



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4339/1
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 24/25 Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 16 June 2011

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description Beard vegetation associations have been mapped at a 1:250,000 scale for the whole of Western Australia. The vegetation of the application area is broadly mapped as Beard vegetation associations:

- 18: Low woodland; mulga (*Acacia aneura*) and;
- 82: Hummock grasslands, low tree steppe: Snappy Gum over *Triodia wiseana* (GIS Database; Shepherd, 2009).

BHP Billiton Iron Ore (2010) identified nine vegetation communities within the application area using a primary vegetation survey of the application area by ENV Australia (2006) and supporting flora surveys by GHD (2008) and ENV Australia (2009) and described the vegetation communities of the application area as follows:

1. *Triodia* Hummock grassland;
2. Open Mulga woodland over mixed shrubs with mixed grasses;
3. Floodplains;
4. Cleared areas;
5. Open Riparian woodland over mixed shrubland over mixed (tussock) grasses;
6. Low open mixed woodlands with mixed shrublands over mixed grasses;
7. *Triodia* open Hummock grassland;
8. *Acacia* open scrub; and
9. Hummock grasslands with emergent mixed shrubs and tree species (ENV Australia 2006; GHD, 2008; ENV Australia 2009).

Clearing Description BHP Billiton Iron Ore is proposing to clear up to 2 hectares of native vegetation within a 224 hectare application area, for the Orebody 24/25 project (BHP Billiton Iron Ore, 2011). The clearing of vegetation is required for the establishment of tracks and drill pads for geotechnical investigations.

The vegetation will be cleared using a dozer. The vegetation and topsoil will be stockpiled separately for use in rehabilitation.

Vegetation Condition Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994);

To:

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

Comment The application area is located in the Hamersley subregion of Western Australia and is situated approximately three kilometres south-west of the Newman town site (GIS Database).

The vegetation condition was derived from a vegetation survey conducted by ENV Australia (2006).

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) subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by Mulga low woodlands 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 consists of Beard vegetation associations 18 and 82, which are common and widespread throughout the Pilbara bioregion with approximately 100% of the pre-European vegetation extent remaining (Shepherd, 2009; GIS Database). A search of the Department of Environment and Conservation Declared Rare and Priority Flora databases revealed that no Declared Rare Flora (DRF) species and six Priority species may potentially occur within a 20 kilometre radius of the application area (DEC, 2011). ENV Australia (2006) identified no DRF or Priority flora species within the application area. A vegetation survey by ENV Australia (2006) between March and April 2006 of the application area and surrounding vegetation identified 413 species of flora taxa belonging to 156 Genera and 53 Families. BHP Billiton Iron Ore (2011) identified nine vegetation communities within the application area using a primary vegetation survey of the application area by ENV Australia (2006) and supporting flora surveys by GHD (2008) and ENV Australia (2009). The condition of these vegetation types were classified from 'completely degraded' to 'excellent' (Keighery, 1994).

No Threatened Ecological Communities or Priority Ecological Communities were recorded or identified within the application area (GIS Database).

Six weed species were identified during the survey: Kapok (*Aerva javanica*), Spiked Malvastrum (*Malvastrum americanum*), Needle Bush (*Vachellia farnesiana*), Pig Weed (*Portulaca oleracea*), Bipinnate Beggartick (*Bidens bipinnata*), Burrgrass (*Cenchrus echinatus*), and Buffel Grass (*Cenchrus ciliaris*) (ENV Australia, 2006). None of these species are listed by the Western Australian Department of Agriculture and Food as Declared Plants; however *A. javanica*, *C. ciliaris* and *V. Farnesiana* are considered environmental weeds of high importance by the Department of Environment and Conservation (ENV Australia, 2009). Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to the biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The fauna habitats within the application area are considered to be common and widespread within the subregion and faunal assemblages are unlikely to be different to that found in similar habitat located elsewhere in the region (ENV Australia, 2006). Several habitat types are of high ecological significance however the clearing of 2 hectares of native vegetation for geotechnical investigation within a 224 hectare application area, is unlikely to have a significant impact in a regional context.

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

Methodology BHP Billiton Iron Ore (2011)
CALM (2002)
DEC (2011)
ENV Australia (2006)
ENV Australia (2009)
GHD (2008)
Keighery (1994)
Shepherd (2009)
GIS Database:
- IBRA WA (regions - subregions)
- 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**

There were six broad fauna habitat types occurring within the survey area as recorded by ENV Australia (2006);

1. Hill crests and slopes;
2. Drainage lines;

3. Lower slopes and plains;
4. Floodplains;
5. Riverines; and
6. Gorges.

ENV Australia (2006) identified the vegetation condition to be 'completely degraded' to excellent' (Keighery, 1994). The landforms and habitat found within the application area are considered as being well represented in the Pilbara bioregion (ENV Australia, 2006; BHP Billiton Iron Ore, 2011). The application area does contain habitats or faunal assemblages that are ecologically significant, but it is unlikely that any species of conservation significance will be significantly impacted by the clearing of native vegetation in the application area. The 2 hectares of native vegetation proposed for clearing is not likely to contain significant habitat for fauna.

There is approximately 100% of the pre-European vegetation remaining within the Pilbara bioregion (Shepherd, 2009; GIS Database). Given the extent of the native vegetation remaining in the local area and bioregion, the vegetation to be cleared does not represent a significant ecological link.

There are seven conservation significant fauna species listed as either Threatened Species under the Environment Protection and Biodiversity Conservation Act 1999 or protected under Western Australian legislation (*Wildlife Conservation Act, 1950*), that may potentially occur within a 20 kilometre radius of the application area (DEC, 2011). ENV Australia (2006) conducted a level one fauna survey of the application area between March and April 2006. ENV Australia (2006) recorded six species of conservation significance within the application area. Four of these species; the Rainbow Bee-eater (*Merops ornatus*), Peregrine Falcon (*Falco peregrinus*), Star Finch (*Neochmia ruficauda subclarensensis*) and Ghost Bat (*Macroderma gigas*) may use the study area for foraging as part of a larger territory area. The habitat present within the application area is not considered significant habitat for these species (ENV Australia, 2006; BHP Billiton Iron Ore, 2011). A record of both the Western pebble-mound mouse (*Pseudomys chapmani*) and Pilbara olive python (*Liasis olivaceus barroni*) have also been recorded in the application area (ENV Australia, 2006). However, the 2 hectares proposed for clearing is not likely to contain significant habitat for these species.

The proposed clearing of 2 hectares of native vegetation for geotechnical investigation within a 224 hectare application area, is not likely to impact critical feeding or breeding habitat for any conservation species. The recorded conservation species are considered highly mobile and/or have a wide distribution the proposed clearing is unlikely to significantly impact these species (ENV Australia, 2006; BHP Billiton Iron Ore, 2011).

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

Methodology BHP Billiton Iron Ore (2011)
 DEC (2011)
 ENV Australia (2006)
 Keighery (1994)
 Shepherd (2009)
 GIS Database:
 - Pre-European Vegetation
 - IBRA WA (regions - subregions)

(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 Declared Rare Flora (DRF) within the application area (GIS Database). A search of the Department of Environment and Conservation's NatureMap database identified no DRF species as occurring within a 40 kilometre radius of the application area (DEC, 2011).

ENV Australia (2006) conducted a vegetation and flora survey of the application area in March 2006. No DRF were recorded within the survey area.

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

Methodology DEC (2011)
 ENV Australia (2006)
 GIS Database:
 - Declared Rare and Priority Flora List

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

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

A search of the available databases shows that the application area sits within the outer edge of the buffer zone of the 'EthelG' Threatened Ecological Community (TEC) (GIS Database; ENV Australia, 2006). EthelG is identified as the Ethel Gorge groundwater aquifer stygobiont community. This TEC is a water dependent TEC

and therefore the greatest threat to this community is groundwater drawdown through water abstraction and dewatering activities (DEWHA, 2008). The clearing of 2 hectares of native vegetation is not likely to significantly impact upon water resources within the local area, and is therefore not likely to impact upon this TEC.

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

Methodology DEWHA (2008)
 ENV Australia (2006)
 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 IBRA bioregion (GIS Database). The vegetation within the application area is recorded as Beard vegetation associations:

18: Low woodland; mulga (*Acacia aneura*) and;

82: Hummock grasslands, low tree steppe: Snappy Gum over *Triodia wiseana* (GIS Database; Shepherd, 2009).

According to Shepherd (2009), Beard vegetation associations 18 and 82 retain approximately 100% of their pre-European extent. Therefore, the area proposed to be cleared is not a significant remnant of native 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	17,804,193.01	17,785,000.82	~99.89	Least Concern	6.32
Beard vegetation associations - State					
18	19,892,304.8	19,890,275.4	~99.99	Least Concern	2.13
82	2,565,901.3	2,565,901.3	~100	Least Concern	10.24
Beard vegetation associations - Bioregion					
18	676,556.7	676,556.7	~100	Least Concern	16.80
82	2,563,583.2	2,563,583.2	~100	Least Concern	10.25

* Shepherd (2009)

** Department of Natural Resources and Environment (2002)

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

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

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

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

According to available databases there are several ephemeral drainage line, and one ephemeral watercourse (Homestead Creek) which intersects the application area (GIS Database), which is small and intermittent, and would only flow after major rainfall events (ENV Australia, 2006). Based on vegetation mapping by ENV Australia (2006), there are two dominant phreatophytes associated with Homestead Creek;

1. Red River Gum (*Eucalyptus camaldulensis* var. *obtusa*); and
2. Smooth-barked Coolibah (*Eucalyptus victrix*).

However, the nearest proposed test pit site is more than 50 metres from Homestead creek and the proposed clearing of 2 hectares is unlikely to result in any significant impact to vegetation growing in association with a

watercourse or wetland.

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

Methodology ENV Australia (2006)
GIS Database:
- Geodata, Lakes
- Hydrography, Linear

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

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

According to available databases, the application area is comprised of the Boolgeeda and Elimunna land systems (GIS Database).

The Boolgeeda land system is comprised of stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands and mulga shrublands. It is generally not susceptible to soil erosion (Van Vreeswyk et al., 2004). The Elimunna land system is comprised of stony plains on basalt supporting sparse acacia and cassia shrublands and patchy tussock grasslands. Some drainage floors are slightly susceptible to erosion but most of the system is inherently resistant (Van Vreeswyk et al., 2004).

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 proposed application area is not located within any conservation areas (GIS Database). The nearest conservation area is Karijini National park, located approximately 121 kilometres north-west of the application area (GIS Database).

Given the distance of the application area from the Karijini National Park, the proposed clearing is not likely to provide a significant ecological linkage or fauna movement corridor and is not likely to impact the environmental values of the conservation area.

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

Methodology GIS Database:
- DEC Tenure

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

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

The proposed clearing area is located entirely within the Newman Water Reserve, a Public Drinking Water Source Area (PDWSA) gazetted under the *Country Areas Water Supply Act 1947* on 21 August 1983. This PDWSA is defined a 'Priority 1 (P1)' under the Water Source Protection Classification System (Department of Water, 2011). The Department of Water (DoW) is satisfied that the proposed clearing of 2 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 and the BHP Billiton Iron Ore's construction environmental management plans. The application area is located within the proclaimed Pilbara groundwater area under the Rights in Water and Irrigation Act 1994 (GIS Database). Any groundwater extraction and/or taking or diversion of surface water for the purposes other than domestic and/or stock watering is subject to licence by the Department of Water. (Department of Water, 2011).

There is one watercourse (Homestead Creek) that runs through the middle of the application area, and several ephemeral drainage lines that only flow during significant rainfall (GIS Database; BHP Billiton Iron Ore, 2011). BHP Billiton Iron Ore (2011) has stated that any test pits will be greater than 50 metres from any watercourses to minimise any potential impact on water quality. Any surface water within the application area is likely to only remain for short periods following significant rainfall events as the annual evaporation rate exceeds rainfall (BoM, 2011). The proposed clearing is not likely to cause deterioration in the quality of any surface water within or outside of the application area.

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

Methodology BHP Billiton Iron Ore (2011)
BoM (2011)
DoW (2011)
GIS Database:
- Geodata, Lakes
- RIWI Act, Groundwater Areas
- Hydrography, Linear
- Public Drinking Water Source Areas

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

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

The application area experiences an arid (semi-desert) tropical climate with summer cyclonic rains or thunderstorm events, with an annual average of approximately 314.2 millimetres per year (CALM, 2002; BoM, 2011). Based on an average annual evaporation rate of 3,200 - 3,600 millimetres (BoM, 2011), any surface water resulting from rainfall events is likely to be relatively short lived.

The small clearing size of 2 hectares in comparison to the size of the Fortescue River catchment area (2,975,192 hectares) (GIS Database) is not likely to lead to an appreciable increase in run off, and subsequently cause or exacerbate the incidence or intensity of flooding.

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

Methodology BoM (2011)
CALM (2002)
GIS Database:
- Hydrographic Catchments - Catchments
- Hydrography, Linear

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 is one registered Aboriginal Site of Significance within the application area (Site ID: 17394) (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 9 May 2011 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the proposed clearing.

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

4. References

- BHP Billiton Iron Ore (2011) Orebody 25 Geotechnical Investigations NVCP Application. Application to Amend Native Vegetation Clearing Permit under the Environmental Protection Act 1986.
- BoM (2011) Climate Statistics for Australian Locations. A Search for Climate Statistics for Newman Aero, Australian Government Bureau of Meteorology, viewed 25 May 2011, <http://reg.bom.gov.au/climate/averages/tables/cw_007176.shtml>.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Pilbara 3 (PIL3 - Hamersley subregion) Department of Conservation and Land Management, Western Australia.
- DEC (2011) NatureMap - Mapping Western Australia Biodiversity, Department of Environment and Conservation, viewed 25 May 2011, <<http://naturemap.dec.wa.gov.au>>.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Department of Water (2011) Advice provided to the Department of Mines and Petroleum for Clearing Permit Application CPS 4339/1 on 23 May 2011.
- DEWHA (2008) Department of Sustainability, Environment, Water, Pollution and Communities. Assessment of Australia's

Terrestrial Biodiversity 2008. Report prepared by the Biodiversity Assessment Working Group of the National Land and Water Resources Audit for the Australian Government, Canberra.

ENV Australia (2006) OB24 Flora and Fauna Assessment Phase II. Internal supporting document prepared for the BHPBIO Orebody 24/25 Upgrade Project Environmental Protection Statement.

ENV Australia (2009) Newman to Jimblebar transmission line and Newman town substation Flora and Vegetation Assessment. Internal document prepared for BHPBIO.

GHD (2008) Report for Myopic Project Area, Newman. Flora and Fauna Assessment. Internal document prepared for BHPBIO.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

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, Department of Agriculture, 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.