

# **Clearing Permit Decision Report**

# 1. Application details

1.1. Permit application details

Permit application No.: 6968/1
Permit type: Purpose

1.2. Proponent details

Proponent's name: Siberia Mining Corporation Pty Ltd

1.3. Property details

Property: Mining Lease 24/39

Mining Lease 24/290 Mining Lease 24/352

Prospecting Licence 24/4182 City of Kalgoorlie-Boulder.

Local Government Area: City of Kalgoor Colloquial name: Siberia Project

1.4. Application

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

52.6 Mechanical Removal Mineral production and expansion of mining operations

including open pit cut back and waste landforms.

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 5 May 2016

# 2. Site Information

# 2.1. Existing environment and information

# 2.1.1. Description of the native vegetation under application

**Vegetation Description** 

The application area has been mapped as the following Beard vegetation association:

468: Medium woodland; salmon gum and goldfields blackbutt

A Level 1 Flora and Vegetation Survey of the application area was undertaken by Plantecology Consulting (Plantecology) (2015) during the period 5 – 6 November 2015. The vegetation survey identified the following ten vegetation types in the application area:

- Acacia hemiteles open shrubland Open Shrubland of Acacia hemiteles with emergent Casuarina
  obesa and scattered groves of Eucalyptus spp. over low open shrubland of Acacia erinacea,
  Eremophila scoparia and Senna artemisioides subsp. filifiolia on red brown silty loams on broad flats,
- 2. Acacia burkittii tall shrubland High shrubland of Acacia burkittii, Acacia incurvaneura and Acacia ramulosa subsp. ramulosa on red-brown silty loams on flats,
- 3. Acacia incurvaneura tall open shrubland Open scrub of Acacia incurvaneura, Acacia mulganeura and Acacia ramulosa subsp. ramulosa on red sandy loams on flats,
- Acacia quadrimarginea tall open shrubland Open scrub of Acacia quadrimarginea over low open shrubland of Dodonaea lobulata, Scaevola spinescens and Senna artemisioides subsp. filifolia on red loams on low stony rises,
- Acacia spp. closed scrub Closed scrub of mainly Acacia species such as Acacia acuminata, Acacia mulganeura and Acacia ramulosa subsp. ramulosa with Grevillea nematophylla subsp. supraplana, Eremophila ionantha and Prostanthera grylloana on red sandy loams on flats,
- Allocasuarina eriochlamys subsp. eriochlamys open shrubland Open scrub of Allocasuarina eriochlamys subsp. eriochlamys, Alyxia buxifolia and Acacia ramulosa subsp. ramulosa over Dodonaea microzyga, Phebalium lepidotum and Philotheca brucei subsp. brucei on shallow red earths on ironstone outcropping of low rises,
- Chenopod low open shrubland Low open shrubland of Atriplex bunburyana, Atriplex nummularia subsp. nummularia and Senna artemisioides subsp. filifolia over herbland of Sclerolaena diacantha and Eriochiton sclerolaenoides with occasional emergent Casuarina obesa and Eucalyptus griffithsii on brown silty loams on flats,
- 8. Chenopod low open shrubland Shrubland of Dodonaea lobulata, Scaevola spinescens and Senna artemisioides subsp. filifolia over Ptilotus obovatus with emergent Casuarina obesa and Eucalyptus salubris on red-brown loams on low stony rises.
- 9. Eucalyptus griffithsii low open woodland with *Triodia scariosa* Low open woodland of *Eucalyptus griffithsii* over tall open shrubland of *Acacia burkittii* and *Acacia ramulosa* subsp. *ramulosa* over low open hummock grassland of *Triodia scariosa* on red sandy loams on flats,
- 10. Eucalyptus lesouefii low open woodland Low open woodland of Eucalyptus lesouefii over open shrubland of Eremophila scoparia, Eremophila ionantha and Dodonaea lobulata over Olearia muelleri on red-brown loams on flats and simple slopes.

**Clearing Description** 

Siberia Project

Siberia Mining Corporation Pty Ltd proposes to clear up to 52.6 hectares of native vegetation within a boundary

of approximately 141.79 hectares for the purposes of mineral production and expansion of mining operations.

The project is located 20 kilometres north-northwest of Ora Banda in the City of Kalgoorlie-Boulder.

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

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Comment

The application area is located at a former mine site which ceased open pit mining operations in 2008. The site has been under care and maintenance since this time. The proposal requires the cutback of the existing Missouri and Sand King pits and the extension of the waste landforms (Piacentini & Son, 2016).

## Assessment of application against clearing principles

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

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

The application area is located within the Eastern Goldfield sub-region of the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Eastern Goldfield subregion is characterised by subdued relief and consists of undulating plains, low hills and ridges of Archaean greenstones and basic granulite. Calcareous earths are the dominant soil group. The vegetation of the bioregion includes Mallees, Acacia thickets and shrub-heaths on sandplains (CALM, 2002).

The flora and vegetation survey undertaken by Plantecology (2015), identified no Threatened Ecological Communities (TEC's) and no Priority Ecological Communities (PEC's) occurring within the application area. The flora and vegetation survey identified ten vegetation types within the application area (Plantecology, 2015). A total of 88 species (and two introduced species) from 47 genera and 21 families were recorded during the flora survey. No species of Threatened flora or Priority flora were recorded during the flora survey (Plantecology, 2015). The flora survey identified vegetation which ranged from *Eucalyptus* woodland, *Acacia* dominated shrublands to Allocasuarina open scrub (Plantecology, 2015).

Surrounding and adjacent areas have been previously disturbed by mining operations. Open pits, tracks, tailings facilities, waste rock dumps and areas of rehabilitation remain from past mining operations (Plantecology, 2015). The vegetation of the application area ranges in condition from very good to degraded (Plantecology, 2015). Two introduced (weed) species were recorded during the flora survey. One of these species, Nicotiana glauca (Tree Tobacco), was recorded in rehabilitation areas and has not invaded the native vegetation. The other weed species Salvia verbenaca was recorded in the chenopod low shrubland Plantecology, 2015). Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

A desktop fauna survey identified 388 fauna species potentially occurring within the application area (MBContracting, 2015). The fauna database search revealed records of four amphibian, 83 reptile, 114 bird and 29 mammal species potentially occurring within a 15 kilometre radius of the application area (MBContracting, 2015). MBContracting (2015) report a low probability of conservation significant species being present in the application area as the habitat is not suitable or large areas of suitable habitat in better condition are located nearby (MBContracting, 2015). The fauna survey reports no fauna habitat in the application area is critical to the survival of conservation significant fauna species (MBContracting, 2015).

Vegetation of the application area has been previously disturbed and the vegetation proposed to be cleared is well represented in the surrounding area (Government of Western Australia, 2014; GIS Database). It is unlikely the proposal will result in the clearing of native vegetation that has high biodiversity values. Surrounding, undisturbed vegetation is likely to contain areas of greater biodiversity value.

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

#### Methodology CALM (2002)

Government of Western Australia (2014) MBContracting (2015) Plantecology (2015)

## GIS Database:

- Pre-European Vegetation
- Threatened Fauna
- Threatened and Priority Flora
- TEC/PEC Boundaries
- TEC/PEC Buffer

# (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 Pro

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

A desktop fauna survey of the application and surrounding areas was undertaken by MBContracting (2015). The desktop survey identified 388 fauna species potentially occurring within a 15 kilometre radius of the application area (MBContracting, 2015). MBContracting (2015) report seven conservation significant fauna species have the potential to occur within the application area:

- Malleefowl (Leipoa ocellata Threatened)
- Rainbow Bee-eater (*Merops ornatus* Migratory)
- Peregrine Falcon (Falco peregrinus Other Specially Protected)
- Western Rosella (*Platycercus icterotis* subsp. xanthogenys Priority 4)
- Fork-tailed Swift (Apus pacificus Migratory)
- Western Quoll (Chuditch) (Dasyurus geoffroii Threatened)
- Central Long-eared Bat (Nyctophilus major) Priority 4)

There are no known records of Threatened fauna within the application area (GIS Database). The desktop survey reported a low probability of conservation significant species being present in the application area as the habitat is not preferred by fauna species or large areas of suitable habitat in better condition are located nearby (MBContracting, 2015). No fauna habitat in the application area is considered to be critical to the survival of conservation significant fauna species (MBContracting, 2015).

MBContracting (2015) report foraging and possibly breeding habitat for the Rainbow Bee-eater (*Merops omatus* – Migratory) may occur in the application area. The likelihood of occurrence of Rainbow Bee-eater individuals occurring is high to medium as reported by MBContracting (2015). It is unlikely Rainbow Bee-eater individuals would rely solely on the application area as the application area contains cleared vegetation and has been subjected to previous disturbance. The species also require close proximity to a permanent water source (DotE, 2016). No permanent water sources are located in or near the application area. Rainbow Bee-eaters are highly mobile and widely distributed around Australia, therefore the application area is not considered to be significant habitat for the species (DotE, 2016).

The area proposed to be cleared does not contain habitat critical for fauna species and the proposed clearing will not impact significant fauna habitat.

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

## Methodology

DotE (2016)

MBContracting (2015) Plantecology (2015)

GIS Database:

- 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

A search of available databases was undertaken and no Threatened flora were located in the application area (GIS Database). A flora survey was also undertaken by Plantecology (2015) which did not record species of Threatened flora in the application area. The native vegetation proposed to be cleared is not likely to contain or is not necessary for the continued existence of rare flora.

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

# Methodology

Plantecology (2015)

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

According to available databases, there are no Threatened Ecological Communities (TEC's) occurring within or near the application area (GIS Database). Plantecology (2015) reported no vegetation communities considered to be a TEC within or near the application area as a result of the flora survey.

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

# Methodology

Plantecology (2015)

GIS Database:

- TEC/PEC Boundaries
- TEC/PEC 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 Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 97.96% of the pre-European vegetation remains in Western Australia (refer to table below) (Government of Western Australia, 2014; GIS Database).

The native vegetation located in the application area has been mapped as Beard vegetation association 468; Medium woodland; salmon gum and goldfields blackbutt (GIS Database). This vegetation association has not been extensively cleared as over 98% remains at both State and bioregional levels (refer to table) (Government of Western Australia, 2014). Vegetation association 468 has not been extensively cleared in the Coolgardie bioregion and the vegetation conservation status is considered to be of least concern (Department of Natural Resources and Environment, 2002). The area proposed to be cleared is not considered to be significant as a remnant in an area that has been extensively cleared (GIS Database).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in All DPaW Managed Land
IBRA Bioregion – Coolgardie	12,912,204	12,648,491	~ 97.96	Least Concern	15.89
Beard veg assoc.  – State					
468	592,022	583,903	~98.63	Least Concern	22.85
Beard veg assoc.  – Bioregion					
468	583,358	575,361	~ 98.63	Least Concern	22.43

<sup>\*</sup> Government of Western Australia (2014).

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 (2014)

GIS Database:

- IBRA WA (Regions Sub Regions)
- 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 to be at variance to this Principle

There are no permanent watercourses or water bodies mapped within the application area (GIS Database). Two minor, ephemeral watercourses are located in the north-east and north-west portions of the application area (GIS Database). The flora survey prepared by Plantecology (2015) recorded no riparian or wetland dependant vegetation or watercourses in the survey area. No vegetation is growing in, or in association with an environment associated with a watercourse.

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

## Methodology

Plantecology (2015)

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 is not likely to be at variance to this Principle

Northcote, et al. (1960-68) describe soils in the application area as shallow, calcareous, loamy soils with shallow, grey-brown calcareous earths to alkaline red earths with limestone on gently undulating valley plains and pediments (Plantecology, 2015; GIS Database). These soils do not readily erode but may be subjected to minor wind erosion once vegetation has been cleared. Localised surface water run-off may occur following

<sup>\*\*</sup> Department of Natural Resources and Environment (2002).

heavy rainfall events and if surface water drainage on-site is not managed. It is unlikely the proposal will change soil salinity levels or impact on-site or off-site nutrient export. Clearing activities are not likely to cause adverse land degradation impacts.

The surrounding area has been cleared of native vegetation for current and past mining activities. It is unlikely that the relatively small amount of clearing required for the proposal (52.6 hectares) within a 141.79 hectare boundary area will cause appreciable land degradation.

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

### Methodology

Northcote, et al. (1960-68)

Plantecology (2015)

GIS Database:

- Hydrography, linear

# (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 at variance to this Principle

The application area does not lie within any conservation areas or Department of Parks and Wildlife managed lands (Plantecology, 2015; GIS Database). The nearest conservation area is the former Goongarrie Pastoral Station (proposed for conservation) which is located approximately 3.5 kilometres north-east of the application area (GIS Database). As this conservation area is located a considerable distance from the application area, the proposed clearing is not likely to have any impacts on the environmental values of this or any other conservation area.

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

### Methodology

Plantecology (2015)

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

No Public Drinking Water Source Areas (PDWSA's) are located within or in the vicinity of the application area (GIS Database). There are no permanent watercourses or wetlands located within the application area (Plantecology, 2015; GIS Database). The nearest permanent watercourse, Lake Owen, is located 7.2 kilometres north-east of the application area. Therefore, the clearing of native vegetation required for the proposal will not cause deterioration in the quality of surface water, including sedimentation, erosion, turbidity or eutrophication of water bodies on-site or off-site.

The groundwater within the application area is between 10,000 – 30,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). It is not expected that the proposed clearing of 52.6 hectares within a permit boundary of 141.79 hectares would adversely alter groundwater salinity levels within the application or surrounding area. The proposed clearing is not likely to have an impact on the quality of groundwater either onsite or off-site of the application area.

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

# Methodology

Plantecology (2015)

GIS Database:

- Groundwater Salinity, 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 mean annual rainfall recorded at the nearest weather station located at Ora Banda (approximately 20 kilometres south – southeast of the application area) is 241.4 millimetres (BoM, 2016). Total average annual evaporation for the area is 2,800 millimetres (BoM, 2016). For this reason, there is likely to be little surface flow during normal seasonal rains (BoM, 2016). It is unlikely that the proposed clearing will cause or exacerbate the incidence or intensity of flooding.

The soils of the application area are not subject to waterlogging during normal seasonal rainfall (Northcote, et al. 1960-68; GIS Database). The application area receives low annual rainfall and high average annual

evaporation (BoM, 2016). For these reasons, the relatively small amount of native vegetation clearing is unlikely to increase flooding of the application area. The surrounding area is also well vegetated further reducing the likelihood of or intensity of flooding (GIS Database).

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

Methodology BoM (2016)

Northcote, et al. (1960-68) Plantecology (2015)

GIS Database:

- Hydrography, linear

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

#### Comments

There are no Native Title claims over the area under application (DAA, 2016). 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 (DAA, 2016). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal sites of significance are damaged through the clearing process.

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

The clearing permit application was advertised on 14 March 2016 by the Department of Mines and Petroleum inviting submissions from the public. There were no submissions received.

Methodology DAA (2016)

## 4. References

BoM (2016) Bureau of Meteorology Website - Climate Data Online, Ora Banda. Bureau of Meteorology. http://www.bom.gov.au/climate/data/index.shtml. (Accessed 18 April 2016).

- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Coolgardie (COO3 Eastern Goldfield subregion) Department of Conservation and Land Management, Perth, Western Australia.
- DAA (2016) Aboriginal Heritage Inquiry System. Department of Aboriginal Affairs. http://maps.dia.wa.gov.au/AHIS2 (Accessed 18 April 2016).
- DotE (2016) *Merops ornatus* in Species Profile and Threats Database. Department of the Environment. http://www.environment.gov.au/sprat. Department of the Environment, Canberra. (Accessed 18 April 2016).
- 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 (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Western Australian Department of Parks and Wildlife, Perth, Western Australia.
- Keighery B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of Western Australia (Inc.). Nedlands, Western Australia.
- MBContracting (2015) Desktop Fauna Assessment, Proposed Clearing Envelope, Siberia Mine. Report prepared for Piacentini and Son Ltd by MBContracting Environmental and Media Consulting Services, Perth, Western Australia, December 2015.
- Northcote, K. H. with Beckmann G. G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Piacentini & Son (2016) Level 1 Flora and Fauna Survey, Siberia Minesite, Eastern Goldfields Ltd. Piacentini & Son, Bunbury, Western Australia, January 2016.
- Plantecology Consulting (2015) Siberia Mine, Davyhurst Flora and Vegetation Survey. Report prepared for Piacentini and Son Ltd, by Plantecology Consulting, Perth, Western Australia, December 2015.

# 5. Glossary

# **Acronyms:**

BoMBureau of Meteorology, Australian GovernmentDAADepartment of Aboriginal Affairs, Western AustraliaDAFWADepartment of Agriculture and Food, Western Australia

DEC Department of Environment and Conservation, Western Australia (now DPaW and DER)

**DER** Department of Environment Regulation, Western Australia

**DMP** Department of Mines and Petroleum, Western Australia

**DRF** Declared Rare Flora

**DotE** Department of the Environment, Australian Government

**DoW** Department of Water, Western Australia

**DPaW** Department of Parks and Wildlife, Western Australia

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

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 (2015) 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.

**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.

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.