



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3527/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Focus Minerals Ltd**

1.3. Property details

Property: Mining Lease 15/646
Mining Lease 15/1294
Mining Lease 15/660
Mining Lease 15/958
Mining Lease 15/1114
Mining Lease 15/1293

Local Government Area: Shire of Coolgardie
Colloquial name: Open Pits 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

Beard Vegetation Associations have been mapped at a 1:250,000 scale for the whole of Western Australia and are useful to look at vegetation extent in a regional context. The following Beard Vegetation Association is located within the proposed clearing area (GIS Database):

9: Medium woodland; coral gum (*Eucalyptus torquata*) & Goldfields blackbutt (*Eucalyptus leseouefii*).

A flora and vegetation survey of the application area was undertaken by van Etten in October 2009. The following vegetation communities were identified within the application area (van Etten, 2009):

- Woodland of Silver Gimlet (*Eucalyptus campaspe*) – Mirret (*Eucalyptus celastroides*) on undulating Greenstone rises and slopes;

- Open Woodland of Salmon Gum (*Eucalyptus salmonophloia*) on broad valley system;

- Woodland of *Eucalyptus griffithsii* on Greenstone hilltops;

- Woodland of Cleland's blackbutt (*Eucalyptus clelandii*) on Greenstone rises with quartz and calcareous soils; and

- Mine site disturbance and rehabilitation.

Clearing Description

Focus Minerals has applied to clear up to 40 hectares within an application area of approximately 651.2 hectares for the purpose of mineral production. The application area is located approximately two kilometres south-east of Coolgardie (GIS Database).

The proposal includes the construction of three pits, a waste landform, facilities and associated infrastructure (Focus Minerals, 2009).

Clearing will be by mechanical means.

Vegetation Condition

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

to

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Comment

The vegetation condition has been assessed by van Etten (2009). The vegetation condition was described using a scale adapted from Keighery (1994) and has 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 Eastern Goldfields subregion of the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). At a broad scale vegetation can be described as

Mallees, Acacia thickets and shrubheaths on sandplains with diverse Eucalypt woodlands occurring around salt lakes, on ranges and in valleys (CALM, 2002).

A total of 64 flora taxa from 31 genera and 19 families were recorded during the flora survey of the application area (van Etten, 2009). There were three weed species recorded within the application area (van Etten, 2009). No Declared Rare Flora or Priority Flora species were recorded within the application area (van Etten, 2009).

Eucalyptus woodlands have been identified as having a high species and ecosystem diversity within the Eastern Goldfields subregion (CALM, 2002). Vegetation communities comprising Eucalyptus woodlands have been identified within the application area (van Etten, 2009). The condition of the vegetation within the application area has been described as ranging from 'very good' to 'degraded' with the majority of the application area being in 'good' condition (van Etten, 2009). The application area has experienced previous disturbances such as the cutting of trees and mining activities (van Etten, 2009).

The fauna habitat of the application area has been described as being 'highly degraded' apart from small sections on the southern boundary that is 'good' fauna habitat (Terrestrial Ecosystems, 2009). The vertebrate fauna assemblages present within the application area would generally be a poor representation of what once existed and what exists in relatively undisturbed similar habitat within the bioregion (Terrestrial Ecosystems, 2009). Given this, the application area is not likely to possess a high level of faunal diversity.

The ecological functional value of the application area has been assessed as low (Terrestrial Ecosystems, 2009) and given the previous disturbances within the area, it is not likely to have a high level of biological diversity.

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

Methodology CALM (2002)
Terrestrial Ecosystems (2009)
van Etten (2009)
GIS Database
- IBRA WA (Regions – Sub Regions)

(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 Level One vertebrate fauna survey was conducted over the application area by Terrestrial Ecosystems. This included a desktop review and site visit on 1 October 2009 (Terrestrial Ecosystems, 2009). The survey identified three broad fauna habitat types (Terrestrial Ecosystems, 2009):

1. Large patches containing a few scattered trees and low shrubs (mostly *Atriplex spp.* and *Maireana spp.*) and grasses. Some of these in the northern sections are the result of earlier rehabilitation programs;
2. Eucalypt woodlands of varying densities that are mostly around the periphery or the southern section of the project area. Leaf litter is generally scarce except immediately under Blackbutt (*Eucalyptus lesouefii*) and other well established eucalypts and acacias; and
3. Large areas of disturbed habitat, including pits, waste dumps and mining infrastructure.

The majority of the application area has been classified as having 'highly degraded' fauna habitat with only small sections in the southern section that could be classified as 'good' fauna habitat (Terrestrial Ecosystems, 2009). The original fauna habitat from the application area is abundant within the goldfields (Terrestrial Ecosystems, 2009).

There is the potential for a number of conservation significant fauna species to be present within the application area. The following species have all been observed during fauna surveys of adjacent areas (Terrestrial Ecosystems, 2009):

- Malleefowl (*Leipoa ocellata* - 'Vulnerable' under the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* and Schedule 1 'Fauna that is rare or is likely to become extinct', *Wildlife Conservation (Specially Protected Fauna) Notice 2008*);
- Western Rosella (*Platycercus icterotis xanthogenys* - Schedule 1 'Fauna that is rare or is likely to become extinct', *Wildlife Conservation (Specially Protected Fauna) Notice 2008*);
- Shy Heathwren (*Hylacola cauta whitlocki* – DEC Priority 4);
- Crested Bellbird (*Oreoica gutturalis gutturalis* – DEC Priority 4); and
- White Browed Babbler (*Pomatostomus superciliosus ashbyi* – DEC Priority 4 listing).

No evidence of Malleefowl was found during the survey and due to the lack of leaf litter and material for mound construction it is unlikely that the Malleefowl will be significantly impacted by the proposed clearing. The application area is not likely to represent significant habitat for the other birds listed above, and these birds will most likely move to adjacent areas once clearing commences (Terrestrial Ecosystems, 2009).

Given the extent of the previous disturbance and habitat degradation, the proposed clearing is not likely to significantly impact indigenous fauna in a local or bioregional context (Terrestrial Ecosystems, 2009). Given the level of degradation present, an effective rehabilitation program is likely to provide habitat of similar or better quality than that which exists in many areas (Terrestrial Ecosystems, 2009).

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

Methodology Terrestrial Ecosystems (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

According to available databases, there are no records of Declared Rare Flora (DRF) or Priority Flora species within the application area (GIS Database). van Etten (2009) conducted a flora survey over the application area on 4 November 2009. No DRF or Priority Flora was recorded within the application area (van Etten, 2009).

There are two records of the Priority 1 flora species *Acacia websteri* within two kilometres of the application area (GIS Database). Searches of the application area failed to locate this species and it is found in red sands, clays or loams which weren't recorded within the application area (van Etten, 2009; Western Australian Herbarium, 2010).

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

Methodology van Etten (2009)
Western Australian Herbarium (2010)
GIS Database
- Declared Rare and Priority Flora List

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

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

According to available databases, there are no Threatened Ecological Communities (TEC's) within the application area (GIS Database). No TEC's were identified during the vegetation survey (van Etten, 2009).

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

Methodology van Etten (2009)
GIS Database
- Threatened Ecological Sites
- Threatened Ecological Sites Buffered

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

Comments Proposal is not at variance to this Principle

The application area falls within the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion which remains largely uncleared, with approximately 98.2% of the Pre-European vegetation remaining (see table) (GIS Database; Shepherd, 2007).

The application area has been mapped as Beard Vegetation Association 9: medium woodland; coral gum (*Eucalyptus torquata*) & Goldfields blackbutt (*Eucalyptus lesouefii*).

According to Shepherd (2007) approximately 99.7% of Beard Vegetation Association 9 remains at both a state and bioregional level. The vegetation communities observed during the vegetation survey appear common in the Coolgardie bioregion, especially within the area between Kalgoorlie and Coolgardie (van Etten, 2009).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and post clearing %)*
IBRA Bioregion – Coolgardie	12,912,204	12,707,619	~98.42	Least Concern	10.87 (11.04)
Beard veg assoc. – State					
9	240,509	239,895	~99.7	Least Concern	1.3 (1.3)
Beard veg assoc. – Bioregion					
9	240,442	239,835	~99.7	Least Concern	1.3 (1.3)

* Shepherd (2007)

** 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 (2007)
van Etten (2009)
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 may be at variance to this Principle

According to available databases, there are a number of ephemeral watercourses within the application area (GIS Database). There is also a perennial lake within the application area (GIS Database). This lake appears to be the result of dam construction and therefore artificial in nature. Analysis of aerial imagery shows that this lake is situated next to an existing pit and appears to no longer exist (GIS Database). Aerial imagery also shows that one of the ephemeral watercourses passes directly through this pit and has already been disturbed (GIS Database).

The vegetation survey did not identify any vegetation types associated with a watercourse within the application area (van Etten, 2009). None of the vegetation types are restricted to the areas where these ephemeral watercourses are located (van Etten, 2009). Given the proposed clearing is 40 hectares within a larger area of approximately 651.2 hectares it is not expected that all ephemeral watercourses will be impacted.

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology van Etten (2009)
GIS Database
- Hydrography, linear
- Kalgoorlie 1.4m Orthomosaic – Langate 2002

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

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

The application area is located within the Norseman Soil-Landscape Zone (Tille, 2006). This zone is characterised by undulating plains and uplands (with some sandplains and salt lakes) on granitic rocks of the Yilgarn Craton (Tille, 2006).

The majority of the application area has soils that are deep calcareous earths, with other areas being mainly shallow skeletal and rocky soils (van Etten, 2009). Calcareous earths are moderately susceptible to wind sheeting and erosion by water (White, 2005). Rocky and skeletal soils have a low susceptibility to erosion,

however, disturbed soils may scour with storm runoff (White, 2005). Wind roses from nearby Kalgoorlie-Boulder weather station indicate low wind speeds which would minimise the potential for wind erosion. The application area has already been degraded by previous mining and grazing activities, and the proposed clearing is not likely to cause significant additional land degradation (Focus Minerals, 2009).

The pH of the surface soil ranges from 7.0 – 7.5 and there has been no known occurrence of acid sulphate soils (CSIRO, 2009). The application area has an annual evaporation rate of over nine times the average annual rainfall (BoM, 2010; GIS Database). Based on this information, recharge to the groundwater would be expected to be minimal, thereby reducing the likelihood of salinity increasing as a result of the proposed clearing.

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

Methodology BoM (2010)
CSIRO (2009)
Focus Minerals (2009)
Tille (2006)
van Etten (2009)
White (2005)
GIS Database
- Evaporation Isopleths

(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 any conservation area or DEC managed land (GIS Database). The nearest known conservation area is the Kangaroo Hills Timber Reserve located approximately 250 metres west of the application area (GIS Database).

The application area is not expected to have a significant impact on the Kangaroo Hills Timber Reserve. The application area currently does not provide any important ecological linkage or fauna movement corridor, so linkages and fauna movement to the Kangaroo Hills Timber Reserve will not be adversely affected (Terrestrial Ecosystems, 2009).

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

Methodology Terrestrial Ecosystems (2009)
GIS Database
- DEC Tenure

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

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

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

The average annual rainfall for Coolgardie is 270.7 millimetres and the average annual evaporation rate is 2,600 – 2,800 millimetres (BoM, 2010; 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 the application area. Focus Minerals (2009) plan to reduce the impact to surface water by diverting drainage lines and sheet wash around mining areas.

The groundwater salinity within the application area ranges from 14,000 – 35,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be saline. Given the groundwater is already saline, any clearing within the application area is not likely to alter the existing groundwater quality.

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

Methodology BoM (2010)
Focus Minerals (2009)
GIS Database
- Evaporation Isopleths
- Groundwater Salinity, Statewide
- Public Drinking Water Source Areas (PDWSA's)

(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

With an average annual rainfall of 270.7 millimetres and an average annual evaporation rate between 2,600 – 2,800 millimetres there is likely to be little surface flow during normal seasonal rains (BoM, 2010; GIS Database). Given there is little surface flow, the proposed clearing of 40 hectares within a 651.2 hectare project area is not likely to cause or increase the incidence of flooding.

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

Methodology BoM (2010)
GIS Database
- Evaporation Isopleths

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. One submission was received stating no objection to the proposal provided no clearing occurs within the Coolgardie town site boundary. The submission also requested that Focus Minerals set aside any large timber for local residents to use for firewood. The submitter should liaise with the proponent to negotiate this request.

There are two native title claims over the area under application: WC98/027 and WC99/029 (GIS Database). These claims have been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenements have 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 are three Aboriginal Sites of Significance within the application area (GIS Database). Focus Minerals has commissioned an Aboriginal heritage survey over the application area. The three sites shown to be within the application area were investigated, and it was concluded that while the buffer of the sites are within the application area, the sites themselves are not (R & E O'Connor, 2009). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged throughout 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 R & E O'Connor (2009)
GIS Database
- Aboriginal Sites of Significance
- Native Title Claims

4. Assessor's comments

Comment

The proposal has been assessed against the Clearing Principles, and the proposed clearing may be 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 for the purposes of weed management, rehabilitation, record keeping and reporting.

5. References

- Bureau of Meteorology (2010) BOM Website - Climate Averages by Number, Averages for Coolgardie. Available online at: http://www.bom.gov.au/climate/averages/tables/cw_012018.shtml Accessed on 26 January 2010.
- 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 25 January, 2010.
- 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.
- Focus Minerals (2009) Application for a Clearing Permit (Purpose Permit). Unpublished report by Focus Minerals Limited, December 2009.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

- R & E O'Connor (2009) Report on an Aboriginal Heritage Survey of M15/958 and Adjacent Focus Minerals Limited Tenure. Unpublished report for Focus Minerals Limited by R & E O'Connor Pty Ltd, November 2009.
- Shepherd, D.P. (2007) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- Terrestrial Ecosystems (2009) Level 1 Fauna Risk Assessment for Focus Minerals Coolgardie Gold Project Area. Unpublished report for Focus Minerals Limited, October 2009.
- Tille, P. (2006) Soil-landscapes of Western Australia's Rangelands and Arid Interior. Technical Report 313. Department of Agriculture and Food, Western Australia. ISSN 1039-7205.
- van Etten (2009) Flora and Vegetation of Focus Minerals Limited's Open Pits Project Area, Coolgardie, Western Australia. Unpublished report for Focus Minerals Limited, November 2009.
- Western Australian Herbarium (2010) Florabase - The Western Australian Flora. Department of Environment and Conservation. Available online at <http://florabase.dec.wa.gov.au/> Accessed on 21 January 2010.
- White, A. (2005) The Geology and Soils of the Southern Alice Springs District. Agnote 316. Department of Primary Industries, Northern Territory.

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.