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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3138/1
Permit type: Purpose Permit

1.2. Proponent details

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

1.3. Property details

Property: *Iron Ore (Hamersley Range) Agreement Act 1963*, Mineral Lease 4SA (AML 70/4)
Local Government Area: Shire Of Ashburton
Colloquial name: McKenna's Reef Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
40		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 Vegetation within the application area has been mapped at a 1:250,000 scale as the following Beard Vegetation Association (GIS Database, Shepherd et al., 2001):

567: Hummock grasslands, shrub steppe; mulga & kanji over soft spinifex & *Triodia basedowii*.

Rio Tinto Iron Ore undertook a vegetation survey of the application area in October 2008. The following 15 vegetation units were identified within the application area (Rio Tinto Iron Ore, 2009):

1. Mixed *Acacia* woodland/shrubland over *Triodia* steppe;
2. Mature *Eucalyptus/Acacia* woodland/shrubland over *Triodia* steppe;
3. Mixed *Acacia* woodland/shrubland with mixed *Eucalyptus* mallee over *Triodia* steppe;
4. Stony hill slope/stony undulating plain Mulga groves;
5. *Eucalyptus* mallee scrub over *Triodia* steppe;
6. Rehabilitated area – *Acacia* shrubland;
7. Disturbed ground – no rehabilitation (tracks dirt piles, windrows, regrowth from old clearing);
8. Disturbed/rehabbed track – medium to tall mixed *Acacia* shrubland;
9. Disturbed/rehabbed track crossing creek or mallee scrub – tall mixed *Acacia* shrubland;
10. Minor creekline – Eucalypt woodland/*Acacia* shrubland;
11. Minor creekline – Eucalypt mallee/*Acacia* shrubland;
12. Minor creekline – Eucalypt woodland/*Acacia* shrubland with *Eucalyptus victrix*;
13. Rocky hill slopes and crests – *Acacia* shrubland over *Triodia* steppe;
14. Moderate rocky hill slopes/crests – *Acacia* shrubland over *Triodia* steppe; and
15. Rocky hill slope valley with minor drainage line (HSD) – *Acacia* shrubland over *Triodia* steppe.

Clearing Description Hamersley Iron has applied to clear up to 40 hectares within an application area of approximately 40.8 hectares for the purpose of mineral production (GIS Database). The proposal includes the development of a new pit and waste dump (Rio Tinto Iron Ore, 2009). Clearing will be by mechanical means.

Vegetation Condition Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

to

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

Comment The vegetation condition was assessed by botanists from Rio Tinto Iron Ore. The vegetation conditions were described using a scale based on Trudgen (1988) and have been converted to the corresponding conditions from the Keighery (1994) scale.

3. Assessment of application against clearing principles

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

Comments

Proposal is not likely to be at variance to this Principle

The application area occurs within the Hamersley (PIL3) Interim Biogeographic Regionalisation of Australia (IBRA) sub-region (GIS Database). At a broad scale vegetation can be described as Mulga low woodland over bunch grasses on fine textured soils in valley floors, and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges (CALM, 2002). The vegetation within the application area has been mapped as Beard Vegetation Association 567 which is common throughout the bioregion, with approximately 100% of the Pre-European extent remaining (GIS Database; Shepherd et al., 2001).

A flora and vegetation survey was undertaken within the application area by Rio Tinto Iron Ore botanists in October 2008. This survey identified 15 vegetation types within the application area (Rio Tinto Iron Ore, 2009). The condition of these vegetation types ranged from 'excellent' to 'completely degraded'.

A total of 106 taxa from 27 families and 46 genera were recorded from the flora survey area (Rio Tinto Iron Ore, 2009). The most common families were the Acacia family (Mimosaceae), the Grass family (Poaceae) and the Eucalypt family (Myrtaceae) (Rio Tinto Iron Ore, 2009). All of the species recorded were typical of stony upper plains and drainage floor habitat and the Tom Price locality (Rio Tinto Iron Ore, 2009). Despite there being areas of previous disturbance, no weed species were recorded within the application area (Rio Tinto Iron Ore, 2009).

A search by the assessing officer of the Department of Environment and Conservation's (DEC's) Naturemap database identified 8 amphibian, 68 bird, 22 mammal and 75 reptile species that have been previously recorded within a 40 kilometre radius of the application area (DEC, 2009). Given that the vegetation within the application area is common throughout the local region and is in close proximity to existing mining operations at Tom Price, it is not likely that it has a higher level of faunal diversity than surrounding undisturbed areas.

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

Methodology

CALM (2002)
DEC (2009)
Rio Tinto Iron Ore (2009)
Shepherd et al.(2001)
GIS Database
- Interim Biogeographic Regionalisation of Australia (subregions)
- Pre-European Vegetation

(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 formal fauna surveys have been carried out over the application area. A fauna habitat assessment was carried out over the application area by botanists from Rio Tinto Iron Ore. Four different fauna habitat types have been identified within the application area (Rio Tinto Iron Ore, 2009):

1. stony undulating footslopes/plains;
2. slightly rocky hill crests and slopes;
3. flat to undulating plains; and
4. riparian woodland.

Fauna habitats 1-3 are common throughout the Pilbara region and are not considered as providing significant habitat for indigenous fauna (Rio Tinto Iron Ore, 2009). Riparian woodland habitat can provide significant fauna habitat due to increased structural complexity of vegetation and moist microclimatic conditions. However, this habitat and more substantial creek lines are well represented in the Tom Price region (Rio Tinto Iron Ore, 2009).

A desktop review for fauna species of conservation significance was carried out by Rio Tinto Iron Ore (2009), whereby 20 fauna species of conservation significance were identified as potentially occurring within the application area (Rio Tinto Iron Ore, 2009). Whilst some of these species may utilise the application area, given that the habitat features are common throughout the local region it is not likely that the application area represents significant habitat for indigenous fauna.

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

Methodology Rio Tinto Iron Ore (2009)

(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

A flora survey of the application area was conducted by botanists from Rio Tinto Iron Ore (Rio Tinto Iron Ore, 2009). No Declared Rare Flora (DRF) was recorded within the application area (Rio Tinto Iron Ore, 2009). One species of Priority Flora was recorded within the application area (Rio Tinto Iron Ore, 2009):

- *Eremophila magnifica* subsp. *magnifica* (P4)

Eremophila magnifica subsp. *magnifica* was recorded at four locations 30 – 40 metres apart in the south-east corner of the application area, with a cumulative total of 30 – 46 individuals being recorded from across all the locations (Rio Tinto Iron Ore, 2009). Due to the survey method and the relative abundance at the Tom Price locality, a range of individuals was recorded rather than exact numbers. This species is known to occur from at least 71 locations, 19 of these being within the vicinity of Tom Price (Rio Tinto Iron Ore, 2009). Over 550 individuals of this species have been recorded in the Tom Price Area (Rio Tinto Iron Ore, 2009). *Eremophila magnifica* subsp. *magnifica* is found in a linear distribution from north-west of Newman to Karijini National Park and extending south-east to Tom Price (Rio Tinto Iron Ore, 2009). Given the relatively small number impacted by this proposal, and the fact this species is not restricted to the Tom Price area, it is not likely to be significantly impacted by the proposed clearing.

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

Methodology

Rio Tinto Iron Ore (2009)

(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

According to available databases, there are no Threatened Ecological Communities (TEC's) within the application area (GIS Database). No vegetation communities described as a TEC were recorded during the botanical survey of the application area (Rio Tinto Iron Ore, 2009). The nearest known TEC is located approximately 35 kilometres north-east of the application area (GIS Database).

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

Methodology

Rio Tinto Iron Ore (2009)
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 falls within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 99.9% of the Pre-European vegetation remains (see table) (GIS Database; Shepherd et al., 2001).

The vegetation of the application area has been mapped as;

- Beard Vegetation Association 567: Hummock grasslands, shrub steppe; mulga & kanji over soft spinifex & *Triodia basedowii.*

According to Shepherd et al. (2001) approximately 100% of Beard Vegetation Association 567 remains at both the state and bioregional level. Therefore the area proposed to clear does not represent a remnant of native vegetation within an area that has been extensively cleared.

While a small percentage of the vegetation types within the Pilbara bioregion are protected within conservation reserves, Beard Vegetation Association 567 is adequately protected within the bioregion with 22.3% within Class I-IV reserves (see table). As a result, the conservation of vegetation associations within the bioregion is not likely to be impacted by this proposal.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and post clearing %)*
IBRA Bioregion – Pilbara	17,804,164	17,794,651	~99.9	Least Concern	6.3 (6.3)
Beard veg assoc. – State					
567	777,516	777,516	~100	Least Concern	22.3 (22.3)
Beard veg assoc. – Bioregion					
567	776,832	776,832	~100	Least Concern	22.3 (22.3)

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

Options to select from: Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment 2002)

Presumed extinct	Probably no longer present in the bioregion
Endangered	<10% of pre-European extent remains
Vulnerable	10-30% of pre-European extent exists
Depleted	>30% and up to 50% of pre-European extent exists
Least concern	>50% pre-European extent exists and subject to little or no degradation over a majority of this area

Based on the above, the proposal 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 at variance to this Principle

According to available databases, the application area contains several ephemeral drainage lines (GIS Database). The botanical survey over the application area identified four vegetation types associated with a watercourse within the application area (Rio Tinto Iron Ore, 2009):

1. Minor creekline – Eucalypt woodland/*Acacia* shrubland;
2. Minor creekline – Eucalypt mallee/*Acacia* shrubland;
3. Minor creekline – Eucalypt woodland/*Acacia* shrubland with *Eucalyptus victrix*; and
4. Rocky hill slope valley with minor drainage line (RSD) – *Acacia* shrubland over *Triodia* steppe.

Rio Tinto Iron Ore (2009) advise that these ephemeral watercourses only ever flow following heavy rainfall events and are dry for the majority of the year. The above mentioned vegetation types occupy approximately 3.72 hectares of the application area and considered common within the local area (Rio Tinto Iron Ore, 2009). Provided surface water flow patterns are not modified as a result of the clearing, the clearing of these vegetation types is not likely to have a significant impact on any watercourses within the application area.

Given the application area includes ephemeral drainage lines, the proposed clearing is at variance to this Principle.

Methodology Rio Tinto Iron Ore (2009)
GIS Database
- 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

According to available databases, the application area is comprised of the Platform land system (GIS Database). This land system is characterised by narrow raised plains and extensive dissected slopes with hard spinifex and shrubs (Payne et al., 1988). The vegetation of this system is generally not prone to degradation as it is not preferred by livestock and is of very little use for pastoralism (Van Vreeswyk et al, 2004). This system is not susceptible to erosion (Van Vreeswyk et al., 2004).

The soil pH of the application area is 6.0 – 6.5 and there has been no recorded occurrence of acid sulphate soils within the application area (CSIRO, 2009). The average annual evaporation is over 8 times the average annual rainfall, so it is unlikely the proposed clearing will result in increased groundwater recharge causing raised saline tables (GIS Database). The application area is mostly flat, with small areas of slopes (GIS Database). These slopes have a rocky soil and the clearing of vegetation would not likely lead to increased erosion (Rio Tinto Iron Ore, 2009).

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

Methodology
CSIRO (2009)
Payne et al. (1988)
Van Vreeswyk et al. (2004)
GIS Database
- Evaporation Isopleths
- Rainfall, Mean Annual
- Rangeland Land System Mapping
- Topographic Contours, Statewide

(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
According to available databases, the application area is not located within a conservation area or any DEC managed lands (GIS Database). The nearest conservation area is Karijini National Park located approximately 9 kilometres east of the application area (GIS Database). Based on the distance between the application area and the National Park, the proposed clearing is not likely to impact on the environmental values of any conservation areas.

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

Methodology
GIS Database
- CALM Managed Lands and Waters

(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).

Rainfall in this area is mainly restricted to a wet summer season, where precipitation can be variable. Rain can be either intense falls associated with cyclonic events or scattered falls associated with local thunderstorms (Rio Tinto Iron Ore, 2009). The average annual evaporation rate for the application area is 3400 millimetres and the average annual rainfall is 400 millimetres (GIS Database). Therefore, during normal rainfall events surface water in the application area is likely to evaporate quickly. However, substantial rainfall events create surface sheet flow which is likely to have a higher level of sediments. During normal rainfall events, the proposed clearing would not likely lead to an increase in sedimentation of watercourses within and outside the application area.

The groundwater salinity within the application area is between 500 – 1000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be potable water. Given the size of the area to be cleared (40 hectares) compared to the size of the Hamersley groundwater province (10,166,832 hectares), the proposed clearing is not likely to cause salinity levels within the application area to alter significantly (GIS Database).

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

Methodology
Rio Tinto Iron Ore (2009)
GIS Database
- Evaporation Isopleths
- Groundwater Provinces
- Groundwater Salinity, Statewide
- Public Drinking Water Source Areas (PDWSA's)
- Rainfall, Mean Annual

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

Comments
Proposal is not likely to be at variance to this Principle
The application area experiences a semi-arid to semi-tropical climate with a wet summer season and a dry

winter season (Rio Tinto Iron Ore, 2009). Most rainfall is received during the wet season, but falls can be variable (BoM, 2009). Rain can either be sporadic (local thunderstorms) or heavy and intense (cyclonic events). It is likely during times of intense rainfall there may be some localised flooding in adjacent areas. However, during normal rainfall events surface water in the application area is likely to be evaporated quickly. Given the small area to be cleared (20 hectares) in relation to the size of the Ashburton River catchment area (7,877,743 hectares), the proposed clearing is not likely to lead to an increase in flood height or duration (GIS Database).

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

Methodology BoM (2009)
Rio Tinto Iron Ore (2009)
GIS Database
- Hydrographic Catchments - Catchments

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

Comments

The clearing permit application was advertised by the Department of Mines and Petroleum, inviting submissions from the public. There was one submission received stating no objection to the proposed clearing.

There is one native title claim over the area under application; WC97/089 (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.*

According to available databases, there is one Aboriginal Site of Significance within the application area (GIS Database). It is the proponents' 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 proponents' 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 at variance to Principle (f), is not likely to be at variance to Principles (a), (b), (c), (d), (g), (h), (i) and (j) and is not at variance to Principle (e).

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

5. References

Bureau of Meteorology, (2009) BOM Website - Climate Averages by Number, Averages for Paraburdoo Aero. Available online at: http://www.bom.gov.au/climate/averages/tables/cw_007185.shtml accessed on 18 June 2009.

Commonwealth Scientific and Industrial Research Organisation (2009) Australian Soil Resource Information System. Available online at: http://www.asris.csiro.au/index_ie.html Accessed on 18 June, 2009.

DEC (2009) NatureMap - Department of Environment and Conservation and Western Australian Museum. http://naturemap.dec.wa.gov.au/default.aspx (Accessed 30 June 2009)

Department of Conservation and Land Management (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions.

Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

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

Payne, A.L., Mitchell, A.A. and Holman, W.F. (1988) An Inventory and Condition Survey of Rangelands in the Ashburton River Catchment, Western Australia. Department of Agriculture, Western Australia.

Rio Tinto Iron Ore (2009) McKenna's Reef Deposit (MRD), Tom Price (AR-08-04001) Native Vegetation Clearing Permit Report. Unpublished report for Hamersley Iron Pty Ltd, 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.

Trudgen M.E. (1988) A Report on the Flora and Vegetation of the Port Kennedy Area. Unpublished report prepared for

Bowman Bishaw and Associates, West Perth.
Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P. and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

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.