



1. Application details

1.1. Permit application details

Permit application No.: 2341/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

1.3. Property details

Property: State Agreement Act, Mineral Lease 244 SA (AML 70/244);
Ministerial Reserve 7484 H;
Crown Land Lease on Lot 301 and Lot 302 Newman Townsite.

Local Government Area: Shire Of East Pilbara

Colloquial name: Kurra Village expansion (Stage 5)

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5		Mechanical Removal	Construction Works

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
<p>The vegetation of the application area is broadly mapped as Beard Vegetation Association 18: low woodland; mulga (<i>Acacia aneura</i>) (GIS Database; Shepherd et al., 2001).</p> <p>A flora and vegetation survey of the entire 25 ha potential disturbance area was conducted by ENV Australia Pty Ltd (ENV) environmental consultants between 25th and 29th September 2006. The survey was conducted using nine 50 m x 50 m quadrats, distributed across the site and representing all the vegetation associations within the survey area. The survey identified nine vegetation associations within the application area, dominated by an open <i>Acacia</i> spp. (predominantly <i>A. aneura</i>) shrubland with a weedy grassy understorey (ENV, 2006).</p> <p>A total of 117 plant taxa were recorded within the survey area, including seven weed species: Ruby Dock, <i>Acetosa vesicaria</i>; Bipinnate Beggartick, <i>Bidens bipinnata</i>; Buffel grass, <i>Cenchrus ciliaris</i>; Flaxleaf Fleabane, <i>Conyza bonariensis</i>; Couch grass, <i>Cynodon dactylon</i>; Spiked Malvastrum, <i>Malvastrum americanum</i>; and Black Berry Nightshade, <i>Solanum nigrum</i> (ENV, 2006). The most commonly occurring weed species was Buffel Grass, <i>Cenchrus ciliaris</i>, which was recorded in varying densities (up to 60% coverage) in all nine quadrats (ENV, 2006). None of the weed species recorded in the survey are listed as a Declared Plant by the Department of Agriculture and Food (DAFWA). No flora species of conservation significance were recorded during the survey (ENV, 2006).</p> <p>The condition of the majority of the vegetation within the survey area was recorded as 'Very Poor', due to weed invasion and extensive disturbance from long-term vehicle and pedestrian movements through the area. The only area of vegetation within the application area that was considered to be in 'good' condition was located on a small, low rocky rise. The proponent has advised that clearing of this area will be avoided (BHP, 2006).</p>	<p>BHP Billiton Iron Ore Pty Ltd (BHP Billiton) has applied to clear up to 5 hectares (ha) of native vegetation, within a total application area of approximately 25 ha. The proposed clearing is for the purpose of extending the existing 'Kurra Village', which is BHP's accommodation village for minesite personnel.</p> <p>A previous expansion of the accommodation village, from 1037 to 1229 rooms was approved in April 2007, under clearing permit CPS 1643/1. The current proposal is to further expand the accommodation village from 1229 rooms to 1601 rooms (BHP Billiton, 2008). CPS 1643/1 authorised the clearing of up to 5 ha within a 25 ha application area. The current proposal is to clear a further 5 ha within the same 25 ha boundary.</p> <p>In addition to the accommodation construction site, incidental areas will be cleared for associated purposes, such as laydown areas for construction materials, topsoil stockpiles, etc. The exact locations for this incidental clearing have not yet been determined. The total area of clearing for all the abovementioned activities will be less than 5 ha. The proponent has selected the 25 ha potential disturbance area to allow for flexibility in the siting of the incidental clearing, and to cover all possible variations in the village layout.</p>	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).</p> <p>To</p> <p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).</p>	<p>The Kurra Village is located on the northern outskirts of Newman township. The existing accommodation village and the proposed extension to the village fall partly within the Newman Townsite Reserve. The land tenure of the existing village area and the proposed expansion area (the current clearing permit application area) is partly State Agreement Act ML 244SA and partly Ministerial Temporary Reserve 7484H, which was created pursuant to the State Agreement. BHP hold a lease over parts of the Ministerial Reserve, issued under the Land Administration Act 1997 'for the purpose of transient workforce accommodation'.</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 clearing permit application area is located on the outskirts of the Newman townsite and is surrounded by existing cleared areas (BHP Billiton, 2008; GIS Database). It is bounded on two sides by major roads (the Great Northern Highway and Newman Drive), and is immediately adjacent to the existing Kurra Village. The application area is criss-crossed by numerous tracks, and the vegetation has suffered significant disturbance over many years from human activities. ENV (2006) have reported that the majority of the vegetation within the application area is in a very poor condition.

No flora or fauna species of conservation significance are known to occur within the application area, and the vegetation types and fauna habitats found within the application area are all well represented in the Pilbara Region (BHP Billiton, 2008; ENV, 2006; GIS Database).

Considering the proximity to the townsite and the degraded state of the vegetation, the application area is unlikely to represent an area of high biological diversity.

The proposed clearing of 5 ha for the expansion of the existing Kurra Village accommodation village, is unlikely to have any significant impact on the biological diversity of the region.

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

Methodology BHP Billiton (2008).
ENV (2006).
GIS Database:
- Declared Rare and Priority Flora List - CALM 01/07/05.
- Newman 1.4m Orthomosaic - Landgate03.
- Pre-European Vegetation - DA 01/01.
- Threatened Fauna - CALM 30/9/05.

(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**

The application area is on the outskirts of the Newman townsite and immediately adjacent to an existing accommodation village and roads. The vegetation of the application area is largely degraded (ENV, 2006), and is criss-crossed by numerous tracks. The application area is bounded on two sides by major roads (the Great Northern Highway and Newman Drive), and is immediately adjacent to the existing Kurra Village. The application area has been subjected to persistent disturbance over many years from vehicle and pedestrian movements, and is unlikely to represent a significant habitat for fauna.

There are no significant fauna habitat features (eg. caves, rock crevices, water sources) within the application area (BHP Billiton, 2008). The landforms, vegetation types and fauna habitats found in the application area are widespread in the Pilbara region (BHP Billiton, 2008; ENV, 2006). No fauna species of conservation significance were recorded within the area proposed to clear (BHP Billiton, 2008).

The relatively small area of clearing of previously disturbed vegetation, immediately adjacent to other disturbed areas is unlikely to have any significant impact on fauna habitat at either a local or regional level.

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

Methodology BHP Billiton (2008).
ENV (2006).

(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**

The nearest known Declared Rare Flora are six populations of *Lepidium catapycnon*, approximately 8-11km west/southwest of the western end of the application area (GIS Database). *L. catapycnon* has a strong habitat preference for steep hill slopes (ENV, 2006; WA Herbarium, 2008), and the application area does not provide suitable habitat for this species.

Department of Environment and Conservation (DEC) databases have no records of any other populations of Declared Rare or Priority Flora within a 50km radius of the application area (GIS Database).

Two Priority Flora species have been recorded during previous surveys in the surrounding area. *Eremophila magnifica*, which prefers rocky ridges and hilltops, was recorded in large numbers in 2004 in an area to the west

of the Orebody 25 minesite (approximately 5 km north-east of Newman) (BHP Billiton, 2006). *Eremophila magnifica* is now classified on the DEC Florabase database (WA Herbarium, 2008) as 'not threatened', however two subspecies are listed as Priority Flora: *E. magnifica subsp magnifica* (P4) and *E. magnifica subsp velutina* (P3). *Triumfetta leptacantha* (P3) was recorded by BHP Billiton in 2000 from the area surrounding the Orebody 25 minesite. *T. leptacantha* grows on rocky outcrops on upper slopes throughout the Pilbara (BHP Billiton, 2006). The area proposed to clear is located on lower lying relatively flat terrain, which is not the preferred habitat for either of the two abovementioned Priority Flora species.

A search of DEC databases, conducted by ENV, revealed a further 22 Priority Flora species with the potential to occur within the application area, based on known distributions. However no Rare or Priority flora species were recorded during the survey (ENV, 2006).

The vegetation associations occurring within the application area are well represented in the Pilbara Region (ENV, 2006; GIS Database). The relatively small area of additional clearing adjacent to the existing townsite is unlikely to have any significant impact on Rare or Priority flora in the region.

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

Methodology BHP Billiton (2006).
 ENV (2006).
 WA Herbarium (2008).
 GIS Database:
 - Declared Rare and Priority Flora List - CALM 01/07/05.
 - Pre-European Vegetation.

(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). The nearest known TEC is the Ethel Gorge aquifer stygobiont community which is located approximately 11 km northeast of the proposed clearing (GIS Database). Groundwater drawdown is listed as a threatening process for the Ethel Gorge stygofauna (CALM, 2002), however the small area of the proposed clearing is not expected to have any effect on groundwater levels.

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

Methodology CALM (2002).
 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 application area falls within the Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Shepherd et al. (2001) report that approximately 99.9% of the pre-European vegetation still exists in the IBRA Pilbara Bioregion. The vegetation in the application area is broadly mapped as Beard Vegetation Association 18: low woodland; mulga (*Acacia aneura*) (GIS Database). Shepherd et al, (2001) report that there is approximately 100% of this vegetation type remaining.

Although large scale mining operations are located in close proximity to the application area, the region in which the clearing is proposed to occur has not undergone broad scale clearing. Furthermore, the majority of the vegetation within the application area is in a degraded state (ENV, 2006). Hence the application area does not represent a significant remnant of native vegetation in an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	% of Pre-European area in IUCN Class I-IV Reserves
IBRA Bioregion – Pilbara	17,804,164	17,794,164	~99.9	Least Concern	6.3
Beard vegetation associations – WA					
18	19,892,437	19,890,348	~100	Least Concern	2.1
Beard vegetation associations – Pilbara Bioregion					
18	676,561	676,561	~100	Least Concern	16.8

* Shepherd et al. (2001) updated 2005

** Department of Natural Resources and Environment (2002)

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

Methodology Dept of Natural Resources and Environment (2002).
ENV (2006).
Shepherd et al. (2001).
GIS Database:
- Pre-European Vegetation - DA 01/01.
- Interim Biogeographic Regionalisation of Australia - 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 not likely to be at variance to this Principle

There are no watercourses or wetlands within the area proposed to clear (GIS Database). Creeks in the surrounding area are dry for most of the year, only flowing briefly immediately following significant rainfall (BHP Billiton, 2008). The nearest creekline to the application area is a minor, seasonal creekline approximately 200m to the north of the proposed clearing area (at its nearest point) (GIS Database). The proposed clearing is unlikely to have any significant impact on this or any other watercourse.

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

Methodology BHP Billiton (2008).
GIS Database:
- Hydrography, Linear - DOE 01/02/04.
- Lakes, 1M - GA 01/06/00.
- Rivers 250K - GA.

(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 lies within the Newman and Elimunna Land Systems (GIS Database).

The Newman Land System consists of lower slopes, with stony soils and some red loamy earths; narrow drainage floors up to 400m in width with stony mantles on shallow red loam soils; and lower stony plains with stony soils, shallow loams or loamy earth soils. The Newman Land System soils are not particularly prone to soil erosion (Van Vreeswyk et al., 2004).

The Elimunna Land System consists of hills and low rises with stony soils on shallow red loams; Groves land unit on red loamy earth soils; and drainage floors with self mulching cracking clay soils. The Elimunna Land System is also reasonably resistant to soil erosion, however soil disturbance or altered water flows may cause localised soil erosion (Van Vreeswyk et al., 2004).

The application area is relatively flat (GIS Database), and the proposed clearing is unlikely to result in significant soil erosion. In their Environmental Management Plan for the project, the proponent has made a commitment to minimise erosion and implement sediment control measures as required (BHP Billiton, 2008).

The relatively small area of the proposed clearing is unlikely to cause appreciable land degradation.

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

Methodology BHP Billiton (2008).
GIS Database:
- Rangeland Land System Mapping - DA.
- Topographic Contours, Statewide - DOLA 12/09/02.
Van Vreeswyk et al., (2004).

(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

There are no conservation areas in the vicinity of the application area. The nearest DEC managed lands are the Collier National Park, approximately 120km south of the application area; and the Karijini National Park, approximately 120km northwest of the application area (GIS Database). The proposed clearing is unlikely to impact on the environmental values of any conservation area.

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

Methodology GIS Database:
- CALM Managed Lands and Waters - CALM 1/07/05.

(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 watercourses or wetlands within the area proposed to clear (GIS Database). The clearing application area is relatively flat (GIS Database), and the small area of the proposed clearing is unlikely to result in significant changes to surface water flows. In their Environmental Management Plan for the project, the proponent has made a commitment to minimise impacts on the quality of surface water (BHP Billiton, 2008).

The proposed clearing of a small area of degraded vegetation is unlikely to have any impact on groundwater levels or quality (DoW, 2008). Groundwater quality monitoring is conducted as part of the existing mine operations at the nearby Mt Whaleback and Orebody 25 minesites (BHP Billiton, 2008).

The application area is located within the Newman Water Reserve, a Public Drinking Water Source Area (GIS Database). The Department of Water has advised that they have no objection to the proposed clearing within the water reserve (DoW, 2008).

The comparatively small area of the proposed clearing is unlikely to cause deterioration in the quality of surface or underground water.

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

Methodology BHP Billiton (2008).
DoW (2008).
GIS Database:
- Hydrography, Linear - DOE 1/02/04.
- Public Drinking Water Source Areas - DOE 09/08/05.
- Topographic Contours, Statewide - DOLA 12/09/02.

(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

Natural flooding occurs occasionally during the wet season (November to March) following significant rainfall (BHP Billiton, 2008). In their Environmental Management Plan for the project, the proponent has made a commitment to minimise disturbance to natural surface drainage flows (BHP Billiton, 2008).

The proposed clearing is for a small area, on relatively flat land, and not associated with any permanent watercourse (GIS Database). Considering the size and location of the area under application, the proposed clearing is not likely to cause or exacerbate the incidence or intensity of flooding (DoW, 2008).

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

Methodology BHP Billiton (2008).
DoW (2008).
GIS Database:
- Hydrography, Linear - DOE 01/02/04.
- Topographic Contours, Statewide - DOLA 12/09/02.

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

Comments

One public submission was received for this clearing permit application. The submission suggested that the vegetation proposed to be cleared should be considered as a significant remnant of native vegetation in an area that has been extensively cleared. This issue has been addressed under Principle (e).

The submission also raised concerns regarding potential impacts of the proposed clearing on Aboriginal Heritage sites and Native Title Rights within the application area.

There are no known Aboriginal sites of significance within the area applied to clear. The nearest known Aboriginal site of significance is located approximately 500m north of the northern tip of the application area (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.

The proponent is committed to the management and protection of Aboriginal heritage sites (BHP Billiton, 2005). BHP Billiton regularly consult with the Nyiyaparli people (traditional owners of the area), and undertake Aboriginal heritage surveys in and around Newman (BHP Billiton, 2005). BHP Billiton also has an internal process; the Project Environment and Aboriginal Heritage Review (PEAHR), which is designed to prevent inadvertent disturbance of Aboriginal heritage sites within BHP Billiton operations. Prior to the commencement of any land disturbance activity, a PEAHR must be completed and submitted to BHP Billiton's Aboriginal Affairs Department, for assessment. All land disturbance activities must be approved by BHP Billiton's Environment and Aboriginal Heritage staff (BHP Billiton, 2005). The proposed Kurra Village expansion area was inspected by the Nyiyaparli people in November 2006, and no sites of Aboriginal significance were found (BHP Billiton, 2006).

There is a native title claim (WC99/004) over the area under application. This claim has been registered with the National Native Title Tribunal. However, the tenements have been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (ie. 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*.

The application area is within the Newman Water Reserve, a Public Drinking Water Source Area (GIS Database). The Department of Water has advised that they have no objection to the proposed clearing within the water reserve (DoW, 2008).

The application area is also located within the Pilbara Groundwater Area as proclaimed in the *Rights in Water and Irrigation Act 1914*. Any groundwater abstraction within this proclaimed area will require a Groundwater Licence issued by the Department of Water (DoW, 2008).

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 proponent has applied for Town Planning approval from the Shire of East Pilbara for the proposed expansion of the accommodation village (BHP Billiton, 2008).

Methodology

BHP Billiton (2006).
BHP Billiton (2008).
DoW (2008).
GIS Database:
- Aboriginal Sites of Significance - DIA 04/07/02.
- Native Title Claims - DLI 19/12/04.
- Public Drinking Water Source Areas - DOE 09/08/05.

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Construction Works	Mechanical Removal	5	<p>The proposal has been assessed against the clearing principles.</p> <p>The proposal is not at variance to Principle (e), and not likely to be at variance to Principles (a), (b), (c), (d), (f), (g), (h), (i) and (j).</p> <p>Should the permit be granted, it is recommended that Conditions be imposed on the permit for the purposes of record keeping and permit reporting.</p>

5. References

- BHP Billiton (2005) Aboriginal Heritage Induction Handbook. BHP Billiton Iron Ore Pty Ltd, Western Australia.
- BHP Billiton (2006) Kurra Village Expansion Works Vegetation Clearing Permit Supporting Documentation. BHP Billiton Iron Ore Pty Ltd, Western Australia.
- BHP Billiton (2008) Rapid Growth Projects. Kurra Village, Newman. Purpose Permit Vegetation Clearing Permit application. Supporting Documentation. BHP Billiton Iron Ore Pty Ltd, Western Australia.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, 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.
- DoW (2008) PDWSA Advice. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Industry and Resources (DoIR). Department of Environment, Western Australia.
- ENV (2006) Proposed Kurra Village extension area flora and vegetation assessment. ENV Australia, Western Australia
- 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.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.
- WA Herbarium (2008) FloraBase - The Western Australian Flora. Department of Environment and Conservation, 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.