



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5184/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Blue Tiger Mines Pty Ltd

1.3. Property details

Property: Mining Lease 15/26
Mining Lease 15/645
Mining Lease 15/1272
Local Government Area: Shire of Coolgardie
Colloquial name: Gunga West Open Pit Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
14		Mechanical Removal	Mineral Production and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 20 September 2012

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 for the whole of Western Australia and are useful to look at vegetation in a regional context. The following Beard vegetation association is located within the application area (GIS Database):

9: Medium woodland; coral gum (*Eucalyptus torquata*) and goldfields blackbutt (*E. lesouffii*).

The application area was covered by a vegetation survey by Rally Revegetation and Environmental Services Pty Ltd (Rally Revegetation) in May 1998 (Rally Revegetation, 1998). The following three major vegetation units were identified within the application area:

1. Mixed *Eucalyptus clelandii/salubris* open woodland over *Eremophila* ssp and *Senna artemisioidea* ssp. middle story with mixed species of low shrubs;

2. *Eucalyptus celastroides* open woodland over *Acacia* and *Atriplex* spp shrubs; and

3. *Eucalyptus griffithsi/celastroides* open woodland over *Eremophila*, *Acacia* and *Dodonaea* middle story and under story.

Clearing Description

Blue Tiger Mines Pty Ltd (BTM) has applied to clear 14 hectares within an application area of approximately 31.7 hectares (GIS Database). The application area is located approximately 6 kilometres north east of Coolgardie (GIS Database).

The purpose of the application is to develop the Gunga West Open Pit Project. This includes an open pit, run of mine pad, haul roads/access roads, waste dump, workshop/offices/ablutions and abandonment bund (BTM, 2012). Clearing will be by mechanical means. Vegetation and topsoil will be stockpiled for use in rehabilitation.

Vegetation Condition

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

to

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

Comment

Vegetation condition is based on information provided by BTM (2012) and aerial imagery (GIS Database).

No previous surface mining has occurred within the application area, however, shallow historical underground workings and exploration/prospecting disturbances have occurred (BTM, 2012). According to BTM (2012), 5.90 hectares has previously been cleared on Mining Leases 15/26 and 15/1272 for historical drilling (approximately 2001 to 2002), old workings and/or resource/sterilisation drilling in 2012.

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 located within the Eastern Goldfields subregion of the Coolgardie Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The vegetation is broadly described as Mallees, *Acacia* thickets and shrubheaths on sandplains (CALM, 2002). Diverse *Eucalyptus* woodlands occur around salt lakes, on ranges, and in valleys and have been identified as having high species and ecosystem diversity (CALM, 2002).

The vegetation survey identified three major vegetation communities comprising *Eucalyptus* open woodland. According to Rally Revegetation (1998), these vegetation communities appear to be well represented across the region.

A total of 50 species from 20 genera belonging to 16 families were recorded during the vegetation survey (Rally Revegetation, 1998). The area has been disturbed to varying degrees by historical mining activity and drilling programs and consists of shallow historical underground workings (no previous surface mining) and exploration/prospecting disturbances (BTM, 2012). Aerial imagery shows disturbance has occurred in the north-eastern portion of the application area (GIS Database). BTM (2012) states that the layout of project infrastructure has been strategically designed to utilise existing cleared area where possible and avoid dense stands of native vegetation, and vegetation associated with minor storm water/drainage lines.

The vegetation survey recorded two weed species including Wards Weed (*Carrichtera annua*) and Medic Burr (*Medicago polymorpha*) and noted that additional weed species are likely to be present (Rally Revegetation, 1998). Potential impacts from weeds as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Available databases show no Threatened or Priority Flora or Threatened or Priority Ecological Communities have been recorded within the application area (GIS Database). The vegetation survey listed several Threatened and Priority Flora known to occur within the area, however, none of these species were recorded during the survey (Rally Revegetation, 1998). A search within ten kilometres of the application area on the Department of Environment and Conservation (DEC) online database Naturemap returned records for two Priority Flora species not listed by Rally Revegetation (1998) including *Lepidium merrallii* (Priority 2) and *Eremophila caerulea* subsp. *merrallii* (Priority 4) (DEC, 2012). However, a review of the *Lepidium merrallii* record shows it is a historical record from 1895 and could have occurred over a wide area (i.e. the nearest named location is listed as Coolgardie) (Western Australian Herbarium, 2012). *Eremophila caerulea* subsp. *merrallii* is known from 21 records and has a widespread distribution including records in the Avon Wheatbelt, Coolgardie and Mallee bioregions (Western Australian Herbarium, 2012). The decision report for nearby clearing permit CPS 3391/1 was also reviewed as this permit is located approximately 800 metres south of the application area and appears to contain comparable habitat (GIS Database). The decision report states that 'flora surveys conducted in August 2009, September 2008 and October 2008 identified no rare flora and no priority species within the project area' (DEC, 2010).

According to Naturemap, six mammal, 82 bird, three amphibian and 41 reptile species have been recorded within a 20 kilometre radius of the application area (DEC, 2012). According to BTM (2012), the habitats present are common on both a local and regional scale. Based on this and given the historical disturbance it is unlikely the application area comprises a higher level of faunal diversity than surrounding areas.

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

Methodology

BTM (2012)
CALM (2002)
DEC (2010)
DEC (2012)
Rally Revegetation (1998)
Western Australian Herbarium (2012)
GIS Database:
- IBRA WA (Regions – Sub Regions)
- Kalgoorlie 50cm Orthomosaic – Landgate 2006
- Threatened and Priority Flora
- Threatened Ecological Sites Buffered

(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 may be at variance to this Principle

A fauna survey has not been conducted over the application area, however, a threatened fauna database search and opportunistic fauna sightings were noted during the vegetation survey (Rally Revegetation, 1998). This was limited to several kangaroos and a variety of bird species with evidence of emus noted (Rally Revegetation, 1998).

Based on the vegetation survey, the application area consists of Eucalypt open woodland with varying middle story and under story. The application area is gently undulating with an overall slope to the south and has two minor non-perennial watercourses intersecting it (Goldfields Mining Services, 2012, GIS Database). Observations by Goldfields Mining Services (2012) indicate there are no outcrops in the application area, just scree material derived from elevated areas that has slowly moved down the slopes over time. BTM (2012) notes the habitats present are common on both a local and regional scale. BTM (2012) states that significant trees (especially those with habitat hollows) and shrubs and areas of vegetation, will be avoided as much as is practicable during clearing activities.

According to Naturemap, six mammal, 82 bird, three amphibian and 41 reptile species have been recorded within a 20 kilometre radius of the application area (DEC, 2012). Of these the following five conservation significant fauna species have been recorded:

- Malleefowl (*Leipoa ocellata*) – Vulnerable; Schedule 1;
- Sharp-tailed Sandpiper (*Calidris acuminata*) – Marine; Migratory under EPBC Act; Schedule 3;
- Common Greenshank (*Tringa nebularia*) - Marine; Migratory under EPBC Act; Schedule 3;
- Carpet Python (*Morelia spilota* subsp. *imbricata*) - Schedule 4; and
- Shy Heathwren (western) (*Hylacola cauta* subsp. *whitlocki*) - Priority 4.

The database search returned three records of Malleefowl located approximately 20 kilometres to the south east, south west and north west of the application area. The Malleefowl occurs in semi-arid and arid zones of temperate Australia, where it occupies shrublands and low woodlands that are dominated by mallee vegetation (DSEWPAC, 2012). The breeding habitat of the Malleefowl, within its home range, is characterised by light soil and an abundant leaf litter, which is used in the construction of nesting mounds (DSEWPAC, 2012). The application area may therefore comprise suitable habitat for the Malleefowl and may be significant if breeding habitat is present. Potential impacts to Malleefowl as a result of the proposed clearing may be minimised by the implementation of a fauna management condition.

The Sharp-tailed Sandpiper and Common Greenshank are associated with wetland or coastal environments and are therefore unlikely to utilise the application area. Suitable habitat may be present for the Carpet Python and Shy Heathwren (western), however, given the availability of similar habitat in the surrounding area, it is unlikely the application area comprises significant habitat for these species.

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

Methodology BTM (2012)
DEC (2012)
DSEWPAC (2012)
Goldfields Mining Services (2012)
Rally Revegetation (1998)
GIS Database:
- Hydrography, linear

(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 Threatened Flora within the application area (GIS Database). According to Naturemap, three records of Threatened Flora species, *Gastrolobium graniticum*, occur approximately seven kilometres south west of the application area (DEC, 2012). However, these were collected in 1899 and 1902, and the location for the nearest named place is listed as Coolgardie (i.e. no further location details are provided) (Western Australian Herbarium, 2012). This species was included in the vegetation survey as a Threatened Flora species known to occur within the area. However, no Threatened Flora were recorded during the vegetation survey (Rally Revegetation, 1998).

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

Methodology DEC (2012)
Rally Revegetation (1998)
Western Australian Herbarium (2012)
GIS Database:
- Threatened and Priority Flora

(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 known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest known TEC is over 300 kilometres from the application area (GIS Database).

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

Methodology GIS Database:
- Threatened Ecological Sites Buffered

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

Comments Proposal is not at variance to this Principle

The application area falls within the Coolgardie Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 98.2% of the pre-European vegetation remains (see table) (GIS Database, Government of Western Australia, 2011).

The vegetation of the application area has been mapped as the following Beard vegetation association (GIS Database):

9: Medium woodland; coral gum (*Eucalyptus torquata*) and goldfields blackbutt (*E. lesouffii*).

Approximately 97.8% of Beard vegetation association 9 remains at both a state and bioregional level (Government of Western Australia, 2011). Therefore, the area proposed to be cleared does not represent a significant remnant of native vegetation within an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion – Coolgardie	12,912,205	12,677,932	~98.2	Least Concern	10.86
Beard veg assoc. – State					
9	240,509	235,162	~97.8	Least Concern	1.26
Beard veg assoc. – Bioregion					
9	240,442	235,101	~97.8	Least Concern	1.26

* Government of Western Australia (2011)

** Department of Natural Resources and Environment (2002)

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

Methodology Department of Natural Resources and Environment (2002)
Government of Western Australia (2011)
GIS Database:
- IBRA WA (Regions – Sub Regions)
- 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

There are two minor, non-perennial watercourses that intersect the application area (GIS Database). According to BTM (2012), no permanent surface water bodies occur within the application area and the proposed waste landform (main area for the proposed clearing) does not intersect any significant existing ephemeral drainage lines. Three major vegetation communities occur within the application area, none of which were identified as growing in association with a watercourse or wetland. According to Rally Revegetation (1998), these vegetation communities appear to be well represented across the region.

The non-perennial watercourses drain towards Lake Brown, located approximately 5.3 kilometres south east of the application area (GIS Database). There are numerous non-perennial watercourses in the local area that also drain into Lake Brown (GIS Database).

The proposed clearing is, therefore, not likely to impact the environment of Lake Brown or result in significant impacts to watercourses within the application area.

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

Methodology BTM (2012)
Rally Revegetation (1998)
GIS Database:
- Geodata, Lakes

- Hydrography, linear

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

Comments Proposal may be at variance to this Principle

According to available databases, the soil type within the application area is described as rocky ranges and hills of greenstones - basic igneous rocks: chief soils seem to be shallow calcareous loamy soils (GIS Database). The soil profile within the application area ranges in thickness from zero to one metre and has been subject to erosion and other weathering processes which has stripped away the original soil profile and more recently replaced it with low energy alluvial material (clays and loams) (Goldfields Mining Services, 2012). In slightly higher areas there is virtually no soil and consists of partially weathered rock (Goldfields Mining Services, 2012). The area is gently undulating with an overall slope to the south (Goldfields Mining Services, 2012). The area experiences a low annual rainfall with Coolgardie recording an annual average rainfall of 270.4 millimetres (BoM, 2012). BTM (2012) notes that short duration, high intensity and large volume rainfall events can occur. Based on the above there is potential for erosion to occur, particularly within drainage areas. Potential impacts from erosion as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

According to BTM (2012), groundwater was not encountered during resource/sterilisation drilling undertaken in March 2012. This included holes vertically drilled to 170 to 180 metres. Additionally, the average annual evaporation rate is over nine times the average annual rainfall, so recharge to the groundwater would be expected to be minimal (BoM, 2012; GIS Database). Based on this and the lack of groundwater encountered, there is a low likelihood of raised saline water tables occurring as a result of the proposed clearing.

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

Methodology BoM (2012)
BTM (2012)
Goldfields Mining Services (2012)
GIS Database:
- Evaporation Isopleths
- Soils, 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

The application area does not lie within any conservation areas or Department of Environment and Conservation (DEC) managed lands (GIS Database). The nearest conservation area is the Kangaroo Hills Timber Reserve, located approximately 8.5 kilometres south west of the application area (GIS Database). Based on the distance between the application area and the timber reserve, the proposed clearing is not likely to impact the environmental values of any conservation area.

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

Methodology GIS Database:
- DEC Tenure

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

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

According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). There are no permanent waterbodies or watercourses within the application area, however, there are two minor non perennial watercourses within the application area (GIS Database). These converge on the eastern boundary of the application area and drain in a south easterly direction to Lake Brown, located approximately 5.3 kilometres south east of the application area (GIS Database).

The climate of the area is arid to semi-arid with 200 to 300 millimetres of rainfall that usually occurs in winter but sometimes occurs in summer (CALM, 2002). The annual average rainfall for Coolgardie is 270.4 millimetres and the average annual evaporation rate for the application area is between 2,600 and 2,800 millimetres (BoM, 2012; GIS Database). Based on this, surface water is likely to evaporate quickly with surface sheet flow and higher sediment levels generally occurring during larger rainfall events. Therefore, during normal rainfall events, the proposed clearing would not likely lead to an increase in sedimentation of watercourses within the application area.

According to available databases, groundwater salinity within the application area is between 14,000 and 35,000 milligrams/Litre Total Dissolved Solids (TDS) (GIS Database). This is considered to be saline. Given the high TDS and lack of groundwater encountered during the recent drilling, the proposed clearing is not likely to cause salinity levels within the application area to alter significantly.

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

Methodology BoM (2012)
CALM (2002)
GIS Database:
- Evaporation Isopleths
- Geodata, Lakes
- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)

(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 is located within the Lake Lefroy catchment area (GIS Database). Given the size of the area to be cleared (14 hectares) in relation to the size of the catchment area (2,488,250 hectares) (GIS Database), the proposed clearing is not likely to increase the potential of flooding on a local or catchment scale.

With an average annual rainfall of 270.4 millimetres and an average evaporation rate of between 2,600 and 2,800 millimetres there is likely to be little surface flow during normal seasonal rains (BoM, 2012; GIS Database). Given the likelihood of little surface flow, the proposed clearing is not likely to cause or increase the incidence or intensity of flooding.

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

Methodology BoM (2012)
GIS Database:
- Evaporation Isopleths
- Hydrographic Catchments - Catchments

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

Comments

The clearing permit application was advertised on 27 August 2012 by the Department of Mines and Petroleum inviting submissions from the public. There was one submission received regarding the requirement for Main Roads approval where the access road connects to Great Eastern Highway. This aspect is discussed in the Mining Proposal and is being addressed by BTM.

There is one native title claim over the area under application: WC10/14 (GIS Database). This claim has been filed at the federal court. However, the mining tenure 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 are no registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment and Conservation and the Department of Water to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims – Filed at the Federal Court

4. References

- BoM (2012) Climate Statistics for Australian Locations. A Search for Climate Statistics for Coolgardie, Australian Government Bureau of Meteorology, viewed 18 September 2012, <http://www.bom.gov.au/climate/averages/tables/cw_012018.shtml>.
- BTM (2012) Mining Proposal Gunga West Open Pit Project M15/26, M15/1272. Unpublished report prepared by Blue Tiger Mines Pty Ltd dated June 2012.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Coolgardie 3 (COO3 – Eastern Goldfields subregion) Department of Conservation and Land Management, Western Australia.
- DEC (2010) Clearing Permit Decision Report for CPS 3391/1. Prepared by the Department of Environment and Conservation, 7 January 2010.
- DEC (2012) NatureMap - Mapping Western Australia Biodiversity, Department of Environment and Conservation. <http://naturemap.dec.wa.gov.au/default.aspx>, viewed September 2012.

- 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.
- DSEWPAC (2012) *Leipoa ocellata* — *Malleefowl*. URL: http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=934, viewed September 2012. Department of Sustainability, Environment, Water, Population and Communities.
- Goldfields Mining Services (2012) Memo regarding Gunga West Soils. Memo from Goldfields Mining Services to Blue Tiger Mines Pty Ltd dated 13 September 2012.
- Government of Western Australia (2011) 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Rally Revegetation (1998) Gunga West/Collards Find (M15/26) (GML15/6350) Vegetation Survey. Unpublished report prepared for Barmingo dated June 1998.
- Western Australian Herbarium (2012) Florabase - The Western Australian Flora. Department of Environment and Conservation. Available online at <http://florabase.dec.wa.gov.au/>, viewed September 2012.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), 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 (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
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 Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

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.