



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5388/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Kimberley Granite Quarries Pty Ltd

1.3. Property details

Property: Mining Lease 04/450
Local Government Area: Shire of Derby-West Kimberley
Colloquial name:

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 24 January 2013

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description Beard vegetation associations have been mapped for the whole of Western Australia. Two Beard vegetation associations have been mapped within the application area (GIS Database):

Beard vegetation association 569: Hummock grasslands, low tree steppe; bloodwood over soft spinifex & *Triodia wiseana*; and

Beard vegetation association 868: Grasslands, curly spinifex & short grass low tree savanna; snappy gum & bloodwood (*Eucalyptus dichromophloia*) over *Enneapogon* & curly spinifex on granite (Government of Western Australia, 2011; GIS Database).

A botanical survey conducted by Goldfields Landcare Services (2012) during 24 to 27 April 2012, identified two distinct vegetation communities within the application area:

Densely Wooded Creek Lines

Densely Wooded Creek Lines, *Acacia ampliceps* Low Forest over Buffel Grass on Creek Lines

Acacia ampliceps low forest (Projected Foliage Cover (PFC) 30-70%, 5-15m) with *Terminalia platyphylla*, *T. carpentariae*, *Ficus coronulata* and *F. aculeata* var *indecora* low woodland (PFC 10-30%, 5-15m) over mixed low scrub (PFC 2-10%, 1-2m) and dense *Cenchrus ciliaris* grassland (PFC 70-100%, <1m) on grey sandy silt.

And;

Grassland with Scattered Trees.

Within the 'Grassland with Scattered Trees' vegetation type, four sub-types were identified:

Dense Bunch Grassland with Scattered Trees

Dense bunch grasses of *Eriachne obtusa* and *Oryza australiensis* (PFC 70-100%; <1m) over open mixed herbs and annuals including *Calandrinia quadrivalvis* and *Gomphrena occulta* (PFC 10-30%; <.5m) on grey silt;

Dense Bunch Grassland with Scattered Trees and Shrubs

Scattered *Corymbia opaca* low trees A (PFC <2%, 5-15m) over open low *Acacia* mixed scrub (PFC 2-10%, 1-2m) over dense bunch grasses of *Cenchrus ciliaris* and aff *Sorghum plumosum* (PFC 70-100%, <1m) on orange sandy silt;

Open Hummock Grassland with Scattered Trees

Corymbia opaca open low woodland A (PFC 2-10%, 5-15m) over *Acacia pyriformis*, *A. synchronicia* open scrub (PFC 2-10% >2m) over sparse *Triodia* sp grassland (PFC 10-30%, <1m) and open dwarf scrub of *Crotalaria medicaginea* var *neglecta*, *Tephrosia remotiflora* and *Indigofera linifolia* (PFC 2-10%, <1m) on granitic colluvial scree with minor outcrop over orange sandy silt; and

Open Hummock Grassland with Scattered Trees and Dwarf Scrub

Corymbia opaca scattered low trees A (PFC <2%, 5-15m) over open *Triodia* sp grassland (PFC 10-30% <1m) and *Indigofera liniflora* dwarf scrub (PFC 10-30% <1m) on orange granitic sand covering brown sandy silt.

Clearing Description	Kimberley Granite Quarries Pty Ltd is proposing to clear up to 50 hectares of native vegetation within a 553 hectare application area for the purposes of mineral production. This includes office and production storage areas, to provide access to the quarry area and associated roads, and to clear the quarry mining area. The vegetation will be cleared by mechanical means.
Vegetation Condition	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994)
Comment	The application area is located in the South Kimberley Interzone subregion of Western Australia and is situated approximately 33 kilometres south-east of the Fitzroy Crossing town site (GIS Database). The vegetation condition was assessed during a survey undertaken by botanists from Goldfields Landcare Services (2012).

3. Assessment of application against clearing principles

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

Comments	<p>Proposal is not likely to be at variance to this Principle</p> <p>The application areas occur within the South Kimberley Intezone subregion of the Ord Victoria Plain Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The bioregion shows level to gently undulating plains with scattered hills on Cambrian volcanics and Proterozoic sedimentary rocks; vertosols on plains and predominantly skeletal soils on hills. The overall vegetation is grassland with scattered bloodwoods (<i>Eucalyptus</i> spp.) and snappy gum (<i>Eucalyptus brevifolia</i>) with spinifex and annual grasses (CALM, 2002).</p> <p>Goldfields Landcare Services (2012) conducted a flora and vegetation survey over the application area during 24 to 27 April 2012. The survey identified 139 vascular plant taxa from 99 genera and 39 families within the application area. The floristic composition and structure of the vegetation types are not considered to be geographically unique or restricted and do not support a high level of biological diversity (Goldfields Landcare Services, 2012). The condition of the vegetation types was classified as 'very good' (Keighery, 1994; GIS Database).</p> <p>A search of the Department of Environment and Conservations Threatened and Priority Flora databases revealed no records of Threatened Flora or Priority Flora species within a 20 kilometre radius of the application area (DEC, 2013). Goldfields Landcare Services (2012) identified no Threatened Flora and no Priority Flora species within the application area. No Threatened Ecological Communities or Priority Ecological Communities were recorded within the application area (GIS Database).</p> <p>There were eight species of weeds identified during the survey (Goldfields Landcare Services, 2012). Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.</p> <p>There were two faunal habitats identified within the application area based on vegetation mapping by Goldfields Landcare Services (2012). Both faunal habitats within the application area are considered to be common and widespread within the subregion and faunal assemblages are unlikely to be different to those found in similar habitat located elsewhere in the region (GIS Database). The clearing of 50 hectares of native vegetation within the 553 hectare application area is unlikely to have a significant impact on faunal diversity in a regional and local context.</p> <p>Based on the above, the proposed clearing is not likely to be at variance to this Principle.</p>
Methodology	<p>CALM (2002) DEC (2013) Goldfields Landcare Services (2012) Keighery (1994) GIS Database: - IBRA WA (Regions - Subregions) - Pre-European vegetation - Threatened Ecological Sites Buffered</p>

(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	<p>Proposal is not likely to be at variance to this Principle</p> <p>There were two fauna habitat types recorded within the application area based on vegetation structure and types identified by Goldfields Landcare Services (2012).</p> <p>Goldfields Landcare Services (2012) identified the vegetation condition to be in a 'very good' (Keighery, 1994). The landforms and habitat found within the application area are considered as being well represented in the</p>
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South Kimberley Interzone subregion (GIS Database). The application area does not contain habitats or faunal assemblages that are ecologically significant (Goldfields Landcare Services, 2012; GIS Database). The clearing of 50 hectares of native vegetation is not likely to contain significant habitat for fauna.

There are four species of conservation significance listed as either threatened species under the *Environment Protection and Biodiversity Conservation Act* (EPBC) 1999 or protected under Western Australian legislation (*Wildlife Conservation Act* 1950), which may potentially occur within a 20 kilometre radius of the application areas (DEC, 2013);

- Pictorella Finch (*Heteromunia pectoralis*) (DEC - Priority 4);
- Ghost Bat (*Macroderma gigas*) (DEC - Priority 4);
- Rainbow Bee-eater (*Merops ornatus*) (EPBC Act - Migratory species; JAMBA, CAMBA); and
- Yellow-tipped Cave Bat (*Vespadelus douglasorum*) (DEC - Priority 2).

While some Schedule or Priority fauna species may temporarily utilise the habitats within the application areas given that there is little or no core habitat represented within the application area for the species listed (McKenzie & Lumsden, 2008; DSEWPaC, 2013a; 2013b; 2013c), it is unlikely that any species of conservation significance will be directly affected to a large degree by the clearing of native vegetation in the application area. The proposed clearing is not likely to significantly impact important habitat for endemic fauna.

The proposed clearing of 50 hectares of native vegetation within a 553 hectare application area is not likely to impact critical feeding or breeding habitat for any conservation significant fauna species as the application area does not contain significant habitat for the potential species.

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

Methodology DEC (2013)
DSEWPaC (2013a)
DSEWPaC (2013b)
DSEWPaC (2013c)
Goldfields Landcare Services (2012)
Keighery (1994)
McKenzie & Lumsden (2008)
GIS Database:
- Geodata, Lakes

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

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

According to available databases, there are no records of Threatened Flora within the application area (GIS Database). A search of the Department of Environment and Conservation's Threatened and Priority Flora databases identified one Threatened Flora species as occurring within a 20 kilometre radius of the application area (DEC, 2013).

Goldfields Landcare Services (2012) conducted a vegetation and flora survey of the application area between 24 to 27 April 2012. No Threatened Flora was recorded within the survey area.

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

Methodology DEC (2013)
Goldfields Landcare Services (2012)
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

A search of the available databases showed that there are no known Threatened Ecological Communities recorded within 100 kilometres of the application area (GIS Database).

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

Methodology GIS Database:
- Threatened Ecological Sites Buffered

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

Comments Proposal is not at variance to this Principle

The application area falls within the Coolgardie IBRA bioregion (GIS Database). The vegetation within the application area is recorded as:

Beard vegetation association 569: Hummock grasslands, low tree steppe; bloodwood over soft spinifex & *Triodia wiseana*; and

Beard vegetation association 868: Grasslands, curly spinifex & short grass low tree savanna; snappy gum & bloodwood (*Eucalyptus dichromophloia*) over *Enneapogon* & curly spinifex on granite (Government of Western Australia, 2011; GIS Database).

Beard vegetation associations 569 and 868 retain approximately 99% of their pre-European extent within the bioregion (Government of Western Australia, 2011). The area proposed to be cleared is not a significant remnant of native vegetation.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Ord Victoria Plain	5,497,882	5,493,145	~99.91	Least Concern	15.96
Beard vegetation associations - State					
569	101,471	101,242	~99.77	Least Concern	2.17
868	200,654	200,636	~99.99	Least Concern	-
Beard vegetation associations - Bioregion					
568	29,036	28,825	~99.27	Least Concern	-
868	12,327	12,327	~100.00	Least Concern	-

* Government of Western Australia (2011)

** 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)
Government of Western Australia (2011)
GIS Database:
- IBRA WA (regions - subregions)
- Pre-European Vegetation

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

Comments Proposal is at variance to this Principle

Based on the vegetation mapping by Goldfields Landcare Services (2012), the vegetation type 'Densely Wooded Creek Lines, *Acacia ampliceps* Low Forest over Buffel Grass on Creek Lines' is associated with drainage lines;

- This vegetation type was described as *Acacia ampliceps* low forest (Projected Foliage Cover (PFC) 30-70%, 5-15m) with *Terminalia platyphylla*, *T. carpentariae*, *Ficus coronulata* and *F. aculeata* var *indecora* low woodland (PFC 10-30%, 5-15m) over mixed low scrub (PFC 2-10%, 1-2m) and dense *Cenchrus ciliaris* grassland (PFC 70-100%, <1m) on grey sandy silt.

The condition of the vegetation type is classified as 'very good' (Keighery, 1994; GIS Database).

Surface drainage in the application area is through several ephemeral drainage lines (GIS Database), which flow during periods of intense rainfall southwest across the application area towards a major drainage line further outside the application area. The vegetation type associated with the drainage lines is considered to be common and widespread within the subregion (Goldfields Landcare Services, 2012). Clearing of areas which contain riparian vegetation have the potential to cause localised erosion to the creek habitat, however the proposed clearing of 50 hectares of native vegetation within an application area of 553 hectares is unlikely to significantly impact the hydrological functions of the drainage systems within the application area (Goldfields

Landcare Services, 2012; GIS Database).

Provided disturbance to riparian habitats is avoided or minimised where possible, and strict weed hygiene procedures are followed, the proposed works are not expected to substantially impact any watercourses or wetlands. Potential impacts to riparian vegetation may be minimised through the implementation of a vegetation management condition.

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

Methodology Goldfields Landcare Services (2012)
Keighery (1994)
GIS Database:
- Geodata, Lakes
- Hydrography, Linear

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

Comments Proposal may be at variance to this Principle

The application area is broadly mapped as the Neillabublica and Pigeon land systems (GIS Database).

The Neillabublica land system is described as undulating limestone country with scattered low hills and cracking clay plains, open grassy woodlands, grasslands, and spinifex. This land system is generally not prone to erosion (Payne & Schoknecht, 2011).

The Pigeon land system is described as stony undulating country with scattered rocky hills, sandy shallow soils, grassy woodlands and curly spinifex. Most of system has low vulnerability to erosion except for drainage floors which are moderately susceptible (Payne & Schoknecht, 2011).

Given the presence of drainage lines throughout the application area, potential land degradation impacts as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

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

Methodology Payne & Schoknecht (2011)
GIS Database:
- Rangeland Land System Mapping

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

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

The application area is not located within any conservation areas (GIS Database). The nearest conservation area is the Geikie Gorge National Park, located approximately 32 kilometres north of the application area (GIS Database). Given the distance separating the proposed Geikie Gorge National Park and the application area, the proposed clearing is not likely to impact the environmental values of the conservation area.

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

Methodology GIS Database:
- DEC Tenure

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

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

The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The application area is located within the proclaimed Canning-Kimberley groundwater area under the *Rights in Water and Irrigation Act 1914* (GIS Database). Any groundwater extraction and/or taking or diversion of surface water for the purpose other than domestic and/or stock watering is subject to licence by the Department of Water.

The groundwater within the application area is between 500 - 1,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be potable water. The proposed clearing of up to 50 hectares of native vegetation within an application area of 553 hectares is unlikely to have any impact on groundwater or surface water quality.

Several drainage tracts transect the application areas (GIS Database). These drainage tracts are dry for most of the year and only flow and hold surface water for short durations following significant rainfall events. If clearing of riparian vegetation is required there may be some localised short term sedimentation during the clearing

process however, this is not likely to be an ongoing issue. Potential impacts to riparian vegetation may be minimised through the implementation of a vegetation management condition. The clearing of vegetation as a result of this proposal is therefore unlikely to result in any further deterioration in surface or groundwater quality in the local area.

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

Methodology GIS Database:
- Geodata, Lakes
- Groundwater Salinity, Statewide
- Hydrography, Linear
- Public Drinking Water Source Areas
- RIWI Act, Groundwater Areas

(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 experiences a dry hot tropical, semi-arid with summer rainfall, with an annual average rainfall of approximately 698.5 millimetres per year (CALM, 2002; BoM, 2013). Based on an average annual evaporation rate of 2,800 - 3,200 millimetres (BoM, 2013), any surface water resulting from rainfall events is likely to be relatively short lived.

Given the size of the area to be cleared (50 hectares) compared to the size of the Fitzroy River catchment area (9,190,140 hectares) (GIS Database) it is not likely that the proposed clearing will lead to an appreciable increase in run off, and subsequently cause or exacerbate the incidence or intensity of flooding.

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

Methodology BoM (2013)
CALM (2002)
GIS Database:
- Hydrographic Catchments - Catchments

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

Comments

There is one Native Title claim over the area under application. The claim WC00/10 was registered with the National Native Title Tribunal on 23 April 2001. 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 within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

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

The clearing permit application was advertised on 24 December 2012 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received in relation to this application regarding aboriginal heritage issues, and these concerns were passed on to the applicant.

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

4. References

- BoM (2013) Climate Statistics for Australian Locations. A Search for Climate Statistics for Kalgoorlie-Boulder, Australian Government Bureau of Meteorology, viewed 17 January 2013, <http://reg.bom.gov.au/climate/averages/tables/cw_012038.shtml>.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Ord Victoria Plains 2 (OVP2 - Kimberley Interzone subregion) Department of Conservation and Land Management, Western Australia.
- DEC (2013) NatureMap - Mapping Western Australia Biodiversity, Department of Environment and Conservation, viewed 17 January 2013, <<http://naturemap.dec.wa.gov.au>>.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

- DSEWPaC (2013a) The Action Plan for Australian Birds 2000, Department of Sustainability, Environment, Water, Population and Communities, viewed 21 January 2013, <<http://www.environment.gov.au/biodiversity/threatened/publications/action/birds2000/pubs/pictorella-mannikin.pdf>>.
- DSEWPaC (2013b) Species Profile and Threats Database: Merops ornatus ? Rainbow Bee-eater, Department of Sustainability, Environment, Water, Population and Communities, viewed 21 January 2013, <http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=670>.
- DSEWPaC (2013c) The Action Plan for Australian Bats, Department of Sustainability, Environment, Water, Population and Communities, viewed 21 January 2013, <<http://www.environment.gov.au/biodiversity/threatened/publications/action/bats/19.html>>.
- Goldfields Landcare Services (2012) Flora and Vegetation Survey M04/450 and L04/47. Prepared for Kimberley Granite Quarries, May 2012.
- Government of Western Australia (2011) 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- McKenzie, N. & Lumsden, L (2008) Vespadelus douglasorum: IUCN Red List of Threatened Species 2012, viewed 21 January 2013, <<http://www.iucnredlist.org/details/7923/0>>.
- Payne, A.L., & Schoknecht, N (2011) Technical bulletin no. 98: Land Systems of the Kimberley Region, Western Australia. Department of Agriculture, Western Australia.

5. Glossary

Acronyms:

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

Definitions:

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

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

need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

- X Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

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

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

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

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

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

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