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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4893/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Rio Tinto Exploration Pty Limited**

1.3. Property details

Property: *Iron Ore (Mt Bruce) Agreement Act 1972*, Mineral Lease 252SA (AML 70/252)
Local Government Area: Shire of Ashburton
Colloquial name: Munjina Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 10 May 2012

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation associations have been mapped for the whole of Western Australia. One Beard vegetation association has been mapped within the application area: 82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana* (GIS Database). A flora and vegetation survey was conducted over the application area by botanists from ENV Australia in January 2012. Vegetation descriptions were provided for each of the proposed drill pad locations. The vegetation was generally described as *Corymbia ferriticola* subsp. *ferriticola*, *C. hamersleyana* and/or *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia* spp. open hummock grassland on a pediment landform (ENV Australia, 2012a). Many sites contained *Eucalyptus gamophylla* scattered mallees and/or *Acacia* spp. open shrubland (ENV Australia, 2012a).	Rio Tinto Exploration Pty Limited has applied to clear up to 28 hectares of native vegetation within an application area of approximately 410 hectares for the purpose of mineral exploration. Clearing will be for drill pads, access tracks and camp sites. The application area is located approximately 98 kilometres north-west of Tom Price. The vegetation will be cleared using bulldozers or diggers.	Pristine: No obvious signs of disturbance (Keighery, 1994); To: Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).	The vegetation condition was assessed by botanists from ENV Australia (2012a).

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) Interim Biogeographic Regionalisation of Australia (IBRA) subregion (GIS Database). This subregion is generally described as 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 (CALM, 2002).

The vegetation within the application area is broadly mapped as Beard vegetation association 82, which has approximately 100% of its pre-European vegetation extent remaining (Shepherd, 2009; GIS Database). A flora and vegetation survey of the application area was conducted by ENV Australia botanists in January 2012. A

total of 62 native vascular plant taxa, belonging to 36 genera from 17 families were recorded within the application area (ENV Australia, 2012a). The genera with the highest number of taxa recorded were *Acacia*, *Triodia* and *Senna* (ENV Australia, 2012a), which is typical of the Pilbara. While the survey was conducted following above average rainfall, the flora had not yet had time to respond to the rainfall and most herbaceous annuals and ephemerals were barely emergent and still unidentifiable. Therefore, the survey timing was sub-optimal for herbaceous annuals and ephemerals which affects the completeness of the flora inventory for the application area (ENV Australia, 2012a).

No Threatened Flora, Threatened Ecological Communities or Priority Ecological Communities were recorded during the field survey conducted by ENV Australia in January 2012, or have previously been recorded within the application area (ENV Australia, 2012a; GIS Database).

One species of Priority Flora was recorded within the application area (ENV Australia, 2012a). An individual plant of *Eremophila magnifica* subsp. *magnifica* (Priority 4) was recorded at a proposed drill site (ENV Australia, 2012a). *Eremophila magnifica* subsp. *magnifica* is known from 18 herbarium records with most records describing the frequency of the plants as 'common' (Western Australian Herbarium, 2012). The proposed clearing of an individual plant is unlikely to impact on the conservation of the species.

No introduced flora species were recorded within the application area (ENV Australia, 2012a). Care must be taken to ensure that the proposed clearing activities do not introduce weed species to non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

A search of the Department of Conservation and Environment's (DEC) NatureMap revealed records of two amphibian, 61 bird, 1 fish, 8 mammal and 28 reptile species within a 20 kilometre radius (DEC, 2012). A high number of reptile species is typical of the Pilbara. The fauna habitats within the application area are predicted to occur adjacent to the application area and throughout the locality (GIS Database) so the fauna species are not likely to be restricted to the application area.

The application area is not likely to comprise a greater diversity than similar areas either locally or at a bioregional scale.

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

Methodology

CALM (2002)
DEC (2012)
ENV Australia (2012a)
Shepherd (2009)
Western Australian Herbarium (2012)
GIS Database:
- IBRA WA (Regions - Sub Regions)
- Mount George 50 cm Orthomosaic - Landgate 2004
- Munjina 50 cm Orthomosaic - Landgate 2004
- Pre-European Vegetation
- Threatened and Priority Flora
- 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

No fauna surveys have been conducted within the application area. The broad landforms in the application area are pediment, plains between hills, low hills, minor creeklines and debris slopes (ENV Australia, 2012a). Large *Eucalyptus*, *Acacia* and *Corymbia* trees provide possible fauna habitat and nesting sites but the proposed access track alignment has been designed to avoid trees where possible (ENV Australia, 2012a). The landforms and vegetation associations recorded within the application area are found throughout the locality and the Pilbara region (ENV Australia, 2012a; GIS Database), therefore, the fauna habitats provided by the application area are likely to be found in adjacent areas and throughout the Pilbara region. The vegetation within the application area may be utilised by a variety of fauna but the lack of specialised fauna habitats means it is unlikely to provide core habitat for any fauna species.

Western Pebble-mound Mouse (*Pseudomys chapmani*) (DEC Priority 4) mounds were recorded at 36 locations along the proposed drill tracks (ENV Australia, 2012b). This species is considered common to very common in suitable habitat within the Pilbara bioregion (ENV Australia, 2012b). Similar habitat for the Western Pebble-mound Mouse is available throughout the Pilbara and the given the relatively small area of the proposed clearing the impact on this species is not likely to be significant.

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

Methodology

ENV Australia (2012a)
ENV Australia (2012b)

GIS Database:
- Mount George 50 cm Orthomosaic - Landgate 2004
- Munjina 50 cm Orthomosaic - Landgate 2004
- 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 are no known records of Threatened Flora within the application area (GIS Database). The nearest record of Threatened Flora is approximately 25 kilometres west of the application area (GIS Database).

A flora and vegetation survey of the application area was conducted by ENV Australia botanists in January 2012 with a focus on flora species with conservation significance. No Threatened Flora were recorded within the application area (ENV Australia, 2012a).

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

Methodology

ENV Australia (2012a)
GIS Database:
- Threatened and Priority Flora

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

Comments

Proposal is not likely to be at variance to this Principle

A search of available databases revealed there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database). The buffer of the nearest recorded TEC, Themeda grasslands on cracking clays, is located approximately 80 kilometres west of the application area (GIS Database).

No TECs were identified during the flora and vegetation survey conducted by ENV Australia botanists (ENV Australia, 2012a).

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

Methodology

ENV Australia (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 clearing application area falls within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion in which approximately 99.9% of the pre-European vegetation remains (see table) (Shepherd, 2009; GIS Database). This gives it a conservation status of 'Least Concern' according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002).

The vegetation of the clearing application area has been mapped as Beard vegetation associations 82 'Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*' (Shepherd, 2009; GIS Database). According to Shepherd (2009), approximately 100% of this vegetation association remains at a state and bioregional level (see table). This vegetation association would be given a conservation status of 'Least Concern' at both a state and bioregional level (Department of Natural Resources and Environment, 2002).

The vegetation under application is not a remnant of vegetation in an area that has been extensively cleared.

	Pre-European Area (ha)*	Current Extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion – Pilbara	17,804,193	17,785,001	~99.89	Least Concern	6.32
Beard Veg Assoc. – State					
82	2,565,901	2,565,901	~100	Least Concern	10.24
Beard Veg Assoc. – Bioregion					
82	2,563,583	2,563,583	~100	Least Concern	10.25

* Shepherd (2009)
** Department of Natural Resources and Environment (2002)

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

Methodology Department of Natural Resources and Environment (2002)
Shepherd (2009)
GIS Database:
- IBRA WA (Regions - 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 are no permanent watercourses or wetlands within the application area (GIS Database). However, there are multiple minor non-perennial watercourses through parts of the application area (GIS Database).

Two of the proposed drill pad sites have a habitat unit associated with drainage lines and an additional five sites near drill pads have habitat units associated with drainage lines or minor creeklines (ENV Australia, 2012a). Minor drainage lines are common in the Pilbara and vegetation associated with minor drainage lines is well represented locally (GIS Database).

Based on the above, the proposed clearing is at variance to this Principle. However, the vegetation types associated with the minor watercourses are common in the local and regional area, and the small amount of proposed clearing is unlikely to have any significant impact on any watercourse or wetland.

Methodology ENV Australia (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 is not likely to be at variance to this Principle

According to available datasets the application area intersects the Boolgeeda, Newman and Platform Land Systems (GIS Database).

The Boolgeeda Land System is characterised by stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands and mulga shrublands (Van Vreeswyk et al., 2004). The vegetation is generally not prone to degradation and the system is not susceptible to erosion (Van Vreeswyk et al., 2004).

The Newman Land System is characterised by rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands (Van Vreeswyk et al., 2004). Each of the landforms in the land system have a mantle of abundant pebbles of ironstone and other rocks, which translates to a low soil erosion risk (Van Vreeswyk et al., 2004).

The Platform Land System is characterised by dissected slopes and raised plains supporting hard spinifex grasslands (Van Vreeswyk et al., 2004). The landforms in this land system generally have surface mantles of very abundant pebbles and cobbles and the system is not susceptible to erosion (Van Vreeswyk et al., 2004).

Rio Tinto Exploration Pty Limited has applied to clear up to 28 hectares for exploration activities. Rio Tinto Exploration Pty Limited (2012) proposes to clear only what is required for a batch of drilling in case the entire program cannot be drilled in one season. This will allow tracks to be secured against erosion by not exposing

unused tracks to extensive rain, which may occur during the summer period (Rio Tinto Exploration Pty Limited, 2012). The proposed clearing activities are not likely to result in large areas of disturbed or open land. Given the moderate size and the temporary nature of the of the proposed activities, the clearing is not likely to result in appreciable land degradation. Potential long term impacts from land degradation as a result of the proposed clearing may be minimised by the implementation of a rehabilitation condition.

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

Methodology Rio Tinto Exploration Pty Limited (2012)
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 a conservation reserve (GIS Database). The nearest conservation area is Karijini National Park, which is located less than 1 kilometre west of the application area at its closest point (GIS Database). A small section, less than 1 hectare, of the application area is within the Register of National Estate site 'Hamersley Range National Park (1977 Boundary)' (GIS Database). Hamersley Range National Park is now known as Karijini National Park and the boundary has changed since 1977, therefore the application area is not within conservation estate. A large proportion of the vegetation in the Pilbara bioregion remains uncleared, approximately 99.89% (Shepherd, 2009), and in the local area there is still a large proportion of the vegetation remaining to provide a buffer for the national park (GIS Database).

The close proximity to Karijini National Park means that the proposed clearing poses a risk of spreading weeds into the national park. Potential impacts to the conservation area may be minimised by the implementation of a weed management condition.

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

Methodology Shepherd (2009)
GIS Database:
- DEC Tenure
- Mount George 50 cm Orthomosaic - Landgate 2004
- Munjina 50 cm Orthomosaic - Landgate 2004
- Register of National Estate

(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 watercourses or wetlands within the application area (GIS Database). There are multiple minor ephemeral drainage lines within the application area that would only flow following substantial rainfall events (GIS Database). Rio Tinto Exploration Pty Limited (2012) proposes to clear only what is required for a batch of drilling in case the entire program cannot be drilled in one season. This will allow tracks to be secured against erosion by not exposing unused tracks to extensive rain, which may occur during the summer period (Rio Tinto Exploration Pty Limited, 2012). Therefore, the proposed clearing is unlikely to significantly increase the sediment load of the surface water compared to the surrounding areas and is unlikely to cause deterioration in the quality of surface water in the local area.

According to available databases the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is Millstream Water Reserve, which is approximately 100 kilometres to the north-west (GIS Database). The proposed clearing is unlikely to affect the water quality of the water reserve due to the large distance between it and the application area.

Given the moderate amount (28 hectares) and low impact nature of the proposed clearing, it is unlikely to cause deterioration in the quality of surface or underground water.

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

Methodology Rio Tinto Exploration Pty Limited (2012)
GIS Database:
- Hydrography, Linear
- Public Drinking Water Source Areas (PDWSAs)

(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 is located within the Fortescue River catchment area (GIS Database). Given the size of the area to be cleared (28 hectares) in relation to the size of the catchment area (1,860,784 hectares) (GIS Database), the proposed clearing is not likely to increase the potential of flooding on a local or catchment scale.

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

Methodology

GIS Database:
- Hydrographic Catchments - Catchments

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

Comments

There is one Native Title Claim (WC11/6) over the area under application (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are three registered Aboriginal Sites of Significance in the vicinity of the application area (Site IDs 7601, 7602, 7603) (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 27 February 2012 by the Department of Mines and Petroleum inviting submissions from the public. The application was re-advertised on 30 April 2012 for an additional 7 day period due to a change in the application area boundary. No submissions were received.

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.

DEC (2012) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. http://naturemap.dec.wa.gov.au/default.aspx (Accessed 24 April 2012).

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.

ENV Australia (2012a) Munjina Rare Flora Survey. Unpublished Report Prepared by ENV Australia Pty Ltd for Rio Tinto Exploration, March 2012.

ENV Australia (2012b) Munjina Western Pebble-Mouse Mounds. Unpublished Report Prepared by ENV Australia Pty Ltd for Rio Tinto, March 2012.

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 Exploration Pty Limited (2012) Statement Against Each of the 10 Clearing Principles. Unpublished Report Prepared by Rio Tinto Exploration Pty Limited, February 2012.

Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A. and Hennig, P. (2004) Technical Bulletin - An Inventory and Condition Survey of the Pilbara Region, Western Australia, No. 92. Department of Agriculture, Government of Western Australia, Perth, Western Australia.

Western Australian Herbarium (2012) FloraBase - The Western Australia Flora. Department of Environment and Conservation. URL: http://florabase.dec.wa.gov.au (Accessed 27/4/2012).

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.