



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 8241/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Kimberley Quarry Pty Ltd

### 1.3. Property details

Property: Mining Lease 04/21  
Mining Lease 04/22  
Mining Lease 04/69  
Mining Lease 04/75  
Local Government Area: Shire of Derby-West Kimberley  
Colloquial name: Nillibubbica Quarry Operation

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 20 December 2018

## 2. Site Information

### 2.1. Existing environment and information

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

**Vegetation Description** The vegetation of the application area is broadly mapped as the following Beard vegetation associations:  
**750:** Shrublands, pindan; *Acacia tumida* shrubland with grey box and cabbage gum medium woodland over ribbon grass and curly spinifex; and  
**751:** Shrublands, pindan; *Acacia eriopoda* and *Acacia tumida* shrubland with scattered low *Eucalyptus confertifolia* over curly spinifex (GIS Database).

A Level 1 flora survey was conducted by a botanist from Astron Environmental Services (Astron) in July 2012 over part of the application area. The remainder of the application area was surveyed by ecologists from EcOz Environmental Services in June 2013. Four vegetation associations were mapped within the application area (Astron, 2012; EcOz Environmental Services, 2013):

**Sandstone Outcrops** – *Corymbia dendromerinx* low woodland over *Terminalia canescens* low open woodland over *Acacia monticola*, *Grevillea refracta* and *Grevillea pyramidalis* subsp. *pyramidalis* tall open shrubland over *Triodia schinzii* open hummock grassland.

**Pindan Plain Open** – *Corymbia polycarpa* low woodland over *Acacia tumida* var. *tumida*, *Acacia platycarpa* and *Erythrophleum chlorostachys* low woodland over *Chrysopogon pallidus*, *Eriachne obtusa* and *Sorghum stipoideum* tussock grassland to closed tussock grassland.

**Pindan Plain Dense** – *Corymbia dendromerinx*, *Corymbia polycarpa* and *Erythrophleum chlorostachys* low open woodland over *Acacia platycarpa* and *Acacia tumida* var. *tumida* low woodland over *Eriachne obtusa*, *Aristida holathera* and *Sorghum stipoideum* tussock grassland.

**Pindan Drainage Channel** – *Melaleuca viridiflora* and *Acacia tumida* var. *tumida* tall open shrubland over *Chrysopogon pallidus*, *Eriachne obtusa* and *Sorghum stipoideum* tussock grassland.

**Clearing Description** Nillibubbica Quarry Operation.  
Kimberley Quarry Pty Ltd proposes to clear up to 98 hectares of native vegetation within a boundary of approximately 393 hectares, for the purpose of mineral production. The project is located approximately 72 kilometres southwest of Derby, within the Shire of Derby-West Kimberley.

**Vegetation Condition** Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);  
to

Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).

**Comment**

The vegetation condition was derived from a vegetation survey conducted by EcOz Environmental Services (2013) and Astron (2012).

The proposed clearing is for the ongoing expansion of pits and infrastructure at the existing Nillibubbicca Quarry. Vegetation will be cleared by bulldozers.

### 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 is within the Pindarland subregion of the Dampierland Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Pindarland subregion comprises of sandplains of the Dampier Peninsula and western part of Dampier Land, including the hinterland of the Eighty Mile Beach (CALM, 2002). It is a fine textured sand sheet with subdued dunes and includes the paleodelta of the Fitzroy River (CALM, 2002). The vegetation is described as pindan. This is the coastal, semi-arid, northwestern margin of the Canning Basin (CALM, 2002).

Astron conducted a flora survey report over part of the application area in July 2012. A total of 72 native vascular flora species, representing 61 genera from 32 families, were recorded during the survey (Astron, 2012). The most species rich families were Fabaceae, Poaceae and Malvaceae which is consistent with other surveys in the Dampierland bioregion (Astron, 2012). The flora and fauna species recorded within the application area are consistent with those commonly recorded in pindan country (EcOz Environmental Services, 2013). The sandstone outcrops within the application area are a less common feature scattered throughout the region that could theoretically present refuges for rare flora and fauna. However, no rare flora or fauna have been detected, which is likely due to the fact that the small and isolated habitat patches provide little protection from fire or chance events (EcOz Environmental Services, 2013).

No Threatened Flora, Priority Flora, Threatened Ecological Communities or Priority Ecological Communities were recorded during the flora surveys or have previously been recorded within the application area (Astron, 2012; EcOz Environmental Services, 2013; GIS Database).

Three introduced flora species were identified during the flora survey. These weed species were Pink Periwinkle (*Catharanthus roseus*), Stinking Passion Flower (*Passiflora foetida*) and Tridax (*Tridax procumbens*) (EcOz Environmental Services, 2013). Care must be taken to ensure that the proposed clearing activities do not introduce weed species to the non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Two broad fauna habitats were recorded within the application area; plains with red-brown loamy sand and sandstone outcrops with shallow grey-brown loam (Astron, 2012). Both of the fauna habitats are common in the bioregion and are not likely to support a high level of faunal diversity (Astron, 2012; CALM, 2002; GIS Database).

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

**Methodology**

Astron (2012)  
CALM (2002)  
EcOz Environmental Services (2013)

GIS Database:  
- IBRA Australia  
- Pre-European Vegetation  
- Threatened and Priority Flora  
- Threatened and Priority Ecological Communities Boundaries  
- Threatened and Priority Ecological Communities Buffers

#### (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**

A Level 1 desktop vertebrate fauna assessment by Ninnox (2009) covered 575 hectares of vegetation within three mining tenements, including the application area. This desktop survey was to provide an inventory of vertebrate fauna species that could be present in the local area and to assess their conservation status. A Level 1 fauna survey was undertaken over part of the application area by Astron in July 2012. This survey included a database search, descriptions of fauna habitats present in the survey area, targeted searches for fauna species of conservation significance and a compilation of fauna species recorded opportunistically as the survey area was traversed (Astron, 2012). In June 2013, EcOz Environmental Services undertook a targeted

fauna survey for Greater Bilbies (*Macrotis lagotis*) over the remainder of the application area not covered by the Astron (2012) survey, as well as the surrounding area.

Two main fauna habitat types were recorded during the Astron field survey (Astron, 2012):

- Plains with red-brown loamy sand – scattered *Corymbia* trees over Acacia woodland over hummock and tussock grassland; and
- Sandstone outcrops with shallow grey-brown – scattered *Corymbia* trees over sparse Acacia shrubland over hummock and tussock grasses.

Based on aerial imagery, it is likely that the same broad fauna habitats also occur within the rest of the application area (GIS Database).

The rocky outcrops present in the survey area appear to be common in the coastal region of the Dampier Peninsula, but less so inland. Areas of rocky outcrops likely to be similar to those in the survey area can be seen on aerial imagery extending for approximately 13 kilometres south-west from the survey area and to the north of Great Northern Highway (Astron, 2012; GIS Database).

The desktop survey of the three mining tenements predicted 140 species of bird, 37 native mammal, 16 frog, 72 reptile and five introduced mammal species may occur in the tenements (Ninox, 2009). Many of these species are seasonal migrants, highly mobile, nomadic and able to move away from disturbance (Ninox, 2009). The frog species, the majority of the small reptiles and a small number of the bird and small mammal species may be resident in the application area and are more susceptible to the proposed disturbance (Ninox, 2009).

Several diggings were observed during the Astron (2012) fauna survey within the application area. These diggings were observed in the sandy plains portion of the survey area, the characteristics of which are typical of those made by foraging Greater Bilbies, listed as Vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (Astron, 2012). Foraging areas of Greater Bilbies are characterised by numerous scattered conical-shaped diggings, and are often temporary and dictated by the availability of food (Johnson, 2008 as quoted in Astron, 2012). Targeted searches were conducted in the survey area for potential burrow entrances but none were observed (Astron, 2012).

A targeted search for the presence of Greater Bilbies in the remainder of the application area was undertaken by EcOz Environmental Services ecologists. No burrows or presence of Greater Bilbies were observed within the application area (EcOz Environmental Services, 2013).

Incidental fauna observations were also recorded during the EcOz Environmental Services field survey. Fauna species Pictorella Mannikins (*Heteromunia pectoralis*) and Bush Stone-curlew (*Burhinus grallarius*) were recorded during the survey (EcOz Environmental Services, 2013). Both of the species were categorised as Priority 4 at the time, however, the conservation status for these species have changed since then and are no longer considered as priority fauna species.

While the application area may provide foraging habitat for the Greater Bilby and suitable habitat for other native fauna species, the fauna habitat types provided by the application area are common in the local area and the bioregion. Whilst no bilbies were found during the targeted survey in 2013, there could be bilbies present at the time of the clearing. Potential impacts to the Greater Bilby 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 is not likely to be at variance to this Principle.

**Methodology** Astron (2012)  
EcOz Environmental Services (2013)  
Ninox (2009)

GIS Database:  
- Imagery

**(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 known records of Threatened Flora within the application area (GIS Database).

Ecologists from Astron and EcOz Environmental Services conducted flora surveys over the application area in July 2012 and June 2013, respectively. No Threatened Flora were recorded during the surveys (Astron, 2012; EcOz Environmental Services, 2013).

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

**Methodology** Astron (2012)

EcOz Environmental Services (2013)

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 available databases revealed there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest recorded TEC is located approximately 70 kilometres west of the application area (GIS Database).

A flora and vegetation survey of the application area did not identify any TECs (Astron, 2012).

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

**Methodology Astron (2012)**

GIS Database:

- Threatened and Priority Ecological Communities Boundaries  
- Threatened and Priority Ecological Communities Buffers

**(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 Dampierland Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). Approximately 99% of the pre-European vegetation still exists in the Dampierland IBRA Bioregion (Government of Western Australia, 2018). The application area is broadly mapped as Beard vegetation associations:

**750:** Shrublands, pindan; *Acacia tumida* shrubland with grey box and cabbage gum medium woodland over ribbon grass and curly spinifex; and

**751:** Shrublands, pindan; *Acacia eriopoda* and *Acacia tumida* shrubland with scattered low *Eucalyptus confertifolia* over curly spinifex (GIS Database).

Approximately 99% of the pre-European extent of each of these vegetation associations remains uncleared at both the state and bioregional level (Government of Western Australia, 2018).

Therefore, the application area does not represent a significant remnant of native vegetation in an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DBCA managed lands
IBRA Bioregion – Dampierland	8,343,944	8,319,879	~99	Least Concern	1.76
Beard vegetation associations – WA					
750	1,231,155	1,225,687	~99	Least Concern	2.78
751	16,045	15,994	~99	Least Concern	-
Beard vegetation associations – Dampierland Bioregion					
750	1,229,182	1,225,280	~99	Least Concern	2.78
751	16,045	15,994	~99	Least Concern	-

\* Government of Western Australia (2018)

\*\* 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 (2018)

GIS Database:

- IBRA Australia
- 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**

According to available databases, there are no permanent watercourses or wetlands within the application area. However, there is a minor non-perennial watercourse that crosses the application area (GIS Database).

One vegetation association 'Pindan Drainage Channel' was identified as occurring in the seasonally waterlogged area in the north of the application area (EcOz Environmental Services, 2013). This vegetation association was only mapped in a small portion of the application area and only a small amount is expected to be disturbed (EcOz Environmental Services, 2013).

Based on the above, the proposed clearing is at variance to this Principle. However, the proposed clearing associated with watercourses is small and unlikely to have a significant impact on any watercourse or wetland.

**Methodology** EcOz Environmental Services (2013)

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 may be at variance to this Principle**

The application area is mapped as the Reeves Land System (GIS Database). The Reeves Land System is characterised by sandplain with scattered hills and minor plateaux, reddish sandy soils and pindan (Payne and Schoknecht, 2011). Pindan vegetation is subject to fairly frequent fires which induce short term changes in botanical composition, density and structure. Sandplains have minor susceptibility to wind erosion immediately after fire but stabilise rapidly after rain (Payne and Schoknecht, 2011).

This permit area covers an area of expired permit CPS 5411/1. Soils in the area covered by CPS 5411/1 comprised of red-brown loamy sand on plains and shallow grey-brown loam (skeletal soils) on rocky outcrops (Astron, 2012). The removal of vegetation from these soils across the survey area was considered likely to result in some wind and water erosion, however, the proposed clearing of 10 hectares was unlikely to be significant (Astron, 2012). Kimberley Quarry Pty Ltd (2018) will be rehabilitating mined out areas, progressively where possible, which reduces the long term impact of land degradation. The current application is for 98 hectares which may pose an erosion risk if large areas are cleared then left exposed for long periods. Potential impacts from land degradation 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** Astron (2012)  
Kimberley Quarry Pty Ltd (2018)  
Payne and Schoknecht (2011)

GIS Database:

- Landsystem Rangelands

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

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

There are no conservation areas in the vicinity of the application area. The nearest conservation area is a *Conservation and Land Management Act 1984* (CALM Act) section 5(1)(h) reserve, which is located approximately 70 kilometres south-west of the application area (GIS Database). The proposed clearing is unlikely to impact on the environmental values of any conservation area.

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

**Methodology** GIS Database:  
- DPaW 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**

There are no permanent watercourses or wetlands within the application area, however, there is a minor non-perennial watercourse that crosses the application area (GIS Database). A small portion of the application area was mapped as occurring in a seasonally waterlogged area (EcOz Environmental Services, 2013).

Activities from the expired permit covering the area may have resulted in some localised deterioration of surface water quality through water erosion (Astron, 2012). The proposed clearing of 98 hectares may have some impact on local surface water if water erosion is not controlled. Potential impacts from water erosion as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is the Broome Water Reserve which is located approximately 60 kilometres west of the application area (GIS Database). The proposed clearing is unlikely to cause deterioration in groundwater.

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

**Methodology** Astron (2012)  
EcOz Environmental Services (2013)

GIS Database:  
- Hydrography, Linear  
- Public Drinking Water Source 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 is within the Coastal catchment area of the Fitzroy River basin (GIS Database). Given the size of the area to be cleared (98 hectares) in relation to the size of the catchment areas (344,252 hectares) (GIS Database), the proposed clearing is not likely to increase the potential of flooding on a catchment scale.

The local area alternates between low plains and rocky outcrops and has well-draining, sandy pindan soils present (Astron, 2012). The proposed clearing is unlikely to cause or exacerbate flooding at a local scale.

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

**Methodology** Astron (2012)

GIS Database:  
- Hydrographic Catchments - Catchments

**Planning Instrument, Native Title, previous EPA decision or other matter.**

**Comments**

The clearing permit application was advertised on 19 November 2018 by the Department of Mines, Industry Regulation and Safety (DMIRS), inviting submissions from the public. No submissions were received in relation to this application.

There is one Native Title Determination (WC1999/025) over the application area (DPLH, 2018). 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 within the application area (DPLH, 2018). 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 Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

**Methodology** DPLH (2018)

## 4. References

- Astron (2012) Nillibubbica Quarry - Level 1 Flora and Fauna Survey, July 2012. Report prepared for Kimberley Quarry Pty Ltd by Astron Environmental Services, August 2012.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DPLH (2018) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage. <http://maps.daa.wa.gov.au/AHIS/> (Accessed 6 December 2018).
- 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.
- EcOz Environmental Services (2013) Kimberley Quarry Extension Ecological Survey Report. Report prepared for Kimberley Quarry Pty Ltd by EcOz Environmental Services, July 2013.
- Government of Western Australia (2018) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Kimberley Quarry Pty Ltd (2018) Clearing (Purpose) Permit Nillibubbica Rock Quarry Extension M04/21, M04/22, M04/69 and M04/75, Kimberley Quarry Pty Ltd.
- Ninox (2009) A Level 1 Vertebrate Fauna Assessment of Tenements M04/17, M04/69, M04/75 Between Derby and Broome, in the Kimberley Region of Western Australia. Report prepared for John Consulting Services on behalf of Kimberley Quarries Pty Ltd by Ninox Wildlife Consulting, March 2009.
- Payne, A. and Schoknecht, N. (2011) Technical Bulletin - Land Systems of the Kimberley Region, Western Australia, No. 98. Department of Agriculture and Food, Western Australia.

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia (now DPLH)
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia (now DPIRD)
<b>DBCA</b>	Department of Biodiversity Conservation and Attractions, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia (now DBCA and DWER)
<b>DEE</b>	Department of the Environment and Energy, Australian Government
<b>DER</b>	Department of Environment Regulation, Western Australia (now DWER)
<b>DMIRS</b>	Department of Mines, Industry Regulation and Safety, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia (now DMIRS)
<b>DPIRD</b>	Department of Primary Industries and Regional Development, Western Australia
<b>DPLH</b>	Department of Planning, Lands and Heritage, Western Australia
<b>DRF</b>	Declared Rare Flora
<b>DoE</b>	Department of the Environment, Australian Government (now DEE)
<b>DoW</b>	Department of Water, Western Australia (now DWER)
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia (now DBCA)
<b>DSEWPaC</b>	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
<b>DWER</b>	Department of Water and Environmental Regulation, Western Australia
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
<b>TEC</b>	Threatened Ecological Community

### Definitions:

{DPaW (2017) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

**T** Threatened species:

Published as Specially Protected under the *Wildlife Conservation Act 1950*, listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

**Threatened fauna** is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the *Wildlife Conservation Act 1950*.

**Threatened flora** is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the *Wildlife Conservation Act 1950*.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

- CR Critically endangered species**  
Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- EN Endangered species**  
Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- VU Vulnerable species**  
Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- EX Presumed extinct species**  
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.
- IA Migratory birds protected under an international agreement**  
Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- CD Conservation dependent fauna**  
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- OS Other specially protected fauna**  
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P Priority species**  
Species which are poorly known; or  
Species that are adequately known, are rare but not threatened, and require regular monitoring. Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.
- P1 Priority One - Poorly-known species:**  
Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.
- P2 Priority Two - Poorly-known species:**



Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

**P3 Priority Three - Poorly-known species:**

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

**P4 Priority Four - Rare, Near Threatened and other species in need of monitoring:**

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for Vulnerable, but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.