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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4498/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Roy Hill Infrastructure Pty Ltd**

1.3. Property details

Property: Mining Lease 45/645
General Purpose Lease 45/220
General Purpose Lease 45/253
Local Government Area: Town of Port Hedland
Colloquial name: Roy Hill 1 Iron Ore Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
17.2		Mechanical Removal	Borrow Pit and Road Upgrades

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 15 September 2011

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. Two Beard vegetation associations have been mapped within the application area: **589:** Mosaic: Short bunch grassland - savanna/grass plain (Pilbara)/hummock grasslands, grass steppe; soft spinifex; and **647:** Hummock grasslands, dwarf-shrub steppe; *Acacia translucens* over soft spinifex (GIS Database). A flora and vegetation survey of Mining Lease 45/645 and the surrounding roads was undertaken by Pilbara Flora in April 2011 (Pilbara Flora, 2011). This survey covered the vast majority, over 99%, of the application area. Two vegetation types and a disturbed area were identified within the application area (Pilbara Flora, 2011; Roy Hill, 2011). **Vegetation Type 1:** Low shrubland of *Acacia stellaticeps* and hummock grass steppe on plains. **Vegetation Types 2:** *Triodia secunda* and *Triodia epactia* hummock grass steppe on plains. **Disturbed Areas:** No vegetation.	Roy Hill Infrastructure Pty Ltd (Roy Hill) has applied to clear up to 17.2 hectares of native vegetation for the purpose of a borrow pit and road upgrades. The application area consists of three separate sections. The largest section of the application area, approximately 17 hectares, is required for the borrow pit. The clearing of the two smaller sections, totalling approximately 0.2 hectares, is for the proposed road upgrades. The extracted borrow material will be used for construction projects in Port Hedland and South Hedland to support the development of the Roy Hill Iron Ore Project. The application area is located approximately 10 kilometres south-west of Port Hedland. Vegetation will be cleared with mechanical equipment using the blade up technique.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994). To: Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).	The vegetation condition was assessed by a botanist from Pilbara Flora (2011). The vegetation conditions were described using a scale based on Trudgen (1988) and have been converted to the corresponding conditions from the Keighery (1994) scale.

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 may be at variance to this Principle

The application area occurs 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 sub-coastal plains with a grass savannah of mixed bunch and hummock grasses, and dwarf shrub steppe of *Acacia stellaticeps* or *A. pyrifolia* and *A. inqequilatera* (CALM, 2002). Uplands are dominated by *Triodia* hummock grasslands and ephemeral drainage lines support *Eucalyptus victrix* or *Corymbia hamersleyana* woodlands (CALM, 2002). Samphire, *Sporobolus* and mangal occur on marine alluvial flats and river deltas (CALM, 2002).

The vegetation within the application area is broadly mapped as Beard vegetation associations 589 and 647, both of which have approximately 100% of their pre-European extent remaining in the bioregion (Shepherd, 2009; GIS Database). Pilbara Flora conducted a flora and vegetation survey in April 2011 of Mining Lease 45/645 and its surrounds, which included two of the three sections of the application area (Pilbara Flora, 2011). A total of 65 vascular plant taxa from 27 families and 49 genera were recorded during the survey, with Poaceae, Fabaceae and Malvaceae being the dominant families (Pilbara Flora, 2011).

No Declared Rare Flora, Priority Flora species, Threatened Ecological Communities or Priority Ecological Communities were recorded within the application area (Pilbara Flora, 2011; GIS Database).

One introduced flora species was recorded within the application area and another was recorded adjacent to the application area (Pilbara Flora, 2011). These weed species were Buffel Grass (*Cenchrus ciliaris*) and Kapok Bush (*Aerva javanica*) (Pilbara Flora, 2011). Care must be taken to ensure that the proposed clearing activities do not spread or 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.

The fauna habitat within the application area consists mostly of *Acacia stellaticeps* low open shrubland with scattered *Hakea lorea* over dense hummock grassland of *Triodia epactia* and *T. schinzii*, and a small area of dense hummock steppe containing *T. epactia* and *T. secunda* (Terrestrial Ecosystems, 2011). These habitats are abundant in the local area (Terrestrial Ecosystems, 2011). The locality is rich in small terrestrial mammals, in particular Mulgara (*Dasycercus* sp.) and Red Kaluta (*Dasykaluta rosamondae*) (Terrestrial Ecosystems, 2011). Mulgara tracks have been recorded within the application area (Terrestrial Ecosystems, 2011). The application area may support a high diversity of small terrestrial mammals which may be affected in the short term by the proposed clearing. Roy Hill have committed to rehabilitating the borrow pit site after its closure, with flora species representative of Mulgara habitat considered of high importance during rehabilitation design (Roy Hill, 2011). Given that the Mulgara and other small terrestrial mammals are not restricted to the application area and it will be rehabilitated (Roy Hill, 2011), the impact on biological diversity is not likely to be significant.

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

Methodology

CALM (2002)
Pilbara Flora (2011)
Roy Hill (2011)
Shepherd (2009)
Terrestrial Ecosystems (2011)
GIS Database:
- IBRA WA (Regions - Subregions)
- 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 may be at variance to this Principle

A risk-based fauna assessment was undertaken over most of the application area and its surrounds by Terrestrial Ecosystems (2011). A desktop analysis was conducted then a field survey was undertaken in April 2011 which recorded the fauna habitats present as well as observations of tracks and burrows (Terrestrial Ecosystems, 2011).

The fauna habitat of the application area consists mainly of a relatively flat landscape with the vegetation dominated by an *Acacia stellaticeps* low open shrubland with scattered *Hakea lorea* over dense hummock grassland of *Triodia epactia* and *T. schinzii*. The soil is sandy throughout, although there is a more stony substrate along the old access track (Terrestrial Ecosystems, 2011). There is a small area of dense hummock steppe containing *Triodia epactia* and *T. secunda* in the east of the application area (Terrestrial Ecosystems, 2011). There is not likely to be any significant variation in the fauna assemblage between the two habitat types (Terrestrial Ecosystems, 2011).

Extensive Mulgara (*Dasycercus* sp.) tracks were recorded within the application area and previous fauna trapping in the vicinity has indicated that the locality is very rich in small terrestrial mammals, in particular the Mulgara and Red Kaluta (*Dasykaluta rosamondae*) (Terrestrial Ecosystems, 2011). While the Mulgara tracks were not identified to species level, a precautionary approach would be to treat them as the Schedule 1 species *Dasycercus cristicauda* (Terrestrial Ecosystems, 2011). The clearing of the application area is likely to result in the loss of Mulgara and Mulgara habitat (Terrestrial Ecosystems, 2011). Terrestrial Ecosystems (2011) recommended the Mulgara be managed in accordance to the "Vertebrate Fauna Management Plan for the Roy Hill Railway". The procedure for trapping and translocating Mulgara recommends that potential Mulgara habitat be searched for active burrows and if they are located then the animals should be translocated. No Mulgara burrows were recorded within the application area (Terrestrial Ecosystems, 2011) so a translocation is not necessary. Although the clearing would impact on Mulgara through a reduction in habitat at a local scale and individual animals, the loss of Mulgara habitat by clearing the vegetation in the application area is unlikely to be significant in a bioregional context because of its abundance in adjacent areas (Terrestrial Ecosystems, 2011).

Several other conservation significant fauna species have been recorded in the vicinity of the application area and may utilise the application area occasionally. The following conservation significant species were described as probably present in adjacent areas:

- Australian Bustard (*Ardeotis australis*);
- Bush Stone-curlew (*Burhinus grallarius*);
- Grey Falcon (*Falco hypoleucos*);
- Northern Quoll (*Dasyurus hallucatus*);
- Pebble-mound Mouse (*Pseudomys chapmani*);
- Peregrine Falcon (*Falco peregrinus*); and
- Rainbow Bee-eater (*Merops ornatus*) (Terrestrial Ecosystems, 2011).

No denning habitat for the Northern Quoll or mounds of the Pebble-mound Mouse have been recorded within the application area and the vegetation is not considered to be of high importance to these species (Terrestrial Ecosystems, 2011). The bird species that frequent the area are mobile and will move into adjacent areas when the clearing occurs (Terrestrial Ecosystems, 2011).

Excluding impacts to Mulgara, the proposed vegetation clearing is unlikely to have a significant impact on fauna species or fauna assemblages, including conservation significant species, when considered in a bioregional context (Terrestrial Ecosystems, 2011).

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

Methodology Terrestrial Ecosystems (2011)

(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 Declared Rare Flora (DRF) within the application area (GIS Database). The nearest record of DRF is located approximately 245 kilometres south-east of the application area (GIS Database).

A flora and vegetation survey covering the vast majority of the application area, and its surrounds, was conducted by a Pilbara Flora botanist in March 2011 (Pilbara Flora, 2011). No DRF were recorded during the survey (Pilbara Flora, 2011).

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

Methodology Pilbara Flora (2011)
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 nearest recorded TEC, *Themeda* grasslands on cracking clays, is located approximately 200 kilometres south-west of the application area (GIS Database).

No TECs were identified during the flora and vegetation survey conducted by a Pilbara Flora botanist over the application area (Pilbara Flora, 2011).

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

Methodology Pilbara Flora (2011)
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:

589: Mosaic: Short bunch grassland - savanna/grass plain (Pilbara)/hummock grasslands, grass steppe; soft spinifex; and
647: Hummock grasslands, dwarf-shrub steppe; *Acacia translucens* over soft spinifex (Shepherd, 2009; GIS Database).

According to Shepherd (2009), over 99.9% of both of these vegetation associations remain at a state level and 100% of vegetation remains at a bioregional level (see table). These vegetation associations 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					
589	809,754	809,637	~99.99	Least Concern	1.60
647	196,372	196,372	~100	Least Concern	
Beard Veg Assoc. – Bioregion					
589	730,718	730,683	~100	Least Concern	1.77
647	196,371	196,371	~100	Least Concern	

* 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 - 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 likely to be at variance to this Principle

According to available databases, there are no watercourses or wetlands within the application area (GIS Database). The vegetation types within the application area are not considered to be growing in association with any watercourse or wetland (Pilbara Flora, 2011).

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

Methodology Pilbara Flora (2011)

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 datasets the application area is within the Uaroo Land System (GIS Database). The Uaroo Land System is characterised by broad sandy plains supporting shrubby hard and soft spinifex grasslands (Van Vreeswyk et al., 2004). Occasionally some erosion is evident on drainage tracts but generally the land system is not susceptible to erosion (Van Vreeswyk et al., 2004). The application area is comprised mostly of the sandy/loamy plains landform unit (Roy Hill, 2011) which is not susceptible to erosion (Van Vreeswyk et al., 2004).

A Construction Environmental Management Plan (CEMP) will be implemented to manage any potential land degradation impacts, including erosion, salinity, nutrient export and waterlogging (Roy Hill, 2011). Initial analysis of the soils of the application area indicate there is low potential for acid sulfate production (Roy Hill, 2011).

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

Methodology

Roy Hill (2011)
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 known conservation areas are on islands off the Western Australian coast (GIS Database) and the application area is unlikely to provide any ecological linkage to these. The nearest mainland conservation area is Mungaroona Range Nature Reserve, located approximately 108 kilometres south-west of the application area (GIS Database). At this distance the proposed clearing is unlikely to impact on the environmental values of the nature reserve.

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

Methodology

GIS Database:
- DEC Tenure
- Register of National Estate (Status)

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

Comments

Proposal is not likely to be at variance to this Principle

According to available databases the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is Turner River Water Reserve, which is approximately 4 kilometres south of the application area (GIS Database). The small area of the proposed clearing is unlikely to cause deterioration in the quality of underground water.

There are no creeklines, wetlands or watercourses within the application area (GIS Database). There are ephemeral drainage lines surrounding the application area (GIS Database) but these would only flow for short periods following heavy rainfall. Ephemeral drainage lines in the Pilbara typically have naturally high background sediment levels during flow events and the clearing is not expected to significantly increase the sediment levels (Roy Hill, 2011). The proposed clearing is unlikely to cause deterioration in the quality of surface water in the local area.

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

Methodology

Roy Hill (2011)
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 Coastal catchment area of the Port Hedland Coast basin (GIS Database). Given the size of the area to be cleared (17.2 hectares) in relation to the size of the catchment area (744,301 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 (WC99/3) 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 no registered 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 8 August 2011 by the Department of Mines and Petroleum inviting submissions from the public. 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. 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.

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

Pilbara Flora (2011) Level 1 Flora and Vegetation of Port Hedland (Boodarie) Lease M45/645. Report Prepared by Pilbara Flora for Roy Hill Intrastucture Pty Ltd, May 2011.

Roy Hill (2011) Native Vegetation Clearing Permit Application M45/645, G45/220 and G45/253: Borrow Pit and Whim Creek Road Upgrade. Unpublished Report Prepared by Roy Hill, July 2011.

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.

Terrestrial Ecosystems (2011) Fauna Risk Assessment - M45/645 and Associated Upgrade of Access Track. Report Prepared by Terrestrial Ecosystems for Roy Hill Infrastructure Pty Ltd.

Trudgen, M.E. (1988) A Report on the Flora and Vegetation of the Port Kennedy Area. Unpublished Report Prepared for Bowman Bishaw and Associates, West 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, Perth, 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.