



## 1. Application details

### 1.1. Permit application details

Permit application No.: 874/2  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: BHP Billiton Nickel West

### 1.3. Property details

Property: Mining Leases: M69/72, M69/73 and M69/75  
Exploration Licence: E69/2201  
Local Government Area: Shire of Ngaanyatjaraku  
Colloquial name: West Musgrave exploration project

### 1.4. Application

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

## 2. Site Information

### 2.1. Existing environment and information

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

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation association 19: Low woodland: mulga between sand ridges (Hopkins et al., 2001; Shepherd et al., 2001).	The proposed clearing of 4 hectares will involve line clearing and drilling a total of 20 diamond drill holes, with associated drill pads and sumps (BHP Billiton Nickel West, 2005). A flora and vegetation survey of the application area was undertaken between the 6 and 7 August 2005 (Western Botanical, 2005). The following six habitat types were identified: * Dune Shrubland - occurs on low linear parallel dunes comprising red aeolian sand, oriented in a NW-SE direction. Vegetation consists of low to medium shrubs including <i>Grevillea stenobotrya</i> , <i>Gyrostemon ramulosus</i> , <i>Aluta masonneuvei</i> , <i>Eremophila wilsii</i> ssp. <i>integrifolia</i> and <i>Dicrastylis</i> sp. * Low Dune Mallee Shrubland - an extension of Dune Shrubland, with a substantial mallee component ( <i>Eucalyptus gamophylla</i> ). The dunes have a low profile with a deep, red aeolian sand sheet and may include a shallow perched calcrete stratum. Common shrubs and grasses include <i>Acacia ligulata</i> , <i>A pachyacra</i> , <i>Eremophila platythamnos</i> ssp. <i>extrachys</i> and <i>Triodia basedowii</i> . * Sand Sheet Spinifex Grasslands - shallow red silty sand sheets support extensive <i>Triodia basedowii</i> and/or <i>Triodia schinzii</i> hummocked grasslands with an occasional shrub and tree stratum. * Wanderrrie Grassland - shallow sandy soils over hardpan support a Wanderrrie Grass ( <i>Eriachne helmsii</i> and <i>Eragrostis eriopoda</i> ) dominated lower stratum, largely excluding <i>Triodia</i> spp, and lacking substantial shrubs and trees. * Mulga-Wanderrrie Woodlands - hardpan red clay loams support groved Mulga ( <i>Acacia aneura</i> ) woodlands with a substantial grass component. <i>Triodia</i> spp are absent. * Calcrete Platform Shrublands - low calcrete rises support scattered shrubs and Spinifex. Grasses include <i>Triodia basedowii</i> , <i>Enneapogon avenaceus</i> , <i>Eragrostis eriopoda</i> and <i>Themeda triandra</i> . Shrubs include <i>Petalostylis cassioides</i> , <i>Hibiscus arenicola</i> , <i>Kennedia prorepens</i> . Larger Shrubs and trees such as <i>Acacia kempeana</i> , <i>A victoriae</i> and <i>Eucalyptus gamophylla</i> are occasional.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The flora and vegetation survey of the Babel, Nebo and East Chamber Prospects was undertaken by Western Botanical over two days (6 and 7 August) in 2005. The vegetation habitats were identified by conducting traverses of the Babel and Nebo prospects. Of the twenty drill sites comprised in this application, 12 are within the south western portion of the Babel prospect, and 8 are within the East Chamber Prospect. All drill sites identified in the current application are within the habitats identified during the flora and vegetation survey. The majority of the sites are situated within Calcrete Platform Shrublands, Sand Sheet Spinifex Grasslands and Dune Shrublands. The condition of the vegetation within the Babel, Nebo and East Chamber Prospects is generally good to excellent (Western Botanical, 2005). However, the prospects and the surrounding areas have been subject to relatively recent and frequent fire mosaics. Evidence of very recent fire (burnt vegetation, absence of grasses and ground cover) is apparent at various sites in the region traversed. Little evidence of grazing was noted and no significant soil erosion issues were identified.
			Clearing Permit 874/1 for the West Musgrave exploration project was originally granted on 8 December 2005. However since the permit was granted, two of the tenements covered by the permit have been surrendered and have been replaced by a new tenement. The permit has now been amended (CPS 874/2) to include the new tenement number (E69/2201) and delete the two old tenement numbers (E69/1155 and E69/1156). The geographical location of the area within which clearing is authorised remains the same.

### 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 habitats which were identified and described for the drill sites are well represented outside the prospects and are representative of that commonly noted in the broader region east of Warburton (Western Botanical, 2005). They are also well represented in the remainder of Aboriginal Reserve 17614 (BHP Billiton Nickel West, 2005).

No Threatened Ecological Communities or Declared Rare Flora were identified within the application area (Western Botanical, 2005). The Priority 3 plant, *Microcorys macradeniae* was identified within the prospects, but not at the drill sites. Conditions will be imposed on the clearing permit to prevent clearing of this species.

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

**Methodology**      BHP Billiton Nickel West (2005).  
Western Botanical (2005).

#### (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**

Current fauna survey data is not available for this region (BHP Billiton Nickel West, 2005). However, as the habitats identified and described for the drill sites are well represented outside the prospects and are representative of that commonly noted in the broader region east of Warburton (Western Botanical, 2005), the clearing of 4 hectares of this vegetation does not constitute a significant habitat for fauna. Therefore, the proposal is not likely to be at variance to this principle.

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

**Methodology**      BHP Billiton Nickel West (2005).  
Western Botanical (2005).

#### (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 flora and vegetation survey of the Babel, Nebo and East Chamber Prospects undertaken by Western Botanical on 6 and 7 August 2005 included detailed site assessments over the twenty proposed exploration drilling locations in this application (Western Botanical, 2005). The survey included determination of vegetation habitats on the Babel and Nebo Prospects, as well as recording of populations of significant taxa within and outside the prospects.

No Declared Rare, Priority or geographically restricted species were identified within the 20 proposed drill sites assessed (Western Botanical, 2005).

While no species of conservation significance were recorded within any of the drill sites, a large population of *Microcorys macradeniae* (P3) occurs within the East Chamber prospect between drill holes 15 and 16 (Western Botanical, 2005). This population occurs at the northern end of a low sand dune and can be readily avoided in the future. It is recommended that this population and its supporting low Dune Shrubland habitat be given a relatively wide berth when establishing access to the drilling sites within the tenement. With respect to management of this population, BHP Billiton Nickel West state that new tracks and drill pads will be located to avoid disturbance to this species (2005). The Project Manager for the drilling program accompanied Western Botanical during the flora survey and is consequently able to identify the species in the field, so as to ensure the drilling activity disturbance avoids this species.

CALM is supportive of BHP Billiton Nickel West's commitment to avoid the known priority flora *Microcorys macradeniae* (CALM, 2005).

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

**Methodology**      Western Botanical (2005).  
BHP Billiton Nickel West (2005).  
CALM (2005).

GIS Databases:  
- 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 TECs in the vicinity of the application area (Threatened Ecological Communities - CALM 12/04/05). Therefore this proposal is unlikely to be at variance to this Principle.

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

**Methodology** GIS Databases:  
- 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**

Aboriginal Reserve 17614 has not been extensively cleared and the vegetation to be disturbed is well represented locally (BHP Billiton Nickel West, 2005). Habitats which have been identified and described for the drill sites are well represented outside the prospects and are representative of that commonly noted in the broader region east of Warburton (Western Botanical, 2005). Furthermore, vegetation association 19 mapped by Beard has over 99% of the Pre-European extent remaining (Shepherd et al., 2001). This association is therefore of 'least concern' for biodiversity conservation.

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation Status**	% in IUCN Class I-IV reserves
IBRA Bioregion					
- Central Ranges	5,132,641*	5,132,641*	100%	Least concern	
Shire of Ngaanyatjaraku	No information available				
Beard vegetation association					
- 19	4,888,643	4,885,387	99.9%	Least concern	0.5%

\* Shepherd et al. (2001)

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

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

**Methodology** BHP Billiton Nickel West (2005).  
Western Botanical (2005).  
Shepherd et al. (2001).  
Department of Natural Resources and Environment (2002).  
Hopkins et al. (2001).

GIS databases:  
- 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**

No watercourses or wetlands are located within the proposed disturbance area (BHP Billiton Nickel West, 2005; Cockerton, 2005). Small well defined depressions in the landscape may support claypan grass (*Eriachne* sp), but none of these are near the proposed drilling sites (Cockerton, 2005).

With regard to riparian vegetation, none of the flora taxa listed at the drill locations, or observed in the application area during the flora survey in early August 2005 (Western Botanical, 2005) is distinctive of watercourses or wetlands, so is not defined as riparian vegetation.

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

**Methodology** BHP Billiton Nickel West (2005).  
Western Botanical (2005).  
Geoff Cockerton, Environmental Consultant, Western Botanical (pers comm, 02/12/05) ref: 438.KF

**(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**

Given that land disturbance will be limited to a series of small drill pads and sumps and connecting tracks which will be rehabilitated within six months of the drilling program's completion (including replacement of topsoil where available), it is unlikely that the vegetation clearance will result in land degradation (BHP Billiton Nickel West, 2005).

With regard to soil erosion subsequent to the clearing of vegetation, the average annual rainfall is 200 to 250 mm (BHP Billiton Nickel West, 2005) and usually sporadic. Rainfall in single events can be high (BoM, 2005), but as the landscape has a low relief (Western Botanical, 2005), with sand dunes and calcrete rises constituting the raised areas, the potential for erosion is very low and the soils in the more undulating areas are sandy in the majority, so there is a high potential for infiltration as opposed to generation of runoff, and subsequently, erosion. Surface sheeting is likely only in the hardpan areas (Cockerton, 2005).

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

**Methodology** BHP Billiton Nickel West (2005).  
BoM (2005).  
Western Botanical (2005).  
Geoff Cockerton, Environmental Consultant, Western Botanical (pers comm, 02/12/05) ref: 438.KF

**(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 area for proposed clearing is not within a conservation area (GIS database: CALM Managed Lands and Waters - CALM 1/07/05) or proposed conservation area recognised by CALM (DoIR, 2005). However, it is within an area of the 'Ranges of the Western Desert', which is listed on the Register for National Estate (BHP Billiton Nickel West, 2005) for its unique aboriginal heritage, landscape and endemic flora values (DEH, 2005). This area is also recognised as Red Book Area 12.19, Ranges of the Western Desert (Conservation through Reserves Committee, 1974) for these same reasons.

The proposed disturbance is small in comparison to the total area listed within the Ranges of the Western Desert. Furthermore, the applicant has an agreement with the Ngaanyatjarra Land Council to gain access to Aboriginal Reserve 17614 for the purposes of mineral exploration and mining (BHP Billiton Nickel West, 2005). The flora survey conducted in August 2005 found that there are no endemic species within the areas proposed to be cleared (Western Botanical, 2005), and the applicant has committed to avoid the P3 species *Microcorys macraedeniae* (BHP Billiton Nickel West, 2005). As such, the impacts of the proposed clearing of 4 ha of vegetation are not likely to compromise the values of the Ranges of the Western Desert.

CALM concurs with the conclusions that this proposal is unlikely to have a significant impact on the values of the Ranges of the Western Desert area (CALM, 2005).

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

**Methodology** DoIR (2005).  
DEH (2005).  
Conservation through Reserves Committee (1974).  
BHP Billiton Nickel West (2005).  
CALM (2005).  
Western Botanical (2005).

GIS databases:  
- CALM Managed Lands and Waters - CALM 1/07/05  
- Register of National Estate - EA 28/01/03  
- System 1 to 5 and 7 to 12 Areas - DEP 06/95

**(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 at variance to this Principle**

No watercourses or wetlands are located within the proposed disturbance area (BHP Billiton Nickel West, 2005; Cockerton, 2005). With regard to degradation of water quality from soil erosion subsequent to the clearing of vegetation, the average annual rainfall is 200 to 250 mm (BHP Billiton Nickel West, 2005) and usually sporadic. Rainfall in single events can be high (BoM, 2005), but as the landscape has a low relief (Western Botanical, 2005), with sand dunes and calcrete rises constituting the raised areas, the potential for erosion is very low and the soils in the more undulating areas are sandy in the majority, so there is a high potential for infiltration as opposed to generation of runoff, and subsequently, erosion and deposition. Surface sheeting is likely only in the

hardpan areas (Cockerton, 2005).

Groundwater quality is good (sub-potable to potable), and the presence of Mallee shrubland calcrete habitat within the survey area, is indicative of shallow groundwater aquifers (BHP Billiton Nickel West, 2005). Given the high rates of evaporation (3,400 mm/annum) compared to the average annual rainfall (200-250mm), runoff does not represent a major source of groundwater aquifer recharge. The area to be cleared is small (4 ha) and dispersed, and therefore the clearing will not result in degradation of the groundwater.

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

**Methodology** BHP Billiton Nickel West (2005).  
Western Botanical (2005).  
BoM (2005).  
Geoff Cockerton, Environmental Consultant, Western Botanical (pers comm, 02/12/05) ref: 438.KF

**(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 at variance to this Principle**

The dispersed nature of the clearing activities and its small size (4ha) relative to the extensive uncleared surrounding lands infer that the clearing will not cause or exacerbate flooding.

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

**Methodology** GIS databases:  
- Western Australia ETM 25m 543 - AGO 04

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

**Comments**

The exploration activities will take place entirely within Aboriginal Reserve 17614. BHP Billiton Nickel West has a current entry permit granted by the then Minister for Indigenous Affairs under section 31 of the *Aboriginal Affairs Planning Authority Act 1972* (BHP Billiton Nickel West, 2005).

There is a native title claim over the area under application; WC04/003. This claim has been registered with the National Native Title Tribunal on behalf of the Ngaanyatjarra Lands claimant group. However, the mining tenements have been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (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*.

CALM recommends that further flora surveys to determine the extent of the priority flora (*Microcorys macradeniae*) should be encouraged (CALM, 2005). This additional information would assist in the assessment of the level of impact on the flora should the proponent need to take any of the priority species during future activities.

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.

Note that clearing must not commence until all other environmental approvals have been obtained. This may include approvals under other acts, such as the *Mining Act 1978* or various Petroleum Acts.

Clearing Permit 874/1 for the West Musgrave exploration project was originally granted on 8 December 2005. However since the permit was granted, two of the tenements covered by the permit have been surrendered and have been replaced by a new tenement. The permit has now been amended (CPS 874/2) to include the new tenement number (E69/2201) and delete the two old tenement numbers (E69/1155 and E69/1156). The geographical location of the area within which clearing is authorised remains the same.

**Methodology** BHP Billiton Nickel West, 2005  
DoE, 2005  
CALM, 2005  
  
GIS Databases:  
- Native Title Claims - DLI 19/12/04

#### 4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Mineral Exploration	Mechanical Removal	4	<p>The proposed clearing of 4 hectares will involve line clearing and drilling a total of 20 diamond drill holes, with associated drill pads and sumps.</p> <p>The amended proposal updates the tenement numbers to be shown on the Permit, but the geographical area covered by the Permit remains the same.</p> <p>The amendment does not alter the environmental impacts of the proposal. It is therefore recommended that the amended permit be granted, subject to the same conditions as the original permit:</p> <ol style="list-style-type: none"><li>1. The Permit Holder shall not clear within 20 m of the boundaries of the Priority 3 flora population of <i>Macrocorys macradeniae</i>, as indicated on attached Plans 874/2a and 874/2b.</li><li>2. For each instance of clearing done under this permit, the Permit Holder must record:<ol style="list-style-type: none"><li>a) the co-ordinates of areas cleared using Geocentric Datum Australia 1994;</li><li>b) the size of the areas cleared in hectares; and</li><li>c) the dates on which the area was cleared.</li></ol></li><li>3. For each instance of clearing recorded under Condition 2, the Permit Holder must, within 6 months of the completion of exploration activities, rehabilitate all cleared areas by re-shaping the surface so that it is consistent with the surrounding 5 metres of uncleared land, and re-spreading the topsoil and vegetative material over each cleared area.</li><li>4. For each area rehabilitated under Condition 3 of this permit, the Permit Holder must record:<ol style="list-style-type: none"><li>a) the co-ordinates of areas rehabilitated using Geocentric Datum Australia 1994;</li><li>b) the size of the areas rehabilitated in hectares; and</li><li>c) the dates on which the area was rehabilitated.</li></ol></li><li>5. The Permit Holder shall provide a report to the Director, Environment Division, Department of Industry and Resources by 1 February each year, setting out the records required under Conditions 2 and 4 of this permit in relation to clearing carried out between 1 January and 31 December of the previous year.</li></ol>

#### 5. References

- BHP Billiton Nickel West (2005). Letter attachment to Application for a Clearing Permit (purpose permit). GPS 874/1. BHP Billiton Nickel West, Perth.
- BoM (2005). Climate averages for Warburton Airfield. Last updated 16 August 2004. Bureau of Meteorology, viewed 1 December 2005, [[http://www.bom.gov.au/climate/averages/tables/cw\\_013011.shtml](http://www.bom.gov.au/climate/averages/tables/cw_013011.shtml)]
- CALM advice: CALM (2005). Draft assessment report for CALM review and comment - BHP Billiton Nickel West, West Musgrave Project. CALM Advice. Department of Conservation and Land Management, Western Australia. DOI ref 437.KF
- Conservation through Reserves Committee (1974). Conservation Reserves in Western Australia: Report of the Conservation through Reserves Committee to the Environmental Protection Authority 1974, Section 2 - Systems 8-12. Conservation through Reserves Committee, Perth.
- DEH (2005). Australian Heritage Database: Place Details - Ranges of the Western Desert - Warburton Rd, Warburton via Laverton, WA. DEH, Canberra. Report prepared 29 November 2005. [<http://www.deh.gov.au/cgi-bin/ahdb/search.pl>]
- 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.
- DoE Advice: DOE (2005). Operating Licence, Groundwater Licence and Works Approvals Checks. Department of Environment, Kalgoorlie.
- DoIR (2005). Tengraph. Publicly available land information mapping system. Viewed 011205. DoIR, Perth.
- Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.
- 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.
- Western Botanical (2005). Flora and Vegetation of the Babel, Nebo and East Chamber Prospects. West Musgrave, Western Australia. August 2005. Western Botanical, Mundaring. Report ref WB315.

## 6. Glossary

### Acronyms:

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

### Definitions:

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

<b>P1</b>	<b>Priority One - Poorly Known taxa:</b> 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.
<b>P2</b>	<b>Priority Two - Poorly Known taxa:</b> 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.
<b>P3</b>	<b>Priority Three - Poorly Known taxa:</b> 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.
<b>P4</b>	<b>Priority Four – Rare taxa:</b> 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.
<b>R</b>	<b>Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):</b> 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.
<b>X</b>	<b>Declared Rare Flora - Presumed Extinct taxa:</b> 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] :-

<b>Schedule 1</b>	<b>Schedule 1 – Fauna that is rare or likely to become extinct:</b> being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
<b>Schedule 2</b>	<b>Schedule 2 – Fauna that is presumed to be extinct:</b> being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
<b>Schedule 3</b>	<b>Schedule 3 – Birds protected under an international agreement:</b> 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.
<b>Schedule 4</b>	<b>Schedule 4 – Other specially protected fauna:</b> 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.