



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3093/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Hamersley Iron Pty Ltd

1.3. Property details

Property: Iron Ore (Hamersley Range) Agreement Act 1963, Special Lease for Mining Operations 3116/4984, Document I 195323 L, Lots 9, 13 and 32 on Deposited Plan 47815
Miscellaneous Licence 47/47
Miscellaneous Licence 47/67
Local Government Area: Shire of Ashburton
Colloquial name: Chainage 101 to 106 Rail Crossover

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
15		Mechanical Removal	Rail Crossover and Associated Activities

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description
Vegetation within the application area has been mapped at a 1:250,000 scale as Beard Vegetation Associations (GIS Database; Shepherd, 2007):

173: Hummock grasslands, shrub steppe; kanji over soft spinifex & *Triodia wiseana* on basalt; and

175: Short bunch grassland – savanna/grass plain (Pilbara).

GHD undertook a flora and vegetation survey of the application area in July and August 2008. The following two vegetation units were identified within the application area (GHD, 2008):

- Mixed grasses dominated by Buffel (*Cenchrus ciliaris*); and
- Triodia* species with a shrub layer of either single or mixed *Acacia* species.

Clearing Description

Hamersley Iron has applied to clear up to 15 hectares within an application area of approximately 49.5 hectares for the purpose of constructing a rail crossover. The proposal also includes the construction of a signal pad and the installation of fibre optic cable to the signalling equipment (GHD, 2008). Clearing will be undertaken by mechanical means.

The application area is located within the Millstream–Chichester National Park, approximately 65 kilometres south of Roebourne (GIS Database).

Vegetation Condition

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Comment

The vegetation condition rating was assessed by botanists from GHD.

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 Chichester subregion (PIL1) of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). At a broad scale, vegetation can be described as shrub steppe characterised by *Acacia inaequilatera* over *Triodia wiseana* hummock grasslands, while *Eucalyptus leucophloia* tree steppes occur on ranges (CALM, 2002).

A flora and vegetation survey was undertaken within the application area by GHD in July and August 2008. This survey identified two vegetation types within the application area (GHD, 2008). These vegetation types were described as being in 'degraded' condition (GHD, 2008).

The flora survey of the application area recorded 52 taxa from 24 families (GHD, 2008). This is considered to represent a low to moderate degree of species diversity (GHD, 2008). Numerous weed species were found within the application area including Ruby Dock (*Acetosa vesicaria*), Buffel Grass (*Cenchrus ciliaris*), Spiked Malvastrum (*Malvastrum americanum*) and Ulcardo Melon (*Cucumis melo*) (GHD, 2008). The presence of these introduced weed species lowers the biodiversity value of the area proposed to be cleared. Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Should a clearing permit be granted, it is recommended that a condition be imposed for the purpose of weed management.

The application area follows an existing rail line and has a high number of weed species (GHD, 2008). It has been rated as being in a 'degraded' condition and due to this is not expected to support a high number of fauna species.

Given the vegetation within the application area is in a 'degraded' condition, it is not likely to have a higher biodiversity value than nearby areas of undisturbed vegetation within the surrounding Millstream-Chichester National Park.

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

Methodology CALM (2002)
GHD (2008)
GIS Database
- Interim Biogeographic Regionalisation of Australia
- Interim Biogeographic Regionalisation of Australia (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

A fauna survey has been conducted over the application area (GHD, 2008). This included a desktop study, a field assessment of fauna habitat and opportunistic observations (GHD, 2008). The field survey identified one fauna habitat within the application area:

- Shrubland over mixed grassland on plains

This habitat type was not considered to be restricted to the application area (GHD, 2008). The condition of the vegetation within the application area has been described as 'degraded' (GHD, 2008). There is also an existing rail line through the application area which may act a deterrent for fauna species.

There is the potential for several species of conservation significance to be found within the application area (GHD, 2009). However, given the degraded state of the vegetation within the application area and the large areas of undisturbed vegetation in the surrounding Millstream-Chichester National Park, the application area is not likely to represent significant habitat for indigenous fauna.

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

Methodology (GHD, 2008)

(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 recorded Declared Rare Flora (DRF) or Priority Flora species within the application area (GIS Database).

GHD conducted a flora survey over the application area. No DRF or Priority Flora was recorded within the application area (GHD, 2008). The Priority 2 species *Pasapalidium retiglume* is known to occur within close proximity to the application area (GIS Database). Given the degraded state of the vegetation within the application area it is not likely to be necessary for the continued existence of this species considering there are large areas of better quality vegetation in the surrounding Millstream-Chichester National Park.

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

Methodology GHD (2008)
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

According to available databases, there are no Threatened Ecological Communities (TEC's) within the application area (GIS Database). The nearest known TEC is located approximately 100 kilometres south of the application area (GIS Database).

No vegetation communities described as a TEC were recorded during the botanical survey of the application area (GHD, 2008).

The vegetation survey has identified a Priority Ecological Community (PEC) known as "Cracking Clays of the Chichester and Mungaroona Range". Hamersley Iron estimates that 1.02 hectares of this PEC will be potentially cleared (Rio Tinto Iron Ore, 2009). There is approximately 127,050 hectares of this PEC within the Pilbara, so the proposed clearing is not likely to significantly impact this PEC in the bioregion (DEC, 2009; Rio Tinto Iron Ore, 2009).

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

Methodology DEC (2009)
GHD (2008)
Rio Tinto Iron Ore (2009)
GIS Database
- Threatened Ecological Communities

(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 area falls within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion in which approximately 99.9% of the Pre-European vegetation remains (see table) (GIS Database; Shepherd, 2007).

The vegetation of the application area has been mapped as:

- Beard Vegetation Association 173: Hummock grasslands, shrub steppe; kanji over soft spinifex & *Triodia wiseana* on basalt; and

- Beard Vegetation Association 175: Short bunch grassland – savanna/grass plain (Pilbara).

According to Shepherd (2007) approximately 100% of Beard Vegetation Association 173 remains at both the state and bioregional level and 99.7% of Beard Vegetation Association 175 remains at a state level and 100% at a bioregional level. Therefore the area proposed to clear does not represent a significant remnant of native vegetation within an area that has been extensively cleared.

While a small percentage of the vegetation types within the Pilbara bioregion are protected within conservation reserves, the bioregion remains largely uncleared. As a result, the conservation of the vegetation associations within the bioregion is not likely to be impacted by this proposal.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-european % in IUCN Class I-IV Reserves (and post clearing %)*
IBRA Bioregion – Pilbara	17,804,187	17,794,646	~99.9	Least Concern	6.3 (6.3)
Beard veg assoc. – State					
173	1,421,376	1,421,376	~100	Least Concern	4.8 (4.8)
175	526,206	524,861	~99.7	Least Concern	4.2 (4.2)
Beard veg assoc. – Bioregion					
173	1,420,793	1,420,793	~100	Least Concern	4.8 (4.8)
175	507,036	507,006	~100	Least Concern	4.4 (4.4)

* Shepherd (2007)

** Department of Natural Resources and Environment (2002)

Options to select from: Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002).

Presumed extinct	Probably no longer present in the bioregion
Endangered	<10% of pre-European extent remains
Vulnerable	10-30% of pre-European extent exists
Depleted	>30% and up to 50% of pre-European extent exists
Least concern	>50% pre-European extent exists and subject to little or no degradation over a majority of this area

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

Methodology Department of Natural Resources and Environment (2002)
Shepherd (2007)
GIS Database
- Interim Biogeographic Regionalisation of Australia
- 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

According to available databases, the application area contains several ephemeral drainage lines (GIS Database). The botanical survey over the application area did not identify any vegetation growing within or in association with a watercourse or wetland (GHD, 2008).

Given the application area includes ephemeral drainage lines, the proposed clearing is at variance to this Principle.

These ephemeral watercourses only ever flow following heavy rainfall events and are dry for most of the year. These drainage lines have already been impacted by the existing rail line and the proposed clearing will not cause any additional impacts to these ephemeral creeks.

Methodology GHD (2008)
GIS Database
- Hydrography, linear

(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 databases, the application area is comprised of the Wona and Rocklea Land Systems (GIS Database). The Wona Land System is characterised by basalt upland gilgai plain with tussock grassland (Van Vreeswyk et al, 2004). It is not susceptible to erosion except if the stony mantle is removed (Van Vreeswyk et al, 2004). The proposed clearing is not expected to remove the stony mantle (GHD, 2008). The Rocklea Land System is characterised by basalt hills, plateaux, lower slopes and minor stony plains supporting hard spinifex (and occasionally soft spinifex) grasslands (Van Vreeswyk et al, 2004). This land system has a very low erosion hazard (Van Vreeswyk et al, 2004).

The application area is relatively flat, with no areas of steep gradient that could lead to an increase in erosion if cleared (GIS Database). The proposed clearing is not likely to result in appreciable land degradation within or outside of the application area.

Soil pH in the application area ranges from 5.5 to 6.5 and there is no known occurrence of acid sulphate soils within the application area (CSIRO, 2009).

Groundwater salinities within the application area range between 500 – 1000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be potable water. The average annual evaporation is over 6 times the average annual rainfall, so it is unlikely the proposed clearing would alter the groundwater level in the local or adjoining areas (GIS Database).

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

Methodology CSIRO (2009)
GHD (2008)
Van Vreeswyk et al (2004)
GIS Database
- Evaporation Isopleths
- Rainfall, Mean Annual
- Rangeland Land System Mapping
- Topographic Contours, 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 at variance to this Principle

According to available databases, the application area occurs directly adjacent to, and in one place within the Millstream–Chichester National Park (GIS Database). The majority of the application area is within the existing transport corridor that passes through the park, however, approximately 0.68 hectares at the northern end of the application area lies directly within the Millstream–Chichester National Park (GIS Database). Advice from the DEC is that the major concern in relation to the proposed clearing is weed management (DEC, 2009). The weed of most concern is Ruby Dock (*Acetosa vesicaria*) (DEC, 2009). Should a clearing permit be granted, it is recommended that a condition be imposed for the management of ruby dock.

Under the Environmental Protection Authority's (EPA) Position Statement No. 9 Environmental Offsets (2006) National Parks are considered 'critical assets'. Environmental Protection Authority (2006) states that 'critical assets' represent the most important assets in the State that must be fully protected and conserved. In addition, the application area is also located with the Chichester Range National Park (1977 boundary) Register of National Estate, which is an environmentally sensitive area (GIS Database).

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

Hamersley Iron proposes to clear up to approximately 0.68 hectares within the Millstream-Chichester National Park. Whilst this proposed clearing would only impact on a very small portion of the National Park, the activities are likely to result in an area of permanent disturbance. Under the assessment criteria of this Clearing Principle, native vegetation should not be cleared if it contributes significantly to the environmental values of a conservation area. The assessing officer considers that given the 'degraded' condition of the existing vegetation and the small scale of the proposal, the proposed clearing within the National Park will not pose a significant impact to the environmental values of the Millstream-Chichester National Park.

Methodology DEC (2009)
Environmental Protection Authority (2006)
GIS Database
- CALM Managed Lands and Waters

(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 within the Harding Dam Catchment Area (GIS Database). The Harding Dam Catchment Area is a Priority 1 (P1) Public Drinking Water Source Area (PDWSA) (Department of Water, 2009). Advice was sought from the Department of Water on this matter. The construction of railways is generally not considered compatible with a P1 PDWSA, however, this application has been assessed as being compatible with conditions (Department of Water, 2009).

Rainfall in this area is mainly restricted to a wet summer season, where precipitation can be variable. Rain can be either intense falls associated with cyclonic events, or scattered falls associated with local thunderstorms (GHD, 2008). The average annual evaporation rate for the application area is 3,400 – 3,600 millimetres and the average annual rainfall is 500 millimetres (GIS Database). Given the low rainfall to high evaporation rate, any surface water that may occur during normal rainfall events is likely to evaporate quickly. The proposed clearing is not likely lead to an increase in sedimentation of watercourses within and outside the application area. Significant rainfall events in the Pilbara have the potential to create surface sheet flows which contain high levels of suspended sediment, however, the proposed clearing is not expected to significantly increase sediment loads.

The salinity of groundwater within the application area is between 500 – 1000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be potable water. The Department of Water (2009) considers the proposed clearing as unlikely to have a significant impact on the quality of groundwater.

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

Methodology Department of Water (2009)
GHD (2008)
GIS Database
- Evaporation Isopleths
- Groundwater Salinity, Statewide
- Public Drinking Water Source Areas (PDWSA's)
- Rainfall, Mean Annual

(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 experiences an arid, tropical climate with a wet summer season and a dry winter season

(BoM, 2009). Most rainfall is received during the wet season, but falls can be variable (BoM, 2009). Rain can either be sporadic (local thunderstorms) or heavy and intense (cyclonic events). It is likely during times of intense rainfall there may be some localised flooding in adjacent areas.

The application area located within the Harding River Catchment which covers a total area of approximately 155, 807 hectares (GIS Database). The proposed clearing of 15 hectares is not likely to impact on the drainage characteristics of the Harding River Catchment, or the local area.

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

Methodology BoM (2009)
GIS Database
- Hydrographic Catchments – Catchments

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

Comments

The clearing permit application was advertised on 11 May 2009 by the Department of Mines and Petroleum, inviting submissions from the public. One submission was received on 22 May 2009 stating that there were no objections to the proposed clearing.

The application was referred to the EPA under the larger 320 Mt Rail expansion project. The EPA set the level of assessment at 'Not Assessed – Public advice given & managed under Part V of the EP Act (Clearing)' on 19 December 2008.

There is one native title claim over the area under application; WC99/014 (GIS Database). This claim has been registered with the National Native Title Tribunal. However, the mining tenements have 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 is one Aboriginal Site of Significance (Site ID: 18777) 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.

Methodology GIS Database
- Aboriginal Sites of Significance
- Native Titles Claims

4. Assessor's comments

Comment

The proposal has been assessed against the Clearing Principles and the proposed clearing is at variance to Principles (f) and (h), is not likely to be at variance to Principles (a), (b), (c), (d), (g), (i) and (j) and is not at variance to Principle (e).

Should the permit be granted it is recommended that conditions be imposed on the permit for the purposes of weed management, retention of vegetative material and topsoil, record keeping and permit reporting.

5. References

- Bureau of Meteorology, (2009) BOM Website - Climate Averages by Number, Averages for Roebourne. Available online at: http://www.bom.gov.au/climate/averages/tables/cw_004035.shtml accessed on 18 June 2009.
- Commonwealth Scientific and Industrial Research Organisation (2009) Australian Soil Resource Information System. Available online at: http://www.asris.csiro.au/index_ie.html Accessed on 18 June, 2009.
- Department of Conservation and Land Management (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions.
- Department of Environment and Conservation (2009) Advice for clearing permit application. Advice to assessing officer, Native Vegetation Assessment Branch, Department of Mines and Petroleum, received 24 June 2009. Department of Environment and Conservation, 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.
- Department of Water (2009) Advice for clearing permit application. Advice to assessing officer, Native Vegetation Assessment

Branch, Department of Mines and Petroleum, received 17 June 2009. Department of Water, Western Australia. Environmental Protection Authority (2006). Environmental Offsets Position Statement No. 9, prepared by the Environmental Protection Authority, January 2006.

GHD (2008) Report for 320 Mt Rail Expansion; Quarries, Water Bores and Crossover 104. Unpublished Report for Hamersley Iron Pty Ltd, 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.

Rio Tinto Iron Ore (2009) Additional information submitted for Clearing Permit application CPS 3093/1. Received by assessing officer, Native Vegetation Assessment Branch, Department of Mines and Petroleum on 7 July 2009.

Shepherd, D.P. (2007) 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P. and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

6. Glossary

Acronyms:

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

Definitions:

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

P1	Priority One - Poorly Known taxa: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P2	Priority Two - Poorly Known taxa: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P3	Priority Three - Poorly Known taxa: taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
P4	Priority Four – Rare taxa: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
R	Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable): taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
X	Declared Rare Flora - Presumed Extinct taxa: taxa which have not been collected, or otherwise verified,

over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

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

- Schedule 1** **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2** **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3** **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4** **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

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

- P1** **Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2** **Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3** **Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4** **Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5** **Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

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

- EX** **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W)** **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR** **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- EN** **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
- VU** **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
- CD** **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.