



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 1153/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Metals Exploration Ltd

### 1.3. Property details

Property: Exploration Licence 69/535  
Local Government Area: Shire of Ngaanyatjarraku  
Colloquial name: Wingellina Area

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 26 May 2011

## 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 at a 1:250,000 scale for the whole of Western Australia. Two Beard vegetation associations have been mapped within the application area (GIS Database; Shepherd, 2009).

**19:** Low woodland; mulga between sand ridges; and

**92:** Hummock grasslands, sparse tree steppe; bloodwood over hard spinifex *Triodia basedowii* (GIS Database; Shepherd, 2009).

The application area was surveyed by Outback Ecology Services on 13-22 April 2008 (Outback Ecology Services, 2009a). The following seven vegetation types were identified within the application area:

**Ega:** *Eucalyptus gamophylla* (*Eucalyptus mannensis* subsp. *mannensis*) (Very) open shrub mallee over *Senna* spp., *Acacia* spp. open shrubland/scattered shrubs over *Triodia* spp. hummock grassland on upper slopes and ridges;

**Eso:** *Eucalyptus socialis* subsp. *eucentrica* open shrub mallee occasionally with *Eucalyptus gamophylla*, *Eucalyptus mannensis* subsp. *mannensis* scattered mallees over *Acacia aneura*, *Acacia kempeana*, *Acacia oswaldii*, *Acacia valdinervia* scattered tall shrubs/open shrubland/low shrubland over mixed shrubs over *Triodia* spp. hummock grassland, *Eragrostis eriopoda*, *Enteropogon ramosus* scattered grasses/very open grassland. On valley floors and plains associated with increased moisture availability;

**Egyp:** *Eucalyptus gypsophila* (Very) open shrub mallee often with *Eucalyptus socialis* subsp. *eucentrica* over mixed *Acacia* spp. over *Ptilotus obovatus* var. *obovatus* low shrubland/open shrubland over *Triodia helmsii*/*Triodia pugnans* hummock grassland. On hills and slopes;

**Aca:** *Acacia aneura* var. *aneura*, *Acacia aneura* var. *intermedia* low woodland-scattered tall shrubs over mixed *Acacia* spp., *Senna artemisioides* scattered shrubs/open shrubland over *Eragrostis eriopoda*, *Aristida* spp., *Enteropogon ramosus* open-closed grassland. On plains surrounding Wingellina;

**Hdi:** *Hakea divaricata* low open woodland over *Cenchrus ciliaris*, *Enteropogon ramosus* open grassland, apparently restricted on flats;

**Apr:** *Acacia pruinocarpa*, *Hakea lorea* subsp. *lorea* tall open shrubland over *Senna artemisioides* subsp. *oligophylla* x *helmsii*, *Acacia kempeana* low open shrubland over *Triodia helmsii* hummock grassland, *Cymbopogon obtectus* very open tussock grassland. On low hills to the south of Wingellina; and

**Ccot:** *Codonocarpus cotinifolius* low open woodland over *Eucalyptus gamophylla* scattered mallee over *Senna glutinosa*, *Acacia kempeana*, *Hakea lorea* subsp. *lorea* open shrubland over *Acacia valdinervia*, *Ptilotus exaltatus* var. *exaltatus* low open shrubland over *Triodia helmsii* hummock grassland, *Cymbopogon obtectus* very open

tussock grassland. On low hills to the south of Wingellina (Outback Ecology Services, 2009a).

<b>Clearing Description</b>	<p>Metals Exploration Ltd is proposing to clear up to 4.23 hectares of native vegetation within an area of approximately 8,554 hectares. The proposed clearing is for exploration drilling and related infrastructures such as sumps (Metals Exploration Ltd, 2006).</p> <p>The application area is located within an area listed on the Register of the National Estate for its natural values, which is classified as an Environmentally Sensitive Area (ESA), and a Schedule 1 Non-permitted area under the <i>Environmental Protection (Clearing of Native Vegetation) Regulations 2004</i>. As a result there is a requirement for a native vegetation clearing permit for this proposal.</p>
<b>Vegetation Condition</b>	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);</p> <p>To</p> <p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).</p>
<b>Comment</b>	<p>The application area has been significantly disturbed as a result of previous mineral exploration, mining, altered fire regimes, vehicle disturbance and other minor human activities (HGM, 2002; Outback Ecology Services, 2009a). The continued use of vehicle tracks within the area has also encouraged the spread of weeds throughout the application area. The application area is located approximately 698 kilometres north east of Laverton. The vegetation condition was derived from a vegetation survey conducted by Outback Ecology Services (2009a).</p>

### 3. Assessment of application against clearing principles

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

<b>Comments</b>	<p><b>Proposal is not likely to be at variance to this Principle</b></p> <p>The application area occurs within the Mann-Musgrave Block (CR1) subregion of the Central Ranges Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Mann-Musgrave Block subregion covers approximately 4,701,518 hectares (GIS Database). The sandplains of this subregion support low open woodlands of either Desert Oak or Mulga over <i>Triodia basedowii</i> hummock grasslands. Low open woodlands of Ironwood (<i>Acacia estrophiolata</i>) and Corkwoods (<i>Hakea</i> spp.) over tussock and hummock grasses often fringe ranges. The ranges support mixed wattle scrub or <i>Callitris glaucophylla</i> woodlands over hummock and tussock grasslands (CALM, 2002).</p> <p>The application area occurs within an Environmentally Sensitive Area (Register of National Estate), which is the Ranges of the Western Desert (GIS Database). According to the Australian Heritage Database (2011) the Ranges of the Western Desert are a system of ranges with many gorges and valleys. The ranges are dominated by spinifex steppe, mulga and mallee scrub (Australian Heritage Database, 2011). Despite the area being on the Register of National Estate for natural values, it is considered that the proposed clearing is low impact and of a small scale and will not significantly impact on the environmental values of the area.</p> <p>One weed species was recorded within the application area (Outback Ecology Services, 2009a), namely <i>Cenchrus ciliaris</i>. Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. This in turn can lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. This species is not listed as a 'Declared Plant' species under the <i>Agriculture and Related Resources Protection Act 1976</i> by the Department of Agriculture and Food. Metals Exploration Ltd (2006) advised within their exploration management plan that 'drilling rigs are washed down thoroughly prior to their entry into the lease area, and prior to their exit from the area'. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed control condition.</p> <p>The application area has been significantly disturbed as a result of previous mineral exploration, mining, altered fire regimes and vehicle disturbance (HGM, 2002). During the course of the biological survey, it was noted that vehicle tracks and uncapped drill holes were prevalent throughout the application area. Vehicle traffic has contributed to the spread of weeds throughout the area, and continued use of vehicle tracks has allowed for little regeneration of native species.</p> <p>Based on the widespread availability of similar vegetation communities and landforms, the application area is not considered to support a higher biological diversity than the adjoining local or regional areas.</p> <p>Based on the above, the proposed clearing is not likely to be at variance to this Principle.</p>
<b>Methodology</b>	<p>Australian Heritage Database (2011) CALM (2002) HGM (2002) Metals Exploration Ltd (2006) Outback Ecology Services (2009a) GIS Database - Clearing Regulations - Environmentally Sensitive Areas - IBRA WA (regions - subregions)</p>

- Register of National Estate (Status)

**(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**

In April 2009, Outback Ecology Services were commissioned to undertake a terrestrial fauna assessment of the Wingellina Nickel Project, within exploration tenement E69/535. A desktop review was undertaken to collate all available information pertaining to the fauna of the Wingellina area, central ranges, and the central deserts in general (HGM, 2002; Outback Ecology Services, 2009b). The following databases were reviewed:

- Western Australian Museum Faunabase;
- Birds Australia Database;
- Threatened and Priority Fauna Database;
- Australian Natural Resources Atlas of the National Land and Water Resources Audit;
- Environmental Reporting Tool of the Australian Government Department of Environment and Water Resources;
- Protected Matters and Environmental Reporting Tools of the Australian Government Department of Environment and Water Resources;
- Australian Wetlands Database of the Australian Government Department of Environment and Water Resources;
- Biological Database held by the Department of Natural Resources, Environment and the Arts, Northern Territory; and
- Biological Database of South Australia, Department of Environment and Heritage.

A fauna survey of the Wingellina area was undertaken between 8-17 April 2008. The survey consisted of:

- systematic sampling including: pitfall traps and drift line, Elliott box traps, Sheffield cage traps, funnel traps, inventory searches, soil sieving, dry pitfall trapping, spotlight searches and avifauna censusing;
- opportunistic sampling including: opportunistic sightings, secondary evidence, spotlighting and anecdotal evidence; and
- targeted searches for fauna including: bat fauna, Mygalomorph spiders and other invertebrates, Mulgara, Black-footed Rock-wallaby, and Malleefowl (Outback Ecology Services, 2009b).

No species listed under the *Wildlife Conservation Act 1950* were recorded within the application area during the fauna survey (HGM, 2002; Outback Ecology Services, 2009b). One species of conservation significance was recorded during the survey, the Australian Bustard (*Ardeotis australis*) which is listed as a Priority 4 species under the WA Department of Environment and Conservation Priority species list.

Six broad fauna habitats were identified within the project area:

- Sparse Mulga woodland/grasses;
- Open Mulga woodland;
- Open Mallee woodland/Spinifex;
- Rocky Escarpment;
- Sparse Mulga woodland/grasses; and
- Open dead Mulga woodland (Outback Ecology Services, 2009b).

The Rocky Escarpments habitat type was found to support three potential Short Range Endemic (SRE) species. The rocky escarpments are a limited habitat type in the region and it is likely that these species have a restricted geographic range within this habitat type (Outback Ecology Services, 2009b). The five remaining broad fauna habitats identified within the project area are widely represented throughout the region (Outback Ecology Services, 2009b).

Many of the species which may occur within the application area are wide ranging and are considered to occur in at least one, and often several, adjoining subregions (Graham & Cowan, 2001). The scale and nature of the proposed clearing activities render it highly unlikely to result in the loss of significant habitat for fauna indigenous to Western Australia.

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

**Methodology**

Graham & Cowan (2001)  
HGM (2002)  
Outback Ecology Services (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 records of Declared Rare Flora (DRF) within the application areas (GIS Database).

Outback Ecology Services (2009a) were commissioned to undertake a flora survey over the application area from 13-22 April 2008. The Central Ranges experienced below-average rainfall in the three months immediately preceding the survey, however rainfall received during December 2007 was significantly above the long term average (Outback Ecology Services, 2009a).

Prior to the field survey, a search for DRF species previously recorded or likely to occur within the vicinity of the application area was undertaken using the following databases:

- *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* Protected Matters;
- Department of Environment and Conservation (DEC) Threatened (Declared Rare) Flora;
- Western Australian Herbarium (WAHERB);
- Declared Rare and Priority Flora List;
- South Australian Herbarium; and
- Northern Territory Department of Natural Resources, Environment and the Arts (NRETA) (Outback Ecology Services, 2009a).

No DRF or species listed under the *Environment Protection and Biodiversity Conservation Act 1999* were recorded within the application area (HGM, 2002; Maunsell, 2006; Outback Ecology Services, 2009a).

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

**Methodology** HGM (2002)  
Maunsell (2006)  
Outback Ecology Services (2009a)  
GIS Database  
- 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**  
According to available databases, there are no Threatened Ecological Communities (TEC's) within the application area (GIS Database). The nearest TEC has been recorded approximately 895 kilometres south-west of the application area. The proposed clearing activities are not likely to impact on any known TEC.

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

**Methodology** GIS Database:  
- Threatened Ecological Sites Buffered

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

**Comments** **Proposal is not at variance to this Principle**  
The application area occurs within the Mann-Musgrave Block subregion of the Central Ranges IBRA bioregion (GIS Database). This bioregion retains approximately 99.97% of its pre-European vegetation (see table) (GIS Database; Shepherd, 2009).

The vegetation of the application areas has been mapped as Beard vegetation associations 19: Low woodland; mulga between sand ridges; and 92: Hummock grasslands, sparse tree steppe; bloodwood over hard spinifex *Triodia basedowii* (GIS Database). According to Shepherd (2009) approximately 99% of these Beard vegetation associations remain at both the state and bioregional level (see table).

According to the Bioregional Conservation Status of Ecological Vegetation Classes, the conservation status for the Central Ranges bioregion and Beard vegetation associations 19 and 92 is of "Least Concern" (Department of Natural Resources and Environment, 2002) (see table).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Central Ranges	4,701,520	4,700,253	~99.97%	Least Concern	N/A
Beard vegetation associations - State					
19	4,385,295	4,384,287	~99.98%	Least Concern	~0.11%
92	152,002	151,113	~99.42%	Least Concern	N/A
Beard vegetation associations - Bioregion					
19	902,251	902,180	~99.99%	Least Concern	N/A
92	123,656	123,208	~99.64%	Least Concern	N/A

\* Shepherd (2009)

\*\* Department of Natural Resources and Environment (2002)

Options to select from: Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment 2002)	
Presumed extinct	Probably no longer present in the bioregion
Endangered*	<10% of pre-European extent remains
Vulnerable*	10-30% of pre-European extent exists
Depleted*	>30% and up to 50% of pre-European extent exists
Least concern	>50% pre-European extent exists and subject to little or no degradation over a majority of this area
* or a combination of depletion, loss of quality, current threats and rarity gives a comparable status	

The vegetation under application is not a remnant of vegetation in an area that has been extensively cleared.

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 at variance to this Principle**

According to available GIS Databases, there are no permanent wetlands or watercourses within the application area; however there are several minor non-perennial drainage lines within the application area (GIS Database).

The Wingellina project area lies in central Australia and therefore has an arid climate with variable rainfall (Bureau of Meteorology, 1983 as cited in HGM, 2002). Much of the rainfall predominantly occurs between December to March and is derived from summer storms (HGM, 2002). It is only during and after such heavy rainfall events that the ephemeral watercourses within the project area are likely to flow (Metals Exploration Ltd pers. comm. 27 April 2006).

Metals Exploration Ltd have advised that drilling will not take place within ephemeral watercourses within the application area, and that all care will be taken not to disturb the native vegetation in the zones marginal to the watercourses. In addition, existing tracks and gridlines will be utilised for access across the project area (Metals Exploration Ltd pers. comm. 27 April 2006).

Based on the above, the proposed clearing is at variance to this Principle. However, the proposed clearing is not likely to significantly impact on the conservation of vegetation growing in association with permanent watercourses or wetlands due to the absence of these within the application area. The proposed clearing of 4.23 hectares of native vegetation is unlikely to significantly impact on vegetation communities growing in association with the drainage channels located within the application area. Furthermore, given the operator's commitment to avoiding watercourses and utilising existing tracks, it is unlikely that these watercourses will be significantly impacted upon through the proposed clearing. Should the watercourse be disturbed the proponent should liaise with the Department of Water to determine whether a Bed and Banks permit is necessary for the proposed works.

**Methodology** HGM (2002)  
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**

The Wingellina Hills consist of a series of predominantly low, NW-SE trending ridges with occasional high steep hills and rocky outcrops (HGM, 2002). These hills are separated from nearby ranges to the east and south by 5-10 kilometre wide flats. The soils across the application area tend to be red clays in amongst the hills and ridges, with red sandy clays on the flats (Metals Exploration Ltd pers. comm. 27 April 2006).

Given the topography of the application area and the dominant soil types which exist within it, the small amount of clearing associated with this proposal is unlikely to increase the incidence of soil erosion.

The proposed clearing activities are not likely to result in large areas of disturbed or open land. Given the nature and scale of the proposed activities, the clearing is not likely to result in appreciable land degradation.

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

**Methodology** HGM (2002)

**(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 is not located within a conservation reserve or Department of Environment and Conservation managed land (GIS Database). The nearest conservation area is Gibson Desert Nature Reserve which is situated approximately 265 kilometres north-west of the application area (GIS Database).

Given the distance separating Gibson Desert Nature Reserve and the application area, the proposed clearing is not likely to impact the environmental values of the 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, there are no permanent watercourses or wetlands within the application areas (GIS Database). Any surface water within the application areas is likely to only remain for short periods following significant rainfall events. Several minor, non-perennial watercourses partially exist within the application area. However, Metals Exploration Ltd have advised that drilling will not take place within ephemeral watercourses within the application area, and that all care will be taken not to disturb the native vegetation in the zones marginal to the watercourses (Metals Exploration Ltd pers. comm. 27 April 2006). The proposed clearing is not likely to cause deterioration in the quality of any surface water within or outside of the application areas.

The application areas are not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).

The groundwater table across much of the project area sits at around 50 metres below ground level, and the water is considered to be of good drinking quality (Metals Exploration Ltd pers. comm. 27 April 2006). The small area proposed to be cleared is not likely to significantly impact the watertable and result in an increased salinity risk across the application area.

Given the low impact nature of the proposed clearing activities, the proposed clearing is not likely to cause deterioration in the quality of any surface or underground water.

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

**Methodology** GIS Database:  
- Hydrography, linear  
- Public Drinking Water Source Areas (PDWSAs)

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

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

Metals Exploration Ltd has applied to clear up to 4.23 hectares within an application area totalling approximately 8,554 hectares for the purpose of mineral exploration. With the application areas being located within the Warburton Basin catchment area which covers a total area of approximately 17,195,990 hectares, the proposed clearing is not likely to cause or exacerbate the incidence or intensity of floods in the catchment or local areas.

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

**Methodology** GIS Database:  
- Hydrographic Catchments - Catchments

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

**Comments**

There is one Native Title Claim (WC04/003) over the areas 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 is one registered Aboriginal Site of Significance located within close proximity to the clearing permit application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

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

**Methodology** GIS Database  
- Aboriginal Sites of Significance  
- Native Title Claims

**4. References**

- Australian Heritage Database (2011) <http://www.environment.gov.au> (Accessed 27 January 2011).
- CALM (2002) Biological Summary of the 2002 Biodiversity Audit for Western Australia, A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002 - Central Ranges 1 (CR1) - Mann-Musgrave Block subregion), ed. N.L McKenzie, J.E May and S. McKenna, Government of Western Australia, Perth, Western Australia.
- 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.
- Graham & Cowan (2001) Central Ranges 1 (CR1 - Mann-Musgrave subregion) in 'A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002'. Report published by the Department of Conservation and Land Management, Perth, Western Australia.
- HGM (2002) Wingellina Baseline Biological Survey. Prepared by Halpern Glick Maunsell for Acclaim Exploration NL. December 2002.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Maunsell (2006) Wingellina Biological Survey Follow-up Threatened Flora Determination. Prepared by Maunsell Australia Pty Ltd for Metals Exploration Ltd. March 2006.
- Metals Exploration Ltd (2006) Application for a Clearing Permit on E69/535. Prepared by Metals Exploration Limited on behalf of Hinckley Range Pty Ltd. February 2006.
- Outback Ecology Services (2009a) Wingellina Nickel Project: Baseline Vegetation and Flora Assessment. Unpublished report prepared for Metals X Limited. April 2009.
- Outback Ecology Services (2009b) Wingellina Nickel Project: Terrestrial Fauna Assessment. Unpublished report prepared for Metals X Limited. April 2009.
- Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

## 5. Glossary

### Acronyms:

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

<b>P1</b>	<b>Priority One - Poorly Known taxa:</b> 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.
<b>P2</b>	<b>Priority Two - Poorly Known taxa:</b> 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.
<b>P3</b>	<b>Priority Three - Poorly Known taxa:</b> 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.
<b>P4</b>	<b>Priority Four – Rare taxa:</b> 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.
<b>R</b>	<b>Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):</b> 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.
<b>X</b>	<b>Declared Rare Flora - Presumed Extinct taxa:</b> 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] :-

<b>Schedule 1</b>	<b>Schedule 1 – Fauna that is rare or likely to become extinct:</b> being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
<b>Schedule 2</b>	<b>Schedule 2 – Fauna that is presumed to be extinct:</b> being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
<b>Schedule 3</b>	<b>Schedule 3 – Birds protected under an international agreement:</b> 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.
<b>Schedule 4</b>	<b>Schedule 4 – Other specially protected fauna:</b> 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.