



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4598/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Robe River Ltd**

1.3. Property details

Property: *Iron Ore (Robe River) Agreement Act 1964*, Mineral Lease 248SA (AML 70/248)
Local Government Area: Shire of Ashburton
Colloquial name: Mesa J Trail Track Extension Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
20		Mechanical Removal	State Agreement

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 24 November 2011

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
<p>Beard vegetation associations have been mapped for the whole of Western Australia and are useful to look at vegetation in a regional context. One Beard vegetation association has been mapped within the application area:</p> <p>Beard vegetation association 609: Mosaic: Hummock grasslands, open low tree steppe; bloodwood with sparse kanji shrubs over soft spinifex / Hummock grasslands, open low tree steppe; snappy gum over <i>Triodia wiseana</i> on a lateritic crust (Shepherd, 2009; GIS Database).</p> <p>Astron Environmental Services (2011) conducted a flora survey of the application area and surrounding areas on 1 June 2011, and described nine vegetation communities of the application area:</p> <p>MJ01a: <i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia trachycarpa</i>, <i>A. coleii</i> and <i>A. synchronicia</i> tall shrubland over <i>Triodia epactia</i> hummock grassland and <i>Cenchrus ciliaris</i> open tussock grassland;</p> <p>MJ02a: <i>Corymbia hamersleyana</i> and <i>Acacia inaequilatera</i> scattered low trees over <i>Hakea lorea</i> and <i>Acacia synchronicia</i> scattered tall shrubs over <i>Triodia epactia</i> and <i>T. wiseana</i> hummock grassland and <i>Cenchrus ciliaris</i> open tussock grassland;</p> <p>MJ03a: Mixed <i>Acacia</i> species tall shrubland (<i>A. coleii</i>, <i>A. elachantha</i>, <i>A. ancistrocarpa</i>, <i>A. synchronicia</i> and <i>A. trachycarpa</i>) over <i>Gossypium australe</i> scattered shrubs over <i>Triodia epactia</i> hummock grassland and <i>Cenchrus ciliaris</i> very open tussock grassland;</p>	<p>Robe River Ltd is proposing to clear up to 20 hectares of native vegetation within a 78.63 hectare application area for the Mesa J Trail Track Extension Project. The clearing of vegetation is required for geotechnical investigations and construction of rail and associated infrastructure.</p> <p>The vegetation will be cleared using a dozer, blade down. The vegetation and topsoil will be stockpiled separately for use in rehabilitation.</p>	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994)</p> <p>To</p> <p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994)</p>	<p>The application area is located in the Hamersley subregion of Western Australia and is situated approximately 120 kilometres west of the Onslow town site (GIS Database).</p> <p>The vegetation condition was derived from a vegetation survey conducted by Astron Environmental Services (2011).</p>

MJ03d: *Schoenoplectus subulatus*, *Cyperus vaginatus* and *Typha domingensis* sedgeland over open herbland of mixed species (*Lobelia arnhemiaca*, *Ammannia baccifera*, *Centipeda minima*, *Cyperus iria* and *Eragrostis tenellula*);

MJ04a: *Acacia xiphophylla* low woodland over *Acacia synchronicia* scattered tall shrubs over *Senna artemisioides* subsp. *oligophylla* scattered shrubs over *Triodia epactia* hummock grassland and *Cenchrus ciliaris* scattered tussock grasses;

MJ05a: *Corymbia hamersleyana* scattered low trees over *Acacia bivenosa* tall shrubland over scattered low shrubs/shrubs of *Acacia synchronicia*, *Indigofera monophylla* and *Gossypium robinsonii* over *Triodia wiseana* hummock grassland;

MJ05c: *Corymbia candida* subsp. *candida* and *C. Hamersleyana* scattered low trees over *Acacia bivenosa*, *Eremophila longifolia* and *Senna artemisioides* subsp. *oligophylla* shrubland over *Triodia epactia* grassland;

MJ05f: *Corymbia hamersleyana* scattered low trees over mixed *Acacia* species (*A. coleii*, *A. bivenosa*, *A. trachycarpa*, *A. sclerosperma* and *tumida* var. *pilbarensis*) and *Hakea lorea* tall shrubland over *Triodia epactia* hummock grassland and *Cenchrus ciliaris* open tussock grassland; and

MJ05g: *Corymbia hamersleyana* scattered low trees over *Acacia inaequilatera* scattered tall shrubs over *Acacia bivenosa*, *A. ancistrocarpa* and *Senna glutinosa* subsp. *pruinosa* tall shrubland over *Triodia wiseana* hummock grassland.

3. Assessment of application against clearing principles

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

Comments

Proposal is not likely to be at variance to this Principle

The application area occurs within the Hamersley (PIL3) Interim Biogeographic Regionalisation of Australia (IBRA) subregion (GIS Database). This subregion is generally described as Mulga low woodland over bunch grasses on fine textured soils in valley floors, and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges (CALM, 2002).

The vegetation within the application area is broadly mapped as Beard vegetation association 609, which has approximately 100% of its pre-European vegetation extent remaining in the bioregion (Shepherd, 2009; GIS Database). A flora and vegetation survey of the application area was undertaken by Astron Environmental Services (2011) on 1 June 2011. A total of 73 vascular plant taxa from 51 genera belonging to 24 families were recorded within the study area (Astron Environmental Services, 2011). This is typical of the floristics of the Hamersley subregion (Astron Environmental Services, 2011).

No Declared Rare Flora, Priority Flora, Threatened Ecological Communities or Priority Ecological Communities were recorded during the botanical survey or have previously been recorded within the application area (Astron Environmental Services, 2011; GIS Database).

Seven introduced flora species were recorded from the application area (Astron Environmental Services, 2011). These weed species were: Buffel Grass (*Cenchrus ciliaris*), Colocynth (*Citrullus colocynthis*), Awnless Barnyard Grass (*Echinochloa colona*), Spiked Malvastrum (*Malvastrum americanum*), Stinking Passion Flower (*Passiflora foetida*), Common Sowthistle (*Sonchus oleraceus*) and Mimosa Bush (*Vachellia farnesiana*) (Astron Environmental Services, 2011). Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Four fauna habitat types were identified within the application area and are considered to be common and widespread within the subregion and faunal assemblages are unlikely to be different to that found in similar habitat located elsewhere in the region (Astron Environmental Services, 2011). There were no habitat types of high ecological significance. The clearing of 20 hectares of native vegetation within a 78.53 hectare application area is unlikely to have a significant impact in a regional and local context.

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

Methodology Astron Environmental Services (2011)
CALM (2002)
Keighery (1994)
Shepherd (2009)
GIS Database:
- IBRA WA (Regions - Subregions)
- Pre-European vegetation
- Threatened Ecological Sites Buffered

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

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

No targeted fauna surveys have been conducted over the application area. A fauna survey conducted by Astron Environmental Services (2011) identified four broad fauna habitat types within the application area;

1. Floodplain with *Corymbia hamersleyana* and mixed *Acacia* sp. over *Triodia* hummock grassland;
2. Minor drainage with flowing water associated with modified drainage/discharge;
3. Stony plain with *Acacia xiphophylla* shrubland; and
4. Low stony hills and slopes with mixed *Acacia* sp.

Astron Environmental Services (2011) identified the vegetation condition to be 'good' to 'very good' (Keighery, 1994). No significant fauna habitats were identified by Astron Environmental Services (2011) or in aerial photography (GIS Database), and the habitat present within the application areas is abundant within the Hamersley subregion (Astron Environmental Services, 2011; GIS Database). The 20 hectares of native vegetation within a 78.63 hectare application area proposed for clearing is not likely to contain significant habitat for fauna.

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

There were five conservation significant fauna species listed as either a Threatened Species under the *Environment Protection and Biodiversity Conservation Act 1999* or protected under Western Australian legislation (*Wildlife Conservation Act, 1950*), that may potentially occur within a 20 kilometre radius of the application area (DEC, 2011).

Astron Environmental Services (2011) conducted a level one fauna survey of the application areas during March 2010. The survey recorded 12 species of birds, one mammal and two reptile species (Astron Environmental Services, 2011). Astron Environmental Services (2011) recorded one species of conservation significance within the application area. This species; the Rainbow Bee Eater (*Merops ornatus*) may use the study area for foraging as part of a larger territory area. The habitat present within the application areas is not considered significant habitat for this species (Astron Environmental Services, 2011).

The fauna habitats within the application area are considered to be common and widespread within the subregion and faunal assemblages are unlikely to be different to that found in similar habitat located elsewhere in the region (Astron Environmental Services, 2011). The proposed clearing of 20 hectares of native vegetation within a 78.63 hectare application area is not likely to impact critical feeding or breeding habitat for any conservation significant fauna species as the application area does not contain significant habitat for the potential species. The recorded conservation significant species (Rainbow Bee Eater) is considered highly mobile and has a wide distribution; therefore the proposed clearing is unlikely to significantly impact this species (Astron Environmental Services, 2011).

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

Methodology Astron Environmental Services (2011)
DEC (2011)
Keighery (1994)
Shepherd (2009)
GIS Database:
- IBRA WA (regions - subregions)
- Pre-European Vegetation
- Pannawonica 1.4m Orthomosaic - Landgate 2000

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

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

According to available databases, there are no records of Declared Rare Flora (DRF) within the application area (GIS Database). A search of the Department of Environment and Conservation Declared Rare and Priority

Flora databases identified no DRF species as occurring within a 20 kilometre radius of the application area (DEC, 2011).

Astron Environmental Services (2011) conducted a vegetation and flora survey of the application area on 1 June 2011. No DRF were recorded within the survey area.

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

Methodology Astron Environmental Services (2011)
DEC (2011)
GIS Database:
- Declared Rare and Priority Flora List

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

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

A search of the available databases shows that there are no Threatened Ecological Communities situated within 100 kilometres of the application area (GIS Database).

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

Methodology GIS Database:
- Threatened Ecological Sites Buffered

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

Comments Proposal is not at variance to this Principle

The application area falls within the Pilbara IBRA bioregion (GIS Database). The vegetation within the application area is recorded as:

Beard vegetation association 609: Mosaic: Hummock grasslands, open low tree steppe; bloodwood with sparse kanji shrubs over soft spinifex / Hummock grasslands, open low tree steppe; snappy gum over *Triodia wiseana* on a lateritic crust (Shepherd, 2009; GIS Database).

According to Shepherd (2009), Beard vegetation association 609 retains approximately 100% of its pre-European extent. Therefore, the area proposed to be cleared is not a significant remnant of native vegetation in an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,804,193	17,785,001	~99.89	Least Concern	6.32
Beard vegetation associations - State					
609	74,186	74,186	~100	Least Concern	Nil
Beard vegetation associations - Bioregion					
609	388,455	388,455	~100	Least Concern	16.14

* Shepherd (2009)

** Department of Natural Resources and Environment (2002)

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

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

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

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

According to available databases there is a minor ephemeral watercourse which intersects the northern point of the application area (GIS Database). This watercourse is only likely to flow after major rainfall events. Based on vegetation mapping by Astron Environmental Services (2011), the vegetation type MJ03d is a riparian vegetation type associated with the drainage line.

The condition of the riparian vegetation type is classified as 'good' (Keighery, 1994) and is well represented in the local area and there is no phreatophyte species associated with the riparian vegetation (Astron Environmental Services, 2011). The clearing of some riparian vegetation is unlikely to result in any significant impact to vegetation growing in association with a watercourse or wetland.

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

Methodology Astron Environmental Services (2011)
Keighery (1994)
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 may be at variance to this Principle

According to available databases, the majority of the application area is comprised of the River land system. A small section of the northern and southern part of the application area is comprised of the Robe land systems (GIS Database).

The River land system is described as active flood plains and major rivers supporting grassy Eucalypt woodlands, tussock grasslands and soft Spinifex grasslands (Van Vreeswyk et al., 2004). The land system is largely stabilised by Buffel Grass and Spinifex and accelerated erosion is uncommon. However, susceptibility to erosion is high or very high if vegetation cover is removed (Van Vreeswyk et al., 2004).

The Robe land system is characterised by low limonite mesas and buttes supporting soft Spinifex (and occasionally hard Spinifex) grasslands (Van Vreeswyk et al., 2004). The system is not generally susceptible to vegetation degradation or erosion (Van Vreeswyk et al., 2004)

Based on the above, the proposed clearing may 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 not located within any conservation area (GIS Database). The nearest conservation area is Millstream Chichester National Park, located approximately 81 kilometres north-east of the application area (GIS Database).

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

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

Methodology GIS Database:
- DEC Tenure

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

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

The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The application area is located within the proclaimed Pilbara groundwater area under the Rights in Water and Irrigation Act 1994 (GIS Database). Any groundwater extraction and/or taking or diversion of surface water for the purposes other than domestic and/or stock watering is subject to licence by the Department of Water.

There is one minor ephemeral watercourse passing through the application area which only supports surface water for short periods following significant rainfall events (Astron Environmental Services, 2011; GIS Database). The proposed clearing is not likely to cause deterioration in the quality of any surface water within or outside of the application area.

The soils within the application area are predominantly sandy loams and alluvial clay loams, therefore there is the potential for deterioration of surface water quality through erosion as a result of vegetation clearing (Astron Environmental Services, 2011). The application area however, lies within a low rainfall zone and any surface water within the application area is likely to only remain for short periods following significant rainfall events (BoM, 2011). The proposed clearing is not likely to cause deterioration in the quality of any surface water within or outside of the application area.

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

Methodology Astron Environmental Services (2011)
BoM (2011)
GIS Database:
- Geodata, Lakes
- Hydrography, Linear
- Public Drinking Water Source Areas

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

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

The application area experiences a semi-desert tropical climate with summer cyclonic or thunderstorm events, with an annual average rainfall of approximately 411.7 millimetres per year (CALM, 2002; BoM, 2011). Based on an average annual evaporation rate of 3,200- 3,600 millimetres (BoM, 2011), any surface water resulting from rainfall events is likely to be relatively short lived.

Given the size of the area to be cleared (55.55 hectares) compared to the size of the Robe River catchment area (737,138 hectares) (GIS Database) it is not likely that the proposed clearing will lead to an appreciable increase in run off, and subsequently cause or exacerbate the incidence or intensity of flooding.

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

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

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

Comments

There is one Native Title claim over the area under application (WC99/12). 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 Aboriginal Site of Significance within the application area (Site IDs: 6267, 6460, 6590 and 6591) (GIS Database). It is the proponent's responsibility to comply with the Aboriginal Heritage Act 1972 and ensure that no Aboriginal sites of significance are damaged through the clearing process.

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

The clearing permit application was advertised on 12 August 2011 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the proposed clearing.

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

4. References

- Astron Environmental Services (2011) Mesa J Trail Track Extension Vegetation, Flora and Fauna Survey prepared for Robe River Ltd, June 2011.
- BoM (2011) Climate Statistics for Australian Locations. A Search for Climate Statistics for Pannawonica Station, Australian Government Bureau of Meteorology, viewed 21 October 2011, <http://reg.bom.gov.au/climate/averages/tables/cw_005069.shtml>.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Pilbara 3 (PIL3 - Hamersley subregion) Department of Conservation and Land Management, Western Australia.
- DEC (2011) NatureMap - Mapping Western Australia Biodiversity, Department of Environment and Conservation, viewed 21 October 2011, <<http://naturemap.dec.wa.gov.au>>.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia, Department of Agriculture, Western Australia.

5. Glossary

Acronyms:

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

Definitions:

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

- P1** **Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2** **Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P3** **Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4** **Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst

being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.

- R** **Declared Rare Flora – Extant taxa** (= *Threatened Flora = Endangered + Vulnerable*): taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X** **Declared Rare Flora - Presumed Extinct taxa**: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

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

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

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

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

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

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

