



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4368/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Argyle Diamonds Limited

1.3. Property details

Property: Diamond (Argyle Diamond Mines Joint Venture) Agreement Act 1981, Mining Lease 259SA (AM 70/259)
Local Government Area: Shire of Roebourne
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
7.726		Mechanical Removal	Road Maintenance

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 23 June 2011

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

Beard vegetation associations have been mapped at a scale of 1:250,000 for the whole of Western Australia. Two Beard vegetation associations are located within the application area (GIS Database):

Beard vegetation association 819: grasslands, tall bunch grass savanna low tree; Cabbage Gum and Silver-leaved Box over *Aristida* and Ribbon Grass on sandy plains; and

Beard vegetation association 833: grasslands, short bunch grass savanna sparse low tree; scattered Snappy Gum over arid short grass on plains.

A flora and vegetation survey of an area that included the application areas was conducted by Mattiske Consulting Pty Ltd (Mattiske) in March 2004. The survey identified the following 13 plant communities within the survey area:

Hummock Grasslands

HG1

Hummock Grassland of *Triodia bitextura* and *Triodia bynoei* with emergent *Eucalyptus brevifolia*, *Corymbia confertiflora*, *Corymbia opaca*, *Eucalyptus pruinosa*, *Bauhinia cunninghamii* over *Acacia arygraea* and *Acacia hemignosta*.

HG2

Hummock Grassland of *Triodia bitextura* and *Triodia bynoei* with emergent *Corymbia confertiflora*, *Corymbia opaca*, *Eucalyptus brevifolia*, *Eucalyptus pruinosa*, *Bauhinia cunninghamii* and *Terminalia canescens*.

HG3

Hummock Grassland of *Triodia bitextura* and *Triodia bynoei* with emergent denser pockets of *Terminalia canescens* and *Cochlospermum fraseri*, with the occasional *Corymbia confertiflora* and *Eucalyptus brevifolia*.

Woodlands

W1

Low Open Woodland of *Terminalia canescens* with *Corymbia confertiflora*, *Eucalyptus brevifolia*, *Terminalia oblongata* subsp. *volucris* and *Eucalyptus pruinosa* over patches of *Triodia bitextura* and *Heteropogon contortus*.

W2

Low Open Woodland of *Melaleuca minutifolia* and *Eucalyptus pruinosa* over *Triodia bitextura*.

W3

Low Open Woodland of *Eucalyptus brevifolia* over pockets of *Acacia argyrea* and *Eriachne ciliata*.

W4

Open Woodland and Low Open Woodland of *Terminalia platyptera*, *Terminalia arostrata*, *Adansonia gregorii*, *Buchanania obovata* and *Bauhinia cunninghamii*.

W5

Mixture of Open Woodland and Low Open Woodland of *Adansonia gregorii*, *Buchanania obovata*, *Bauhinia cunninghamii* and *Eucalyptus brevifolia* over patches of *Typha domingensis*, *Heteropogon contortus*, *Cenchrus elymoides* and *Chloris truncata*.

W6

Low Open Woodland of *Melaleuca minutifolia* over patches of *Typha domingensis*.

W7

Low Open Woodland of *Bauhinia cunninghamii* and *Eucalyptus pruinosa* over mixed grasses and herbs.

W8

Low Woodland of *Cochlospermum fraseri*, *Eucalyptus brevifolia*, *Eucalyptus pruinosa* and *Corymbia opaca* over *Triodia bitextura* and *Cyperus cunninghamii* subsp. *cunninghamii*.

W9

Low Open Woodland of *Corymbia opaca*, *Eucalyptus brevifolia*, *Eucalyptus pruinosa* and *Cochlospermum fraseri* over *Ptilotus spicatus* subsp. *spicatus*, *Cleome viscosa* and *Phyllanthus maderaspatensis* var. *angustifolia*.

Sedgelands**S1**

Sedgelands of *Typha domingensis* with emergent *Adansonia gregorii*, *Melaleuca viridiflora* and *Lophostemon grandiflora* var. *riparius*.

Clearing Description

Argyle Diamonds Ltd (Argyle Diamonds) proposed to clear up to 7.726 hectares of native vegetation (Argyle Diamonds, 2011). The application area is located approximately 140 kilometres south of Kununurra (GIS Database).

The purpose of the proposed clearing is road maintenance including upgrading and maintaining culverts (Argyle Diamonds, 2011). Vegetation will be cleared by a dozer or grader and vegetation and topsoil will be stockpiled for rehabilitation purposes (Argyle Diamonds, 2011).

Vegetation Condition

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

to

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

Comment

The vegetation condition rating is derived from a flora and vegetation survey conducted by Mattiske (2004) and photographs of the proposed clearing areas provided by Argyle Diamonds (2011).

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 Ord subregion of the Ord Victoria Plains Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). CALM (2002) states that rainforest patches within this subregion are centres of endemism and are resource centres for a variety of faunal taxa that are either directly linked to rainforests, or are more widely ranging species that are dependent on them. Furthermore, it is considered that 'dry' rainforest patches and riparian zones (whilst degraded), are important refuges for fauna (CALM, 2002).

A flora and vegetation survey was conducted for an area that included the application areas in March 2004 (Mattiske, 2004). This survey identified a total of 206 vascular plant taxa from 124 genera and 51 families (Mattiske, 2004). The dominant families within the survey area were *Poaceae* (42 taxa), *Papilionaceae* (23 taxa), *Mimosaceae* (12 taxa) and *Myrtaceae* (10 taxa) (Mattiske, 2004). Although this indicates that the area has relatively high flora diversity, the application is for the maintenance and upgrade of culverts and the 7.726 hectares of proposed clearing is made up of over 12 separate areas, spread across a much larger area. These areas already contain river crossings and the vegetation surrounding these areas is fairly degraded. Therefore, the diversity of these areas is expected to be much lower than the flora survey results indicate.

No Declared Rare Flora, Threatened Ecological Communities or Priority Ecological Communities have been recorded within the survey area (Mattiske, 2004). Mattiske (2004) reports that a previously recorded Priority 1 species; *Goodenia lunata* now appears to be *Goodenia coronopifolia*, which is not a Priority Flora species and is relatively widespread throughout the area.

Thirteen weed species have been identified within the survey area (Mattiske, 2004). The presence of weed species lowers the biodiversity value of the proposed clearing areas. It is important to ensure that the proposed clearing activities do not spread or introduce weed species to non-infected areas. The risk of spreading weed species can be mitigated by imposing a condition for the purpose of weed management.

Fauna surveys of the Argyle lease area have previously been conducted in June and November 2000 (Biostat 2000, 2001 as cited by Bancroft and Bamford, 2005) and these surveys have been reviewed by M.J & A.R Bamford Consulting Ecologists (Bancroft and Bamford, 2005). Fauna surveys of the area have identified up to 330 fauna species, including 27 mammals, 205 birds, 79 reptiles and 19 amphibians (Bancroft and Bamford, 2005). Of these 330 species, 41 were of conservation significance (Bancroft and Bamford, 2005). The Ord-Victoria Plains is reported to have a high diversity of macropods and birds as the bioregion forms an interzone for some species of the arid and tropical fauna of northern Australia (DSEWPC, 2009). Given the dispersed and disturbed nature of the application areas, the proposed clearing is unlikely to have a significant impact upon fauna diversity in the region.

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

Methodology Bancroft and Bamford (2005)
CALM (2002)
DSEWPC (2009)
Mattiske (2004)
GIS Database:
- IBRA WA (Regions - Subregions)

(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

Fauna surveys of the Argyle lease area have previously been conducted in June and November 2000 (Biostat 2000, 2001 as cited by Bancroft and Bamford, 2005) and these surveys have been reviewed by M.J & A.R Bamford Consulting Ecologists (Bancroft and Bamford, 2005).

The application is for upgrading and maintaining culverts and therefore, the majority of clearing will be of vegetation associated with watercourses. These vegetation associations are often of high importance as fauna habitat as this vegetation is often dense and in close proximity to water (Bancroft and Bamford, 2005).

The proposal is for 7.726 hectares of proposed clearing, made up of over 12 separate areas, spread across a much larger area. These areas already contain river crossings and culverts and the vegetation surrounding these areas is fairly degraded. Given this, the proposed clearing in each separate area will be minimal and therefore, the proposal is unlikely to have a significant impact on any fauna habitat.

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

Methodology Bancroft and Bamford (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

A flora and vegetation survey has been conducted over an area that included the application areas in March 2004 (Mattiske, 2004).

No Declared Rare Flora species were recorded within the survey area during the flora assessment (Mattiske, 2004).

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

Methodology Mattiske (2004)

(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 (TECs) within the areas applied to clear (GIS Database). The nearest known TEC is located over 600 kilometres south-west of the application areas (GIS Database).

Mattiske (2004) reports that no TECs were identified within the survey area during the flora and vegetation survey.

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

Methodology Mattiske (2004)
 GIS Database:
 - Threatened Ecological Sites Buffered

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

Comments Proposal is not at variance to this Principle

The application areas fall within the Ord Victoria Plains Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). Shepherd (2009) reports that approximately 100% of the pre-European vegetation still exists within the Ord Victoria Plains bioregion (see table below). The vegetation within the application areas is recorded as the following Beard vegetation associations (Shepherd, 2009):

Beard vegetation association 819: grasslands, tall bunch grass savanna low tree; Cabbage Gum and Silver-leaved Box over *Aristida* and Ribbon Grass on Sandy Plains.

Beard vegetation association 833: grasslands, short bunch grass savanna sparse low tree; scattered Snappy Gum over arid short grass on plains.

According to Shepherd (2009) approximately 100% of these vegetation associations still exist within the bioregion (see table below).

The vegetation within the application areas is not a remnant of native vegetation within an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Ord Victoria Plain	87,484	87,484	~100	Least Concern	
Beard vegetation associations - State					
819	58,827	58,827	~100	Least Concern	
833	38,675	38,675	~100	Least Concern	
Beard vegetation associations - Bioregion					
819	48,986	49,986	~100	Least Concern	
833	38,498	38,498	~100	Least Concern	

* Shepherd (2009)

** Department of Natural Resources and Environment (2002)

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

Methodology Department of Natural Resources and Environment (2002)
 Shepherd (2009)
 GIS Database:
 - IBRA WA (Regions - Subregions)

(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

The proposed clearing is for the purpose of maintaining and upgrading culverts (Argyle Diamonds, 2011) and therefore, small areas of vegetation associated with watercourses will be impacted. Water flows within these watercourses are highly variable due to the extreme range of rainfall that can be experienced in the area (Argyle Diamonds, 2011). The proposed maintenance and upgrade will help ensure that all roads and culverts maintain their integrity and reduce the risk of road culverts and roads being washed out, which will help improve safety along these roadways (Argyle Diamonds, 2011).

The 7.726 hectares of proposed clearing is made up of over 12 separate areas, spread across a much larger area and therefore the amount of clearing within each area is likely to be fairly minimal. These areas already contain roads and river crossings and the vegetation surrounding these areas is fairly degraded. Therefore, the proposed clearing is unlikely to have a further significant impact on the vegetation associated within

watercourses.

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

Methodology Argyle Diamonds (2011)

(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

The proposed clearing is for the purpose of maintaining and upgrading culverts (Argyle Diamonds, 2011) and therefore, the majority of vegetation to be impacted is vegetation associated with watercourses. These watercourses are likely to naturally experience erosion and material being washed downstream during periods of heavy rainfall that generates water flows.

The proposal to upgrade already existing culverts has been generated due to an unprecedented wet season that caused major road wash-outs. The 7.726 hectares of proposed clearing is made up of over 12 separate areas, spread across a much larger area and therefore the amount of clearing within each area is likely to be minimal. Given this, and that the areas are already disturbed by existing river crossings, the small amount of vegetation disturbance in each area is unlikely to exacerbate or cause appreciable land degradation.

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

Methodology Argyle Diamonds (2011)

(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 at variance to this Principle

The application areas are not located within any conservation areas (GIS Database). The nearest Department of Environment and Conservation managed land is the Ord River Regeneration Reserve located approximately 45 kilometres south-east of the application areas (GIS Database).

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

Methodology GIS Database:
- DEC Tenure

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

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

The proposed clearing is for the purpose of maintaining and upgrading the culverts on roadways (Argyle Diamonds, 2011). Water flows within these watercourses are highly variable due to the extreme range of rainfall that can be experienced in the area (Argyle Diamonds, 2011). The majority of the project area already contains river crossing, culverts and roads and therefore, the further proposed clearing is unlikely to have a further significant impact upon the quality of surface water.

The 7.726 hectares of proposed clearing is made up of over 12 separate areas, spread across a much larger area. Given this, the proposed clearing is unlikely to impact on underground water quality or quantity.

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

Methodology Argyle Diamonds (2011)

(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 proposed clearing is for the purpose of maintaining and upgrading culverts on roadways and therefore will occur close to watercourses. The majority of drainage lines in the area are ephemeral with flows restricted largely to the wet season when rainfall allows rapid flows in these areas (Argyle Diamonds, 2011). Flows within these creeks are highly variable which reflects the extreme range of rainfalls that can be experienced in the area (Argyle Diamonds, 2011).

Flooding of these watercourses occurs naturally following significant rainfall and the increased flows can result in road washouts. This application has been submitted as road washouts have occurred in this area following an unprecedented wet season, which has resulted in a safety risk. The proposed clearing of 7.726 hectares of native vegetation, dispersed across a much larger area, is unlikely to exacerbate the incidence or intensity of flooding.

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

Methodology Argyle Diamonds (2011)

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

Comments

The clearing permit was advertised by the Department of Mines and Petroleum on 30 May 2011, inviting submissions from the public. One submission was received regarding Native Title.

According to available databases there are no Native Title Claims over the areas under application (GIS Database). 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*.

According to available databases there are several registered Aboriginal Sites of Significance within the application areas (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.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims

4. References

- Argyle Diamonds (2011) Clearing Permit Application Supporting Documentation. Argyle Diamonds Limited.
- Bancroft, W. and Bamford, A.R. (2005) Review of Terrestrial Vertebrate Fauna of the Argyle Diamond Lease and East Kimberley (including impacts of proposed mine expansion near Limestone Creek). Unpublished Report. M.J. & A.R. Bamford Consulting Ecologists, 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.
- DSEWPC (2009) Australian Natural Resource Atlas: Ord Victoria Plains. Department of Sustainability, Environment, Water, Population and Communities. Available from: <http://www.anra.gov.au/topics/rangelands/overview/nt/ibra-ovp.html>. Accessed 13 June 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.
- Mattiske (2004) Flora and Vegetation Survey Expansion of Waste Dumps and Area Associated with Underground Expansion Near Limestone Creek. Unpublished Report. Mattiske Consulting Pty Ltd, Western Australia.
- 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:
(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.