Government of Western Australia
Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4895/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Mesa Minerals Limited**

1.3. Property details

Property: General Purpose Lease 45/265
Local Government Area: Town of Port Hedland
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
22.91		Mechanical Removal	Sand Excavation and Associated Activites

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 21 June 2012

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 been mapped for the whole of Western Australia and are useful to look at vegetation in a regional context. One Beard vegetation association has been mapped within the application area:

Beard vegetation association 589: Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex (GIS Database; Government of Western Australia, 2011).

Mesa Minerals Limited (2012) conducted a vegetation and flora survey of the application area on 4 November 2010, and described two vegetation communities within the application area:

- Low Heath dominated by *Acacia stellaticeps* with hummock grass dominated by *Triodia epactia* with emergent tall shrubs of *Corymbia candida* subsp. *lautifolia* and *Hakea lorea* subsp. *lorea*; and
- Acacia Shrub dominated by *Acacia tumida* var. *pilbarensis* growing to 3 meters tall over Low Heath with no species dominated.

Fire has left a mosaic scar pattern across the project area. As such there were burnt, regenerating and old growth sections of each habitat type.

Clearing Description
Mesa Minerals Limited is proposing to clear up to 22.91 hectares of native vegetation for the purpose of the construction and maintenance of a boundary fence and the associated clearing to allow for residue and tailings disposal.

The vegetation will be cleared using a dozer. The vegetation and topsoil will be stockpiled separately for use in rehabilitation.

Vegetation Condition
Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994);

To:

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

Comment
The application area is located in the Roebourne subregion of Western Australia and is situated approximately 14 kilometres south-west of the Port Hedland town site (GIS Database).

The vegetation condition was derived from a vegetation survey conducted by Rapallo (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 occur within the Roebourne subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by quaternary alluvial and older colluvial coastal and subcoastal plains with a grass savannah of mixed bunch and hummock grasses, and dwarf shrub steppe of *Acacia stellaticeps* or *A. pyrifolia* and *A. inaequilatera*. Uplands are dominated by Triodia hummock grasslands. Ephemeral drainage lines support *Eucalyptus victrix* or *Corymbia hamersleyana* woodlands. Samphire, Sporobolus and mangal occur on marine alluvial flats and river deltas (CALM, 2002).

A flora and vegetation survey by Rapallo (2010b) on 4 November 2010 of the application area and surrounding vegetation identified four vegetation communities within the application area. The condition of the vegetation types were classified as 'very good' to 'good' (Keighery, 1994; GIS Database).

A search of the Department of Environment and Conservations Threatened and Priority Flora databases revealed three records of Priority Flora species within a 20 kilometre radius of the application area (DEC, 2012). No Threatened Flora species were identified (DEC, 2012a). Rapallo (2010b) identified no Threatened Flora and no Priority Flora species within the application area. There were no Threatened Ecological Communities or Priority Ecological Communities were recorded or identified within the application area (GIS Database).

No weed species were identified during the survey (Rapallo, 2010b). Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to the biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The faunal habitats within the application area are considered to be common and widespread within the subregion and the faunal assemblage is unlikely to be different to that found in similar habitat located elsewhere in the region (Rapallo, 2010a). The application area is in a 'very good' to 'good' condition (Keighery, 1994) however evidence of cattle and sheep grazing is evident (Rapallo, 2010b). Given this disturbance and the small amount of proposed clearing, the application area is not likely to comprise a high level of biological diversity.

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

Methodology

DEC (2012a)
CALM (2002)
Keighery (1994)
Rapallo (2010a)
Rapallo (2010b)
GIS Database:
- Port Hedland 50cm Orthomosaic - Landgate 2004
- 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 at variance to this Principle

A level one fauna survey conducted by Rapallo (2010a) identified two vegetation communities within the application area;

1. Triodia grassland with low Acacia shrub and occasional tall thin Acacia thickets. Red sands formed the dominant soil substrate covering most of the site except for a small limestone extrusion in the central east of the application area; and

2. Low Heath dominated by *Acacia stellaticeps* with hummock grass dominated by *Triodia epactia* with emergent tall shrubs of *Corymbia candida* subsp. *lautifolia* and *Hakea lorea* subsp. *lorea*.

Rapallo (2010b) identified the vegetation condition to be 'good' to 'very good' (Keighery, 1994). Rapallo (2010a) noted that the application area showed few characteristics of habitats that might support short-range endemic species. The habitats were relatively uniform, the only exception being small limestone extrusions (Rapallo, 2010a), and the habitats of the application area are similar to large areas of the Roebourne subregion.

There is approximately 99% of the pre-European vegetation remaining within the Pilbara bioregion (Government of Western Australia, 2011; GIS Database). Given the extent of the native vegetation remaining in the local area and bioregion, the vegetation to be cleared does not represent a significant ecological link.

There were three conservation significant fauna species listed as either a Threatened Species under the *Environment Protection and Biodiversity Conservation Act 1999* or protected under Western Australian legislation (*Wildlife Conservation Act, 1950*), that may potentially occur within a 20 kilometre radius of the application area (DEC, 2012a).

Rapallo (2010a) conducted a level one fauna survey of the application area on 4 November 2010. The survey recorded eight species of birds, four mammals and two reptile species (Rapallo, 2010a). Rapallo (2010a) recorded two species of conservation significance within the application area, however there is potential for another three conser0vation significant species to occur within the application area. The species recorded within the application area; the Rainbow Bee Eater (*Merops ornatus*) and Bush-stone Curlew (*Burhinus grallarius*) are both highly mobile and may use the study area for foraging as part of a larger territory area. The habitat present within the application areas is not considered significant habitat for this species (Rapallo, 2010a).

Suitable habitat for the Peregrine Falcon (*Falco peregrinus*) was found within the application area, and this bird species may occasionally hunt over the application, however due to the lack of high rocky outcrops means that it is unlikely to nest within the application area (Rapallo, 2010a). This species is considered highly mobile and/or have a wide distribution so the clearing is unlikely to significantly impact on this species (Rapallo, 2010a). Extensive sand plains and clay pans supporting Acacia thickets and Triodia provide habitat for the Greater Bilby (*Macrotis lagotis*) however there have only been historical records of Bilby sightings, with the last one made in 1963, therefore these are not expected to be in the surrounding area (Rapallo, 2010a).

Two active burrows that display similar characteristics to Mulgara burrows were recorded within the application area (Rapallo, 2010a). A recent record of the Crest-tailed Mulgara (*Dasycercus cristicauda*) was made one kilometre to the north of the application area, and a record of the Brush-tailed Mulgara (*D. blythi*) was recorded six kilometres to the east of the application area (Rapallo, 2010a). The Brush-tailed Mulgara can be found in most arid habitats, especially sandy habitats where Triodia grasslands form the dominant component of the understory (Van Dyke & Strahan, 2008). In parts of Western Australia the historic distribution of the Brush-tailed Mulgara is sympatric with that of the Crest-tailed Mulgara (Wooley, 2006). The Mulgara is a ground-dwelling conservation significant fauna species with limited dispersal abilities and is more likely to be impacted on by any development (Rapallo, 2010a). Rapallo (2011) conducted a targeted Mulgara survey of the application area and surrounding area during March 2011. Two male Brush-tailed Mulgara were captured during the survey. Three additional burrow systems potentially belonging to the Brush-tailed Mulgara were also identified within the application area (Rapallo, 2011). Rapallo (2011) suggests that the capture rates were lower than average due to the ample food resources across the project area associated with the recent above average rainfall. Therefore, any core habitats such as burrows could be considered as significant and should be avoided (DEC, 2012b). Potential impacts to conservation significant fauna as a result of the proposed clearing may be minimised by the implementation of a fauna management condition (DEC, 2012b).

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

Methodology

DEC (2012a)
DEC (2012b)
Government of Western Australia (2011)
Keighery (1994)
Rapallo (2010a)
Rapallo (2011)
Van Dyke & Strahan (2008)
Wooley (2006)
GIS Database:
- IBRA WA (regions - subregions)
- Pre-European Vegetation
- Port Hedland 50cm Orthomosaic - Landgate 2004

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

Comments

Proposal is not likely to be at variance to this Principle

According to available databases, there are no records of Threatened Flora within the application area (GIS Database). A search of the Department of Environment and Conservations Threatened and Priority Flora databases identified no Threatened Flora species as occurring within a 20 kilometre radius of the application area (DEC, 2012a).

Rapallo (2010b) conducted a vegetation and flora survey of the application area and surrounding areas on 4 November 2010. No Threatened Flora was recorded within the survey area.

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

Methodology

DEC (2012a)
Rapallo (2010b)
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 the available databases shows that there are no Threatened Ecological Communities situated within 100 kilometres of the application area (GIS Database).

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

Methodology

GIS Database:
- Threatened Ecological Sites Buffered

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

Comments

Proposal is not at variance to this Principle

The application area falls within Pilbara IBRA bioregion (GIS Database). The vegetation within the application area is recorded as Beard vegetation association 589: Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex (GIS Database; Government of Western Australia, 2011).

According to the Government of Western Australia (2011), Beard vegetation association 589 retains approximately 99% of its pre-European extent. Therefore, the area proposed to be cleared is not a significant remnant of native 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	17,804,427	17,729,352	~99.59	Least Concern	6.32
Beard vegetation associations - State					
589	809,603	804,022	~99.31	Least Concern	1.60
Beard vegetation associations - Bioregion					
589	730,567	725,993	~99.37	Least Concern	1.77

* Government of Western Australia (2011)
** 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)
Government of Western Australia (2011)
GIS Database:
- IBRA WA (regions - subregions)
- Pre-European Vegetation

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

Comments

Proposal is not at variance to this Principle

According to available databases, there are no watercourses or wetlands within the application area (GIS Database). The vegetation within the application area is not considered to be growing in association with any watercourse or wetland.

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

Methodology

GIS Database:
- Geodata, Lakes
- Hydrography, Linear

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

Comments

Proposal is not likely to be at variance to this Principle

According to available databases, the application area is comprised of the Uaroo land system.

The Uaroo land system consists of broad sandy surfaced plains with hard and soft spinifex grasslands. Pebbly surfaced plains, plains with calcrete at very shallow depth, broad mostly unchannelled tracts receiving more concentrated sheet flow, minor stony hills and rises are also present. The Uaroo land system is generally not susceptible to erosion or significant pasture degradation, however, there is some risk of wind erosion following burning (Payne et al., 1992).

Rapallo (2010b) states that the application area has been extensively exposed to livestock grazing and some of the more palatable shrubs have been selectively eliminated in certain areas. Given the already degraded state of the application area, and the small amount of proposed clearing of 22.91 hectares of native vegetation, it is not likely to cause appreciable land degradation.

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

Methodology

Payne et al. (1992)
Rapallo (2010b)
GIS Database
- Rangeland Land System Mapping

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

Comments

Proposal is not likely to be at variance to this Principle

The application area is not located within any conservation areas (GIS Database). The nearest conservation area is the North Turtle Island Nature Reserve, located approximately 70 kilometres north-east of the application areas (GIS Database). Given the body of water and distance separating North Turtle Island Nature Reserve and the application area, the proposed clearing is not likely to impact the environmental values of the conservation area.

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

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

Methodology

GIS Database:
- DEC Tenure

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

Comments

Proposal is not likely to be at variance to this Principle

The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The application area is located within the proclaimed Pilbara groundwater area under the *Rights in Water and Irrigation Act 1914* (GIS Database). Any groundwater extraction and/or taking or diversion of surface water for the purposes other than domestic and/or stock watering is subject to licence by the Department of Water.

The application areas lies within a low rainfall zone and any surface water within the application area is likely to only remain for short periods following significant rainfall events (BoM, 2012). The proposed clearing is not likely to cause deterioration in the quality of any surface water within or outside of the application areas.

There are no permanent or ephemeral waterbodies located within the application area (GIS Database). Given there is a low average rainfall (317.6 millimetres) and there are no watercourses within the application area, the proposed clearing is not likely to cause sedimentation or deteriorate the quality of surface water in the nearby areas (BoM, 2012; GIS Database).

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

Methodology

BoM (2012)
GIS Database:
- Geodata, Lakes
- Hydrography, Linear
- Public Drinking Water Source Areas

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments

Proposal is not likely to be at variance to this Principle

The application area experiences an arid (semi-desert) climate with highly variable rainfall, falling mainly in summer, with an annual average rainfall of approximately 317.6 millimetres per year (BoM, 2012; CALM, 2002). Based on an average annual evaporation rate of 3,200- 3,600 millimetres (BoM, 2012), any surface water resulting from rainfall events is likely to be relatively short lived.

Given the size of the area to be cleared (22.91 hectares) compared to the size of the Port Hedland Coast catchment area (48,879 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

BoM (2012)
CALM (2002)
GIS Database:
- Hydrographic Catchments - Catchments
- Hydrography, Linear

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

Comments

There is one Native Title claim over the area under application (WC99/3). This claim was determined by the Federal Court on 22 April 1999. The mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There is no registered Aboriginal Site 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 20 February 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 - Determined by the Federal Court

4. References

BoM (2012) Climate Statistics for Australian Locations. A Search for Climate Statistics for Port Hedland Airport, Australian Government Bureau of Meteorology, viewed 24 April 2012, <http://reg.bom.gov.au/climate/averages/tables/cw_004032.shtml>.

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Pilbara 4 (PIL4 - Roebourne subregion) Department of Conservation and Land Management, Western Australia.

DEC (2012a) NatureMap - Mapping Western Australia Biodiversity, Department of Environment and Conservation, viewed 27 April 2012, <http://naturemap.dec.wa.gov.au>.

DEC (2012b) Advice from species and communities branch regarding clearing permit application 4895/1. Prepared by the Department of Environment and Conservation, 30 March 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.

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.

Payne, A.L., & Tille, P.J. (1992) An Inventory and Condition Survey of the Roebourne Plains and surrounds, Western Australia, Department of Agriculture, Western Australia.

Rapallo (2010a) Level One Fauna Survey of G45/265 for Mesa Minerals Ltd. Prepared by Rapallo, November 2010.

Rapallo (2010b) Level One Flora Survey of G45/265 for Mesa Minerals Ltd. Prepared by Rapallo, November 2010.

Rapallo (2011) Targeted Mulgara Survey of G45/265 for Mesa Minerals Ltd. Prepared by Rapallo, March 2011.

Van Dyke, S., & Strahan, R.,(2008) The Mammals of Australia. 3rd ed. Sydney: Reed New Holland. Original edition, 1983.

Wooley, P.A. (2006) Studies on the Crest-tailed Mulgara Dasycercus cristicauda and the Brush-tailed Mulgara *Dasycercus blythi* (Marsupialia: Dasyuridae). Australian Mammalogy 28:117-120.

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.