Government of Western Australia
Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3606/1
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 4SA (AML 70/4)
Local Government Area: Shire of Ashburton
Colloquial name: Lolly Jar Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3.3		Mechanical Removal	Mineral Production

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

Beard Vegetation Associations have beem mapped at a scale of 1:250,000 for the whole of Western Australia. One Beard Vegetetation Association is located within the application areas (Shepherd, 2007):

Beard Vegetation Association 82: hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*.

A flora and vegetation survey was conducted by Rio Tinto in March 2009. This survey identified the following seven vegetation units within the survey area (Rio Tinto, 2010):

Vegetation Unit 1
Acacia low woodland over *Grevillea pyramidalis* open scrub over *Senna leurssennii*, *Stylobasium spathulatum* scattered shrubs over *Maireana georgei* low scattered shrubs over *Cenchrus ciliaris* closed tussock grassland.
This vegetation type was recorded on a stony plain consisting of red/brown skeletal silty clay-loam soils. Associated species include; *Enneapogon lindleyanus*, *Ptilotus incanus*, *Rhagodia eremaea*, *Sida* sp., *Spiciform panicles*, *Hibiscus coatesii*, *Cucumis maderaspatensis*, *Acacia aneura*, *Acacia sclerosperma* subsp. *sclerosperma*, *Goodenia forrestii*. The condition was deemed poor to good due to a heavy infestation of buffel grass.

Vegetation Unit 2
Hakea lorea, *Eucalyptus leucophloia*, *Eucalyptus gamophylla* scattered low trees over *Grevillea pyramidalis* scattered tall shrubs over *Acacia maitlandii*, *Scaevola acacioides*, *Eremophila longifolia* shrubland over scattered tussock grassland.
This vegetation type was recorded on a gentle stony slope with a closed surface mantle of gravel. Associated species include *Hakea lorea*, *Eucalyptus leucophloia*, *Eucalyptus gamophylla* scattered low trees over *Grevillea pyramidalis* scattered tall shrubs over *Acacia maitlandii*, *Scaevola acacioides*, *Eremophila longifolia* shrubland over *Eriachne mucronata*, *Paraneruachne muelleri* scattered tussock grassland. The condition was deemed good due to intermittent disturbance to the soil surface.

Vegetation Unit 3
Eucalyptus leucophloia, *Acacia pruinocarpa* low woodland over *Capparis umbonata*, *Eremophila fraseri*, *Rhagodia eremaea* open shrubland over *Maireana georgei* scattered low shrubs over *Triodia wiseana* scattered hummock grassland over *Cenchrus ciliaris* tussock grassland.
This vegetation type was recorded in a drainage line on a rocky slope. A discharge pipe directs water onto the survey area from upslope controlling surface water flow during rainfall events.

Vegetation Unit 4
Brachychiton acuminatus, *Eucalyptus leucophloia* scattered low trees over *Eremophila longifolia*, *Acacia bivenosa* scattered shrubs over *Cymbopogon ambiguus*, *Cenchrus ciliaris* tussock grassland.
This vegetation type was recorded in an ephemeral drainage line which is artificially fed surface water from dust supression activities from the adjacent haul road. Associated species include; *Tinospora smilacina*, *Lepidium pedicellosum*, *Ficus platypoda*, *Capparis spinosa*, *Enneapogon lindleyanus*, *Enneapogon polyphyllus*, *Scaevola acacioides*, *Amaranthus interruptus*. The vegetation was deemed to be in poor condition due to the lack of structural semblance to the original vegetation.

Vegetation Unit 5

Eucalyptus camaldulensis scattered low trees over *Acacia bivenosa*, *Senna glutinosa* subsp. *pruinosa* scattered shrubs over *Cymbopogon ambiguus*, *Cenchrus ciliaris* tussock grassland.

This vegetation unit was recorded in an artificial drainage line, which has been concreted in some places to allow for surface water to be directed through the Tom Price minesite and collected to minimise erosion. Associated species include; *Senna olygophylla*, *Euphorbia biconvexa*, *Duperrera commixta*, *Maireana georgei*, *Atriplex* aff. *nummularia*, *Capparis spinosa* var. *nummularia*, *Enneapogon lindleyanus*, *Acacia sclerosperma* ssp. *sclerosperma*, *Gossypium robinsonii*, *Lepidium pedicellosum*, *Cleome viscosa*. The condition was deemed very poor due to the level of historical clearing for a mine haul road, and apparent engineering of the soil surface for the development of preferential pathways for surface water.

Vegetation Unit 6

Eucalyptus camaldulensis scattered low trees over *Cenchrus ciliaris*, *Cynodon dactylon*, *Setaria dielsii* closed tussock grassland.

This vegetation unit occurred within a naturally occurring drainage depression. This is an artificial habitat, heavily altered with some native flora existing, and acts as a sink for the adjacent haul road within Tom Price mine. Associated species include; *Malvastrum americanum*, *Maireana georgei*, *Amaranthus interruptus*, *Acacia sclerosperma* subsp. *sclerosperma*, *Rhagodia eremaea*. The condition was deemed very poor.

Vegetation Unit 7

Historical disturbance associated from mining activities is prevalent within the survey area. An ephemeral watercourse has been altered and partially cemented to allow for the drainage and collection of surface water in the Tom Price mine. Vegetation has also been cleared for the construction of pipelines and other mine infrastructure. A major weed infestation of *Leucaena leucocephala* was observed in one of the application areas.

Clearing Description

Hamersley Iron (2010) proposes to clear up to 3.3 hectares of native vegetation, within an area equalling approximately 5.6 hectares. The application areas are located approximately 6 kilometres south of Tom Price (GIS Database).

The purpose of the proposed clearing is for the creation of additional stockpiling areas (Hamersley Iron, 2010). Vegetation will be cleared by bulldozer with the blade down and vegetation will be stockpiled for rehabilitation purposes (Hamersley Iron, 2010).

Vegetation Condition

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

To

Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).

Comment

The vegetation condition rating is derived from information provided by Rio Tinto (2010).

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 areas are located within the Hamersley subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Hamersley subregion is described by CALM (2002) as being rich in *Acacia*, *Triodia*, *Ptilotus* and *Sida* species.

Numerous weed species have been identified within the application areas (Rio Tinto, 2010). The presence of introduced weed species lowers the biodiversity value of the proposed clearing areas. Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. The risk of spreading weed species can be mitigated by imposing a condition for the purpose of weed management.

A flora and vegetation survey of the application areas was conducted by Rio Tinto in March 2009. This survey identified a total of 94 vascular plant taxa from 31 families (Rio Tinto, 2010). Rio Tinto (2010) report that this represents quite low diversity which can be attributed to the high proportion of disturbed land within the survey area. Rio Tinto (2010) further contribute the low diversity to the small spatial area covered by the survey as well as to fragmentation, historical clearing and weed infestation.

A search was conducted by the assessing officer of the Department of Environment and Conservation's NatureMap database for fauna species that could potentially occur within a 40 kilometre radius of the application areas. This search identified a total of 150 fauna species within the search area (DEC, 2007 – 2010). Given the disturbed nature of the application areas and their proximity to active mining areas, the application areas are expected to have lower fauna diversity than other undisturbed areas nearby.

The landforms, vegetation and habitat types occurring within the application areas are all well represented within the Hamersley subregion (Rio Tinto, 2010). The clearing of 3.3 hectares of native vegetation, within an area that has been disturbed by historical and current mining activities, is unlikely to have a significant impact upon biodiversity within the region.

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

Methodology CALM (2002)
DEC (2007 - 2010)
Rio Tinto (2010)
GIS Database
- Interim Biogeographic Regionalisation of Australia

(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**
Rio Tinto (2010) reports that fauna habitats within the application areas are limited to a small stony plain and a degraded ephemeral watercourse, which are isolated habitats within the Tom Price mine footprint. Furthermore, Rio Tinto (2010) claim that no intact vegetation has been observed adjacent to the three application areas, which would restrict the movement of fauna into the application areas. The fragmented and degraded nature of the application areas is supported by aerial photography supplied by Rio Tinto (2010). Rio Tinto (2010) state that whilst highly mobile species would temporarily utilise the habitats within the application areas, the degraded condition of the vegetation, and proximity to active mining would mean that these areas would most likely be avoided by fauna.

Rio Tinto (2010) reports that no significant fauna habitats such as caves, waterholes, significant creek lines, gorges, large tree hollows or termite mounds were observed within the application areas.

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

Methodology Rio Tinto (2010)

(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**
Rio Tinto conducted a flora and vegetation survey of the application areas in March 2009. This survey included a desktop survey reviewing previous flora and vegetation reports and database searches (Rio Tinto, 2010). Following this, a field survey was conducted on 11 March 2009 which consisted of systematically traversing the entire study area on foot (Rio Tinto, 2010).

Rio Tinto (2010) reports that no plant species currently listed as Declared Rare Flora were recorded within or in the immediate vicinity of the survey area during the current or previous surveys. A single Priority 1 flora species was recorded in one of the application areas; *Sida* sp. Hamersley Range (Rio Tinto, 2010).

Rio Tinto (2010) reports that *Sida* sp. Hamersley Range is typically known to occur on skeletal red stony soils under cliffs or high in the landscape in the Hamersley Ranges. This individual is growing out of its normal range on a low sandy plain (Rio Tinto, 2010). Rio Tinto (2010) reports that no other individuals were found despite systematic traversing of the study area.

This individual of *Sida* sp. Hamersley Range can be protected by imposing a condition for the purpose of Priority flora protection.

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

Methodology Rio Tinto (2010)

(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 (TECs) or Priority Ecological Communities (PECs) within the areas applied to clear (GIS Database). The nearest known PEC is located approximately 50 kilometres east of the application areas (GIS Database).

Rio Tinto (2010) reports that no TECs or PECs were identified within the application areas during the flora and vegetation surveys.

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

Methodology Rio Tinto (2010)
GIS Database
- Threatened Ecological Communities

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

Comments

Proposal is not at variance to this Principle

The application areas fall within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). Shepherd (2007) reports that approximately 100% of the pre-European vegetation still exists within this bioregion (see table below). The vegetation within the application areas is recorded as the following Beard Vegetation Association (Shepherd, 2007):

- **Beard Vegetation Association 82:** hummock grasslands, low tree steppe, snappy gum over *Triodia wiseana*.

According to Shepherd (2007) approximately 100% of these vegetation associations remain within the bioregion (see table below).

Therefore, the vegetation within the application areas is not a significant remnant of native vegetation within an area that has been already cleared.

	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	~100	Least Concern	~6
Beard vegetation associations - State					
82	2,565,901	2,565,901	~100	Least Concern	~10
Beard vegetation associations - Bioregion					
82	2,563,583	2,563,583	~100	Least Concern	~10

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

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

Methodology

Department of Natural Resources and Environment (2002)
Shepherd (2007)
GIS Database
- Interim Biogeographic Regionalisation of Australia

(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 two ephemeral watercourses within one of the application areas (GIS Database). Based on vegetation descriptions provided by Rio Tinto (2010) the ephemeral watercourses within the application areas appear to have been highly degraded and modified. One of the drainage lines is reported by Rio Tinto (2010) as having been altered and partially cemented to allow for the drainage and collection of surface water in the Tom Price mine.

Based on the degraded and modified nature of the ephemeral watercourses within the application areas, the further clearing of 3.3 hectares of native vegetation is unlikely to have a significant impact on any watercourse or wetland.

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

Methodology

Rio Tinto (2010)
GIS Database
- Hydrography, linear

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

Comments

Proposal is not likely to be at variance to this Principle

The application areas have been mapped as occurring within the Platform land system (GIS Database).

The Platform land system is described by Van Vreeswyk et al. (2004) as consisting of dissected slopes and raised plains supporting hard spinifex. Van Vreeswyk et al. (2004) reports that this land system is not

susceptible to erosion.

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 clearing is not located within any conservation areas (GIS Database). The nearest Department of Environment and Conservation managed land is the Karijini National Park located approximately 12 kilometres east of the application areas (GIS Database).

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

Methodology GIS Database
- DEC Managed Land 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**
According to available databases there are two ephemeral drainage lines within the application areas (GIS Database). Vegetation descriptions provided by Rio Tinto (2010) indicate that these drainage lines are highly modified and that drainage has been altered to control surface water flow during rainfall events. Based on the degraded vegetation and modified nature of drainage within the application areas, the further clearing of 3.3 hectares of native vegetation is unlikely to have any further impacts on surface or groundwater quality or groundwater quantity.

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

Methodology Rio Tinto (2010)
GIS Database
- Hydrography, linear

(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**
According to available databases there are two ephemeral drainage lines within the application areas (GIS Database). Vegetation descriptions provided by Rio Tinto (2010) indicate that these drainage lines are highly modified and that drainage has been altered to control surface water flow during rainfall events.

Natural flood events do occur in the Pilbara between December and March, following cyclonic activity. Based on the modified nature of drainage within the application areas, the further clearing of 3.3 hectares of native vegetation is unlikely to increase the incidence or intensity of flood events.

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

Methodology Rio Tinto (2010)
GIS Database
- Hydrography, linear

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

Comments

There is one Native Title Claim (WC97/089) over the area under application (GIS Database). This claim has been registered with the Native Title Tribunal on behalf of the claimant group, however, the mining tenement has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process. Therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

According to available databases there are no registered Aboriginal Sites of Significance within the application areas (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 by the Department of Mines and Petroleum on 8 March 2010 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 proposal has been assessed against the Clearing Principles 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).

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

5. References

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

DEC (2007 - 2010) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: 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.

Hamersley Iron (2010) Clearing Permit Application Supporting Documentation. Hamersley Iron Pty Ltd, February 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.

Rio Tinto (2010) Flora and Vegetation Survey of the Tom Price Extra Stockpiling at Lolly Jar & Supporting Documentation for the Native Vegetation Clearing Permit Application. Unpublished Report. 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., Hennig, P. and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. 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.