



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5974/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Fortescue Metals Group Limited**

1.3. Property details

Property: Exploration Licence 47/1396
Exploration Licence 47/2378

Local Government Area: Shire of Ashburton

Colloquial name: Hardey Ridge Prospect

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 6 March 2014

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 useful to look at vegetation in a regional context. The following Beard vegetation associations are located within the application area (GIS Database):	Hardey Ridge Prospect. Fortescue Metals Group Limited (FMG) has applied to clear up to 6 hectares of native vegetation, within a total application boundary of approximately 290 hectares, for the purpose of mineral exploration. The proposed clearing is located approximately 68.3 kilometres north west of Paraburdo, in the Shire of Ashburton.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994); to Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).	Area to be cleared has not been addressed by a fauna or vegetation survey. Based on the absence of previous mining or exploration activity in the area and following a review of aerial imagery, vegetation condition is likely to be Very Good - Excellent.
18: Low woodland; mulga (<i>Acacia aneura</i>)			
82: Hummock grasslands, low tree steppe; snappygum over <i>Triodia wiseana</i> ; and			
567: Hummock grasslands, shrub steppe; mulga and kanji over soft spinifex & <i>Triodia basedowii</i> .			

No vegetation surveys have occurred within the application area. No vegetation surveys within 20 kilometres of the application area were available at the time of assessment.

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 boundary is entirely within the Woongarra Gorge Area, which is listed in the Register of the National Estate and is therefore an Environmentally Sensitive Area. There have been no flora or fauna field surveys conducted over the application area. Therefore, a desktop assessment has been utilised to assess the level of biodiversity within the application boundary.

Vegetation within the application boundary is mapped as belonging to Beard vegetation associations 18, 82 and 567 (GIS Database). According to available databases, there are no Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) likely to be present within the application area (DoE, 2014a; FMG, 2014a; GIS Database).

Using a 10 kilometre buffer surrounding the application area, NatureMap returned records for 75 flora species (DEC, 2014). However, the distribution of Naturemap records within this landscape suggests that the area has

not been thoroughly surveyed, and this figure is likely to underestimate the existing floristic diversity within the application boundary.

Aerial imagery suggests that there are at least three habitat types within the application boundary; ridge habitat, minor drainage line habitat, and major drainage line habitat (GIS Database). In particular, studies have shown that riparian habitat in the Pilbara such as that associated with drainage lines is often more biodiverse than surrounding areas in the Pilbara (e.g. McKenzie and Bullen, 2009; Burbidge et al., 2010).

The Naturemap database returned records for 104 avian, nine mammal and 32 herpetofauna species within a 10 kilometre boundary of the application area (DEC, 2014). Furthermore, the EPBC Act Protected Matters Search Tool (DoE, 2014a) indicates that five conservation-significant fauna species and/or suitable habitat are likely to be present within the application boundary.

The presence of weed species within the proposed clearing is unknown. A number of weed species in the Pilbara have the potential to increase in abundance and/or distribution following disturbance (DEC, 2001). Invasive flora species can decrease the biodiversity value of an area, as they out-compete native vegetation for available resources, contribute to land degradation and increase the frequency and intensity of fires (DEC, 2011). Potential impacts to biodiversity within and nearby the application area as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

While the 290 hectares within the application boundary may represent an area of moderate biodiversity, the limited area to be disturbed (6 hectares) is not likely to comprise a high level of biological diversity. Impacts to habitats which are likely to contain proportionally higher levels of biodiversity (i.e. major drainage lines) may be minimised by the implementation of a restricted clearing condition.

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

Methodology Burbidge et al. (2010)
DEC (2001)
DEC (2014)
DoE (2014a)
FMG (2014a)
McKenzie and Bullen (2009)
GIS Database:
- Pre-European vegetation
- Rocklea 50cm Orthomosaic – Landgate 2004
- Threatened and Priority Flora
- Threatened Ecological Sites Buffered

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

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

A review of aerial imagery indicates that there are at least three fauna habitats present within the application boundary, including ridge habitat, minor drainage line habitat, and major drainage line habitat. The Naturemap database returned records for 104 avian, nine mammal and 32 herpetofauna species within a 10 kilometre boundary of the application area (DEC, 2014) which are likely to utilise these habitats for shelter, foraging or dispersal. This habitat is also likely to be suitable and/ or used by five conservation-significant fauna, including the Northern Quoll (*Dasyurus hallucatus*; Endangered), Greater Bilby (*Macrotis lagotis*; Vulnerable), Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia* (Pilbara form); Vulnerable), Fork-tailed Swift (*Apus pacificus*; Migratory), and Great Egret (*Ardea alba*; Migratory) (DoE, 2014a). In particular, the EPBC Protected Matters Search Tool notes that the application area is likely to contain habitat for “foraging, feeding or related behaviour” of the Pilbara Leaf-nosed Bat (DoE, 2014a).

However, the application area is dispersed across patches within the landscape, and does not encompass large portions of any specific habitat type, such that there are large, uninterrupted areas of similar or more suitable fauna habitat surrounding the application boundary (GIS Database). Furthermore, 6 hectares of clearing for the purpose of exploration is unlikely to clear habitat which is considered significant to the existence of indigenous fauna. Nevertheless, a lack of field survey in the area contributes to an absence of certainty in this conclusion.

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

Methodology DEC (2014)
DoE (2014a)
GIS Database:
- Rocklea 50cm 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 records of Threatened Flora within a 10 kilometre radius of the application area (DEC, 2014; GIS Database). Based on habitat type and the known distribution of Threatened Flora species, it is not highly likely that Threatened Flora occur within the application boundary (DoE, 2014b; DPaW, 2014).

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

Methodology DEC (2014)
DoE (2014b)
DPaW (2014)
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

According to available databases, there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest known TEC is approximately 62.3 kilometres north, north east of the application area and is a Themeda grassland on cracking clays (GIS Database).

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

Methodology GIS Database:
- Threatened Ecological Sites Buffered

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

Comments Proposal is not at variance to this Principle

The application area falls within the Pilbara Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 99.6% of the pre-European vegetation remains (Government of Western Australia, 2013; GIS Database).

The vegetation of the application area has been mapped as the following Beard vegetation associations (GIS Database):

- 18: Low woodland; mulga (*Acacia aneura*)
- 82: Hummock grasslands, low tree steppe; snappygum over *Triodia wiseana*; and
- 567: Hummock grasslands, shrub steppe; mulga and kanji over soft spinifex & *Triodia basedowii*.

Approximately 99.8% of Beard vegetation association 18, 99.5% of Beard vegetation association 82 and 99.7% of Beard vegetation association 567 remains at both a state and bioregional level (Government of Western Australia, 2013). Based on aerial imagery, the vegetation within the application area is neither a remnant itself nor does it form part of any remnants within the local area (GIS Database).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPaW Managed Lands
IBRA Bioregion – Pilbara	17,804,427	17,729,352	~99.6	Least Concern	6.3
Beard veg assoc. – State					
18	19,892,305	19,843,727	~99.8	Least Concern	6.3
82	2,565,901	2,553,217	~99.5	Least Concern	10.2
567	777,507	774,896	~99.7	Least Concern	22.3
Beard veg assoc. – Bioregion					
18	676,557	672,424	~99.39	Least Concern	17.2
82	2,563,583	2,550,899	~99.5	Least Concern	10.2
567	776,824	774,213	~99.7	Least Concern	22.4

* Government of Western Australia (2013)

** 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 (2013)

- GIS Database:
- IBRA WA (Regions – Sub Regions)
 - Rocklea 50cm Orthomosaic – Landgate 2004
 - 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

Fortescue Metals Group Limited proposes to clear native vegetation within a boundary encompassing one minor and two major non-perennial watercourses. Slightly less than one quarter of the application boundary encompasses a portion of Beasley River West and the associated floodplain. Aerial imagery indicates that vegetation growing in association with these watercourses is riparian in nature (GIS Database). Van Vreeswyk et al. (2004) identified the vegetation types likely to grow in association with drainage lines within each of the land systems present within the application area. They include:

- (i) Newman land system - minor drainage channel; hummock grassland of *Triodia pungens* with very scattered shrubs;
- (ii) Newman land system - major drainage channel; tall shrublands/woodlands of *Acacia* spp. and *Eucalyptus victrix* (coolibah) with tussock grass or hummock grass understoreys;
- (iii) Rocklea land system – drainage floors and channels; Scattered to moderately close tall shrublands or woodlands of *Acacia* and *Eucalyptus* spp. with numerous undershrubs and hummock grass understoreys or tussock grass understoreys; and
- (iv) Robe land system – drainage floors and channels; hummock grasslands of *Triodia pungens* with *Acacia* spp. Shrubs or moderately close *eucalypt* or *acacia* woodlands/tall shrublands with *T. pungens* understorey.

FMG intends to clear native vegetation for the purpose of exploration for Channel Iron Deposits within the south-easterly flowing paleo-channel in the northern-most section of the application area (FMG, 2014b). However, the company has committed to strategically placing drill pads amongst vegetation where possible, in order to minimise impacts to riparian vegetation (FMG, 2014b).

In other areas, where existing creek crossings are not available the proposed clearing will include clearing riparian vegetation for access tracks (FMG, 2014a). One southern corner of the application boundary intersects a portion of the Beasley River. As this area is across an edge of the application boundary, it is unlikely that an access track will be required across this watercourse. Impacts to riparian vegetation not required for access tracks may be minimised by the implementation of a restricted clearing condition.

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

- Methodology**
- FMG (2014a)
 - FMG (2014b)
 - Van Vreeswyk et al. (2004)
 - GIS Database:
 - Hydrography, linear
 - Rivers
 - Rocklea 50cm Orthomosaic – Landgate 2004

(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 encompasses three land systems (GIS Database). A majority of the application area falls within the Newman land system, which consists of mountains, ridges and plateaus (Van Vreeswyk et al., 2004). A very small proportion has been affected by erosion, which may be due to the stony soils characteristic of this land system (Van Vreeswyk et al., 2004).

Approximately one third of the application area belongs to the Rocklea land system, which consists of hills, ridges and plateaus on basalt with steep stony slopes, and moderately spaced tributary drainage patterns with stony interfluvies (Van Vreeswyk et al., 2004). This land system is reported to have a low risk of erosion (Van Vreeswyk et al., 2004), however, drainage channels contain loamy earths with sandy duplex soils and non-cracking clays, and some erosion following heavy rainfall may occur in these areas with the removal of riparian vegetation.

A small portion of the application area occurs within the Robe land system, along a drainage channel (GIS Database). This land system is considered to be fairly resistant to vegetation degradation or soil erosion; however, the river bed soils present within drainage channels suggest that some rainfall-induced erosion is possible following the clearing of riparian vegetation (Van Vreeswyk et al., 2004).

Given that the proposed clearing is for 6 hectares of access tracks and drill pads within 290 hectares,

appreciable land degradation is unlikely to occur.

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
- Rocklea 50cm Orthomosaic – Landgate 2004

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

Comments Proposal is not at variance to this Principle

The application area does not lie within any conservation areas managed by the Department of Parks and Wildlife (GIS Database). The nearest conservation area is an area of former leasehold land proposed for conservation (GIS Database). It is located approximately 62.8 kilometres south, south west of the application area (GIS Database). From this distance, the proposed clearing is not likely to impact the environmental values of this land.

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

Methodology GIS Database:
- DEC Tenure

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

Comments Proposal may be at variance to this Principle

The application area does not occur within a Public Drinking Water Source Area (PDWSA), however it is located within the proclaimed Pilbara groundwater area under the *Rights in Water and Irrigation Act 1914* (GIS Database). The application boundary intersects Beasley River, which is a significant stream and tributary of the Ashburton River, and Beasley River West (GIS Database). The application boundary is also adjacent to a perennial natural pool (GIS Database).

The clearing of native vegetation has the potential to destabilise soils and cause temporary sedimentation to watercourses. FMG has stated that clearing within drainage areas will be limited to creek crossings (FMG, 2014a). However, clearing riparian vegetation within the portion of Beasley River encompassed by the southern corner of the application area may lead to the accumulation of sediments within the perennial natural pool via water erosion. The deterioration of surface water in this area may be minimised by the implementation of a restricted clearing condition. Further impacts to surface water throughout the watercourses intersecting the application boundary may be minimised by the implementation of a watercourse management condition.

Groundwater salinity in the local area is estimated to be between 500 - 1,000 milligrams/Litre Total Dissolved Solids (TDS), which is considered marginal (GIS Database). The proposed clearing activity is not likely to significantly alter salinity levels within the application area.

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

Methodology FMG (2014a)
GIS Database:
- Groundwater Salinity, Statewide
- 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

Mean annual rainfall in Paraburdoo is approximately 313.5 millimetres (BoM, 2014). The Pilbara region represents a transitional zone between semi-arid and tropical climates, and receives a majority of its rainfall during the summer months (Kendrick, 2001; CALM, 2002). It is likely that during times of intense rainfall there may be some localised flooding, however the proposed clearing is unlikely to significantly alter the intensity of flooding within the application area or surrounding areas.

The application area is located within the Ashburton River catchment area (GIS Database). Given the size of the area to be cleared (6 hectares) in relation to the size of the catchment area (7,877,743 hectares), the proposed clearing is not likely to increase the potential for flooding in this region (GIS Database).

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

Methodology BoM (2014)
CALM (2002)
Kendrick (2001)
GIS Database:
- Hydrographic Catchments - Catchments

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

Comments

There are two native title claims over the area under application (GIS Database). These claims (WC2005/004 and WC2010/016) have been registered with the Native Title Tribunal on behalf of the claimant group (GIS Database). However, tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

According to available databases, there are 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 Regulation 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 10 February 2014 by the Department of Mines and Petroleum inviting submissions from the public. There were no submissions received.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims – Determined by the Federal Court
- Native Title Claims – Registered with the NNTT

4. References

- BoM (2014) Climate Statistics for Australian Locations. Climate Statistics for Australian Locations. A Search for Climate Statistics for Paraburdoo, Australian Government Bureau of Meteorology, http://www.bom.gov.au/climate/averages/tables/cw_007185.shtml, accessed February 2014.
- Burbidge, A.H., Johnstone, R.E and Pearson, D.J (2010) Birds in a vast arid upland: avian biogeographical patterns in the Pilbara region of Western Australia, *Records of the Western Australian Museum, Supplement 78*:247 – 270.
- CALM (2002) Bioregional Summary of the 2002 Biodiversity Audit for Western Australia. Department of Conservation and Land Management, Western Australia.
- DEC (2001) Environmental weed strategy for Western Australia. Department of Environment and Conservation, Perth.
- DEC (2011) Invasive Plant Prioritisation, Department of Environment and Conservation, Perth.
- DEC (2014) NatureMap: Mapping Western Australia's Biodiversity, Department of Environment and Conservation, <http://naturemap.dec.wa.gov.au/default.aspx>, viewed February 2014.
- 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.
- DoE (2014a) EPBC Protected Matters Search Tool, Department of the Environment, <http://www.environment.gov.au/topics/about-us/legislation/environment-protection-and-biodiversity-conservation-act-1999/protected>, viewed February 2014.
- DoE (2014b) SPRAT - *Lepidium catapycnon*, Department of the Environment, http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=9397, viewed February 2014.
- DPaW (2014) FloraBase – *Aluta quadrata*, Department of Parks and Wildlife, <http://florabase.dpaw.wa.gov.au/browse/profile/19448>, viewed February 2014.
- FMG (2014a). Native Vegetation Clearing Permit Application – Supporting Documentation. Fortescue Metals Group Limited.
- FMG (2014b) Additional information supplied to the assessing officer by Fortescue Metals Group Limited on 19 February 2014.
- Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. 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.
- Kendrick, P. (2001) Pilbara 3 (PIL3 – Hamersley Subregion). In A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002 (eds J. E. May & N. L. McKenzie). Department of Conservation and Land Management, WA.
- McKenzie, N.L and Bullen, R.D (2009) The echolocation calls, habitat relationships, foraging niches and communities of Pilbara microbats, *Records of the Western Australian Museum, Supplement 78*:123- 155.
- Van Vreeswyk, A.M.E.; Payne, A.L.; Leighton, K.A.; Hennig, P. (2004) An inventory and condition survey of the Pilbara Region, Western Australia, Technical Bulletin No. 92 Department of Agriculture Western Australia, South Perth.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

Definitions:

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

- P1** **Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2** **Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P3** **Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4** **Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R** **Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):** taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X** **Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

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

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

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

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

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

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