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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3187/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Hamersley Iron Pty Ltd**

1.3. Property details

Property: *Iron Ore (Rhodes Ridge) Agreement Authorisation Act 1972*
Temporary Reserve 70/4882
Local Government Area: Shire Of East Pilbara
Colloquial name: Bakers Deposit – Fibrous Mineral Disposal Site

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
4		Mechanical Removal	Fibrous Mineral Disposal Site

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
The vegetation of the application area is broadly mapped as Beard Vegetation Association 175: Short bunch grassland - savannah/grass plain (Pilbara) (GIS Database; Kendrick, 2001). A flora and vegetation survey of the application area was undertaken by botanists from Pilbara Iron during April 2008. The following vegetation types were recorded within the application area (Rio Tinto, 2008): 1) Very Open Mulga Clay Flats (Variation 1): *Acacia aneura* high open shrubland over *Eremophila caespitosa*, *Solanum lasiophyllum* low scattered shrubs over *Eriachne flaccida* scattered tussock grass over *Aristida contorta* scattered bunch grass over *Ptilotus schwartzii* scattered herbs. 2) Very Open Mulga Clay Flats (Variation 2): *Eremophila caespitosa* low scattered shrubs over *Eriachne flaccida*, *Themeda triandra* scattered tussock grass over *Aristida contorta* scattered bunch grass. 3) Very Open Mulga Clay Flats (Variation 3): *Acacia aneura* high open shrubland over *Sida platycalyx* low scattered shrubs over *Aristida latifolia*, *Eriachne flaccida* scattered tussock grass over *Aristida contorta* scattered bunch grass. 4) Very Small Vegetated Flat Area: *Grevillea berryana*, *Acacia aneura* high open shrubland over *Eremophila forrestii* subsp. forrestii low shrubland over *Triodia pungens* humock grassland over *Aristida contorta* scattered very open bunch grassland. 5) Low Flat Area: *Senna notabilis*, *Hibiscus burtonii*, *Sida platycalyx* low open shrubland over *Triodia pungens* hummock grassland over *Paraneurachne muelleri*, *Chrysopogon fallax* open tussock grassland over *Digitaria ammophila* very open bunch grassland.	Hamersley Iron Pty Ltd has applied to clear up to 4 hectares of native vegetation within an application area of 16.4 hectares. The purpose of the proposal is for a fibrous mineral disposal site. The application area is adjacent to the Great Northern Highway, approximately 15.2 kilometres south-west of Rhodes Ridge in the central southern part of the Pilbara region (GIS Database). Vegetation will be cleared by a bulldozer with its blade down, and vegetation and topsoil will be collected and stockpiled for future rehabilitation (Rio Tinto, 2008).	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).	The vegetation descriptions were derived from descriptions by Rio Tinto (2008).

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 woodland over bunch grasses on fine textured soils in valley floors, and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges (Kendrick, 2001). The vegetation within the application area consists of Beard vegetation association 175 (short bunch grassland - savannah/grass plain), which is common and widespread throughout this region with approximately 100% of the Pre-European extent remaining (GIS Database; Shepherd, 2007).

A vegetation survey of the application area and surrounding vegetation identified 51 vascular plant taxa, representing 28 genera from 16 families (Rio Tinto, 2008). No flora or fauna species of conservation significance, restricted vegetation types or significant fauna habitat features were recorded within the application area (GIS Database; Rio Tinto, 2008). The total number of flora species recorded from the application area is within the expected range for an application area of this size in the locality, and is not considered to represent a high diversity (Rio Tinto, 2008).

No weed species were recorded within the area applied to be cleared. 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 in turn can lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeat fires. Should the permit be granted, it is recommended that appropriate conditions be imposed on the permit for the purposes of weed management.

A total of five vegetation communities were recorded within the application area. These vegetation types include a variation in very open mulga clay flats, a small vegetative flat area and a low flat area (Rio Tinto, 2008). All of these vegetation communities are relatively typical of the locality.

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

Methodology

Kendrick (2001)
Rio Tinto (2008)
Shepherd (2007)
GIS Database:
-Interim Biogeographic Regionalisation of Australia
-Interim Biogeographic Regionalisation of Australia (Subregions)
-Pre European Vegetation

(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

The assessing officer has conducted a search of the Department of Environment and Conservation's (DEC) online fauna database centred on the coordinate 23.1833S, 119.2459E with a radius of 20 kilometres. This search identified one amphibian, 11 avian, 9 mammalian and 27 reptilian species that may occur within the application area (NatureMap, 2009). Of these, the following species of conservation significance have previously been recorded within the study area:

- *Liasis olivaceus barroni* (Pilbara Olive Python), Schedule One (Fauna that is rare or is likely to become extinct) of the *Wildlife Conservation* (Specially Protected Fauna) *Notice 2008(2)*; listed as 'Vulnerable' under the *Environmental Protection and Biodiversity Conservation* (EPBC) *Act 1999*;
- *Ramphotyphlops ganei*, listed DEC Priority One; and
- *Pseudomys chapmani* (Western Pebble-mound Mouse), listed DEC Priority Four.

Rio Tinto (2008) conducted a desktop fauna search of the Department of Environment and Conservation's online Threatened and Priority Fauna Database on 25 June 2009. In addition to those species listed above, the following fauna species of conservation significance were identified through this desktop search:

- *Rhinonicteris aurantius* (Orange Leaf-nosed Bat), Schedule One (Fauna that is rare or is likely to become extinct) of the *Wildlife Conservation* (Specially Protected Fauna) *Notice 2008(2)*; listed as 'Vulnerable' under the EPBC Act 1999;
- *Macroderma gigas* (Ghost Bat), listed DEC Priority Four;
- *Falco hypoleucos* (Grey Falcon), listed DEC Priority Four;
- *Ardeotis australis* (Australian Bustard), listed DEC Priority Four; and
- *Neochima ruficauda subclarescens* (Star Finch - western), listed DEC Priority Four.

Rio Tinto (2008) has identified that the primary habitats present within the application area are reasonably widespread and abundant in the Rhodes Ridge locality. Although it has been noted that some Schedule or Priority fauna species may potentially utilise these habitats, neither the landforms nor vegetation types represent 'core habitat' for any of these species (Rio Tinto, 2008). As the size of the proposed clearing is

relatively small, it is unlikely to result in a significant impact on fauna or the availability of fauna habitat in the local area or region.

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

Methodology NatureMap (2009)
Rio Tinto (2008)

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

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

According to available datasets there are no known records of Declared Rare Flora (DRF) or Priority Flora species within the clearing application area (GIS Database). A population of *Lepidium catapycnon*, DRF and endangered under the EPBC Act 1999, is located approximately 14 kilometres north-west of the application area (GIS Database).

A flora survey was conducted over the application area by botanists from Pilbara Iron Pty Ltd during April 2008. The application area was traversed by a botanist at 50-70 metre intervals where possible (Rio Tinto, 2009). No DRF species were recorded during the survey. At the time of the survey one Priority Flora species, *Eremophila caespitosa* (Priority 3) was recorded at three different locations within the application area, and one population was recorded outside the application area (Rio Tinto, 2008). The assessing officer has reviewed FloraBase (2009) and the conservation status of *Eremophila caespitosa* has been reassessed as 'not threatened'.

The proposed clearing is unlikely to have any impact on the continued existence of any Rare or Priority flora.

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

Methodology FloraBase (2009)
Rio Tinto (2008)
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**

There are no known Threatened Ecological Communities (TEC) within or in the vicinity of the application area (GIS Database; Rio Tinto, 2008). The nearest known TEC is located approximately 42 kilometres south-west of the application area (GIS Database). Given the distance between the proposal and the nearest known TEC, the proposed clearing is not likely to impact on the conservation of the TEC.

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

Methodology Rio Tinto (2008)
GIS Database:
-Threatened Ecological Communities
-Clearing Regulations - Environmentally Sensitive Areas

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

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

The application area is located within the Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Shepherd (2007) reports that approximately 99.95% of the pre-European vegetation remains in the Pilbara bioregion. The vegetation in the application area is broadly mapped as Beard Vegetation Association 175: short bunch grassland - savannah/grass plain (GIS Database; Kendrick, 2001). According to Shepherd (2007), there is approximately 100% of this vegetation type remaining (see table below).

According to the Bioregional Conservation Status of Ecological Vegetation Classes the conservation status for the Pilbara Bioregion and Beard vegetation association 175 is of "Least Concern" (Department of Natural Resources and Environment, 2002).

Although several large scale mining operations are located within a 50 kilometres radius of the application area, the Pilbara bioregion remains largely uncleared (GIS database). As a result, the conservation of the vegetation association within the bioregion is not likely to be impacted upon by the proposal.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,804,188	17,794,647	~99.95	Least Concern	~6.32
Beard veg assoc. - State					
175	526,026	524,861	~99.7	Least Concern	~4.2
Beard veg assoc. - Bioregion					
175	507,036	507,006	~100	Least Concern	~4.4

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

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

Methodology Department of Natural Resources and Environment (2002)
Kendrick (2001)
Shepherd (2007)
GIS Database:
-Interim Biogeographic Regionalisation of Australia
-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 no permanent or ephemeral wetlands or watercourses within the application area (GIS Database). Rio Tinto (2008) has advised that the vegetation to be cleared is not associated with any watercourses, wetlands or wetland dependant vegetation.

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

Methodology Rio Tinto (2008)
GIS Database:
-Hydrography, Linear
-Rivers

(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 situated within the Wannamunna Land System (GIS Database; Rio Tinto, 2008). According to the Department of Agriculture in Technical Bulletin no. 92 "An inventory and condition survey of the Pilbara region, Western Australia" the proposed clearing in the Wannamunna Land System consists of hardpan plains and internal drainage tracts supporting mulga shrublands and woodlands (and occasionally eucalypt woodlands) (Van Vreeswyk et al., 2004).

According to Van Vreeswyk et al. (2004) landforms in the Wannamunna Land System comprise:

- Stony plains;
- Hardpan plains;
- Calcrete platforms;
- Groves; and
- Internal drainage plains.

An analysis of information and pictures provided by Rio Tinto (2008) reveals the application area is most likely to fall within the 'stony plains', 'hardpan plains' and 'groves' landforms. The soils of these landforms (red loamy earths, red-brown hardpan shallow loams, and red deep loamy duplex soils) are not susceptible to erosion and according to Van Vreeswyk et al. (2004) 95% of the Wannamunna Land System is not affected by soil erosion. This land system, being at the end point of millions of years of erosion, withstands massive rainfall events on an annual basis without any appreciable increase in land degradation or erosion (Rio Tinto, 2008). This erosion resistance combined with the small size of the application area, means the current proposal would be unlikely to cause appreciable land degradation.

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

Methodology Rio Tinto (2008)
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 application area is not situated within a Department of Environment and Conservation managed conservation area (GIS Database). The nearest conservation estate is Karijini National Park, which is situated approximately 68 kilometres east of the application area (GIS Database). Based on the distance between the proposal and the nearest conservation area, the proposed clearing is not likely to impact on the conservation values of Karijini National park.

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

Methodology GIS Database:
CALM Managed Lands and Waters

(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**
There are no permanent naturally occurring watercourses, drainage systems or wetlands associated within the application area (GIS Database; Rio Tinto, 2008). The Land System associated with the application area (Wannamunna Land System) has a low susceptibility to erosion (Van Vreeswyck et al., 2004), meaning there is minimal risk of sediment export that may result in sedimentation and turbidity in nearby watercourses. The proposed clearing is unlikely to cause deterioration in the quality of surface water in the local area.

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

Groundwater salinities have been measured in the range from 500 to 1000 milligrams/litre Total Dissolved Solids (TDS) (GIS Database). It is unlikely that the small area proposed to be cleared will significantly alter groundwater recharge, or impact the quality of groundwater.

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

Methodology Rio Tinto (2009)
Van Vreeswyck et al. (2004)
GIS Database:
-Groundwater Salinity, Statewide
-Hydrography, Lakes (Course Scale, 1m GA)
-Hydrograhpy, Linear
-Public Drinking Water Source Areas (PDWSA's)
-Rivers

(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**
There are no permanent or ephemeral wetlands or watercourses located within the application area. The closest known watercourse ends approximately 450 metres north-west of the application area, with the next closest being over two kilometres south-west (GIS Database).

The application area is located in a semi-desert-tropical region where the average annual pan evaporation rate greatly exceeds the average annual rainfall (ANRA, 2007; Bureau of Meteorology, 2009). Most of the rainfall in the Pilbara region is the result of heavy rainfall triggered by cyclonic activity or sporadic thunderstorms (ANRA, 2007). The main mechanism by which the incidence of flooding is exacerbated in the Pilbara is through the reduction of the capacity for water to infiltrate the soil surface (Rio Tinto, 2008). Due to ground and vegetation disturbance associated with the proposal being minimal, it is unlikely to significantly reduce the capacity for soil water infiltration (Rio Tinto, 2008).

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

Methodology ANRA (2007)
Bureau or Meteorology (2009)

Rio Tinto (2008)
GIS Database:
-Hydrography, Lakes (Course Scale, 1m GA)
-Hydrography, Linear

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

Comments

There is one native title claim over the area under application: WC99/004. This claim has been registered with the National Native Title Tribunal on behalf of the claimant groups. However, the tenement has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (ie. 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 known Aboriginal sites of significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

No submissions were received raising objections to this proposal.

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.

Methodology

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

4. Assessor's comments

Comment

The proposal has been assessed against the Clearing Principles and is not at variance to Principle (e) and is not likely to be at variance to Principles (a), (b), (c), (d), (f), (g), (h), (i), and (j).

Should the permit be granted, it is recommended that conditions be imposed on the permit for the purposes of weed management, rehabilitation, record keeping and permit reporting.

5. References

ANRA (2007) Australian Natural Resources Atlas: Rangelands overview; Pilbara. Available online from: http://www.anra.gov.au/tropics/rangelands/overview/wa/ibra-pil.html Accessed 30 July 2009.

Bureau of Meteorology (2009) Climate Statistics for Australian Locations - Newman. Available online from: http://www.bom.gov.au/climate/averages/tables/cw_007151.shtml Accessed 30 July 2009.

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.

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

Kendrick, P. (2001) Pilbara (PIL3 - Hamersley subregion). In a Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management, pp 568-580.

NatureMap (2009) NatureMap: Mapping Western Australia's biodiversity. Department of Environment and Conservation. Available online from: http://naturemap.dec.wa.gov.au/default.aspx Accessed 30 July 2009.

Rio Tinto (2008) Botanical Survey for a Proposed Site for a Fibrous Mineral Disposal at Bakers Deposit (Purpose Permit). Rio Tinto, 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A., and Hennig, P. (2004) Technical Bulletin: An inventory and condition survey of rangelands in Pilbara Region, Western Australia, No 92. Department of Agriculture, 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.