



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 5340/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: FMG Pilbara Pty Ltd

### 1.3. Property details

Property: Exploration Licence 47/1479  
Exploration Licence 47/1761  
Local Government Area: Shire of Ashburton  
Colloquial name: Mount MacLeod Exploration Prospect

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3.8		Mechanical Removal	Mineral Exploration

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 21 February 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
Beard vegetation associations have been mapped for the whole of Western Australia, and are a useful tool to examine the vegetation extent in a regional context. One Beard vegetation association is located within the area proposed to be cleared:  175: Short bunch grassland - savanna/grass plain (Pilbara) (GIS Database).	FMG Pilbara Pty Ltd has applied to clear up to 3.8 hectares of native vegetation, within an application area of approximately 19.6 hectares, for the purpose of mineral exploration. Clearing is for the Mount MacLeod exploration prospect. The drilling program includes 56 drill holes and 3.8 kilometres of access tracks.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994);  To:	The vegetation condition has been inferred from orthophotos.
No vegetation surveys have been undertaken over the application areas, therefore, the vegetation communities have not been described or mapped for these areas in any further detail than Beard vegetation mapping.	Vegetation will be cleared by mechanical equipment. Vegetation for the drill pads and secondary access tracks will be cleared using a raised blade technique and the main access tracks will be cleared by removing the topsoil. Vegetation will be stockpiled and used during rehabilitation.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).	

## 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 may 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 association 175 (GIS Database). This vegetation association is common and widespread through the Pilbara bioregion, with over 99% of the pre-European vegetation extent remaining (Government of Western Australia, 2011; GIS Database). No on-ground flora or vegetation surveys have been undertaken over the application area and it is likely a greater number of vegetation types would occur if the area was mapped at a local scale.

A flora and vegetation survey was undertaken adjacent to the application area by botanists from Western Botanical in 2011 (FMG, 2012). No Threatened Flora species were recorded during the survey, however, five Priority Flora species were recorded (FMG, 2012). The Priority Flora species were *Rostellularia adscendens* var. *latifolia* (P3), *Themeda* sp. Hamersley Station (P3), *Goodenia* sp. East Pilbara (P3), *Goodenia nuda* (P4) and *Rhynchosia bungarensis* (P4) (FMG, 2012). A search of the Department of Environment's (DEC) NatureMap database revealed an additional 21 Priority Flora species have been recorded within 20 kilometres of the application (DEC, 2013b). Given the close proximity of the Western Botanical 2011 records to the application area and the large number of other Priority Flora species found in the local area, there is a high likelihood of Priority Flora occurring within the application area. Potential impacts to Priority Flora as a result of the proposed clearing may be minimised by the implementation of a flora management condition.

The application area is within the buffer of several occurrences of the Threatened Ecological Community 'Themeda Grasslands' (GIS Database). DEC's Species and Communities Branch have recently reviewed the mapping for this TEC and the mapped extent is within 50 metres at its closest point (FMG, 2012). DEC has concerns for the management of the TEC with the proposed exploration activities and has recommended clearing be excluded within a 200 metre buffer of the mapped extent of the TEC (DEC, 2013a). Potential impacts to the TEC as a result of the proposed clearing may be minimised by the implementation of an avoidance condition.

The application area is also within the buffer of the Priority Ecological Community (PEC) Brockman Iron cracking clay communities of the Hamersley Range (GIS Database). This Priority 1 PEC is described as rare tussock grassland dominated by *Astrelba lappacea* in the Hamersley Range on the Newman land system (DEC, 2012b). The tussock grassland is on cracking clays and is derived in valley floors and depositional floors. This is a rare community and the landform is rare. The PEC is known from near West Angelas, Newman, Tom Price and the boundary of Hamersley and Brockman Stations (DEC, 2012b). Several proposed drill holes and sections of the access track intercept the mapped boundary of the PEC (FMG, 2012).

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.

The application area on E47/1479 is adjacent to, and will utilise, an existing access track (FMG, 2012). Previous exploration activities have occurred in close proximity to the application area on E47/1761 (FMG, 2012).

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

**Methodology** CALM (2002)  
DEC (2012b)  
DEC (2013a)  
DEC (2013b)  
FMG (2012)  
Government of Western Australia (2011)  
GIS Database:  
- IBRA WA (Regions - Subregions)  
- Pre-European Vegetation

**(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 may be at variance to this Principle**

No targeted fauna surveys were undertaken within the application area. Based on aerial photography and Department of Environment and Conservation (DEC) Priority Ecological Community mapping, the application area consists of grassland plains and tussock grassland on cracking clays in valley, depositional floors (FMG, 2012; GIS Database). The application area may provide habitat for a variety of fauna species. The fauna habitats provided by the application area are also likely to occur in the surrounding area and mobile fauna species will be able to utilise these.

Rapallo undertook a terrestrial vertebrate fauna survey in the Mount MacLeod area, adjacent to the application area (FMG, 2012). No fauna species pursuant to the *Environment Protection and Biodiversity Conservation Act 1999* or listed under Schedule 1 of the *Wildlife Conservation Act 1950* were recorded (FMG, 2012). Five DEC Priority listed fauna species were recorded during the survey:

- *Ramphotyphlops ganei* (DEC Priority 1);
- Lakeland Downs Mouse (*Leggadina lakedownensis*) (DEC Priority 4);
- Western Pebble-mound Mouse (*Pseudomys chapmani*) (DEC Priority 4);
- Australian Bustard (*Ardeotis australis*) (DEC Priority 4);
- Flock Bronzewing (*Phaps histrionica*) (DEC Priority 4) (FMG, 2012).

The avifauna species (Australian Bustard and Flock Bronzewing) are highly mobile and capable of evacuating

from areas being disturbed. The application area may provide habitat for the other conservation significant species. However, the amount of potential habitat proposed to be cleared is small (3.7 hectares).

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

**Methodology** FMG (2012)  
GIS Database:  
- Macrae 50 cm Orthomosaic - Landgate 2004  
- Rocklea 50 cm Orthomosaic - Landgate 2004

**(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 31 kilometres south-west of the application area (GIS Database).

A flora and vegetation survey was undertaken adjacent to the application area by botanists from Western Botanical in 2011 (FMG, 2012). No Threatened Flora species were recorded during the survey (FMG, 2012). *Lepidium catapycnon* is generally found on skeletal soils on hillsides in the Pilbara (Western Australian Herbarium, 2013) and the topography of the application area would be described as flat or gently sloping at most (GIS Database).

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

**Methodology** FMG (2012)  
Western Australian Herbarium (2013)  
GIS Database:  
- Macrae 50 cm Orthomosaic - Landgate 2004  
- Rocklea 50 cm Orthomosaic - Landgate 2004  
- Threatened and Priority Flora  
- Topographic Contours, Statewide

**(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 may be at variance to this Principle**

The entire application area is within the buffer of several occurrences of the Threatened Ecological Community (TEC) 'Themeda Grasslands' (GIS Database). The Themeda Grasslands on cracking clays (Hamersley Station, Pilbara) TEC is described as grassland plains dominated by the perennial Themeda (kangaroo grass) and many annual herbs and grasses (DEC, 2012a). The Department of Environment and Conservation's (DEC) Species and Communities Branch recently completed a review of the mapping for the Themeda Grasslands TEC and the current mapped extent is less than 50 metres from the application area at its closest point (FMG, 2012). DEC (2013a) has concerns for the management of the TEC with the proposed exploration activities and a current Themeda Grasslands Management Plan has not been provided. DEC has requested that FMG updates its Themeda Grasslands Management Plan to ensure that exploration activities on the TEC and within the identified 200 metre TEC buffer are appropriately managed. DEC has recommended clearing be excluded within a 200 metre buffer of the mapped extent of the TEC (DEC, 2013a). Potential impacts to the TEC as a result of the proposed clearing may be minimised by the implementation of an avoidance condition to avoid clearing within the 200 metre buffer until FMG develop an adequate management plan that is endorsed by DEC and DMP.

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

**Methodology** DEC (2012a)  
DEC (2013a)  
FMG (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 approximately 99.6% of the pre-European vegetation remains (see table) (Government of Western Australia, 2011; 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 mapped as Beard vegetation association 175 'Short bunch grassland - savanna/grass plain (Pilbara)' (Government of Western Australia, 2011; GIS Database). Over 99% of this vegetation association remains at a state and bioregional level (Government of Western Australia, 2011), therefore, it 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
<b>Beard Veg Assoc. – State</b>					
175	526,203	523,800	~99.5	Least Concern	4.2
<b>Beard Veg Assoc. – Pilbara Bioregion</b>					
175	507,033	506,626	~99.9	Least Concern	4.4

\* 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**

There are no permanent watercourses or wetlands within the application area, however, several minor non-perennial watercourses cross the application area (GIS Database). Minor non-perennial watercourses are common in the Pilbara and the small amount of proposed clearing is unlikely to significantly impact any watercourse or wetland.

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

**Methodology** 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 may be at variance to this Principle**

The application area intersects the Brockman, Hooley and Jurrawarrina land systems (GIS Database).

The Brockman land system is characterised by alluvial plains with cracking clay soils supporting tussock grasslands (Van Vreeswyk et al., 2004). Soil erosion, despite the inherent resistance of the system, can occur if vegetative cover is severely depleted (Van Vreeswyk et al., 2004).

The Hooley land system is characterised by alluvial clay plains supporting a mosaic of snakewood shrublands and tussock grasslands (Van Vreeswyk et al., 2004). Those parts of the system not protected by a stony surface mantle are moderately susceptible to soil erosion (Van Vreeswyk et al., 2004).

The Jurrawarrina land system is characterised by hardpan plains and alluvial tracts supporting mulga shrublands with tussock and spinifex grasses (Van Vreeswyk et al., 2004). Some hardpan washplains, drainage tracts and groves are moderately susceptible to erosion (Van Vreeswyk et al., 2004).

Rehabilitation will be undertaken in accordance with FMG's Exploration Environmental Management Plan with topsoil generally stockpiled at the drill pads and reinstated within 18 months from the commencement of drilling (FMG, 2012).

All of the land systems mapped over the application area have a moderate susceptibility to erosion when disturbed so it is important that the areas are not cleared and left bare for long periods of time. Potential impacts from erosion may be minimised by the implementation of a staged clearing condition. Rehabilitation of the proposed clearing will reduce the risk of any long-term land degradation.

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

**Methodology** FMG (2012)  
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**

Part of the application area is within the Hamersley Station pastoral lease, a proposed conservation reserve area which has been identified by DEC for exclusion from its lease and as a proposed addition to the conservation reserve in 2015 (GIS Database). The section of application area on E47/1761 is also in close proximity to Karijini National Park, approximately 5.5 kilometres west of the park (GIS Database).

The Department of Environment and Conservation (DEC) has advised that the applicant should minimise the clearing in the proposed reserve and ensure rehabilitation is undertaken in a timely manner (DEC, 2013a). FMG will clear vegetation for the drill pads and secondary access tracks using a raised blade technique to minimise soil disturbance (FMG, 2012). The main access tracks will be cleared by removing the topsoil and the vegetation that is cleared will be stockpiled and reinstated during rehabilitation (FMG, 2012). Further rehabilitation requirements are addressed through the *Mining Act 1978*.

The presence of weed species would lower the biodiversity value of the proposed conservation area. Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Potential impacts to the conservation area as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

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

**Methodology** DEC (2013a)  
FMG (2012)  
GIS Database:  
- DEC Proposed 2015 Pastoral Lease Exclusions  
- 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**

There are no permanent watercourses or wetlands within the application area, however, several minor non-perennial watercourses cross the application area (GIS Database).

According to available databases the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is Southern Fortescue Water Reserve, which is approximately 5 kilometres south-east of the application area (GIS Database).

The small area of the proposed clearing (3.8 hectares) is unlikely to cause deterioration in the quality of surface or underground water.

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

**Methodology** GIS Database:  
- Hydrography, Linear  
- 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 Ashburton and Fortescue River catchment areas (GIS Database). Given the size of the area to be cleared (3.8 hectares) in relation to the size of the catchment areas (7,877,743 and 1,860,784 hectares, respectively) (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 (WC97/89) over the area under application (GIS Database). This claim has been determined by the Federal Court 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 but numerous Sites in the local 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 19 November 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 - Determined by the Federal Court

## 4. References

- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management, Western Australia.
- DEC (2012a) List of Threatened Ecological Communities endorsed by the Western Australian Minister for the Environment. Department of Environment and Conservation, Species and Communities Branch.
- DEC (2012b) Priority Ecological Communities for Western Australia Version 17. Species and Communities Branch, Department of Environment and Conservation, April 2012.
- DEC (2013a) Advice to Assessing Officer for Clearing Permit Application CPS 5340/1. Department of Environment and Conservation, Environmental Management Branch, January 2013.
- DEC (2013b) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. <http://naturemap.dec.wa.gov.au>. Accessed 6 February 2013.
- 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.
- FMG (2012) Native Vegetation Clearing Permit Application for the Mount MacLeod Exploration Prospect. Report Prepared by Fortescue Metals Group Limited, October 2012.
- 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.
- 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, Perth, Western Australia.
- Western Australian Herbarium (2013) Florabase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> Accessed 5 February 2013.

## 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.