



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4706/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Saracen Gold Mines Pty Ltd

1.3. Property details

Property: Mining Lease 39/165
Mining Lease 39/166
Mining Lease 39/230
Colloquial name: Butcher Well Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 5 January 2012

2. Background

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. Four Beard vegetation associations have been mapped within the application area (GIS Database, Shepherd 2009):

Beard vegetation association 18: Low woodland; Mulga (*Acacia aneura*);

Beard vegetation association 109: Hummock grasslands, shrub steppe; *Eucalyptus youngiana* over hard Spinifex;

Beard vegetation association 389: Succulent steppe with open low woodland; mulga over saltbush; and

Beard vegetation association 400: succulent steppe with open low woodland; Mulga over Bluebush.

A Level 1 flora and vegetation survey was conducted of the Butcher Well clearing permit area in September 2011 (Alexander Holm and Associates, 2011). The following vegetation communities were recorded as occurring within the application area:

Vegetation unit 1: Rises and breakaways associated with banded ironstone ridges

Scattered (Projected Foliage Cover (PFC) 15-20%) mixed height shrublands (2 – 4 metres) dominated by acacias including *Acacia pteroneura*, *A. quadrimarginea*, *A. oswaldii*, *A. inceana* subsp. *conformis* and *Grevillia berryana* with low shrubs including *Eremophila compacta*, *Ptilotus obovatus* and *P. swartzii*.

Vegetation unit 2: Lower footslopes on basalt or metamorphic rocks

Scattered (PFC 10-15%) mixed height (2 – 5 metres) shrublands dominated by *Acacia incurvaneura*, *A. caesaneura*, *Hakea preissii* or *Eremophila caperata*, with low shrubs including *Ptilotus obovatus*, *Maireana georgei*, *M. triptera* and *Frankenia* spp.

Vegetation unit 3: Low rises on metamorphic rocks

Very scattered to scattered (PFC 5-15%) tall shrublands 4 metres dominated by *Acacia quadrimarginea*, *Hakea preissii* with undershrubs *Ptilotus obovatus*, *Maireana* spp. *Atriplex bunburyana* and *Frankenia setosa*.

Vegetation unit 4: Low breakaways and associated footslopes

Crests – very scattered (PFC about 5%) mixed shrublands to 4 metres of *Acacia erinacea*, *Dodonaea lobulata*, *Eremophila scoparia*, *E. oppositifolia* and *Tecticornia* spp. With occasional small trees of *Eucalyptus celastroides* ssp. *Celastroides* and *E. lesouefii*. Lower slopes – only isolated shrubs (PFC < 2.5%), much bare ground.

Vegetation unit 11a: Saline stony plains with myall

Very scattered (PFC 5 – 10%) low (<1 metre) shrublands frequently dominated by *Frankenia setosa* with a prominent overstorey of *Acacia papyrocarpa* (myall) trees to about 8 metres; other common shrubs are *Maireana pyramidata*, *M. georgei*, *M. triptera*, *M. sedifolia*, *Atriplex vesicaria*, *Cratystylis subspinescens* and *Eremophila caperata*.

Vegetation unit 11b: Saline stony plains

Very scattered to scattered (PFC 5 – 25%) low (<1 metre) shrublands dominated by *Maireana pyramidata*, *M. georgei* and *M. triptera*; others include *Frankenia* spp., *Atriplex* spp., *Ptilotus obovatus* and *Cratystylis subspinescens*. Occasionally, scattered *Hakea preissii*, *Eremophila caperata*, *Acacia kalgoorliensis* and *A. oswaldii*.

Vegetation unit 12: Highly saline stony plains

Very scattered to scattered (PFC 5-25%) low (<1 metre) shrublands dominated by *Tecticornia halocnemoides*, *T. disarticulate*, *T. indica* subsp. *bidens* (samphires); minor components of numerous other, mostly halophytic shrubs, including *Maireana platycarpa*, *M. atkinsiana*, *M. glomerifolia*, *M. tomentose*, *Atriplex vesicaria*, *Disphyma crassifolium* and *Eremophila caperata*.

Vegetation unit 14: Sandy banks

Scattered (PFC about 15%) woodlands of *Acacia caesaneura* to 8 metres over low shrubs *Maireana pyramidata*, *M. triptera*, *Gunniopsis quadrifida*, *Rhagodia drummondii* and *Enchylaena tomentose*, or low shrublands of same species with occasional *Acacia caesaneura*, *Hakea preisii* and *Eremophila miniata*.

Vegetation unit 16: Saline drainage tracts

Very scattered to moderately close (PFC 5-40%) low (<1 metre) shrublands dominated by *Atriplex*, *Maireana*, *Frankenia* and *Tecticornia* spp. or *Tecticornia* spp.

Vegetation unit 17: Creeklines

Moderately close (PFC about 30%) tall shrublands (4-5 metres) dominated by *Acacia burkittii*, *A. oswaldii*, *Exocarpus aphylla*, *Eremophila alternifolia*, *E. oldfieldii* subsp. *angustifolia*, *E. youngii* subsp. *youngie* with undershrubs such as *Ptilotus obovatus*, *Maireana pyramidata*, *M. georgei* and *Atriplex bunburyana*.

Clearing Description	<p>Saracen Gold Mines Pty Ltd (Saracen) proposes to clear up to 200 hectares of native vegetation. The application area is located approximately 185 kilometres north-east of Kalgoorlie (GIS Database).</p> <p>The purpose of the proposed clearing is for mineral exploration and mineral production (Saracen, 2011a). This includes the mining of oxide pits as well as potential cutbacks of existing pits and associated exploration. Topsoil and vegetation will be stockpiled for rehabilitation purposes (Saracen, 2011a).</p>
Vegetation Condition	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994);</p> <p style="text-align: center;">to</p> <p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).</p>
Comment	<p>The vegetation condition rating is derived from a flora and vegetation survey conducted by Alexander Holm and Associates in September 2011.</p> <p>Disturbance is primarily the result of pastoral activities and mineral exploration (Alexander Holm and Associates, 2011).</p>

3. Assessment of application against Clearing Principles

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

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

The application area is located within the Eastern Murchison (MUR2) subregion of the Murchison Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Eastern Murchison subregion is described by CALM (2002) as being rich and diverse in both its flora and fauna, however, most species are wide ranging and usually occur in at least one, and often several, adjoining subregions.

The vegetation within the application area consists of Beard vegetation associations 18, 109, 389 and 400, which are common and widespread throughout the Murchison bioregion with approximately 100% of the pre-European vegetation extent remaining (Shepherd, 2009; GIS Database). A flora and vegetation survey of the application area was conducted by Alexander Holm and Associates in September 2011. This survey recorded a total of 208 flora species representing 40 families. Ten vegetation communities were identified in the application area, with the condition of these vegetation types classified from 'good' to 'excellent' (Alexander Holm and Associates, 2011; Keighery, 1994). This level of diversity is reported by Alexander Holm and Associates (2011) as being an average diversity for the north-east Goldfields region.

No Threatened Ecological Communities or Priority Ecological Communities were recorded or identified within the application area (GIS Database). The nearest Threatened or Priority Ecological Community is the Mt Linden Range banded ironstone vegetation complex, which is located approximately 11 kilometres to the south-east of the application area (Saracen, 2011a).

A search of the Department of Environment and Conservation Declared Rare and Priority Flora databases revealed no Declared Rare Flora (DRF) species which may potentially occur within a 20 kilometre radius of the application area (DEC, 2011a). One Priority Flora species may potentially occur within this same area (*Tecticornia mellaria* – Priority 1). Alexander Holm and Associates (2011) found one Priority 3 species, *Gunniopsis rubra* in abundance within four sites within the application area (not previously collected in this

area). Saracen (2011a) have indicated that as far as possible they will avoid disturbance to these known locations. Additionally, they will map the extent of this species within the application area and report on any disturbance in the annual report (Saracen, 2011b). According to DEC's Florabase, the species is widespread in its distribution (although it has not previously been recorded in the application area) (DEC, 2011b).

Six weed species have been recorded within the survey area, none of which are listed as a declared plant by the Department of Agriculture and Food (Alexander Holm and Associates, 2011a). Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to the biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Fauna surveys have indicated that there are no significant features or specific habitats within the project area that indicate ecological function values significantly different to those within surrounding areas. In addition, the area is already disturbed by previous mining operations (Coffey Environments, 2011; Saracen, 2011a).

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

Methodology Alexander Holm and Associates (2011)
CALM (2002)
Coffey Environments (2011)
DEC (2011a)
DEC (2011b)
Keighery (1994)
Saracen (2011a)
Saracen (2011b)
Shepherd (2009)
GIS Database:
- IBRA WA (Regions - Subregions)
- Pre-European Vegetation
- Threatened Ecological Sites Buffered

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

Comments Proposal not likely to be at variance to this Principle

Coffey Environments conducted a Level 1 fauna survey of the proposed Red October haul road route which runs along the eastern side of the Butcher Well mining area in November 2010 (Coffey Environments, 2011). Further fauna surveys were not considered necessary for the Butcher Well project. This is due to there being no significant features of specific habitat within the area that would indicate it possesses ecological function values that are significantly different to surrounding areas (Saracen, 2011a).

There is approximately 100% of the pre-European vegetation remaining within the Murchison bioregion (Shepherd, 2009; GIS Database). Given the extent of the native vegetation remaining in the local area and bioregion, the vegetation to be cleared does not represent a significant ecological link.

Six of the species listed under Commonwealth or State government legislation are possible visitors to the proposed application area (Saracen, 2011a):

- Mallee Fowl – *Leipoa ocellata* – Threatened;
- Peregrine Falcon – *Falco peregrinus* – Specially protected fauna;
- Carpet Python – *Morelia spilota* subsp. *imbricata* – Specially protected fauna;
- Australian Bustard – *Ardeotis australis* – Priority 4;
- Bush Stone-Curlew – *Burhinus grallarius* – Priority 4;
- Crested Bellbird – *Oreica gutturalis* subsp. *gutturalis* – Priority 4; and
- White-Browed Babbler – *Pomatostomus superciliosus* subsp. *ashbyi* – Priority 4.

Coffey Environments (2011) reports the habitats within the application area as being typical of those found widely distributed throughout the region. Additionally, some of the application area is already disturbed. Although the proposed clearing may have some localised impacts upon fauna species and cause some fragmentation of habitat, the proposed clearing is unlikely to have a major impact on significant habitat for any fauna species.

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

Methodology Coffey Environments (2011)
Saracen (2011a)
Shepherd (2009)
GIS Database:
- IBRA WA (regions – subregions)
- 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 records of Declared Rare Flora (DRF) within the application area (GIS Database). A search of the Department of Environment and Conservation Declared Rare and Priority Flora databases identified no DRF species as occurring within a 20 kilometre radius of the application area (DEC, 2011a).

Alexander Holm and Associates (2011) conducted a vegetation and flora survey of the application area during September 2011. No DRF were recorded within the survey area.

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

Methodology Alexander Holm and Associates (2011a)
DEC (2011a)
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

There are no known Threatened Ecological Communities (TECs) within the area applied to clear (GIS Database). There are no known TECs within 200 kilometres of the application area (GIS Database).

Alexander Holm and Associates (2011) reports that no TECs were identified within the application area during the flora and vegetation survey.

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

Methodology Alexander Holm and Associates (2011)
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 falls within the Murchison Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). Shepherd (2009) reports that approximately 100% of the pre-European vegetation still exists within the Murchison bioregion (see table below). The vegetation within the application area is recorded as the following Beard vegetation associations (GIS Database; Shepherd, 2009):

Beard vegetation association 18: Low woodland; Mulga (*Acacia aneura*);
Beard vegetation association 109: Hummock grasslands, shrub steppe; *Eucalyptus youngiana* over hard Spinifex;
Beard vegetation association 389: Succulent steppe with open low woodland; mulga over saltbush; and
Beard vegetation association 400: succulent steppe with open low woodland; Mulga over Bluebush.

According to Shepherd (2009) approximately 100% of these vegetation associations still exist within the bioregion (see table below).

The vegetation within the application area is not a remnant of native vegetation within an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Murchison	28,120,587	28,120,587	~100	Least Concern	~1
Beard vegetation associations - State					
18	19,892,305	19,890,275	~99.9	Least Concern	~2
109	949,307	949,307	~100	Least Concern	~10.75
389	622,461	622,461	~100	Least Concern	~0.33
400	190,824	190,824	~100	Least Concern	NA
Beard vegetation associations - Bioregion					
18	12,403,172	12,403,172	~100	Least Concern	~0.37
109	310,285	310,285	~100	Least Concern	~24.44
389	474,082	474,082	~100	Least Concern	~0.43
400	190,824	190,824	~100	Least Concern	NA

* Shepherd (2009)

** 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 (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 databases there are no permanent watercourses or wetlands within the application area, however, there are several minor ephemeral watercourses within the application area. There are also some major ephemeral wetlands with local significance in the area surrounding the application area – Lake Raeside to the south and Lake Carey to the north-east (GIS Database; Alexander Holm and Associates, 2011).

Alexander Holm and Associates (2011) reports that two vegetation units within the application area are associated with drainage areas:

- **Vegetation unit 16:** Saline drainage tracts; and
- **Vegetation unit 17:** Creeklines.

Saracen have not committed to avoiding these areas, however these watercourses are minor and already significantly disturbed (especially the saline drainage tracts) (Saracen, 2011a).

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

Methodology Alexander Holm and Associates (2011)
Saracen (2011a)
GIS Database:
- Hydrography, linear
- Geodata, Lakes

(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

The application area is located within the Yilgangi land system (GIS Database).

Pringle et al. (1994) reports the Yilgangi land system as consisting of low breakaways with saline, gravelly lower plains, supporting predominantly halophytic shrublands. The breakaway footslopes, saline alluvial plains and narrow drainage zones of this system have fragile soils and are susceptible to water erosion (Pringle et al., 1994).

Potential soil erosion as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

Water tables are known to be below the rooting depth of vegetation growing on this site and water tables are likely to be hyper-saline. Clearing of vegetation in this application will have minimal effect on water tables and the associated risk of secondary salinity (Saracen, 2011a).

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

Methodology Alexander Holm and Associates (2011)
Pringle et al. (1994)
Saracen (2011a)
GIS Database:
- Rangelands land system mapping

(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 is not located within any conservation areas (GIS Database). The nearest Department of Environment and Conservation managed land is located greater than 50 kilometres from the application area (Alexander Holm and Associates, 2011).

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

Methodology Alexander Holm and Associates (2011)
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 (GIS Database). The groundwater in the region varies from almost fresh to hypersaline and is approximately 30 to 60 metres below ground level (Alexander Holm and Associates, 2011; Saracen, 2011a). The removal of 200 hectares of vegetation is unlikely to cause deterioration of underground water quality.

The application area is located within an arid to semi-arid region. No permanent waterbodies or watercourses occur within the application area, however there are several minor ephemeral watercourses that transect the application area (GIS Database). Surface water runoff is only likely to occur during and immediately following significant rainfall events.

Saracen (2011a) has a Surface Water Management Plan in place to help minimise impacts and changes to surface water flows.

Some drainage tracts are already impeded by existing infrastructure; all other drainage lines will be managed to ensure functionality is retained (Saracen, 2011a).

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

Methodology Alexander Holm and Associates (2011)
Saracen (2011a)
GIS Database:
- Geodata, Lakes
- 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 is located within an arid to semi-arid region where the evaporation rate greatly exceeds the average annual rainfall (Alexander Holm and Associates, 2011). According to available databases there are no permanent watercourses mapped within the application area, however, there are several minor

ephemeral watercourses within the application area (GIS Database). These drainage lines are expected to be dry for most of the year and would likely only flow immediately following significant rainfall events that originate from the north-west primarily during January to March (Alexander Holm and Associates, 2011).

Considering that the proposed clearing of 200 hectares is within the Lake Carey catchment area of 11,378,213 hectares, it is not considered likely that the proposed clearing will 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 Alexander Holm and Associates (2011)
GIS Database:
- Hydrography, linear
- Hydrographic Catchments - Catchments

Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

There is one Native Title claim (WC10/18) 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*.

According to available databases there are two 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 was advertised by the Department of Mines and Petroleum on 11 July 2011, inviting submissions from the public. No submissions were received.

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

4. References

- Alexander Holm and Associates (2011) Butcher Well Project Clearing Permit Application. Prepared for Saracen Gold Mines Pty Ltd. Unpublished report. Alexander Holm and Associates, Western Australia.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002 (MUR 1 – Murchison 1 Subregion). Department of Conservation and Land Management, Western Australia.
- Coffey Environments (2011) Level 1 Fauna Survey, Safari to Red October Haul Road, Saracen Gold. Prepared for Saracen Gold Mines Pty Ltd. Unpublished report. Coffey Environments Australia Pty Ltd, Western Australia.
- DEC (2011a) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>.
- DEC (2011b) Florabase. Department of Environment and Conservation. URL: <http://florabase.dec.wa.gov.au/>
- 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.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Pringle, H., Van Vreeswyk, A. And Gilligan, S. (1994) Technical Bulletin: An inventory and condition survey of the north-eastern Goldfields, Western Australia. No. 87. Department of Agriculture, Western Australia.
- Saracen (2011a) Clearing Permit Application Supporting Documentation. Saracen Gold Mines Pty Ltd.
- Saracen (2011b) Email from Briony Sinclair, RE: CPS 4706/1 – Saracen Gold Mines Pty Ltd – Query – Flora Management Condition, 16 December 2011.
- 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.

Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

Definitions:

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

- P1** **Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2** **Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P3** **Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4** **Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R** **Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):** taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X** **Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

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

- Schedule 1** **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2** **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3** **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.

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

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

- P1** **Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2** **Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3** **Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4** **Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5** **Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

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

- EX** **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W)** **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR** **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- EN** **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
- VU** **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
- CD** **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.

