



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 2527/3  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

### 1.3. Property details

Property: Iron Ore (Mt Newman) Agreement Act 1964, Mineral Lease 244SA (AML 70/244)  
Local Government Area: Shire of East Pilbara  
Colloquial name: Orebody 17 Exploration Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
100		Mechanical Removal	Mineral exploration, construction of access tracks and ammonium nitrate storage facility

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 15 May 2014

## 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 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):

**82:** Hummock grasslands, low tree steppe; Snappy Gum over *Triodia wiseana*; and  
**216:** Low woodland; Mulga (with spinifex) over rises.

Vegetation mapping which compiled the findings of previous flora surveys in the area was conducted by Onshore Environmental (2013). A total of nine broad floristic communities with 17 vegetation associations were mapped to occur within the application area:

#### **Triodia Hummock Grassland**

**DL2:** *Eucalyptus trivalvis* low open woodland over *Acacia bivenosa*, *Acacia ancistrocarpa*, *Acacia adsurgens*, *Acacia dictyophleba*, *Acacia tenuissima* shrubland over *Triodia pungens* hummock grassland.

**FP5:** *Corymbia hamersleyana* scattered low trees over *Acacia ancistrocarpa*, *Acacia dictyophleba* open shrubland over *Triodia basedowii* hummock grassland.

**FS2:** *Triodia basedowii* hummock grassland.

**HC1:** *Corymbia hamersleyana*, *Eucalyptus kingsmillii* low open woodland over *Acacia maitlandii*, *Petalostylis labicheoides*, *Mirbelia viminalis*, *Eremophila exilifolia* shrubland over *Acacia hilliana*, *Acacia adoxa*, *Waltheria virgata* low shrubland over *Triodia pungens* hummock grassland.

**HC4:** *Eucalyptus leucophloia* scattered low trees over *Eremophila latrobei* subsp. *filiformis*, *Eremophila latrobei* subsp. *glabra*, *Senna artemisioides* subsp. *stricta*, *Senna glutinosa* subsp. *pruinosa* open shrubland over *Acacia hilliana*, *Acacia adoxa*, *Dodonaea coriacea* low shrubland over *Triodia basedowii* open hummock grassland.

**HS3:** *Acacia aneura*, *Acacia pruinocarpa*, *Acacia wanyu* low open woodland over *Senna glutinosa* subsp. *glutinosa*, *Dodonaea viscosa*, *Eremophila forrestii* x *latrobei* open shrubland over *Sida excedentifolia*, *Gompholobium oreophilum* low open shrubland over *Triodia basedowii* open hummock grassland over *Eriachne mucronata* open grassland.

#### **Corymbia Low Woodland**

**DL3:** *Corymbia hamersleyana*, *Eucalyptus gamophylla* low woodland over *Petalostylis labicheoides*, *Gossypium robinsonii* open scrub over *Acacia monticola*, *Senna glutinosa* subsp. *glutinosa* shrubland over *Scaevola parvifolia*, *Isotropis atropurpurea* low open shrubland.

#### **Eucalyptus Low Woodland**

**GG3:** *Eucalyptus leucophloia*, *Acacia aneura* low woodland over *Senna artemisioides* subsp. *artemisioides*, *Eremophila latrobei*, *Dodonaea pachyneura* open shrubland over *Sida excedentifolia*, *Eremophila cuneifolia* low shrubland over *Eriachne mucronata* open grassland over *Triodia pungens* open hummock grassland.

#### **Goodenia Low Shrubland**

**FS4:** *Eucalyptus gamophylla*, *Corymbia hamersleyana* scattered low trees over *Hakea lorea* subsp. *lorea* scattered shrubs over *Goodenia* sp. 'Sandy Creek' low shrubland over *Fimbristylis simulans* open herbland.

**HS1:** *Eucalyptus leucophloia*, *Corymbia hamersleyana*, *Corymbia deserticola* low open woodland over *Petalostylis labicheoides* open shrubland over *Goodenia stobbsiana*, *Dampiera candidans* low shrubland over *Eriachne lanata* open grassland over *Triodia basedowii* open hummock grassland.

**HS4:** *Eucalyptus leucophloia*, *Corymbia hamersleyana* low open woodland over *Halgania solanacea*, *Goodenia* sp. 'Sandy Creek', *Gompholobium oreophilum* low shrubland over *Eriachne lanata*, *Eriachne mucronata* open grassland over *Triodia basedowii* open hummock grassland over *Fimbristylis simulans* open herbland.

#### **Themeda Closed Grassland**

**FP3:** *Corymbia hamersleyana* low open woodland over *Rulingia luteiflora*, *Acacia* spp. open shrubland over *Bonamia rosea*, *Indigofera georgei*, *Isotropis forrestii*, *Scaevola parvifolia* subsp. *pilbarae* low open shrubland over *Themeda triandra*, *Aristida holathera*, *Paraneurachne muelleri*, *Chrysopogon fallax* closed grassland.

#### **Aristida Grassland**

**FP4:** *Corymbia hamersleyana* scattered low trees over *Acacia ancistrocarpa*, *Acacia dictyophleba*, *Acacia monticola*, *Rulingia luteiflora* open shrubland over *Scaevola parvifolia*, *Sida cardiophylla*, *Bonamia rosea*, *Isotropis atropurpurea* low shrubland over *Paraneurachne muelleri*, *Aristida holathera*, *Eragrostis eriopoda*, *\*Cenchrus ciliaris* grassland.

**FS5:** *Corymbia hamersleyana* low open woodland over *Hakea lorea* subsp. *lorea* scattered shrubs over *Grevillea wickhamii*, *Ptilotus calostachyus* shrubland over *Goodenia* sp. 'Sandy Creek', *Gompholobium oreophilum*, *Grevillea wickhamii*, *Acacia hilliana*, *Acacia adoxa* low shrubland over *Paraneurachne muelleri*, *Aristida holathera* grassland.

#### **Aristida Closed Grassland**

**FP6:** *Corymbia hamersleyana* low open woodland over *Acacia ancistrocarpa*, *Acacia dictyophleba*, *Grevillea wickhamii*, *Gossypium robinsonii* open shrubland over *Bonamia rosea*, *Indigofera georgei*, *Ptilotus obovatus*, *Scaevola parvifolia* subsp. *pilbarae* low open shrubland over *Paraneurachne muelleri*, *Aristida holathera*, *Themeda triandra* closed grassland.

#### **Senna Low Shrubland**

**FS7:** *Acacia aneura*, *Acacia wanyu* low open woodland over *Senna stricta*, *Eremophila cuneifolia* low shrubland over *Triodia basedowii* open hummock grassland over *Aristida contorta* open grassland.

#### **Sida Low Shrubland**

**GG1:** *Eucalyptus leucophloia*, *Ficus brachypoda*, *Acacia aneura* (+/- *Eucalyptus kingsmillii*) low open woodland over *Petalostylis labicheoides*, *Gossypium robinsonii* high open shrubland over *Grevillea wickhamii*, *Acacia monticola* open shrubland over *Sida excedentifolia*, *Triumfetta maconochieana*, *Ptilotus obovatus*, *Acacia maitlandii*, *Stemodia grossa*, *Goodenia stobbsiana*, *Dampiera candidans*, *Gompholobium oreophilum* low shrubland over *Cymbopogon ambiguus*, *Eriachne mucronata*, *Eriachne lanata* open grassland over *Triodia pungens* open hummock grassland.

In another portion of the application area, Syrinx (2012) mapped five broad floristic communities with six vegetation associations within the application area:

#### **Acacia Low Woodland**

**2c:** Low Woodland of *Acacia aptaneura* and *Corymbia hamersleyana* over Very Open Shrubland of *Acacia wanyu*, *Acacia ancistrocarpa* and *Eremophila forrestii* subsp. (indet) over Very Open Hummock Grassland of *Triodia epactia* and *Triodia lanigera*.

#### **Acacia High Shrubland**

**4a:** High Shrubland of *Acacia monticola*, *Rulingia luteiflora* and *Gossypium robinsonii* with Low Woodland of *Corymbia hamersleyana*, *Eucalyptus victrix* and *Eucalyptus leucophloia* subsp. *leucophloia* over Very Open Tussock Grassland of *Themeda triandra*, *\*Cenchrus ciliaris* and *Cymbopogon procerus*.

#### **Triodia Hummock Grassland**

**5e:** Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835), *Triodia angusta* and *Triodia epactia* with Scattered Shrubs of *Acacia tenuissima*, *Acacia melleodora* and *Eremophila cuneifolia* with Scattered Low Trees of *Acacia aptaneura* and *Acacia pruinocarpa*.

**5f:** Hummock Grassland of *Triodia lanigera* and *Triodia epactia* with High Open Shrubland of *Acacia bivenosa*, *Acacia ancistrocarpa* and *Acacia tenuissima* with Very Open Mallee of *Eucalyptus gamophylla*.

#### **Mixed Tussock Grassland**

**8a:** Tussock Grassland of *Eulalia aurea*, *Themeda triandra* and *Aristida inaequiglumis* with Low Open Woodland of *Corymbia hamersleyana*, *Acacia aptaneura* and *Acacia citrinoviridis* over Open Shrubland of *Acacia ancistrocarpa*, *Gossypium robinsonii* and *Acacia pyrifolia*.

#### **Mixed Open Tussock Grassland**

**9a:** Open Tussock Grassland of *Themeda triandra*, *Aristida inaequiglumis* and *Aristida contorta* with Open Shrubland of *Acacia monticola*, *Acacia ancistrocarpa* and *Grevillea wickhamii* subsp. *aprica* with Scattered Low Trees of *Corymbia hamersleyana*.



In addition, Syrinx (2011) mapped four broad floristic communities with four vegetation associations within a further portion of the application area:

**Acacia Closed Scrub**

3a: Closed Scrub of *Acacia monticola* over Open Shrubland of *Santalum lanceolatum*, *Acacia maitlandii* and *Grevillea wickhamii* subsp. (indet) with Scattered Low Trees of *Corymbia deserticola*, *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana*.

**Triodia Closed Hummock Grassland**

9a: Closed Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) with Low Scattered Shrubs of *Acacia adoxa* var. *adoxo*, *Halgania solanacea* var. Mt Doreen (G.M. Chippendale 4206) and *Senna glutinosa* subsp. *x luerssenii* with Scattered Tall Shrubs of *Grevillea wickhamii* subsp. (indet).

**Triodia Hummock Grassland**

10a: Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) with Low Open shrubland of *Acacia hilliana*, *Acacia adoxa* var. *adoxo* and *Halgania solanacea* var. Mt Doreen (G.M. Chippendale 4206) with High Open Shrubland of *Acacia bivenosa*, *Grevillea wickhamii* subsp. (indet) and *Acacia trudgeniana*.

**Triodia Open Hummock Grassland**

11b: Open Hummock Grassland of *Triodia lanigera* and *Triodia epactia* with Open Shrubland of *Acacia ancistrocarpa*, *Acacia atkinsiana* and *Acacia tetragonophylla* with Scattered Trees of *Corymbia hamersleyana*.

**Clearing Description**

Orebody 17 Exploration Project.

BHP Billiton Iron Ore Pty Ltd (BHP) proposes to clear up to 100 hectares of native vegetation, within a total boundary of 612.9 hectares, for the purpose of mineral exploration, construction of access tracks, and ammonium nitrate storage facility. The project is located approximately 32 kilometres east, north east of Newman, in the Shire of East Pilbara.

**Vegetation Condition**

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

to

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

**Comment**

Vegetation condition was derived from flora and vegetation assessments conducted by Syrinx (2011), Syrinx (2012) and Onshore (2013).

Clearing permit CPS 2527/1 was granted by the Department of Mines and Petroleum on 5 February 2009, and was valid from 7 March 2009 to 30 September 2014. The clearing permit authorised the clearing of 50 hectares of native vegetation. CPS 2527/1 was amended on 6 December 2012 to include the construction of access tracks and ammonium nitrate storage facility to the purpose for which clearing may be conducted. To facilitate rehabilitation activities, the permit was extended to 1 October 2019.

### 3. Assessment of application against clearing principles

**Comments**

On 17 March 2014, BHP Billiton Iron Ore Pty Ltd (BHP) applied to increase the area to be cleared from 50 hectares to 100 hectares for the purpose of mineral exploration within Orebody 17, and extend the duration of the permit from 30 September 2019 to 1 October 2024.

Since clearing permit CPS 2527/1 was granted, three flora and vegetation assessments (Syrinx, 2011; Syrinx, 2012; Onshore, 2013) and three fauna surveys (ENV, 2011; ENV, 2012; Biologic, 2013) have been conducted over the application area.

Flora and vegetation assessments conducted over the application area observed levels of floristic species richness which were considered average for the region (Syrinx, 2011; 2012). A total of 17 vegetation associations have been identified within the application boundary (Syrinx, 2011; Syrinx, 2012; Onshore, 2013). None of these represent a Threatened Ecological Community or Priority Ecological Community, and no Threatened or Priority flora were identified (Syrinx, 2011; Syrinx, 2012; Onshore, 2013). Furthermore, none of the vegetation types are considered to be a remnant on a local or regional scale (Department of Natural Resources and Environment, 2002; Government of Western Australia, 2013; GIS Database).

Vegetation associations DL2, DL3, 3a and 11b occur in association with drainage lines, and are considered to be riparian in nature.

Therefore, the proposed clearing is at variance to Principle (f), and is not likely to be at variance to Principles (c) and (d), and is not at variance to Principle (e).

Six fauna habitat types were identified across recent fauna surveys (ENV, 2011; ENV, 2012; Biologic, 2013), including:

Drainage Area/ Alluvial Plains:

Drainage Area (Alluvial Plain habitat; ENV, 2011; ENV, 2012) habitat occurs through low-lying areas within

the application boundary, and consists of scattered *Acacia high open* shrubland over low *Eremophila exilifolia* over very open hummock grassland. Large areas of bare sandy/loamy soil and few grasses occur within this habitat. This habitat is most suitable for herpetofauna, although it may support conservation significant species including *Ramphotyphlops ganeii* (Priority 1), the Australian Bustard (*Ardeotis australis*; Priority 4), Bush Stone-curlew (*Burhinus grallarius*; Priority 4), and Rainbow Bee-eater (*Merops ornatus*; Migratory). This habitat type is widespread within the Pilbara region.

**Crest/Slope:**

Crests and slopes (Hill habitat; ENV, 2011; ENV, 2012) consist of rocky ranges, dominated by *Eucalyptus* woodlands, *Acacia* and *Grevillea* shrublands and *Triodia* spp. low hummock grasslands. This habitat type is widespread within the Pilbara region. Crest/Slope habitat does not contain many large trees, tree hollows, logs or woody debris, and as such the microhabitat availability for fauna is limited. Crest/Slope habitat supports Western Pebble-mound Mouse (*Pseudomys chapmani*; Priority 4), and may provide foraging habitat for other conservation significant fauna.

**Gorge/Gully:**

Gorges and gullies are rugged, steep-sided valleys incised into the surrounding landscape. Gorges tend to be deeply incised with vertical cliff faces, while gullies are more open. This habitat type covers a small portion of the application area. Gorge/Gullies are not uncommon within the Pilbara, but due to their linear structure they cover a relatively small portion of land area within the region.

**Minor Drainage Lines:**

This habitat is created by episodic rainfall that scours the landscape. Drainage off the Ophthalmia range (upon which Orebody 17 is located) has created numerous drainage lines incised into the hill slopes and gently sloping plains. This habitat type occurs throughout the Pilbara region, but represents a relatively small proportion of land area.

**Mulga:**

Woodland or tall shrubland dominated by *Acacia anuera*. The extent of ground cover varies with canopy density. This habitat type is not restricted within the Pilbara region.

**Sand/Gravel Plains:**

Flat or gently sloping plains and foot slopes of sand and gravel. This habitat type is common within the application area and is widespread within the Pilbara region.

Of these, Minor Drainage Lines and Gorge/Gully are considered to be of particular importance to fauna, due to the foraging and shelter resources they provide for conservation significant species such as the Peregrine Falcon (*Falco peregrinus*; Schedule 4), Northern Quoll (*Dasyurus hallucatus*; Schedule 1), and Pilbara Olive Python (*Liasis olivaceous barroni*; Schedule 1) (Biologic, 2013). However, these habitat types occupy a relatively small portion of the application area, and BHP have committed to avoiding Gorge/Gully habitat (clearing permit decision report CPS 2527/1). Therefore, it is unlikely that the application area represents critical fauna habitat.

Biologic (2013) advise that there are eight conservation significant fauna species which are likely to occur within the application area. Of these, five have been recorded within or directly adjacent to the application area, including the Western Pebble-mound Mouse, Common Sandpiper (*Actitis hypoleucos*; Migratory), Bush Stone-curlew, Rainbow Bee-eater, and *Ramphotyphlops ganeii* (Biologic, 2013). Given the limited dispersal ability of the Western Pebble-mound Mouse and *R. ganeii*, the proposed clearing may represent a direct, local impact to these species. However, this impact is not likely to be significant. Furthermore, BHP (2014) have committed to avoid Pebble-mound Mouse mounds by a minimum of 10 metres where practicable.

Therefore, the proposed clearing is not likely to be at variance to Principles (a) and (b).

Current environmental information has been reviewed and the assessment of clearing principles (g), (h), (i) and (j) is consistent with the assessment in clearing permit decision report CPS 2527/1 and CPS 2527/2.

**Methodology** BHP (2014)  
Biologic (2013)  
Department of Natural Resources and Environment (2002)  
ENV (2011)  
ENV (2012)  
Government of Western Australia (2013)  
Onshore Environmental (2013)  
Syrinx (2011)  
Syrinx (2012)  
GIS Database:  
- Pre-European Vegetation  
- Murrumunda 1.4m Orthomosaic – Landgate 2003

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

**Comments**

There is one native title claim in the application area (GIS Database). This claim (WC2005/06) has been registered with the National Native Title Tribunal on behalf of the claimant group (GIS Database). 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 four registered Sites of Aboriginal Significance located in the area applied to clear (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation, the Department of Parks and Wildlife 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 31 March 2014 by the Department of Mines and Petroleum inviting submissions from the public. There were no submissions received.

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

#### 4. References

- BHP (2014) Supporting Document for Orebody 17 Exploration: Native Vegetation Clearing Permit 2527/2 Amendment Application. BHP Billiton Iron Ore, Western Australia.
- Biologic (2013) Orebody 17/ 18 Vertebrate Fauna Habitats. Consultants report prepared for BHP Billiton Iron Ore Pty Ltd, January 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.
- ENV (2011) Orebody 31 Fauna Assessment. Consultants report prepared for BHP Billiton Iron Ore Pty Ltd, August 2011.
- ENV (2012) Wheelarra Hill North Fauna Assessment. Consultants report prepared for BHP Billiton Iron Ore Pty Ltd, January 2012.
- 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.
- Onshore Environmental (2013) Orebody 17/18 Derived Vegetation Association Mapping. Consultants report prepared for BHP Billiton Iron Ore Pty Ltd, January 2013.
- Syrinx (2011) Orebody 31 Flora and Vegetation Assessment. Consultants report prepared for BHP Billiton Iron Ore Pty Ltd, September 2011.
- Syrinx (2012) Wheelarra Hill North Flora and Vegetation Assessment. Consultants report prepared for BHP Billiton Iron Ore Pty Ltd, February 2012.

#### 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.

