



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8639/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Cassini Resources Limited**

1.3. Property details

Property: Miscellaneous Licence 69/42
Local Government Area: Shire of Ngaanyatjarraku
Colloquial name: West Musgrave Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 14 November 2019

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 associations:

18: Low woodland; mulga (*Acacia aneura*); and
19: Low woodland; mulga between sandridges (GIS Database).

No flora or vegetation surveys have been undertaken over the application area.

Clearing Description West Musgraves Project.
Cassini Resources Limited proposes to clear up to 40 hectares of native vegetation within a boundary of approximately 13,539 hectares, for the purpose of hydrogeological investigations. The project is located approximately 70 kilometres east of Warburton, within the Shire of Ngaanyatjarraku.

Vegetation Condition Pristine: No obvious signs of disturbance (Keighery, 1994);
To:
Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Comment The proposed clearing is for drill pads, water bores and associated access tracks.

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 application area occurs within the Mann-Musgrave Block subregion of the Central Ranges Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by sandplains supporting low open woodlands of either Desert Oak or Mulga over *Triodia basedowii* hummock grasslands. Low open woodlands of Ironwood (*Acacia estrophiolata*) and Corkwoods (*Hakea* spp.) over tussock and hummock grasses often fringe ranges. The ranges support mixed wattle scrub or *Callitris glaucophylla* woodlands over hummock and tussock grasslands (Graham and Cowan, 2001).

Graham and Cowan (2001) assessed the biodiversity of the Mann-Musgrave Block IBRA subregion, finding that the subregion is rich and diverse in both its flora and fauna. However, most species are wide ranging and usually occur in at least one, and often several adjoining subregions (Graham and Cowan, 2001).

A flora and vegetation survey was undertaken by Western Botanical (2018) which intersects the south-eastern portion of the application area. The survey identified no Threatened flora species, and nine Priority flora species (Western Botanical, 2018), and according to aerial imagery suitable habitat is likely to occur within the application area (GIS Database).

The Priority 3 flora species *Eragrostis* sp. Limestone was located adjacent to the application area (Western Botanical, 2018). This species is known to have limited populations within Western Australia (Western Botanical, 2018; Western Australian Herbarium, 1998-).

CALM (2002) note that flora species within the Central Ranges bioregion are wide ranging, and often occur in one or more adjacent bioregions. Searches of available databases revealed several other species of Priority flora that, based on the vegetation and landforms present, could potentially be present within the application area (Western Australian Herbarium, 2019; GIS Database). Potential impacts to conservation significant flora as a result of the proposed clearing may be minimised by the implementation of a flora management condition.

There are no known Threatened or Priority Ecological Communities within the application area (GIS Database).

Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The vegetation and habitat types occurring within the application area are well represented in the region (GIS Database), and the application area is unlikely to be of higher biodiversity value than the surrounding areas.

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

Methodology CALM (2002)
Graham & Cowan (2001)
Western Australian Herbarium (1998-)
Western Botanical (2018)

GIS Database:

- IBRA Australia
- Imagery
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers

(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 2 fauna survey was undertaken by Western Wildlife (2018) which intersects the south-eastern portion of the application area. The survey identified nine faunal habitat types which are widespread and likely to occur within the application area. Based on potential habitat types within the application area, the following conservation significant species may occur within the application area:

- Greater Bilby (*Macrotis lagotis*) - Vulnerable
- Crest-tailed Mulgara (*Dasyercus cristicauda*) - Vulnerable
- Sandhill Dunnart (*Sminthopsis psammophila*) - Endangered
- MacDonnell Ranges Black-footed Rock Wallaby (*Petrogale lateralis*, MacDonnell Range subspecies) - Endangered
- Great Desert Skink (*Liopholis kintorei*) - Vulnerable
- Malleefowl (*Leipoa ocellata*) – Vulnerable
- Central Long-eared Bat (*Nyctophilus major tor*) – Priority 3
- Striated Grasswren (*Amytornis striatus striatus*) – Priority 4
- Brush-tailed Mulgara (*Dasyercus blythi*) – Priority 4
- Long-tailed Dunnart (*Sminthopsis longicaudata*) – Priority 4
- Southern Marsupial Mole (*Notoryctes typhlops*) – Priority 4

The survey recorded evidence of the Brush-tailed Mulgara (burrow and tracks/digging) within the application area and adjacent to the application area was evidence of the Southern Marsupial Mole (tracks and tunnels) (Western Wildlife, 2018). Outside the application area, the Great Desert Skink and the Striated Grasswren were recorded during the fauna survey (Western Wildlife, 2018).

The Bilby and Brush-tailed Mulgara have a similar habitat preference in that they dig burrows for shelter and refuge (DBCA, 2017). Suitable areas for foraging and habitat construction for these species would not be restricted to the application area, however individuals of these species may be actively using the permit area for habitat. The proposed clearing may potentially result in the destruction of habitat burrows or mounds, directly impacting on these species. Impacts to Mulgara and Bilby burrows can be avoided through the implementation of a fauna management condition.

The Striated Grasswren favours Spinifex sandplains, and is a highly mobile ground-dwelling species that favours Spinifex sandplains (Western Wildlife, 2018). The Central Longeared Bat is also highly mobile, and likely to be a breeding resident, favouring mulga woodlands (Western Wildlife, 2018). The proposed clearing is not likely to impact these species.

The Southern Marsupial Mole occurs in sand dunes and evidence of this species was identified during the fauna survey (Western Wildlife, 2018). Western Wildlife (2018) suggests that the local area is likely to be breeding habitat for this species. However, given this species spend the majority of its life underground, remaining on the surface for a short time (Threatened Species Scientific Committee, 2015), and extensive amounts of similar habitat has been mapped in areas outside the proposed clearing permit boundary, impacts as a result of the proposed clearing are not likely to be significant.

The Great Desert Skink is a large burrowing lizard that is found in desert areas within Western Australia, Northern Territory and South Australia. This species maintains an interconnected network of tunnels which can be up to 13 metres long and have up to 20 entrances (Threatened Species Scientific Committee, 2016). This species has been recorded in the spinifex sandplain habitat (Western Wildlife, 2018). When foraging they may move up to 100 metres from their burrow and have been known to move 10 kilometres to colonise new areas (DotEE, 2019). Cassini Resources has committed to avoiding clearing within 200 metres of burrows. Potential impacts to Great Desert Skink may be minimised by a fauna management condition.

The MacDonnell Ranges Black-footed Rock- Wallaby potentially occurs in the smaller rocky hills in the local area (Western Wildlife, 2018; GIS Database). Western Wildlife (2018) were unable to confirm the presence of this species during the fauna survey as rocky areas have generally been excised from the application area due to their importance as heritage sites, and access is restricted.

The Long-tailed Dunnart favours rocky and scree habitats, and although there are no records of this species within the local area, the application area is within the known range of this species (Western Wildlife, 2018). The fauna survey identified a lack of rocky and scree habitat favoured by this species (Western Wildlife, 2018).

The Crest-tailed Mulgara, Sandhill Dunnart and Malleefowl appear to be locally extinct and the habitats they favour, according to recent research, are absent from tenements in the local area held by the proponent (Western Wildlife, 2018).

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

Methodology DBCA (2017)
DotEE (2019)
Threatened Species Scientific Committee (2015)
Threatened Species Scientific Committee (2016)
Western Wildlife (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

According to the available databases, there are no known records of Threatened Flora within the application area (GIS Database). A search of the Department of Parks and Wildlife's Threatened and Priority Flora databases identified no Threatened Flora species as occurring within a 10 kilometre radius of the application area (Western Australian Herbarium, 1998-).

Flora surveys which partially intersect the application area and surrounding region did not record any species of rare flora (Western Botanical, 2018).

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

Methodology Western Australian Herbarium (1998-)
Western Botanical (2018)

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

A search of the available databases showed that there are no known Threatened Ecological Communities situated within 200 kilometres of the application area (GIS Database).

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

Methodology GIS Database:
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities 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 Central Ranges Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99% of the pre-European vegetation still exists in this IBRA Bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation associations:

18: Low woodland; mulga (*Acacia aneura*); and
19: Low woodland; mulga between sandridges (GIS Database).

Approximately 99% of the pre-European extent of these vegetation associations remain uncleared at both the state and bioregional level (Government of Western Australia, 2019).

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

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

Methodology Government of Western Australia (2019)

GIS Database:
- IBRA Australia
- Pre-European Vegetation

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

Comments Proposal is not at variance to this Principle

According to available databases, there are no watercourses or wetlands within the application area (GIS Database). The vegetation within the application area is not considered to be growing in association with any watercourse or wetland.

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

Cassini Resources Limited proposes to clear 40 hectares of native vegetation, distributed over a large application area of approximately 13,539 hectares. Disturbance will be for access tracks and drill pads using machinery with the blade up to ensure soil is not removed, which is not likely to result in large areas of disturbed or open land. Given the nature and scale of the proposed activities, the clearing is not likely to result in appreciable land degradation.

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

Methodology

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

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

The application area is not located within a conservation reserve or DPaW managed land (GIS Database). The nearest conservation area is Gibson Desert Nature Reserve which is situated approximately 160 kilometres north-west of the application area (GIS Database). Given the distance separating Gibson Desert Nature Reserve and the application area, the proposed clearing is not likely to impact the environmental values of the conservation area.

The proposed clearing is within the 'Ranges of the Western Desert', an area which is listed on the Register of National Estate for its unique natural values (GIS Database). The ranges of the Western Desert cover an area of approximately 8 million hectares. The small area of the proposed clearing (40 hectares) is unlikely to have any significant impact on the natural values of this area.

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

Methodology GIS Database:
- DPaW Tenure
- Register of National Estate

(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 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). 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 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, with a low average rainfall of approximately 160 to 250 millimetres per year (Cassini, 2019). Given the high rates of evaporation compared to the low average annual rainfall the clearing of vegetation is unlikely to cause, or exacerbate, the incidence or intensity of flooding (GIS Database).

There are no permanent water courses or waterbodies within the application area (GIS Database).

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

Methodology Cassini (2019)

GIS Database:
- Evapotranspiration, Area Actual
- Hydrography, linear
- Rainfall, Mean Annual

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

Comments

The clearing permit application was advertised on 26 August 2019 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, 2019). This claim has been determined by the Federal Court on behalf of the claimant group. 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, 2019). 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 (2019)

4. References

- Cassini (2019) Clearing Permit Application L69/45. Cassini Resources Limited, May 2019.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DBCA (2017) Fauna profile – Bilby *Macrotis lagotis*. Department of Biodiversity, Conservation and Attractions, Western Australia. https://www.dpaw.wa.gov.au/images/documents/plants-animals/animals/animal_profiles/bilby_fauna_profile.pdf. (Accessed 6 November 2019).
- DotEE (2019) Species Profile and Threats Database – *Liopholis kintorei*. Department of the Environment and Energy. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=83160 (Accessed 6 November 2019).
- DPLH (2019) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <http://maps.daa.wa.gov.au/AHIS/> (Accessed 7 November 2019).
- Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Graham, D. and Cowan, M (2001) Central Ranges 1 (CR1 - Mann-Musgrave Block subregion), in A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Threatened Species Scientific Committee (2015) Commonwealth Listing Advice on *Notoryctes typhlops* (itjaritjari). Department of the Environment and Energy, Canberra, 3 December 2015.
- Threatened Species Scientific Committee (2016) Approved Conservation Advice for *Liopholis kintorei* (Great Desert Skink). Department of the Environment and Energy, Canberra, 16 December 2016.
- Western Australian Herbarium (1998–) FloraBase—the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <https://florabase.dpaw.wa.gov.au/>
- Western Botanical (2018) Detailed Flora and Vegetation Survey, West Musgraves Project. Prepared for OZ Minerals Limited, by Western Botanical, August 2018.
- Western Wildlife (2018) West Musgrave Project: Level 2 Vertebrate Fauna Survey. Prepared for OZ Minerals Limited, by Western Wildlife, June 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)
DoEE	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 DoEE)
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 DoEE)
DWER	Department of Water and Environmental Regulation, Western Australia
EPA	Environmental Protection Authority, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:-

T Threatened species:

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

Threatened fauna is that subset of ‘Specially Protected Fauna’ listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

Threatened flora is that subset of ‘Rare Flora’ listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

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 in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

EN Endangered species

Threatened species considered to be “*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.

VU Vulnerable species

Threatened species considered to be “*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

Extinct Species:

EX Extinct species

Species where “*there is no reasonable doubt that the last member of the species has died*”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

EW**Extinct in the wild species**

Species that “is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species:

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

MI**Migratory species**

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes 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 fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

CD**Species of special conservation interest (conservation dependent fauna)**

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

OS**Other specially protected species**

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

P**Priority species:**

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species 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.