



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 4559/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Kagara Nickel Pty Ltd

### 1.3. Property details

Property: Mining Lease 77/545  
Local Government Area: Shire of Kondinin  
Colloquial name: Forrestania Nickel Project

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 6 October 2011

## 2. Site Information

### 2.1. Existing environment and information

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

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation associations have been mapped for the whole of Western Australia and are useful to look at vegetation in a regional context. Two Beard vegetation associations have been mapped within the application area (GIS Database):  511: Medium woodland; salmon gum & morel;  2048: Shrublands; scrub-heath in the Mallee Region.  The application area was surveyed by Botanica Consulting staff in October 2007. The following vegetation type was identified within the application area (Botanica Consulting, 2008):  <b>Sandplain Heath:</b> Dominant midstorey comprised of <i>Grevillea cagiana</i> , <i>Hakea cygna</i> ssp. <i>cygna</i> , <i>Melaleuca adnata</i> and <i>M. uncinata</i> over an understorey comprised of <i>Verticordia acerosa</i> ssp. <i>preissii</i> and <i>V. crisanthella</i> .	Kagara Nickel Pty Ltd has applied to clear up to 3.4 hectares of native vegetation within an area of approximately 11.6 hectares for the purpose of mineral exploration (evaluation drilling).  Kagara Nickel Pty Ltd intend to establish drill lines with a backhoe or loader, with topsoil and plant debris conserved and laid aside for later rehabilitation of sites.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).	Vegetation descriptions were derived from descriptions by Botanica Consulting Pty Ltd (Botanica Consulting, 2008).  This application is over the same area as CPS 3716/1 which has expired. CPS 3716/1 authorised the clearing of 3.6 hectares, of which 0.2 hectares was cleared.

## 3. Assessment of application against clearing principles

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

**Comments** **Proposal is not likely to be at variance to this Principle**  
The application area occurs within the Southern Cross (COO2) sub-region of the Coolgardie Bioregion of the Interim Biogeographic Regionalisation of Australia (IBRA) (GIS Database). This sub-region is characterised by subdued relief, comprising of gently undulating lands dissected by broad valleys with bands of low greenstone hills (CALM, 2002). The vegetation described within the application area by Botanica Consulting, (2008) is typical of the bioregion.  
  
The application area occurs within the Lake Cronin Area which is listed on the Register of National Estate for its high level of flora and fauna diversity and endemism. According to the Australian Heritage Database (2011), 16 fauna species that are endemic to either the south-west region or to Western Australia occur within the Lake

Cronin Area. The Lake Cronin Area is also described as being an important refuge for rare species due to widespread clearing in the wheatbelt to the west. Rare species include fauna such as the Malleefowl (*Leipoa ocellata*) and flora species such as *Eucalyptus steedmanii*.

A vegetation survey of the application area and surrounding vegetation identified 63 species of native flora belonging to 36 genera from 20 families (Botanica Consulting, 2008). This is not considered to be floristically diverse. *Myrtaceae*, *Mimosaceae* and *Proteaceae* families were the most diverse within the survey area (Botanica Consulting, 2008). One vegetation community has been identified within the application area, being well represented in the local area and bioregion. This vegetation community was identified as being in a good condition according to the Keighery scale (Botanica Consulting, 2008).

No Declared Rare Flora, Priority Flora, Threatened Ecological Communities, or Priority Ecological Communities were identified within the application area (Botanica Consulting, 2008). No introduced species were recorded during the survey (Botanica Consulting, 2008). The potential spread of introduced species as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

An area search of the Department of Environment and Conservation's online fauna database conducted by the assessing officer suggests that the application area is diverse in reptile and bird species (DEC, 2011). The database search found 47 reptile species and 151 bird species recorded within a 20 kilometre radius of the application area (DEC, 2011).

There are numerous old gridlines located within Mining Lease 77/545. The proposed clearing is to be located on lines previously cleared during the 1970's (Kagara Nickel, 2011). The proposed clearing is not likely to impact on an area that comprises of higher biological diversity than the remaining vegetation in the bioregion.

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

**Methodology** Australian Heritage Database (2011)  
Botanica Consulting (2008)  
CALM (2002)  
DEC (2011)  
Kagara Nickel (2011)  
GIS Database:  
- Clearing Regulations - Environmentally Sensitive Areas  
- IBRA WA (Regions - Sub Regions)  
- Register of National Estate

**(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 may be at variance to this Principle**

The assessing officer has conducted a search of the Department of Environment and Conservation's NatureMap comprising a 20 kilometre radius around the application area.

This search identified 8 Amphibian, 20 Mammalian, 56 Avian and 47 Reptilian species that may occur within the application area (DEC, 2011). Of these, the following species of conservation significance have the potential to occur within the application area:

- Carnaby's Black Cockatoo (*Calyptorhynchus latirostris* - Schedule 1; Endangered);
- Baudin's Black Cockatoo (*Calyptorhynchus baudinii* - Schedule 1; Vulnerable);
- Malleefowl (*Leipoa ocellata* - Schedule 1; Vulnerable);
- Chuditch (*Dasyurus geoffroii* - Schedule 1; Vulnerable);
- Western Rosella (*Platycercus icterotis* subsp. *xanthogenys* - Schedule 1).
- Lake Cronin Snake (*Paroplocephalus atriceps* - Priority 3);
- Western Mouse (*Pseudomys occidentalis* - Priority 4);
- Western Brush Wallaby (*Macropus irma* - Priority 4);
- Shy Heathwren (*Hylacola cauta* subsp. *whitlocki* - Priority 4);
- Crested Bellbird (*Oreocia gutturalis* subsp. *gutturalis* - Priority 4);
- White Browed Babbler (*Pomotostomus superciliosus* subsp. *ashbyi* - Priority 4);
- Australian Bustard (*Ardeotis australis* - Priority 4);
- Carpet Python (*Morelia spilota* subsp. *imbricata* - Schedule 4); and
- Peregrine Falcon (*Falco peregrinus* subsp. *macropus* - Schedule 4).

A vegetation survey conducted by Botanica Consulting (2008) recorded one habitat type within the application area:

- **Sandplain Heath:** Dominant midstorey comprised of *Grevillea cagiana*, *Hakea cygna* ssp. *cygna*, *Melaleuca adnata* and *M. uncinata* over an understorey comprised of *Verticordia acerosa* ssp. *preissii* and *V. cysanthella*.

The habitat identified within the application area is likely to be well represented within the Coolgardie Bioregion given the extent of the pre-European vegetation remaining within the bioregion. The habitat present is not

considered restricted, endangered or under threat and does not provide an ecological linkage to any restricted habitats (GIS Database).

Based on vegetation surveys carried out in the area (Botanica Consulting, 2008), the habitat type 'Eucalyptus Mallee Woodland' has been identified as occurring adjacent to the application area. This habitat type contains Salmon Gums which may provide large hollows for nesting, foraging and shelter. Due to the proximity of the 'Eucalyptus Mallee Woodland' to the application area, there is the potential for Salmon Gums to extend into the proposed clearing area. Apart from the potential for large hollows in Salmon Gums, no significant fauna habitats have been identified within the application area.

The Carnaby's and Baudin's Black Cockatoos forage in woodland and heath that is dominated by proteaceous species and nest in hollows of large eucalypts, usually Salmon Gum and Wandoo (DEC, 2006). Potential impacts to nesting hollows as a result of the proposed clearing may be minimised by the implementation of a fauna management condition.

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

**Methodology** Botanica Consulting (2008)  
DEC (2011)  
DEC (2006)  
GIS Database:  
- Pre-European Vegetation

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

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

According to available databases, no Declared Rare Flora (DRF) species occur within the application area (GIS Database). One population of *Eucalyptus steedmanii* (DRF) has been recorded approximately 1.32 kilometres south-west of the application area (GIS Database).

A flora survey was conducted over the application area by Botanica Consulting in October 2007 (Botanica Consulting, 2008). No species of DRF were identified within the application area (Botanica Consulting, 2008).

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

**Methodology** Botanica Consulting (2008)  
GIS Database:  
- Threatened and Priority Flora

**(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.**

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

According to available databases, there are no Threatened Ecological Communities (TECs) within the application area (GIS Database). A vegetation survey was undertaken by Botanica Consulting in October 2007. None of the vegetation communities identified were considered a TEC (Botanica Consulting, 2008).

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

**Methodology** Botanica Consulting (2008)  
GIS Database:  
- Threatened Ecological Sites Buffered

**(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.**

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

The application area is located within the Coolgardie Bioregion of the Interim Biogeographic Regionalisation of Australia (IBRA) (GIS Database). Shepherd (2009) reports that approximately 98.4% of the pre-European vegetation still exists in the Coolgardie Bioregion.

The vegetation in the application area is broadly mapped as Beard vegetation association 511: Medium woodland; salmon gum and morel; with a small section of the proposed clearing comprises Beard vegetation association 2048: Shrublands; scrub-heath in the Mallee Region (Shepherd, 2009). According to Shepherd (2009) there is approximately 70.6% of Beard vegetation association 511 remaining in the State and approximately 93.8% remaining in the Coolgardie Bioregion (see table below). There is approximately 48.4% of Beard vegetation association 2048 remaining in the State and approximately 100% remaining in the Coolgardie Bioregion (see table below).

According to the Bioregional Conservation Status of Ecological Vegetation Classes the conservation status for Beard vegetation associations 511 and 2048 within the Coolgardie Bioregion is of 'Least Concern' (Department

of Natural Resources and Environment, 2002).

Although several large scale mining operations are located within a 50 kilometre radius of the application area, the Coolgardie Bioregion remains largely uncleared (GIS Database). As a result, the conservation of the vegetation associations within the bioregion are not likely to be impacted upon by the proposal.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and post clearing %)
IBRA Bioregion - Coolgardie	12,912,204	12,707,619	~98.4%	Least Concern	~10.9%
Beard vegetation associations - State					
511	700,410	494,148	~70.6%	Least Concern	~14.1%
2048	322,220	155,845	~48.4%	Depleted	~7.6%
Beard vegetation associations - Coolgardie Bioregion					
511	464,425	435,798	~93.8%	Least Concern	~17.5%
2048	4,379	4,379	~100%	Least Concern	~3.5%

\* Shepherd (2009)

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

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

**Methodology** Department of Natural Resources and Environment (2002)  
Shepherd (2009)  
GIS Database:  
- Holland 50cm Orthomosaic  
- IBRA WA (Regions - Subregions)  
- Pre-European Vegetation

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

**Comments** **Proposal is not at variance to this Principle**  
According to known GIS datasets, there are no known watercourses or water bodies within the application area (GIS Database).

The vegetation types identified by Botanica Consulting (2008) are not representative of riparian vegetation.

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

**Methodology** Botanica Consulting (2008)  
GIS Database:  
-Hydrography, linear

**(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**

**Comments** **Proposal is not likely to be at variance to this Principle**  
According to available databases, there is one soil type (Ms8) within the application area containing two sub-types (GIS Database):

- i. depositional slopes, sandy yellow earths containing some ironstone gravels at depths below 6-7 feet; and
- ii. erosional ridges and slopes, ironstone gravels all underlain by hardened mottled-zone material by depths of 12-24 inches (DAFF, 2008).

The application area is on soil sub-type (i) depositional slope (GIS Database).

Sandy earths have a moderate to high risk of wind erosion while ironstone gravels have a low to moderate risk of wind erosion (Schoknecht, 2002). However, the linear nature of the clearing suggests that the potential for wind erosion is low.

Rainfall in the area is low (341 millimetres/year - BoM, 2011) and run-off is expected to be low due to a high pan evaporation rate (2,200 millimetres/year – GIS Database) and the moderate permeability of soils present. Therefore, the risk of water erosion is likely to be minimal.

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

**Methodology** BoM 2011  
DAFF (2008)  
Schoknecht (2002)  
GIS Database:  
- Evaporation Isopleths  
- Soils – Statewide

**(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 may be at variance to this Principle**

The application area occurs within the Lake Cronin Area (Register of National Estate), which is a buffer zone surrounding Lake Cronin (GIS Database). This area is regarded as an Environmentally Sensitive Area.

According to the Australian Heritage Database (2011) the Lake Cronin Area is an area of approximately 31,000 hectares and is a potentially important contemporary refugia for many species. The Lake Cronin Area is one of a number of areas within the wheatbelt region that is significant for rare species due to its high diversity and level of local endemism (Australian Heritage Database, 2011). This conservation area is an important refuge for two species which are listed as vulnerable at a national level, the Malleefowl (*Leipoa ocellata*) and *Eucalyptus steedmanii* (Australian Heritage Database, 2011).

The application area is also situated approximately 4.1 kilometres south-west of the Lake Cronin Nature Reserve. The Lake Cronin Nature Reserve is surrounded by extensive vegetation. The clearing of up to 3.4 hectares of vegetation within the application area will not significantly affect ecological linkages to the reserve.

Based on the above, the proposed clearing may be at variance to this Principle. However, it is considered that the proposed clearing is low impact and of a small scale (3.4 hectares) and will not significantly impact on the environmental values of the Lake Cronin Area and Nature Reserve.

**Methodology** Australian Heritage Database (2011)  
GIS Database:  
- Clearing Regulations - Environmentally Sensitive Areas  
- Clearing Regulations - Schedule One Areas  
- DEC Tenure

**(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.**

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

According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). There are no Public Drinking Water Source Areas within a 50 kilometre radius of the proposed clearing (GIS Database).

There are no permanent water bodies or watercourses within the application area (GIS Database). The application area experiences an average annual rainfall of approximately 341 millimetres, falling mainly during the winter months (BoM, 2011). The application area experiences an average annual evaporation rate of approximately 2,200 millimetres (GIS Database). Surface water flow is likely to be low during normal seasonal rains. Therefore, during normal rainfall events, surface water within the application area is likely to evaporate or be utilised by vegetation quickly.

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

**Methodology** BoM (2011)  
GIS Database:

- Public Drinking Water Source Area
- Hydrography, linear

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.**

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

The application area is located within the Swan Avon-Yilgarn Catchment area (GIS Database). The small area to be cleared (3.4 hectares) in relation to the size of the Swan Avon-Yilgarn Catchment area (5,836,045 hectares) is not likely to lead to an increase in flood height or duration (GIS Database).

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

- Methodology** GIS Database:
- Hydrographic Catchments - Catchments
  - Hydrography, linear

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

**Comments**

There is one Native Title claim (WC00/7) over the areas under application (GIS Database). This claim has been registered with the Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process. Therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance located within the clearing permit application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

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

The clearing permit application was advertised on 29 August 2011 by the Department of Mines and Petroleum inviting submissions from the public. Two submissions were received. One submission was received raised concerns over Aboriginal Heritage and the impact of the proposed clearing on conservation areas and native fauna. Impacts relating to native fauna and conservation areas are addressed in Principles (b) and (h) respectively. The other submission received did not support the application on the grounds that the clearing is incompatible with the areas' 'rural' zoning under the Shire of Kondinin's current town planning scheme, its impact on landscape amenity resulting in land degradation and further loss of biodiversity and that the clearing is incompatible with EPA position statement number two. Under the *Mining Act 1978* provisions of any planning scheme shall not prohibit the carrying out of any mining operations authorised by the Act. Impacts relating to land degradation and biodiversity are addressed in Principles (g) and (a) respectively.

- Methodology** GIS Database:
- Aboriginal Sites of Significance
  - Native Title Claims – Registered with the NNTT

**4. References**

- Australian Heritage Database (2011) Register of National Estate: Lake Cronin Area. [http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place\\_detail;search=place\\_name%3DLake%2520cronin%2520%3Bkeyword\\_PD%3Don%3Bkeyword\\_SS%3Don%3Bkeyword\\_PH%3Don%3Blatitude\\_1dir%3DS%3Blongitude\\_1dir%3DE%3Blongitude\\_2dir](http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=place_name%3DLake%2520cronin%2520%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir) (Accessed 22 September).
- Botanica Consulting (2008) Flora and Vegetation Survey of Proposed Drill Lines - M77/544, M77/00, M77/545 and M77/467. Prepared for Newexco on behalf of Kagara Nickel. Unpublished Report dated June 2008.
- BoM (2011) BOM Website - Climate statistics for Australian locations, Averages for Hyden. Available online at: [http://www.bom.gov.au/climate/averages/tables/cw\\_010568.shtml](http://www.bom.gov.au/climate/averages/tables/cw_010568.shtml) Accessed on 26 September 2011.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DAFF (2008) Department of Agriculture, Fisheries and Forestry - Digital Atlas of Australian Soils (Archive Data). <http://www.daff.gov.au/brs/data-tools/daas-download> (Accessed 21 November 2008).
- DEC (2006) Carnaby's Black Cockatoo in Fauna Species Profiles, Department of Environment and Conservation, Perth. <http://www.naturebase.net/> Accessed 10 June 2010. Department of Environment and Conservation, Western Australia.
- DEC (2011) NatureMap: Mapping Western Australia's Biodiversity - Department of Environment and Conservation. <http://naturemap.dec.wa.gov.au/default.aspx> (Accessed 22 September 2011).
- 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.

Kagara Nickel (2011) Information supporting clearing permit application CPS 4559/1. Received by the Department of Mines and Petroleum on 9 August 2011.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Schoknecht N. (2002) Soil Groups of Western Australia. A simple guide to the main soils of Western Australia. Resource Management Technical Report 246. Edition 3.

Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>CALM</b>	Department of Conservation and Land Management (now DEC), Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia
<b>DEH</b>	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
<b>DEP</b>	Department of Environment Protection (now DEC), Western Australia
<b>DIA</b>	Department of Indigenous Affairs
<b>DLI</b>	Department of Land Information, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DoE</b>	Department of Environment (now DEC), Western Australia
<b>DoIR</b>	Department of Industry and Resources (now DMP), Western Australia
<b>DOLA</b>	Department of Land Administration, Western Australia
<b>DoW</b>	Department of Water
<b>EP Act</b>	Environmental 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>ha</b>	Hectare (10,000 square metres)
<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 Act</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>TEC</b>	Threatened Ecological Community

### Definitions:

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

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

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

- Schedule 1**     **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2**     **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3**     **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4**     **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

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

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

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

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