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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 376/3
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Paddington Gold Pty Ltd**

1.3. Property details

Property: Mining Leases: 24/20, 24/101, 24/180, 24/181, 24/183, 24/239, 24/240, 24/251, 24/416, 24/417, 24/422, 24/426, 24/428, 24/497, 24/716;
Prospecting Licences: 24/4253, 24/4255;
Miscellaneous Licence 24/29.
Local Government Area: City of Kalgoorlie/Boulder
Colloquial name: Paddington Area

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
100		Mechanical Removal	Mining Operations

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 association 10: Medium woodland; red mallee group; Beard vegetation association 125: Bare areas; salt lakes; Beard vegetation association 2903: Medium woodland; Salmon gum, Goldfields blackbutt, gimlet and *Allocasuarina cristata*; Beard vegetation association 468: Medium woodland; salmon gum and Goldfield blackbutt; Beard vegetation association 480: Succulent steppe with open low woodland; mulga and sheoak over saltbush; Beard vegetation association 540: Succulent steppe with open low woodland; sheoak over saltbush (Hopkins et al. 2001; Shepherd et al. 2001).	The proposal is for the clearing of up to 100 hectares of native vegetation within a project area of 4596 hectares for future exploration drilling, mining activity ie. open pits, waste dumps and related infrastructure ie. roads, water, powerlines (De Sousa, 2005). There will be up to 20 hectares of clearing within the project area at any one time (MBS Environmental, 2005). van Etten (2005) has surveyed the flora and mapped the vegetation for the Paddington mining area. Five plant communities have been described within the area proposed to be cleared: Community 1 - Mixed *Acacia* spp, *Eremophila* spp, *Dodonaea lobulata* with emergent *Casuarina pauper* and mallee. Eucalyptus on hill tops and rocky upper slopes; Community 2 - Woodland of Eucalyptus clelandii with broombush understorey on dissected residual plateaus with ironstone gravels; Community 3 - Open woodland of *Eucalyptus salmonophloia* with understorey of mixed chenopod shrubs situated on lower slopes, floodplains and valley floors over deep sandy loams; Community 4 - Open woodland of *Callitris glaucophylla* and/or *Eucalyptus oleosa* with *Acacia masliniana* over *Triodia scariosa* open hummock grassland situated on sandy dunes around salt lakes; and Community 5 - Low open shrubland of mixed *Halosarcia* spp on low rises and dunes fringing salt lakes. Plant community 3 is the most widespread over the Paddington lease area, however, each community was found in numerous patches across the study area and immediate surrounds. None of them appear to be locally restricted in distribution within the Paddington vicinity (van Etten, 2005).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).	The Paddington area has been subject to relatively intensive mining activity for the last 100 years with much of the area selectively logged in the early years to provide timber for mining-related infrastructure. The area has also been operated as a pastoral station during this time and as a result has been heavily grazed (van Etten, 2005). Despite the obvious disturbance from these activities, the associated impacts appear to be low with the general condition of vegetation across the study area being rated 'good to excellent' (van Etten, 2005). Clearing Permit CPS 376/1 was granted on 22 December 2005. An Appeal was received and following the decision of the Appeals Convenor, the Permit was amended (CPS 376/2) to include five additional Permit Conditions. As the proposed geotechnical investigations have taken longer to complete than expected, the Permit has now been further amended to extend the duration of the Permit until 9 December 2012 (CPS 376/3).

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 Paddington area has been subject to relatively intensive mining activity for the last 100 years. The area has also been operated as a pastoral station during this time and has historically been heavily grazed (De Sousa, 2005; van Etten, 2005). Despite the obvious disturbance from these activities, the associated impacts appear to be low with the general condition of vegetation across the study area being rated 'good to excellent' (van Etten, 2005). The landforms and vegetation within the Paddington area are common both locally and regionally (MBS Environmental, 2005).

During a site inspection by the assessor on 30 September 2005, numerous open pit workings, waste dumps and mine related infrastructure were observed across the area under application. The vegetation immediately adjacent to these areas was found to be sparse and degraded, with exploration activity observed at the time of the visit. Tracks and exploration grid lines are common throughout the Paddington area and the vegetation alongside these has also been noticeably disturbed.

Five plant communities exist across the Paddington area, however, none of them appear locally restricted in distribution to the Paddington vicinity. None of these communities are listed as Threatened Ecological Communities under the *Environmental Protection Biodiversity Conservation Act* 1999, and floristic comparisons to other nearby studies show that these communities are commonly found at other sites within the Placer Dome lease area (van Etten, 2005).

Considering the historical mining and pastoral activities, it is not likely that the biodiversity at the site of this proposal would be considered outstanding, or of a higher diversity than in the Coolgardie or Murchison bioregion, the City of Kalgoorlie/Boulder or the local area.

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

Methodology

MBS Environmental (2005)
van Etten (2005)
GIS Database:
- Kalgoorlie 1.4m Orthomosaic

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments

Proposal is not likely to be at variance to this Principle

A number of fauna surveys have been conducted across tenements partially covered by this application (Kinhill Engineers, 1997; Shepherdson Environmental Services, 2001). During both of these studies, no declared or priority fauna species were recorded, however, both suggest that the Malleefowl (*Leipoa ocellata*, Schedule 1) might occur within the area under application (MBS Environmental, 2005). Shepherdson (2001) advised that active Malleefowl nesting sites have been located approximately 40km south-east of the project area, however, no active nests have been observed within the area covered by the fauna survey (mining lease M24/240), despite the suitability of vegetation for nesting.

A desk-top fauna habitat assessment of the Paddington mining area was conducted by MBS Environmental in November 2005, based on the vegetation mapping previously carried out for the project area (van Etten, 2005). MBS Environmental (2005b) advised that it is likely that the Hooded Plover (*Charadrius rubricollis*, Priority 4) and the crustacean *Branchinella denticulata* (Priority 1) will occur within the Paddington mining area as both of these species have been recorded from nearby areas. The Hooded Plover has previously been recorded from Arrow Lake which is within the area under application, however, this species will not be significantly affected by the temporary loss of such small areas of habitat (MBS Environmental, 2005). Placer Dome have consulted with CALM on the possible presence of *Branchinella denticulata* and management of any potential impacts will be achieved through existing procedures and further discussions with CALM (MBS Environmental, 2005b).

It is also considered that the Shy Heathwren (*Hylacola cauta whitlocki*, Priority 4), Rainbow Bee-eater (*Merops ornatus*, Migratory), Crested Bellbird (*Oreoica gutteralis gutteralis*, Priority 4) and the White-browed Babbler (*Pomatostomus superciliosus ashbyi*, Priority 4) may also inhabit the Paddington mining area. However, due to the widespread nature of the habitats across the project area, it is considered unlikely that these represent significant habitat for these species (MBS Environmental, 2005b). The Shy Heathwren, Crested Bellbird and White-browed Babbler have all been recorded from the nearby Karrawang Nature Reserve, indicating that part of the habitat of these species in the Goldfields region has already been reserved (MBS Environmental, 2005b).

In accordance with their Exploration Clearing Management Plan, Placer Dome have committed to identifying areas that are more likely to represent significant habitat for fauna species. They propose to conduct targeted fauna surveys across such areas prior to any clearing for exploration. Should any significant habitat for fauna species be found, clearing will be planned to avoid these areas where possible (MBS Environmental, 2005a).

Placer Dome advise that there will be up to 20 hectares of active clearing occurring within the project area at

any one time. Given that the fauna habitats represented by the landform units, soils and vegetation of the application area are widely represented locally and regionally, it is unlikely that any of the above mentioned species will be adversely impacted upon through the loss of such small amounts of habitat (MBS Environmental, 2005).

The above discussion adequately reflects the existing fauna habitat value of the application area and as such CALM concurs with the comments (CALM, 2005a).

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

Methodology
CALM (2005a)
MBS Environmental (2005)
MBS Environmental (2005a)
MBS Environmental (2005b)
Kinhill Engineers (1997)
Shepherdson Environmental Services (2001)
GIS databases:
- Threatened Fauna

(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 the available CALM datasets, no Declared Rare Flora species are known to occur within the area under application (CALM, 2005).

A search of CALM's Threatened (Declared Rare) Flora database was conducted which indicated that three Priority 1 species (*Acacia epedunculata*, *Eremophila praecox* and *Lepidium fasciculatum*), two Priority 2 species (*Eucalyptus jutsonii* and *Elachanthus pusillus*), two Priority 3 species (*Gompholobium asperulum* and *Xanthoparmelia dayiana*) and one Priority 4 species (*Eucalyptus x brachyphylla*) could occur with the application area, however, no known populations or individual specimens of these species are located within the area under application (MBS Environmental, 2005). The nearest known Priority species to the project area is *Eremophila praecox* (P1) which has been recorded approximately 9km south of the proposal.

Vegetation mapping and a flora survey was conducted by van Etten for the Paddington Mining Area in January 2005. A total of 82 taxa were collected from 19 survey sites across the Paddington lease area, however, none were found to be classified as Declared Rare Flora or Priority Flora by CALM. *Eremophila pustulata* (previously a P3 species) was observed during the survey, however, this has been re-classified by CALM as 'not threatened' (van Etten, 2005).

During the exploration phase of the project, Placer Dome have committed to identifying areas that are more likely to contain significant flora species. They propose to conduct targeted flora surveys across such areas prior to any clearing for exploration. Should any flora species of significance be found, clearing will be planned to avoid them where possible (MBS Environmental, 2005a).

Based on previous survey work and given careful planning and management of clearing is undertaken, it is unlikely that the proposed clearing will impact on significant flora.

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

Methodology
CALM (2005)
MBS Environmental (2005)
MBS Environmental (2005a)
van Etten (2005)
GIS databases:
- Declared Rare and Priority Flora List

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

Comments

Proposal is not likely to be at variance to this Principle

There have been no known Threatened Ecological Communities (TECs) identified within the area subject to be cleared. The nearest known TEC is approximately 165 km south-east of the proposed area.

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

Methodology
GIS Databases:
- Threatened Ecological Community Database

(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 State Government is committed to the National Objectives Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment, 2002; EPA, 2000).

While the benchmark of 15% representation in conservation reserves (JANIS Forests Criteria, 1997) has not been met for Beard vegetation associations 10, 125, 468, 480 and 2903, between approximately 89.8 - 100% of the pre-European extent respectively remains for these associations and it is therefore of 'least concern' for biodiversity conservation (Department of Natural Resources and Environment, 2002).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Coolgardie	12,912,204	12.707,620	98.42	Least Concern	10.87
IBRA Subregion - Murchison	28,120,590	28,120,590	100	Least Concern	1.06
Beard vegetation associations - State					
10	145,676	144,760	99.4	Least Concern	0.4
125	3,489,858	3,246,667	93	Least Concern	7.2
468	592,022	592,022	100	Least Concern	4.3
540	202,424	202,424	100	Least Concern	27.8
2903	28,309	28,309	100	Least Concern	N/A
Beard vegetation associations - Coolgardie Bioregion					
125	543,774	540,608	99.4	Least Concern	4.5
468	583,358	583,358	100	Least Concern	4.3
540	75,810	75,810	100	Least Concern	N/A
Beard vegetation associations - Murchison Bioregion					
10	65,388	65,388	100	Least Concern	N/A
125	711,483	711,483	100	Least Concern	0.5
2903	28,295	28,295	100	Depleted	N/A

* Shepherd (2007)
** Department of Natural Resources and Environment (2002)

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

Methodology

Shepherd (2007)
EPA (2000)
JANIS Forests Criteria (1997)
Department of Natural Resources and Environment (2002)
GIS Databases:
- Pre-European Vegetation
- Interim Biogeographic Regionalisation of Australia
- Local Government Authorities

(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

There are several minor, non-perennial watercourses situated within the area under application. The Arrow Lake and other ephemeral salt lake systems are located within the southern extent of the project area. Although tracks may be required to cross ephemeral creeks and lakes, Placer Dome are committed to the implementation of procedures and construction methods designed to minimise the disturbance to creek/lake beds, banks and fringing vegetation (MBS Environmental, 2005).

The lakebeds and fringing vegetation are dominated by halophytes such as *Halosarcia* and *Maireana* species (MBS Environmental, 2005; van Etten, 2005), however, as these are low vegetation types the clearing for tracks should not be required (MBS Environmental, 2005). The clearing of these species is not likely to have a significant impact as they are prolific seeders, and a good stand of seedlings normally regenerates in the season immediately following the removal of a bush (Department of Agriculture, 1988 as cited in MBS Environmental, 2005).

The proposal is for the progressive clearing of 100 hectares of native vegetation within a project area of 4596 hectares. This clearing will not significantly alter water tables and impact upon ecological communities that are wetland or groundwater dependent.

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

Methodology

MBS Environmental (2005)
van Etten (2005)
Department of Agriculture (1988)
GIS Database:
- Hydrography, linear
- Lakes 250K
- Kalgoorlie 1.4m Orthomosaic

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

Comments

Proposal is not likely to be at variance to this Principle

The proposal is located within the Coolgardie Botanical District, characterised by topography which is gently undulating with occasional ranges of low hills (MBS Environmental, 2005). The major soil types across the proposed area are red loamy sands and red clay loams, with red sands forming stabilised dunes on the fringes of salt lakes (Kinhill Engineers, 1997). Based on surface water hydrology and topography, the project would not appear to be in a high risk soil erosion area.

Due to the short duration of exploration activities and the rehabilitation procedures that are in place ie. cleared areas will be rehabilitated within 6 months of the activity occurring, it is unlikely that clearing undertaken during exploration activities will have any long-term land degradation impacts (MBS Environmental, 2005). Placer Dome has committed to minimising land degradation by following procedures outlined in its Exploration Drilling: Clearing Management Plan (MBS Enviromental, 2005a).

With low average annual rainfall (250mm) and high annual evaporation rates of 2800mm, recharge to groundwater would be low. Similarly, residency time for locally ponded waters would be limited, effectively reducing the risk of waterlogging across the area to be cleared. As the individual areas to be cleared are very small in area, it is unlikely that the proposed clearing will impact upon larger, landscape scale processes such as rises in the water table (MBS Environmental, 2005). Any clearing is unlikely to increase on-site salinisation as saline and subsaline soils are common throughout the Paddington lease area (De Sousa, 2005).

DAWA (2005) advise that the proposed clearing of 100 hectares for mining purposes is not likely to cause appreciable on and off-site land degradation, provided surface water is managed to avoid concentrated flows and subsequent soil erosion. Priority should be given to the stripping and protection of top soil to facilitate successful rehabilitation post clearing.

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

Methodology

DAWA (2005)
MBS Environmental (2005)
MBS Environmental (2005a)
Kinhill Engineers (1997)
GIS Databases:
- Evaporation Isopleths
- Isohyets
- Topographic Contours, Statewide
- Hydrography, Linear

(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 at variance to this Principle

The Kalgoorlie Arboretum and Kurrawang Conservation Reserve are the nearest CALM managed conservation areas to the proposal. Located 21.6km and 28km respectively south of the area subject to be cleared, it is unlikely that the vegetation within the proposal would be significant in providing an ecological linkage with these regional conservation areas.

The clearing associated with this project is unlikely to impact on the environmental and conservation values of the listed CALM managed areas based on the separating distance between the project and the reserves (CALM 2005).

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

Methodology

CALM (2005).
GIS Databases:
- CALM Managed Lands and Water

(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 area to be cleared does not fall within a Public Drinking Water Source Area (PDWSA) or PDWSA Protection Zone. The Broad Arrow Dam Catchment is situated 1.4km north of the area to be cleared, however, this will not be impacted upon as it is upslope of the area under application.

MBS Environmental (2005) advise that groundwater in the area is hypersaline with salinities of approximately 200,000 milligrams per litre of Total Dissolved Solids (TDS). For most local groundwaters the major ionic composition is salts of sodium and chloride with minor levels of magnesium and sulfate (De Sousa, 2005a). The quality of groundwater will not be impacted upon by the clearing activity.

The area of native vegetation to be cleared is unlikely to have an impact on regional groundwater considering the magnitude of the regional Yilgarn-Goldfields groundwater province (>290,000 sq km) and the extent of native vegetation remaining in the Coolgardie and Murchison Bioregions {approximately 98% and 100% respectively} (Shepherd et al, 2001). As the individual areas to be cleared are very small in area, it is unlikely that the proposed clearing will impact upon larger, landscape scale processes such as rises in the water table (MBS Environmental, 2005).

Placer Dome has committed to prevent or reduce impacts by following procedures outlined in its Exploration Drilling: Clearing Management Plan to manage drainage and water quality issues (MBS Environmental, 2005a).

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

Methodology

MBS Environmental (2005)
MBS Environmental (2005a)
Shepherd et al. (2001)
GIS Databases:
- Groundwater Salinity, Statewide
- Interim Biogeographic Regionalisation of Australia
- Groundwater Provinces
- Public Drinking Water Supply Areas (PDWSAs)
- PDWSA Protection Zones
- Topographic Contours, Statewide

(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 broad valleys and salt lake systems of the region compensate and sustain floodwaters. The topography of the area is gently undulating with all drainage flowing into salt lakes through ephemeral creeks (MBS Environmental 2005). Given the relatively small area to be cleared at any one time, it is unlikely that the clearing of native vegetation will create a catchment area large enough to increase the incidence of flooding.

The applicant has committed to adhere to its Exploration Drilling: Clearing Management Plan which seeks to manage surface drainage so that surface water flows and the incidence of flooding are unlikely to be significantly altered as a result of vegetation clearing (MBS Environmental 2005a).

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

Methodology MBS Environmental (2005)
MBS Environmental (2005a)
GIS Databases:
- Hydrography, linear

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

Comments

Clearing Permit CPS 376/1 was granted on 22 December 2005. An Appeal was received and following the decision of the Appeals Convenor, the Permit was amended (CPS 376/2) to include five additional Permit Conditions. As the proposed geotechnical investigations have taken longer to complete than expected, the Permit has now been further amended to extend the duration of the Permit until 9 December 2012 (CPS 376/3).

There are three Native Title Claims over the area under application; WC98/027, WC99/029 and WC98/009. These claims have been registered with the National Native Title Tribunal on behalf of the claimant groups. However, the tenements have been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (ie. 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 eight Aboriginal sites of significance (ID 963, 1298, 1299, 15127, 15128, 15129, 15130, 15131) within the area under application. It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

The proponent does not have a current EP Licence or works approval for this project, as Paddington Gold Pty Ltd is covered by Environmental Protection (Gold Extraction) Operations exemption order 1993.

Methodology DoE (2005)
GIS Databases:
- Aboriginal Sites of Significance
- Native Title Claims

4. Assessor's comments

Comment

The amended proposal has been assessed against the Clearing Principles and is not at variance to Principles (e) and (h) and is not likely to be at variance to Principles (a), (b), (c), (d), (f), (g), (i) and (j).

It is recommended that should a permit be granted, conditions be imposed on the permit for the purposes of flora and vegetation management, fauna management, retention of vegetative material and topsoil, record keeping and permit reporting.

5. References

CALM (2005a). Land clearing proposal advice. Advice to Program Manager, Native Vegetation Assessment Branch, Department of Industry and Resources (DoIR) - Department of Conservation and Land Management, Western Australia.

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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.

DoE (2005). Licence check and water allocation advice - Department of Environment, Western Australia.

EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority, Western Australia.

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Kinhill Engineers (1997). Biological assessment survey of Lease M24/239 'Paddington South'. Prepared for Paddington Gold Goldfields Ltd. Kinhill Engineers Pty Ltd.

MBS Environmental (2005). Purpose Permit Application Assessment of Clearing Principles. Prepared for Placer Dome Paddington Tenements, April 2005.

MBS Environmental (2005a). Exploration Drilling: Clearing Management Plan Kalgoorlie Region, April 2005. Prepared for

Placer Dome - Kalgoorlie Operations.
MBS Environmental (2005b). Desktop Habitat Assessment Paddington Mining Area - Supporting Document for Purpose Permit Application CPS 376/1. Prepared for Placer Dome, November 2005.
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Shepherdson Environmental Services (2001). Fauna of the proposed Golden Cities to Paddington Haul Road and surrounding area, May 2001. Prepared for Paddington Gold Pty Ltd.
van Etten (2005). Vegetation and Flora of the Paddington Mining Area - A report prepared for Placer Dome Inc., April 2005. Centre for Ecosystem Management, Edith Cowan University.

6. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government.
CALM	Department of Conservation and Land Management, Western Australia.
DAFWA	Department of Agriculture and Food, Western Australia.
DA	Department of Agriculture, Western Australia.
DEC	Department of Environment and Conservation
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DoE), Western Australia.
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia.
DMP	Department of Mines and Petroleum, Western Australia.
DoE	Department of Environment, Western Australia.
DoIR	Department of Industry and Resources, Western Australia.
DOLA	Department of Land Administration, Western Australia.
DoW	Department of Water
EP Act	Environment Protection Act 1986, Western Australia.
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System.
IBRA	Interim Biogeographic Regionalisation for Australia.
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
RIWI	Rights in Water and Irrigation Act 1914, Western Australia.
s.17	Section 17 of the Environment Protection Act 1986, Western Australia.
TECs	Threatened Ecological Communities.

Definitions:

{Atkins, K (2005). ***Declared rare and priority flora list for Western Australia, 22 February 2005.*** **Department of Conservation and Land Management, Como, Western Australia} :-**

P1	**Priority One - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P2	**Priority Two - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P3	**Priority Three - Poorly Known taxa**: taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
P4	**Priority Four – Rare taxa**: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
R	**Declared Rare Flora – Extant taxa** *(= Threatened Flora = Endangered + Vulnerable)*: taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

X **Declared Rare Flora - Presumed Extinct taxa**: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

Schedule 1 **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.

Schedule 2 **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.

Schedule 3 **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.

Schedule 4 **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

P1 **Priority One: Taxa with few, poorly known populations on threatened lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P2 **Priority Two: Taxa with few, poorly known populations on conservation lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P3 **Priority Three: Taxa with several, poorly known populations, some on conservation lands**: Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P4 **Priority Four: Taxa in need of monitoring**: Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.

P5 **Priority Five: Taxa in need of monitoring**: Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999)*

EX **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.

EX(W) **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.

CR **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.

EN **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

VU **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

CD **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.