Government of **Western Australia**
Department of **Mines and Petroleum**

# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

**Permit application No.:** 5968/1
**Permit type:** Purpose Permit

### 1.2. Proponent details

**Proponent's name:** Hamersley Iron Pty Ltd

### 1.3. Property details

**Property:** *Iron Ore (Hamersley Range) Agreement Act 1963*, Mineral Lease 4SA (AML 70/4)
**Local Government Area:** Shire of Ashburton
**Colloquial name:** Brockman 2 Communications Tower

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|---|---|---|---|
| 10 | | Mechanical Removal | Establishing a communications tower and associated activities. |

### 1.5. Decision on application

**Decision on Permit Application:** Grant
**Decision Date:** 13 March 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 across the entirety of Western Australia. The following Beard vegetation assocation was identified in the application area (GIS Database):

- 82; Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*.

A flora and vegetation survey of the application area was undertaken by Ecological Australia in 2013. Two vegetation associations were identified in the application area during this survey (Ecological Australia, 2013);

- ElAmTw - *Eucalyptus leucophloia* subsp*. leucophloia* low open woodland with *Eucalyptus gamophylla* scattered low trees over *Acacia monticola* open shrubland over *Triodia wiseana* hummock grassland and *Cymbopogon obtectus* scattered grasses; and
- ElEgAmHlTw - *Eucalyptus leucophloia* subsp. *leucophloia* and *Eucalyptus gamophylla* low open woodland over *Acacia maitlandii*, *Hakea lorea* subsp. *lorea*, *Acacia marramamba* and *Senna glutinosa* subsp. *glutinosa* open shrubland over *Triodia wiseana* hummock grassland.

**Clearing Description**

Brockman 2 Extension.
Hamersley Iron Pty Ltd proposes to clear up to 10 hectares of native vegetation within a total application area of approximately 23 hectares, for the purpose of installing a communications tower to support the Brockman 2 mine expansion. The project is located approximately 51 kilometres north west of Tom Price, in the Shire of Ashburton.

**Vegetation Condition**

Pristine: pristine or nearly so, no obvious signs of disturbance (Keighery, 1994);

to

Completely Degraded: the structure of the vegetation is no longer intact and the area is completely or almost completely without native species (Keighery, 1994).

**Comment**

Vegetation condition in the application area was recorded using the condition implemented by Trudgen (1988). These condition ratings have been converted to the condition scale implemented by Keighery (1994).

## 3. Assessment of application against clearing principles

### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

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

The application area is situated within the Hamersley subregion of the Pilbara bioregion as defined within the Interim Biogeographic Regionalisation of Australia (IBRA) (GIS Database). The Hamersley subregion is described as consisting of mountainous areas of Proterozoic sedimentary ranges and plateaux which are dissected by gorges (Department of Conservation and Land Management, 2002). Mulga low woodland occurs over bunch grasses on fine textured soils in the valley floors and *Eucalyptus leucophloia* exists over *Triodia brizoides* on the skeletal soils of the ranges (Department of Conservation and Land Management, 2002).

Rio Tinto commissioned Ecological Australia to undertake a flora, vegetation and fauna assessment of the application area in 2013. A desktop search undertaken during this assessment determined that 48 conservation significant flora species could possibly occur in the application area, including 2 species previously recorded within the application area and 21 species considered to likely or potentially occur within the application area (Ecological Australia, 2013). The following conservation significant flora species were identified as either being previously recorded or considered likely to occur within the application area during this desktop assessment (Ecological Australia, 2013):

- *Acacia bromilowiana* (Priority 4);
- *Dampiera anonyma* (Priority 3);
- *Eremophila magnifica* subsp. *velutina* (Priority 3);
- *Sida* sp. Barlee Range (S. van Leeuwen 1642) (Priority 3);
- *Sida* sp. Hamersley Range (K. Newbey 10692) (Priority 1); and
- *Spartothamnella puberula* (Priority 2).

Additional information provided by Rio Tinto advised that two occurrences of *Sida* sp. Hamersley Range and 15 occurrences of *Sida* sp. Barlee Range were recorded within the application area between 2008 and 2009 (Rio Tinto, 2014a). Based on the above, it is possible that the clearing activities could result in the loss of individuals of these species. However, Rio Tinto's GIS database contains approximately 377 records of *Sida* sp. Hamersley Range and 729 records of *Sida* sp. Barlee Range which are derived from past survey work in the Pilbara region, with these records conservatively estimated to represent 600 individuals of *Sida* sp. Hamersley Range and 4,000 individuals of *Sida* sp. Barlee Range (Rio Tinto, 2014a). When the large number of recorded occurrences of these species from the Pilbara region is considered, it is not considered likely that the clearing of a 10 hectare area will adversely impact the conservation status or distribution of these species.

Whilst the application area could provide suitable habitat for a number of conservation significant flora species, none of these species with the exception of *Sida* sp. Barlee Range and *Sida* sp. Hamersley Range have been recorded within the application area during past flora and vegetation surveys (Ecological Australia, 2013). In addition the area of proposed clearing is only 10 hectares in size and a review of aerial photography determined that landforms similar to those found in the application area exist in the surrounding environment (GIS Database). Furthermore, none of the conservation significant flora species which could potentially occur in the application area appear to be confined to this area based on information provided by the Western Australian Herbarium database (Western Australian Herbarium, 2014). When the above is considered it is not anticipated that the clearing activities will result in adverse impacts to the conservation status or distribution of conservation significant flora species and their habitat.

A total of 28 flora species were identified within the application area during the survey, comprising nine families and 19 genera (Ecological Australia, 2013). No Threatened or Priority Listed flora species were recorded in the application area (Ecological Australia, 2013). None of the species recorded in the application area were considered to be at the extent of their range, representative of a range extension, or be regionally significant (Ecological Australia, 2013). No weed species were recorded in the application area (Ecological Australia, 2013). The clearing activities have the potential to introduce weed species into the application area. The impact of the clearing on the areas biodiversity may be minimised by the implementation of a weed management condition.

Two broad vegetation associations were recorded in the application area during the flora and vegetation survey (Ecological Australia, 2013). These vegetation communities occupied approximately 66 percent of the application area (Ecological Australia, 2013). The remainder of the application area had been previously cleared as part of the Brockman 2 mining operations (Ecological Australia, 2013). No vegetation associations matching the description of any Threatened or Priority Ecological Communities were identified in the application area (Ecological Australia, 2013). The two vegetation associations identified in the application area and the species they comprise are typical of the bioregion and are well represented locally and regionally (Ecological Australia, 2013). The majority of the vegetation within the application area was assigned a condition rating of Pristine, with small areas rated as Excellent and Degraded in condition (2.3 percent and 1.5 percent of the application area respectively) (Ecological Australia, 2013).

Five native fauna species were opportunistically recorded within the application area during the survey, including the Priority 4 listed Western Pebble-mound Mouse (*Pseudomys chapmani*) (Ecological Australia, 2013). With the exception of the Western Pebble-mound Mouse, all the opportunistically recorded fauna

species are common and widespread throughout the Pilbara region (Ecological Australia, 2013).

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

**Methodology** Department of Conservation and Land Management (2002)
Ecological Australia (2013)
Rio Tinto (2014a)
Western Australian Herbarium (2014)
GIS Database
-IBRA WA (Regions – Subregions)
-Jeerinah 50cm Orthomosaic
-Mcrae 50cm Orthomosaic
-Mount Bruce 50cm Orthomosaic
-Mount Lionel 50cm Orthomosaic
-Rocklea 50cm Orthomosaic
-Wittenoom 50cm Orthomosaic.

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

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

A desktop search undertaken by Ecological Australia (2013) determined that 25 species of conservation significant fauna could possibly occur in the application area, including 14 species which could potentially occur in the application area (Ecological Australia, 2013). The 14 species which could potentially occur in the application area included the following species listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999* and the *Wildlife Conservation Act 1950*:

- Northern Quoll (*Dasyurus hallucatus*) (Schedule 1, Endangered);
- Grey Falcon (*Falco hypoleucos*) (Schedule 1);
- Pilbara Olive Python (*Liasis olivaceus* subsp. *barroni*) (Schedule1, Vulnerable); and
- Pilbara Leaf-nosed Bat (*Rhinonicteris aurantius*) (Schedule 1, Vulnerable).

The only conservation significant fauna species identified within the application area during the survey was the Priority 4 Listed Western Pebble-mound Mouse (*Pseudomys chapmani*), which was identified through the presence of a potentially active mound (Ecological Australia, 2013). The fauna habitat identified within the application area; rocky hills and ridges, provides suitable habitat for this species (Ecological Australia, 2013).

Whilst no other conservation significant fauna species were recorded during the survey, the habitat of the application area was noted as potentially providing foraging habitat to other fauna species of conservation significance including fauna species listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999* and the *Wildlife Conservation Act 1950* (Ecological Australia, 2013). However, no evidence (scats, tracks etc) of other conservation significant fauna species was recorded during this survey (Ecological Australia, 2013). In addition, extensive areas of habitat similar to that found in the application area occur in the Pilbara region (Ecological Australia, 2013).

When the small area of clearing proposed is considered alongside the knowledge that similar fauna habitat to that found in the application area occurs widely in the Pilbara region and that the application area does not appear to constitute significant habitat for conservation significant fauna species, it is considered unlikely the proposed activities will result in the loss of significant habitat for conservation significant fauna.

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

**Methodology** Ecological Australia (2013)

**(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**

There are three Threatened flora species known to occur within the Pilbara region; *Aluta quadrata*, *Lepidium catapycnon* and *Thryptomene wittweri* (Western Australian Herbarium, 2014). None of these species were identified in the application area during the survey (Ecological Australia, 2013).

Ecological Australia advise in the flora and vegetation survey that whilst *Lepidium catapycnon* has been recorded within 10 kilometres of the application area, this species is considered unlikely to occur in the application area due to a lack of suitable habitat for this species (Ecological Australia, 2013). *Lepidium catapycnon* favours elevated positions on the foot slopes of high rocky hills with calcrete and shale rocky slopes, sometimes with mallee (Ecological Australia, 2013). As this habitat did not occur in the application area, this species is not expected to occur within the application area and therefore the proposed activities are unlikely to result in adverse impacts to the conservation status or distribution of this species (Ecological

Australia, 2013).

Prior to the flora and vegetation survey, Ecological Australia undertook extensive database searches for conservation significant flora species potentially occurring within the application area (Rio Tinto, 2014b). The results of these searches indicated that neither *Thryptomene wittweri* nor *Aluta quadrata* have been recorded within the Brockman locality (Rio Tinto, 2014b). On this basis, neither of these species are expected to occur in the application area.

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

**Methodology** Ecological Australia (2013)
Rio Tinto (2014b)
Western Australian Herbarium (2014)

**(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**

The application area is situated approximately 20 kilometres to the south-east of the nearest Threatened Ecological Community (TEC), the Themeda Grasslands on cracking clays TEC (GIS Database; Department of Environment and Conservation, 2013). None of the vegetation associations identified in the application area are representative of any TEC's. Therefore, the proposed activities are unlikely to result in adverse impacts to any Threatened Ecological Communities.

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

**Methodology** Department of Environment and Conservation (2013)
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 is situated within the Hamersley sub-region of the Pilbara bioregion as defined in the IBRA and contained within Beard vegetation association 82 (GIS Database). This Beard vegetation association retains almost 100% of its pre-European extent (see table below). Hence, the application areas vegetation does not represent a significant remnant of vegetation within an extensively cleared area.

| | Pre-European area (ha)* | Current extent (ha)* | Remaining %* | Conservation Status** | Pre-European % in DEC Managed Land |
|---|---|---|---|---|---|
| IBRA Bioregion – Hamersley | 5,634,726.8 | 5,610,205 | ~99.6 | Least Concern | ~12.9 |
| Beard veg assoc. – State | | | | | |
| 82 | 2,565,901.3 | 2,553,217 | ~99.5 | Least Concern | ~10.2 |
| Beard veg assoc. – Bioregion | | | | | |
| 82 | 2,177,573.9 | 2,165,235 | ~99.4 | Least Concern | ~12.04 |

* Government of Western Australia (2013)
** Department of Natural Resources and Environment (2002).

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

**Methodology** Government of Western Australia (2013)
Department of Natural Resources and Environment (2002)
GIS Database
-IBRA WA (Regions – Sub Regions)

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

**Comments** **Proposal is at variance to this Principle**

A search of available databases determined that no permanent watercourses or wetlands exist within the application area (GIS Database). However, the proposed activities will intercept several minor ephemeral watercourses and in turn impact the vegetation communities associated with these watercourses (GIS Database). Based on the above, the proposed clearing is at variance to this Principle.

Two vegetation associations were identified in the application area during the flora and vegetation survey; ElEgAmHlTw and ElAmTw (Ecological Australia, 2013). These vegetation associations are typical of the bioregion and are well represented locally and regionally (Ecological Australia, 2013).

When the small area of proposed clearing is considered alongside the knowledge that neither of the vegetation associations mapped within the application area are confined to this area, it is not anticipated that the proposed activities will result in adverse impacts to the distribution of these vegetation associations.

**Methodology** Ecological Australia (2013)
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**

The application area is situated within the Newman Land System (GIS Database), which is described as consisting of rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands (van Vreeswyk et al, 2004). At the time of the land system survey, 99% of the Newman Land System had not experienced erosion (van Vreeswyk et al, 2004). When the inherent erosion resistance of the Newman Land System is considered alongside the small area of clearing proposed, it is unlikely the proposed activities will result in erosion impacts in the surrounding environment.

In addition, it is anticipated that the cleared areas will be surrounded by intact vegetation which will slow the movement of wind and water over the surface of the cleared land, thereby reducing the capacity of wind and water flows to initiate erosion within the cleared areas. Furthermore, the proponent will be required to rehabilitate the cleared areas at the cessation of mining operations and therefore any erosion impacts which occur as a result of the proposed activities will be temporary in nature.

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 application area is situated approximately 56 kilometres east south-east of the nearest conservation area, Karijini National Park (GIS Database). When the distances between the application area and conservation areas are considered, it is unlikely the proposed activities will result in adverse impacts to any 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 application area is situated approximately 17 kilometres to the south of the nearest Public Drinking Water Source Area (PDWSA), the Priority 2 Millstream Water Reserve (GIS Database). The clearing activities are surficial in nature and therefore are not anticipated to adversely impact the quality of any underlying groundwater sources.

The anticipated impact of the proposed clearing on surface water quality would be the sedimentation of surface water flows. However, the activities are situated within the Newman Land System which is inherently resistant to erosion and the proposed clearing will only impact an area 10 hectares in size. When the above is considered, it is unlikely the clearing activities would result in adverse impacts to the quality of surface water flows. In addition, the proponent will be required to rehabilitate the cleared areas at the end of their useful life and therefore any additional contribution of sediment to surface water flows caused by the clearing activities is likely to be short-term in nature.

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

**Methodology** GIS Database
-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 is situated within the Ashburton River catchment which has a total area of approximately 7,877,743 hectares (GIS Database). When the Ashburton River catchments size is considered alongside the Pilbara regions natural propensity for flooding and the small area of clearing proposed, it is unlikely the proposed activities will result in changes to the incidence or intensity of flooding within the local environment.

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

**Methodology** GIS Database
-Hydrographic Catchments

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

**Comments** There is a Native Title Claim (WC1997/089) 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 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 site of Aboriginal heritage significance in the vicinity of the application area. It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no sites of Aboriginal heritage significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit application was advertised on 27 January 2014 by DMP inviting submissions from interested parties. No submissions have been received regarding this application.

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

## 4. References


Department of Conservation and Land Management (2002) A biodiversity audit of Western Australia's 53 biogeographical subregions.

Department of Environment and Conservation (2013) List of Threatened Ecological Communities endorsed by the Western Australian Minister for the Environment. Prepared by the Species & Communities Branch.

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.

Ecological Australia Pty Ltd (2013) Flora and vegetation survey for Brockman 2 expansion communications tower (AR-13-11823), Native Vegetation Clearing Permit supporting report. Prepared for Rio Tinto Iron Ore.

Government of Western Australia (2013) 2012 state wide 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.

Rio Tinto (2014a) Response to CPS 5968/1 - Brockman Communications Tower Queries. Received on 05/03/2014.

Rio Tinto (2014b) Response to CPS 5968/1 - Additional information required. Received 27/02/2014.

Trudgen, M.E. (1988) A report on the flora and vegetation of the Port Kennedy Area. Unpublished report prepared for Bowman Bishaw and Associates, West 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, Technical Bulletin No. 92. Department of Agriculture Western Australia, South Perth.

Western Australian Herbarium (2014) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. http://florabase.dpaw.wa.gov.au/ (Accessed March 2014).

## 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.