



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3699/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Dampier Salt Limited

1.3. Property details

Property: *Evaporates (Lake MacLeod) Agreement Act 1967*, Mineral Lease 245 SA (AML70/245)

Local Government Area: Shire of Carnarvon

Colloquial name: Lake MacLeod Operations

1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|--------------------|-----------|--------------------|---------------------|
| 0.98 | | Mechanical Removal | Borrow Pits |

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description Beard Vegetation Associations have been mapped at a 1:250,000 scale for the whole of Western Australia. One Beard Vegetation Association has been mapped within the application area (GIS Database; Shepherd, 2007).

328: Succulent steppe with scrub; waterwood & *Acacia sclerosperma* over saltbush & samphire (GIS Database; Shepherd, 2007).

The application area was surveyed by Biota Environmental Sciences staff on 23 to 26 September 2009 (Biota Environmental Sciences, 2010). The following vegetation types were identified within the application area:

1. ATRpFRsp - *Atriplex paludosa* subsp. *baudinii*, *Frankenia pauciflora*, *F. cinerea* low shrubland: Low shrublands dominated by salt tolerant species occurring on the sandy plains fringing Lake MacLeod. Taller shrubs were typically sparse, however *Acacia sclerosperma* subsp. *sclerosperma* occasionally provided an open cover. Other species commonly recorded within this habitat included the low shrubs *Atriplex vesicaria*, *Cratystylis subspinescens*, *Lawrenzia viridigrisea* and *Maireana villosa*; and the annual herbs *Goodenia berardiana*, *Nicotiana occidentalis* subsp. *hesperis* and *Podolepis microcephala*;

2. AteAsclAco - *Acacia tetragonophylla*, *A. sclerosperma* subsp. *sclerosperma*, *A. coriacea* subsp. *coriacea* tall shrubland: Occurring on low orange-brown sand dunes along the western margin of the application area. An open cover of low shrubs dominated by *Atriplex paludosa* subsp. *baudinii* with *Ptilotus obovatus* typically present and scattered hummocks of soft spinifex (*Triodia epactia*) present in some areas. Associated species include shrubs *Abutilon geranioides*, *Alectryon oleifolius* subsp. *oleifolius*, *Enchylaena tomentosa* var. *tomentosa*, *Exocarpos aphyllus*, *Jasminum calcarium*, *Maireana villosa*, *Pembertonia latisquamea*, *Pimelea microcephala*, *Rhagodia latifolia* subsp. *latifolia*, *Rhagodia preissii* subsp. *obovata*, *Scaevola spinescens*, *Sida calyxhymenia*, *Solanum nummularium* and *Zygophyllum fruticosum*; and

3. Cleared (Biota Environmental Sciences, 2010).

Clearing Description Dampier Salt Limited is proposing to clear up to 0.98 hectares of native vegetation as part of the proposed Lake MacLeod Solar Salt Stage 1 Expansion Project (Dampier Salt Limited, 2010). Vegetation will be cleared using transverse removal and stockpiling of topsoil by dozer prior to excavation by a front end loader. All cleared topsoil and vegetation will be stockpiled for use in rehabilitation.

Vegetation Condition Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994);

To

Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

Comment The application area is located in the Gascoyne region, approximately 52 kilometres north-northwest of Carnarvon (GIS Database). The vegetation condition was derived from a vegetation survey conducted by Biota Environmental Sciences (2010).

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 Wooramel (CAR2) subregion of the Carnarvon Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by alluvial plains associated with downstream sections and deltas of the Gascoyne, Minilya and Wooramel Rivers (CALM, 2002). The Wooramel subregion includes Lake MacLeod and the Kennedy Range and is composed of tree to shrub steppe over hummock grasslands on and between aeolian red sand dunefields which are extensive in the north and east as well as on top of Kennedy Range (CALM, 2002). In the northern parts Permian sediments are common, while southern areas are comprised of limestone plateaux overlain by red sand plains (CALM, 2002). Acacia shrublands (Mulga, Bowgada and *A. coriacea*) over bunch grasses on red sandy ridges and plains are common with mangroves confined to small areas around Lake MacLeod and near Carnarvon. Saline alluvial plains with samphire and saltbush low shrublands are located in near-coastal areas (CALM, 2002).

The Lake MacLeod Environmentally Sensitive Area (ESA) (Register of National Estate) occurs approximately 0.4 kilometres east of the application area (GIS Database). According to the Australian Heritage Database (Australian Heritage Database, 2010) the Lake MacLeod Area is highly significant in maintaining regionally and nationally important ecological processes. The lake is a major migration stop over and drought refuge area for shorebirds and is a critical habitat for maintaining the life cycle of a number of migratory bird species. Lake MacLeod also supports Australia's largest inland community of mangroves and associated fauna (Australian Heritage Database, 2010).

Lake MacLeod is also listed on the Directory of Nationally Important Wetlands (Environment Australia, 2001). According to the Directory of Nationally Important Wetlands, Lake MacLeod is;

- It is a good example of a wetland type occurring within a biogeographic region in Australia;
- It is a wetland which plays an important ecological or hydrological role in the natural functioning of a major wetland system/complex;
- It is a wetland which is important as the habitat for animal taxa at a vulnerable stage in their life cycles, or provides a refuge when adverse conditions such as drought prevail;
- The wetland supports 1% or more of the national populations of any native plant or animal taxa; and
- The wetland is of outstanding historical or cultural significance (Environment Australia, 2001).

It is unlikely that the application area contains any of the significant environmental values of conservation areas mentioned above. Furthermore the area proposed to be cleared is small (0.98 hectares) and is unlikely to have a net impact on the environmental values of any of the conservation areas mentioned above.

The application area lies adjacent to the existing Lake MacLeod Solar Salt Field operation, which has operated in this location since 1965 and came under Dampier Salt Limited's operation management in 1978 (Biota Environmental Sciences, 2010). Therefore, the application area has previously been affected by the construction and operation of infrastructure associated with existing operations.

Eight alien weed species were recorded within the vegetation survey area (Biota Environmental Sciences, 2010). These were: Buffel Grass (*Cenchrus ciliaris*), Lesser Jack (*Emex spinosa*), *Rostraria pumila*, *Eragrostis barrelieri*, Iceplant (*Mesembryanthemum crystallinum*), Onion Weed (*Asphodelus fistulosus*), Common Sowthistle (*Sonchus oleraceus*) and Mediterranean Turnip (*Brassica tournefortii*) (Biota Environmental Sciences, 2010). Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. This in turn can lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. None of these species are listed as 'Declared Plant' species under the *Agriculture and Related Resources Protection Act 1976* by the Department of Agriculture and Food. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

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

Methodology

Australian Heritage Database (2010)
Biota Environmental Sciences (2010)
CALM (2002)
Environment Australia (2001)
GIS Database
- IBRA WA (regions - subregions)
- Register of National Estate

(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

According to Shepherd (2007) approximately 99.84% of the pre-European vegetation remains within the Carnarvon bioregion. Given the extent of native vegetation remaining in the local area and bioregion, the vegetation to be cleared does not represent an ecological linkage.

Biota Environmental Sciences (2010) recorded two habitat types as occurring within the application area; Saltbush/Frankenia low shrublands on sandy plains: mixed shrublands dominated by *Atriplex paludosa* subsp. *baudinii* and *Frankenia pauciflora* on the sandy plains bordering Lake MacLeod; and

Red Sand Dunes: mixed Acacia tall shrublands on red sand dunes west of Lake MacLeod (Biota Environmental Sciences, 2010).

The primary habitats present within the application area are considered widespread and abundant in the local and regional area (Biota Environmental Sciences, 2010). The proposed clearing is unlikely to result in a significant impact on fauna or the availability of fauna habitat in the local or regional area.

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

Methodology Biota Environmental Sciences (2010)
Shepherd (2007)

(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 GIS databases there are no known records of Declared Rare Flora (DRF) or Priority Flora within the application area (GIS Database). The nearest record of Priority Flora is a population of *Acacia ryaniana* (P2) located approximately 9.7 kilometres south-west of the application area (GIS Database).

A flora survey was conducted over the application area by staff from Biota Environmental Sciences staff on 23 to 26 September 2009 (Biota Environmental Sciences, 2010).

No DRF or Priority Flora species were recorded within the application area (Biota Environmental Sciences, 2010).

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

Methodology Biota Environmental Sciences (2010)
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 available databases reveals that there are no Threatened Ecological Communities or Priority Ecological Communities (TEC's or PEC's) within the application area (GIS Database). The nearest TEC is located approximately 224 kilometres north of the application area (Cape Range Remipede Community) and the nearest PEC is approximately 137 kilometres north-east of the application area (Birdsong Spring). At this distance there is little likelihood of any impact to the TEC or PEC from the proposed clearing.

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 falls within the Carnarvon IBRA bioregion (GIS Database). Shepherd (2007) reports that approximately 99.84% of the pre-European vegetation remains in this bioregion.

The vegetation within the application area is recorded as Beard Vegetation Association: 328: Succulent steppe with scrub; water wood and *Acacia sclerosperma* over saltbush & samphire (GIS Database; Shepherd, 2007).

According to Shepherd (2007) approximately 100% of this Beard Vegetation Association remains within the Carnarvon bioregion (see table below).

| | Pre-European area (ha)* | Current extent (ha)* | Remaining %* | Conservation Status** | Pre-European % in IUCN Class I-IV Reserves |
|---|-------------------------|----------------------|--------------|-----------------------|--|
| IBRA Bioregion - Carnarvon | 8,382,606 | 8,368,970 | ~99.84% | Least Concern | ~3.62% |
| IBRA Subregion - Wooramel | 6,013,855 | 6,010,206 | ~99.94% | Least Concern | ~3.74% |
| Beard vegetation associations - State | | | | | |
| 328 | 10,237 | 10,237 | ~100% | Least Concern | 0.00 |
| Beard vegetation associations - Bioregion | | | | | |
| 328 | 10,237 | 10,237 | ~100% | Least Concern | 0.00 |

* Shepherd (2007)

** 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 (2007)
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

A watercourse as defined by Schedule 5 of the *Environmental Protection Act 1986* is “an area of seasonally, intermittently or permanently waterlogged or inundated land, whether natural or otherwise, and includes a lake, swamp, marsh, spring, damp land, tidal flat or estuary”.

According to available GIS databases, there are no watercourses or wetlands within the application area (GIS Database). The application area is located on saline alluvial plains and according to available GIS databases is not subject to inundation (GIS Database).

Lake MacLeod is listed on the Directory of Nationally Important Wetlands and is located approximately 0.31 kilometres east of the application area (Environment Australia, 2001; GIS Database). As this lake is outside the application area, it is unlikely that native vegetation associated with the watercourse will be impacted by this proposal.

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

Methodology Biota Environmental Sciences (2010)
Environment Australia (2001)
GIS Database
- Hydrography, Linear
- Geodata, Lakes

(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 has been surveyed by the Department of Agriculture and Food (Payne et al., 1987). The application area is comprised of the following land system (GIS Database):

- Warroora Land System.

The Warroora Land System is described as flat to gently sloping saline alluvial plains, with minor areas of sand and limestone, supporting tall acacia shrublands and low shrublands of saltbush, bluebush and samphire (Payne et al., 1987). An analysis of aerial photography for the application area reveals the application area is most likely to fall within the 'limestone outcrop plains' and 'saline plains' land units. The soils of these land units (red sandy loams and sandy clay loams) have a low susceptibility to wind erosion (MacLeod 1.4m Orthomosaic; Schoknecht, 2002).

Based on the above, the proposed clearing is not likely to be at variance to this Principle. Potential land degradation impacts as a result of the proposed clearing may be minimised by the implementation of a rehabilitation condition.

Methodology Payne et al. (1987)
Schoknecht (2002)
GIS Database
- MacLeod 1.4m Orthomosaic - Landgate 2002
- Rangeland Land System Mapping

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments **Proposal is not likely to be at variance to this Principle**
The proposed clearing is not located within a conservation reserve (GIS Database). The nearest known conservation reserve is an un-named C-class nature reserve, located approximately 9.5 kilometres south-west (GIS Database).

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**
According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).

The application area is located within a proclaimed *Rights in Water and Irrigation Act 1914* (RIWI Act) Groundwater Area (GIS Database). The proponent may be required to obtain bed and banks permits to interfere with bed or banks of a proclaimed area (DoW, 2010).

The groundwater salinity within the application area is approximately 3,000-7,000 milligrams/Litre Total Dissolved Solids (TDS) (GIS Database). This is considered to be saline water. Given the size of the area to be cleared (0.98 hectares) compared to the size of the Carnarvon Groundwater Province (11,131,109 hectares) (GIS Database), the proposed clearing is not likely to cause salinity levels within the application area to alter significantly.

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

Methodology DoW (2010)
GIS Database
- Public Drinking Water Source Areas
- Groundwater Salinity, Statewide
- RIWI Act, Groundwater Areas
- Groundwater Provinces

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

Comments **Proposal is not likely to be at variance to this Principle**
The application area experiences an arid climate with an average annual rainfall of 225.9 millimetres recorded from the nearest weather station at Carnarvon Airport approximately 52 kilometres south-south-east of the application area (CALM, 2002; BoM, 2010). The application area also experiences a high average annual evaporation rate exceeding the average annual rainfall by more than ten times (approximately 2,400 millimetres) (BoM, 2010), clearing within the application area is unlikely to exacerbate or increase the incidence or intensity of flooding.

The application area is located within the Coastal catchment area (GIS Database). However, the size of the area to be cleared (0.98 hectares) in relation to the size of the Coastal catchment area (1,478,742 hectares) (GIS Database) is not likely to increase the potential for flooding within the application area, local area or within the catchment.

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

Methodology BoM (2010)
CALM (2002)

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

Comments

The application area is located within a *Rights in Water and Irrigation Act 1914* (RIWI Act) Groundwater Area (GIS Database). The proponent may be required to obtain bed and banks permits to interfere with bed or banks of a proclaimed area (DoW, 2010).

There is one Native Title Claim (WC97_028) over the area under application. This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. 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 (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 no registered Aboriginal Sites of Significance within the application area (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 19 April 2010 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the proposed clearing.

Methodology DoW (2010)
GIS Database
- Aboriginal Sites of Significance
- Native Title Claims
- RIWI - Groundwater Areas

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the *Environmental Protection Act 1986*, and the proposed clearing is not likely to be at variance to Principles (a), (b), (c), (d), (f), (g), (h), (i) and (j) and is not at variance to Principle (e).

5. References

- Australian Heritage Database (2010) Lake MacLeod Area, Carnarvon, WA, Australia. <http://www.environment.gov.au> (Accessed 3 May 2010)
- Biota Environmental Sciences (2010) Lake MacLeod Solar Salt Stage 1 Expansion Project - Native Vegetation Clearing Permit Report. Unpublished report prepared for Dampier Salt Ltd, March 2010
- BoM (2010) Bureau of Meteorology Website - Climate Averages by Number, Averages for CARNARVON AIRPORT. www.bom.gov.au/climate/averages/tables/cw_006011.shtml (Accessed 3 May 2010)
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Carnarvon 2 (CAR2 - Wooramel subregion) Department of Conservation and Land management, 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
- DoW (2010) Water Quality Advice. Advice to assessing officer, Native Vegetation Assessment Branch, Department of Mines and Petroleum (DMP), received (19 April 2010). Department of Water, Western Australia
- Environment Australia (2001) A Directory of Important Wetlands in Australia, Third Edition. Environment Australia, Canberra
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia
- Payne, A.L., Curry, P.J., and Spencer, G.F. (1987) An Inventory and Condition Survey of Rangelands in the Carnarvon Basin, Western Australia
- Schoknecht, N. (2002) Soil Groups of Western Australia. A Simple Guide to the Main Soils of Western Australia. Resource Management Technical Report 246. Edition 3
- Shepherd, D.P. (2007) 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

6. Glossary

Acronyms:

| | |
|-----------------|---|
| BoM | Bureau of Meteorology, Australian Government. |
| CALM | Department of Conservation and Land Management, Western Australia. |
| DAFWA | Department of Agriculture and Food, Western Australia. |
| DA | Department of Agriculture, Western Australia. |
| DEC | Department of Environment and Conservation |
| DEH | Department of Environment and Heritage (federal based in Canberra) previously Environment Australia |
| DEP | Department of Environment Protection (now DoE), 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, Western Australia. |
| DoIR | Department of Industry and Resources, Western Australia. |
| DOLA | Department of Land Administration, Western Australia. |
| DoW | Department of Water |
| EP Act | Environment Protection Act 1986, Western Australia. |
| EPBC Act | Environment Protection and Biodiversity Conservation Act 1999 (Federal Act) |
| GIS | Geographical Information System. |
| 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 | Rights in Water and Irrigation Act 1914, Western Australia. |
| s.17 | Section 17 of the Environment Protection Act 1986, Western Australia. |
| TECs | 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.