

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7969/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: North West Quarries Pty Ltd

1.3. Property details

Property: Mining Lease 45/258

General Purpose Lease 45/47 General Purpose Lease 45/48 General Purpose Lease 45/329

Local Government Area:
Colloquial name:

Town of Port Hedland
Pippingarra Quarry Project

1.4. Application

Clearing Area (ha) No. Trees Method of Clearing For the purpose of:

47.18 Mechanical Removal Purpose as shown on the Permit

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 22 March 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 association: **93:** Hummock grasslands, shrub steppe; kanji over soft spinifex (GIS Database).

A Level 1 Vascular flora and vegetation survey was conducted over the application area by Ecoscape during July 2011. The following vegetation associations were recorded within the application area (Ecoscape, 2011):

- Acacia tumida var. pilbarensis and A. ancistrocarpa tall open shrubland over Triodia sp. 1 hummock grassland.
- 2. Acacia ancistrocarpa open shrubland over A. stellaticeps low open shrubland over Triodia epactia hummock grassland.
- Acacia ancistrocarpa shrubland over A. stellaticeps low open shrubland over Poaceae sp. tussock grassland.
- Corymbia hamersleyana scattered low trees over Acacia ancistrocarpa, Acacia tumida var. pilbarensis,
 A. bivenosa open shrubland over Indigofera monophylla scattered low shrubs over Triodia sp.1 and T. epactia hummock grassland and Aristida holathera tussock grassland.
- Acacia inaequilatera and A. sphaerostachya scattered shrubs over Bonamia media scattered low shrubs over Triodia sp. 1 hummock grassland.
- Acacia ancistrocarpa shrubland over Triodia sp. 1 mid-dense hummock grassland.
- Acacia ancistrocarpa, A. stellaticeps and Tephrosia sp. Bungaroo Creek scattered low shrubs over Triodia sp.1 hummock grassland and Goodenia sp. scattered herbs.
- 8. Acacia bivenosa, Acacia tumida var. pilbarensis shrubland over Indigofera monophylla scattered low shrubs over Triodia sp.1 hummock grassland.

Clearing Description

Pippingarra Quarry Project.

North West Quarries Pty Ltd proposes to clear up to 47.18 hectares of native vegetation within a boundary of approximately 47.18 hectares, for the purpose of mineral production, associated facilities and infrastructure. The project is located approximately 30 kilometres south of Port Hedland, within the Shire of Port Hedland.

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 Ecoscape (2011).

The proposed clearing is for the Pippingarra Quarry Project which includes a granite quarry, borrow pit, magazine site, campsite, transport corridor, workshop extension and vehicle inspection area.

This clearing permit application replaces CPS 4633/1 which expired on the 15 September 2017. The only change in this permit from CPS 4633/1 is that tenement G45/55 (dead) is now G45/329. No other changes have been made

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 clearing permit application area is located within the Chichester subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Pilbara Bioregion (GIS Database). The Chichester subregion supports a shrub steppe characterised by *Acacia inaequilatera* over *Triodia wiseana* hummock grasslands, while *Eucayptus leucophloia* tree steppes occur on the basaltic ranges (CALM 2002). There are no Threatened Ecological Communities (TECs) within the subregion (CALM 2002; GIS Database).

A level 1 flora survey recorded 39 species from 15 families and 25 genera. There was one Priority Flora species *Heliotropium muticum* (Priority 1) recorded. However, it was recorded from outside the application area (Ecoscape, 2011). Based on the number recorded, the application area does not appear to possess a high level of floristic diversity.

A desktop fauna survey found 221 species of vertebrate fauna that are expected to occur within the application area. Of the 221 vertebrate fauna species potentially occurring within the area, 58 species were found during the field survey that included two conservation significant species (Northern Quoll (*Dasyurus hallucatus*) and the Rainbow Bee-eater (*Merops omatus*)). No short range endemic (SRE) or otherwise significant invertebrate species were recognised from the desktop review (Bamford Consulting Ecologists, 2011).

Majority of the application area has been subject to historic ground disturbances as it is located on existing mining tenements. Furthermore, the area has experienced fire within the last decade and shows some evidence of degradation by livestock. Given this, the habitats within the application area are not expected to contain a level of faunal diversity as high as other adjoining less disturbed areas.

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

Methodology

CALM (2002)

Bamford Consulting Ecologists (2011)

Ecoscape (2011) GIS Database:

- IBRA Australia
- Pre-European Vegetation
- Threatened Ecological Sites Buffered

(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

The two following fauna habitats have been recorded within the application area during a level 1 fauna survey that was undertaken by Bamford Consulting Ecologists on the 7th and 8th July 2011;

- 1. Areas that have undergone rehabilitation consists of mixed acacia shrubs and some Triodia spp.
- 2. Areas that remain undisturbed consists of mixed acacia shrubland over *Triodia* spp. with scattered *Corymbia* spp.

Both of these habitats were on soils of coarse sand over loam, mixed with quartz stones originating from small quarts extrusions. Apart from the old waste dumps, there is very little geographical relief across the application area (Bamford Consulting Ecologists, 2011).

Two conservation significant species were found during the field survey;

- 1. Northern Quoll (Dasyurus hallucatus) Endangered
- 2. Rainbow Bee-eater (Merops ornatus) Migratory

The Rainbow Bee-eater has a wide distribution across the state and therefore, the application area is not likely to represent a significant habitat for this species.

The presence of the Northern Quolls were detected by scats at latrine sites (Bamford Consulting Ecologists, 2011). The latrine sites were located on a granite outcrop that is situated less than 100 metres east of the application area. Given the close proximity of the granite outcrop, the application area would be utilised as foraging habitat for Northern Quolls. Bamford Consulting Ecologists undertook a second survey in April 2012 that encompassed a greater area of Pippingarra to help determine the wider distribution of Northern Quolls in the local area. Evidence of Northern Quolls were found throughout rocky hills immediately south and north-east of the application area (Bamford Consulting Ecologists, 2012). Whilst they were not visited during the survey, there are also hills further east (approximately four kilometres) that are likely to support Northern Quolls as they appear to have the same geology as the hills where the species was recorded (Bamford consulting Ecologists, 2011). Given the Northern Quoll is present at a number of rocky hills in the local area, the proposed clearing will only impact a small amount of the foraging habitat in the local area (Bamford Consulting Ecologists, 2012). The application area lies west of all the regional denning habitat, so the proposed clearing is not likely to affect the dispersal of the species (Bamford Consulting Ecologists, 2012).

The regional Northern Quoll survey also recorded a few Mulgara burrows in spinifex sandplains east of the application area (Bamford Consulting Ecologists, 2012). Similar habitat within the application area has been searched, however, no Mulgara burrows were recorded.

The project was referred to the Department of Sustainability, Environment, Water, Population and Communities (now Department of the Environment and Energy) due to its potential impacts on Northern Quoll habitat. The project was deemed not to be a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999*.

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

Methodology

Bamford Consulting Ecologists (2011)

Bamford Consulting Ecologists (2012)

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, rare 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). Flora surveys of the application area did not record any species of Threatened flora (Ecoscape, 2011).

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

Methodology

Ecoscape (2011)

GIS Database:

- 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 (Ecoscape, 2011).

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

Methodology

Ecoscape (2011)

GIS Database:

- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities 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 Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99.9% of the pre-European vegetation still exists in the IBRA Pilbara Bioregion (Government of Western Australia, 2016).

The application area is broadly mapped as Beard vegetation associations 93: Hummock grasslands, shrub steppe; kanji over soft spinifex (GIS Database). Approximately 99.9% of the pre-European extent of this vegetation association remains uncleared at both the state and bioregional level (Government of Western Australia, 2016).

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 – Pilbara	17,808,657	17,733,583	99.58	Least Concern	10.12
Beard vegetation associations – WA					
93	3,044,309	3,040,640.98	99.88	Least Concern	1.96
Beard vegetation associations – Pilbara Bioregion					
93	3,042,114	3,038,471	99.88	Least Concern	1.96

^{*} Government of Western Australia (2017)

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 (2017)

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 at variance to this Principle

There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). No non-perennial watercourses have been mapped within the application area (GIS Database). The vegetation survey did not identify any vegetation as being associated with a watercourse or wetland (Ecoscape, 2011).

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

Methodology

Ecoscape (2011)

GIS Database:

- Hydrography, Lakes
- Hydrography, linear

^{**} Department of Natural Resources and Environment (2002)

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

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

The application area lies within the Boolaloo and Macroy land systems (GIS Database). These land systems have been mapped and described in technical bulletins produced by the former Department of Agriculture (now the Department of Primary Industries and Regional Development).

The Boolaloo and Macroy land systems are generally not susceptible to erosion (Van Vreeswyk et al., 2004). The application area is relatively flat so there is not likely to be significnt erosion caused by increased runoff (GIS Database).

The proposed clearing of up to 47.18 hectares of native vegetation is spread across several polygons over a 4 kilometre area. The proposed clearing is unlikely to cause appreciable land degradation.

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

Methodology Van Vreeswyk et al. (2004)

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 DBCA (formerly DPaW) managed land is the Mungaroona Range Nature Reserve which is located approximately 110 kilometres southwest 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 Managed Lands and Waters

(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 Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database). There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). Surface water within the application are is likely to occur as sheet flow following heavy rains. With an annual evaporation rate over ten times the average annual rainfall, any surface water is likely to evaporate quickly (BOM, 2018).

The groundwater within the application area is between 1,000 – 3,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be brackish water. It would not be expected that the proposed clearing would cause salinity levels within the application or surrounding area to alter.

The proposed clearing is unlikely to cause deterioration in the quality of underground water.

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

Methodology BOM (2018)

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

Rainfall in this region is generally low and highly variable, typically resulting from cyclone events and localised thunderstorms (Van Vreeswyk et al., 2004). The average annual rainfall is 319.2 millimetre with an annual evaporation rate of ~3400 millimetre (BOM, 2018). Whilst temporary localised flooding may occur briefly following heavy rainfall events, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.

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

Methodology BOM (2018)

Van Vreeswyk et al. (2004)

GIS Database:

- Hydrographic Catchments Catchments
- Hydrography, linear

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

Comments

The clearing permit application was advertised on 26 February 2018 the Department of Mines, Industry Regulation and Safety (DMIRS) inviting submissions from the public. One submission was received requesting appropriate rehabilitation to be completed upon cessation of mining. A mine closure plan has been approved under the *Mining Act 1978* which outlines the rehabilitation requirements and methods for closure of this project.

There are two native title claims over the area under application (DPLH, 2018). These claims (WC2009/003 and WC1999/008) have been registered with the National Native Title Tribunal on behalf of the claimant groups. 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*.

According to available databases, 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.

The project was referred to the Department of Sustainability, Environment, Water, Population and Communities (now Department of the Environment and Energy) due to its potential impacts on Northern Quoll habitat. The project was deemed not to be a controlled action under the *Environment Protection and Biodiversity Conservation Act* 1999.

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)

GIS Database:

- Native Titles Claim Regiestered with the National Native Title Tribunal
- Aboriginal Sites Register System

4. References

- Bamford Consulting Ecologists (2011) Assessment of Fauna and Flora Values at Pippingarra, Port Hedland WA. Report for North West Quarries Pty Ltd, by Bamford Consulting Ecologists, 31 July 2011.
- Bamford Consulting Ecologists (2012) Regional Survey for the Northern Quoll *Dasyurus hallucatus* around North West Quarries' Pippingarra Quarry. Report for North West Quarries Pty Ltd, by Bamford Consulting Ecologists, 14 May 2012.
- BOM (2018) Bureau of Meteorology Website Climate Statistics for Australian locations, Summary statistics Port Hedland Airport. http://www.bom.gov.au/climate/averages/tables/cw_004032.shtml (Accessed 7 March 2018).
- 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 March 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.
- Ecoscape (2011) Pippingarra Quarry Vascular Flora and Vegetation Survey. Report for North West Quarries Pty Ltd, by Ecoscape (Australia) Pty Ltd, August 2011.
- Government of Western Australia (2017) 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.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

5. Glossary

Acronyms:

BoM Bureau of Meteorology, Australian Government

DAA
 Department of Aboriginal Affairs, Western Australia (now DPLH)
 DAFWA
 Department of Agriculture and Food, Western Australia (now DPIRD)
 DBCA
 Department of Biodiversity Conservation and Attractions, Western Australia

DEC Department of Environment and Conservation, Western Australia (now DBCA and DWER)

DEE Department of the Environment and Energy, Australian Government
DER Department of Environment Regulation, Western Australia (now DWER)
DMIRS Department of Mines, Industry Regulation and Safety, Western Australia
DMP Department of Mines and Petroleum, Western Australia (now DMIRS)

DPIRD Department of Primary Industries and Regional Development, Western Australia

DPLH Department of Planning, Lands and Heritage, Western Australia

DRF Declared Rare Flora

DoE Department of the Environment, Australian Government (now DEE)

DoW Department of Water, Western Australia (now DWER)

DPaW Department of Parks and Wildlife, Western Australia (now DBCA)

DSEWPaC Department of Sustainability, Environment, Water, Population and Communities (now DEE)

DWER Department of Water and Environmental Regulation, Western Australia

EPA Environmental Protection Authority, Western Australia
EP Act Environmental Protection Act 1986, Western Australia

EPBC Act Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)

GIS Geographical Information System 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

PEC Priority Ecological Community, Western Australia

RIWI Act Rights in Water and Irrigation Act 1914, Western Australia

TEC 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.