Government of Western Australia
Department of Mines, Industry Regulation and Safety

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7797/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Norwest Sand and Gravel Pty Ltd**

1.3. Property details

Property: Mining Lease 47/556
Miscellaneous Licence 47/357
Local Government Area: City of Karratha
Colloquial name: Cossack Gravel Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 30 November 2017

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

Beard vegetation associations have been mapped for the whole of Western Australia. There is one Beard vegetation association mapped within the application area (GIS Database):

589: Mosaic: short bunch grassland - savanna / grass plain (Pilbara) / hummock grasslands, grass steppe; soft spinifex.

A flora and vegetation survey was undertaken over Mining Lease 47/556 and several other nearby tenements by West Ecology in May 2011 (West Ecology, 2011). Six vegetation types were identified within the mining lease, five of which are present within the application area (West Ecology, 2011). Aerial imagery indicates the same vegetation types are likely to occur in the rest of the application area that was not surveyed (GIS Database).

Vegetation Type 11: Low open shrubland of *Acacia bivenosa* and *Indigofera monophylla* over hummock grassland on hills.

Vegetation Type 12: High open shrubland of *Flueggea virosa* subsp. *melanthesoides* over very open tussock grassland on breakaways.

Vegetation Type 13: Shrubland of *Acacia sabulosa* and *Acacia stellaticeps* over hummock and tussock grassland on plains.

Vegetation Type 14: Tussock and hummock grassland of *Cenchrus ciliaris* and *Triodia epactia* on plains.

Vegetation Type 15: Low open to low shrubland of *Tecticornia* ?*indica* subsp. *leiostachya* on mudflat margins and tidal creeks.

Clearing Description

Cossack Gravel Project.
Norwest Sand and Gravel Pty Ltd proposes to clear up to 40 hectares of native vegetation within a boundary of approximately 41.24 hectares, for the purpose of mineral production. The project is located less than one kilometre south-east of Wickham, within the City of Karratha.

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 West Ecology (2011).

The vegetation condition was described using a scale based on Trudgen (1988) and has been converted to the corresponding condition from the Keighery (1994) scale.

The majority of the application area was covered by clearing permit CPS 5172/1 which authorised the clearing of 8.5 hectares of native vegetation and was valid from 6 October 2012 to 6 October 2017.

3. Assessment of application against Clearing Principles

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

Comments

Proposal is not likely to be at variance to this Principle

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

There were five vegetation types recorded within the application area from the vegetation survey of Mining Lease 47/556 (West Ecology, 2011). None of the vegetation types were identified as being a Threatened or Priority Ecological Community (West Ecology, 2011; GIS Database). The application area is within the buffer of the 'Horseflat Landsystem of the Roebourne Plains' Priority Ecological Community, however, the application area is not located within the Horseflat landsystem (GIS Database).

A total of 89 flora taxa from 29 families and 59 genera were recorded within the flora survey area (West Ecology, 2011). Several species of priority flora are known to occur within 10 kilometres of the application area (GIS Database). No species of priority flora have been recorded within the application area (West Ecology, 2011; GIS Database).

Three introduced flora species were recorded during the flora survey (West Ecology, 2011). These weed species were Buffel Grass (*Cenchrus ciliaris*), Kapok Bush (*Aerva javanica*) and Purslane (*Portulaca oleracea*) (West Ecology, 2011). 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 flora and vegetation survey identified five landforms within Mining Lease 47/556 which was considered diverse for an area of its size (Astron, 2012; West Ecology, 2011). The application area does not include the mudflat areas which are more likely to support a greater number of migratory bird species (Astron, 2012). The habitat within the application area is common along the coast in the region and is not expected to comprise a higher level of faunal diversity than adjacent areas.

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

Methodology

Astron (2012)
CALM (2002)
West Ecology (2011)

GIS Database:
- IBRA Australia
- Imagery
- Rangeland landsystems
- Threatened and Priority Flora
- 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

No targeted fauna surveys have been undertaken within the application area. Five landforms were observed in the application area: hills, breakaways, plains, mudflat margins/tidal creeks and mudflats (West Ecology, 2011). The majority of the application area, consists of plains habitat (West Ecology, 2011). The landforms and their associated vegetation types were also recorded outside of the application area and are typical of the Roebourne subregion (CALM, 2002; West Ecology, 2011; GIS Database), therefore it is likely that the fauna habitats associated with these vegetation types are also common in the local area. Based on the vegetation survey and imagery of the application area, there are no significant habitat features such as caves, waterholes, significant creeklines or coastal dunes (Astron, 2012; West Ecology, 2011; GIS Database).

The endangered species *Lerista nevinae* is restricted to pale coastal dune habitat in the vicinity of Cape Lambert (Astron, 2012). Given its restricted habitat, this species is highly susceptible to impacts from clearing. Suitable habitat for this species has not been identified within the application area and it does not contain coastal dunes which are critical for this species (Astron, 2012; Biota, 2008).

The application area may provide habitat for a variety of fauna species but the fauna habitat types are likely to be represented outside the application area. No conservation significant fauna have previously been recorded within the application area (GIS Database) and while the application area may provide foraging habitat for some conservation significant species it is unlikely to provide core habitat for any species (Astron, 2012).

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

Methodology

Astron (2012)
Biota (2008)
West Ecology (2011)

GIS Database:
- Hydrography, linear
- 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, priority flora or other flora species of conservation significance (West Ecology, 2011).

The vegetation associations within the application area are common and widespread within the region (West Ecology, 2011; GIS Database), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened (rare) flora.

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

Methodology

West Ecology (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 (West Ecology, 2011).

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

Methodology

West Ecology (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 lies within the Pilbara Interim Biogeographical Regionalisation of Australia (IBRA) bioregion in which approximately 99.58% of the pre-European vegetation remains (Government of Western Australia, 2016; GIS Database).

The vegetation of the application area has been broadly mapped as Beard vegetation association 589 (GIS Database). This vegetation association has not been extensively cleared as over 99% remains at both a state and bioregional level (Government of Western Australia, 2016). The application area is not a remnant nor does it form part of any remnants within the local area (GIS Database).

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 (2016)

GIS Database:
- IBRA Australia
- Imagery
- 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**

There are no permanent watercourses within the application area, however there are several minor ephemeral watercourses that pass through the application area (GIS Database). Vegetation type 15 is low open to low shrubland of *Tecticornia ?indica* subsp. *leiostachya* occurring in association with mudflat margins and tidal creeks (West Ecology, 2011). This vegetation type only occupied 0.93 hectares of the greater flora survey area (West Ecology, 2011). More extensive areas of this vegetation type are present in adjacent areas (GIS Database). Mudflat margins and tidal creeks are common in the local region and the proposed clearing is not likely to have a significant impact on hydrological regimes and riparian environments in the local area (GIS Database).

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

Methodology West Ecology (2011)

GIS Database:
- 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**

According to available datasets the application area intersects the Cheerawarra and Littoral Land Systems (GIS Database). The Cheerawarra Land System is characterised by sandy coastal plains and saline clay plains supporting soft and hard spinifex grasslands and minor tussock grasslands (Van Vreeswyk et al., 2004). Most units of this land system are highly susceptible to wind erosion if vegetative cover is depleted (Van Vreeswyk et al., 2004). The Littoral Land System is characterised by bare coastal mudflats with mangroves on seaward fringes, samphire flats, sandy islands, coastal dunes and beaches (Van Vreeswyk et al., 2004). Most of this land system is tidal flat which supports no vegetation (Van Vreeswyk et al., 2004). Potential impacts from erosion 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 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**

The proposed clearing is not located within a Department of Biodiversity Conservation and Attractions (DBCA) conservation reserves (GIS Database). The nearest known conservation areas are on islands off the Western Australian coast (GIS Database) and the application area is unlikely to provide any ecological linkage to these areas. The nearest mainland DBCA conservation area is Murujuga National Park, located approximately 37 kilometres east of the application area (GIS Database). At this distance the proposed clearing is unlikely to impact on the environmental values of the National Park.

The application area is within land reserved for 'conservation, recreation and natural landscapes' under the City of Karratha's Town Planning Scheme No. 8 (Department of Planning, 2000). The vegetation types identified within the application area are common locally and there are no significant habitat features such as caves, waterholes, significant creeklines or coastal dunes (West Ecology, 2011; GIS Database). While the proposed clearing will have an impact on the conservation area, the environmental values of the application area are not likely to be elevated above the substantial tracts of land also reserved under the Town Planning Scheme along the Dampier coastline. The relatively small size of the proposed clearing (40 hectares) is not likely to have an impact on the environmental values of this area.

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

Methodology

Department of Planning (2000)
West Ecology (2011)

GIS Database:
- DPaW Tenure
- Imagery
- Town Planning Zones

(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 wetlands or watercourses within the application area (GIS Database). With an average annual rainfall of approximately 299 millimetres and an annual evaporation rate of 3,200 millimetres it is expected that there would be little surface flow during normal seasonal rains. The soil and rock materials occurring on the mining tenement have a high level of permeability and this facilitates rapid infiltration of rainfall without substantial pooling (Norwest Sand and Gravel Pty Ltd, 2012). The proposed clearing is unlikely to cause deterioration in the quality of surface water in the local area.

According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). Generally, groundwater in the area is brackish with salinity levels between 1,000 – 3,000 milligrams per litre of total dissolved solids (GIS Database). It is not likely that the proposed clearing of 40 hectares will have an impact on the local and regional groundwater quality.

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

Methodology

BoM (2017)
Norwest Sand and Gravel (2012)

GIS Database:
- Groundwater Salinty, Statewide
- 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 climate of the region is semi-arid, with a low average rainfall of approximately 299 millimetres per year (BoM, 2017). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (GIS Database).

There are no permanent watercourses or waterbodies within the application area (GIS Database). Seasonal drainage lines are common in the region and temporary localised flooding may occur briefly following heavy rainfall events. The soil and rock materials occurring on the mining tenement have a high level of permeability and this facilitates rapid infiltration of rainfall without substantial pooling (Norwest Sand and Gravel Pty Ltd, 2012). 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 (2017)

GIS Database:
- Hydrography, linear

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

Comments

The clearing permit application was advertised on 30 October 2017 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. One submission was received raising concerns about impacts from dust on nearby residential areas. Impacts from dust will be managed through the mining proposal approval under the *Mining Act 1978.*

There is one native title claim over the area under application (DPLH, 2017). 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, 2017). 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 (2017)

4. References

Astron (2012) Cossack Gravel Lease M47/556 and L47/357 Terrestrial Fauna Desktop Study. Report prepared for Austwide Mining Title Management Pty Ltd by Astron Environmental Services, November 2012.

BoM (2017) Bureau of Meteorology Website - Climate Data Online, Cossack. Bureau of Meteorology. http://www.bom.gov.au/climate/averages/tables/cw_004054.shtml (Accessed 28 November 2017)

Biota (2008) A Survey of Coastal Dunes Between Cossack and Karratha for Lerista nevinae. Report prepared for the Pilbara Iron Company, by Biota Environmental Sciences, August 2010.

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

Department of Planning (2000) City of Karratha Town Planning Scheme No. 8, Updated to Include Amd 43 gg 14/07/2017.

DPLH (2017) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage. http://maps.daa.wa.gov.au/AHIS/ (Accessed 27 November 2017).

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 (2016) 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2016. WA Department of Parks and Wildlife, Perth.

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

Norwest Sand and Gravel (2012). Mining Proposal M47/556 – Cossack Gravel Lease and L47/357, Version 7, 28 November 2012.

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.

West Ecology (2011) Flora and Vegetation Survey of Welcome Exploration Tenements M47/411, M47/524, M47/556, M47/442 and M45/1195. Report Prepared for Welcome Exploration Pty Ltd by West Ecology, September 2011.

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
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
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.