



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8970/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Regan Scott Grant

1.3. Property details

Property: Mining Lease 70/1285
Local Government Area: Shire of Lake Grace
Colloquial name: Lake Cobham

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
100		Mechanical Removal	Gypsum Extraction and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 22 October 2020

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation association: 125: Bare areas; salt lakes (GIS Database).</p> <p>A flora and vegetation survey was conducted over the application area and surrounding areas by Rick during October 2009. The following vegetation association was recorded within the application area (Rick, 2010):</p> <p><i>Tecticornia</i> Scrub/Heath: <i>Disphyma crassifolium</i>, <i>Tecticornia halocnemoides</i> subsp. <i>caudata</i>, <i>Tecticornia halocnemoides</i> subsp. <i>caudata</i>, <i>Tecticornia leptoclada</i> subsp. <i>inclusa</i>, <i>Tecticornia loriae</i>, <i>Tecticornia moniliformis</i>, <i>Tecticornia syncarpa</i>, <i>Tecticornia pergranulata</i> subsp. <i>pergranulata</i>, <i>Frankenia cinerea</i>, <i>Frankenia tetrapetala</i> and <i>Frankenia</i> sp. southern gypsum (M.N. Lyons 2864) (P3) shrubs to 0.5 metres form a sparse to mid dense stratum. Scattered perennial and annual herbs and grasses. Occurs over large areas of the lake bed on gypsum over clay.</p>
Clearing Description	<p>Lake Cobham.</p> <p>Regan Scott Grant proposes to clear up to 100 hectares of native vegetation within a boundary of approximately 150 hectares, for the purpose of gypsum extraction and associated activities. The project is located approximately 55 kilometres south-west of Lake King, within the Shire of Lake Grace.</p>
Vegetation Condition	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).</p> <p>To:</p> <p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).</p>
Comment	<p>The vegetation condition was derived from a vegetation survey conducted by Rick (2010).</p> <p>The proposed clearing is for gypsum mining. Lake Cobham has previously been subject to gypsum mining, with expired permit 4705/6, valid from 11 February 2012 to 30 June 2020, previously granting the clearing of 278 hectares of native vegetation on Lake Cobham which intersected a section of the current application area.</p>

3. Assessment of application against Clearing Principles

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

Comments

Proposal is not likely to be at variance to this Principle

The clearing permit application area is located within the Western Mallee subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Mallee Bioregion (GIS Database). The Western Mallee subregion is characterised by clays and silts underlain by Kankar, exposed granite, sandplains and laterite pavements; salt lake systems on a granite basement; and an occluded drainage system. Mallee communities occur on a variety of surfaces; Eucalyptus woodlands occur mainly on fine textured soils, with scrub-heath on sands and laterite (CALM, 2002).

A reconnaissance vegetation survey conducted by Rick (2010) during October 2009 identified three vegetation types within the application area and surrounding areas: *Tecticornia* scrub/heath, *Eucalyptus* woodland and *Atriplex* scrub/heath, of which only the *Tecticornia* scrub/heath is present within the application area (PGV Environmental, 2020). The *Tecticornia* scrub/heath vegetation association recorded within the application area is extensive throughout the Lake Magenta salt lake chain and large areas of salt lake vegetation are conserved in the Lake Magenta Nature Reserve (Rick, 2010). The application area exists adjacent to areas identified as potentially containing Eucalypt woodlands of the Western Australian Wheatbelt, listed as a Priority 3 Ecological Community at a state level and a Threatened Ecological Community at the federal level (GIS Database). However, the areas containing *Eucalyptus* species have been excised from the application area, along with a 50 metre buffer, and no Threatened or Priority Ecological Communities were identified during the field assessment (PGV Environmental, 2020; Rick, 2010).

A total of 70 flora species were recorded during the field assessment of the application area and surrounding areas (Rick, 2010). A desktop assessment identified 41 conservation significant flora species previously recorded within 20 kilometres of the application area (PGV Environmental, 2020). Of these, five have the potential to occur due to the presence of suitable habitat, including *Roycea pycnophylloides* (T) *Fitzwillia axilliflora* (P2), *Angianthus micropodioides* (P3), *Eucalyptus sargentii* subsp. *onesis* (P3) and *Haegiela tatei* (P4) (PGV Environmental, 2020). None of these five species were recorded during the field survey of the application area and surrounding areas, however two additional species, *Frankenia* sp. southern gypsum (P3) and *Goodenia salina* (P2) were recorded (Rick, 2010). *Goodenia salina* was recorded within the *Eucalyptus* woodland vegetation type and is unlikely to be impacted by the proposed clearing as this vegetation type has been excised from the application area. *Frankenia* sp. southern gypsum (P3) was recorded within the application area, however has a range of approximately 220 kilometres east-west and 84 kilometres north-south and given the species appears to be well represented locally, the proposed clearing is unlikely to be significant to the conservation status of the species (DBCA, 2020). *Frankenia* sp. southern gypsum (P3) was recorded at the majority of the survey sites across Lake Cobham and was present as a structural component of the *Tecticornia* scrub/heath vegetation type, which was the dominant vegetation type recorded across Lake Cobham (Rick, 2010). *Frankenia* sp. southern gypsum was also found to occur in regenerated areas following past mining operations (Rick, 2010). Therefore, is considered to be locally common and the proposed clearing of 100 hectares is unlikely to significantly impact the local population.

Fourteen introduced flora species (weeds) were recorded within the application area (Rick, 2010). None were Declared Pest species, as listed under the *Biosecurity and Agriculture Management Act 2007*. Weeds have the potential to out-compete native flora and reduce the biodiversity of an area. Potential impacts to biodiversity as a result of the introduction of weeds may be minimised by the implementation of a weed management condition.

A total of 24 conservation significant fauna species were identified during a desktop assessment of the application area, with suitable habitat for eight of these present: Curlew Sandpiper, *Calidris ferruginea* (CR at state and federal level and MI at federal level); Carnaby's Black Cockatoo, *Calyptorhynchus latirostris* (EN at state and federal level); Western Rosella, *Platycercus icterotis xanthogenys* (P4); Hooded Plover, *Thinornis rubricollis* (P4); Fork-tailed Swift, *Apus pacificus* (MI at state and federal level); Common Sandpiper, *Actitis hypoleucos* (MI at state and federal level); Common Greenshank, *Tringa nebularia* (MI at state and federal level); and Sharp-tailed Sandpiper, *Calidris acuminata* (MI at state and federal level) (PGV Environmental, 2020). However, the potential impact to these species is considered to be low as they are all highly mobile avian species, with the majority being migratory species which are more likely to be present within the application area during flooding events when vegetation clearing is unable to occur.

The vegetation associations, fauna habitats and landform types present within the application area, are well represented in surrounding areas (GIS Database). The application area is unlikely to represent an area of higher biodiversity than surrounding areas, in either a local or regional context.

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

Methodology

CALM (2002)
DBCA (2020)
PGV Environmental (2020)
Rick (2010)

- GIS Database:
- IBRA Australia
 - Pre-European Vegetation
 - Threatened and Priority Ecological Communities Boundaries
 - Threatened and Priority Ecological Communities Buffers
 - Threatened and Priority Flora
 - 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 is not likely to be at variance to this Principle

One fauna habitat, lake floor – *Tecticornia* low heath, has been recorded within the application area (PGV Environmental, 2020; Rick, 2010). As Lake Cobham is subject to flooding, the application area may support a wide range of migratory water birds, including some conservation significant species (PGV Environmental, 2020). Water birds of conservation significance potentially occurring within the application area include: Curlew Sandpiper, *Calidris ferruginea* (CR at state and federal level and MI at federal level); Hooded Plover, *Thinornis rubricollis* (P4); Common Sandpiper, *Actitis hypoleucos* (MI at state and federal level); Common Greenshank, *Tringa nebularia* (MI at state and federal level); and Sharp-tailed Sandpiper, *Calidris acuminata* (MI at state and federal level) (PGV Environmental, 2020). However, as no mining can occur while the lake bed is flooded, the proposed clearing is not likely to significantly impact habitat for water bird species.

Suitable habitat for Carnaby's Black Cockatoo, *Calyptorhynchus latirostris* (EN at state and federal level); Western Rosella, *Platycercus icterotis xanthogenys* (P4); and Fork-tailed Swift, *Apus pacificus* (MI at state and federal level) may also occur (PGV Environmental, 2020), however breeding habitat for these species is not present within the application area due to a lack of trees and therefore the proposed clearing is unlikely to impact habitat significant to these species.

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

Methodology PGV Environmental (2020)
Rick (2010)

- 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 (Rick, 2010).

One Threatened flora species, *Eremophila verticillata*, has been recorded within approximately 350 metres of the application area (GIS Database). This species is known to occupy clay loam, loam over limestone and is unlikely to be present within the application area due to a lack of suitable habitat (PGV Environmental, 2020; Western Australia Herbarium, 1998-).

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

Methodology PGV Environmental (2020)
Rick (2010)
Western Australian Herbarium (1998-)

- GIS Database:
- Pre-European Vegetation
 - Threatened and Priority Flora

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

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

There are no known Threatened Ecological Communities (TECs) located within or in close proximity to the application area (GIS Database). A flora and vegetation survey of the application area did not identify any TECs (Rick, 2010).

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

Methodology Rick (2010)

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 likely to be at variance to this Principle

The application area falls within the Mallee Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 56% of the pre-European vegetation still exists in the IBRA Mallee Bioregion (Government of Western Australia, 2019). Approximately 36-38% of the pre-European vegetation still exists in the IBRA Western Mallee subregion and Shire of Lake Grace local government area, respectively, which is considered to be Depleted (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation association 125: bare areas; salt lakes (GIS Database). Approximately 67-90% of the pre-European extent of this vegetation association remains uncleared at both the state and bioregional level, however at approximately 38% at a subregional level it is considered to be Depleted (Government of Western Australia, 2019).

Although considered to be Depleted at a subregional and local government level, the area consists of vegetation association 125: bare areas; salt lakes and has been previously mined, with the *Tecticornia* scrub/heath vegetation type present being representative of vegetation existing on adjacent salt lakes throughout the Lake Magenta salt lake system (GIS Database; Rick, 2010). Therefore, the application area is not likely to 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 (and post clearing %)
IBRA Bioregion – Mallee	7,395,894	4,180,937	~56	Least Concern	~18 (30)
IBRA Subregion – Western Mallee	3,981,717	1,471,047	~36	Depleted	~10 (24)
Local Government – Lake Grace	1,188,459	456,515	~38	Depleted	~16 (39)
Beard vegetation associations – WA					
125	3,485,785	3,146,487	~90	Least Concern	~9 (8)
Beard vegetation associations – Mallee Bioregion					
125	160,327	107,845	~67	Least Concern	~26 (23)
Beard vegetation associations – Western Mallee Subregion					
125	81,604	31,801	~38	Depleted	~43 (58)

* Government of Western Australia (2019)

** Department of Natural Resources and Environment (2002)

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

Methodology Department of Natural Resources and Environment (2002)
Government of Western Australia (2019)
Rick (2010)

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

The proposed clearing lies on Lake Cobham, a non-perennial salt lake of approximately 900 hectares in size (GIS Database). The vegetation of the application area, *Tecticornia* scrub/heath, is growing in association with the saline wetland (Rick, 2010).

Based on the above, the proposed clearing is at variance to this Principle. However, the area has been subject to previous mining and exists within the Lake Magenta salt lake chain where the vegetation type recorded is considered to be common (Rick, 2010).

Methodology Rick (2010)

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 may be at variance to this Principle

The application area lies within the Logan salt lake phase (250LA_1sl) system (DPIRD, 2020). Map Unit 250LA_1sl is described as seasonally dry saline playa lakes on saline playa deposits in the southern wheatbelt, saline and gypsiferous clays and silts, bare, with minor halophytes on margins. The application area is naturally prone to wind erosion, as a high proportion of its surface is devoid of significant vegetation (DPIRD, 2020). The removal of the remaining vegetation will increase the wind erosion hazard and will possibly result in an increased airborne dust loading during high wind events if the land surface is dry at the time (DPIRD, 2020).

Based on the above, the proposed clearing may be at variance to this Principle. Potential land degradation impacts as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

Methodology DPIRD (2020)

(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 Lake Magenta Nature Reserve which is located approximately 3.5 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 (GIS Database). There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). The application area exists on the lake bed of Lake Cobham, a non-perennial salt lake that has previously been subject to gypsum mining when not inundated by seasonal flooding (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 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 warm Mediterranean, with an annual rainfall of 250-500 millimetres (CALM, 2002). The nearest weather station is Newdegate Research Station, approximately 55 kilometres north-west of the application area, with an average rainfall of approximately 367.5 millimetres per year (BoM, 2020). The application area exists on the lake bed of Lake Cobham, a non-perennial salt lake that has previously been subject to gypsum mining when not inundated by seasonal flooding (GIS Database). The application area exists within the Magenta Internal catchment area which is comprised of approximately 367,554 hectares (GIS Database). Given the size of the area to be cleared (100 hectares) in relation to the size of the catchment area, 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 (2020)
CALM (2002)

GIS Database:
- Hydrographic Catchments - Catchments
- Hydrography, Lakes

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

Comments

The clearing permit application was advertised on 14 July 2020 by the Department of Mines, Industry Regulation and Safety (DMIRS), inviting submissions from the public. No submissions were received in relation to this application.

The permit area is within the South West Native Title Settlement area (DPLH, 2020). This settlement resolves Native Title rights and interests over an area of approximately 200,000 square kilometres within the south west of Western Australia. 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, 2020). 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 (2020)

4. References

- BoM (2020) Bureau of Meteorology Website – Climate Data Online, Newdegate Research Station. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/> (Accessed 20 October 2020).
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DBCA (2020) Advice received in relation to Clearing Permit Application CPS 8970/1. Species and Communities Branch, Department of Biodiversity, Conservation and Attractions, Western Australia, September 2020.
- DPLH (2020) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <http://maps.daa.wa.gov.au/AHIS/> (Accessed 11 September 2020).
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Government of Western Australia (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>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- PGV Environmental (2020) Mining Lease 70/1285 CPS 8970/1 Reconnaissance Flora, Vegetation and Fauna Survey. Report prepared for Regan Scott Grant by PGV Environmental, October 2020.
- Rick (2010) Lake Cobham – Proposed Gypsum Mine, Vegetation and Flora Survey. Report prepared for Regan Grant by Anne (Coastes) Rick, 2010.
- Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <https://florabase.dpaw.wa.gov.au/> (Accessed 19 October 2020).

5. Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016</i> , Western Australia
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)
DAWE	Department of Agriculture, Water and the Environment, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DBCA and DWER)
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)
DoE	Department of the Environment, Australian Government (now DAWE)
DoEE	Department of the Environment and Energy (now DAWE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DAWE)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPA	Environmental Protection Authority, 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.