



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5435/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

1.3. Property details

Property: Iron Ore (Mount Newman) Agreement Act 1964, Mineral Lease 244SA (AML 70/244)
Local Government Area: Shire of East Pilbara
Colloquial name: Orebody 25

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3		Mechanical Removal	Construction and Maintenance of Dewatering Pipelines, Power Lines, Access Tracks and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 7 March 2013

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>18: Low woodland; mulga (<i>Acacia aneura</i>); and 82: Hummock grasslands, low tree steppe; snappy gum over <i>Triodia wiseana</i> (GIS Database).</p> <p>Botanists from Onshore Environmental conducted a targeted significant flora and riparian vegetation mapping survey around the existing Orebody 25 mining operations in July and August 2012. Onshore Environmental identified six broad floristic communities with seven vegetation associations within the application area (BHPBIO, 2013).</p> <p>1. Eucalyptus Woodland - Woodland of <i>Eucalyptus camaldulensis</i> subsp. <i>refulgens</i> and <i>E. victrix</i> over Low Woodland of <i>Acacia citrinoviridis</i> over Low Open Shrubland of <i>Corchorus crozophorifolius</i> and <i>Tephrosia rosea</i> var. <i>glabrior</i> ms in rocky pavements along major drainage lines.</p> <p>2. Acacia Low Woodland - Low Woodland of <i>Acacia aptaneura</i> and <i>Hakea lorea</i> subsp. <i>lorea</i> over Open Tussock Grassland of <i>Cenchrus ciliaris</i> over Open Hummock Grassland of <i>Triodia pungens</i> in sandy loam soils on stony plains.</p> <p>3a. Triodia Hummock Grassland - Hummock Grassland of <i>Triodia pungens</i> with Low Open Woodland of <i>Eucalyptus xerothermica</i> and <i>Corymbia hamersleyana</i> over High Open Shrubland of <i>Acacia bivenosa</i> and <i>Petalostylis labicheoides</i> in calcrete soils on rises and sloping plains.</p>	<p>BHP Billiton Iron Ore Pty Ltd (BHPBIO) has applied to clear up to 3 hectares within an application area of approximately 20 hectares for the purposes of construction and maintenance of dewatering pipelines, power lines, access tracks and associated activities. BHPBIO has identified the need to install a new dewatering pipeline at Orebody 25. The application area is located approximately 10 kilometres east of Newman.</p> <p>Vegetation will be cleared by mechanical means.</p>	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);</p> <p>To:</p> <p>Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).</p>	<p>The vegetation condition was assessed by botanists from Onshore Environmental (2012).</p>

3b. Triodia Hummock Grassland - Hummock Grassland of *Triodia pungens* with Low Open Woodland of *Eucalyptus xerothermica* and *Acacia aptaneura* over High Open Shrubland of *Acacia sclerosperma* in loam soils on floodplains.

4. *Cenchrus Closed Tussock Grassland - Closed Tussock Grassland of **Cenchrus ciliaris* with Low Open Forest of *Acacia citrinoviridis* and *Hakea lorea* subsp. *lorea* and Woodland of *Eucalyptus victrix* in loam soils fringing major drainage lines.

5. *Cenchrus Tussock Grassland - Tussock Grassland of **Cenchrus ciliaris*, *Eulalia aurea* and *Chrysopogon fallax* with Low Woodland of *Acacia citrinoviridis*, *Hakea lorea* subsp. *lorea* and *Acacia aptaneura* and Open Woodland of *Corymbia aspera* and *Corymbia hamersleyana* in loam soils on floodplains.

6. Aristida Tussock Grassland - Tussock Grassland of *Aristida inaequiglumis*, *A. contorta* and *Enneapogon polyphyllus* with Low Open Woodland of *Acacia aptaneura*, *Acacia paraneura* and *Grevillea striata* over High Open Shrubland of *Acacia synchronicia* in sandy loam soils on stony plains.

*indicates introduced species

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 Hamersley (PIL3) Interim Biogeographic Regionalisation of Australia (IBRA) subregion (GIS Database). This subregion is generally described as Mulga low woodland over bunch grasses on fine textured soils in valley floors, and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges (CALM, 2002).

The vegetation within the application area is broadly mapped as Beard vegetation associations 18 and 82, both of which have over 99% of their Pre-European vegetation extent remaining in the bioregion (Government of Western Australia, 2011; GIS Database). Botanists from Onshore Environmental conducted a targeted significant flora survey and riparian vegetation mapping around the existing Orebody 25 mining operations in July and August 2012. Onshore Environmental identified six broad floristic communities with seven vegetation associations within the application area (BHPBIO, 2013). No Threatened or Priority Flora were recorded within the application area (BHPBIO, 2013).

The application area is within the buffer of the Threatened Ecological Community (TEC) 'Ethel Gorge aquifer stygobiont community' and is approximately 2.7 kilometres from the TEC (GIS Database). The TEC is subterranean and groundwater drawdown is listed as a threatening process for the Ethel Gorge stygofauna (CALM, 2002), however, the proposed clearing is not expected to have an effect on groundwater levels.

No Priority Ecological Communities or other TECs were recorded within the application area during the flora surveys or have previously been recorded within application area (BHPBIO, 2013; GIS Database).

Four introduced flora species were identified within 500 metres of the application area (BHPBIO, 2013). These weed species were Buffel Grass (*Cenchrus ciliaris*), Kapok (*Aerva javanica*), Purslane (*Portulaca oleracea*) and Ruby Dock (*Rumex vesicarius*) (BHPBIO, 2013). 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.

Two broad fauna habitats were identified within the application area, alluvial plain and riverine, during the ENV Australia Level 1 fauna assessment over BHPBIO's Eastern Ridge area in May 2011 (BHPBIO, 2013). The alluvial plain habitat is classified as having moderate habitat value and the riverine habitat has high habitat value (ENV Australia, 2011). The riparian vegetation associated with Homestead Creek has high habitat value but similar habitat in better condition is located in the vicinity of the application area (BHPBIO, 2013).

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

Methodology BHPBIO (2013)
CALM (2002)

ENV Australia (2011)
Government of Western Australia (2011)
GIS Database:
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation
- 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

ENV Australia undertook a large scale Level 1 fauna assessment over BHPBIO's Eastern Ridge area in May 2011. Seven broad fauna habitat types were described over the larger survey area and two of these were identified within the application area: alluvial plain and riverine (ENV Australia, 2011; BHPBIO, 2013). The alluvial plain habitat is classified as having moderate habitat value and the riverine habitat has high habitat value (ENV Australia, 2011). Both of these habitats are well represented in the Pilbara bioregion and similar habitat in better condition is located in the vicinity of the application area (BHPBIO, 2013). The riverine habitat is associated with Homestead Creek and a maximum of 0.2 hectares of riparian vegetation will be cleared to allow the pipeline to cross Homestead Creek (BHPBIO, 2013). Part of the application area is mapped as disturbed with existing infrastructure and this provides little to no habitat value for fauna (ENV Australia, 2011; BHPBIO, 2013).

No conservation significant species have been recorded from within the application but some species may utilise the application area for foraging (BHPBIO, 2013). The fauna species are likely to be transitory and able to utilise similar habitat in the locality (BHPBIO, 2013).

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

Methodology BHPBIO (2013)
ENV Australia (2011)

(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 known record of Threatened Flora, *Lepidium catapycnon*, is approximately 17 kilometres west of the application area (GIS Database).

Botanists from Onshore Environmental conducted a targeted significant flora survey and a riparian vegetation mapping survey around the existing Orebody 25 mining operations, where the application area is located, in July and August 2012. No Threatened Flora were recorded during the survey (Onshore Environmental, 2012).

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

Methodology Onshore Environmental (2012)
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

The application area is within the buffer of the Threatened Ecological Community (TEC) 'Ethel Gorge aquifer stygobiont community' (GIS Database). The northern tip of the application area is approximately 2.7 kilometres south-west of the TEC occurrence (GIS Database). The TEC is subterranean and groundwater drawdown is listed as a threatening process for the Ethel Gorge stygofauna (CALM, 2002), however, the proposed clearing is not expected to have an effect on groundwater levels.

No floristic TECs were identified during the flora and vegetation survey conducted by Onshore Environmental botanists (Onshore Environmental, 2012).

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

Methodology CALM (2002)
Onshore Environmental (2012)
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 Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion in which 99.6% of the pre-European vegetation remains (see table) (Government of Western Australia, 2011; GIS Database). This gives the bioregion 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 mapped as Beard vegetation associations:

18: Low woodland; mulga (*Acacia aneura*); and
82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana* (Government of Western Australia, 2011; GIS Database).

Over 99% of both of these vegetation associations remains at a state level and bioregional level (Government of Western Australia, 2011). 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 – Pilbara	17,804,427	17,729,352	~99.6	Least Concern	6.3
Beard Veg Assoc. – State					
18	19,892,304	19,843,823	~99.8	Least Concern	2.1
82	2,565,901	2,553,217	~99.5	Least Concern	10.2
Beard Veg Assoc. – Bioregion					
18	676,557	672,424	~99.4	Least Concern	16.8
82	2,563,583	2,550,899	~99.5	Least Concern	10.2

* Government of Western Australia (2011)

** 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)
Government of Western Australia (2011)
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 non-perennial watercourse Homestead Creek is located within the application area (BHPBIO, 2013; GIS Database). The application area contains approximately 1.5 hectares of riparian vegetation and a maximum of 0.2 hectares of riparian vegetation will be cleared to allow the pipeline to cross Homestead Creek (BHPBIO, 2013). Onshore Environmental (2012) conducted vegetation mapping of Homestead Creek in July and August 2012. Approximately 54 hectares of riparian vegetation associated with the drainage line landform was identified along the 10 kilometre length of Homestead Creek surveyed (Onshore Environmental, 2012; BHPBIO, 2013). The proposed clearing of 0.2 hectares of creekline vegetation represents less than 0.4% of the riparian vegetation identified (BHPBIO, 2013).

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

Methodology BHPBIO (2013)
Onshore Environmental (2012)
GIS Database:

(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 application area intersects the Elimunna and Newman Land Systems (GIS Database).

The Elimunna Land System is characterised as stony plains on basalt supporting sparse acacia and cassia shrublands and patchy tussock grasslands (Van Vreeswyk et al., 2004). Some drainage floors are slightly susceptible to erosion but most of the system is inherently resistant (Van Vreeswyk et al., 2004).

The Newman Land System is characterised by rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands (Van Vreeswyk et al., 2004). Each of the landforms in the land system have a mantle of abundant pebbles of ironstone and other rocks, which translates to a low soil erosion risk (Van Vreeswyk et al., 2004).

BHP Billiton Iron Ore Pty Ltd has applied to clear up to 3 hectares within an application area totalling approximately 20 hectares. 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 Van Vreeswyk et al. (2004)
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 within conservation estate (GIS Database). The closest conservation areas are Collier Range National Park and Karijini National Park, which are located approximately 125 kilometres to the south and 130 kilometres to the east, respectively (GIS Database). Given the large distance between these two areas it is unlikely that the environmental values of the National Parks will be compromised from the proposed clearing.

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 Newman Water Reserve (GIS Database), a Public Drinking Water Source Area (PDWSA) gazetted under the *Country Areas Water Supply Act 1947* in August 1983. This PDWSA has been assigned a 'Priority 1 (P1)' under the Water Source Protection Classification System (DoW, 2013). Clearing activities associated with mineral production are compatible with conditions in a P1 PDWSA and all activities associated with the clearing including infrastructure, laydown areas, refuelling and topsoil storage should be compatible with the Department of Water (DoW) Land Use Compatibility Tables (DoW, 2013). The DoW advises there are Water Quality Protection Notes and Guidelines for mining and mineral processing that should be followed to reduce the risk the associated activities pose to the Water Reserve (DoW, 2013). The DoW is satisfied that the proposed clearing of 3 hectares is unlikely to have a significant impact on the quality or quantity of groundwater, provided activities are carried out in accordance with DoW advice.

The non-perennial watercourse Homestead Creek is located within the application area (BHPBIO, 2013; GIS Database). The application area contains approximately 1.5 hectares of riparian vegetation and a maximum of 0.2 hectares of riparian vegetation will be cleared to allow the pipeline to cross Homestead Creek (BHPBIO, 2013). Clearing within riparian vegetation will be minimised and will be constructed flat level to the surface (i.e. no bunds) to maintain the natural surface flow (BHPBIO, 2013). The small amount of clearing of riparian vegetation is not anticipated to increase erosion or cause deterioration in the quality of surface water (BHPBIO, 2013).

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

Methodology BHPBIO (2013)
DoW (2013)
GIS Database:

- Hydrography, Linear
- Public Drinking Water Source Areas (PDWSA)

(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 within the Fortescue River Upper catchment area of the Fortescue River basin (GIS Database). Given the size of the area to be cleared (3 hectares) in relation to the size of the catchment areas (2,975,192 hectares) (GIS Database), the proposed clearing is not likely to increase the potential of flooding on a local or catchment scale.

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

Methodology GIS Database:
 - Hydrographic Catchments - Catchments

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

Comments

There is one Native Title Claim (WC05/6) 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 28 January 2013 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received regarding the cumulative impacts of clearing and this is addressed in Principle (e).

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

4. References

- BHPBIO (2013) Orebody 25 Native Vegetation Clearing Permit Application Supporting Document for a Dewatering Pipeline. Report Prepared by BHP Billiton Iron Ore Pty Ltd, January 2013.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. 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.
- DoW (2013) Advice provided to the Department of Mines and Petroleum for Clearing Permit Application CPS 5435/1. February 2013.
- ENV Australia (2011) Eastern Ridge (OB23/24/25) Fauna Assessment. Report Prepared by ENV Australia Pty Ltd for BHP Billiton Iron Ore, December 2011.
- Government of Western Australia (2011) 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Onshore Environmental (2012) Targeted Significant Flora Survey Vegetation Mapping of Homestead Creek. Report Prepared by Onshore Environmental Consultants Pty Ltd for BHP Billiton Iron Ore, September 2012.
- Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A. and Hennig, P. (2004) Technical Bulletin - An Inventory and Condition Survey of the Pilbara Region, Western Australia, No. 92. Department of Agriculture, Government of Western Australia, Perth, Western Australia.

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.