



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 5295/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Integra Mining Limited

### 1.3. Property details

Property: Mining Lease 25/350  
Miscellaneous Licence 25/23  
Miscellaneous Licence 25/34  
Local Government Area: City of Kalgoorlie-Boulder  
Colloquial name: Majestic Gold Project

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 13 December 2012

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

**Vegetation Description** Beard vegetation associations have been mapped for the whole of Western Australia. One Beard vegetation association has been mapped within the application area (GIS Database):

468: Medium woodland; salmon gum & goldfields blackbutt.

A flora and vegetation survey of the application area was conducted in October 2010 and May 2011 by Outback Ecology (2011a). This survey identified the following 25 vegetation communities within the application area (Outback Ecology, 2011a):

AnpEo: Tall Shrubland of *Acacia* sp. Narrow phyllode (B.R. Maslin 7831) (*Acacia tetragonophylla* and *Eremophila oldfieldii* subsp. *angustifolia*) over Scattered Low Shrubs of *Maireana* spp;

AnpMsp: Tall Open Shrubland of *Acacia* sp. Narrow phyllode (B. R. Maslin 7831) over a Low Shrubland of *Maireana* spp. and *Ptilotus obovatus*;

AtPa: Tall Shrubland of *Acacia tetragonophylla*, *Pittosporum angustifolium* and *Santalum spicatum* over a mixed Shrubland;

ChS: Open Low Shrubland of *Atriplex vesicaria*, *Maireana triptera* and other Chenopod species;

CoEi: Low Open Woodland of *Casuarina obesa* over a Tall Scattered Shrubland of *Eremophila interstans* subsp. *interstans* over a Low Open Shrubland of *Maireana sedifolia*;

CoTd: Low Open Woodland of *Casuarina obesa* over a Low Open Shrubland of *Tecticornia disarticulata*;

CpAt: Low Scattered Woodland of *Casuarina pauper* over an Open Shrubland of *Acacia tetragonophylla* and *Dodonaea lobulata* over Very Open Grassland of *Triodia irritans*;

EccEo: Woodland of *Eucalyptus celastroides* subsp. *celastroides* with occasional *Eucalyptus salmonophloia* and *Eucalyptus salubris* over a Tall Open Shrubland of *Eremophila oldfieldii* subsp. *angustifolia* and *Exocarpos aphyllus* over a Low Shrubland of *Eucalyptus decipiens* subsp. *decipiens* and *Senna artemisioides* subsp. *filifolia*;

EeAb: Very Open Mallees of *Eucalyptus ewartiana* over a Tall Shrubland of *Acacia burkittii* over an Open Shrubland of *Eremophila granitica* and *Dodonaea lobulata*;

EgAnp: Low Open Woodland of *Eucalyptus griffithsii* over Tall Shrubland of *Acacia* sp. narrow phyllode (B.R. Maslin 7831) over an Open Shrubland of *Eremophila* spp., *Senna artemisioides* subsp. *filifolia*, *Dodonaea lobulata*, *Atriplex nummularia* subsp. *spathulata* and *Maireana sedifolia*;

EgAnpEg: Low Open Woodland of *Eucalyptus griffithsii* over Tall Shrubland of *Acacia* sp. Narrow phyllode (B. R. Maslin 7831) over an Open Shrubland of *Eremophila granitica*, *Scaevola spinescens* and *Dodonaea lobulata*;

EgEd: Low Woodland of *Eucalyptus griffithsii* over Tall Open Shrubland of *Eremophila dempsteri* and *Eremophila interstans* subsp. *interstans* over an Open Shrubland of *Dodonaea lobulata*, *Maireana sedifolia*, *Scaevola spinescens* and *Prostanthera campbellii*;

EIAAn: Low Open Woodland of *Eucalyptus lesouefii* over an Open Shrubland of *Acacia nyssophylla* and *Maireana sedifolia*;

EIMs: Woodland of *Eucalyptus lesouefii* over a Low Open Shrubland of *Maireana sedifolia* and *Tecticornia disarticulata*;

EsaEi: Open Woodland of *Eucalyptus salmonophloia* with occasional *Eucalyptus salubris* over a Tall Scattered Shrubland of *Eremophila interstans* subsp. *interstans* over an Open Shrubland of *Lycium australe*, *Maireana sedifolia*, *Maireana pyramidata*, *Senna artemisioides* subsp. *filifolia*, *Tecticornia disarticulata* and *Atriplex* spp.;

EsaMs: Scattered Woodland of *Eucalyptus salmonophloia* over an Open Shrubland of *Lycium australe*, *Maireana sedifolia*, *Senna artemisioides* subsp. *filifolia*, *Tecticornia disarticulata* and *Atriplex* spp.;

EsaMsp: Open Woodland of *Eucalyptus salmonophloia* over an Open Shrubland of *Maireana* and *Atriplex* spp.;

EsaEIEc: Open Woodland of *Eucalyptus salmonophloia* and *Eucalyptus lesouefii* with occasional *Eucalyptus celastroides* subsp. *celastroides* and *Casuarina obesa* over a Tall Open Shrubland of *Eremophila dempsteri*, *Eremophila oldfieldii* subsp. *angustifolia* over an Open Shrubland of *Senna artemisioides* subsp. *filifolia*, *Eremophila glabra* subsp. *glabra* and *Atriplex nummularia* subsp. *spathulata* and *Maireana* spp.;

EsaEIEd: Open Woodland of *Eucalyptus salmonophloia* and *Eucalyptus lesouefii* over a Tall Open Shrubland of *Eremophila dempsteri* over a Low Open Shrubland of *Atriplex nummularia* subsp. *spathulata* and *Tecticornia disarticulata*;

EsaEstEI: Open Woodland of *Eucalyptus salmonophloia*, *Eucalyptus stricklandii* and *Eucalyptus lesouefii* over a Tall Open Shrubland of *Eremophila dempsteri* and *Eremophila oldfieldii* subsp. *angustifolia*, over Open Shrubland of *Eucalyptus decipiens* subsp. *decipiens*, *Senna artemisioides* subsp. *filifolia* and *Olearia muelleri*;

EslEs: Open Woodland of *Eucalyptus salubris* with occasional *Eucalyptus salmonophloia* over a Tall Scattered Shrubland of *Eremophila scoparia* over a Low Open Shrubland of *Maireana sedifolia* and *Tecticornia disarticulata*;

EslEy: Woodland of *Eucalyptus salubris* with occasional *Eucalyptus yilgarnensis* over a Tall Open Shrubland of *Eremophila interstans* subsp. *interstans* over a Low Scattered Shrubland of *Olearia muelleri*, *Enchylaena tomentosa* and other mixed shrubs;

EtEI: Open Woodland of *Eucalyptus transcontinentalis* and *Eucalyptus lesouefii* with occasional *Eucalyptus salmonophloia* over a Tall Open Shrubland of *Eremophila dempsteri*, *Eremophila oldfieldii* subsp. *angustifolia* over an Open Shrubland of *Maireana sedifolia*, *Scaevola spinescens* and *Atriplex* spp.;

SafMs: Open Shrubland of *Senna artemisioides* subsp. *filifolia* over a Low Open Shrubland of *Maireana sedifolia* and *Lycium australe*; and

IMs: Tall Open Shrubland of *Casuarina pauper* and *Acacia tetragonophylla* over a Low Open Shrubland of *Dodonaea lobulata* over a Very Open Grassland of *Triodia irritans*.

<b>Clearing Description</b>	Integra Mining Limited is proposing to clear up to 133.75 hectares of native vegetation for the purpose of mineral production including open pits, waste rock landforms, ROM pad, haul roads, pit de-watering infrastructure and other associated site infrastructure.  Clearing will be conducted by mechanical means.
<b>Vegetation Condition</b>	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).
<b>Comment</b>	The application area is located within the Coolgardie region of Western Australia and is situated approximately 35 kilometres north east of Kambalda.

### 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>	<b>Proposal is not likely to be at variance to this Principle</b> The application area is located within the Eastern Goldfields subregion of the Coolgardie Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). At a broad scale, vegetation can be described as Mallees, <i>Acacia</i> thickets and shrub-heaths on sandplains with diverse <i>Eucalyptus</i> woodlands occurring around salt lakes, on ranges and in valleys (CALM, 2002). <i>Eucalyptus</i> woodlands have been identified as having a high species and ecosystem diversity within the Eastern Goldfields bioregion (CALM, 2002).
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A flora survey of the application area was conducted by Outback Ecology (2011a) in October 2010 and May

2011. This survey identified a total of 121 plant taxa from 30 families and 65 genera within the application area (Outback Ecology, 2011a). The vegetation associations within the application area are relatively widespread both locally and regionally, therefore the proposed clearing is not likely to result in the loss of unique vegetation (Outback Ecology, 2011a).

According to available databases there are no Threatened or Priority Flora species within the application area (GIS Database). No Threatened or Priority Flora species were recorded within the application area during a flora and vegetation survey conducted by Outback Ecology (2011a).

According to available databases there are no Threatened or Priority Ecological Communities within the application area (GIS Database).

Thirteen introduced flora species, *Asphodelus fistulosus*, *Carrichtera annua*, *Hypochaeris* sp., *Lysimachia arvensis*, *Marrubium vulgare*, *Medicago minima*, *Medicago polymorpha*, *Monoculus monstrosus*, *Oligocarpus calendulaceus*, *Oncosiphon suffruticosum*, *Oxalis perennans*, *Salvia verbenaca* and *Sonchus oleraceus*, were recorded within the application area during the Outback Ecology (2011a) flora and vegetation survey. 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 can in turn lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. None of these species are listed as 'Declared Plant' species under the *Agriculture and Related Resources Protection Act 1976* by the Department of Agriculture and Food. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

A fauna survey of the application area was conducted by Terrestrial Ecosystems (2010) in November 2010. This survey identified one fauna habitat within the application area. This habitat has been identified as being similar to that in adjacent areas and well represented both locally and regionally (Terrestrial Ecosystems, 2010; Integra, 2012). It is therefore considered unlikely that the application area would support a higher level of faunal diversity than other similar areas locally and regionally.

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

**Methodology** CALM (2002)  
Integra (2012)  
Outback Ecology (2011a)  
Terrestrial Ecosystems (2010)  
GIS Database:  
- IBRA WA (Regions – subregions)  
- Threatened Ecological Sites Buffered  
- Threatened and Priority Flora

**(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 fauna survey of the application area was conducted by Terrestrial Ecosystems (2010) in November 2010. This survey identified one fauna habitat within the application area. This habitat is described as 'open eucalypt woodland with a mixed understory of scattered scrub and chenopods' (Terrestrial Ecosystems, 2010). This habitat is considered to be common on both a local and regional scale.

The fauna survey conducted by Terrestrial Ecosystems (2010) identified eleven fauna species as likely or probable to occur within the application area:

- Western Rosella (*Platycercus icterotis xanthogenys*) Schedule 1;
- Slender-billed Thornbill (Western) (*Acanthiza iredalei iredalei*) Vulnerable;
- Rainbow Bee-eater (*Merops ornatus*) Migratory;
- Fork-tailed Swift (*Apus pacificus*) Migratory;
- Peregrine Falcon (*Falco peregrinus*) Schedule 4;
- Carpet Python (*Morelia spilota imbricate*) Schedule 4;
- Shy Heathwren (*Hylacola cauta whilocki*) Priority 4;
- Crested Bellbird (*Oreoica gutturalis gutturalis*) Priority 4;
- Australian Bustard (*Ardeotis australis*) Priority 4;
- Greater Long-eared Bat (*Nyctophilus timoriensis* sp.1) Priority 4; and
- Crested Shrike-tit (south western subspecies) (*Falcunculus frontatus leucogaster*) Priority 4.

Terrestrial Ecosystems (2010) has identified that the habitat within the application area is common locally and regionally. As the avifauna species, Western Rosella, Slender-billed Thornbill, Rainbow Bee-eater, Fork-tailed Swift, Peregrine Falcon, Shy Heathwren, Crested Bellbird, Australian Bustard and Crested Shrike-tit, are all mobile, it is considered likely that should they occur within the application area they will move away from the area during disturbance.

The Greater Long-eared Bat is considered likely to have been recorded during an echolocation survey conducted by Terrestrial Ecosystems (2010). It is thought to be the same species as referred to by Churchill

(2008) (cited in Terrestrial Ecosystems, 2010) as the Central Long-eared Bat, which is distributed across the southern and central wheatbelt, the Great Victoria Desert and across the Nullabor coast (Terrestrial Ecosystems, 2010). The application area is therefore considered to be only a very small part of the known distribution for this species.

The Carpet Python occurs across the south west of Western Australia in numerous different habitats (Terrestrial Ecosystems, 2010). The application area is considered to be a small fraction of the suitable habitat for this species and the proposed clearing is therefore considered unlikely to significantly impact on the conservation of this species.

Given the common nature of the habitat within the application area, it is considered unlikely that the proposed clearing will significantly impact on 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** Terrestrial Ecosystems (2010)

**(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**

There are no records of Threatened Flora species within the application area (GIS Database). Two site flora surveys of the application area were conducted by Outback Ecology (2011a) in October 2010 and May 2011. No Threatened flora species were recorded during these surveys (Outback Ecology, 2011a).

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

**Methodology** Outback Ecology (2011a)  
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 Threatened Ecological Communities (TEC) within the application area (GIS database). The nearest known TEC is approximately 305 kilometres south east of the application area (GIS Database). At this distance there is little likelihood of any impacts to the TEC as a result of the proposed clearing.

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 is located within the Coolgardie Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). Approximately 98.19% of the pre-European vegetation remains within the Pilbara bioregion (Government of Western Australia, 2011).

The vegetation in the application area has been broadly mapped as Beard vegetation association:

468: Medium woodland; salmon gum & goldfields blackbutt.

Approximately 98.63% of Beard vegetation association 468 remains within the Coolgardie bioregion (see table on next page) (Government of Western Australia, 2011).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Coolgardie	12,912,205	12,677,932	~98.19	Least Concern	~10.68
Beard vegetation associations - State					
468	592,022	583,903	~98.63	Least Concern	~4.11
Beard vegetation associations - Bioregion					
468	583,358	575,301	~98.63	Least Concern	~4.11

\* Government of Western Australia (2011)

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

The vegetation within the application area is not considered to be a remnant of native 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)  
Government of Western Australia (2011)  
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 databases there are no permanent wetlands or watercourses and several non-perennial watercourses within the application area (GIS Database).

A flora and vegetation survey of the application area conducted by Outback Ecology (2011a) identified four vegetation communities associated with minor, non-perennial watercourses; AtPa, EsaEi, EsaMs and EsIEy.

Integra (2012) has advised that only one of these creeks, Mine Creek, will be directly impacted by the proposed clearing. This creek will be diverted to the east of the project area by placement of a bund (Integra, 2012). Potential impacts to surface water flow may be minimised by the implementation of a watercourse management condition.

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

**Methodology** Integra (2012)  
Outback Ecology (2011a)  
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 may be at variance to this Principle**

A soil survey of the application area was conducted by Outback Ecology (2011b). This survey identified the majority of the soil within the application area as relatively benign and generally stable (Outback Ecology, 2011b). Several of the soil samples, however, identified dispersive soil material which may become problematic after disturbance (Outback Ecology, 2011b). Potential soil erosion impacts may be minimised by the implementation of a staged clearing condition.

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

**Methodology** Outback Ecology (2011b)

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

**Comments Proposal may be at variance to this Principle**

The application area is not located within a conservation reserve, however it is located directly adjacent to the

Majestic Timber Reserve (GIS Database). Clearing in the areas adjacent to the Majestic Timber Reserve is for the purpose of a haul road, with the mining area being approximately 1 kilometre north of the Timber Reserve (Integra, 2012; GIS Database).

Increased activities and movement may lead to a greater potential for the spread of weeds through the area, therefore impacting upon the biodiversity of the conservation area. Potential spread of weeds as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

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

**Methodology** Integra (2012)  
GIS Database:  
- DEC Tenure

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

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

The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is the Broad Arrow Catchment Area located approximately 75 kilometres north west of the application area. At this distance the proposed clearing is considered unlikely to impact on the quality of the Broad Arrow Catchment Area.

The groundwater salinity within the application area is approximately 14,000 to 35,000 milligrams/Litre Total Dissolved Solids (TDS) (GIS Database). Given the scale of the proposed clearing (133.75 hectares) within the Yilgarn-Goldfields Groundwater Province (19,001,413 hectares), it is considered unlikely that the proposed clearing will cause salinity levels within the application area to alter significantly.

There are no permanent watercourses located within the application area (GIS Database; Integra, 2012). The application area experiences an average annual rainfall of approximately 264.5 millimetres while the annual average evaporation rate is approximately 2,600 millimetres (BoM, 2012; GIS Database). Therefore any water pooling within the application area is likely to be short lived.

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

**Methodology** BoM (2012)  
Integra (2012)  
GIS Database:  
- Evaporation Isopleths  
- Groundwater Provinces  
- Groundwater Salinity, Statewide  
- 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**

The application area experiences an arid to semi arid climate with an average annual rainfall of approximately 264.5 millimetres (CALM, 2002; BoM, 2012). The annual evaporation rate within the application area is approximately 2,600 millimetres (GIS Database), therefore any water pooling within the application area is likely to be short lived. It is therefore considered unlikely that the proposed clearing will cause or exacerbate the incidence or intensity of flooding.

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

**Methodology** BoM (2012)  
CALM (2002)  
GIS Database:  
- Evaporation Isopleths

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

**Comments**

There is one Native Title Claim (WC99/30) over the area under application (GIS Database). This claim has been registered with the Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of

Significance are damaged through the clearing process.

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

The clearing permit application was advertised on 15 October 2012 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the proposed clearing.

**Methodology** GIS Database:  
- Aboriginal Sites of Significance  
- Native Title Claims – Determined by the Federal Court

#### 4. References

- BoM (2012) BoM Website - Climate Averages by Number, Averages for KALGOORLIE-BOULDER AIRPORT  
[www.bom.gov.au/climate/averages/tables.shtml](http://www.bom.gov.au/climate/averages/tables.shtml) (Accessed 10 December 2012)
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Government of Western Australia (2011) 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Integra (2012) Majestic Gold Project - Clearing Permit Supporting Document. Unpublished report dated October 2012. Integra Mining Limited.
- 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 (2011a) Integra Mining Limited Majestic Gold Project - Majestic Level 2 and Haul Road Level 1 Vegetation and Flora Surveys. Unpublished Report dated November 2011.
- Outback Ecology (2011b) Integra Mining Limited Majestic Gold Project - Baseline Soil Resource Assessment. Unpublished report dated April 2011.
- Terrestrial Ecosystems (2010) Fauna Assessment for the Majestic Gold Project. Unpublished report dated December 2010.

#### 5. Glossary

##### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>CALM</b>	Department of Conservation and Land Management (now DEC), Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia
<b>DEH</b>	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
<b>DEP</b>	Department of Environment Protection (now DEC), 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 (now DEC), Western Australia
<b>DoIR</b>	Department of Industry and Resources (now DMP), Western Australia
<b>DOLA</b>	Department of Land Administration, Western Australia
<b>DoW</b>	Department of Water
<b>EP Act</b>	Environmental 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>ha</b>	Hectare (10,000 square metres)
<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 Act</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>TEC</b>	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.