



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5128/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Mutiny Gold Limited

1.3. Property details

Property: Mining Lease 59/49
Mining Lease 59/356
Mining Lease 59/442
Mining Lease 59/507
Mining Lease 59/522
Miscellaneous Licence 59/49
Miscellaneous Licence 59/64
Miscellaneous Licence 59/71
Local Government Area: Shire of Yalgoo
Colloquial name: Deflector Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 29 November 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. Two Beard vegetation associations have been mapped within the application area (GIS Database):

Beard vegetation association 364:

Shrublands; bowgada scrub with scattered eucalypts & cypress pine; and

Beard vegetation association 2685:

Shrublands; *Acacia quadrimarginea* & jam scrub on greenstone (Government of Western Australia, 2011; GIS Database).

A survey conducted by Mattiske Consulting (2012) identified two vegetation communities within the application area:

S1: Open Tall Shrubland of *Acacia burkittii*, *A. ramulosa* var. *linophylla* and *A. tetragonophylla* with occasional *A. grasbyi* and *A. aneura* over *Ptilotus obovatus* var. *obovatus* and *P. polystachyus* over *Aristida contorta* and mixed Asteraceae species on clay loam soils; and

S2: Open Low Shrubland of *Acacia eremaea* with *Cratystylis subspinescens* over mixed Chenopodiaceae species over *Eragrostis dielsii* and other grasses on clay-sandy soils.

Clearing Description

Mutiny Gold Limited is proposing to clear up to 95 hectares of native vegetation within a 403 hectare application area for the Deflector Project. The clearing of vegetation is required for the purposes of mineral production and associated activities.

For the Deflector mine site, this includes clearing for the Deflector mine site expansion, infrastructure facilities, waste rock landform, access roads, mine water storages, pipelines, powerlines, mine and administration and workshops.

For the Gullewa site, this includes clearing for the village expansion, access roads, borrow pits and site infrastructure expansion (Mutiny Gold Limited, 2012a).

The vegetation will be cleared by either trackrolling, windrowing or mechanical clearing. The vegetation and topsoil will be stockpiled separately for use in rehabilitation.

Vegetation Condition

Pristine: No obvious signs of disturbance (Keighery, 1994);

To:

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

Comment

The application area is located in the Tallering subregion of Western Australia and is situated approximately 47 kilometres south-west of the Yalgoo town site (GIS Database).

The vegetation condition was assessed during a survey undertaken by botanists from Mattiske Consulting (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 areas occur within the Talling subregion of the Yalgoo Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This bioregion is characterised by low woodlands to open woodlands of *Eucalyptus*, *Acacia* and *Callitris* on red sandy plains of the Western Yilgarn Craton and southern Carnarvon Basin. The latter has a basement of Phanerozoic sediments. Mulga, *Callitris*, *E. salubris*, and Bowgada open woodlands and scrubs on earth to sandy-earth plains in the western Yilgarn Craton (CALM, 2002).

Mattiske Consulting (2012) conducted a flora and vegetation survey over the application area during 24 to 26 October 2011 and during 21 to 23 March 2012. The survey identified 89 vascular plant taxa from 49 genera and 26 families within the application area. The survey recorded approximately 76 percent of the flora species potentially present within the application area (Mattiske Consulting, 2012). The condition of the vegetation types was classified from 'pristine' to 'completely degraded' (Keighery, 1994; GIS Database).

A search on the Department of Environment and Conservation's Threatened and Priority Flora databases revealed one Threatened Flora species and three Priority Flora species that may potentially occur in the application area; *Stylidium scintillans* (sp. Yalgoo) (Threatened), *Malleostemon* sp. *Yalgoo Road* Priority 1 (P1), *Rhodanthe collina* (P1) and *Chthonocephalus muellerianus* Priority 2 (P2) (DEC, 2012a; 2012b). Suitable habitat was only present for *Chthonocephalus muellerianus* within the application area (Mattiske Consulting, 2012). There were no Threatened or Priority Flora species recorded within the application area (Mattiske Consulting, 2012). Given that the first phase of the flora survey was undertaken following above average rainfall, it is most likely that the potential Threatened and Priority Flora species would have been visible at the time of the targeted flora survey (Mattiske Consulting, 2012; Mutiny Gold Limited, 2012b). The clearing of 95 hectares of native vegetation is not likely to significantly influence the conservation status of these flora species (Mattiske Consulting, 2012).

The application area is within the buffer zone of a Priority Ecological Community (PEC) 'Wolla Wolla (Guella) Vegetation Complexes'. This PEC is associated with banded ironstone formations (CALM, 2002). Mutiny Gold Limited (2012a) and Mattiske Consulting (2012) found that ironstone ridges and associated slopes are not present within the application area.

There are no Threatened Flora species, Priority Flora species, Threatened Ecological Communities or Priority Ecological Communities recorded within the application area (GIS Database).

There were several species of weeds identified during the survey (Mattiske Consulting, 2012). Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

There were two faunal habitats identified within the application area (Ninox Wildlife Consulting, 2012). The habitats within the application area are considered to be common and widespread within the subregion and faunal assemblages are unlikely to be different to that found in similar habitat located elsewhere in the region (Ninox Wildlife Consulting, 2012, Mattiske Consulting, 2012). The clearing of 95 hectares of native vegetation is unlikely to have a significant impact on fauna in a regional or local context.

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

Methodology

CALM (2002)
DEC (2012a)
DEC (2012b)
Keighery (1994)
Mattiske Consulting (2012)
Mutiny Gold Limited (2012a)
Mutiny Gold Limited (2012b)
Ninox Wildlife Consulting (2012)
GIS Database:
- IBRA WA (Regions - Subregions)
- Pre-European vegetation
- 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

Ninox Wildlife Consulting undertook a desktop study of the application area and surrounding region in December 2011. There were two broad fauna habitat types identified within the application area by Ninox Wildlife Consulting (2012);

1. Lowland *Acacia* shrublands; and
2. Saline Chenopod Shrublands.

Ninox Wildlife Consulting (2012) identified the vegetation condition to be 'completely degraded' to 'pristine' (Keighery, 1994). The landforms and habitat found within the application area is considered as being well represented in the subregion (Ninox Wildlife Consulting, 2012; Mattiske Consulting, 2012; GIS Database).

There are several species of conservation significance listed as either threatened species under the *Environment Protection and Biodiversity Conservation Act (EPBC) 1999* or protected under Western Australian legislation (*Wildlife Conservation Act 1950*), which may potentially occur within a 20 kilometre radius of the application areas (DEC, 2012a). Based on habitat type and vegetation mapping associated with the application area, the Malleefowl (*Leipoa ocellata*) (EPBC Act – Vulnerable; WC Act – Schedule 1) and the Common slender blue-tongue lizard (*Cyclodomorphus branchialis*) (EPBC Act – Vulnerable) may occur within the application area. Mattiske Consulting (2012) vegetation surveys consisted of foot traverses in extensively gridded open habitat by botanists which are also trained to identify Malleefowl and their mounds (Mutiny Gold Limited, 2012b). There is also a lack of understorey species within the application area to provide enough leaf litter for the Malleefowl to create a nesting mound (Mattiske Consulting, 2012). The Malleefowl is considered highly mobile and has a wide distribution so the clearing is unlikely to significantly impact on these species (Ninox Wildlife Consulting, 2012). The application area is at the extreme Eastern boundary of the known range of the Common slender blue-tongue lizard (DEC, 2012a; Mutiny Gold Limited, 2012b). The nearest known location of the lizard is 50 kilometres east of the application area. However, suitable habitat for the lizard is present within the application area and may be impacted by the proposed clearing. Potential impacts to conservation significant fauna as a result of the proposed clearing may be minimised by the implementation of a fauna management condition.

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

Methodology DEC (2012a)
Keighery (1994)
Mattiske Consulting (2012)
Mutiny Gold Limited (2012b)
Ninox Wildlife Consulting (2012)
GIS Database:
- IBRA WA (regions - subregions)
- Pre-European Vegetation
- Mellenbye 50cm Orthomosaic - Landgate 2006

(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). A search of the Department of Environment and Conservation's Threatened and Priority Flora databases identified one Threatened Flora species as occurring within a 20 kilometre radius of the application area (DEC, 2012a).

Mattiske Consulting (2012) conducted a vegetation and flora survey of the application area during 24 to 26 October 2011 and during 21 to 23 March 2012. No Threatened Flora was recorded within the survey area.

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

Methodology DEC (2012a)
Mattiske Consulting (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**
A search of the available databases shows that there are no Threatened Ecological Communities situated within 100 kilometres of 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 Yalgoo IBRA bioregion (GIS Database) in which approximately 98.61% of the pre-European vegetation still exists (Government of Western Australia, 2011). The vegetation within the application area is recorded as:

Beard vegetation association 364: Shrublands; bowgada scrub with scattered eucalypts & cypress pine; and **Beard vegetation association 2685:** Shrublands; *Acacia quadrimarginea* & jam scrub on greenstone (Government of Western Australia, 2011; GIS Database).

Beard vegetation associations 364 and 2685 retain approximately 99% of their pre-European extent (Government of Western Australia, 2011). The local area has been extensively cleared, however the area proposed to be cleared is not a significant remnant of native vegetation.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and post clearing %)
IBRA Bioregion - Yalgoo	5,057,314	4,987,193	~98.61	Least Concern	10.88 (10.75)
IBRA Subregion - Talling	3,498,944	3,449,835	~98.60	Depleted	2.14 (2.14)
Local Government - Yalgoo	2,794,644	2,790,720	~99.86	Least Concern	-
Beard vegetation associations - State					
364	510,985	506,096	~99.04	Least Concern	31.54 (31.54)
2685	58,412	57,772	~98.90	Least Concern	0.06 (0.05)
Beard vegetation associations - Bioregion					
364	509,047	504,202	~99.05	Least Concern	31.65 (31.65)
2685	17,924	17,814	~99.38	Least Concern	-
Beard vegetation associations - subregion					
364	122,194	199,416	~97.73	Least Concern	0.53 (0.53)
2685	17,924	17,814	~99.38	Least Concern	-

* 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 not likely to be at variance to this Principle

According to available databases, there are no permanent watercourses or wetlands within the application area (GIS Database). There are several ephemeral drainage lines throughout the application area, however, the vegetation surveyed within the application area is not considered to be growing in association with any watercourse or wetland (Mattiske Consulting, 2012).

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

Methodology Matiske Consulting (2012)
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

The application area is broadly mapped as the Violet, Gabanintha and Tindalarra land systems (GIS Database).

The Violet land system is described as undulating stony and gravelly plains and low rises supporting mulga shrublands. The abundant mantles provide effective protection against soil erosion over most of this land system, except where the soil surface has been disturbed, for example by the construction of tracks and gridlines. In such circumstances the soil becomes moderately susceptible to water erosion. Narrow drainage tracts are mildly susceptible to water erosion (Payne et al., 1998).

The Gabanintha land system is described as greenstone ridges and hills supporting sparse acacia shrublands. Stone mantles afford protection against soil erosion, the exception being narrow drainage tracts, which are mildly susceptible to water erosion (Payne et al., 1998).

The Tindalarra land system is described as hardpan plains supporting acacia shrublands with sparse drainage channels and associated drainage floors supporting saltbush/bluebush shrubs under snakewood. This land system is moderately susceptible to accelerated erosion (Payne et al., 1998).

Due to the large area of native vegetation to be cleared (95 hectares), potential land degradation impacts as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

The application area is not at risk of forming Acid Sulphate Soils (GIS Database).

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

Methodology Payne et al. (1998)
GIS Database:
- Rangeland Land System Mapping
- 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 may be at variance to this Principle

The application area is located within Department and Conservation (DEC) managed land 'former Barnong Pastoral Station' (GIS Database). This pastoral station is managed by DEC for conservation purposes. Mining operations by Mutiny Gold Limited should be managed with due consideration for the affected and surrounding proposed conservation park. Advice received from the DEC requests that an Environmental Management Plan (EMP) is created in consultation with the DEC (DEC, 2012b). Mutiny Gold Limited has already indicated to DEC that they will enter into a formal working arrangement covering DEC managed lands, and an EMP will be eventually produced (Mutiny Gold Limited, 2012b).

The presence of weeds has the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

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

Methodology DEC (2012b)
Mutiny Gold Limited (2012b)
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

The application area is not located within a Public Drinking Water Source Area (GIS Database). The application areas are located within the proclaimed Gascoyne groundwater area under the *Rights in Water and Irrigation Act 1914* (GIS Database). Any groundwater extraction and/or taking or diversion of surface water for the purposes other than domestic and/or stock watering is subject to licence by the Department of Water.

There are no permanent watercourses or water bodies within the application area (GIS Database). Several

ephemeral drainage tracts transect the application area (GIS Database). These drainage tracts are dry for most of the year and only flow and hold surface water for short durations following significant rainfall events. Drainage flows within the application area will be locally concentrated by diversion structures (Mutiny Gold Limited, 2012a). The clearing of vegetation as a result of this proposal is therefore unlikely to result in any further deterioration in surface or groundwater quality in the local area.

The application area has a groundwater salinity that ranges from marginal to saline (3,000 - 35,000 milligrams/Litre Total Dissolved Solids (TDS)) (GIS Database). Groundwater salinity in the catchment downstream from the application area is recorded at 200,000 milligrams/Litre TDS, due to internal drainage, discharges via groundwater recharge and evaporation from salina lakes (Mutiny Gold Limited, 2012a). The proposed clearing of 95 hectares of native vegetation is unlikely to further deteriorate the quality of underground water (GIS Database).

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

Methodology Mutiny Gold Limited (2012a)
GIS Database:
- Geodata, Lakes
- Groundwater Salinity, Statewide
- Hydrography, Linear
- Public Drinking Water Source Areas
- RIWI Act, Groundwater Areas

(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 an arid to semi-arid warm Mediterranean climate, with an annual average rainfall of approximately 260.8 millimetres per year (CALM, 2002; BoM, 2012). Based on an average annual evaporation rate of 2,400 - 2,800 millimetres (BoM, 2012), any surface water resulting from rainfall events is likely to be relatively short lived.

Given the size of the area to be cleared (95 hectares) compared to the size of the Yarra Monger catchment area (4,182,476 hectares) (GIS Database) it is not likely that the proposed clearing will lead to an appreciable increase in run off, and subsequently cause or exacerbate 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)
CALM (2002)
GIS Database:
- Hydrographic Catchments - Catchments

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

Comments

There are three Native Title claims over the area under application (WC04/2, WC96/93 and WC97/72). The claim WC04/2 was registered with the National Native Title Tribunal on 2 March 2005. The claim WC96/93 was registered with the National Native Title Tribunal on 19 August 1996. The claim WC97/72 was registered with the National Native Title Tribunal on 12 December 2011. 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*.

There is one registered Aboriginal Site of Significance within the application area (Site ID: 4497) (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.

The clearing permit application was advertised on 30 July 2012 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received in relation to this application regarding an extension of the comment period. A written response was provided on the matters raised.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims - Registered with the NNTT

4. References

- BoM (2012) Climate Statistics for Australian Locations. A Search for Climate Statistics for Yalgoo, Australian Government Bureau of Meteorology, viewed 13 August 2012, <http://reg.bom.gov.au/climate/averages/tables/cw_007091.shtml>.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Yalgoo (Yal) Department of Conservation and Land Management, Western Australia.
- Department of Environment and Conservation (DEC) (2012a) NatureMap - Mapping Western Australia Biodiversity, Department of Environment and Conservation, viewed 1 November 2012, <<http://naturemap.dec.wa.gov.au>>.
- Department of Environment and Conservation (DEC) (2012b) Gullewa Gold Copper Operations Deflector Project - Mining Proposal Amendment 03- Recommencement of Mining Operations- September 2012. Department of Environment and Conservation, Internal Report, November 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.
- 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.
- Mattiske Consulting (2012) Flora and Vegetation Survey of the Gullewa Survey Area. Prepared for Woolard Consulting on behalf of Mutiny Gold Ltd, May 2012.
- Mutiny Gold Limited (2012a) Gullewa Gold Operations Deflector Project - Supporting Documentation Purpose Permit - Clearing Application, June 2012.
- Mutiny Gold Limited (2012b) Gullewa Gold Operations Deflector Project - Response to DEC Review of CPS. Internal Report, November 2012.
- Ninox Wildlife Consulting (2012) A Level 1 Vertebrate Fauna Assessment of the Gullewa Copper-Gold Project, North of Morawa, Western Australia. Prepared for Woolard Consulting on behalf of Mutiny Gold Ltd, May 2012.
- Payne, A.L., Van Vreeswyk, A.M.E., Pringle, H. J. R., Leighton, K.A. & Hennig, P. (1998) Technical bulletin no. 90: An inventory and condition survey of the Sandstone-Yalgoo-Paynes Find area, Western Australia. Department of Agriculture, Western Australia.

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.