



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4338/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **L G & H M McDonald T/A Exmouth Quarries & Concrete**

1.3. Property details

Property: Mining Lease 08/62
Local Government Authority: Shire of Exmouth
Colloquial name:

1.4. Application

| | | | |
|--------------------|-----------|--------------------|---------------------|
| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
| 6.24 | | Mechanical Removal | Limestone Quarrying |

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 28 July 2011

2. Background

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

| Vegetation Description | Clearing Description | Vegetation Condition | Comment |
|---|---|--|--|
| <p>Beard Vegetation Associations have been mapped for the whole of Western Australia. One Beard vegetation association is located within the application area (Shepherd, 2009):</p> <p>Beard Vegetation Association 663: Hummock grasslands, shrub steppe; waterwood over soft spinifex.</p> <p>A flora and vegetation survey of M08/62 was undertaken by Busniak (2011). The survey identified <i>Triodia Wiseana</i> as the dominant understorey species with a mixture of <i>Acacia</i> and <i>Eremophila</i> species comprising the shrub layer. Some Chenopod (Samphire and Saltbush) species were also recorded including <i>Atriplex codonocarpa</i>, <i>A. Holocarpa</i>, <i>Maireana planifolia</i> and <i>Rhagodia eremaea</i>. Two weed species were recorded including <i>Cenchrus ciliaris</i> (Buffel Grass) and <i>Cenchrus setiger</i> (Birdwood Grass).</p> | <p>Exmouth Quarries & Concrete propose to clear up to 6.24 hectares of native vegetation for the expansion of an existing limestone quarry on mining lease M08/62. Limestone will be quarried and utilised for the production of aggregates for concrete and roads construction. The application area is located at the south-western boundary of the Exmouth town site (GIS Database).</p> | <p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994); To Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).</p> | <p>The vegetation condition rating is derived from aerial imagery and a flora and vegetation survey conducted over the application area by Busniak (2011). The application area is located adjacent to an existing limestone quarry and is also adjacent to granted clearing permits CPS 3703/1 and CPS 1381/1 for the purposes of limestone extraction and a concrete batching plant and limestone block manufacturing plant.</p> |

3. Assessment of application against Clearing Principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments **Proposal is not likely to be at variance to this Principle**

The application area is located within the Cape Range subregion of the Carnarvon Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). One Beard vegetation association is located within the application area; Beard vegetation association 663: Hummock grasslands, shrub steppe; waterwood over soft spinifex. Beard vegetation association 663 retains approximately 95% of its pre-European vegetation extent within the Carnarvon bioregion (Shepherd, 2009).

CALM (2002) reports that the vegetation of the Cape Range subregion comprises of a mosaic of saline alluvial plains with samphire and saltbush low shrublands, Bowgada low woodland on sandy ridges and plains, Snakewood scrub on clay flats, and tree to shrub steppe over hummock grasslands on and between red sand dune fields. Limestone strata with *Acacia stuartii* or *A. Bivenosa* shrubland outcrop in the north.

The proposal is to clear 6.24 hectares of native vegetation for the purpose of limestone quarrying within the Shire of Exmouth. The majority of the vegetation under application is considered to be in very good condition (Keighery, 1994), however some parts of the applied area show signs of disturbance. The proposed clearing is located adjacent to an existing limestone quarry and a concrete batching plant and limestone block manufacturing plant.

The application area is within the boundary of the Cape Range and adjacent Coastal Plain which is an approximately 182,600 hectare area on the Register of National Estate. This is an area of natural value and is an Environmentally Sensitive Area however the proposed clearing of 6.24 hectares is not likely to significantly impact the value of this area. As the proposed clearing is within the Cape Range and adjacent Coastal Plain conservation area 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.

A number of records of Priority Flora are located within the local area (10 kilometre radius) (DEC, 2011) however a flora and vegetation survey conducted by Busniak (2011) did not identify any Priority Flora species within the application area. The closest Priority Flora record is *Acanthocarpus rupestris* (P2) located 2 kilometres south of the existing limestone quarry in similar vegetation and soil types to those within the application area (GIS Database). The local area (10 kilometre radius) retains approximately 95% of its pre-European vegetation (GIS Database), with large tracts held within the Cape Range National Park. Given the large amount of suitable habitat that remains in the local area, the proposed clearing of 6.24 hectares is unlikely to have a significant impact on this species.

The critically endangered Cameron's Cave Troglitic Threatened Ecological Community (TEC) is located 1.5 kilometres north-northeast with its buffer zone extending to within 450 metres of the area under application. The vegetation proposed to be cleared is not considered necessary for the maintenance of the Cameron's Cave Troglitic Community (TEC).

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

Methodology Busniak (2011)
CALM (2002)
DEC (2011)
Keighery(1994)
Shepherd (2009)
GIS Database:
- Declared Rare and Priority Flora List
- Exmouth Townsite 20cm Orthomosaic - Landgate 2003
- IBRA WA (Regions – Sub Regions)
- Soils, Statewide

(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

An opportunistic fauna survey of the application area conducted by Busniak (2011) identified 3 native mammal, 14 reptile and 37 bird species utilising the area proposed for clearing. The fauna habitats within the application area are well represented regionally with Beard vegetation association 663 retaining approximately 95% of its pre-European vegetation extent (Shepherd, 2009). The proposed clearing is located adjacent to an existing limestone quarry and a concrete batching plant and limestone block manufacturing plant and it is unlikely that the area proposed for clearing represents a significant habitat for fauna.

A search of the Department of Environment and Conservation's (DEC) Naturemap database (2011) identified the following records of threatened stygofaunal and troglifaunal subterranean species in the local area (10 kilometre radius):

- Blind cave eel (*Ophisternon candidum*) mapped 800 metres southeast – DEC Schedule 1;
- Blind gudgeon (*Milyeringa veritas*) mapped 800 metres southeast – DEC Schedule 1;
- Cameron's Cave millipede (*Stygiochiropus peculiaris*) mapped 1.5 kilometres northeast – DEC Schedule 1;
- Eastern Cape Range bamazomus (*Bamazomus subsolanus*) – DEC Schedule 1; and
- Lance-beaked cave shrimp (*Stygiocaris lancifera*) – DEC Schedule 1.

A survey conducted by Busniak (2011) did not identify any caves or subterranean habitat within the application area. The Cameron's Cave millipede is endemic to Cameron's Cave (CALM, 2001) and the proposed clearing is unlikely to have a significant impact upon groundwater levels and therefore habitat for fauna within the Cameron's Cave community. The vegetation under application is not considered necessary for the maintenance of habitat for these species.

The migratory Atlantic Yellow-nosed Albatross (*Thalassarche chlororhynchos*) (DEC Schedule 1) has been recorded 2.5 kilometres east-southeast of the area under application. The area proposed to be cleared may contain vegetation suitable for nesting by this species, however due to its distance from the coast (1.7 kilometres) and considering the large amount of suitable habitat that remains in the local area, the vegetation

under application is not considered to be significant habitat for this species.

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

Methodology CALM (2001)
 Busniak (2011)
 DEC (2011)
 Shepherd (2009)
 GIS Database:
 Threatened Fauna

(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

There are no records of Declared Rare Flora (DRF) known to occur within the local area (10 kilometre radius) (GIS Database) and a flora survey conducted by Busniak (2011) did not identify the presence of any DRF species.

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

Methodology Busniak (2011)
 GIS Database:
 - Declared Rare and Priority Flora List

(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 is one known Threatened Ecological Community (TEC) in the local area (10 kilometre radius). The critically endangered Cameron's Cave Troglitic Community is located approximately 1.5 kilometres north-northeast, with its buffer zone extending to within 450 metres, of the area under application.

The application area is not located within the buffer of the TEC and the vegetation to be cleared is not considered necessary for the maintenance of the Cameron's Cave Troglitic Community.

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

Methodology GIS Database:
 - Threatened Ecological Sites Buffered

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

Comments Proposal is not at variance to this Principle

| | Pre-European area (ha)* | Current extent (ha)* | Remaining %* | Conservation Status** | Pre-European % in IUCN Class I-IV Reserves |
|--|-------------------------|----------------------|--------------|-----------------------|--|
| IBRA Bioregion - Carnarvon | 8,382,609 | 8,349,861 | ~99.6 | Least Concern | 3.6 |
| Beard vegetation association - State | | | | | |
| 663 | 30,474 | 28,123 | ~92 | Least Concern | 24.9 |
| Beard vegetation association - Bioregion | | | | | |
| 663 | 29,060 | 27,631 | ~95 | Least Concern | 25.6 |

*Shepherd (2009)

** Department of Natural Resources and Environment (2002)

The clearing application area falls within the Carnarvon Interim Biogeographic Regionalisation for Australia (IBRA) bioregion in which approximately 99.6% of the pre-European vegetation remains (see table) (Shepherd, 2009; GIS Database).

Beard vegetation association 663 retains approximately 95% of its pre-European vegetation extent within the Carnarvon bioregion (Shepherd, 2009). Given that the vegetation to be cleared is well represented locally and regionally the vegetation within the proposed area is not considered to be significant as a remnant in a highly

cleared landscape.

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 at variance to this Principle

There is an ANCA wetland (Cape Range Subterranean Waterway) located 3.3 kilometres to the south of the area under application (GIS Database) however considering that this wetland is described as a subterranean waterway it is unlikely that the vegetation to be cleared is growing in association with this wetland.

The vegetation proposed for clearing is located either side of a deeply incised ephemeral creek line and two other minor ephemeral drainage lines also pass through the application area (GIS Database). Mining has previously taken place within the main creek line and haul roads exist within part of the creek bed. The proposed clearing is located adjacent to an existing limestone quarry and a concrete batching plant and limestone block manufacturing plant.

Based on the above, the proposed clearing is at variance to this Principle however considering the level of disturbance already associated with the existing quarry operations there are unlikely to be any significant additional environmental impacts to the watercourse.

Methodology GIS Database:
- ANCA, Wetlands
- Hydrography, linear
- Exmouth Townsite 20cm Orthomosaic - Landgate 2003

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

Comments Proposal may be at variance to this Principle

There are two soil types associated with the area proposed for clearing (Northcote et al.; GIS Database):

- Narrow Coastal Plain. Shallow loams on limestone with sands also overlying limestone with some red sand in dunes; and
- Rugged Limestone Ranges. Steeply dissected with cliff faces forming their margins. The area is dominated by bare limestone and there are pockets of shallow calcareous loams.

Given that part of the application area contains sandy soil types and is located within 1.7 kilometres of the coast, potentially exposing the area to prevailing winds, there may be some risk of wind erosion when vegetation is removed. In addition intense thunderstorms, cyclonic rain and run-off events are a feature of the Cape Range climate and low annual rainfall results in slow plant growth which can leave cleared landforms susceptible to degradation and erosion (Busniak, 2007).

Based on the above, the proposed clearing may be at variance to this Principle however the implementation of a staged clearing condition will minimise this risk.

Methodology Busniak (2007)
Northcote et al. (1960 -1968)
GIS Database:
- Soils, Statewide

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

Comments Proposal is not likely to be at variance to this Principle

The application area is located within the boundary of the Cape Range and adjacent Coastal Plain which is an approximately 182,600 hectare area on the Register of National Estate (GIS Database). This is an area of natural value and is an Environmentally Sensitive Area however, as the application area is in close proximity to the developed Exmouth townsite and the local area is highly vegetated, it is considered that the proposed clearing of 6.24 hectares is not likely to significantly impact the natural value of this Register of National Estate area.

The Cape Range National Park is located approximately 5.4 kilometres to the west of the application area (GIS

Database). Given the distance to the National Park and the large amount of remaining native vegetation in the local area, it is considered unlikely that the vegetation under application provides a significant buffer or ecological linkage to this conservation area.

As the proposed clearing is within the Cape Range and adjacent Coastal Plain conservation area 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 the conservation area as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

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

Methodology GIS Database:
- DEC Tenure
- Soils, Statewide

(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 may be at variance to this Principle

The western half of the area proposed for clearing is located within the Exmouth Water Reserve and the recharge zone for Exmouth's public drinking water source (DOW, 2011; GIS Database). This water source is highly vulnerable to contamination, as the aquifer is Karstic and unconfined. Whilst regional groundwater flow is generally to the east, local groundwater flow patterns are likely to be significantly affected by karstic features. This has implications for protecting groundwater quality as it means that groundwater pollutants may move rapidly through the aquifer (DOW, 2011).

The major risks to the water source from the quarry extension are associated with the potential for hydrocarbon and contaminant spills and microbiological contamination due to an increased human presence and the generation of waste, however clearing of native vegetation and the reduction in vegetation buffers may also cause increased turbidity (DOW, 2011).

The Department of Water (2011) have recommended that the project should be undertaken in accordance with its water quality protection notes, 'Vegetation Buffers to Sensitive Water Resources' and, 'Extractive Industries near Sensitive Water Resources'.

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

Methodology DOW (2011)
GIS Database:
- 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 vegetation proposed for clearing is located either side of a deeply incised ephemeral creek line and two other minor ephemeral drainage lines also pass through the application area (GIS Database). Intense thunderstorms, cyclonic rain and run-off events are a feature of the Cape Range climate however the proposed clearing of 6.24 hectares is not likely to increase the incidence or intensity of these events.

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

Methodology GIS Database:
- Hydrography, linear

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

Comments

There is one Native Title Claim (WC97/28) 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 6 June 2011 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received from the Shire of Exmouth stating no objection to the proposed clearing.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims - Registered with the NNTT

4. References

- Busniak (2007) Rehabilitation Plan for Exmouth Quarries and Concrete: Mining Lease 08/06 – Sub-Lease 311/034. Exmouth: Ashburton Mineral Field Western Australia.
- Busniak (2011) Proposed Clearing Area Flora and Fauna Assessment, Exmouth Quarries and Concrete, M08/62.
- CALM (2001) Camerons Cave Troglitic Community, Camerons Cave Millipede and Camerons Cave Psuedoscorpion Interim Recovery Plan No. 76.
- 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 (2011) Flora and Fauna search of 10 kilometre radius undertaken on 21 July 2011 using DEC Naturemap database.
- DOW (2011) Department of Water advice provided on Clearing Permit CPS 4388/1 - 14 July 2011.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- 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.

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:
- is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
 - 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.