



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5073/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Process Minerals International Pty Ltd

1.3. Property details

Property: Mining Lease 47/1414
Local Government Authority: Shire of East Pilbara
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
28		Mechanical Removal	Haul Road and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 16 August 2012

2. Background

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 associations have been mapped for the whole of Western Australia. One Beard vegetation association has been mapped within the application area (GIS Database):</p> <p>29: Sparse low woodland; mulga, discontinuous in scattered groups.</p> <p>A survey conducted by Rapallo (2012a) identified three vegetation communities within the application area:</p> <p>E - Floodplains and Drainage lines - Open eucalypt woodland of <i>Corymbia hamersleyana</i>, <i>C. aspera</i> or <i>Eucalyptus ?victrix</i> over mixed shrubs such as <i>Acacia citrinoviridis</i>, or open shrubland dominated by <i>Gossypium robinsonii</i>, <i>Acacia synchronicia</i>, <i>A. tetragonophylla</i> and <i>A. tumida</i> var. <i>pilbarensis</i>, over grasses such as <i>*Cenchrus ciliaris</i>; and</p> <p>F - Drainage lines - Open mixed tall woodland dominated by <i>Acacia incurvaneura</i>, <i>A. bivenosa</i>, <i>A. citrinoviridis</i> or <i>A. pruinocarpa</i>, often with emergent eucalypts such as <i>Eucalyptus ? victrix</i>, over shrubs and moderately dense <i>*Cenchrus ciliaris</i> or other grasses; and</p> <p>G - Floodplains - Sparse open tall shrubland or open low woodland with scattered <i>Corymbia hamersleyana</i>, dominated by <i>Acacia distans</i>, <i>A. paraneura</i>, <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>, <i>A. synchronicia</i>, <i>Eremophila longifolia</i>, over mixed shrubs such as <i>Acacia citrinoviridis</i>, over <i>*Cenchrus ciliaris</i> and <i>Triodia lanigera</i> hummock grasses.</p>	<p>Process Minerals International Limited has applied to clear up to 28 hectares, within a total application area of approximately 114 hectares. The proposed clearing is located 90 kilometres north-west of Newman.</p> <p>Clearing will be undertaken for the purpose of constructing an 8.6 kilometre section of the 30.6 kilometre Phil's Creek haul road (Process Minerals International Limited, 2012).</p>	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994)</p> <p>To</p> <p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).</p>	<p>The vegetation condition was assessed during a survey undertaken by botanists from Rapallo (2012a).</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 Fortescue Plains (PIL2) subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Fortescue Plains subregion is characterised by alluvial plains and river frontage (CALM, 2002). The eastern portion of the subregion is comprised of extensive salt marsh, mulga-bunch grass and short grass communities on alluvial plains, while deeply incised gorge systems comprise the western part of the drainage (CALM, 2002). The vegetation within the application area consists of Beard vegetation association 29, which is common and widespread throughout the Pilbara bioregion with approximately 100% of the pre-European vegetation extent remaining (Government of Western Australia, 2011; GIS Database).

The clearing permit application is to construct an 8.6 kilometre section of the Phil's Creek haul road. A flora and vegetation survey undertaken by Rapallo (2012a) covered a 125 metre wide corridor the entire length of the 30.6 kilometre haul road. The survey identified a total of 153 plant taxa (including subspecies and varieties), from 34 families. The four most diverse families observed were Fabaceae (43 taxa), Malvaceae (20 taxa), Poaceae (eighteen taxa) and Amaranthaceae (ten taxa) (Rapallo, 2012a). The most diverse genus observed across the survey area was *Acacia* (in the family Fabaceae) with a total of 26 taxa. The survey identified three introduced species (Rapallo, 2012a). The vegetation ranges from good to very good condition (Keighery, 1994; Rapallo, 2012a). The implementation of a weed management condition will minimise the risk of the spread of weeds into un-infested areas.

A desktop search conducted by Rapallo (2012a) within a 50 kilometre radius of the survey area identified four flora species of conservation significance with potential to occur in the survey area. A field survey undertaken by Rapallo (2012a) did not record any DRF or Priority Flora species within the application area although the Priority 3 species *Rhagodia sp. Hamersley* (M. Trudgen 17794) was identified approximately 15 kilometres south of the application area (Rapallo, 2012a).

No Threatened Ecological Communities (TEC) occur within the application area (Rapallo, 2012a), however, the proposed clearing is located within the buffer of the Fortescue Marsh Priority Ecological Community (PEC) (Priority 1) and the Fortescue Valley Sand Dunes PEC (Priority 3) (GIS Database; Rapallo, 2012a). Rapallo (2012a) undertook a desktop survey and a flora and vegetation survey of the application area and no PECs were recorded.

Rapallo (2012b) identified two broad fauna habitat types within the application area which align with the Fortescue and Fan land systems (Van Vreeswyk et al., 2004). These Plain habitat types are considered to be well represented in the Pilbara bioregion (Rapallo, 2012b). The majority (approximately 95%) of the application area is located within the Fortescue Land system and the fauna habitat type which is associated with this system has been described by Rapallo (2012b) as flood plain adjacent to creek bed. Rapallo (2012b) has identified that this habitat type is fairly degraded due to the impacts of cattle, Buffel grass and other weeds.

An analysis of threatened fauna databases for the region indicates that 19 species of conservation significance could occur within the larger project area, but only five of these species are likely to be present based on habitat suitability, detections and availability of suitable habitats (Rapallo, 2012b).

The proposed Phil's Creek haul road project may indirectly impact the Northern Quoll (*Dasyurus hallucatus* - Schedule 1 and EPBC Act Endangered) for which core habitat exists adjacent to the south-western section of the haul road alignment (Rapallo, 2012b). However, the section of the project to which this application relates, is unlikely to provide significant habitat for any conservation significant fauna species. The Rainbow Bee-eater (*Merops Omatus* - EPBC Act Migratory) was recorded within the application area but is highly mobile, widely distributed and unlikely to be significantly impacted by the proposed activities.

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

Methodology

Rapallo (2012a)
Rapallo (2012b)
CALM (2002)
Keighery (1994)
Government of Western Australia (2011)
Van Vreeswyk et al. (2004)
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

Rapallo (2012b) undertook a fauna survey of the proposed haul road project which included site investigations between 8 -10 November and 30 November to 1 December 2012. In total nine habitat types were identified as potentially being able to support varying faunal assemblages.

Low plains and alluvial deposits dominate the majority of the project area (Rapallo, 2012b). The south-western section of the haul road alignment consists of a broad shallow drainage valley that supports predominantly Acacia shrublands and Triodia grasslands. At the fringes of the valley, steep sided gullies associated with rocky breakaways and outcrops become the dominant habitat type. The remaining sections of the haul road are flat plains with alluvial deposits and dominant vegetation types including triodia grassland, mixed acacia shrublands and mulga woodlands over perennial grasslands (Rapallo, 2012b).

Rapallo (2012b) identified 2 broad fauna habitat types within the application area which align with the Fortescue and Fan land systems (Van Vreeswyk et al., 2004). These Plain habitat types are considered to be well represented in the Pilbara bioregion (Rapallo, 2012b). The majority (approximately 95%) of the application area is located within the Fortescue Land system and the fauna habitat type which is associated with this system has been described by Rapallo (2012b) as flood plain adjacent to creek bed. Rapallo (2012b) has identified that this habitat type is fairly degraded due to the impacts of cattle, Buffel grass and other weeds.

An analysis of threatened fauna databases for the region indicates that 19 species of conservation significance could occur within the larger project area, but only five of these species are likely to be present based on habitat suitability, detections and availability of suitable habitats (Rapallo, 2012b).

Evidence of the Pilbara Pebble-mound Mouse (*Pseudomys chapmani* - DEC Priority 4) was recorded at five locations within the survey area. Three of these mounds were active, however, all were located in the southern sections of the proposed haul road and none were located within the application area. The haul road traverses suitable habitats for the Australian Bustard (*Ardeotis australis* - DEC Priority 4) and the Bush Stone Curlew (*Burhinus grallarius* - DEC Priority 4) which are likely to occur (Rapallo, 2012b). However, these species are highly mobile and there is a low risk of long term negative impacts to the Pilbara populations (Rapallo, 2012).

The proposed project may indirectly impact the Northern Quoll (*Dasyurus hallucatus* - Schedule 1 and EPBC Act Endangered) for which core habitat exists adjacent to the south-western section of the haul road alignment (Rapallo, 2012b). However, the section of the project to which this application relates, is unlikely to provide significant habitat for any conservation significant fauna species. The Rainbow Bee-eater (*Merops Omatus* - EPBC Act Migratory) was recorded within the application area but is highly mobile, widely distributed and unlikely to be significantly impacted by the proposed activities (Rapallo, 2012b).

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

Methodology Rapallo (2012b)
Van Vreeswyk et al. (2004)
GIS Database:
- IBRA WA (regions - subregions)
- Pre-European Vegetation

(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 is no recorded Threatened Flora within the application area (GIS Database). Rapallo (2012a) undertook a desktop survey and a flora and vegetation survey of the application area and no Threatened Flora species were recorded.

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

Methodology Rapallo (2012a)
GIS Database:
- Declared Rare and Priority Flora List

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

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

According to available databases, there are no recorded Threatened Ecological Communities within the application area (GIS Database). Rapallo (2012a) undertook a desktop survey and a flora and vegetation survey of the application area and no Threatened Ecological Communities were recorded.

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

Methodology Rapallo (2012a)
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) in which approximately 99.6% of the pre-European vegetation still exists (Government of Western Australia, 2011).

One Beard vegetation association is located within the application area (GIS Database; Government of Western Australia 2011):

29: Hummock grasslands, low tree steppe: Snappy Gum over *Triodia wiseana*.

This vegetation association retains approximately 99.95% of its pre-European extent.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,804,193	17,785,000	~99.6	Least Concern	~6.32
Beard vegetation associations - State					
29	7,903,991	7,900,200	~99.95	Least Concern	~5.22
Beard vegetation associations - Bioregion					
29	1,133,219	1,132,939	~99.98	Least Concern	~1.98

* Government of Western Australia (2011)

** Department of Natural Resources and Environment (2002)

Given that the vegetation is well represented locally and regionally the vegetation within the proposed area is not significant as a remnant in a highly cleared landscape.

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

Methodology Department of Natural Resources and Environment (2002)
Government of Western Australia (2011)
GIS Database
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments Proposal is at variance to this Principle

There is one major river, Weeli Wolli Creek, which crosses the application area. Vegetation associated with this river will be cleared during the construction of the road (Rapallo, 2012a). In addition Rapallo (2012a) conducted a flora survey of the application area which identified that there are three vegetation communities located within the application area which are all associated with floodplains and drainage lines.

However, some drainage systems, particularly the north-eastern portions (associated with the application area) have been heavily degraded by cattle grazing and weeds are present (Rapallo, 2012a). No diversion of the Weeli Wolli Creek will be required and the implementation of a watercourse vegetation management condition will minimise the impact of the clearing upon the Weeli Wolli Creek. It is unlikely that the proposed clearing for the road will have any serious environmental impacts upon watercourses or wetlands.

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

Methodology Rapallo (2012a)
GIS Database:
- Hydrography, Linear

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

Comments Proposal may be at variance to this Principle

The application area comprises of the Fortescue and the Fan land systems (GIS Database).

The Fortescue land system is comprised of alluvial plains and flood plains supporting patchy grassy woodlands, shrublands and tussock grasslands. Some parts of this land system are extremely susceptible to erosion if vegetative cover is removed (Van Vreeswyk et al., 2004). The Fan land system is comprised of washplains and gilgai plains supporting groved mulga shrublands and minor tussock grasslands. This system is moderately susceptible to soil erosion if vegetative cover is depleted (Van Vreeswyk et al., 2004).

Given the above, there may be an increased risk of soil erosion following removal of native vegetation, however, given the linear nature of the proposed haul road and considering the roadside infrastructure which will be utilised to protect the road surface such as drains and culverts, this risk will be short term during the construction period and unlikely to cause appreciable long term land degradation.

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

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

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

Comments Proposal is not 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 the Karijini National Park, located more than 50 kilometres from the application area (GIS Database).

Given the distance to these conservation areas, the proposed clearing is not likely to have any negative impacts on the environmental values of these areas.

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

Methodology GIS Database:
- DEC Tenure

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

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

The proposed clearing area is not located within a Public Drinking Water Source Area. However, there is one major river, Weeli Wolli Creek, which crosses the application area. Vegetation associated with this river will be cleared during the construction of the road (Rapallo, 2012a).

However, the application area experiences an arid (semi-desert) tropical climate with summer cyclonic rains or thunderstorm events, with an annual evaporation rate which greatly exceeds rainfall (GIS Database). Surface water within the application area is only likely to remain for short periods following significant rainfall events (GIS Database) when the Weeli Wolli creek will carry a high sediment load. It is unlikely that the construction of the road will significantly impact upon the quality of water within the Weeli Wolli Creek or the quality of underground water.

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

Methodology Rapallo (2012a)
GIS Database:
- Evaporation Isopleths
- Hydrography, Linear
- Public Drinking Water Source Areas (PDWSAs)
- Rainfall Mean Annual

(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 area experiences an arid (semi-desert) tropical climate with summer cyclonic rains or thunderstorm events, with an annual evaporation rate which greatly exceeds rainfall (GIS Database). Any surface water resulting from rainfall events is likely to be relatively short lived.

Given the size of the area to be cleared (28 hectares) compared to the size of the Fortescue River catchment area (2,975,192 hectares) (GIS Database) it is not likely that the proposed clearing will lead to an appreciable increase in run off, and subsequently cause or exacerbate the incidence or intensity of flooding.

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

Methodology GIS Database:
- Evaporation Isopleths
- Hydrographic Catchments - Catchments
- Hydrography, Linear
- Rainfall Mean Annual

Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

There are two Native Title Claims (WC11/6 and WC05/6) over the area under application (GIS Database). These claims have 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 are several Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal sites of significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment and Conservation and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit application was advertised on 4 June 2012 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 - Registered with the NNTT

4. References

- 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.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Government of Western Australia (2011) 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Rapallo (2012a) Level 2 Flora and Vegetation Survey of Phil's Creek Haul Road prepared for Process Minerals International - February 2012
- Rapallo (2012b) Level 1 Phil's Creek Vertebrate Fauna Survey prepared for Process Minerals International - February 2012
- 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.