



1. Application details

1.1. Permit application details

Permit application No.: 950/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Apache Northwest Pty. Ltd.

1.3. Property details

Property: Production Licence PL12
Local Government Area:
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.07		Mechanical Removal	Building or Structure

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 type 117: Hummock grasslands, grass steppe; soft spinifex. (Shepherd et al. 2001).	The 0.07 ha of proposed clearing is for a materials laydown area that is required during the construction of upgrading the Helicopter Reception Facility (HRF). The clearing activities will involve the removal of perimeter fencing, clearing the regrowth vegetation on the eastern side of the helipad using a bobcat to 'grub' the vegetation, disposal of cleared vegetation via incineration, grading of the soil to ensure a level area, resurfacing the exposed soil with blue metal and replacement of perimeter fencing (Apache, 2005). A flora and vegetation survey was conducted in the proposed clearing area by Astron Environmental (2005). The surveyed site contains a cleared access route and laydown area as well as a fenced perimeter, and houses a variety of stored materials. A single vegetation association was recorded over the proposed HRF materials laydown area: Low shrubland of <i>Abutilon cunninghamii</i> (10-30%; 0.8m) over Mixed Closed Herbland of <i>Flaveria australasica</i> (70%; 0.7m) and <i>Atriplex semilunaris</i> (10-30%; 0.8m) over Very Open Dwarf Herbland of <i>Enchylaena tomentosa</i> (10%; 0.3m) on previously disturbed mixed sandy and rocky soils. Dense thickets of <i>Canavalia rosea</i> are evident at some locations (Astron Environmental, 2005).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Astron Environmental (2005) was commissioned by Apache to undertake a vegetation survey of the area proposed to be cleared. The survey was carried out on the 7th November 2005 (Apache, 2005). Astron Environmental (2005) classified the surveyed area as being 100% previously disturbed; containing disturbed, fragmented and regenerating vegetation. This vegetation type has an abundance of annual colonising species and paucity of perennial dominants that is typical of early successional regenerative vegetation types within previously disturbed limestone rocky areas of Varanus Island and does not constitute a vegetation type of conservation significance on the Island (Apache, 2005).

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 a declared 'C' class Nature Reserve (Reserve 33902) vested in the Conservation Commission for the protection of flora and fauna (GIS database). Varanus Island has an area of 85 hectares and is the largest of the 34 islands, islets and rocks that make up the Lowendal group (Apache, 2005). Varanus Island has high conservation value due to the number of seabirds and turtles that are found nesting on the island. Approximately 87 bird species have been recorded on the Lowendal Islands and about a dozen types of lizards have been observed (Apache, 2005). Its vegetation has not been impacted by grazing by introduced stock or feral predators. In 1993 the house mouse, *Mus domesticus*, was introduced to Varanus Island in food containers and were successfully eradicated in 1997 (Burbidge and Morris, 2004).

Petroleum activities have been operating on and in the surrounding waters to Varanus Island since 1986. A total of 29 hectares of Varanus Island is leased to Apache to operate its oil and gas processing facilities. Oil treatment and gas processing equipment operates directly adjacent to Wedge-tailed Shearwater rookeries and sea turtle nesting beaches. These migratory seabirds and sea turtles return each year to the Varanus Island rookeries and the sandy beaches to nest (Apache, 2005).

The vegetation on the island is classified as Beard Vegetation Association 117 by Shepherd (2001) and is described as: Hummock grasslands, grass steppe; soft spinifex. Apache commissioned Astron Environmental Pty Ltd to undertake a vegetation survey of the area proposed to be cleared (Apache, 2005). Astron Environmental (2005) identified a single vegetation association over the proposed area to clear. It was described as: Low Shrubland of *Abutilon cunninghamii* (10-30%; 0.8 m) over Mixed Closed Herbland of *Flaveria australasica* (70%; 0.7 m) and *Atriplex semilunaris* (10-30%; 0.8 m) over Very Open Dwarf Herbland of *Enchylaena tomentosa* (10%; 0.3 m) on previously disturbed mixed sandy and rocky soils. Dense thickets of *Canavalia rosea* are evident at some locations. Twenty two native flora species were found in the application area, the majority of which are colonising or invasive species that readily inhabit degraded and previously disturbed areas (Apache, 2005). Twelve weed species and six introduced mainland plants have been recorded on Varanus Island however there have been no records of Declared Noxious Weeds as defined by the Agriculture Protection Board, 2000 (Apache, 2005).

Given the small amount of clearing proposed (0.07 ha) and its disturbed status it is unlikely the proposal will have a significant impact on biological diversity.

Methodology

Apache (2005).
Burbidge and Morris (2004).
GIS Database:
-CALM Managed Lands and Waters- CALM 1/07/05.
Shepherd (2001).

(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 has high conservation value due to the number of seabirds and turtles that utilise the island for nesting. Approximately 87 bird species have been recorded on the Lowendal Islands and a dozen types of lizards observed (Apache, 2005).

Seabird nesting records on Varanus Island include 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*), and Brahminy Kites (*Haliastur indus*). Varanus Island is particularly important for Wedge-tailed Shearwater and Tern breeding. The Wedge-tailed Shearwater, Bridled Tern, Osprey, and Caspian Tern are protected as migratory species under the *Environmental Protection and Biodiversity Conservation (EPBC) Act 1999* (DEH, 2000). Many of the migratory species found in the Lowendal group are protected under the international JAMBA/CAMBA treaties, the Wildlife Conservation Act and the EPBC Act (DEH, 2000).

Important sea turtle nesting occurs throughout the Lowendal group. The Hawksbill (*Eretmochelys imbricata*), Green (*Chelonia mydas*) and Flatback (*Natator depressus*) turtles lay their eggs above the high tide mark during the summer months on the beaches of Varanus Island (Apache, 2005; Kendrick & Mau, 2002). All three turtle species are listed under Schedule 1 of the *Wildlife Conservation Act 1950* (CALM, 2005) and listed as Vulnerable under the *EPBC Act 1999*. Apache annually monitors both the sea turtles and shearwaters to ensure that these populations are preserved and petroleum operations are managed so as to have no adverse impact on them.

A specific fauna assessment for the clearing permit application was not commissioned given the small quantity of vegetation proposed to be cleared, its disturbed status and its distance inland from the island's shoreline (which is of the greatest importance to threatened species) (Apache, 2005). Nonetheless, the fauna of the island and its surrounding waters has been and continues to be extensively studied and monitored (Apache, 2005). The vegetation within this area is not likely to be used as a feeding, nesting or shelter resource to any

threatened species however it may be used by some of the common lizard species (Apache, 2005). Given the availability of similar (and generally better quality) habitat nearby (Apache, 2005) and the size of the area to be cleared, the proposed clearing is not likely to represent a significant habitat loss for these species.

Methodology Apache (2005).
 DEH (2000).
 CALM (2005).
 Kendrick and Mau (2002).
 GIS Database :
 -Declared Rae and Priority Flora List- CALM (1/07/2005).

(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**
 No declared Rare Flora species listed under the *Wildlife Conservation Act 1950*, protected plant taxa listed under Section 179 of the *Environment Protection and Biodiversity Conservation Act 1999*, or priority species listed by CALM have been recorded or are known to occur on Varanus Island (GIS database). Twenty-two native flora species and one environmental weed species were identified during the site survey conducted by Astron Environmental (2005). No flora of conservation significance was recorded within the site (Apache, 2005).

Methodology Apache (2005).
 Astron Environmental (2005).
 GIS System:
 -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**
 The vegetation within the proposed clearing area does not form part of a threatened ecological community (Apache, 2005). There are no known threatened ecological communities on Varanus Island or in nearshore and offshore marine areas around the island (GIS database). Therefore the proposed clearing is unlikely to be at variance to this principle.

Methodology Apache (2005).
 GIS Layer: 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 likely to be at variance to this Principle**
 The State Government is committed to the National Objectives and Targets for Biodiversity Conservation 2001-2005, which includes a target that prevents clearance of ecological communities with an extent below 30% of the present pre-European settlement (Department of Natural Resources and Environment 2002; EPA, 2000). Varanus Island is situated within the Pilbara 4 (PIL4) Roebourne IBRA subregion (GIS database). According to Shepherd et al. (2001) approximately 100% of the native vegetation cover remains within this subregion. There is one pre-European vegetation type present within the proposed area classified as Beard's Vegetation Association 117: Hummock grasslands, grass steppe; soft spinifex of which 100% of the pre-European extent remains with 13.3% in IUCN Class I-IV Reserves (Shepherd et al. 2001).

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation Class I-IV status**	% in IUCN reserves
IBRA Bioregion:					
Pilbara	17,944,694	17,944,694	100	Least concern	
Beard vegetation association:					
117	917,087	917,087	100	Least concern	13.3

* Shepherd et al. (2001)

** Department of Natural Resources and Environment (2002)

A survey conducted by Astron Environmental (2005) identified a single vegetation association in the application area described; Low Shrubland of *Abutilon cunninghamii* (10-30%; 0.8 m) over Mixed Closed Herbland of *Flaveria australasica* (70%; 0.7 m) and *Atriplex semilunaris* (10-30%; 0.8 m) over Very Open Dwarf Herbland of *Enchylaena tomentosa* (10%; 0.3 m) on previously disturbed mixed sandy and rocky soils. Dense thickets of *Canavalia rosea* are evident at some locations. This vegetation type is typical of early successional regenerative vegetation types within the previously disturbed limestone rocky areas of Varanus Island (Apache, 2005). Astron Environmental (2005) classified the vegetation within the application area as 100% previously disturbed containing both fragmented and regenerating vegetation. The area outside the Apache lease area (and inside) still remains

vegetated and largely undisturbed and there is a high level of habitat connectivity between vegetation communities on the island (Apache, 2005). The proposal is not considered at variance with this principle.

Methodology Apache (2005).
Astron Environmental (2005).
Department of Natural Resources and Environment (2002).
EPA (2000).
GIS Database:
-Pre European Vegetation- DA 01/01.
JANIS Forests Criteria (1997).
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 defined watercourses or wetlands on Varanus Island (GIS database, 2004); therefore the proposal is not at variance to this principle.

Methodology GIS Database:
-Hydrography, Linear - DoE 01/02/04.

(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

Rainfall on Varanus Island is generally low with evaporation exceeding rainfall throughout the year. Intense rainfall may occur during the passage of summer tropical cyclones and thunderstorms (Apache, 2005). Any clearing is unlikely to increase soil salinity given the islands climatic features, location and extent of vegetation to be cleared.

The threat of increased soil erosion (wind and water) is not likely due to blue metal being laid over cleared areas, serving as an erosion barrier (Apache, 2005). The clearing of 0.07 ha of vegetation is not likely to result in appreciable on site and off site land degradation and therefore this proposal is unlikely to be at variance to this principle.

Methodology Apache (2005).
GIS Database- Hydrography, Linear - DoE 01/02/04.

(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 a 'C' class Nature Reserve for the protection of flora and fauna (GIS database). It is vested in the Conservation Commission of Western Australia and is managed by the Department of Conservation and Land Management (CALM). The proposed clearing is within the Apache lease area, and is greater than 200 m south of mangrove and rookery protection areas located outside the Apache lease (Apache, 2005).

Twelve weed species and six introduced mainland plants have been recorded on Varanus Island however there have been no records of Declared Noxious Weeds as defined by the Agriculture Protection Board, 2000 (Apache, 2005). One environmental weed species, buffel grass (*Cenchrus ciliaris*) was recorded within the site during the survey conducted by Astron Environmental (2005). Previous surveys by Astron Environmental on Varanus Island have also recorded a number of tall fleabane (*Conzys albida*) within the proposed HRF materials laydown area. Apache (2005) states that there is very small chance that the weed species currently present on Varanus Island (outside or within the HRF laydown site) are likely to be spread as a result of the construction works, given the small footprint of the works and that the layer of blue metal over the soil surface will minimise or prevent the growth of plants in the cleared area. Apache's Quarantine Procedure (AR-91-IQ-189) will ensure that the risk of importing weed species in with the blue metal or with equipment associated with construction is minimised to as low as reasonably possible (Apache, 2005).

CALM (2005) has reviewed the clearing permit application and provided the following comment: Considering the small area of vegetation proposed to be disturbed and its proximity to pre-existing facilities on the Apache's Lease, this proposal is unlikely to pose a significant impact to the conservation values of the island and its existing biota.

Methodology Apache (2005).
GIS Database:
-CALM Managed Lands and Waters - CALM 1/07/05.

(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 is no surface water on Varanus Island therefore no impacts to surface water will occur as a result of clearing (GIS database). Surface water drainage patterns will not be affected as the grading of the site will not alter the local topography (Apache, 2005). Water table levels and groundwater flow patterns are subject to tidal influence. The watertable beneath most of Apache's lease area lies at a mean elevation of 1.8 m at low tide, and 2.6 m above sea level at high tide (tidal height variation of 1.8 m) (Apache, 2005). The quality of the groundwater is saline (Parsons Brinckerhoff, 2005) and currently serves no beneficial human uses (Apache, 2005). Apache undertakes regular groundwater monitoring. Given the tidal influence on groundwater quality it is not likely that the clearing of 0.07 ha of vegetation will affect the quality of groundwater on Varanus Island.

Methodology Apache (2005).

GIS Database:

-Groundwater Salinity, Statewide - 22/02/00.

-Hydrography, Linear - DoE 01/02/04.

Parsons Brinckerhoff (2005).

(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 at variance to this Principle

The area is not prone to flooding under normal climatic conditions. Surface water flows/flooding are unlikely to be different as a result of vegetation clearing. Given the island receives a low annual rainfall with a high evaporation rate, and the amount of clearing is of a small scale it is unlikely to cause or exacerbate the incidence or intensity of flooding (Apache, 2005). The event of flooding is only likely as a result of cyclones, in which case the severity of flooding is not likely to be heavily influenced by the amount of vegetation clearing proposed under this application.

Methodology Apache (2005).

Gis Database:

-Hydrography, Linear - DoE 01/02/04.

-Topographic Contours, Statewide - DOLA 12/09/02.

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

Comments

There are no native title claims over the area under application (GIS database).

Apache Energy Varanus Island pipeline licence PL12 has a current operating licence (6284) and three works approval licences (3866; 4079 and 4103) granted in accordance with the *Environmental Protection Act 1986* (DoE, 2005). The proposed clearing is not at variance to these licences, and no amendments to the licences will be required.

According to DoE advice, there is no inforce groundwater or surface water licence for this area. *The Rights in Water and Irrigation (RIWI) Act 1914* does not have any jurisdiction in offshore water use and a Water Allocation is not required for the construction of the Varanus Island Helicopter Reception Facility (DoE, 2005).

Methodology DoE (2005).

GIS Database:

-Native Title Claims- DLI 19/12/04.

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Building or Structure	Mechanical Removal	0.07	Grant	The clearing principles have been addressed and the proposed clearing is not at variance for clearing principles f and j and not likely to be at variance for principles a, b, c, d, e, g, h, and i. The assessing officer therefore recommends that the permit be granted.

5. References

Apache (2005) Varanus Island; Supporting Documentation for Clearing Permit (Purpose Permit) - Helicopter Reception Facility. Apache Energy, Western Australia.

Astron Environmental (2005) Proposed Helicopter Reception Facility (HRF) Project - Vegetation and Flora Survey. Prepared by Astron Environmental Pty Ltd, Karratha, for Apache Energy Limited, Perth.

Burbidge, A.A. and Morris, K.D. (2004) Introduced Mammal Eradications for Nature Conservation on Western Australian Islands: a review. CALM, Western Australia.

CALM (2005) Land clearing proposal advice. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department

- of Industry and Resources. Department of Conservation and Land Management. Perth, Western Australia.
- CALM (2005) Wildlife Conservation (Specially Protected Fauna) Notice 2005. Western Australian Government, Western Australia.
- DEH (2000) List of Migratory Species under the Environment Protection and Biodiversity Conservation Act 1999. Australian Government, 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.
- EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Kendrick, P. and Mau, R. (2002) Subregional Description and Biodiversity Values Carnarvon 1 (CAR1 - Cape Range subregion). In: A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions.
- Parsons Brinckerhoff (2005) Groundwater monitoring Event. Apache Energy Lease area. Varanus Island. W.A. Draft report. prepared by Parsons Brinckerhoff Australia Pty Ltd, Subiaco, for Apache Energy Limited, Perth.
- 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.

6. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government.
CALM	Department of Conservation and Land Management, Western Australia.
DAWA	Department of Agriculture, Western Australia.
DA	Department of Agriculture, Western Australia.
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.
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.

