



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 9180/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Nickol River Enterprises Pty Ltd

### 1.3. Property details

Property: Mining Lease 47/559  
Local Government Area: City of Karratha  
Colloquial name: N/A

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
66.2		Mechanical Removal	Sand Mining

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 11 March 2021

## 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:  
127: Bare areas; mud flats; and  
589: Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex (GIS Database).

Astron Environmental Services (2011) conducted a vegetation and flora survey of the application area and surrounding areas on 22 August 2011 and described nine broad vegetation communities within the application area:

**LSi1** – *Triodia epactia* hummock and *Cenchrus ciliaris* tussock closed grassland on sandy island. Some *Triodia angusta* around fringes of island;

**LSi2** – *Cenchrus ciliaris* tussock closed grassland on sandy island;

**LSf1** – *Tecticornia halocnemoides* var sp1, *Tecticornia halocnemoides* var. sp2 and *Tecticornia indica* var. *leiostachya* over scattered to closed *Sporobolus virginicus* grassland;

**CSp1** – *Trianthema turgidifolia* open or scattered low shrubland over *Cenchrus ciliaris* tussock grassland with patchy *Triodia angusta*;

**CSp2** – *Chrysopogon fallax* closed grassland with small scalds of closed *Ptilotus murrayi* annual herbland;

**CSs1** – *Salsola tragus* annual scattered to open low shrubland over mixed annual herbland of *Swainsona pterostylis*, *Lepidium pholidogynum*, *Atriplex codonocarpa*, *Sclerolaena bicornis*;

**LSf1** – *Tecticornia halocnemoides* var sp1, *Tecticornia halocnemoides* var sp2 and *Tecticornia indica* var *leiostachya* with occasional *Frankenia pauciflora* over scattered to closed *Sporobolus virginicus* grassland;

**RHs1** – *Acacia bivenosa* shrubland over *Triodia angusta* hummock grassland with annual herbland; and

**RHs2** *Acacia bivenosa*, *Senna pruinosa* scattered to open shrubland over *Triodia wiseana* hummock grassland.

**Clearing Description** Nickol River Enterprises Pty Ltd proposes to clear up to 66.2 hectares of native vegetation within a boundary of approximately 68.8 hectares, for the purpose of sand mining. The project is located approximately 7 kilometres east of Karratha, within the City of Karratha.

**Vegetation Condition** Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994);  
to:

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

**Comment**

The vegetation condition was derived from a vegetation survey conducted by Astron (2011) and aerial imagery (GIS Database).

Given that the proponent has purchased tenement M47/559, the underlying clearing permit (CPS 4743/4) was not transferable. This application for a clearing permit is to replace CPS 4743/4.

### 3. Assessment of application against Clearing Principles

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

**Comments**

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

The application area occurs within the Roebourne sub-region of the Pilbara Interim Biogeographic Regionalisation of Australia bioregion (GIS Database). This sub-region is characterised as quaternary alluvial and older colluvial coastal and subcoastal plains with a grass savannah of mixed bunch and hummock grasses, and dwarf shrub steppe of *Acacia stellaticeps* or *A. pyrifolia* and *A. inaequilatera*. Uplands are dominated by *Triodia hummock* grasslands. Ephemeral drainage lines support *Eucalyptus victrix* or *Corymbia hamersleyana* woodlands. Samphire, Sporobolus and mangal occur on marine alluvial flats and river deltas (CALM, 2002).

There are no known Threatened or Priority Flora species, or Threatened Ecological Communities within the application area (Astron, 2011; GIS Database). The application area lies within the buffer of the 'Roebourne Plains gilgai grassland' Priority Ecological Community (PEC) (Priority 1) (GIS Database). Astron (2011) advise that the vegetation present within the application area is not representative of this PEC. Available databases suggest that the boundary of the mapped PEC is one kilometre south of the application area (GIS Database).

Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to 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.

The vegetation associations, fauna habitats and landform types present within the application area, are well represented in surrounding areas (Astron, 2011; GIS Database). The application area is unlikely to represent an area of higher biodiversity than surrounding areas, in either a local or regional context.

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

**Methodology**

Astron (2011)  
CALM (2002)

GIS Database:

- IBRA Australia
- Imagery
- Pre-European Vegetation
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers
- Threatened and Priority Flora
- Threatened Fauna

#### (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.

**Comments**

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

No fauna surveys have been undertaken over the application area. Astron (2011) and available databases (GIS Database), show three fauna habitats to exist within the application area:

1. Low sandy island;
2. Low linear hills; and
3. Clay and sandy plains.

Aerial imagery over the application area and surrounds indicates that these fauna habitats are widespread within the region (GIS Database), and does not indicate the presence of any habitat features which may be important for habitat specific fauna (Astron, 2011; GIS Database). A search of the NatureMap (DBCA, 2007-) did not return records for any conservation significant species which are likely to be dependent on the application area. The proposed clearing of native vegetation is unlikely to comprise significant fauna habitat (Astron, 2011; DBCA, 2007-; GIS Database).

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

**Methodology** Astron (2011)  
DBCA (2007-)

GIS Database:  
- Imagery  
- Pre-European Vegetation  
- Threatened Fauna

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

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

There are no known records of Threatened flora within the application area (GIS Database). Astron (2011) did not record any species of Threatened flora within the application area.

The vegetation associations within the application area are common and widespread within the region (GIS Database), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened flora.

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

**Methodology** Astron (2011)

GIS Database:  
- Imagery  
- Pre-European Vegetation  
- 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**

There are no known Threatened Ecological Communities (TECs) located within or in close proximity to the application area (GIS Database).

A flora and vegetation survey of the application area did not identify any TECs (Astron, 2011).

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

**Methodology** Astron (2011)

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 Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). The vegetation within the application area is recorded as:

Beard vegetation association 127: Bare areas; mud flats; and  
Beard vegetation association 589: Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex soft spinifex (GIS Database; Government of Western Australia, 2019).

Beard vegetation associations 127 and 589 retain approximately 89% and 99% of their pre-European extent respectively, within the bioregion (Government of Western Australia, 2019). Therefore, the area proposed to be cleared is not a significant remnant of native vegetation in an area that has been extensively cleared.

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 (2019)

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 not likely at variance to this Principle**

According to available databases the application area sits within a broad expanse of a saline mud flat (GIS Database). Based on vegetation mapping by Astron (2011) there were no riparian vegetation associations found within the application area associated with saline mudflat.

As the saline mud flat located within the application area is only likely to inundate following significant rainfall or cyclonic events, the proposed clearing of 66.2 hectares of native vegetation within a 68.8 hectare application area is unlikely to result in any significant impact to any watercourse or wetland provided natural surface water flow patterns are not disturbed.

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

**Methodology Astron (2011)**

GIS Database:  
- Hydrography, Lakes  
- Hydrography, linear  
- Imagery

**(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 intersects the Littoral, Horseflat and Cheerawarra land systems (GIS Database).

The Littoral Land System is described as extensive bare coastal mudflats flanked by mangroves and samphire flats with quaternary coastal mud and silty loams, minor sandy islands, narrow sandy plains, coastal dunes and beaches with Aeolian sands (Van Vreeswyk et al., 2004). This land system is not susceptible to soil erosion however is highly susceptible to wind erosion if vegetative cover is depleted (Van Vreeswyk et al., 2004).

The Horseflat Land System is described as gilgaied clay plains supporting tussock grasslands and minor grassy snakewood shrublands. Parts of the land system are moderately to highly susceptible to erosion (Van Vreeswyk et al., 2004).

The Cheerawarra land system is described as sandy coastal plains and saline clay plains supporting soft and hard spinifex grasslands and minor tussock grasslands. This land system is susceptible to wind erosion (Van Vreeswyk et al., 2004). The potential land degradation impacts as a result of the proposed clearing of may be minimised by the implementation of a staged clearing condition.

The application area intercepts areas categorised as 'low' to 'moderate' and 'moderate' to 'high' Acid Sulphate Soil (ASS) risk (GIS Database). Astron (2011) identified that the resource is not likely to form acid on exposure to air, so that acid mine drainage risks are considered to be low. On this basis, the proposed clearing activities are not likely to pose a significant ASS risk (Astron, 2011).

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

**Methodology Astron (2011)  
Van Vreeswyk et al. (2004)**

GIS Database:  
- Landsystem Rangelands  
- 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 is not likely to be at variance to this Principle**

There are no conservation areas in the vicinity of the application area. The nearest DBCA (formerly DPaW) managed land is the Great Sandy Island Nature Reserve which is located approximately 46 kilometres 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**

The application area is not located within a Public Drinking Water Source Area (GIS Database).

The application area is situated partly on saline coastal flats which are subject to inundation (GIS Database). High sediment loads may enter the tidal areas from overland flow events which result following significant rainfall events. The proposed clearing is not likely to significantly increase sediment entering the tidal areas or Indian Ocean (GIS Database).

With an average annual rainfall of approximately 297 millimetres (BoM, 2021) and an annual evaporation rate of 3,200 - 3,600 millimetres (GIS Database) there is little surface flow during normal seasonal rains. The sand dunes are highly permeable with sparsely distributed vegetation, so the proposed clearing is not likely to increase surface water run-off.

With high annual evaporation rates and low annual rainfall there is little recharge into regional groundwater, that at this site is considered brackish (between 1,000 milligrams/litre and 3,000 milligrams/litre) (GIS Database).

The proposed clearing is unlikely to have any impact on groundwater or surface water quality.

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

**Methodology** BoM (2021)

GIS Database:  
- Hydrography, Linear  
- Groundwater Salinity, Statewide  
- 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 climate of the Pilbara region is mostly hot and dry, with highly variable rainfall throughout the year (CALM, 2002).

Natural flood events do occur in the Pilbara region following cyclonic activity. The application area is located on coastal sand dunes and saline flats. Clearing of vegetation on the highly permeable sand dunes is unlikely to cause or exacerbate flooding (GIS Database). The proposed clearing is not expected to increase the incidence or intensity of such events given the size of the area to be cleared (66.2 hectares) in relation to the catchment area (GIS Database).

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

**Methodology** CALM (2002)

GIS Database:  
- Hydrographic Catchments - Catchments  
- Hydrography, linear  
- Imagery

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

### Comments

The clearing permit application was advertised on 1 February 2021 by the Department of Mines, Industry Regulation and Safety (DMIRS), inviting submissions from the public. There was one submission received in relation to this application which stated no objection to the proposed clearing and for weeds to be controlled within the surrounding area.

There is one native title claim over the area under application (DPLH, 2021). This claim has been determined by the Federal Court 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 within the application area (DPLH, 2021). 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 (2021)

## 4. References

- Astron (2011) Nickol River Tenement M47/559 Vegetation and Flora Survey. Report prepared for Louis Rinaldi by Astron Environmental Services, August 2011.
- BoM (2021) Bureau of Meteorology Website – Climate Data Online, Karratha Aero. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/> (Accessed 8 March 2021).
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DBCA (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Biodiversity, Conservation and Attractions. <https://naturemap.dbca.wa.gov.au/> (Accessed 8 March 2021).
- DPLH (2021) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 8 March 2021).
- 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.
- Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth. <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.
- Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A. and Hennig, P. (2004) An inventory and condition survey of the Pilbara Region, Western Australia. Technical Bulletin No. 92. Department of Agriculture, South Perth, Western Australia.

## 5. Glossary

### Acronyms:

<b>BC Act</b>	<i>Biodiversity Conservation Act 2016</i> , Western Australia
<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>DAWE</b>	Department of Agriculture, Water and the Environment, Australian Government
<b>DBCA</b>	Department of Biodiversity, Conservation and Attractions, Western Australia
<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>DoEE</b>	Department of the Environment and Energy (now DAWE)
<b>DoW</b>	Department of Water, Western Australia (now DWER)
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia (now DBCA)
<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 (now known as Threatened Flora)
<b>DWER</b>	Department of Water and Environmental Regulation, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPA</b>	Environmental Protection Authority, 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:**

{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:-

### **T Threatened species:**

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

**Threatened fauna** is that subset of ‘Specially Protected Fauna’ listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

**Threatened flora** is that subset of ‘Rare Flora’ listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

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 in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

### **EN Endangered species**

Threatened species considered to be “*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.

### **VU Vulnerable species**

Threatened species considered to be “*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

## **Extinct Species:**

### **EX Extinct species**

Species where “*there is no reasonable doubt that the last member of the species has died*”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

### **EW Extinct in the wild species**

Species that “*is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

**Specially protected species:**

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

**MI**

**Migratory species**

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes 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 fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

**CD**

**Species of special conservation interest (conservation dependent fauna)**

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

**OS**

**Other specially protected species**

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

**P**

**Priority species:**

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species 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.