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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5716/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Silver Lake Resources Limited**

1.3. Property details

Property: Mining Lease 25/347
Local Government Area: City of Kalgoorlie-Boulder
Colloquial name: Randall's Gold Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
75		Mechanical Removal	Tailings Storage Facility

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 12 September 2013

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

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

468: Medium woodland; salmon gum & Goldfields blackbutt.

The application area was surveyed by Outback Ecology Services (Outback Ecology) (2009a) as part of a larger flora and vegetation survey over the Salt Creek, Maxwells and Cock-Eyed Bob project areas (part of Randall's Gold Project). The application area is located within the Salt Creek project area which was subject to a Level 2 flora and vegetation survey (Outback Ecology, 2009a). The field survey was undertaken between 23 and 26 June 2008 and 16 and 21 October 2008. The following seven vegetation associations were recorded within the application area (Outback Ecology, 2009a):

Ab: *Acacia burkittii*, *Eremophila oldfieldii* subsp*. oldfieldii* tall Open Shrubland over *Eremophila gibbosa*, *Dodonaea lobulata* Open Shrubland over scattered Herbs;

CcMp: *Callitris columellaris* Low Open Woodland/Low Open Forest over *Myoporum platycarpum* subsp. *platycarpum, Dodonaea viscosa* subsp. *angustissima, Alyxia buxifolia, Eremophila* spp. Tall (Open) Shrubland over *Rhagodia ulicina, Atriplex vesicaria, Scaevola spinescens* Low Open Shrubland;

DVS: *Dodonaea viscosa* subsp. *angustissima* Shrubland over *Senna artemisioides* subsp. *filifolia, Tecticornia disarticulata, Maireana sedifolia* low shrubland;

EgSa: *Eucalyptus griffithsii* Woodland over *Senna artemisiodes* subsp. *filifolia*, *Eremophila decipiens* subsp. *decipiens* Open heath/Shrubland over Scattered Low Shrubs;

EoS: *Eremophila oldfieldii* subsp. *oldfiledii* Scattered Tall Shrubs over *Senna artemisioides* subsp. *filifolia*, *Eremophila glabra* subsp. *glabra*, *Dodenaea lobulata* Shrubland;

EsEl: *Eucalyptus salmonophloia (Eucalyptus lesoufii)* Scattered Trees to Woodland over *Senna artemisioides* subsp*. filifolia, Acacia colletioides* Shrubland/Tall Shrubland over Scattered Low Shrubs; and

FCM: *Frankenia georgei, F. pauciflora*, *Cratystylis subspinescens, Maireana amoena, M. pyramidata, Roycea divaricata, Tecticornia* spp. Open Low Heath.

Clearing Description Randall's Gold Project. Silver Lake Resources Limited (Silver Lake) proposes to clear 75 hectares of native vegetation within a boundary of approximately 180 hectares (GIS Database) for the purpose of a tailings storage facility. The project area is located within the City of Kalgoorlie-Boulder and is approximately 35 kilometres east, north east of Kambalda (GIS Database).

Vegetation Condition Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994);

To

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Comment

The purpose of the application is to develop a tailings storage facility at the Salt Creek deposit which is part of Randall's Gold Project.

Vegetation condition was determined by Outback Ecology (2009a).

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposal is not likely to be at variance to this Principle

The application area is located within the Eastern Goldfields subregion of the Coolgardie Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). This subregion is characterised by gently undulating plains interrupted in the west with low hills and a series of large playa lakes in the western half (CALM, 2002). The vegetation is dominated by Mallees, *Acacia* thickets and shrub-heaths on sandplains, diverse Eucalyptus woodlands occur around salt lakes, on ranges, and in valleys, and dwarf shrublands of samphire around salt lakes (CALM, 2002).

Seven vegetation communities were identified by Outback Ecology in the application area. Vegetation was found to be in a 'good' to 'excellent' condition with consistent heavy grazing from goats and sheep observed in the survey area (Outback Ecology, 2009a). This had altered the vegetation composition and structure, particularly the shrub, herb and grass strata. The vegetation was considered typical of that in the Goldfields and is well represented outside the application area (Outback Ecology, 2009a).

A total of 118 flora species from 60 genera and 20 families were recorded within the Salt Creek project area (Outback Ecology, 2009a). Three weed species were recorded including Wild Sage (*Salvia verbenaca*), Small Burr Medic (*Medicaga minima*) and *Oncosiphon suffruticosum* (Outback Ecology, 2009a). These were concentrated in the ephemeral river bed located adjacent to the western boundary of the application area. The presence of these introduced weed species lowers the biodiversity value of the area proposed to be cleared. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Available databases show no known Threatened or Priority Flora or Priority Ecological Communities (PECs) or Threatened Ecological Communities (TECs) have been recorded within the application area (GIS Database). No Threatened or Priority Flora or TECs or PECs were recorded by Outback Ecology (2009a). However, a review of Naturemap (DEC, 2013), shows Priority 1 flora species, *Eucalyptus websteriana* subsp. *norsemanica*, has been recorded approximately 530 metres east of the application area. Outback Ecology (2009a) did not identify this species in desktop database searches, therefore, it was not included in the list of potential Priority Flora species that were targeted during the field survey. According to Florabase (Western Australian Herbarium, 2013), this species occurs on rocky rises. Outback Ecology has advised that the only rocky rise in the application area is vegetation association EoS and that the application area intersects the lower south west slope of this rocky rise which extends outside the application area to the north east (Silver Lake, 2013). However, Outback Ecology considered this portion of the rocky rise as not rocky enough to support this species (Silver Lake, 2013). Outback Ecology adds that although this species was not identified in the database search, it is very distinctive (minni richi bark and heart shaped leaves) and would likely have been identified if present (Silver Lake, 2013). Based on the above there is a low likelihood of this species occuring within the application area.

Two fauna surveys have been conducted over the application area. The most recent survey was conducted by Outback Ecology over the Salt Creek project area from 6 to 18 November 2008. This survey recorded 14 mammal, 40 reptile and 57 bird species (Outback Ecology, 2009b). A previous survey conducted in 2007 recorded 17 mammal, 29 reptile and 32 bird species at the Salt Creek project area (Outback Ecology, 2009b). The fauna habitat present is well represented throughout the Goldfields region, and the application area is not likely to have a higher level of faunal diversity than surrounding areas (Outback Ecology, 2009b).

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

Methodology

CALM (2002)
DEC (2013)
Outback Ecology (2009a)
Outback Ecology (2009b)
Silver Lake (2013)
Western Australian Herbarium (2013)
GIS Database:
- IBRA WA (Regions – Sub Regions)
- Threatened and Priority Flora
- Threatened Ecological Sites Buffered

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

Comments

Proposal is not likely to be at variance to this Principle

A vertebrate fauna survey was undertaken over the Salt Creek project area by Outback Ecology from 6 to 18 November 2008. The survey included systematic trapping and targeted searching at six survey sites and opportunistic sampling techniques (Outback Ecology, 2009b). One of the six survey sites was located within the application area.

Fauna habitats at the survey sites were described as 'chenopod shrubland on river flat', 'mallee woodland on greenstone hill', 'mallee woodland over spinifex', 'Blackbutt (*Eucalyptus lesouefii*) over open shrubland', 'Salmon Gum (*Eucalyptus* salmonophloia) woodland over open shrub' and 'open mallee woodland over saltbush' (Outback Ecology, 2009b). The 'Blackbutt over open shrubland' survey site was located within the application area. Based on factors such as aspect, topography, outcropping, soil type, vegetation, litter cover, existing disturbance and proximity to water sources the habitats studied were considered unlikely to contain potential short range endemic habitat (Outback Ecology, 2009b). The sites were degraded due to extensive grazing pressure from feral goats. The habitat present within the application area is considered to be widespread within the region (Outback Ecology, 2009b).

Three fauna species of conservation significance have been recorded within the Salt Creek project area: Rainbow Bee-eater (*Merops ornatus*) (Marine; Migratory under *EPBC Act*; Schedule 3), White-browed Babbler (*Pomatostomus superciliosus ashbyi*) (Priority 4) and Western Rosella (*Platycercus icterotis xanthogenys*) (Priority 4) (Outback Ecology, 2009b). The Rainbow Bee-eater is found across most of Australia and inhabits open forests and woodlands, shrublands and various cleared or semi-cleared habitats (DSEWPAC, 2013). Given this species migratory habits and large distribution, the application area is not likely to represent significant habitat for the Rainbow Bee-eater.

The White Browed Babbler is found mainly in the arid and semi arid zones south of the Tropic of Capricorn (Johnstone and Storr, 2004). It usually inhabits the edges of most types of thicket and scrub, including mulga, wattle and other Acacia thickets, and shrubby understorey of Eucalypt and Casuarina woodlands (Johnstone and Storr, 2004). The Western Rosella is found in the semi-arid southern interior (Johnstone and Storr, 2004). It occurs mainly in Eucalypt and Casuarina woodland and scrubs, especially Wandoo and Salmon Gum woodlands (Johnstone and Storr, 2004). Given the mobility of these species and that the habitat in the application area is well represented within the region, the proposed clearing is not likely to represent significant habitat for the White Browed Babbler or Western Rosella.

There is the potential for other fauna species of conservation significance to occur within the application area (Outback Ecology, 2009b). However, given that the habitat present is well represented throughout the region and the application area has suffered degradation from feral grazing, the application area is not likely to represent significant habitat for native fauna species.

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

Methodology

DSEWPAC (2013)
Johnstone and Storr (2004)
Outback Ecology (2009b)

(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 Threatened Flora species within the application area (GIS Database).

The flora and vegetation survey by Outback Ecology (2009a) did not identify any Threatened Flora species within the survey area.

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

Methodology

Outback Ecology (2009a)
GIS Database:
- Threatened and Priority Flora

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

Comments

Proposal is not likely to be at variance to this Principle

According to available databases, there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest known TEC is approximately 285 kilometres south west of the application area (GIS Database).

The flora and vegetation survey by Outback Ecology (2009a) did not identify any TECs within the survey area.

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

Methodology Outback Ecology (2009a)
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 is located within the Coolgardie Interim Biogeographical Regionalisation for Australia (IBRA) bioregion (GIS Database). Approximately 97.96% of the pre-European vegetation remains within the Coolgardie bioregion (Government of Western Australia, 2013).

The vegetation of the application area has been mapped as Beard vegetation association 468 (GIS Database). Over 98% of this Beard vegetation association remains at both a state and bioregional level (Government of Western Australia, 2013). Therefore, the area proposed to be cleared does not represent a significant remnant of native vegetation within an area that has been extensively cleared. A review of aerial imagery also shows that vegetation within the application area is not a remnant within the local area (GIS Database).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Extent in DEC Managed Lands %*
IBRA Bioregion - Coolgardie	12,912,204	12,648,491	~97.96	Least Concern	~15.84
Beard vegetation associations - State					
468	592,022	583,903	~98.63	Least Concern	~23.15
Beard vegetation associations - Bioregion					
468	583,358	575,361	~98.63	Least Concern	~22.72

* Government of Western Australia (2013)
** 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 (2013)
GIS Database:
- IBRA WA (Regions - Sub Regions)
- Mount Belches 3335 Mar 2011 Mosaic
- Pre-European Vegetation

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

Comments

Proposal may be at variance to this Principle

According to available databases, there are no watercourses or waterbodies within the application area (GIS Database). However, the ephemeral watercourse Salt Creek lies immediately adjacent to the western boundary of the application area (GIS Database; Outback Ecology, 2009a). This drains into a large salt lake approximately three kilometres south of the application area (GIS Database; Outback Ecology, 2009a).

Vegetation mapping by Outback Ecology (2009a) indicates that vegetation association FCM is associated with Salt Creek. This is described as '*Frankenia georgei, F. pauciflora*, *Cratystylis subspinescens, Maireana amoena, M. pyramidata, Roycea divaricata, Tecticornia* spp. Open Low Heath'. Vegetation mapping shows only a very small portion of this vegetation association occurs within the north western corner of the application area and is unlikely to be impacted by the proposed clearing.

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

Methodology Outback Ecology (2009a)
GIS Database:
- 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

The application area is located within the Kambalda Soil-Landscape Zone (Tille, 2006). This zone is characterised by flat to undulating plains (with hills, ranges and some salt lakes and stony plains) on greenstone and granitic rocks of the Yilgarn Craton (Tille, 2006).

Soils within the application area have been described as being sandy and appear to be well drained (Outback Ecology, 2009a). The clearing of 75 hectares is likely to increase erosion, particularly in the vicinity of Salt Creek. Potential impacts from erosion as a result of the proposed clearing may be minimised by the implementation of a soil erosion management condition.

The application area has an annual evaporation rate of over eight times the average annual rainfall (GIS Database). Based on this information, recharge to the groundwater would be expected to be minimal. The soils within the application area are generally saline to extremely saline due to their proximity to the salt lake, Lake Lefroy (Outback Ecology, 2009a). Given this, the proposed clearing is not likely to result in changes to salinity within the application area.

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

Methodology

Outback Ecology (2009a)
Tille (2006)
GIS Database
- Evaporation Isopleths
- Rainfall, Mean Annual

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments

Proposal is not likely to be at variance to this Principle

The application area does not lie within any conservation areas or Department of Parks and Wildlife (DPAW) (formerly the Department of Environment and Conservation) managed lands (GIS Database). The nearest conservation area is the Randall Timber Reserve located approximately 13 kilometres east, north east of the application area (GIS Database). Based on the distance between the application area and the timber reserve, the proposed clearing is not likely to impact the environmental values of any conservation area.

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

Methodology

GIS Database:
- DEC Tenure

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

Comments

Proposal is not likely to be at variance to this Principle

According to available databases the application area is not located within a Public Drinking Water Source Area (GIS Database). There are no waterbodies or watercourses within the application area, however, the ephemeral watercourse Salt Creek lies immediately adjacent to the western boundary of the application area (GIS Database). Clearing in the vicinity of this watercourse is likely to result in localised erosion and sedimentation, particularly following heavy rainfall. Potential impacts to the surface water quality as a result of the proposed clearing may be minimised by the implementation of a soil erosion management condition.

The climate of the area is arid to semi-arid with 200 to 300 millimetres of rainfall that usually occurs in winter but sometimes occurs in summer (CALM, 2002). The application area receives an average annual rainfall of approximately 300 millimetres with an average annual evaporation rate of 2,600 millimetres (GIS Database). Any surface flows are therefore likely to be short lived.

According to available databases, groundwater salinity within the application area is between 14,000 and 35,000 milligrams/Litre Total Dissolved Solids (TDS) (GIS Database). This is considered to be saline. Given the groundwater is already saline, any clearing within the application area is not likely to alter the existing groundwater quality.

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

Methodology

CALM (2002)
GIS Database
- Evaporation Isopleths
- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSA's)

- Rainfall, Mean Annual

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments

Proposal is not likely to be at variance to this Principle

The application area is located within the Lake Lefroy catchment area (GIS Database). Given the size of the area to be cleared (75 hectares) in relation to the size of the catchment area (2,488,251 hectares) (GIS Database), the proposed clearing is not likely to increase the potential of flooding on a local or catchment scale.

With an average annual rainfall of 300 millimetres and an average annual evaporation rate of 2,600 millimetres there is likely to be little surface flow during normal seasonal rains (GIS Database). Whilst large rainfall events may result in flooding of the area, the proposed clearing is not likely to lead to an increase in incidence or intensity of flooding.

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

Methodology

GIS Database:
- Evaporation Isopleths
- Hydrographic Catchments – Catchments
- Rainfall, Mean Annual

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

Comments

There is one native title claim over the area under application: WC1999/030 (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*.

According to available databases, there are no registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation (formerly 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 12 August 2013 by the Department of Mines and Petroleum inviting submissions from the public. A 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

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management.

DEC (2013) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. http://naturemap.dec.wa.gov.au/default.aspx (Accessed 2 September 2013).

Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

DSEWPAC (2013) *Merops ornatus* - Rainbow Bee-eater. Available online at http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=670. Accessed 29 August 2013.

Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.

Johnstone and Storr (2004) Handbook of Birds of Western Australia Vol. II, Western Australian Museum, 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.

Outback Ecology (2009a) Salt Creek Level 2 and Maxwells/Cock-Eyed Bob Level 1 Vegetation and Flora Surveys. Unpublished report for Integra Mining Limited by Outback Ecology Services, dated April 2009.

Outback Ecology (2009b) Terrestrial Vertebrate Fauna Assessment. Unpublished report for Integra Mining Limited by Outback Ecology Services, dated January 2009.

Silver Lake (2013) Further Information provided by Silver Lake Resources Limited on 11 September 2013.

Tille (2006) Soil-landscapes of Western Australia's Rangelands and Arid Interior. Technical Report 313. Department of

Agriculture and Food, Western Australia. ISSN 1039-7205.
Western Australian Herbarium (2013) Florabase - The Western Australian Flora. Department of Parks and Wildlife. Available online at http://florabase.dpaw.wa.gov.au/ Accessed 2 September 2013.

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.