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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2409/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Metals Exploration Limited**

1.3. Property details

Property: Miscellaneous Licence 69/12
Local Government Area: Shire of Laverton & Shire of Ngaanyatjarraku
Colloquial name: Wingellina Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
6		Mechanical Removal	Water bore exploration drilling

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
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 (GIS Database): 236; hummock grasslands, shrub steppe; mulga and mallee (marble gum) over hard spinifex (GIS Database).	Metals Exploration Limited (Metals Exploration) proposes to clear six hectares of native vegetation within a purpose permit boundary of 7,299 hectares (Metals Exploration, 2008). The proposed clearing is for the purpose of water bore drilling on Miscellaneous Licence 69/12. The proposed clearing will be undertaken mechanically with a raised blade (Metals Exploration, 2008).	Pristine: No obvious signs of disturbance (Keighery, 1994). To Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).	Metals Exploration commissioned Outback Ecology (2008) to conduct a desktop flora survey of the application area in May 2008. No ground vegetation survey was conducted. Some landscape and soil characteristics were provided from Metals Exploration geologists. It is likely due to the remoteness of the proposal that the vegetation would be in pristine to very good condition. However, an un-named road passes through the middle of the application area running north-south (GIS Database), which is likely to have introduced some weed species and caused some degradation to existing vegetation.

3. Assessment of application against clearing principles

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

Comments

Proposal is not likely to be at variance to this Principle

The application area is situated approximately 90 kilometres south-west of the Aboriginal community of Wingellina in the Great Victoria Desert 3 (GVD 3) subregion of the Great Victoria Desert Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Australian Natural Resource Atlas (ANRA) (2008) state that, "no systematic biological survey has been undertaken for the [sub] region, although there has been some assessment of biota on proposed and current reserves and a number of localized studies have occurred". On the Continental Landscape Stress Class issued by the Australian Natural Resource Atlas, the Great Victoria Desert 3 bioregion is classed as 6, where 1 is most stressed and 6 is least (Barton and Cowan, 2001).

Vegetation within the application area is primarily a tree steppe of *Eucalyptus gongylocarpa,* Mulga and *E.*

youngiana over hummock grassland dominated by *Triodia basedowii* on aeolian sands, *Acacia, dominatees* the colluvial soils with *Eremophila and Santalum* spp, halophytes are confined to edges of salt lakes and saline drainage systems (Barton and Cowan, 2001).

Feral animals are reported to pose a major threat to the biodiversity of the GVD 3 bioregion (ANRA, 2008; Outback Ecology, 2008) and feral herbivores such as rabbits and camels have been reported to be widespread (ANRA, 2008).

The ecological impacts and extent of feral carnivores such as foxes and cats is largely unknown, however, they appear to have taken a large toll on mammal species within the bioregion. Fifty two mammal species have been registered in the bioregion; however, 21 of those are now reported to be extinct from the region (ANRA, 2008).

The vegetation habitat types occurring within the application area are well represented in the region (Shepherd et al., 2001), and the application area is unlikely to be of higher biodiversity value than the surrounding areas (Outback Ecology, 2008). The region has a medium priority for reserve consolidation with 9.4% in IUCN I-IV reserves, and minimal sub-regional bias (ANRA, 2008). Given that the application area is situated in a very remote location, the introduction of weeds may pose a threat to the biodiversity of the region. Should the permit be granted It is recommended a condition be placed on the permit for the purposes of weed management.

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

Methodology

ANRA (2008)
Barton and Cowan (2001)
Outback Ecology (2008)
Shepherd et al. (2001)

(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 detailed vertebrate or invertebrate fauna surveys have been conducted over the application area, however, a search of the following databases was conducted on behalf of the proponent by Outback Ecology (2008):

- Department of Environment and Conservation's (DEC's) Threatened and Priority Fauna Database;
- the West Australian Museum Faunabase;
- Birds Australia database; and
- the Environmental Protection and Biodiversity Conservation Protected Matters Report.

The database searches revealed two species of conservation significant fauna likely to occur within the application area and a further nine species which were recorded as possilbly occuring within the application area (Outback Ecology, 2008). In total seven brids, two mammals and two reptiles of conservation significance were identified. These are shown below, including their conservation status in accordance with the *Wildlife Conservation (Specially Protected Fauna) Notice, 2008*, The *Evironmental Protection and Biodiversity Conservation Act 1999* and Department of Environment Conservations Priority Fauna list (Outback Ecology, 2008).

Name	*Evironmental Protection and Biodiversity Conservation Act 1999*	*Wildlife Conservation (Specially Protected Fauna) Notice, 2008*	DEC's priority list	Occurrence likelyhood
Mulgara – *Dasycercus cristicauda*	Vulnerable	Schedule 1	-	Possible
Black-footed Rock wallaby – *Petrogale lateralis* spp	Vulnerable	Schedule 1	-	Possible
Malleefowl – *Leipoa ocellata*	Vulnerable	Schedule 1	-	Possible
Princess Parrot – *Polytelis alexandrae*	Vulnerable	-	Priority 4	Possible
Major Mitchell's Cockatoo – *Cacatua leadbeateri*	-	Schedule 4	-	Possible
Slender-billed Thornbill – *Acanthiza iredlei iredelei*	Vulnerable	-	-	Possible
Australian Bustard – *Ardeotis australis*	-	-	Priority 4	Likely
Bush Stone-curlew – *Burhinus grallarius*	-	-	Priority 4	Possible
Rainbow Bee-eater – *Merops ornatus*	Migratory	-	-	Likely
Great Desert Skink – *Egernia Kintorei*	Vulnerable	Schedule 1		Possible

Woma – *Aspidites ramsayi*		Schedule 4	Priority 4	Possible

Based on habitat preferences, it is unlikely all of these species listed above would occur in the application area. The species most likely to occur in the project site are discussed below.

The Australian Bustard is distributed sporadically across Australia and typically occurs in open country preferring grasslands, low shrublands and grassy woodlands (DNRA, Northern Territory Government, 2008). The presence of suitable habitat within the application area (open to lightly timbered woodlands, grasslands) suggest that this species is likely to occur. Individuals of this species move readily, tracking rainfall, fires and food sources (e.g. grass hopper outbreaks) across the landscape opportunistically. Their movements are not well defined, however, they are believed to be nomadic or irruptive in the arid and semi-arid regions and migratory with regular north-south movements in relation to wet/dry seasons (DNRA, Northern Territory Government, 2008). Due to this species ability to utilise a wide variety of habitats across Australia it is unlikely the clearing of six hectares of native vegetation within a pupose permit boundary of 7,299 hecares would represent significant habitat for this species.

The Rainbow Bee-eater occupies numerous habitats including open woodlands, semi-arid scrub and grassland (Outback Ecology, 2008). It occurs in farmland, orchards, vineyards, and is regularly recorded in other disturbed habitats including road-side vegetation and in quarries, mines or gravel pits where they often breed (DEHWA, 2008). Within Australia this species is disributed across much of the mainland and occurs on several near shore Islands. Outside of Australia the Rainbow Bee-eater also has a wide distribution occuring in eastern Indonesia, Papua New Guinea and the Solomon Islands (DEHWA, 2008). This species has been listed under the *Evironmental Protection and Biodiversity Conservation Act 1999* as a Migratory species and therefore, is not necessarily threatened. Population size and population trends have not been quantified, but the population size is assumed to be resonably large, and there is little documented evidence of pupulation declines (DEHWA, 2008). Due to this species wide distribution across many countries and many habitat types it is unlikely the proposed clearing of six hectares of native vegetation would represent significant habitat for this species.

The Great Desert Skink is a burrowing species of skink found in a variety of desert habitats on sandy, clay and loamy soils (DEHWA, 2008). The Great Desert Skink is sparsely distributed over the Greater Sandy Desert, the Gibson Desert, the Great Victoria Desert and across the Northern Territory. The main threat to this species is changes to fire patterns and feral animals such as foxes and cats (DEHWA, 2008). Based on habitat preferences it is possible the Great Desert Skink would exist in the application area. However, given the large range of the lizard and the small disturbance footprint of six hectares fragmented over a purpose permit boundary of approximately 7,299 hectares, it is unlikely the proposed clearing would represent significant habitat for this species.

The Woma Python is a nocturnal, terrestrial python, sheltering in hollow logs, animal burrows or thick vegetation (Outback Ecology, 2008). Its distribution extends from the Pilbara coast of Western Australia, north to the Eightymile Beach area, and south-west Western Australia, from Cape Peron south and east to the eastern Goldfields. It also extends into northern South Australia and the south-west edge of Queensland (Western Australian Museum, 2008). The Woma favours open myrtaceous heath on sandplains, and dunefields dominated by spinifex (Western Australian Museum, 2008). Due to the extensive range of the Woma across arid regions of Australia, it is unlikely the clearing of six hectares of suitible habitat will represent significant habitat for this species.

None of the abovementioned fauna species are likely to be specifically dependant on habitats found within the application area, although they may use the application area as part of a foraging ground (Outback Ecology, 2008). The fauna habitats occurring within the application area are well represented in the Great Victoria Desert 3 Bioregion (Outback Ecology, 2008).

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

Methodology DEWHA (2008)
DNRA, Northern Territory Government (2008)
Outback Ecology (2008)
Western Australian 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 available databases there are no known records of Declared Rare Flora (DRF) or Priority Flora within the application area (Outback Ecology, 2008; and GIS Database).

Whilst the application area provides habitat for a range of flora species, it is unlikely that the clearing of six hectares within a 7,299 hectare purpose permit boundary will impact on the continued existence of DRF or Priority Flora species (Outback Ecology, 2008). Habitats which are most likely to support conservation significant flora are usually associated with unique landscape features such as creek lines or ridges (Outback Ecology, 2008). According to the GIS Database no creeks or water courses occur within the application area and the nature of exploration drilling for water means ridges and rock features are avoided.

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

Methodology Outback Ecology (2008)
GIS Database
-Hydrology Linear

(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 within the application area (GIS Database). The nearest registered Threatened Ecological Community occurs approximately 650 kilometres to the south-west of the application area (GIS Database). It is very unlikely this community will be impacted upon by this proposal.

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

Methodology 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 application area is within the Great Victoria Desert Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). According to Shepherd et al. (2001) there is approximately 100% of the pre-European vegetation remaining in the Great Victoria Desert bioregion. The vegetation of the application area is classified as Beard Vegetation Association 236; hummock grasslands, shrub steppe; mulga and mallee (marble gum) over hard spinifex. (GIS Database). There is approximately 100% of the pre-European vegetation remaining of Beard Vegetation Association 236 in the Great Victoria Desert bioregion (Shepherd et al., 2001).

Whilst Beard Vegetation Association 236 is not represented in conservation reserves, the application area does not represent a significant remnant of vegetation in the wider regional area (Shepherd et al., 2001). The proposed clearing is unlikely to reduce the extent of Beard Vegetation Association 236 below current recognised threshold levels, below which species loss increases significantly.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	% of Pre-European area in IUCN Class I-IV Reserves (and current %)
IBRA Bioregion – Great Victoria Desert Bioregion	21,794,203	21,784,884	~ 100	Least Concern	~ 8.5
Beard veg assoc. – State					
236	1,626,899	1,617,315	~ 99.4	Least Concern	0.0 (0.0)
Beard veg assoc. – Bioregion					
236	1,619,192	1,612,280	~ 99.6	Least Concern	0.0 (0.0)

* Shepherd et al. (2001) updated 2005
** Department of Natural Resources and Environment (2002)

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

Methodology Shepherd et al. (2001)
GIS Database
-Interim Biogeographic Regionalisation for 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**
According to available databases, there are no watercourses, drainage lines or wetlands within the application area (GIS Database).

The vegetation types identified by Outback Ecology (2008) are not examples of riparian vegetation, and are common in the landscape.

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

Methodology Outback Ecology (2008)
GIS Database
-Hydrology 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 methods of clearing are proposed to be raised blade and lowered blade (Metals Exploration, 2008). Raised blade methods ensure equipment blades are above the ground level to minimise soil displacement and erosion potential. This type of clearing is preferred for access tracks as it leaves soil and root systems intact and minimises erosion potential. Metals Exploration (2008) will minimise vegetation clearing by utilising existing tracks and naturally sparse areas to ensure land degradation is further reduced.

Lowered blade methods present a higher potential for land degradation, however, this type of clearing is only proposed to be used within drill pad sites where management practices will ensure land degradation is minimised. Such practices will include the establishment of proper drainage systems, minimising cleared areas to prevent erosion (Metals Exploration, 2008).

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

Methodology Metals Exploration (2008)

(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 falls within an Environmentally Sensitive Area (ESA); Ranges of the Western Desert (GIS Database). The ESA was registered in 1978 and covers an area of 8,019,568 hectares (DEWHA, Australian Heritage Database, 2008). The Australian Heritage Commission deemed that this area has indigenous values of National Estate significance (DEWHA, Australia Heritage Database, 2008). The proposed clearing is not likely to impact upon environmental values of the area.

The application area is located within the Red Book Area 12.92 – Ranges of the Western Desert (GIS Database). Special features of this area have been noted as mountain ranges. In the eastern region of Western Australia are many mountain ranges which are the western extension of the central Australian range complex. They reach their western limit in the Warburton Range, and are varied in size, topography, geology and biology. The flora of the ranges can be diverse, however, many species may be dormant until decent rainfall (Conservation Through Reserves Committee, 1978).

Despite the area being on the Register of National Estate for natural values, it is considered that the clearing to take place is low impact and of a small scale and will not significantly impact on 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 Conservation Through Reserves Committee (1978)
DEWHA, Australian Heritage Database (2008)
GIS Database
- Environmentally Sensitive Areas

(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 situated within a Public Drinking Water Source Area (PDSWA) (GIS Database).

Groundwater within the application area is fresh to brackish, between 1,000 - 3,000 milligrams per litre of dissolved solids (GIS Database). Given the large size of the Warburton basin catchment area (17,195,989 hetares) and the relatively small size of the proposed clearance area (six hectares) it is unlikely that the clearing project will impact on the quality of the groundwater (GIS Database).

The application area is relatively flat and is not associated with any permanent or ephemeral watercourses or water bodies (GIS Database).

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

Methodology GIS Database
- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Area

(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

According to available databases no floodways or areas of flooding exist within the application area (GIS Database). The area shows a gentle relief in topography (Metals Exploration, 2008). Given the relatively small size of the application area and the transmissive nature of the sandy site, clearing is unlikely to cause or exacerbate the incidence of flooding (Metals Exploration, 2008).

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

Methodology Metals Exploration (2008)
GIS Database
- FMD Floodplain Map Index

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

Comments

There is one native title claim over the application area (GIS Database). This claim (WC04/003) has been registered with the National Native Title Tribunal on behalf of the claimant group (GIS Database). 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 registered Sites of Aboriginal 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 Sites of Aboriginal 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.

Methodology GIS Database:
-Aboriginal Sites of Significance
-Native Title Claims

4. Assessor's comments

Comment

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

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

5. References

Australian Natural Resource Atlas (ANRA) (2008), Biodiversity Assessment Great Victoria Desert www.anra.gov.au/topics/vegetation/assessment/wa/ibra-great-victoria-desert.html. Published by the Department of the Environment and Water Resources.

Barton and Cowan (2001), 'Great Victoria Desert 3 (GVD3 – Great Vectoria Deser Eastern subregion)', in a Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002. Report Published by CALM, Perth, Western Australia

Department of Natural Resources and the Arts, Northern Territory Government (2008), Threatened Species of the Northern Territory - Australian Bustard Ardeotis australis

Department of the Environment, Water, Heritage and the Arts (2008), Merops ornatus - Rainbow Bee-eater. West Australian Government, viewed on 18/7/08 at www.environment.gov.au.

Department of the Environment, Water, Heritage and the Arts, Australian Heritage Database (2008) Ranges of the Western Desert, Laverton-Warburton Rd, Warburton via Laverton, WA, Australia. Http://www.environment.gov.au/cgi-bin/ahdb/search.pl

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Metals Exploration (2008). Application for clearing permit, supporting document, Western Australia.

Outback Ecology (2008), Wingellina Nickel Project, unpublished report for Metals Exploration Limited, Western Australia.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status.

Resource Management Technical Report 249. Department of Agriculture, Western Australia.
West Australian Museum (2008), FaunaBase and WA FaunaList website, viewed 11/6/2008 at
http://www.museum.wa.gov.au/faunabase/prod/index.htm

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.