



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 4892/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Sweetman Industries Pty Ltd

### 1.3. Property details

Property: Mining Lease 09/130  
Local Government Area: Shire of Carnarvon  
Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.3		Mechanical Removal	Sand Mining and Associated Activities

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 19 April 2012

## 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
<p>Beard vegetation associations have been mapped for the whole of Western Australia. Two Beard vegetation associations have been mapped within the application area:</p> <p>129: Bare areas; drift sand; and 308: Mosaic: Shrublands; <i>Acacia sclerosperma</i> sparse scrub/Succulent steppe; saltbush and bluebush (GIS Database).</p> <p>No vegetation surveys have been undertaken over the application area, therefore, the vegetation communities have not been described or mapped for the areas in any further detail than Beard vegetation mapping.</p>	<p>Sweetman Industries Pty Ltd has applied to clear up to 2.3 hectares of native vegetation for the purpose of sand mining and associated activities. The clearing will comprise of an access track and storage area for a river sand mining operation. Vegetation will not be cleared within the river bed (Sweetman Industries Pty Ltd, 2012a). The application area is located approximately 40 kilometres north-east of Carnarvon.</p> <p>Vegetation will be cleared by machinery. Vegetation and topsoil will be stockpiled and used in rehabilitation activities.</p>	<p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).</p>	<p>The vegetation condition is based on aerial imagery. Vegetation appears to be in very good condition with disturbance from previous access tracks.</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 occurs within the Wooramel subregion of the Carnarvon Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by alluvial plains associated with downstream section and deltas of the Gascoyne, Minilya and Wooramel Rivers (CALM, 2002). Tree to shrub steppe over hummock grasslands on, and between, aeolian red sand dunefields are extensive in the north and east as well as on top of Kennedy Range. Permian sediments are common in the northern parts of the subregion while the southern areas comprise of limestone plateaux overlain by red sand plains (CALM, 2002). Typical vegetation includes *Acacia* shrublands (Mulga, Bowgada and *A. coriacea*) over bunch grasses on red sandy ridges and plains (CALM, 2002).

The vegetation within the application area is broadly mapped as Beard vegetation associations 129 and 308, both of which have approximately 100% of their pre-European vegetation extent remaining in the bioregion (Shepherd, 2009; GIS Database). No on-ground flora or vegetation surveys have been undertaken over the application area but aerial imagery of the application area appears typical of vegetation along the Gascoyne

River (GIS Database).

According to available databases there are no known records of Threatened Flora or Threatened Ecological Communities within the application area or within a 190 kilometre radius of the application area (GIS Database). The application area is also not within the buffer of any known Priority Ecological Communities (GIS Database). No Priority flora species have been recorded within the application area, or a 20 kilometre radius, but on-ground flora surveys have not been undertaken (DEC, 2012; Sweetman Industries Pty Ltd, 2012b; GIS Database).

The presence and abundance of weeds in the application area is unknown. The presence of weed species would lower the biodiversity value of the application 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 search of the Department of Environment and Conservation's NatureMap revealed records of one amphibian, 103 bird, one mammal and 11 reptile species within a 20 kilometre radius (DEC, 2012). The high number of fauna species recorded would reflect the fauna habitats the Gascoyne River provides. While the locality may have relatively high fauna diversity, the application area itself is small and the access track location has been selected to utilise existing disturbance (Sweetman Industries Pty Ltd, 2012b). The application area is not likely to comprise a higher level of fauna diversity than its surroundings.

The application area is not likely to comprise a greater diversity than nearby and similar areas within the bioregion and local area.

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

**Methodology** CALM (2002)  
DEC (2012)  
Shepherd (2009)  
Sweetman Industries Pty Ltd (2012b)  
GIS Database:  
- Doorawarra 1.4 m Orthomosaic - Landgate 2002  
- IBRA WA (Regions - Subregions)  
- Pre-European Vegetation  
- Threatened and Priority Flora  
- Threatened Ecological Sites Buffered

**(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.**

**Comments** **Proposal is not likely to be at variance to this Principle**  
No fauna surveys have been conducted over the application area.

The proposed clearing is adjacent to the Gascoyne River which has subregional significance as a biological refuge (CALM, 2002). The fringing riparian vegetation along the river is likely to provide important fauna habitat, particularly for bird species. The vegetation within the river bed itself will not be cleared (Sweetman Industries Pty Ltd, 2012b). The vegetation in the local area is largely uncleared (GIS Database) so the fauna habitats offered by the application area are also available in the surrounding area.

A threatened fauna database search was undertaken and three Priority fauna species have been recorded within 20 kilometres of the application area: Grey Falcon (*Falco hypoleucos*), *Branchinella wellardi* and *Parartemia contracta* (DEC, 2012). While the Grey Falcon may utilise the riverine plains habitat, it is a wide ranging species (Johnson and Storr, 1998) and unlikely to be impacted by the proposal. *Branchinella wellardi* and *Parartemia contracta* are shrimp with little known about them (Inland Water Crustacean Specialist Group, 1996a, 1996b). The application area is approximately 12 to 14 kilometres north-west of the recorded locations (GIS Database) and at this distance the proposed clearing is unlikely to impact on the known populations.

Although the vegetation within the application area potentially supports a rich array of fauna species, the vegetation is well represented on a regional scale and is unlikely to represent significant habitat to the fauna species in a regional context (Shepherd, 2009).

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

**Methodology** CALM (2002)  
DEC (2012)  
Inland Water Crustacean Specialist Group (1996a)  
Inland Water Crustacean Specialist Group (1996b)  
Johnson and Storr (1998)  
Shepherd (2009)  
Sweetman Industries Pty Ltd (2012b)

GIS Database:  
 - Doorawarra 1.4 m Orthomosaic - Landgate 2002

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

**Comments** **Proposal is not likely to be at variance to this Principle**  
 According to available databases there are no known records of Threatened Flora within the application area (GIS Database). The nearest record of Threatened Flora is located approximately 195 kilometres south of the application area (GIS Database).

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

**Methodology** GIS Database:  
 - Threatened and Priority Flora

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

**Comments** **Proposal is not likely to be at variance to this Principle**  
 A search of available databases revealed there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest recorded TEC is located approximately 260 kilometres north of the application area (GIS Database).

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**  
 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). This gives it a conservation status of 'Least Concern' according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002).

The vegetation of the clearing application area has been broadly mapped as the following Beard vegetation associations:

129: Bare areas; drift sand; and  
 308: Mosaic: Shrublands; *Acacia sclerosperma* sparse scrub/Succulent steppe; saltbush and bluebush (Shepherd, 2009; GIS Database).

According to Shepherd (2009) approximately 100% of Beard vegetation association 308 remains at the state and bioregional level, while 64.8% and 100% of Beard vegetation association 129 remains at a state and bioregional level, respectively. These vegetation associations would be given a conservation status of 'Least Concern' at both a state and bioregional level (Department of Natural Resources and Environment, 2002).

The vegetation under application is not a remnant of vegetation in an area that has been extensively cleared.

	Pre-European Area (ha)*	Current Extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion – Carnarvon	8,382,609	8,349,861	~99.6	Least Concern	3.6
<b>Beard Veg Assoc. – State</b>					
129	95,286	61,734	~64.8	Least Concern	42.8
308	447,065	447,030	~100	Least Concern	0.1
<b>Beard Veg Assoc. – Bioregion</b>					
129	8,473	8,473	~100	Least Concern	0.1
308	446,977	446,962	~100	Least Concern	0.1

- \* Shepherd (2009)
- \*\* Department of Natural Resources and Environment (2002)

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

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

**(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**

**Comments Proposal is at variance to this Principle**

The application area includes an access track from the river bed of the Gascoyne River to a connecting road and the proposed storage area, approximately 500 metres from the river bed (Sweetman Industries Pty Ltd, 2012b; GIS Database). Therefore, most or possibly all of the vegetation within the application area is growing in association with a watercourse.

The original application area included the river bed itself but the final application area has been modified so the river bed is not included. Sweetman Industries Pty Ltd (2012) have stated no vegetation will be cleared within the river bed itself, which is in line with Department of Water (DoW) advice (DoW, 2012).

While the proposed clearing will be clearing riparian vegetation, the amount of riparian vegetation to be cleared has been minimised by utilising an existing access track and locating the proposed storage area on an area mostly devoid of vegetation (Sweetman Industries Pty Ltd, 2012b). The vegetation and topsoil that is cleared will be stockpiled and used for rehabilitation (Sweetman Industries Pty Ltd, 2012a).

Based on the above, the proposed clearing is at variance to this Principle. However, the amount of vegetation to be cleared is small and the low impact activities are unlikely to significantly impact the watercourse.

**Methodology** DoW (2012)  
Sweetman Industries Pty Ltd (2012a)  
Sweetman Industries Pty Ltd (2012b)  
GIS Database:  
- Geodata, Lakes

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

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

According to available datasets the application area intersects the Delta and River Land Systems (GIS Database).

The Delta Land System is characterised as flood plains of the major rivers, supporting low shrublands of bluebush and saltbush, and is widely degraded and eroded (Payne et al., 1987). Most of the soil units of the land system are susceptible to major erosion when degraded (Payne et al., 1987).

The River Land System is characterised by seasonally active flood plains and major channelled watercourses supporting moderately close, tall shrublands or woodlands of acacias and fringing communities of coolibah and river gum (Payne et al., 1987). The system is not normally susceptible to accelerated erosion (Payne et al., 1987).

Sweetman Industries Pty Ltd has applied to clear up to 2.3 hectares for access tracks and a storage area. The proposed clearing activities are not likely to result in large areas of disturbed or open land. Given the small size of the proposed activities, the clearing is not likely to result in appreciable land degradation.

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

**Methodology** Payne et al. (1987)  
GIS Database:  
- Rangeland Land System Mapping

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

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

The application area is not located within a conservation reserve (GIS Database). The nearest conservation

area is Chinamans Pool Nature Reserve, which is located approximately 38 kilometres south-west of the application area (GIS Database). At this distance the proposed clearing is unlikely to have any impact on the conservation area.

Based on the above, the proposed clearing is not likely to be 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 application area is located within the Carnarvon Water Reserve, which is a public drinking water source area proclaimed under the Country Areas Water Supply Act 1947 (DoW, 2012; GIS Database). The reserve has a Priority 1 (P1) classification, meaning it is managed in accordance with the principle of risk avoidance (DoW, 2012). The Department of Water (DoW) considers clearing associated with extractive industries to be 'compatible with conditions' in P1 areas (DoW, 2012). The DoW requires that any clearing within Mining Lease 09/130 be in accordance with the Mining Proposal including:

- clearing will be limited to the storage area and access track;
- no clearing will occur within the river channel; and
- vegetation and topsoil will be stockpiled and used to rehabilitate the cleared areas once mining in the river ceases (DoW, 2012).

Based on the DoW advice, the application area was modified so the river bed was excluded and only the proposed storage area and access track are now included in the application area.

Additional advice and restrictions were provided by DoW for the Mining Proposal in relation to the activities to be carried out after the proposed clearing has occurred.

The proposed clearing will include riparian vegetation adjacent to the river bed and this may increase the risk of sedimentation into the river. However, the amount of clearing is small (2.3 hectares) and the proposed disturbance has been minimised by utilising an existing track (Sweetman Industries Pty Ltd, 2012b). The rehabilitation of the proposed clearing will reduce the risk of any long term deterioration in the local water quality.

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

**Methodology** DoW (2012)  
Sweetman Industries Pty Ltd (2012b)  
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 application area is located within the Gascoyne River catchment area (GIS Database). Given the size of the area to be cleared (2.3 hectares) in relation to the size of the catchment area (8,039,088 hectares) (GIS Database), the proposed clearing is not likely to increase the potential of flooding on a catchment scale.

The proposed clearing is located adjacent to the Gascoyne River, which flows periodically after heavy rains. Rainfall for the region is predominantly in winter but occasional storms can occur during summer (Payne et al., 1987). Large rainfall events can cause flooding of the Gascoyne River but the small size and low impact nature of the proposed clearing make it unlikely to exacerbate the flooding on a local scale.

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

**Methodology** Payne et al. (1987)  
GIS Database:  
- Hydrographic Catchments - Catchments

**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 5 March 2012 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

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

## 4. References

- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Carnarvon 2 (CAR2 ? Wooramel Subregion). Department of Conservation and Land Management, Western Australia.
- DEC (2012) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. <http://naturemap.dec.wa.gov.au/default.aspx> (Accessed 13 April 2012).
- 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.
- DoW (2012) Advice to Assessing Officer for Clearing Permit Application CPS 4892/1. Department of Water, April 2012.
- Inland Water Crustacean Specialist Group (1996a) *Brachinella wellardi*. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.2. <http://www.iucnredlist.org> (Accessed 16 April 2012).
- Inland Water Crustacean Specialist Group (1996b) *Paratemia contracta*. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.2. <http://www.iucnredlist.org> (Accessed 16 April 2012).
- Johnson R.E. and Storr G.M. (1998) Handbook of Western Australian Birds, Volume 1 - Non-Passerines (Emu to Dollarbird). Western Australian Museum, Perth, 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.
- Payne A.L., Curry P.J. and Spencer G.F. (1987) Technical Bulletin - An Inventory and Condition Survey of Rangelands in the Carnarvon Basin, Western Australia, No. 73. Department of Agriculture, Government of Western Australia, Perth, 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.
- Sweetman Industries Pty Ltd (2012a) Mining Proposal for Small Operations Reg ID 33484. Prepared by Sweetman Industries Pty Ltd, February 2012.
- Sweetman Industries Pty Ltd (2012b) Supporting Documentation for Clearing Permit Application CPS 4892/1. Prepared by Sweetman Industries Pty Ltd, February 2012.

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>CALM</b>	Department of Conservation and Land Management (now DEC), Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia
<b>DEH</b>	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
<b>DEP</b>	Department of Environment Protection (now DEC), Western Australia
<b>DIA</b>	Department of Indigenous Affairs
<b>DLI</b>	Department of Land Information, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DoE</b>	Department of Environment (now DEC), Western Australia
<b>DoIR</b>	Department of Industry and Resources (now DMP), Western Australia
<b>DOLA</b>	Department of Land Administration, Western Australia
<b>DoW</b>	Department of Water
<b>EP Act</b>	Environmental Protection Act 1986, Western Australia
<b>EPBC Act</b>	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)

<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>RIWI Act</b>	Rights in Water and Irrigation Act 1914, Western Australia
<b>s.17</b>	Section 17 of the Environment Protection Act 1986, Western Australia
<b>TEC</b>	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.