



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2263/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Dampier Salt Limited

1.3. Property details

Property: Leslie Solar Salt Industry Agreement Act 1966,
Mining Lease 269SA (AML 70/269)
Local Government Area: Town of Port Hedland
Colloquial name: Port Hedland Salt Operation

1.4. Application

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

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, and are a useful tool to examine the vegetation extent in a regional context. One Beard vegetation association is located within the application area:

647: Hummock grasslands, dwarf-shrub steppe; *Acacia translucens* over soft spinifex (GIS Database, Shepherd *et al.*, 2001).

Dampier Salt conducted a site survey of the area in September 2007 (Dampier Salt, 2008).

The area consists of *Triodia secunda*, *T. empatctia*, *T. pungens*, **Cenchrus ciliaris* hummock grassland, over very open *Pluchea rubelliflora*, *Pulcea tetrathera* herbland with scattered *Rhynchosia minima* and *Trianthema turgidifolia*.

* denotes introduced species

Clearing Description

Dampier Salt Ltd (from this point forward referred to as Dampier Salt) have applied to clear up to 20 hectares of native vegetation for the purpose of a borrow pit. The proposed clearing is required in order to undertake urgent repairs to levees and roads damaged as a result of tropical cyclone George (Dampier Salt, 2008).

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 vegetation condition is derived from the vegetation description in Dampier Salt (2008) and aerial photography.

Dampier Salt has an Environmental Management System (Rio Tinto Minerals - Asia Pacific Environmental Management System (Certified ISO14001:2004)) in place, which includes a number of management measures to prevent environmental degradation.

Clearing Permit 2263/1 was originally granted on 14 February 2008, with the Permit becoming live on 15 March 2008 and expiring on 31 July 2009.

The Permit has been amended to extend the duration of the Permit from 15 March 2008 to 31 July 2012. Additionally the Permits reporting and record keeping conditions have been modified to reflect standard wording and to align the permit reporting date with the permit expiration date.

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 proposed clearing is located within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, and the Roebourne IBRA subregion (GIS Database).

Kendrick and Stanley (2001) assessed the biodiversity of the Roebourne IBRA subregion in relation to landscape, ecosystem, species and genetic values. High species and ecosystem diversity as well as a centre of endemism are cited for the Burrup Peninsula (Kendrick and Stanley, 2001), which is located approximately 220 kilometres west of the application area. The basalt rock piles in the region are listed as fire refuges in Kendrick and Stanley (2001), however, no such habitats were found within the application area during the Dampier Salt (2008) survey.

The application area is located immediately adjacent to roads, levees and supply channels (GIS Database)

Weeds are widespread throughout the area, particularly Buffel Grass (*Cenchrus ciliaris*) and Kapok (*Aerva javanica*).

Vegetation and habitat types occurring within the application area are well represented in the region (GIS Database). Given that Hummock grasslands are well represented in the vicinity and the application area has been degraded through the introduction of non-native species (Dampier Salt, 2008), it is unlikely that it comprises higher biodiversity values than the surrounding vegetation.

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

Methodology Dampier Salt (2008).
Kendrick and Stanley (2001).
GIS Database:
- Hydrography, linear.
- Hydrography, linear.
- Interim Biogeographic Regionalisation of Australia (subregions).
- Interim Biogeographic Regionalisation of Australia.
- Pre-European Vegetation.
- Roads.
- Spit Point 85cm 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 search of the Department of Environment and Conservation (DEC) priority fauna databases was conducted by DEC on behalf of the proponent (Dampier Salt, 2008). The search revealed nine species of conservation significance previously recorded within a 25 kilometre radius of the Port Hedland Dampier Slat Lease (Dampier Salt, 2008).

The species which may potentially occur within the area under application are:
- *Lagostrophus fasciatus fasciatus* (Banded Hare-Wallaby - Schedule 1 (Fauna that is rare or likely to become extinct, *Wildlife Conservation (Specially Protected Fauna) Notice, 2006*));
- *Aspidites ramsayi* (Woma - southwest population - Schedule 4 / Priority 1 (Other specially protected fauna, *Wildlife Conservation (Specially Protected Fauna) Notice, 2006*));
- *Mormopterus loriae cobourgiana* (Little North-Western Mastiff Bat or Mangrove Freetail Bat - Priority 1 (DEC Priority list))
- *Lagorchestes conspicillatus leichardti* (Spectacled Hare-Wallaby (mainland) - Priority 3 (DEC Priority list));
- *Macroderma gigas* (Ghost Bat - Priority 4 (DEC Priority list));
- *Pseudomys chapmani* (Western Pebble-Mound Mouse - Ngadji - Priority 4 (DEC Priority list));
- *Ardeotis australis* (Australian Bustard - Priority 4 (DEC Priority list));
- *Burhinus grallarius* (Bush Stonecurlew - Priority 4 (DEC Priority list)); and
- *Neochima ruficauda subclarescens* (Star Finch - western - Priority 4 (DEC Priority list)) (Dampier Salt, 2008).

The Banded Hare-wallaby is unlikely to occur within the areas proposed to be cleared, as it is only known from the Bernier and Dorre Islands, as well as Faure Islands in Shark Bay (Dampier Salt, 2008).

Only the south-west population of the Woma species is listed as specially protected (Biota, 2006). The northern form that could potentially occur within the proposed areas to be cleared is not currently listed as threatened or priority species (Biota, 2006). It is unlikely that the application area would provide significant habitat for the south-west population of the Woma, due to their habitat being restricted to areas surrounding Yuna, Wialki, Menzies south to Boddington, Naremben and Marvel Loch, and east to western edge of the Nullarbor Plain (WA Museum, 2008).

The Little North-western Mastiff Bat (or the Mangrove Freetail Bat) is restricted to mangroves and adjoining areas (Australian Museum, 1999). Considering that the vegetation associated with the application area is Hummock grassland, it is unlikely that the bats would roost within the application area. The species may partially rely on the habitat within the application area for prey foraging (Biota, 2006), however, impacts through habitat loss are considered low due to the vegetation types found within the area proposed to be cleared.

The Spectacled Hare-Wallaby inhabits open forests, open woodlands, tall shrublands and hummock grasslands (Ingleby, 1995). The species have a wide distribution, however, its occurrence within their preferred habitat is extremely patchy and there have been marked contractions in its range during the last 100 years (Ingleby, 1995). The species is still common on Barrow Island, however, is now rare in the Pilbara and Kimberley region of Western Australia (Ingleby, 1995). Given the wide spread distribution of the Spectacled Hare-Wallaby, it is unlikely that the proposed clearing areas would represent significant habitat for this species.

The Ghost bats roost in caves, old mine tunnels and in deep cracks in rocks (Australian Museum, 1999). Ghost bats are likely to occur in the region, however, as there are no known caves or abandoned mines within the application areas, the likelihood of them roosting within the proposed clearing area is very low.

The Western Pebble-Mound Mouse inhabits the arid zones of central Western Australia (Moro and Spencer, 2003). It lives in complex mounds, containing thousands of pebbles, that may take several years to build (Moro and Spencer, 2003). As these habitats do not occur within the application area, the vegetation within the application area is not significant habitat for this species.

The Australian Bustard potentially occurs within the application area, however, the species is relatively widespread, and the small area of the proposed clearing is unlikely to have any significant impacts on the habitat for this species.

The Bush Stone-curlew is widespread throughout Australia (Australian Museum, 2003). It inhabits lightly timbered open woodlands (Pizzey and Knight, 1997). The species may occur within the application area but it is not likely to be dependent upon the vegetation within the application area for its continued existence in the local area.

The Star Finch prefers long grass, sedges and rushes in swamps and along watercourses (WA Museum, 2008). As there are no watercourses within the application area, it is unlikely that the proposed clearing would impact on significant habitat of this species.

The fauna habitats within the application area are uniform and well represented elsewhere within the tenement boundaries and its surrounds. Consequently no significant loss of habitat for fauna indigenous to Western Australia is expected.

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

Methodology Australian Museum (1999).
Biota (2006).
Dampier Salt (2008).
Ingleby (1995).
Moro and Spencer (2003).
Pizzey and Knight (1997).
WA Museum (2008).

(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 GIS Databases there are no known records of threatened flora species within a 50 kilometre radius of the application area (GIS Database). The nearest recorded Declared Rare Flora (DRF) is the *Lepidium catapycnon*, located approximately 225 kilometres south-west of the application area.

A search of the DEC and Western Australian Herbarium rare flora databases conducted on behalf of the proponent yielded 11 records of 7 flora species which are known to potentially occur within approximately 50 kilometres of the area proposed to be cleared (Dampier Salt, 2008). The species are:

- *Abutilon trudgenii* (Priority 3);
- *Acacia glaucocaesia* (Priority 3);
- *Euphorbia clementii* (Priority 2);
- *Gomphrena pusilla* (Priority 2);
- *Goodenia pascua* (Priority 3);
- *Gymnanthera cunninghamii* (Priority 3); and
- *Ptilotus appendiculatus* (Priority 1) (Dampier Salt, 2008).

A survey of the area was conducted by Dampier Salt in September 2007. No species of conservation significance were recorded.

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

Methodology Dampier Salt (2008).
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**
There are no known Threatened Ecological Communities (TECs) within the application area (GIS Database), with the nearest known TEC located approximately 235 kilometres south-west of the application area (GIS Database). No TECs have been recorded within or adjacent to the application area (Dampier Salt, 2008).

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

Methodology Dampier Salt (2008).
GIS Database:
- Threatened Ecological Communities.

(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 area under application falls within the Pilbara IBRA bioregion, and the Roebourne IBRA subregion (GIS Database). The proposed clearing is not located within the Intensive Land Use Zone (GIS Database; Shepherd *et al.*, 2001). The vegetation proposed to be cleared is classified as Beard vegetation association 647: Hummock grasslands, dwarf-shrub steppe; *Acacia taranslucens* over soft spinifex (GIS Database; Shepherd *et al.*, 2001).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	% of Pre-European area in IUCN Class I-IV Reserves (and current %)
IBRA Bioregion – Pilbara	17,804,163	17,794,650	~99.99	Least concern	6.3 (6.3)
Beard veg assoc. – State					
647	196,372	196,372	~100	Least concern	0.0 (0.0)
Beard veg assoc. – Bioregion					
647	196,372	196,372	~100	Least concern	0.0 (0.0)

* Shepherd *et al.* (2001) updated 2006

** Department of Natural Resources and Environment (2002)

Although the percentage of land vested in conservation reserves is low for the Pilbara IBRA bioregion, and Beard vegetation association 647, the regional extent is approximately 100% uncleared, and therefore the proposed clearing does not pose a threat to the conservation of this vegetation association.

The area proposed to be cleared does not form a significant remnant of native vegetation in an area that has been extensively cleared

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

Methodology Department of Natural Resources and Environment (2002).
Shepherd *et al.* (2001).
GIS Database:
- Interim Biogeographic Regionalisation of Australia.
- 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 at variance to this Principle**
There are no watercourses or waterbodies within the application area (GIS Database).

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

- Methodology** GIS Database:
- Geodata, Lakes.
 - Hydrography, Lakes.
 - Hydrography, linear.
 - Hydrography, pipelines.
 - 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 clearing application area lies within the Uaroo land system (sandy surfaced plains: not degraded eroded) (GIS Database; Van Vreeswyk *et al.*, 2004). The Uaroo land system is generally not susceptible to erosion or significant degradation (Van Vreeswyk *et al.*, 2004).

Dampier Salt will minimise disturbance where possible (Dampier Salt, 2008). Where available, topsoil and vegetation will be collected and stockpiled for use in rehabilitation works, which will be undertaken as soon as is practicable following the removal of borrow material (Dampier Salt, 2008).

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

- Methodology** Dampier Salt (2008).
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 nearest conservation category wetland is the Leslie (Port Hedland) Saltfields System, located approximately one kilometre north of the proposed clearing areas (GIS Database). This wetland plays an important ecological role as a major migration stop-over area for shorebirds in the East-Asia-Australasia Flyway (Department of the Environment and Water Resources, 2007). However, based on the distance between the proposed clearing and the wetlands, adverse impacts on the environmental values of the wetlands are unlikely.

The nearest DEC managed area is the Class "A" North Turtle Island Nature Reserve, located approximately 48 kilometres north of the application area (GIS Database). The nearest on-shore DEC managed area is the Class "A" Mungaroo Range Nature Reserve, located approximately 135 kilometres south-west of the proposed clearing areas (GIS Database). Based on the distance between the proposed clearing and the nature reserves, adverse impacts on the environmental values of those reserves are unlikely.

The Coastal Islands Dixon to Cape Keraudren Red Book Area (System 8.6) is located approximately 47 kilometres north-east from the proposed clearing (GIS Database). The closest on-shore Red Book area is the Marble Bar Red Book Area (System 8.9), located approximately 73 kilometres south of the proposed clearing areas. The recommendation from the Environmental Protection Authority (EPA) (1993) was that no action be taken with regards to the Marble Bar Red Book area. Also, based on the distance between the proposed clearing permit area and the Marble Bar Red Book area, any adverse impacts on the environmental values of that area are unlikely.

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

- Methodology** GIS Database:
- CALM proposed 2015 pastoral lease exclusions.
 - CALM Regional Parks.
 - CALM Managed Lands and Waters.
 - System 1 to 5 and 7 to 12 Areas.
 - Register of National Estate.

(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 proposed clearing is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).

Groundwater within the area under application is fresh to brackish, at between 1,000 - 3,000 milligrams per litre of Total Dissolved Solids (GIS Database). Given the relatively small size of the proposed clearing, the quality of

the groundwater is unlikely to be impacted by the proposed clearing activity.

The proposed clearing area is relatively flat, and is not associated with any permanent watercourse or waterbody (GIS Database).

The limited amount of clearing proposed (20 hectares), in comparison with the extent of the Pilbara Groundwater province (which is approximately 5,557,665 hectares) is unlikely to result in deterioration in the quality of groundwater.

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

- Methodology** GIS Database:
- Groundwater Salinity, Statewide.
 - Hydrographic Catchments - Catchments.
 - Public Drinking Water Source Areas (PDWSAs).
 - Topographic Contours, Statewide.

(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 limited amount of clearing proposed (20 hectares) in comparison with the extent of the Port Hedland coastal catchment area (which is approximately 744,301 hectares) is unlikely to result in an increase in peak flood height or flood peak duration.

The mean annual rainfall for the area is 400 millimetres, while the potential evaporation of the area is at around 3,400 millimetres per year (GIS Database). Therefore, it is unlikely that the proposed clearing will cause or exacerbate the incidence or intensity of flooding.

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

- Methodology** GIS Database:
- Evapotranspiration, Point Potential.
 - Hydrographic Catchments - Catchments.
 - Rainfall, Mean Annual.

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

Comments

There is one native title claim (WC99_026) over the area under application (GIS Database). This claim has been registered with the National Native Title Tribunal. However, the mining 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 known Aboriginal Sites of Significance occurring within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972*, and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

Although a s38 Environmental Protection Authority (EPA) and Ministerial approval (EPA bulletin 506 and Ministerial statement 147) exist over the majority of the application area, the proponent has sought approval of a clearing permit to undertake the activities as proposed.

The application area is within *Rights in Water and Irrigation Act 1914* groundwater management area (GIS Database). The applicant would require approval from Department of Water to extract groundwater.

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.

Clearing Permit 2263/1 was originally granted on 14 February 2008, with the Permit becoming live on 15 March 2008 and expiring on 31 July 2009.

The Permit has been amended to extend the duration of the Permit from 15 March 2008 to 31 July 2012. Additionally the Permits reporting and record keeping conditions have been modified to reflect standard wording and to align the permit reporting date with the permit expiration date.

- Methodology** GIS Database:
- Aboriginal Sites of Significance.
 - Environmental Impact Assessments.

- Native Title Claims.
- RIWI Act, Groundwater Areas.

4. Assessor's comments

Comment

The amended proposal has been assessed against the Clearing Principles, and is not at variance to Principles (e) and (f), not likely to be at variance to Principles (a), (b), (c), (d), (g), (h), (i) and (j).

Should a permit be granted, it is recommended that conditions be imposed on the permit for the purposes of rehabilitation, record keeping and reporting.

5. References

- Australian Museum (1999) *Bats in Australia*, [online] <http://austmus.gov.au/bats/> [Last Accessed 07/02/2008]
- Biota (2006b) *Port Hedland Solar Saltfield Expansion Fauna Survey - Fauna and Faunal Assemblages Report*, prepared for Dampier Salt Ltd, North Perth, Western Australia.
- Dampier Salt (2008) *Additional information provided in support for an application for a purpose clearing permit on Mining Lease (State Agreement Act) M269SA*, Dampier Salt Ltd, 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.
- Department of the Environment and Water Resources (2007) *A Directory of Important Wetlands in Australia*, Leslie (Port Hedland) Saltfields System - WA068, <http://www.environment.gov.au> [Last accessed 07/02/2008]
- Ingleby, S. (1995) *Rare and endangered - Spectacled Hare-wallaby*, in *Nature Australia*, volume 25 no. 1:22.
- Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Kendrick, P. and Stanley, F. (2001) *Pilbara 4 (PIL4 - Roebourne synopsis)*, in *Bioregional summary of the 2002 Biodiversity Audit for Western Australia*, Department of Conservation and Land Management, Western Australia.
- Moro, D. and Spencer, P.B.S. (2003) *Microsatellite primers for the Western Pebble-mound Mouse (Pseudomys chapmani) that show cross amplification for other species of Australian rodent*, in *Molecular Ecology Notes*, volume 3, 259-261
- Pizzey, G. and Knight, F. (1997) *Field Guide to the Birds of Australia*. Angus & Robertson, Sydney.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A. and Henning, P. (2004) *An inventory and condition survey of the Pilbara region, Western Australia*, Technical Bulletin No. 92, Department of Agriculture, Western Australia.
- WA Museum (2007) *Collections databases* [online <http://www.museum.wa.gov.au/faunabase/prod/index.htm>] Last accessed 29/10/2007.

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.
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.