Government of Western Australia
Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4795/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Western Areas NL

1.3. Property details

Property: Mining Lease 77/98
Mining Lease 77/329
Local Government Area: Shire of Kondinin
Colloquial name: Forrestania Nickel Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5		Mechanical Removal	Mineral Exploration

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 5 April 2012

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation associations have been mapped for the whole of Western Australia. One Beard vegetation association has been mapped within the application area: **511:** Medium woodland; salmon gum and morrel (GIS Database). A flora and vegetation survey of the application area and an adjacent area was conducted by botanists from Botanica Consulting in September 2011. Eight vegetation communities were recorded during the survey and seven of these occurred within the application area (Botanica Consulting, 2011). 1) Low woodland of *Eucalyptus melanoxylon* over scrub of *Melaleuca pauperiflora* subsp. *pauperiflora* and *Melaleuca lateriflora*; 2) Open mallee of *Eucalyptus salicola* over dense heath of *Melaleuca lateriflora*; 3) Regrowth forest of *Eucalyptus flocktoniae/E. annulata* over scrub of *Melaleuca pauperiflora* subsp. *pauperiflora*; 4) Low regrowth forest of *Eucalyptus salubris* over low scrub of *Acacia merrallii* and *Melaleuca pauperiflora* subsp. *pauperiflora*; 5) Open low woodland of *Eucalyptus salmonophloia* over open Mallee of *Eucalyptus eremophila/E. cylindrocarpa* over heath of *Melaleuca hamata*; 6) Low scrub of *Allocasuarina helmsii* over low sedges of *Lepidosperma* sp. A2 Inland Flat; and	Western Areas NL has applied to clear up to 5 hectares of native vegetation for the purpose of mineral exploration. The application area consists of a northern section, with an area of approximately 66 hectares, and a southern section, approximately 176 hectares. The application area is located near the existing Forrestania Nickel Project and approximately 82 kilometres east of Hyden.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).	The vegetation condition was assessed by botanists from Botanica Consulting (2011).

7) Open low woodland of *Eucalyptus salmonophloia* over very open Mallee of *Eucalyptus eremophila* over heath of *Melaleuca hamata*.

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 may be at variance to this Principle

The application area occurs within the Southern Cross (COO2) subregion of the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This sub-region is characterised by subdued relief, comprising of gently undulating lands dissected by broad valleys with bands of low greenstone hills (CALM, 2002). Diverse *Eucalyptus* woodlands rich in endemic eucalypts occur around salt lakes, on low greenstone hill, valley alluvials and broad plains of calcareous earths (CALM, 2002). Mallees and scrub-heaths occur on the uplands, sand lunettes associated with playas along the broad valley floors, and sand sheets around granite outcrops (CALM, 2002).

The application area occurs within the Lake Cronin Area which is listed on the Register of National Estate for its high level of flora and fauna diversity and endemism. According to the Australian Heritage Database (2012), 16 fauna species that are endemic to either the south-west region or to Western Australia occur within the Lake Cronin Area. The Lake Cronin Area is also described as being an important refuge for rare species due to widespread clearing in the wheatbelt to the west. Rare species include fauna such as the Malleefowl (*Leipoa ocellata*) and flora species such as *Eucalyptus steedmanii*.

A flora and vegetation survey of the application area and surrounding vegetation identified 91 flora species belonging to 51 genera from 27 families (Botanica Consulting, 2011). Two Priority Flora species were recorded during the flora survey (Botanica Consulting, 2011). *Eutaxia acanthoclada* (P3) was recorded from one location within the application area and six locations outside the application area while an individual *Eutaxia nanophylla* (P3) plant was recorded from one location within the application area (Botanica Consulting, 2011). The population of *Eutaxia acanthoclada* within the application area contained 204 plants while the total number of plants in the other six locations was approximately 108 (Botanica Consulting, 2011). *Eutaxia acanthoclada* is known from 14 herbarium records with a limited distribution from the North Ironcap area through to the Hatters Hill area in the south-east of the Forrestania region (Botanica Consulting, 2011; Western Australian Herbarium, 2012). Potential impacts to *Eutaxia acanthoclada* as a result of the proposed clearing may be minimised by the implementation of a flora management condition.

Five introduced flora species were recorded within the application area during the flora survey. These weed species were False Hairgrass (*Pentaschistis airoides*), Iceplant (*Mesembryanthemum crystallinum*), Pimpernel (*Lysimachia arvensis*), *Rostraria pumila* and Shivery Grass (*Briza minor*) (Botanica Consulting, 2011). Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The application area is located within the boundary of the Priority Ecological Community (PEC) 'Ironcap Hills Vegetation Complexes' (Botanica Consulting, 2011; GIS Database). The PEC includes vegetation on Mt Holland, Middle Ironcap Hill, Nothern Ironcap Hill, Southern Ironcap Hill, Digger Rock and Hatter Hill (DEC, 2010). Newbey and Hnatuik (1988) (cited in Botanica Consulting, 2011) recorded that species composition of the three Ironcap hills varied from one another and that flora of these ironstones differ widely from the nearest other banded ironstone formations, including the nearby Parker Range. Many of the vegetation communities that characterise the 'Ironcap Hill Vegetation Complexes' were identified within the application area, however the North and Middle Ironcap Hills themselves do not occur within the application area (Botanica Consulting, 2011).

A four phase fauna survey of the Forrestania area, in the same vicinity as the application area, was undertaken by biologists from Biota between February 2005 and November 2006. The Biota fauna surveys recorded a total of 34 herpetofauna, 71 avifauna, 16 native mammal and four introduced mammal species in the Forrestania survey area (Biota, 2007).

Given the application area is within a Register of National Estate site known for its high level of flora and fauna diversity and also the buffer of a PEC, the application area is considered to comprise a high level of biological diversity. However, the amount of proposed clearing is small (5 hectares) and provided the disturbed areas are rehabilitated after drilling and the recommended conditions of weed management and flora management are implemented the impact of the proposed clearing will be minimised.

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

Methodology

Australian Heritage Database (2012)
Biota (2007)
Botanica Consulting (2011)
CALM (2002)
DEC (2010)

Western Australian Herbarium (2012)
GIS Database:
- IBRA WA (Regions - Subregions)
- 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

Western Areas NL commissioned Biota to undertake an ongoing fauna assemblage monitoring survey within the Forrestania project area, specifically surrounding the Flying Fox Mine. A four phase fauna survey was undertaken by biologists from Biota during February/March 2005, November 2005, May 2006 and November 2006 (Biota, 2006; Biota, 2007). While the fauna survey was not specifically over the clearing permit application area, it was undertaken in the nearby Forrestania area so the results are applicable.

The Biota fauna surveys recorded a total of 34 herpetofauna, 71 avifauna, 16 native mammal and four introduced mammal species in the Forrestania survey area (Biota, 2007).

During the fauna surveys, the highest herpetofauna diversity was recorded in the *Eucalyptus* mallee and woodland habitats (Biota, 2007). These habitats contain an abundance of leaf litter providing microhabitats for litter inhabiting species, as well as habitat for arboreal species (Biota, 2007). Salmon Gum woodland exhibited the highest avifauna diversity with *Eucalyptus* mallee also displaying high diversity (Biota, 2007). These habitats offer significant vertical stratification providing a variety of habitat niches (Biota, 2007). Vegetation communities corresponding to these fauna habitat types were identified during the flora survey of the application area (Botanica Consulting, 2011).

Similar vegetation communities identified during the vegetation survey of the application area have also been recorded in the greater Forrestania area (Biota, 2007; Botanica Consulting, 2011). While the application area may provide important fauna habitat, the surrounding area is largely vegetated (Shepherd, 2009) and also provides suitable fauna habitat.

Based on habitats available and known distributions, a total of 20 Schedule or Priority fauna species may potentially occur in the Forrestania area: Carpet Python (*Morelia spilota* subsp. *imbricata*), Red-tailed Phascogale (*Phascogale calura*), Western Mouse (*Pseudomys occidentalis*), Western Whipbird (*Psophodes nigrogularis*), Heath Mouse (*Pseudomys shortridgei*), Numbat (*Myrmecobious fasciatus*), Western Brush Wallaby (*Macropus irma*), Chuditch (*Dasyurus geoffroii*), Australian Bustard (*Ardeotis australis*), Carnaby's Cockatoo (*Calyptorhynctius latirostris*), Shy Heathwren (*Hylacola cauta* subsp. *whitlocki*), Malleefowl (*Leipoa ocellata*), Crested Bellbird (*Oreocia gutturalis* subsp. *gutturalis*), Rufous Fieldwren (*Calamanthus campestris montanellus*), Western Shrike-tit (*Falcunculus frontatus leucogaster*), White Browed Babbler (*Pomotostomus superciliosus* subsp. *ashbyi*), Peregrine Falcon (*Falco peregrinus*), Fork-tailed Swift (*Apus pacificus*), Rainbow Bee-eater (*Merops ornatus*) and the Western Rosella (*Platycercus icterotis* subsp. *xanthogenys*) (Biota, 2007). Twelve of these species were recorded during the Biota fauna surveys (Biota, 2007).

Some of the conservation significant species are considered to be highly mobile, have a wide distribution and/or are able to utilise a wide range of habitat types so the clearing is unlikely to significantly impact on the species (Biota, 2007). Other species are known mostly from historical records and based on their current distribution these species are not expected to be found in the surrounding area (Biota, 2007).

Carnaby's Cockatoos (Schedule 1 - Fauna that is rare or likely to become extinct, *Wildlife Conservation (Specially Protected Fauna) Notice, 2012*) forage in woodland and heath that is dominated by proteaceous species and nest in hollows of large eucalypts, usually Salmon Gum and Wandoo (DEC, 2006a). Two vegetation communities within the application area consist of open low woodland of Salmon Gum (Botanica Consulting, 2011) and large trees may provide hollows of a suitable size (Biota, 2007). Biota (2007) recommended clearing of large hollow bearing trees be avoided in the Forrestania study area, particularly Salmon Gums. Potential impacts to Carnaby's Cockatoo's as a result of the proposed clearing may be minimised by the implementation of a fauna management condition.

Malleefowl (Schedule 1 - Fauna that is rare or likely to become extinct, *Wildlife Conservation (Specially Protected Fauna) Notice, 2012*) are largely confined to arid and semi-arid woodland that is dominated by mallee eucalypts on sandy soils, with less than 430 millimetres of rainfall annually (DEC, 2006b). A disused mound was recorded near Diggers South and an active mound near a Flying Fox water disposal pipeline (Biota, 2007). In regards to the Forrestania project, Biota (2007) recommended searches be undertaken in new project disturbance footprints to determine if active Malleefowl mounds are present and if any active mounds are located then measures should be taken to avoid their disturbance. The recommendation is relevant for the current application area, given its close proximity. Potential impacts to Malleefowl 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

Biota (2006)
Biota (2007)
Botanica Consulting (2011)

DEC (2006a)
DEC (2006b)
Shepherd (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 known records of Threatened Flora within the application area (GIS Database). The nearest record of Threatened Flora is located approximately 5 kilometres west of the application area (GIS Database).

Flora and vegetation surveys of the application area were conducted by Botanica Consulting botanists in September 2011. No Threatened Flora species were recorded during the surveys (Botanica Consulting, 2011).

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

Methodology

Botanica Consulting (2011)
GIS Database:
- Theatened 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 available databases revealed there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest recorded TEC is located approximately 125 kilometres south-west of the application area (GIS Database).

No TECs were identified during the flora and vegetation survey conducted by Botanica Consulting botanists (Botanica Consulting, 2011).

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

Methodology

Botanica Consulting (2011)
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 clearing application area falls within the Coolgardie Interim Biogeographic Regionalisation for Australia (IBRA) bioregion in which approximately 98.4% of the pre-European vegetation remains (see table) (Shepherd, 2009; GIS Database). This gives it a conservation status of 'Least Concern' according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002).

The vegetation of the clearing application area has been mapped as Beard vegetation association 511 'Medium woodland; salmon gum and morrel' (Shepherd, 2009; GIS Database). According to Shepherd (2009), approximately 71.3% of this vegetation association remains at a state level and 93.8% remains at a bioregional level. In a bioregional context, the vegetation under application is not a remnant of vegetation in 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	12,912,204	12,707,873	~98.4	Least Concern	10.9
Beard Veg Assoc. – State					
511	700,410	499,600	~71.3	Least Concern	14.1
Beard Veg Assoc. – Bioregion					
511	464,424	435,794	~93.8	Least Concern	17.5

* Shepherd (2009)
** 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)
Shepherd (2009)
GIS Database:
- IBRA WA (Regions - Subregions)
- Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments **Proposal is not at variance to this Principle**
There are a series of non-perennial lakes to the east of the application area and the south-eastern corner of the application area may be subject to inundation (GIS Database). However, a vegetation survey of the application area by botanists from Botanica Consulting did not identify any vegetation growing in, or in association with, a watercourse or wetland (Botanica Consulting, 2011).

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

Methodology Botanica Consulting (2011)
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 is not likely to be at variance to this Principle**
According to available GIS Databases, there are two soil types (DD10 and Ya28) within the application area (GIS Database). These soil types are described as:

- DD10: Plains with some clay pans and small salt lakes, dunes and lunettes; chief soils are brown and grey-brown calcareous earths; and
- Ya28: Sandy plains with some clay pans and small salt lakes, dunes and lunettes, with the chief soils being sandy alkaline yellow mottled soils (Bureau of Rural Sciences, 1992).

Shallow and deep sands have a high risk of wind erodibility and seasonal water logging may occur over the sandy topsoil and clays, whilst cracking clays have a low to moderate risk of wind erodibility (Schoknecht, 2002). Calcareous loamy earths have a low-high risk of wind erodibility and moderately slow soil permeability therefore some seasonal water logging may occur over the application area (Schoknecht, 2002). However, the linear nature of the clearing suggests that the potential for wind erosion is low and provided the disturbed areas are rehabilitated after drilling is completed there would be minimal risk of increased salinity and/or water logging.

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

Methodology Bureau of Rural Sciences (1992)
Schoknecht (2002)
GIS Database:
- 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 occurs within an Environmentally Sensitive Area (ESA) (Register of National Estate), the Lake Cronin Area (GIS Database). At its closest point, the application area is approximately 3.5 kilometres south-west from Lake Cronin and 2 kilometres south of the Lake Cronin Nature Reserve boundary (GIS Database).

According to the Australian Heritage Database (2012) the Lake Cronin Area is one of a number of areas in the south-west which has provided excellent conditions for the persistence of a range of primitive and relict species. At over 31,000 hectares, the Lake Cronin Area is a significant area in maintaining existing processes at a regional scale and therefore is a potentially important contemporary refugia for many species (Australian Heritage Database, 2012).

The Lake Cronin Area is dominated by mallee and woodland associations (Australian Heritage Database, 2012). This corresponds with several of the vegetation communities described by Botanica Consulting in their

2011 vegetation survey as occurring within the application area (Botanica Consulting, 2011). The habitat to be cleared is therefore well represented within the conservation estate. Lake Cronin Nature Reserve is surrounded by extensive vegetation and the clearing of up to 5 hectares of vegetation at a distance of approximately 2 kilometres or greater from the reserve will not significantly affect ecological linkages to the reserve.

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

Methodology
Australian Heritage Database (2012)
Botanica Consulting (2011)
GIS Database:
- Clearing Regulations - Environmentally Sensitive Areas
- DEC Tenure
- Geodata, Lakes
- Register of National Estate

(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 (PDWSA) (GIS Database). The nearest PDWSA is Ravensthorpe Catchment Area, which is approximately 130 kilometres to the south (GIS Database).

The groundwater salinity within the application area is approximately 14,000 - 35,000 milligrams/Litre Total Dissolved Solids (TDS) (GIS Database). This is considered to be hyper saline. Given the size of the area to be cleared (5 hectares) compared to the size of the Yilgarn-Southwest Groundwater Province (24,601,260 hectares) (GIS Database), the proposed clearing is not likely to cause salinity levels within the application area to alter significantly.

The application area is located within a semi arid, warm Mediterranean environment with an average annual rainfall of 340.2 millimetres recorded from the nearest weather station at Hyden approximately 82 kilometres west of the application area (CALM, 2002; BoM, 2012). The small size of the proposed clearing area within the above climate is unlikely to result in significant changes to surface water flows.

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

Methodology
BoM (2012)
CALM (2002)
GIS Database:
- Groundwater Provinces
- Groundwater Salinity, Statewide
- 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 experiences a semi arid, warm Mediterranean climate with an average annual rainfall of 340.2 millimetres recorded from the nearest weather station at Hyden approximately 82 kilometres west of the application area (CALM, 2002; BoM, 2012). Rainfall is usually experienced during winter months and it is likely that during times of intense rainfall there may be some localised flooding in adjacent areas (CALM, 2002; GIS Database).

The application area is located within the Swan-Avon Yilgarn catchment area (GIS Database). The small area to be cleared (5 hectares) in relation to the size of the Swan-Avon Yilgarn catchment area (5,836,045 hectares) (GIS Database) is not likely to increase the potential for flooding within the application area, local area or within the catchment (GIS Database).

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

Methodology
BoM (2012)
CALM (2002)
GIS Database:
- Geodata, Lakes
- Hydrographic Catchments - Catchments

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

Comments

There is one Native Title Claim (WC00/7) over the area under application (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. 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*.

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.

The clearing permit application was advertised on 9 January 2012 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received regarding Aboriginal heritage issues. A response was sent to the interested party.

Methodology

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

4. References

Australian Heritage Database (2012) Register of National Estate: Lake Cronin Area. http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=place_name%3Dlake%2520cronin%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=9929 (Accessed 30 March 2012).

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Schoknecht N. (2002) Soil Groups of Western Australia. A simple guide to the main soils of Western Australia. Resource Management Technical Report 246. Edition 3.

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Western Australian Herbarium (2012) FloraBase - The Western Australia Flora. Department of Environment and Conservation. http://florabase.dec.wa.gov.au (Accessed 3/4/2012).

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.