Department of Industry and Resources

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1359/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Apache Northwest Pty Ltd**

1.3. Property details

Property: Petroleum Production Licence TL 6
Pipeline Licence PL 12

Local Government Area: Shire of Ashburton (Islands)

Colloquial name: Varanus Island

1.4. Application

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

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
The vegetation of Varanus Island has been broadly mapped as Beard Vegetation Association 117: Hummock grasslands; grass steppe; soft spinifex (GIS Database; Shepherd et al., 2001). Six vegetation associations, (broadly associated with topographic features), have been identified on the island,: 1) Low (to 20 cm) open herbland of *Frankenia pauciflora* on exposed limestone, that is exposed to wind and sea spray and has poorly developed soil. 2) Low (to 50 cm) open shrubland of *Scaevola spinescens*, *Rhagodia preissii* and *Sarcostemma viminale* subsp *australe* (formerly *S. australe*) on limestone plains and ridges inland from the exposed coastal limestone. 3) Low (to 50 cm) open shrubland of *Sarcostemma viminale* subsp *australe*, *Capparis spinosa* and *Pittosporum phylliraeoides* on more sheltered and inland parts of undulating limestone terrain. 4) Open grassland of *Spinifex longifolius* on white sands of coastal dunes. 5) Closed mixed grassland/herbland of *Setaria dielsii* and *Amaranthus pallidiflorus* on the deeper orange sands of inland plains. 6) Low (to 50 cm) open shrubland of *Sarcostemma viminale* subsp *australe* with mixed grassland on orange sand particularly where it is shallow over limestone. (Semeniuk, 1990; as cited by Apache, 2006b) Twelve weed species have been recorded on the island: Buffel grass, *Cenchrus ciliaris;* Birdwood Grass, *Cenchrus setiger;* Kapok bush, *Aerva javanica;* Milk thistle, *Sonchus oleraceus;* Prickly sow thistle, *Sonchus asper;* Purple top chloris, *Chloris barbata;* Tridax daisy, *Tridax procumbens;* Spiked malvastrum, *Malvastrum americanum;* Summer grass, *Digitaria ciliaris;* Dandelion, *Taraxacum officinale;* Tall fleabane, *Conyza albida; and Euphorbia* sp. Spurge (Apache, 2006b). According to the Department of Conservation and Land Management (CALM, now DEC), Environmental Weed Strategy for Western Australia, three of these weed species, (Buffel Grass, Birdwood Grass, and Kapok bush) are considered as a high priority for weed control, due to their invasiveness and potential environmental impacts (CALM, 1999). The majority (approximately 26.5 ha) of the vegetation within the	The clearing application area covers the existing Apache Lease on Varanus Island. The application is to clear up to 25 ha, over a period of five years, within a larger area of 29 ha, for various minor construction and maintenance activities associated with the existing petroleum production facility and associated infrastructure. The vegetation will be cleared by various means appropriate to each specific instance of clearing. Vegetation may be cleared by spraying, hand removal, or by mechanical means.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994). To Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994).	Varanus Island is situated approximately 58 km off the Pilbara coast, and is the largest island in the Lowendal group. Varanus Island has a total area of approximately 85 ha, and forms part of the C Class, Lowendal Nature Reserve which is managed by the Department of Environment and Conservation (DEC) for the purposes of conservation. Apache have leased a section of Varanus Island (approximately 29 ha) from DEC since 1986, and operate a petroleum receiving, processing, and loading and export facility on the island (Apache, 2006a).

application area (the Apache lease area) has been previously disturbed. The two areas of vegetation within the lease area which remain relatively undisturbed are the areas known as East Tank Hill, and Eastern Beach Dune, which cover approximately 1 ha and 1.5 ha, respectively.

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

Varanus Island is situated approximately 60 km off the Pilbara coast, and approximately 11 km east/northeast of the northern end of Barrow Island. Varanus Island has a total area of approximately 85 ha, and is the largest of the 30 small, low lying islands and rocky outcrops which make up the Lowendal archipelago. The island is approximately 2.5 km long and approximately 600m wide at its widest point. The topography of the island varies from flat to low undulating dunes, and rises to approximately 30m above sea level at its highest point (CALM, 2002).

Varanus Island is part of the Lowendal Nature Reserve (C Class), which is managed by the Department of Environment and Conservation (DEC), and is recognised as an important nesting ground for several species of seabird and marine turtle (CALM, 2002). However, the proposed clearing is located within or immediately adjacent to previously disturbed areas, and is not expected to impact on any significant fauna habitats.

The vegetation of Varanus Island consists of typical coastal species (CALM, 2002), and no species of Declared Rare or Priority Flora are known to occur on the island (Apache, 2006b; CALM 2002; GIS Database). Much of the vegetation within the clearing application area has been previously disturbed, and the biodiversity of the application area is substantially less than the remainder of the island.

Apache hold a lease over approximately 29 ha of Varanus Island, and the clearing permit application area covers the existing lease. Under the terms of the lease agreement between Apache and DEC, a number of restrictions are imposed on Apache operational procedures, aimed at protecting the natural environment of the island. Annual monitoring of flora and fauna is required and the results of the monitoring are reported to DEC in an annual report (Apache, 2006b). Apache have adopted a Vegetation Management Plan for the island, in consultation with DEC (Apache, 2006a; 2006b). DEC considers that the biodiversity values of Varanus Island can be adequately managed under the existing lease agreement and the Varanus Island Vegetation Management Plan (DEC, 2006a).

DEC advises that the proposed clearing, adjacent to existing infrastructure and previously disturbed areas is unlikely to have any significant impact on the biodiversity values of the island. The proponent is advised to liaise with DEC Regional staff, to ensure that clearing activities are conducted in the most appropriate manner (DEC, 2006a).

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

Methodology

Apache (2006a).
Apache (2006b).
CALM (2002).
DEC (2006a).
GIS Database: Declared Rare and Priority Flora List - CALM 01/07/05.

(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

Varanus Island is an important breeding ground for several species of seabirds, including the Wedge-tailed Shearwater, *Puffinus pacificus;*, Osprey, *Pandion haliaetus;* White-bellied Sea Eagle, *Haliaeetus leucogaster;* Caspian Tern, *Sterna caspia;* Crested Tern, *Sterna bergii;* Lesser Crested Tern, *Sterna bengalensis;* Roseate Tern, *Sterna dougallii;* Bridled Tern, *Sterna anaethetus;* Silver Gull, *Larus novaehollandiae;* Pied Cormorant, *Phalacrocorax varius;* Beach Stone Curlew, *Esacus neglectus* and Pied Oystercatcher, *Haematopus longirostris*. The islands are particularly important for tern breeding (CALM, 2002).

Varanus Island is also a significant nesting site for three species of marine turtle, the Hawksbill Turtle, *Eretmochelys imbricata*; the Green Turtle, *Chelonia mydas* and the Flatback Turtle, *Natator depressus* (CALM, 2002), which are listed in *Schedule 1 - Fauna that is rare or is likely to become extinct*, of the *Wildlife Conservation (Specially Protected Fauna) Notice*, and protected under the *Wildlife Conservation Act 1950.*

However, none of these breeding grounds occur within the clearing application area (Apache, 2006a) and the proposed clearing is not expected to impact on the habitat for any of the above species.

The vegetation of the application area occurs as small fragmented remnants, the majority of which have been previously disturbed. As a result, these remnants are unlikely to represent a significant habitat for fauna. The vegetation associations and habitat types within the application area are well represented on other parts of Varanus Island (Apache, 2006a), and the proposed clearing is unlikely to have any significant impact on the

fauna habitats of the island.

The Department of Environment and Conservation (DEC) considers that any potential impacts of the proposed clearing on fauna and fauna habitats can be adequately managed through the existing fauna monitoring and management procedures which have been developed by Apache in consultation with DEC (DEC, 2006a).

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

Methodology Apache (2006a).
CALM (2002).
DEC (2006a).

(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**
The flora of Varanus Island has been extensively surveyed, and a total of 122 plant taxa have been recorded, including 12 weed species and six introduced mainland species (Apache, 2006b).

There are no known populations of Declared Rare or Priority Flora on Varanus Island (Apache, 2006b; GIS Database).

The only two areas of vegetation within the lease area which remain relatively undisturbed are the areas known as East Tank Hill, and Eastern Beach Dune. The vegetation of East Tank Hill in particular, has a relatively high species richness and some species which are considered locally significant due to their restricted distribution on the island. The proponent has advised that there is no intention to clear these two areas of vegetation for any construction purposes, however these areas have been included within the application area to allow for possible disturbance in the event of an emergency (Apache, 2006a; 2006b)

The Department of Environment and Conservation (DEC) considers that the potential impacts of the proposed clearing can be adequately managed under the provisions of the existing Varanus Island Vegetation Management Plan (DEC, 2006a).

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

Methodology Apache (2006a).
Apache (2006b)
DEC (2006a).
GIS Database: Declared Rare and Priority Flora List - CALM 01/07/05.

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

Comments **Proposal is not likely to be at variance to this Principle**
There are no known Threatened Ecological Communities (TEC's) on Varanus Island (GIS Database).

Therefore the proposed clearing is not likely to be at variance to this principle.

Methodology GIS Database: Threatened Ecological Communities - CALM 12/04/05.

(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**
Varanus Island is the largest island in the Lowendal Islands group. The Lowendal Islands lie off the Pilbara coast, however the Western Australian Biodiversity Audit (CALM, 2002), classified the Lowendal Islands as falling within the Cape Range subregion of the Carnarvon Bioregion.

Shepherd et al. (2001) report that approximately 100% of the pre-European vegetation still exists in the IBRA Carnarvon Bioregion. The vegetation in the application area is broadly mapped as Beard Vegetation Association 117: Hummock grasslands; grass steppe; soft spinifex (GIS Database; Shepherd et al., 2001). In 2001 Shepherd et al., reported that there was approximately 96% of this vegetation type remaining, of which 13% was in reserves.

Varanus Island covers an area of approximately 85 ha. Apache operate a petroleum production facility on the island, within a defined lease area of approximately 29 ha. The remainder of the island remains largely undisturbed. The application is to clear up to 25 ha within the existing lease area, for various construction and maintenance activities which may be required over the next five years. Much of the vegetation within the lease area has suffered previous disturbance. The island has not been extensively cleared, and the small pockets of vegetation proposed to be cleared do not represent significant remnants of native vegetation.

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

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation Status**	% in reserves/CALM-managed land
IBRA Bioregion - Carnarvon	8,382,975*	8,369,554*	99.8%	Least concern	
Shire of Ashburton (Islands)	No information available				
Beard vegetation association - 117	919,751	886,791	~96%	Least concern	13%

* Shepherd et al. (2001)
** Department of Natural Resources and Environment (2002)

Methodology CALM (2002).
Dept of Natural Resources and Environment (2002).
GIS Database:
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00.
- Local Government Authorities - DLI 8/07/04.
- Pre-European Vegetation - DA 01/01.
Shepherd et al. (2001).

(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

There are no permanent watercourses or waterbodies on Varanus Island (Apache, 2006a; GIS Database), and there are no watercourses or waterbodies within the application area (GIS Database).

Therefore, the proposed clearing is not at variance to this principle.

Methodology Apache (2006a).
GIS Database: Hydrography, Linear - DoE 1/2/04.

(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

Varanus Island is approximately 2.5 km long and approximately 600m wide at its widest point. Its highest point is approximately 30m above sea level. The soils consist of shallow sands over limestone, and the topography of the island ranges from flat to undulating low dunes (Apache, 2006a; CALM 2002).

The groundwater of the island is saline and under tidal influence (Apache, 2006a). The proposed clearing is unlikely to cause an increase in salinity.

The risk of erosion due to surface water run-off is minimal, due to the relatively flat topography and sandy soils of the application area. Although there is some risk of wind erosion, it is also likely to be minor, due to the shallow soils, and is unlikely to result in appreciable land degradation.

Apache conduct regular monitoring and control of weeds on Varanus Island, as part of their Vegetation Management Plan for the island (Apache, 2006b).

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

Methodology Apache (2006a).
Apache (2006b).
CALM (2002).

(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

Varanus Island is part of the Lowendal Nature Reserve (GIS Database), a C Class Nature Reserve which covers the Lowendal group of islands (approximately 245 ha in total), and is managed for the purposes of conservation by the Department of Environment and Conservation (DEC).

The Lowendal Islands are listed for their natural values on the Register of the National Estate, and are recognised in particular as an important breeding ground for the Wedge-tailed Shearwater (DEH, 2007).

The proposed clearing falls within a 29 ha area leased by Apache from DEC, which consists largely of

previously disturbed vegetation in close proximity to existing infrastructure. DEC considers that the additional clearing within the existing disturbance area, is unlikely to have any impact on the conservation values of the Nature Reserve (DEC, 2006a).

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

Methodology DEC (2006a).
DEH (2007).
GIS Database:
- CALM Managed Lands and Waters - CALM 1/07/05.
- Register of National Estate - EA 28/01/03.

(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 waterbodies on Varanus Island. The application area is relatively flat, with shallow sandy soils, and the proposed clearing is unlikely to result in increased surface water run-off (Apache, 2006a; GIS Database).

The watertable level and groundwater flow patterns are subject to tidal influence, and groundwater is saline (Apache, 2006a). The proposed clearing is unlikely to have any impact on the groundwater level or quality.

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

Methodology Apache (2006a).
GIS Database: Hydrography, Linear - DoE 1/2/04.

(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**
There are no permanent wetlands or watercourses on Varanus Island and any brief occurrence of surface water is limited to significant rainfall events. Varanus Island has an arid, sub-tropical climate, and receives variable summer and winter rainfall with an average annual rainfall of approximately 250 mm per annum (Apache, 2006a; CALM, 2002). The region is prone to seasonal cyclones and natural flooding may occur occasionally during the wet season (November to March). However the application area is located on coastal sand-dunes, and the highly permeable sandy soils reduce the potential for local flooding.

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

Methodology Apache (2006a).
CALM (2002).

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

Comments

There are no native title claims registered over Varanus Island (GIS Database).

There are no known Sites of Aboriginal Significance on Varanus Island (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

Apache Energy Ltd holds a current operating licence, and current Works Approvals for Varanus Island, granted in accordance with the *Environmental Protection Act 1986*. The proposed clearing is not at variance to this licence (DEC, 2006b).

A water licence will not be required for this project, as *The Rights in Water and Irrigation Act 1914* has no jurisdiction on offshore islands (DoW, 2006).

The vegetation clearing applied for under this permit is for various minor construction and maintenance activities associated with the existing petroleum production facility and associated infrastructure, to be carried out over the next five years. The proponent will be required to submit an Environmental Management Plan (EMP) for each new project, which must be approved by DoIR, prior to commencement of the project.

Methodology DEC (2006b).
DoW (2006).
GIS Database:
- Aboriginal Sites of Significance - DIA 04/07/02.
- Native Title Claims - DLI 19/12/04.

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Petroleum Production	Mechanical Removal	25	**Grant**	The proposal has been assessed against the clearing principles. The proposal is either not at variance, or not likely to be at variance to any of the clearing principles. The assessing officer therefore recommends that the permit should be granted, subject to the following conditions: 1. The Permit Holder shall record the following for each instance of clearing: a) the location where the clearing occurred, expressed as grid coordinates using the Geocentric Datum of Australia 1994 coordinate system; b) the size of the area cleared in hectares or square metres; c) the method of clearing; d) the purpose of clearing, e) the area rehabilitated in hectares or square metres; f) the dates on which the area was cleared. 2. The Permit Holder shall provide a report to the Director, Environment, Department of Industry and Resources by 9 May of each year, setting out the records required under Condition 1 of this permit in relation to clearing carried out between 1 January and 31 December of the previous year.

5. References

Apache (2006a) Supporting documentation for a Native Vegetation Clearing Permit (Purpose Permit). Apache Energy, Western Australia.

Apache (2006b) Varanus Island Vegetation Management Plan. Apache Energy, Western Australia.

CALM (1999) Environmental Weed Strategy for Western Australia. Department of Conservation and Land Management, Western Australia.

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. 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.

DEC (2006a) Biodiversity advice for land clearing application. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Industry and Resources (DoIR). Biodiversity Coordination Section, Department of Environment and Conservation, Western Australia.

DEC (2006b) Licence Advice. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Industry and Resources (DoIR). Department of Environment and Conservation, Western Australia.

DEH (2007) Australian Heritage Database. Department of the Environment and Heritage, ACT.

DoW (2006) Water Allocation/Licence Advice. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Industry and Resources (DoIR). Department of Environment and Conservation, Western Australia.

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

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia, Updated 2005.

6. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government.
CALM	Department of Conservation and Land Management, Western Australia.
DAFWA	Department of Agriculture and Food, Western Australia.
DA	Department of Agriculture, Western Australia.
DEC	Department of Environment and Conservation
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DoE), Western Australia.
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia.
DoE	Department of Environment, Western Australia.
DoIR	Department of Industry and Resources, Western Australia.
DOLA	Department of Land Administration, Western Australia.
DoW	Department of Water
EP Act	Environment Protection Act 1986, Western Australia.
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System.
IBRA	Interim Biogeographic Regionalisation for Australia.
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
RIWI	Rights in Water and Irrigation Act 1914, Western Australia.
s.17	Section 17 of the Environment Protection Act 1986, Western Australia.
TECs	Threatened Ecological Communities.

Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

P1 **Priority One - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

P2 **Priority Two - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

P3 **Priority Three - Poorly Known taxa**: taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.

P4 **Priority Four – Rare taxa**: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.

R **Declared Rare Flora – Extant taxa** *(= Threatened Flora = Endangered + Vulnerable)*: taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

X **Declared Rare Flora - Presumed Extinct taxa**: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

Schedule 1 **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.

Schedule 2 **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.

Schedule 3 **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.

Schedule 4 **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of

special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

P1 **Priority One: Taxa with few, poorly known populations on threatened lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P2 **Priority Two: Taxa with few, poorly known populations on conservation lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P3 **Priority Three: Taxa with several, poorly known populations, some on conservation lands**: Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P4 **Priority Four: Taxa in need of monitoring**: Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.

P5 **Priority Five: Taxa in need of monitoring**: Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999)*

EX **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.

EX(W) **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.

CR **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.

EN **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

VU **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

CD **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.