



1. Application details

1.1. Permit application details

Permit application No.: 1717/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Harmony Gold Mt Magnet Gold NL

1.3. Property details

Property: M58/30
M58/136
M58/172
M58/185
M58/198
M58/234
Local Government Area: Shire of Mount Magnet
Colloquial name: Golden Stream Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
40		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

The vegetation in the application area is broadly mapped as Beard Vegetation Association 312: Succulent steppe with very open shrubs; very sparse Mulga and *Acacia sclerosperma* over saltbush & bluebush (Shepherd et al, 2001; GIS Database).

A flora survey of the Golden Stream project area was conducted by Western Botanical on 11th October 2006. Western Botanical (2006) identified four distinct vegetation types:

1. Open Mulga Shrubland - most extensive vegetation unit across the proposed footprint. Vegetation is characterised by *Acacia ramulosa* var. *ramulosa*, *Acacia aneura* var. *fuliginea* Open Scrub over *Monachather paradoxus*, *Eragrostis eriopoda* sparse grass on plains with lag gravel;

2. Open Chenopod Shrubland - open Chenopod Shrubland with occasional dense shrublands on claypans. Vegetation is characterised by *Maireana triptera*, *Sclerolaena densiflora* Open Dwarf Scrub with occasional tall shrubs of *Acacia aneura* var. *aneura*, *Acacia grasbyi* and *Hakea preissii*;

3. Mulga Shrubland on Banded Ironstone - a discontinuous narrow Banded Ironstone ridge runs in a north/south direction through the proposed footprint area. Mulga Shrubland on Banded Ironstone vegetation dominates these rocky outcrops. Vegetation is characterised by *Acacia aneura* var. *fuliginea* Open Scrub over *Aluta aspera* subsp. *hesperia*, *Eremophila latrobei*, *Thryptomene decussata* Open Low Scrub over *Monachather paradoxus*, *Aristida contorta* sparse grasses;

4. Open Mulga Chenopod Stony Plain - numerous exploration tracks dissect this community and with seasonal rains it would most likely support a number of annual species. Vegetation is characterised by *Eremophila fraseri* subsp. *galeata*, *Acacia aneura* var. *aneura* Open Low Scrub over sparse chenopods and grasses.

Clearing Description

The proposal is for the clearing of up to 40 hectares of native vegetation within the Golden Stream project area for new open pit developments and associated mining activities and infrastructure (Harmony- Mt Magnet Gold NL, 2007).

The proponent has advised that where possible, clearing will be carried out within the disturbed areas in order to minimise the amount of clearing that is conducted (Harmony - Mt Magnet Gold NL, 2007).

Vegetation Condition

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)

Comment

The vast majority of the Golden Stream project area has been disturbed as a result of historic mining and pastoral activities (Harmony - Mt Magnet Gold NL, 2007). Vegetation is regarded as remnant and/or regenerated to some degree (Harmony - Mt Magnet Gold NL, 2007).

Although no weeds were located within the project area following a vegetation survey by Western Botanical on 11 October 2006, Ruby Dock (*Acetosa vesicaria*) is common in the Mount Magnet area and could be expected to occur (Western Botanical, 2006; Harmony - Mt Magnet Gold NL, 2007).

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 area proposed to be cleared is surrounded by existing mining operations and associated infrastructure (GIS Database), and as a result the vegetation within the Golden Stream project area is largely degraded in condition.

Although the East Murchison Interim Biogeographic Regionalisation for Australia (IBRA) subregion is rich and diverse in both its flora and fauna, most species are wide ranging and usually occur in at least one, and often several, adjoining subregions (Cowan, 2001). A flora survey of the project area revealed no Declared Rare Flora (DRF) species to occur within the proposed area of disturbance (Western Botanical, 2006). One Priority 3 species, *Acacia speckii*, was recorded within the proposed clearing area. This species has previously been recorded between Meekatharra and Yalgoo, including 7 separate locations across the Harmony - Mount Magnet tenements. The clearing of scattered individuals of *Acacia speckii* is unlikely to impact upon the local or regional biodiversity.

Similar vegetation types to those found within the Golden Stream project area are well represented throughout adjacent subregions (GIS Database; Shepherd et al, 2001), and therefore it is unlikely that the biodiversity at the site of this proposal would be considered outstanding, or of a higher diversity than other areas within the East Murchison IBRA subregion, the Shire of Mount Magnet or the local area.

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

Methodology Cowan (2001).
Shepherd et al (2001).
Western Botanical (2006).
GIS Database:
- Mt Magnet 1.4M Orthomosaic - DLI03 (Image).
- Pre-European Vegetation - DA - 01/01.

(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**
According to the Department of Environment and Conservation's (DEC) Threatened Fauna dataset, there are no known records of species of conservation significance within the area proposed to be cleared (GIS Database).

The vegetation type and landforms found within the Golden Stream project area are not uncommon to the East Murchison subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (Harmony - Mt Magnet Gold NL, 2007; Shepherd et al, 2001).

Although the East Murchison IBRA subregion is rich and diverse in fauna, most species that occur within this subregion are wide ranging and usually occur in at least one, and often several, adjoining subregions (Cowan, 2001). The area proposed to be cleared is highly disturbed and more intact vegetation types that would provide similar habitat for fauna species indigenous to Western Australia can be found in close proximity to the active mining areas (GIS Databases). The vegetation found within the Golden Stream project area is not likely to represent significant habitat for any fauna species indigenous to Western Australia.

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

Methodology Cowan (2001).
Harmony - Mt Magnet Gold NL (2007).
Shepherd et al (2001).
GIS Database:
- Mt Magnet 1.4M Orthomosaic - DLI03 (Image).
- Threatened Fauna - CALM 30/09/05.

(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 known records of Declared Rare Flora (DRF) within the area applied to clear (GIS Database). The nearest known DRF to the proposed clearing area is 5 populations of *Eremophila rostrata*, located approximately 70km to the north (GIS Database). A flora survey of the Golden Stream project area was undertaken by Western Botanical on 11 October 2006. No DRF species were located (Western Botanical, 2006). It is therefore unlikely that the proposed clearing will have any impact upon DRF species.

Western Botanical (2006) located scattered individuals of the Priority 3 species *Acacia speckii* on the northern edge of the proposed waste dump footprint during a flora survey of the Golden Stream project area on 11 October 2006. No other Priority species were located. Between 10 - 15 October 2006, Western Botanical recorded *Acacia speckii* from 7 different locations throughout the Harmony - Mount Magnet tenements (Western Botanical, 2006). The size of these populations is yet to be quantified (Western Botanical, 2006). *Acacia speckii* has previously been recorded from several locations between Yalgoo and 100km north of Meekatharra (Western Australian Herbarium, 2007). Based on existing information, it is unlikely that the proposed clearing of scattered individuals of *Acacia speckii* will impact upon the conservation status of this species.

The proposed clearing area is comprised of open Mulga and Chenopod shrublands that are well represented throughout the East Murchison subregion (Western Botanical, 2006). The vegetation has been subject to disturbances from historic and recent exploration activities and goat grazing (Western Botanical, 2006). It is therefore considered that the area applied to clear is unlikely to be representative of significant habitat for any DRF or Priority flora species.

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

Methodology Western Australian Herbarium (2007).
Western Botanical (2006).
GIS Database:
- Declared Rare and Priority Flora List - CALM 01/07/05.

(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 (TEC's) in close proximity to the area applied to clear, with the nearest known TEC located approximately 193 kilometres south-west of the Golden Stream project area (GIS Database).

No Threatened Ecological Communities are known to occur within the East Murchison Interim Biogeographic Regionalisation of Australia (IBRA) subregion (Cowan, 2001), and it is therefore unlikely that the proposal will impact upon TEC's.

A discontinuous and narrow Banded Ironstone ridge runs in a north/south orientation through the proposed Golden Stream footprint area (Western Botanical, 2006). However, due to high levels of historic disturbance, this ridge is highly fragmented and has lost many floristic elements typical of Banded Ironstone communities (Western Botanical, 2006). The Department of Environment and Conservation (DEC) have assessed the site and associated impacts of the proposal, and advise that a more detailed survey of this BIF ridge would not be required due to the poor level of intactness and low conservation value attached to this ridge when compared to more intact BIF's occurring within the Mt Magnet Gold lease area (DEC, pers comm 2007).

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

Methodology Cowan (2001).
Western Botanical (2006).
GIS Database:
- Threatened Ecological Communities - CALM 12/04/05.

(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 area proposed to be cleared is located within the East Murchison subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 100% of the Pre-European vegetation extent remains within the East Murchison subregion (Shepherd et al. 2001).

The benchmark of 15% representation in conservation reserves (JANIS Forests Criteria, 1997) has not been met for Beard vegetation association 312 within the East Murchison IBRA subregion (Shepherd et al. 2001). The area proposed to be cleared does not represent a significant remnant of native vegetation when compared to the extent of the above Beard vegetation type remaining in the East Murchison IBRA subregion, and the clearing associated with this proposal is of 'least concern' for biodiversity conservation (Department of Natural Resources and Environment, 2002).

	Pre-European Area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	% in IUCN Class I-IV Reserves*
IBRA subregion – East Murchison Shire of Mount Magnet - Beard Vegetation Associations -	21,135,046 1,385,825	21,135,046 No information available	~100%	Least concern	~1.4%
-312	41,503	41,503	~100%	Least concern	0%

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

* Shepherd et al. (2001)

** Department of Natural Resources and Environment (2002)

Methodology Department of Natural Resources and Environment (2002).
JANIS Forests Criteria (1997).
Shepherd et al (2001).
GIS Database:
- IBRA - EA - 18/10/00.

(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

There are no permanent watercourses or wetlands within the Golden Stream project area, although one ephemeral creek is located within the boundary of the area proposed to be cleared (GIS Database).

Whilst some vegetation will be cleared within the ephemeral creek, the creek is not considered to have significant environmental values as the surrounding area has been heavily disturbed through previous mining activity, and the *Acacia spp.* which dominate this creekline system are well represented outside of the area proposed to be cleared.

It is the proponent's responsibility to liaise with the Department of Water to determine whether a Bed and Banks Permit is required for the proposed works, in accordance with Section 17 of the *Rights in Water and Irrigation Act 1914*.

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

Methodology GIS Database:
- Hydrography, linear - DOE 01/02/04.

(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 area applied to clear is within the Gabanintha land system (GIS Database), as mapped by the Department of Agriculture Western Australia (1994). The Gabanintha land system is characterised by ridges, hills and footslopes, stony and gravelly plains, creeks and drainage tracts (Department of Agriculture Western Australia, 1994). These land units support sparse *Acacia* and mainly non-halophytic shrublands (Department of Agriculture Western Australia, 1994).

The proposed clearing area is characterised by soils with limited topsoil and an iron indurated or carbonate cemented duricrust layer 1 - 2 metres thick (Harmony - Mt Magnet Gold NL, 2007). The arid climate of Mt Magnet is characterised by low rainfall and high evaporation, and subsequently the likelihood of having significant sheetflow capable of eroding surface soil material is minimal (Harmony - Mt Magnet Gold NL, 2007). Given the lack of loose topsoil material, the presence of a thick ironstone mantle, and the rare occurrence of significant sheetflow; soil erosion is not likely to occur as a result of the proposed clearing.

Land degradation such as waterlogging and salinity is not likely to be increased on or off site as a result of the proposed clearing. The low average annual rainfall of Mt Magnet (236mm) and high average annual evaporation (3,400mm) would suggest that there is minimal water available for ponding and subsequent waterlogging (Harmony - Mt Magnet Gold NL, 2007; GIS Database). The depth to groundwater, approximately 120 metres (Harmony - Mt Magnet Gold NL, 2007), would also suggest that the risk of salinisation as a result of the proposed clearing is unlikely.

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

Methodology Department of Agriculture Western Australia (1994).
Harmony - Mt Magnet Gold NL (2007).

GIS Database:
- Evaporation Isoleths - BOM 09/98.
- Rangeland Land System Mapping - DA.

(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 at variance to this Principle

The nearest conservation area to the area applied to clear is a Timber Reserve (TR 2/10) located approximately 172 kilometres south-west of the Golden Stream project area (GIS Database). This Timber Reserve is adjacent to the Bowgarder Nature Reserve, a "C" class reservation located approximately 21 kilometres north-west of Perenjori (GIS Database).

Given the distance between the area proposed to be cleared and the above mentioned conservation areas, the proposed clearing is not considered to be at variance to this principle.

Methodology GIS Database:
- CALM Managed Lands and Waters - CALM 01/07/05.

(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

There are no permanent watercourses or wetlands within the Golden Stream project area, although one ephemeral creek is located within the boundary of the area proposed to be cleared (GIS Database). The Mt Magnet area experiences low average annual rainfall of 236 mm, therefore, this creek is only likely to flow during and after heavy rainfall events (Harmony - Mt Magnet Gold NL, pers comm).

The area proposed to be cleared does not fall within a Public Drinking Water Source Area (PDWSA), although the Mount Magnet (Genga) Water Reserve, a Priority 2 water reserve, is located approximately 2.68 kilometres west of the project area (GIS Database). The clearing as proposed will not have an impact on the quality of groundwater within this reserve, as Harmony - Mt Magnet Gold NL advise within the Mining Proposal for the Golden Stream project that an effective stormwater harvesting system is used to prevent any run-off from the mining area reaching the Genga Water Reserves (Harmony - Mt Magnet Gold NL, 2007).

The vegetation within the area proposed to be cleared is sparse and not likely to act as a significant buffer for this watercourse, hence the clearing of vegetation within the area under application is unlikely to cause any deterioration of surface water quality (Harmony - Mt Magnet Gold NL, 2007).

The depth to groundwater within the area proposed to be cleared is low, as evident from the Boomer Pit (200 metres east of the Golden Stream Project area) where groundwater depth is in excess of 120 metres (Harmony - Mt Magnet Gold NL, pers comm). It is not anticipated that groundwater will be encountered as a result of any clearing or associated mining activity (Harmony - Mt Magnet Gold NL, 2007), and therefore there is not likely to be any impact on salinity as a result of this proposal.

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

Methodology Harmony - Mt Magnet Gold NL (2007).
GIS Database:
- Hydrography, linear - DOE 01/02/04.
- Public Drinking Water Source Areas (PDWSAS) - DoW (Display).

(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

There are no permanent wetlands or watercourses within the area proposed to be cleared, although two non-perennial drainage lines are present (GIS Database).

The Mt Magnet area experiences low annual rainfall at an average of 236 mm/year (Harmony - Mt Magnet Gold NL, 2007), and high evaporation at a rate in the order of 3,400 mm/year (GIS Database). Consequently, watercourses only flow for short periods of time and ponded waters generally evaporate quickly within a normal year (Harmony - Mt Magnet Gold NL, 2007).

The landscape of the proposed clearing area is characterised by a low topographic gradient and the numerous broad drainage tracts of the region disperse floodwaters following high rainfall events (Harmony - Mt Magnet Gold NL, 2007). Non-perennial watercourses are responsible for diverting floodwaters into the numerous salt lakes in the region.

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

Methodology Harmony - Mt Magnet Gold NL (2006).
 GIS Database:
 - Evaporation Isoleths - BOM 09/98.
 - Hydrography, linear - DOE 01/02/04.

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

Comments

There is one native title claim over the area under application. This claim (WC96/098) has been registered with the National Native Title Tribunal on behalf of the claimant group (GIS Database). However, the mining tenement has been granted in accordance with the future act regime of the *Native Title Act* 1993 and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act* 1993.

There is one site of Aboriginal significance within the area applied to clear (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act* 1972 and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

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

Methodology GIS Database:
 - Aboriginal Sites of Significance - DIA 04/07/02.
 - Native Title Claims - DLI 19/12/04.

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Mineral Production	Mechanical Removal	40	Grant	<p>The clearing principles have been addressed and the proposal is at variance to principle (f), is not likely to be at variance to principle (a), (b), (c), (d), (g), (i) and (j), and is not at variance to principle (e) and (h). It is therefore recommended that the permit be granted, subject to the following conditions:</p> <ol style="list-style-type: none"> The Permit Holder shall record the following for each instance of clearing: <ol style="list-style-type: none"> the location of where the clearing occurred, expressed as grid coordinates using the Geocentric Datum of Australia 1994 coordinate system; the size of the area cleared in hectares; the dates on which the area was cleared; the area rehabilitated in hectares; the method of clearing; the purpose of clearing. The Permit Holder shall provide a report to the Director, Environment, Department of Industry and Resources by 14 August each year for the life of the permit setting out the records required under condition 1 of this permit in relation to clearing carried out between 1 January and 31 December of the previous year. This report can be included as an addendum to the Annual Environmental Report. <p>Explanatory Note:</p> <ol style="list-style-type: none"> In this permit Annual Environmental Report means a report produced as a requirement of tenement conditions under the <i>Mining Act</i> 1978.

5. References

Cowan. M (2001) *A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions*. Murchison 1 (MUR1 - East Murchison subregion). Department of Conservation and Land Management, Western Australia.

Department of Agriculture Western Australia (1994) Technical Bulletin: *An inventory and condition survey of the Murchison River catchment and surrounds*, Western Australia. No. 84. South Perth, Western Australia.

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

- Harmony - Mt Magnet Gold NL (2007) *Mining Proposal: Golden Stream Open Pit. M58/185*, January 2007. Mount Magnet, Western Australia.
- JANIS Forests Criteria (1997) *Nationally agreed criteria for the establishment of a comprehensive, Adequate and Representative reserve System for Forests in Australia*. A report by the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee. Regional Forests Agreement process. Commonwealth of Australia, Canberra.
- Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia (updated 2005).
- Western Australian Herbarium (2007). *Florabase - The Western Australian Flora*. Department of Environment and Conservation. <http://florabase.calm.wa.gov.au/>
- Western Botanical (2006) *Review of Flora, Vegetation and Conservation Values of the proposed Golden Stream Pit*. Harmony Gold, Mt Magnet. October 2006. Midland, Western Australia.

6. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government.
CALM	Department of Conservation and Land Management, Western Australia.
DAFWA	Department of Agriculture and Food, Western Australia.
DA	Department of Agriculture, Western Australia.
DEC	Department of Environment and Conservation
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DoE), Western Australia.
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia.
DoE	Department of Environment, Western Australia.
DoIR	Department of Industry and Resources, Western Australia.
DOLA	Department of Land Administration, Western Australia.
DoW	Department of Water
EP Act	Environment Protection Act 1986, Western Australia.
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System.
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	Rights in Water and Irrigation Act 1914, Western Australia.
s.17	Section 17 of the Environment Protection Act 1986, Western Australia.
TECs	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.