



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 3465/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **Integra Mining Ltd**

### 1.3. Property details

Property: Miscellaneous Licence 25/31, Mining Lease 25/347  
Local Government Area: City of Kalgoorlie-Boulder  
Colloquial name: Randalls Gold Project

### 1.4. Application

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

## 2. Site Information

### 2.1. Existing environment and information

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

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Vegetation Associations have been mapped at a 1:250,000 scale for the whole of Western Australia and are useful to look at vegetation extent in a regional context. One Beard Vegetation Association is located within the proposed clearing area (GIS Database):	Integra Mining Limited have applied to clear up to 21.97 hectares of native vegetation for the purposes of constructing three production bores, associated access road, water pipeline and powerline for the Salt Creek gold deposit, located on Mining Lease 25/347. In a broader context, the proposed works are part of the larger Randalls Gold Project, located approximately 30 kilometres east of Kambalda (Integra Mining Limited, 2009).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994)	The vegetation condition rating is derived from information provided by Outback Ecology Services (2009a; 2009b).
Beard Vegetation Association 468: Medium woodland; Salmon Gum & Goldfields Blackbutt.		to	
Outback Ecology Services (2009a) undertook a targeted Declared Rare Flora (DRF) and Priority Flora survey of part of the proposed clearing area (L25/31) on 2 June 2009. Vegetation communities were not mapped as part of this survey. Outback Ecology Services (2009a) generally described the vegetation of the survey area as 'Low Woodland of <i>Casuarina obesa</i> and <i>Eucalyptus</i> spp. over a Shrubland of <i>Eremophila</i> spp. and mixed shrubs'.	Native vegetation clearing will occur in a linear fashion, spanning approximately 8.8 kilometres at a width of approximately 20 metres. A small surplus has been sought as part of this clearing permit application.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).	
	Vegetation clearing will be undertaken via mechanical means. Cleared topsoil and vegetation will be retained for future rehabilitation works (Integra Mining Limited, 2009).		

## 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 proposed clearing area is located within the Eastern Goldfields subregion of the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). At a broad scale, vegetation can be described as Mallees, Acacia thickets and shrub-heaths on sandplains with diverse *Eucalyptus* woodlands occurring around salt lakes, on ranges and in valleys (CALM, 2002).

*Eucalyptus* woodlands have been identified as having a high species and ecosystem diversity within the Eastern Goldfields bioregion (CALM, 2002). Based on Shepherd (2007), vegetation communities comprising *Eucalypt* woodlands would be expected within the proposed clearing area.

Flora and vegetation of the local area has been well studied, with three flora surveys of the Randalls area conducted over the Winter and Spring seasons between 1993 and 1996. Flora catalogued during these surveys was described as being typical of mixed woodland/bluebush areas of the Eastern Goldfields. More recently, a Spring flora survey was conducted in Randalls Timber Reserve in 1999, with findings comparable to regional surveys. Similarly, a Level 1 flora survey of the Salt Creek area was completed by Botanica in 2007, also suggesting the flora to be typical of the region (Outback Ecology Services, 2009a).

On 2 June 2009, Outback Ecology Services (2009a) recorded 43 flora taxa from 16 families and 23 genera during a targeted DRF and Priority Flora survey of Miscellaneous Licence 25/31. In addition, four specimens could not be identified beyond family level, whilst six specimens could not be identified beyond genus level. None of the species recorded are known to be of conservation significance. Outback Ecology Services (2009a) noted that the vegetation present in the proposed clearing area appears typical of Goldfields vegetation and is well represented outside of the mining tenements on which clearing is proposed. Vegetation communities which are of a higher biodiversity value in the bioregion (greenstone/banded ironstone ranges) are not known from the proposed clearing area (Outback Ecology Services, 2009a).

No introduced flora species were recorded by Outback Ecology Services (2009a). The proposed vegetation clearing has the potential to introduce weed species into the local area should adequate hygiene practices not be put in place. Weeds can affect biodiversity in a number of ways, including out competing native species for resources and increasing the fire risk. Standard weed management protocols can manage the risks posed by the introduction and spread of weeds.

The proposed clearing area is located on the Mount Monger Pastoral lease and includes pre-existing cleared station tracks and fence lines, evidence of historic grazing and historic mining activity (Integra Mining Limited, 2009). On this basis, the proposed clearing area is not likely to exhibit a higher level of floristic diversity than other areas in the bioregion.

A number of fauna surveys have been conducted in the vicinity of the proposed clearing area. The most recent survey was conducted in the Salt Creek area (M25/347) by Outback Ecology Services (2009b) during 6 - 18 November 2008. This survey recorded 14 mammal, 40 reptile and 57 bird species (Outback Ecology Services, 2009b). The fauna habitat likely to be present in the proposed clearing area 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 Services, 2009b).

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

**Methodology** CALM (2002).  
Integra Mining Limited (2009).  
Outback Ecology Services (2009a).  
Outback Ecology Services (2009b).  
Shepherd (2007).

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

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

A number of Level 1 and Level 2 fauna surveys have been conducted in the greater Randalls area and Salt Creek area (Outback Ecology Services, 2009b). The most recent survey was conducted at the Salt Creek area by Outback Ecology Services during 6 – 18 November 2008.

Six major fauna habitats were identified within the Salt Creek area:

1. Chenopod shrubland on river flat;
2. Mallee woodland on greenstone hill;
3. Mallee woodland over Spinifex;
4. Blackbutt (*Eucalyptus lesouefii*) over open shrubland;
5. Salmon Gum (*Eucalyptus salmonophloia*) woodland over open shrub; and
6. Open Mallee woodland over saltbush (Outback Ecology Services, 2009b).

None of the survey sites in the Outback Ecology Services (2009b) Salt Creek fauna survey were located in the proposed clearing area. Consequently, the assessing officer was not able to definitively determine what fauna habitat types are present in the proposed clearing area. Based on information obtained from Outback Ecology Services (2009a) and GIS Databases, it is inferred that the following fauna habitats are likely to be present in the proposed clearing area:

Chenopod shrubland on river flat;  
Mallee woodland over Spinifex;  
Blackbutt (*Eucalyptus lesouefii*) over open shrubland;  
Salmon Gum (*Eucalyptus salmonophloia*) woodland over open shrub; and  
Open Mallee woodland over saltbush.

These fauna habitats provide foraging, breeding, nesting and shelter habitat for a range of vertebrate fauna species, however all are well represented on a bioregional scale. Many of the species expected to occur in the proposed clearing area are highly mobile and would not be reliant on habitat in the proposed clearing area for their survival. Many species would be expected to disperse and relocate to adjacent habitats on the onset of clearing (Outback Ecology Services, 2009b). Those species with low mobility and those inhabiting arboreal and subterranean habitats (hollow roosting bats and some snakes for example) are most at risk of mortality during clearing operations (Outback Ecology Services, 2009b).

Three fauna species of conservation significance have been recorded within the Salt Creek area and may utilise habitats within the proposed clearing area: Rainbow Bee-eater (*Merops ornatus*), White-browed Babbler (*Pomatostomus superciliosus ashbyi*) and Western Rosella (*Platycercus icterotis xanthogenys*) (Outback Ecology Services, 2009b).

The Rainbow Bee-eater is listed as a migratory bird by the Japan-Australia Migratory Bird Agreement (JAMBA) and is protected under the *Environment Protection and Biodiversity Conservation Act 1999*. The Rainbow Bee-eater is found across most of Australia and inhabits open forests and woodlands, shrublands and various cleared or semi-cleared habitats (DEWHA, 2009). Given this species migratory habits and large distribution, the proposed clearing area is not likely to represent significant habitat for the Rainbow Bee-eater.

The White Browed Babbler (DEC Priority 4 listing) 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). Given this species mobility and that the habitat in the proposed clearing area is well represented within the region, the proposed clearing area is not likely to represent significant habitat for the White Browed Babbler.

The Western Rosella (Schedule 1 - Fauna that is rare or likely to become extinct, *Wildlife Conservation (Specially Protected Fauna) Notice, 2008*) 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 this species mobility and that the habitat in the proposed clearing area is well represented within the region, the proposed clearing area is not likely to represent significant habitat for the Western Rosella.

There is the potential for other fauna species of conservation significance to occur within the proposed clearing area (Outback Ecology Services, 2009b). However, given that the habitat present is well represented throughout the region and the application area is partially degraded from pre-existing clearing, grazing from feral goats and historic mining; the proposed clearing 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** DEWHA (2009)  
Johnstone and Storr (2004)  
Outback Ecology Services (2009a).  
Outback Ecology Services (2009b).  
GIS Database:  
- Pre-European vegetation.

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

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

According to available databases, there are no known Declared Rare Flora (DRF) or Priority Flora species within the proposed clearing area (GIS Database). Outback Ecology Services did not record any DRF or Priority Flora species during a targeted DRF and Priority Flora survey of Miscellaneous Licence 25/31 on 2 June 2009 (Outback Ecology Services, 2009a). A recent flora survey of the Salt Creek area by Botanica (2007) also failed to locate any DRF or Priority Flora species (Outback Ecology Services, 2009a).

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

**Methodology** 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 GIS Databases, there are no known Threatened Ecological Communities (TEC's) within the proposed clearing area (GIS Database). Outback Ecology Services (2009a) did not locate any TEC's or Priority Ecological Communities (PEC's) during a DRF and Priority Flora survey of L25/31, however the assessing officer notes that vegetation units were not mapped during this survey, nor was the proposed

clearing area searched in its entirety.

The Mt Belches *Acacia quadrimarginea* / *Ptilotus obovatus* banded ironstone community is listed as a Priority 3 PEC (DEC, 2008). This Priority 3 PEC is defined as a community made up of large, and/or widespread occurrences, that may or not be represented in the reserve system, but is under threat of modification across much of its range from processes such as grazing by domestic and/or feral stock, and inappropriate fire regimes (DEC, 2007). This PEC is known to occur in the central-southern section of the nearby Randalls Timber Reserve and has also been recorded on nearby Mining Lease 25/133. Based on recent and historic local flora surveys and analysis of aerial photography, this PEC is not known from the proposed clearing area (Outback Ecology Services, 2009a).

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

**Methodology** DEC (2007).  
DEC (2008).  
Outback Ecology Services (2009a).  
GIS Database:  
- Threatened Ecological Communities.

**(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 falls within the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion within which approximately 98.2% of the Pre-European vegetation remains (see table overleaf) (GIS Database; Shepherd, 2007).

The vegetation of the application area has been mapped as:

Beard Vegetation Association 468: Medium Woodland; Salmon Gum & Goldfields Blackbutt.

According to Shepherd (2007) approximately 100% of Beard Vegetation Association 468 remains at both a state and bioregional level. Therefore, the area proposed to be cleared does not represent a significant remnant of native vegetation within an area that has been extensively cleared.

Whilst only a small percentage of the vegetation types within the Coolgardie bioregion are adequately protected within conservation reserves, the bioregion remains largely uncleared. As a result, the conservation of vegetation associations within the bioregion is not likely to be impacted by this proposal.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and post clearing %)*
IBRA Bioregion – Coolgardie	12,912,204	12,707,619	~98.42	Least Concern	10.87 (11.04)
Beard veg assoc. – State					
468	592,022	592,022	~100	Least Concern	4.3 (4.3)
Beard veg assoc. – Bioregion					
468	583,358	583,358	~100	Least Concern	4.3 (4.3)

\* Shepherd (2007)

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

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

**Methodology** Department of Natural Resources and Environment (2002).  
Shepherd (2007).  
GIS Database:  
- Interim Biogeographic Regionalisation of Australia.  
- Pre-European Vegetation.

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

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

According to available databases, there are no watercourses or wetlands in the proposed clearing area (GIS

Database). The northern shoreline of Lake Randall (a large saline playa lake) is located approximately 150 metres to the south of the proposed clearing area at its nearest point (Peter Clifton & Associates Consulting Hydrogeologists, 2009; Outback Ecology Services, 2009a).

The linear nature of the proposed clearing is unlikely to result in a loss of native vegetation acting as an important buffer for Lake Randall.

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

**Methodology** Outback Ecology Services (2009a).  
Peter Clifton & Associates Consulting Hydrogeologists (2009).  
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 proposed clearing area have been described as being sandy and appear to be well drained (Outback Ecology Services, 2009a). The pH of the surface soil within the application area ranges from 6.0 - 7.5 and there is no known occurrence of acid sulphate soils (CSIRO, 2009).

The proposed clearing area has an annual evaporation rate of over 8 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 proposed clearing area are generally saline to extremely saline due to their proximity to Lake Randall (Outback Ecology Services, 2009a). Given this, the proposed clearing is not likely to result in changes to salinity within the proposed clearing area.

Native vegetation clearing is likely to increase the risk of wind and water erosion, however the scale and nature of the proposal is unlikely to result in appreciable land degradation.

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

**Methodology** CSIRO (2009).  
Outback Ecology Services (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 proposed clearing area is not located within a conservation reserve (GIS Database). The Randalls Timber Reserve is located approximately 8 kilometres north-east of the proposed clearing area at its nearest point (GIS Database).

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 proposed clearing area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).

The average annual rainfall within the proposed clearing area is 300 millimetres and the average annual evaporation rate is 2,600 millimetres (GIS Database). Therefore, during normal rainfall events surface water in the proposed clearing area is likely to evaporate quickly. However, substantial rainfall events create surface sheet flow which is likely to have a higher sediment load. During normal rainfall events, the proposed clearing would not likely lead to an increase in sedimentation of surface water within the proposed clearing area.

The proposed clearing area is characterised by a paleochannel aquifer containing hypersaline groundwater at

depths up to 90 metres below ground level (Peter Clifton & Associates Consulting Hydrogeologists, 2009). Given the groundwater is already hypersaline, any vegetation clearing within the proposed clearing 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** Peter Clifton & Associates Consulting Hydrogeologists (2009).  
GIS Database:  
- Evaporation Isopleths.  
- Rainfall, Mean Annual.  
- Public Drinking Water Source Areas (PDWSA's).

**(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 climate of the region is semi-arid warm Mediterranean with hot summers and cool winters (Peter Clifton & Associates Consulting Hydrogeologists, 2009). The proposed clearing area receives an average annual rainfall of approximately 300 millimetres (GIS Database). Based on an average annual evaporation rate of 2,600 millimetres (GIS Database), any surface water resulting from rainfall events is likely to be relatively short lived.

The clearing of native vegetation is likely to result in an increase in surface water runoff, however the proposed clearing is not likely to increase the incidence or intensity of flooding.

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

**Methodology** Peter Clifton & Associates Consulting Hydrogeologists (2009).  
GIS Database:  
- Evaporation Isopleths.  
- 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: WC99/030 (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenements have 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 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 throughout 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.

No submissions were received from direct interest parties or members of the public when the clearing permit application was advertised for comment.

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

**4. Assessor's comments**

**Comment**

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

Should a clearing permit be granted, it is recommended that conditions be imposed on the permit for the purposes of weed management, record keeping and permit reporting.

**5. References**

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Coolgardie 3 (COO3 - Eastern Goldfields subregion).  
Commonwealth Scientific and Industrial Research Organisation (2009) Australian Soil Resource Information System. Available

- online at: [http://www.asris.csiro.au/index\\_ie.html](http://www.asris.csiro.au/index_ie.html). Accessed on 10 November, 2009.
- DEC (2007) Definitions, Categories and Criteria for Threatened and Priority Ecological Communities. Department of Environment and Conservation, Western Australia.
- DEC (2008) Priority Ecological Communities for Western Australia. Department of Environment and Conservation, Western Australia.
- Department of Environment, Water, Heritage and the Arts (2009) *Merops ornatus* - Rainbow Bee-eater. Available online at [http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon\\_id=670](http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=670). Accessed 5 November, 2009.
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- Integra Mining Limited (2009) Randalls Gold Project (Borefield Area) - Summary of Randalls Gold Project Borefield Area for Clearing Permit Application (L25/31 and M25/347). November 2009.
- Johnstone, R.E & Storr, G.M (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 Services (2009a) Integra Mining Limited: Randalls Gold Project - Borefield and pipeline targeted Declared Rare Flora and Priority Flora search. July 2009.
- Outback Ecology Services (2009b) Integra Mining Limited: Randalls Gold Project - Terrestrial Vertebrate Fauna Assessment. June 2009.
- Peter Clifton & Associates Consulting Hydrogeologists (2009) Integra Mining Limited - Initial Groundwater Supply Investigations for the Proposed Open Pit Gold Mine at the Salt Creek Project. May 2009.
- Shepherd, D.P. (2007). 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- Tille. P. (2006) Soil-landscapes of Western Australia's Rangelands and Arid Interior. Technical Report 313. Department of Agriculture and Food, Western Australia. ISSN 1039-7205.

## 6. 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} :-

- 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.