

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.:

7960/1

Permit type:

Purpose Permit

1.2. Proponent details

Proponent's name:

Norton Gold Fields Limited

1.3. Property details

Property:

Mining Lease 24/272 Mining Lease 24/417 Mining Lease 24/423 Mining Lease 24/426 Mining Lease 24/428

Miscellaneous Licence 24/207

ocal Government Area:

City of Kalgoorlie-Boulder Liberty Haul Road

olloquial name:

1.4. Application

Clearing Area (ha)

No. Trees

Method of Clearing

For the purpose of:

Mechanical Removal

Haul Road

1.5. Decision on application

Decision on Permit Application:

Grant

Decision Date:

08 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 two Beard vegetation associations:

468: Medium woodland; salmon gum and goldfields blackbutt; and

2901: Mosaic: Medium woodland; *Allocasuarina cristata* and goldfields blackbutt Shrublands; *Acacia quadrimarginea* thicket (GIS Database).

A flora and vegetation survey was conducted over the application area by Native Vegetation Solutions during October, 2017. The following vegetation associations were recorded within the application area (Native Vegetation Solutions, 2018).

Open chenopod and sclerophyll shrubland: Alectryon oleifolius, Casuarina pauper, Eremophila scoparia, Cratystylis subspinescens, Maireana pyramidata and Atriplex nummularia subsp. spathulata;

Acacia acuminata shrubland with emergent Eucalyptus griffithsii: Eucalyptus griffithsii, Acacia acuminata, Eremophila granitica. Acacia hemiteles. Eremophila decipiens subsp. decipiens and Ptilotus obovatus;

Eremophila miniata creekline vegetation: Eremophila miniata, Eremophila scoparia, Cratystylis subspinescens, Maireana pyramidata and Atriplex nummularia subsp. spathulata;

Transitional Eucalyptus woodland: numerous Eucalypt species, Eremophila sp. Mt Jackson, Eremophila interstans subsp. virgata, Maireana sedifolia, Eremophila scoparia, Eremophila dempsteri, Exocarpos aphyllus, Senna artemisioides subsp. filifolia and Olearia muelleri;

Casuarina pauper over sclerophyll shrubland: Casuarina pauper, Eremophila oldfieldii, subsp. angustifolia, Dodonaea lobulata, Scaevola spinescens, Atriplex nummularia subsp. spathulata, Acacia tetragonophylla and Olearia muelleri;

Mixed Eucalyptus woodland over mixed sclerophyll shrubland: Eucalyptus griffithsii, E. clelandii, Eremophila sp. Mt Jackson, Eremophila oldfieldii subsp. angustifolia, Dodonaea lobulata, Scaevola spinescens, Olearia muelleri and Ptilotus obovatus;

Acacia quadrimarginea shrubland: Acacia quadrimarginea, Acacia ramulosa subsp. linophylla, Eremophila granitica, Eremophila clarkei, Ptilotus obovatus and Chrysocephalum puteale.

Clearing Description

Liberty Haul Road.

Norton Gold Fields Limited proposes to clear up to 50 hectares of native vegetation within a boundary of approximately 58.6 hectares, for the purpose of a haul road. The project is located approximately 28 kilometres

northwest of Kalgoorlie within the City of Kalgoorlie-Boulder.

Vegetation Condition

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

Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate

(Keighery, 1994).

Comment

The vegetation condition was derived from a Level 1 vegetation survey conducted by Native Vegetation Solutions during October 2018. Evidence of some grazing was observed during the field assessment however overall, the condition of the vegetation was determined to be "Very Good" with areas which were affected by grazing and other exploration activities in "Good" condition (Native Vegetation Solutions, 2018).

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 may be at variance to this Principle

The clearing permit application area is located within the Eastern Goldfield subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Coolgardie Bioregion (GIS Database).

The vegetation within the application area is broadly mapped as Beard vegetation associations 468 and 2901. which are common and widespread throughout the Coolgardie bioregion with over approximately 95% of the pre-European vegetation extents remaining (Government of Western Australia, 2016; GIS Database). A search of The Department of Parks and Wildlife Declared Rare and Priority Flora databases revealed that no Threatened Flora species and six Priority flora species may potentially occur within a 20-kilometre radius of the application area (DPaW, 2018).

A Level 1 vegetation survey conducted by Native Vegetation Solutions (2018) of the application area and extended corridors was undertaken on the 11th of October 2017. This survey identified 116 flora taxa, from 52 genera, belonging to 24 families within the broader survey area. Native Vegetation Solutions (2018) identified eight vegetation communities within the application area, with the condition of these vegetation types ranging from 'good' to 'very good' (Keighery, 1994). Native Vegetation Solutions (2018) identified no Threatened or Priority flora species within the application area. No evidence suggests that the application area contains higher biodiversity than what is considered typical for the Coolgardie region.

There are no known Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) mapped within the application area (GIS Database). During a flora and vegetation survey, no TECs or PECs were recorded within the application area (Native Vegetation Solutions, 2018). The nearest Threatened or Priority Ecological Community is Mount Belches (P3), which is located approximately 105 kilometres to the south-west of the application area (GIS Database).

The Department of Parks and Wildlife Nature Map database identified nine locations of Leipoa ocellata (Malleefowl) EPBC Act 1999 listing status of vulnerable within a 20km radius of the application area (DPaW. 2018). No other fauna listings of significance were identified within 20km of the application area (DPaW, 2018).

A Level 1 Fauna survey was undertaken by Terrestrial Ecosystems during November 2017. The Fauna survey covered the application area as part of a broader survey boundary and all reported fauna observations were typical of the area. Six Malleefowl mounds and one Malleefowl sighting were recorded within the broader survey area.

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

Methodology

CALM (2002)

DPaW (2018)

Native Vegetation Solutions (2018) Terrestrial Ecosystems (2018)

GIS Database:

- IBRA Australia
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened Ecological Sites Buffered
- 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 indigenous to Western Australia.

Comments Proposal may be at variance to this Principle

A Level 1 Fauna survey was undertaken by Terrestrial Ecosystems during November 2017 the following four broad fauna habitats were recorded within the greater survey area inclusive of the application area (Terrestrial Ecosystems, 2018):

- Open shrubland with an understory of spinifex or tussock grasses;
- Open eucalypt woodland over shrubs and chenopods of varying densities;
- Dense shrubland; and
- Mallee and shrubs of varying density.

All habitats identified within the survey are common within the goldfields. Based on the habitats type and fauna surveys in the local area, the following species of conservation significance listed as either threatened species under the *EPBC Act* or protected under Western Australian legislation (*Wildlife Conservation Act 1950*) are likely to occur within the application area.

- Malleefowl (Leipoa ocellata) Vulnerable Recorded in the broader survey area; and
- Rainbow Bee-eater (Merops ornatus) Migratory.

The Rainbow Bee-eater is widespread during late spring and summer in the southern section of WA, particularly in sandy areas that have access to water. This species may be recorded in the project area, but any impacts are unlikely to be significant in a bioregional context, given its very large geographic distribution and abundance. Terrestrial Ecosystems' assessment is that the proposed clearing in the project area is unlikely to have a significant impact on this species and it will also readily move to other areas if it is disturbed (Terrestrial Ecosystems, 2018).

Malleefowl (*Leipoa ocellata*) nest in the same general area year-after-year, and will often use the same nest mound. Outside the breeding period, birds will range over several square kilometres. Chicks are independent from hatching and disperse widely, moving up to 2km per day and do not appear to respond to habitat boundaries (Terrestrial Ecosystems, 2018).

Malleefowl was recorded within the broader survey with sightings, active and non-active mounds reported, however none of these records were within the current application area and were all located within the broader survey area approximately 15km away from the application area. As part of the Level 1 survey Terrestrial Ecosystems mapped the habitat suitable for Malleefowl, as Malleefowl chicks are not strictly habitat dependant it would be assumed the mapped habitat is habitat for Malleefowl breeding and foraging. The designated Malleefowl habitat was isolated to an area approximately 15 kilometres to the northeast of the application area so the proposed clearing would unlikely impact on the environmental values of Malleefowl breeding or foraging (Terrestrial Ecosystems, 2018).

Due to the presence of Malleefowl breeding and foraging habitat within the local area and potential risk to roaming Malleefowl, impacts to Malleefowl may be minimised by the implementation of a fauna management condition.

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

Methodology

Terrestrial Ecosystems (2018)

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 (Native Vegetation Solutions, 2018).

The vegetation associations within the application area are common and widespread within the region (Native Vegetation Solutions, 2018; GIS Database). 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 Native Vegetation Solutions (2018)

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). The nearest Priority Ecological Community (PEC) is Mount Belches (P3), which is located approximately 105 kilometres to the south-west of the application area (GIS Database).

A flora and vegetation survey of the application area did not identify any TECs (Native Vegetation Solutions, 2018).

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

Methodology

Native Vegetation Solutions (2018)

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 Coolgardie Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 98% of the pre-European vegetation still exists in the IBRA Coolgardie Bioregion (Government of Western Australia, 2016). The application area is broadly mapped as Beard vegetation associations 2901 and 468 (GIS Database). Approximately 96% of the pre-European extent of each of these vegetation associations 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 – Coolgardie	5,058,246	5,031,528	~99	Least Concern	8.64
Beard vegetation associations – WA					
468	592,022	583,902	~99	Least Concern	23
2901	36,012	34,451	~96	Least Concern	3
Beard vegetation associations – COO03 Bioregion					
468	583,357	575,360	~98	Least Concern	22
2901	35,470	33,995	~96	Least Concern	3

^{*} Government of Western Australia (2016)

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:

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

- 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 to be at variance to this Principle

There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). Several minor seasonal creek lines pass through the application area (GIS Database). Creek lines in the region are generally dry for most of the year, only flowing briefly immediately following significant rainfall.

As the haul road is a permanent feature risks to seasonal surface water flows and associated riparian vegetation may be minimised by the implementation of a watercourse management condition.

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

Methodology

GIS Database:

- Hydrography, Lakes
- 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 at variance to this Principle

The application area is within the Yilgarn Craton's 'Eastern Goldfields Terrains'. The underlying geology is of gneisses and granites eroded into a flat plane covered with tertiary soils with scattered exposures of bedrock. Calcareous earths are the dominant soil group and cover much of the plains and greenstone areas (CALM, 2002).

The soils of the application area are broadly mapped as soil types SV15 (Northcote et al., 1960-68; GIS Database).

The soil type is described as:

SV15: Salt lakes and their associated areas: common soils are gypseous and saline loams together with gypseous and saline soils on the lake beds (Northcote et al., 1960-68).

The majority of the application area is relatively flat, there are no permanent watercourses or waterbodies in the application area and the region receives a relatively low annual rainfall (GIS Database). Although the removal of vegetation cover may result in localised erosion, the proposed clearing of up to 50 hectares of native vegetation within a boundary of approximately 58.6 hectares, is unlikely to cause appreciable land degradation.

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

Methodology

CALM (2002)

Northcote et al. (1960-68)

GIS Database:

- Contours
- 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 former Credo Pastoral Lease, which is located approximately 27 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

There are no Public Drinking Water Source Areas within or in close proximity to the application area. The closest Public drinking water source is the Broad Arrow Dam catchment area approximately five kilometres north of the application area (GIS Database). There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). Creek lines in the region are generally dry for most of the year, only flowing briefly immediately following significant rainfall. The proposed clearing is unlikely to result in significant changes to surface water flows.

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

GIS Database:

- Hydrography, Linear
- Public Drinking Water Source Areas

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments

Proposal is not likely to be at variance to this Principle

The climate of the region is arid to semi-arid, with a low average rainfall of approximately 266.9 millimetres per year (BoM, 2018: CALM, 2002). Based on an average annual evaporation rate of 2,400 - 2,800 millimetres (BoM, 2018), any surface water resulting from rainfall events is likely to be relatively short lived.

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. However, 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)

CALM (2002)

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 05 February 2018 by DMIRS inviting submissions from the public. No submissions were received in relation to this application.

There are two native title claims over the area under application (DPLH, 2018). The mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2018). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

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

Methodology

DPLH (2018)

4. References

BoM (2018) Climate Statistics for Australian Locations. A Search for Climate Statistics for Kalgoorlie-Boulder, Australian Government Bureau of Meteorology. http://www.bom.gov.au/climate/averages/tables/cw_012038.shtml (Accessed 19 February 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 19 February 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.
- DPaW (2018) NatureMap Mapping Western Australia Biodiversity, Department of Parks and Wildlife. http://naturemap.dpaw.wa.gov.au. (Accessed 06 February 2018).
- 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.
- Native Vegetation Solutions (2018) Level 1 Flora and Vegetation Survey of the Liberty and Stockyard Haul Roads. Report prepared for Norton Gold Fields Limited, January 2018.
- 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.
- Terrestrial Ecosystems (2018) Level 1 Fauna Risk Assessment and the results of a Malleefowl for the Golden Cities project area. Report prepared for Norton Gold Fields Limited, January 2018
- Western Australian Herbarium (1998 -). FloraBase the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. https://florabase.dpaw.wa.gov.au/ (Accessed 19 February 2018).

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.