

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7985/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Alinta Energy (Chichester) Pty Ltd

1.3. Property details

Property: Mining Lease 46/334

Mining Lease 46/420 Mining Lease 46/421

Local Government Area: Shire of East Pilbara

Colloquial name: Christmas Creek Solar Field

1.4. Application

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

160 Mechanical Removal Solar field

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 2 August 2018

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

The vegetation of the application area is broadly mapped as the following Beard vegetation association: 29: sparse low woodland, mulga (GIS Database).

Flora and vegetation surveys were conducted by ENV Australia Pty Ltd (ENV Australia) over the Christmas Creek study area during March and April 2011, April and May 2012, June 2012 and May 2013, which covered the application area.

The following vegetation associations were recorded within the application area (ENV Australia, 2013):

- Low Woodland to Low Open Forest of Acacia aneura var. aneura, Acacia pruinocarpa, Acacia tetragonophylla, Acacia tenuissima, Grevillea wickhamii subsp. aprica, Psydrax latifolia over Dodonaea petiolaris and species of Triodia and Aristida.
- Low Open Woodland of Acacia aneura var. aneura, Acacia pruinocarpa, Acacia xiphophylla, Acacia victoriae over Acacia tetragonophylla, Psydrax latifolia and Psydrax suaveolens over Ptilotus obovatus and mixed species of Maireana and Sclerolaena.

Clearing Description

Christmas Creek Solar Field.

Alinta Energy (Chichester) Pty Ltd proposes to clear up to 160 hectares of native vegetation within a boundary of approximately 245 hectares, for the purpose of constructing a solar field and associated infrastructure. The project is located approximately 120 kilometres north-west of Newman, within the Shire of East Pilbara.

Vegetation Condition

Very Good: Vegetation structure altered; obvious signs of disturbance (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 vegetation surveys conducted by ENV Australia (2013).

The proposed clearing is for the construction of a solar field and associated infrastructure adjacent to FMG's Christmas Creek Substation, which will supply FMG's Christmas Creek mine site with power to support ongoing mining operations. Construction activities for the Christmas Creek Solar Field include the following broad categories:

• Installation of underground electrical cables and communication services;

- Construction of control room, inverter containers, small office and step-up substation;
- Installation of steel piles and frames to support solar panels;
- Installation and connection of solar panels onto steel support structures; and
- Installation of security fence around the perimeter of the facility.

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 may be at variance to this Principle

The clearing permit application area is located within the Fortescue Plains subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Pilbara Bioregion (GIS Database). The Fortescue Plains subregion can be described as alluvial plains with *Acacia aneura* over grass communities and *Eucalyptus camaldulensis* woodlands fringing drainage lines (CALM, 2002).

The application area does not intersect any Threatened Ecological Communities (TECs), Priority Ecological Communities (PECs) or known locations of Threatened flora (GIS Database). One PEC, the Fortescue Marsh, occurs approximately 5 kilometres to the south west of the application area (GIS Database). The proposed clearing is unlikely to impact the PEC as clearing will be kept to a minimum within the application area and only as required (Preston Consulting, 2018).

The vegetation within the application area is considered to be in 'Good' to 'Very Good' condition (ENV Australia, 2013). The majority of the vegetation within the application area is considered to be in a 'Very Good' condition (ENV Australia, 2013).

The proposed clearing area lies within an area of approximately 70,144 hectares which was surveyed for FMG's Christmas Creek Iron Ore Mine (ENV Australia, 2013). A total of 485 taxa, representing 17 genera belonging to 53 families were recorded during the surveys from 2011 and 2013 within the broad study area, reflecting good seasonal conditions and intrinsically high species diversity, particularly of mulga and riparian vegetation.

Flora and vegetation surveys conducted by ENV Australia (2013) over the application area and surrounding area recorded one Priority Flora species within the proposed clearing area, *Rhagodia* sp. Hamersley (Priority 3). It was recorded at 139 locations in the study area during ENV Australia's 2011 survey, of which 17 were recorded within the application area (ENV Australia, 2013).

The proposed clearing will require the disturbance of several *Rhagodia* sp. Hamersley recorded within the application area, however, it is unlikely to impact the conservation significance of this species as it was recorded in numerous locations outside the application area. Its extent was expected to be potentially underrepresented in ENV Australia's survey due to the difficulty of positively recognising the species in the field (Preston Consulting, 2018). Therefore this species may be more locally abundant than the recorded numbers from previous surveys (ENV Australia, 2013). Additionally, all known locations of Priority Flora species will be recorded in Alinta Energy's Ground Disturbance Permit system and known locations shall be avoided where reasonably practicable (Preston Consulting, 2018).

The proposed clearing area lies within the broad vertebrate fauna survey area of the Christmas Creek Iron Ore Mine (ENV Australia, 2012). A total of 120 vertebrate fauna species, consisting of four amphibian species, 45 reptile species, 60 birds and 11 mammal species, were recorded during the survey. All of the species recorded are typical of the Pilbara and the majority of them have been recorded previously in this area (ENV Australia, 2012).

One broad fauna habitat, Stony Plain, was recorded within the application area (ENV Australia, 2012). This fauna habitat is considered to be common and widespread in the surrounding area, and of low habitat value (ENV Australia, 2012). The proposed clearing of 160 hectares of native vegetation within a 245 hectare boundary is unlikely to have a significant impact on faunal diversity in a regional and local context.

There were no weed species recorded within the application area, however, weed species were recorded adjacent to the northern edge of the application area (Preston Consulting, 2018). Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. Potential impacts to biodiversity as result of the proposed clearing may be minimised by the implementation of a weed management condition.

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

Methodology CALM (2002)

ENV Australia (2012) ENV Australia (2013) Preston Consulting (2018)

GIS Database:

- IBRA Australia
- Threatened and Priority Ecological Communities boundaries

(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

A Level 2 vertebrate fauna survey of the Christmas Creek study area was conducted by ENV Australia in 2011, which covered the application area. One broad fauna habitat, Stony Plain, was recorded within the application area (ENV Australia, 2012). The Stony Plain habitat consisted of a Low Woodland of *Acacia aneura*, *Acacia pruinocarpa*, *Acacia tetragonophylla* and *Acacia xiphophylla* over *Triodia* and *Aristida* species. This habitat type contains limited microhabitats with the dominant *Acacia* species providing no tree hollows, few logs, limited leaf litter and sparse vegetation (ENV Australia, 2012).

The Stony Plain habitat was identified as being of 'low habitat value' for fauna and was widespread in the surrounding area (ENV Australia, 2012).

Sixteen conservation significant fauna species were recorded or listed as possibly occurring in the vicinity of the ENV Australia (2012) study area. Of these, three species of conservation significance were recorded within the study area (ENV Australia, 2012). A single individual of the conservation significant species, the Pilbara Olive Python (*Liasis olivaceus barroni*) (Vulnerable), was recorded from degraded Drainage Line habitat. Singles, pairs and a group of three individual Australian Bustard (*Ardeotis australis*) (Priority 4 – DBCA) were recorded widely throughout the study area. Small numbers of the Western Star Finch (*Neochimia ruficauda subclarescens*) (Priority 4 – DBCA) were recorded in Alluvial Plain and Drainage Line habitat near free-standing water.

The Pilbara Olive Python typically occupies rocky habitat (ENV Australia, 2012), it is unlikely this species will be impacted by the proposed clearing as this species' preferred habitat does not occur within the application area. The Australian Bustard is a highly mobile species, and is unlikely to be impacted by localized vegetation clearance (ENV Australia, 2012). The Western Star Finch is typically a resident species with a relatively small home range (ENV Australia, 2012). It typically inhabits permanent water bodies and drainage lines. As these features are not found within the application area, it is unlikely this species will be impacted by the proposed clearing.

Fauna refuges such as logs will be pushed to the side of the clearing areas and retained where practicable (Preston Consulting, 2018). The proposed clearing of 160 hectares within a total boundary of approximately 245 hectares is unlikely to have a significant impact on the local fauna habitats.

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

Methodology ENV Australia (2012)

Preston Consulting (2018)

(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 (ENV Australia, 2013).

The vegetation associations within the application area are common and widespread within the region (ENV Australia, 2013; 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 ENV Australia (2013)

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

There are two Threatened Ecological Communities (TECs) in the Pilbara bioregion: the 'Themeda grasslands on cracking clays (Hamersley Station, Pilbara)' and the 'Ethel Gorge aquifer stygobiont community'. Neither TEC is located within or in close proximity to the application area (GIS Database).

Flora and vegetation surveys of the application area did not identify any TECs (ENV Australia, 2013).

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

Methodology ENV Australia (2013)

GIS Database:

- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffered

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments Proposal is not at variance to this Principle

The application area falls within the Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99% of the pre-European vegetation still exists in the IBRA Pilbara Bioregion (Government of Western Australia, 2018). The application area is broadly mapped as Beard vegetation association 29: sparse low woodland, mulga (GIS Database). The pre-European extent of this vegetation association remains at approximately 99% uncleared at both the state and bioregional level (Government of Western Australia, 2018).

Therefore, the application area does not represent a significant remnant of native vegetation in an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DBCA managed lands	
IBRA Bioregion – Pilbara	17,808,657	17,733,584	99	Least Concern	10.12	
Beard vegetation associations – WA						
29	7,903,991	7,900,200	99	Least Concern	6.28	
Beard vegetation associations – Pilbara Bioregion						
29	1,133,220	1,132,939	99	Least Concern	9.38	

^{*} Government of Western Australia (2018)

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 (2018)

GIS Database:

- IBRA Australia
- Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments Proposal is at variance to this Principle

There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database; Preston Consulting, 2018). Several small un-named ephemeral watercourses are located close to the south and west boundaries of the application area, which drain into the Fortescue Marsh (Preston Consulting, 2018). There are also minor, ephemeral watercourses located within the application area. However, they do not appear to drain into the Fortescue Marsh (GIS Database).

Based on the above, the proposed clearing is at variance to this Principle. Potential impacts to vegetation growing in association with the watercourse may be minimised by the implementation of a watercourse management condition.

Methodology Preston Consulting (2018)

GIS Database:

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

- 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 to be at variance to this Principle

The application area lies within the Turee land system (GIS Database). This land system has been mapped and described in technical bulletins produced by the former Department of Agriculture (now the Department of Primary Industries and Regional Development).

The Turee land system is described as stony alluvial plains with gilgaed and non-gilgaied surfaces supporting tussock grasslands and grassy shrublands. This land system is not generally susceptible to erosion (Kendrick, 2001), particularly stony plains.

The proposed clearing of up to 160 hectares of native vegetation within a boundary of approximately 245 hectares, for the purpose of a solar field and associated infrastructure is unlikely to cause appreciable land degradation.

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

Methodology

Kendrick (2001)

GIS Database:

- Landsystem Rangelands
- Soils, Statewide

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments

Proposal is not likely to be at variance to this Principle

There are no conservation areas in the vicinity of the application area. The nearest DBCA (formerly DPaW) managed land is the Karijini National Park which is located approximately 100 kilometres west of the application area (GIS Database).

The application area lies within the buffer zone of the Fortescue Marsh Priority Ecological Community (ENV Australia, 2013; GIS Database), which is an Environmentally Sensitive Area. The Fortescue Marsh is located approximately 5 kilometres to the south west of the nearest section of the application area, therefore the proposed clearing is unlikely to cause direct impacts to the PEC.

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

ENV Australia (2013)

GIS Database:

- DPaW Tenure
- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffered

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments

Proposal is not likely to be at variance to this Principle

There are no Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database). There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). Creek lines in the region are 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 groundwater within the application area is between 500 – 1,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be fresh water. It would not be expected that the proposed clearing would cause salinity levels within the application or surrounding area to alter.

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

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

Methodology GI

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 climate of the region is semi-arid, with a low average rainfall of approximately 332.6 millimetres per year (BOM, 2018). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (Preston Consulting, 2018).

There are no permanent water courses 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)

Preston Consulting (2018)

GIS Database:

- Hydrography, linear

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

Comments

The clearing permit application was advertised on 26 February 2018 by the Department of Mines, Industry Regulation and Safety (DMIRS) inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the area under application (DPLH, 2018). 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, 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 (Bureau of Meteorology) (2018) Climate statistics for Australia locations – Newman Aero. www.bom.gov.au/climate/averages/tables/cw 007176.shtml (Accessed 23 July 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 23 July 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

ENV Australia (2012) Christmas Creek Terrestrial Vertebrate Fauna and Fauna Habitat Assessment. Report prepared for FMG Pty Ltd, by ENV Australia Pty Ltd, 2012.

ENV Australia (2013) Christmas Creek Life of Mine Flora and Vegetation Assessment – Update. . Report prepared for FMG Pty Ltd, by ENV Australia Pty Ltd, 2013.

Government of Western Australia (2018) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

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

Kendrick, P. (2001) Pilbara 2 (PIL2 – Fortescue Plains Subregion). In: A Biodiversity Audit of Western Australia's 53
Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

Preston Consulting (2018) Native Vegetation Clearing Permit Application, Christmas Creek Solar Field – Supporting Information. Report prepared for Alinta Energy (Chichester) Pty Ltd, by Preston Consulting Pty Ltd, 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.	
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