should be compatible with the Department of Water's Land Use Compatibility Tables. DoW is satisfied that the proposed clearing is unlikely to have a significant impact on the quality or quantity of groundwater' (Department of Water, 2009).

With respect to surface water, a number of minor ephemeral drainage lines occur in the proposed clearing area (GIS Database). Where necessary, BHP Billiton plans to incorporate surface drainage structures such as culverts and diversion drains (BHP Billiton, 2010).

The groundwater salinity within the application area is between 500 -1,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be potable water. The proposed clearing is not likely to cause salinity levels within the application area to alter.

Advice from the Department of Water is that it is satisfied that the proposed clearing is not likely to have a significant impact on the quality or quantity of groundwater (Department of Water, 2010).

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

Methodology BHP Billiton (2010)
Department of Water (2009)

Department of Water (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 310.1 millimetres and an average evaporation rate of 3,600 millimetres there is likely to be little surface flow during normal seasonal rains (BoM, 2010; GIS Database). Given the likelihood of little surface flow, the proposed clearing of 40 hectares is not likely to cause or increase or intensity of flooding.

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

Methodology BoM (2010)
GIS Database
- Evaporation Isopleths

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

Comments

There is one native title claim over the area under application (GIS Database). This claim (WC99/004) has been registered with the National Native Title Tribunal on behalf of the claimant group (GIS Database). However, the mining tenements have 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 is one 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 proposed works.

The clearing permit application was advertised on 26 July 2010 by the Department of Mines and Petroleum inviting submissions from the public. There were no submissions 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 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

- BHP Billiton (2010) Jumblebar Rail Spur Duplication Ancillary Infrastructure. Application for a clearing permit under the *Environmental Protection Act 1986*.
- Bureau of Meteorology (2010) BOM Website - Climate statistics for Australian locations, Averages for Newman Aero. Available online at: http://www.bom.gov.au/climate/averages/tables/cw_007176.shtml Accessed on 18 August 2010.
- Commonwealth Scientific and Industrial Research Organisation (2009) Australian Soil Resource Information System. Available online at: http://www.asris.csiro.au/index_ie.html Accessed on 19 August 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.
- Department of Water (2009) Public Drinking Water Source Area (PDWSA) advice to assessing officer, Native Vegetation Assessment Branch, Department of Mines and Petroleum (DMP), 1 November 2009. Department of Water, Western Australia.
- Department of Water (2010) Advice to assessing officer, Native Vegetation Assessment Branch, Department of Mines and Petroleum (DMP), 9 August 2010. Department of Water, Western Australia.
- ENV Australia (2010a) Jumblebar Borrow Pits Flora and Vegetation Assessment. Unpublished report for BHP Billiton, July 2010.

ENV Australia (2010b) Jiblebar Borrow Pits Fauna Assessment. Unpublished report for BHP Billiton, 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.

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.

Start, A.N., Anstee, S.D. & Endersby, M. (2000) 'A review of the biology and conservation status of the Ngadji, *Pseudomys chapmani* Kitchener, 1980 (Rodentia: Muridae)', CALMScience, vol. 3, no.2, pp.125-147.

Van Vreeswyk, A.M, Payne, A.L, Leighton, K.A & Hennig, P (2004) Technical Bulletin No. 92: An inventory and condition survey of the Pilbara region, Western Australia. Department of Agriculture, South Perth, Western Australia.

6. Glossary

Acronyms:

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

Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

P1	Priority One - Poorly Known taxa: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P2	Priority Two - Poorly Known taxa: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P3	Priority Three - Poorly Known taxa: taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
P4	Priority Four – Rare taxa: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
R	Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable): taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
X	Declared Rare Flora - Presumed Extinct taxa: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

- Schedule 1** **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2** **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3** **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4** **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2** **Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3** **Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4** **Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5** **Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999*)

- EX** **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W)** **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR** **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- EN** **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
- VU** **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
- CD** **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.