



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4295/1
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: Tom Price Operations Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
4.5		Mechanical Removal	Fibre Optic Cable and Access Road

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 12 May 2011

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
<p>Beard vegetation association has been mapped at a 1:250,000 scale for the whole of Western Australia. The vegetation of the application area is broadly mapped as Beard vegetation association 82: Hummock grasslands, low tree steppe; Snappy Gum over <i>Triodia wiseana</i> (GIS Database; Shepherd, 2009).</p> <p>Pilbara Flora (2010) conducted a flora survey of the application area and surrounding areas between 13 and 19 November 2010, and described the vegetation communities of the application area as follows:</p> <ol style="list-style-type: none"> Hills – Hummock grasslands of <i>Triodia epactia</i>; Plains – High open shrubland of <i>Acacia synchronicia</i> over open shrubland of <i>Eremophila reticulata</i> over very open to open hummock grassland of <i>Triodia epactia</i>; and Heavily disturbed – Heavily disturbed hummock grasslands. 	<p>Hamersley Iron is proposing to clear up to 4.5 hectares of native vegetation, for the Tom Price Operations Project. The clearing of vegetation is required for a fibre optic cable route and access road.</p> <p>The vegetation will be cleared using a dozer with the blade down. The vegetation and topsoil will be stockpiled separately for use in rehabilitation.</p>	<p>Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).</p> <p>To:</p> <p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).</p>	<p>The vegetation condition was derived from a vegetation survey conducted by Pilbara Flora (2010). The vegetation conditions were described using a scale based on Trudgen (1988) and has been converted to the corresponding conditions from the Keighery (1994) scale.</p>

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments **Proposal is not likely to be at variance to this Principle**
The application area occurs within the Hamersley (PIL3) subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by Mulga low woodlands over bunch grasses on fine textured soils in valley floors, and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges (CALM, 2002).

The vegetation within the application area consists of Beard vegetation association 82, which is common and widespread throughout the Pilbara bioregion with approximately 100% of the pre-European vegetation extent remaining (Shepherd, 2009; GIS Database). A vegetation survey of the application area by Pilbara Flora (2010) between 13 and 19 November 2010 identified three vegetation communities. The condition of these vegetation

types were classified from 'completely degraded' to 'excellent' (Keighery, 1994).

A search on the Department of Environment and Conservation Declared Rare and Priority Flora databases revealed that no Declared Rare Flora (DRF) species and six Priority species may potentially occur within a 20 kilometre radius of the application area (DEC, 2011). Pilbara Flora (2010) identified no DRF or Priority flora species within the application area.

No Threatened Ecological Communities or Priority Ecological Communities were recorded or identified within the application area (GIS Database).

Four weed species were identified during the survey: Kapok (*Aerva javanica*), Roby Dock (*Acetosa vesicaria*), Burrgrass (*Cenchrus echinatus*) and Buffel Grass (*Cenchrus ciliaris*) (Pilbara Flora, 2010). None of these species are listed by the Western Australian Department of Agriculture and Food as Declared Plants. Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to the biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The fauna habitats within the application area are considered to be common and widespread within the subregion and faunal assemblages are unlikely to be different to that found in similar habitat located elsewhere in the region (Pilbara Flora, 2010). The habitat types are not of high ecological significance and the clearing of 4.5 hectares of native vegetation is unlikely to have a significant impact in a regional context.

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

Methodology CALM (2002)
DEC (2011)
Keighery (1994)
Pilbara Flora (2010)
Shepherd (2009)
GIS Database:
- IBRA WA (regions - subregions)
- Pre-European Vegetation
- Threatened Ecological Sites Buffered

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

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

There were three broad vegetation types occurring within the application area as recorded by Pilbara Flora (2010);

1. Hummock grassland of *Triodia epactia*;
2. High open shrubland of *Acacia synchronicia* over open shrubland of *Eremophila reticulata* over open hummock grassland of *Triodia epactia*; and
3. Completely degraded hummock grasslands.

Analysis of aerial photography and Pilbara Flora (2010) identified the vegetation condition to be 'completely degraded' to 'excellent' (Keighery, 1994; GIS Database). Any vertebrate fauna assemblages that are likely to be recorded within the application area are likely to be similar to those found in neighbouring areas due to the availability of similar fauna habitats in the surrounding areas (Pilbara Flora, 2010). The habitats recorded during the survey are considered typical to those found in the Hamersley subregion (Pilbara Flora, 2010; GIS Database). The application area does not contain habitats or faunal assemblages that are ecologically significant, and it is unlikely that any species of conservation significance will be directly affected to a large degree by the clearing of native vegetation in the application area. The proposed clearing is not likely to significantly impact important habitat for endemic fauna.

There is approximately 99.89% of the pre-European vegetation remaining within the Pilbara bioregion (Shepherd, 2009; GIS Database). Given the extent of the native vegetation remaining in the local area and bioregion, the vegetation to be cleared does not represent a significant ecological link.

There are five birds, two mammals, one non-volant mammal and one reptile listed as either Threatened Species under the *Environment Protection and Biodiversity Conservation Act (EPBC) 1999* or protected under Western Australian legislation (*Wildlife Conservation Act 1950*), that may potentially occur within a 20 kilometre radius of the application area (DEC, 2011). The mammal and reptile species are: The Western Pebble-mound Mouse (*Pseudomys chapmani*), Northern Quoll (*Dasyurus hallucatus*), Pilbara Leaf-nosed Bat (*Rhinonictis aurantia*) and Olive Python (*Liasis olivaceus barroni*).

The hummock grassland of *Triodia epactia* could provide some colluvial scree for the Western Pebble-mound Mouse, however the scree particle sizing appeared too large for typical Western Pebble-mound Mouse pebbles. It is considered that this habitat represents a low quality habitat, and no pebble mounds were observed during the fauna survey (Pilbara Flora, 2010). There is no suitable habitat within the application area for the Northern Quoll, Pilbara Leaf-nosed Bat or Olive Python.

The five bird species: Rainbow Bee-eater (*Merops ornatus*), Fork-tailed Swift (*Apus pacificus*), Great Egret (*Ardea alba*), Cattle Egret (*Ardea ibis*) and Oriental Plover (*Charadrius veredus*), are listed as migratory under the *EPBC Act 1999*. These birds may overfly and be occasional visitors to the application area (with Turee Creek 13 kilometres south-east), rather than utilising the habitats of the application area on a regular basis. The proposed clearing is not likely to impact critical feeding or breeding habitat for any migratory species. The remaining species are considered highly mobile and/or have a wide distribution so the clearing is unlikely to significantly impact on the species (Pilbara Flora, 2010).

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

Methodology DEC (2011)
 Keighery (1994)
 Pilbara Flora (2010)
 Shepherd (2009)
 GIS Database:
 - IBRA WA (regions - subregions)
 - Pre-European Vegetation
 - Paraburdoo 50cm Orthomosaic, Landgate 2004

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments **Proposal is not likely to be at variance to this Principle**
 According to available databases, there are no records of Declared Rare Flora (DRF) within the application area (GIS Database). A search of the Department of Environment and Conservation's NatureMap database identified no DRF species as occurring within a 20 kilometre radius of the application area (DEC, 2011).

Pilbara Flora (2010) conducted a vegetation and flora survey of the application area between 13 and 19 November 2010. No DRF were recorded within the survey area.

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

Methodology Pilbara Flora (2010)
 DEC (2011)
 GIS Database:
 - Declared Rare and Priority Flora List

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments **Proposal is not likely to be at variance to this Principle**
 A search of the available databases shows that there are no Threatened Ecological Communities (TEC) situated within 50 kilometres of the application area (GIS Database). The nearest TEC is located 73 kilometres north of the application area.

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 falls within the Pilbara IBRA bioregion (GIS Database). Shepherd (2009) reports that approximately 99.89% of the pre-European vegetation still exists in this bioregion.

The vegetation associations within the application area are recorded as:

Beard vegetation association 82: Hummock grasslands, low tree steppe; Snappy Gum over *Triodia wiseana* (GIS Database; Shepherd, 2009).

According to Shepherd (2009) approximately 100% of the Beard vegetation association 82 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	17,804,193.01	17,785,000.82	~99.89	Least Concern	6.32
Beard vegetation associations - State					
82	2,565,901.28	2,565,901.28	~100	Least Concern	10.24
Beard vegetation associations - Bioregion					
82	2,563,583.23	2,563,583.23	~100	Least Concern	10.25

* Shepherd (2009)

** 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 (2009)
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 not likely to be at variance to this Principle

According to available databases there are few minor non-perennial drainage lines within the application area (GIS Database). Based on vegetation mapping by Pilbara Flora (2010), these drainage lines have either defined creek beds or areas of broad drainage flow and are associated with *Acacia* species.

Based on the above, the proposed clearing is not likely to be at variance to this Principle. As the ephemeral drainage lines located within the application area are only likely to flow following significant rainfall (Pilbara Flora, 2010), the proposed clearing of 4.5 hectares is unlikely to result in any significant impact to any watercourse or wetland.

Methodology Pilbara Flora (2010)
GIS Database:
- Geodata, Lakes
- 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 is broadly mapped as the Marandoo land system and Newman land system (GIS Database).

The Marandoo land system is described as basalt hills and restricted stony plains supporting grassy mulga shrublands (Van Vreeswyk et al., 2004). The mulga shrublands with understorey grasses and shrubs are moderately attractive to grazing animals although more rugged parts are poorly accessible (Van Vreeswyk et al., 2004).

The Newman land system is described as rugged jaspilite plateau, ridges and mountains supporting hard spinifex grasslands (Van Vreeswyk et al., 2004). It contains erosional surfaces; plateaux and mountains with rectangular tributary drainage patterns of narrow valleys and gorges with narrow drainage floors and channels (Van Vreeswyk et al., 2004).

Given the low levels of susceptibility to erosion and the small size of area to be cleared it is not likely to cause any significant land degradation to the land systems above.

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

The proposed application area is not located within any conservation areas (GIS Database). The nearest conservation area is Karijini National Park, located approximately 38 kilometres north-east of the application area (GIS Database).

Given the distance separating the application area from the Karijini Nature Park, the proposed clearing is not likely to provide a significant ecological linkage or fauna movement corridor and is not likely to impact the environmental values of the conservation area.

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

Methodology GIS Database:
- DEC Tenure

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

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

According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).

Several drainage tracts transect the application area (GIS Database). The drainage patterns in the surrounding area have been significantly impacted by mining. The northern watercourse has been intersected by an existing rail loop and is redirected via an excavated channel outside of the application area to a culvert under the rail loop, and ends in ponding sumps (Pilbara Flora, 2010). These drainage tracts are dry for most of the year and only flow after significant rainfall events (Pilbara Flora, 2010). The application area experiences a semi-arid to semi-tropical climate with a very hot summer rainfall season, where the annual pan evaporation rate greatly exceeds the annual rainfall average (Pilbara Flora, 2010; BoM, 2011). There is little surface flow during normal seasonal rains. The proposed clearing of 4.5 hectares is not likely to cause the quality of surface water to deteriorate.

The application area has a groundwater salinity that ranges from potable to hypersaline (500 - 10,000 milligrams/Litre Total Dissolved solids (TDS)) (GIS Database). Due to the wide extent of groundwater salinity levels, the proposed clearing is unlikely to further deteriorate the quality of underground water.

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

Methodology BoM (2011)
Pilbara Flora (2010)
GIS Database:
- Hydrographic Catchments - Catchments
- Hydrography, linear
- Groundwater Salinity, Statewide
- 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 areas experience a semi-arid to semi-tropical climate where the annual evaporation rate (3,200 - 3,600 millimetres) substantially exceeds the annual rainfall (283.8 millimetres) (BoM, 2011; Pilbara Flora, 2010). There are no permanent watercourses within the application areas; however there are drainage tracts within the proposed clearing areas (Pilbara Flora, 2010; GIS Database). Due to the high evaporation rate and low rainfall, it is unlikely that the drainage lines would carry water under normal rainfall events. Any surface water resulting from the summer rainfall is expected to be short lived and evaporate, or quickly utilised by the existing vegetation (Pilbara Flora, 2010).

The proposed clearing of 4.5 hectares of native vegetation represents only a very small proportion of the size of the Ashburton River catchment (7,877,743 hectares) the application area overlays (GIS Database). Shepherd (2009) vegetation statistics indicate that approximately 99.89% of the pre-European vegetation extent remains within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) region, therefore given that the Pilbara bioregion remains in essence uncleared, the proposed clearing is not likely to impact on the drainage characteristics of the Ashburton River catchment area.

Natural flood events do occur within the Pilbara region following cyclonic activity (Pilbara Flora, 2010) however the proposed clearing of 4.5 hectares 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 (2011)
Pilbara Flora (2010)
Shepherd (2009)
GIS Database:
- Hydrographic Catchments - Catchments
- Hydrography, Linear

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

Comments

There is one Native Title Claim (WC10/16) over the area under application (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There is one registered Aboriginal Sites of Significance within the application area (site ID: 11215) (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 4 April 2011 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the proposed clearing.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims - Determined by the Federal Court
- Native Title Claims - Registered with the NNTT
- Native Title Claims - Filed at the Federal Court

4. References

- BoM (2011) Climate Statistics for Australian Locations. A Search for Climate Statistics for Paraburdoo, Australian Government Bureau of Meteorology, viewed 11 April 2011, <http://www.bom.gov.au/climate/averages/tables/cw_007178.shtml>.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Pilbara 3 (PIL3 - Hamersley subregion) Department of Conservation and Land Management, Western Australia.
- DEC (2011) NatureMap - Mapping Western Australia Biodiversity, Department of Environment and Conservation, viewed 03 March 2011, <<http://naturemap.dec.wa.gov.au>>.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Pilbara Flora (2010) Flora and vegetation surveys for the Paraburdoo Magazine and the Tom Price powerline infrastructure areas - Native vegetation clearing permit supporting information. Prepared for Rio Tinto Iron Ore by Pilbara Flora, January 2010.
- Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Trudgen, M.E. (1988) A Report on the Flora and Vegetation of the Port Kennedy Area. Unpublished report prepared for Bowman Bishaw and Associates, West Perth.
- Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A & Hennig, P. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia, Department of Agriculture, Western Australia.

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.