



## 1. Application details

### 1.1. Permit application details

Permit application No.: 797/2  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

### 1.3. Property details

Property: Crown Lease L3116/3687  
Local Government Area: Shire of Ashburton & Shire of East Pilbara  
Colloquial name: Hesta, Weeli and Poonda railway sidings

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
22.4		Mechanical Removal	Railway construction or maintenance

## 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
The vegetation of the area surrounding the Poonda and Weeli sidings is recorded as Beard Vegetation Associations 29: Sparse low woodland; mulga, discontinuous in scattered groups; and 111: Hummock grasslands, shrub steppe; <i>Eucalyptus gamophylla</i> over hard spinifex; The vegetation of the area surrounding the Hesta Siding is recorded as Beard Vegetation Associations 29: Sparse low woodland; mulga, discontinuous in scattered groups; and 173: Hummock grasslands, shrub steppe; kanji over soft spinifex & <i>Triodia wiseana</i> on basalt; and 562: Mosaic: Low woodland; mulga in valleys / Hummock grasslands, open low tree-steppe; snappygum over <i>T. wiseana</i> . According to Shepherd et al., (2001) there is approximately 100% of each of these vegetation types remaining.	The proposed clearing area is a total of 22.4ha for the extension of three existing railway sidings along the Newman to Port Hedland railway line. The area comprises 5.2ha at the Hesta Siding, 9ha at the Weeli Siding and 8.2ha at the Poonda Siding.  Hesta Siding is predominantly vegetated by moderately dense Mulga or <i>Acacia</i> shrubland, over mixed grasses, growing on low undulating loamy hills. The southern end of the siding is located on a minor seasonal floodplain and is vegetated by scattered <i>Corymbia flavescens</i> , over moderately dense shrubs and sparse grasses (Ecologia, 2005).  Weeli Siding is located on an open, degraded, sparsely vegetated, loamy plain. The vegetation consists of open <i>Acacia pruinocarpa</i> shrubland over sparse grasses (Ecologia, 2005).  Poonda Siding is located on a degraded, loamy plain. The vegetation is predominantly Mulga, <i>Acacia aneura</i> shrubland over mixed Senna, annuals and grasses (Ecologia, 2005).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The areas applied to clear have been subject to varying degrees of disturbance through grazing, and through railway construction and maintenance activities. The vegetation at the Poonda and Weeli sidings is significantly degraded from cattle grazing (Ecologia 2005).  Clearing Permit 797/1 for the extension of the Hesta, Weeli and Poonda railway sidings along the Newman to Port Hedland railway line, was originally granted on 18 December 2005. The Permit has now been amended (CPS 797/2) to extend the duration of the Permit until 30th April 2007, to allow for unexpected delays in construction activities.

## 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 flora of the areas proposed to clear consists of two main vegetation associations, both of which are well represented in the region (Ecologia, 2005; GIS Database). No vegetation units of restricted distribution occur within the application areas, and no species of Rare or Priority flora are known to occur within the application areas (Ecologia, 2005; GIS Database).

The Hesta Siding is within the Mulga Downs Pastoral Lease, and the Weeli and Poonda sidings are within the Marillana Pastoral Lease (GIS Database). The areas applied to clear have been subject to varying degrees of disturbance from grazing, and from railway construction and maintenance activities. The vegetation at the Poonda and Weeli sidings is significantly degraded from cattle grazing (Ecologia, 2005).

The areas proposed to clear are not likely to be of higher biodiversity than surrounding areas, and the proposed clearing is unlikely to have any significant impact on the biodiversity of the region.

**Methodology** Ecologia (2005).  
GIS Database:  
- Declared Rare and Priority Flora List - CALM 01/07/05.  
- Pre-European Vegetation - DA 01/01.  
- Pastoral Leases - DOLA 10/01.

**(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**

Fauna species of conservation significance known to occur in the local area (50 km radius) based on the CALM Threatened and Priority Fauna Database include: Australian Bustard, *Ardeotis australis* (P4); Bilby, *Macrotis lagotis* (VU); Black-flanked Rock-wallaby, *Petrogale lateralis lateralis* (VU); a skink species, *Ctenotus uber johnstonei* (P2); Ghost Bat, *Macroderma gigas* (P4); Grey Falcon, *Falco hypoleucos* (P4); Lakeland Downs Mouse, *Leggadina lakedownensis* (P4); Peregrine Falcon, *Falco peregrinus*; Western Pebble-mound Mouse, *Pseudomys chapmani* (P4) (CALM, 2005).

The areas proposed to clear are long narrow corridors, immediately adjacent to an existing railway line. The area has been disturbed by grazing, and by railway construction and maintenance activities. The vegetation types within the application areas are widespread in the region (Ecologia, 2005; GIS Database). Consequently, CALM (2005) advised that the proposal is unlikely to have an impact on any significant habitat for native fauna.

**Methodology** CALM (2005).  
Ecologia (2005).  
GIS Database: - Pre-European Vegetation - DA 01/01.

**(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**

CALM databases show the only known populations of Declared Rare or Priority flora within a 50km radius of the areas applied to clear are several populations of *Lepidium catapycnon* (R) (GIS Database). The two nearest populations are located approximately 11km and 26km respectively southwest of Weeli Siding (GIS Database).

Ecologia Environment conducted a flora survey of the proposed clearing areas between 21st and 24th March 2005. No Rare or Priority flora species were recorded at any of the sites. The survey recorded 92 plant species at Hesta Siding, 37 plant species at Weeli Siding, and 37 plant species at Poonda Siding. The vegetation associations found within the survey areas are well represented in the region (Ecologia, 2005).

The Hesta Siding is located within a minor seasonal creekline and associated floodplains and supports the most diverse flora of the three sidings. The northern end of the application area is located in a low undulating loamy valley, and supports a low moderately dense Acacia shrubland, over mixed grasses (Ecologia, 2005). The central section is located on the lower slope of a small hill which supports a moderately dense Mulga and Acacia shrubland over open mixed Triodia species. The southern end of the siding is located on a minor floodplain, subject to seasonal inundation. The flora in this section is scattered *Corymbia flavescens*, over moderately dense shrubs and sparse grasses (Ecologia, 2005). Two weed species; Buffel grass, *Cenchrus ciliaris*, and Spiked malvastrum, *Malvastrum americanum*, were recorded at Hesta Siding. Buffel grass was introduced to the Pilbara region by pastoralists, but has become an aggressive and widespread weed in the region (Ecologia, 2005). The site exhibits moderate levels of disturbance from cattle, and from the railway line and associated access track (Ecologia, 2005).

Weeli Siding is located on an open, degraded, sparsely vegetated, loamy plain (Ecologia, 2005). The vegetation consists of open *Acacia pruinocarpa* shrubland over sparse grasses. The area has been previously disturbed by railway construction activities and includes a disused borrow pit at the northern end. Two weed species; Buffel grass and Kapok Bush, *Aerva javanica*, were recorded from the Weeli Siding survey area (Ecologia, 2005).

Poonda Siding is located on a loamy plain, which has suffered significant disturbance from cattle grazing (Ecologia, 2005). The vegetation at the southern end consists of low sparse shrubs over mixed grasses and annuals, and is highly degraded. The central and northern sections are more densely vegetated, comprising a moderately dense Mulga, *Acacia aneura* shrubland over mixed Senna, annuals and grasses. Three weed species; Buffel Grass, Spiked Malvastrum and Kapok Bush were found at Poonda Siding (Ecologia, 2005). The movement of cattle facilitates the spread of these weed species.

As demonstrated in the flora survey conducted for the proposal, the relatively small areas of clearing, adjacent

to an existing railway line are unlikely to have any significant impact on Rare or Priority flora in the Region (CALM, 2005).

**Methodology** CALM (2005).  
Ecologia (2005).  
GIS Database: - Declared rare and priority Flora List - CALM 01/07/05.

**(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**

There are no known Threatened Ecological Communities in the vicinity of the areas applied to clear (GIS Database). The nearest known endorsed TEC is the Ethel Gorge aquifer stygobiont community which is located approximately 38 km south/southeast of the Poonda Siding (GIS Database). Other ecosystems of conservation significance are the Coolibah-Lignum Flats, sites 1-27; and the West Angelas Cracking-Clays, sites 1-14, (all non-endorsed TEC's), approximately 70km and 80km respectively southwest of Weeli Siding (CALM, 2002; GIS Database).

Due to the distance from the application areas, these ecosystems are unlikely to be affected by the proposed clearing.

**Methodology** CALM, (2002).  
GIS Databases: - Threatened Ecological Communities - CALM 12/04/05.

**(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 IBRA Pilbara Bioregion (GIS Database). Hesta Siding falls within the Shire of Ashburton, and Weeli and Poonda sidings fall within the Shire of Ashburton (GIS Database). Shepherd et al. (2001) report that approximately 100% of the pre-european vegetation still exists in the IBRA Pilbara Bioregion, although no specific information is available for the Shires of Ashburton and East Pilbara. The vegetation of the area is broadly mapped as Beard Vegetation Associations 29: Sparse low woodland; mulga, discontinuous in scattered groups; 111: Hummock grasslands, shrub steppe; *Eucalyptus gamophylla* over hard spinifex; 173: Hummock grasslands, shrub steppe; kanji over soft spinifex & *Triodia wiseana* on basalt; and 562: Mosaic: Low woodland; mulga in valleys / Hummock grasslands, open low tree-steppe; snappygum over *T. wiseana* (GIS Database; Shepherd et al., 2001). According to Shepherd et al. (2001), there is approximately 100% of each of these vegetation types remaining.

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation Status**	% in reserves/CALM-managed land
IBRA Bioregion - Pilbara	17,944,694*	17,944,694*	100%	Least concern	
Shire of Ashburton and Shire of East Pilbara	No information available				
Beard vegetation associations					
- 29	7,782,264	7,782,264	~100%	Least concern	0.3%
- 111	814,103	814,103	~100%	Least concern	6.4%
- 173	1,856,728	1,856,728	~100%	Least concern	7.5%
- 562	112,469	112,469	~100%	Least concern	0.0%

\* Shepherd et al. (2001)

\*\* Department of Natural Resources and Environment (2002)

**Methodology** Department of Natural Resources and Environment (2002).  
GIS Database:  
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00.  
- Local Government Authorities - DLI 8/07/04.  
- Pre-European Vegetation - DA 01/01.  
Shepherd et al. (2001).

**(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**

There are no permanent watercourses or wetlands within the areas applied to clear (GIS Database). The northern end of the Hesta Siding crosses three minor seasonal creeklines. The southern end of the Weeli Siding crosses a minor seasonal branch of the Mindy Mindy Creek. The southern end of the Poonda Siding crosses one minor seasonal creekline and the northern end crosses a chain of small seasonal lakes (GIS

Database). The Coondiner Creek crosses the railway line approximately 1.5 km north of the northern end of the Poonda Siding (GIS Database). The Fortescue Marsh, an ANCA Wetland is located approximately 7km south of the Hesta Siding (GIS Database).

The proposed clearing to extend three existing railway sidings is unlikely to have any significant impact on the Fortescue Marsh or any of the seasonal lakes and creeklines.

**Methodology** GIS Database:  
- Hydrography, Linear - DOE 01/02/04.  
- Lakes, 1M - GA 01/06/00.  
- Rivers 250K - GA.

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

**Comments Proposal may be at variance to this Principle**

The three areas applied to clear are long narrow corridors adjacent to an existing railway line. There are no recorded acid sulphate soils in the area and the clearing is unlikely to result in an increased risk of salinity (GIS Database). The majority of the area is relatively flat (GIS Database).

The proposed extension to Hesta Siding is located within the McKay and Newman land systems, which are not generally regarded as being prone to soil erosion. However the proposed works will include clearing across a seasonal creekline, therefore adequate provision will need to be made to ensure a natural flow regime is maintained (DAWA, 2005).

The proposed extension to the Weeli Siding is located within the Fan and Urandy land systems. The Fan land system is recognised as being moderately susceptible to soil erosion if the vegetation is removed. Mulga groves occur on the washplain across the direction of the sheet flow, and removal of the vegetation has the potential to cause soil erosion if the natural flow regime is altered (DAWA, 2005).

The proposed extension to the Poonda Siding is located within the Fan and Divide land systems. The land degradation risks associated with the Fan land system at this site are similar to those at the Weeli Siding. The Divide land system is not particularly prone to land degradation (DAWA, 2005).

The Commissioner for Soil and Land Conservation concluded that the clearing and construction works proposed for the three siding extensions are liable to cause land degradation in the form of soil erosion, therefore the proposed clearing may be at variance to this principle (DAWA, 2005).

BHP Billiton has designed management strategies to minimise any disturbance to natural surface drainage and minimise soil erosion. These strategies include: constructing culverts to minimise the amount of upstream ponding and the need for outlet drains; installing appropriate erosion control structures (eg. rip rap rock protection and reno mattresses) in areas at high risk of erosion; constructing adequate drainage and bunding around infrastructure; and minimising clearing (BHP, 2005).

**Methodology** BHP Billiton (2005).  
DAWA (2005).  
GIS Database:  
- Acid Sulphate soil risk map, SCP - DOE 4/1/04.  
- Salinity Risk LM 25m - DOLA 00.  
- Topographic Contours, Statewide - DOLA 12/9/02.

**(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**

There are no CALM reserves in the vicinity of the application area. The nearest existing CALM managed land is the Karijini National Park, which is located approximately 30km southwest of Hesta Siding (GIS Database).

The proposed sidings are located near the exclusion areas of the Mulga Downs and Marillana Pastoral Leases, that were identified by CALM for addition to the conservation reserve system in 2015 when the pastoral leases expire. Based on the extent and location of the clearing within the existing rail corridor, the proposal is unlikely to result in a significant impact to the environmental values of these future conservation areas (CALM, 2005).

**Methodology** CALM (2005).  
GIS Database: - CALM Managed Lands and Waters - CALM 01/07/05.

**(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 three areas proposed to clear are reasonably flat, and are not associated with any permanent watercourses or waterbodies (GIS Database).

The proposed clearing for the extension of three railway sidings, within the existing railway corridor is unlikely to have any significant impact on surface or underground water quality.

**Methodology GIS Database:**

- Lakes, 1M - GA 01/06/00.
- Rivers 250K - GA.
- Topographic Contours, Statewide - DOLA 12/9/02.

**(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 areas proposed to be cleared are relatively flat and are not associated with any permanent waterbody or watercourse (GIS Database).

The relatively small areas of clearing within an existing railway corridor are not likely to cause or exacerbate the incidence or intensity of flooding.

**Methodology GIS Database: - Hydrography, Linear - DOE 1/02/04.**

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

**Comments**

New bores are likely to be required along the main Port Hedland to Newman railway to supply water for the proposed expansion of the Hesta, Weeli and Poonda sidings and for dust suppression (BHP Billiton, 2005). The proponent will be required to obtain a groundwater licence under the *Rights in Water and Irrigation Act 1914* (DoE, 2005).

There are no other Works Approvals or EP licences that will affect the area that has been applied to clear (DoE, 2005).

There are three Native Title Claims relating to the areas under application. These claims have been registered with the National Native Title Tribunal (WC98-062; WC99-004; WC99-016). However, the tenement has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (ie. 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*.

Two Registered Indigenous Heritage Sites occur in the vicinity of the proposed clearing at Weeli Siding: (Site ID 11288 and Site ID 7351) (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.

The flora survey conducted by Ecologia (2005) reported that the areas surrounding all three sidings contained significant amounts of rubbish from railway construction and maintenance activities. The proponent is encouraged to remove all rubbish from the sites during construction of the siding extensions.

Clearing Permit 797/1 for the extension of the Hesta, Weeli and Poonda railway sidings along the Newman to Port Hedland railway line, was originally granted on 18 December 2005. The original permit was due to expire on 30 November 2006, however adverse weather conditions caused unexpected delays in the construction activities, and consequently the proponent applied to extend the duration of the permit. The permit has now been amended (CPS 797/2) to extend the duration of the permit until 30th April 2007.

**Methodology DoE (2005).**

Ecologia (2005).

GIS Database:

- Aboriginal Sites of Significance - DIA 04/07/02.
- Native Title Claims - DLI 19/12/04.

#### 4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Railway construction or maintenance	Mechanical Removal	22.4	Grant	<p>The amended proposal has been assessed against the Clearing Principles. The amendment extends the duration of the permit by five months, which does not significantly alter the environmental impacts of the proposal. The assessing officer therefore recommends that the amended permit be granted, subject to the following conditions:</p> <ol style="list-style-type: none"><li>1. The permit holder shall record the following for each instance of clearing:<ol style="list-style-type: none"><li>a) location of where clearing occurred (using Geocentric Datum Australia 1994);</li><li>b) purpose of clearing;</li><li>c) area cleared in hectares;</li><li>d) area rehabilitated in hectares;</li></ol></li><li>2. The Permit Holder shall provide a report to the Director, Environment, DoIR by 30 August 2007, setting out the records required under condition 1 of this permit in relation to clearing carried out between 1 July 2006 and 30 April 2007.</li><li>3. The Permit Holder shall retain the vegetative material and topsoil removed by clearing in accordance with this Permit and shall, within six months of the completion of the siding extension works at the Hesta, Weeli and Poonda sidings, respread the topsoil and vegetative material over any disturbed areas that remain at the completion of construction activities.</li></ol>

#### 5. References

- BHP Billiton (2005) Rail Construction Environmental Management Plan. BHP Billiton Iron Ore, Western Australia.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- CALM (2005) Land clearing proposal advice. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Industry and Resources (DoIR). Department of Environment and Conservation, Western Australia.
- DAWA (2005) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- DoE (2005) Water Allocation/Licence Advice. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Industry and Resources (DoIR). Department of Environment, Western Australia.
- Ecologia (2005) BHPBIO Rail Sidings Flora and Vegetation Assessment. Ecologia Environment, Western Australia.
- 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., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

## 6. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government.
<b>CALM</b>	Department of Conservation and Land Management, Western Australia.
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia.
<b>DA</b>	Department of Agriculture, 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 DoE), Western Australia.
<b>DIA</b>	Department of Indigenous Affairs
<b>DLI</b>	Department of Land Information, Western Australia.
<b>DoE</b>	Department of Environment, Western Australia.
<b>DoIR</b>	Department of Industry and Resources, Western Australia.
<b>DOLA</b>	Department of Land Administration, Western Australia.
<b>EP Act</b>	Environment 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>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</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>TECs</b>	Threatened Ecological Communities.

### 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.