Government of Western Australia
Department of Mines, Industry Regulation and Safety

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7763/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Regan Scott Grant and Melita Grant**

1.3. Property details

Property: Mining Lease 70/1346
Miscellaneous Licence 70/173
Local Government Area: Shire of Lake Grace
Colloquial name: Lake Morris Gypsum Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
65.38		Mechanical Removal	Gypsum Mining

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 9 November 2017

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

Beard vegetation associations have been mapped for the whole of Western Australia and are useful to look at vegetation in a regional context. The following vegetation associations have been mapped within the permit area (GIS Database):

The majority of the application area (~90%) is mapped as Beard vegetation association 125: Bare areas; salt lakes. The remaining portion of the application area is mapped as Beard vegetation association 511: Medium woodland; salmon gum & morel; and 519: Shrublands; mallee scrub, *Eucalyptus eremophila* (Government of Western Australia, 2016; GIS Database).

A flora survey of the application area was undertaken on 2 and 6 November 2013 (Botanical consultants, 2014). The flora survey identified four vegetation types within the application area. The vegetation associations identified were Mallee(Eu) and Melaleuca Scrub/ Thicket (Me) covering areas adjacent to the salt lake. Mixed Low Heath (M) which occurs on ridges of gypsiferous soils on the lake bed and Tecticornia (Te)(samphire) Scrub /Heath which is extensive across the lake bed.

Clearing Description

Regan Scott Grant and Melita Grant.
Regan Scott Grant and Melita Grant proposed to clear up to 65.38 hectares of native vegetation, within a total boundary of approximately 168.92 hectares, for the purpose of gypsum mining. The proposed clearing is located at Lake Cobham approximately 55 kilometres from the town of Newdegate.

Vegetation Condition

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);

to

Pristine: No obvious signs of disturbance (Keighery, 1994).

Comment

The vegetation condition was determined during a flora survey of the application area conducted by Botanical Consultants in November 2013 (Botanical Consultants, 2014).

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 application area occurs within the Western Mallee subregion of the Mallee Interim Biogeographic

Regionalisation of Australia (IBRA) bioregion (GIS Database). The Mallee bioregion is the south-eastern part of the Yilgarn Craton. The Western Mallee's main surface-types comprise clays and silts underlain by Kankar, exposed granite, sandplains and laterite pavements and salt lake systems on a granite basement. 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).

The vegetation within the application area is broadly mapped as Beard vegetation associations 125, 511 and 519, although the majority of the application (99%) falls within Beard vegetation association 125 which has approximately 93% of its pre-European extent remaining (Government of Western Australia, 2016; GIS Database). A survey was conducted by Botanical Consultants (2014) which provides vegetation mapping of the application area. A total of 58 plant species were recorded during the flora and vegetation survey. A total of four vegetation associations were identified within the application area ranging from excellent to pristine condition (Botanical Consultants, 2014; Keighery, 1994).

Tecticornia scrub\heath vegetation associations recorded within the application area are extensive throughout the Lake Magenta salt lake chain with mixed low heath confined to ridges of gypsum which covers small areas but not uncommon on the lake system. The Mallee vegetation association covers higher ground on the edge of the lake is also reportedly extensive in the region. Melaleuca Scrub/Thicket was also present on a strip of vegetation adjacent to the lake bed this vegetation is common throughout the Lake Magenta salt lake system. (Botanical Consultants, 2014)

Three priority species were found in the area covered by the proposed gypsum mine at Lake Morris, *Frankenia* sp. southern gypsum (M.N. Lyons 2864) P3, *Fitzwillia axilliflora* P2 and *Pimelea halophila* P2. *Eremophila verticillata* (Declared Rare Flora) has two sub populations adjacent to Lake Cobham. The proposed gypsum mine at Lake Morris is about 2.5 kms from the rare flora populations and should not impact on them. (Botanical Consultants, 2014)

Frankenia sp. southern gypsum is a spreading to prostrate shrub growing on gypsiferous soils. This species was recorded at all Tecticornia Scrub/Heath Sites and 5 of the Mixed Low Heath sites. *Frankenia* sp. southern gypsum was also recorded at 13 sampled locations in the Lake Magenta Lake Chain including Lake Burkett, Lake Lockhart, Lake Magenta and Lake Cobham (Botanical Consultants, 2014). It should be noted that *Frankenia* sp. Southern gypsum was also recorded at Lake Cobham in areas regenerating after past mining operations so it would be unlikely that the impact on the application will have a significant detrimental affect on *Frankenia* sp. southern gypsum conservation status. (Botanical Consultants, 2014)

Pimelea halophila is a dwarf, cushion-like shrub, 1.5cm to 15 cm in height and flowers from August to October. It occurs on clayey sand, sand over clay and sandy soils with gypsum in salt lake habitats. This species has previously been known to occur from Lake King to North and East of Esperance. The present record is a range extension. There were 193 plants recorded along the gypsum ridge within the application area (Botanical Consultants, 2014). Potential impacts on *Pimelea halophila* may be minimised by the implementation of a flora management condition.

Fitzwillia axilliflora is an annual herb 3 to 13.5 cm in height, flowering from September to November and growing in sand, clay loam and gypsum associated with salt lakes. This species has been recorded in the shires of Kent, Lake Grace, Morawa and Wyalkatchem. In the present survey *Fitzwillia axilliflora* was recorded within the application area with no information provided on how many plants recorded. Potential impacts on *Fitzwillia axilliflora* may be minimised by the implementation of a flora management condition.

Several weed species were recorded during the survey conducted by Botanical Consultatnts (2014) including: *Mesembryanthemum nodiflorum*, *Arctotheca calendula*, *Parapholis incurve*, *Lolium* species and *Spergularia marina* (Botanical Consultants, 2014). Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

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

Methodology

CALM (2002)
Botanical Consultants (2014)
GIS Database:
- Newdegate Orthomosaic - Landgate 2014
- Declared Rare and Priority Flora List
- IBRA WA (Regions - Subregions)
- Pre-European Vegetation
- Threatened Ecological Sites Buffered

(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 threatened and priority fauna database search was undertaken on NatureMap (2017) within a 20-kilometre radius of the proposed clearing. This search identified records of one conservation significant fauna species Carnaby's Black Cockatoo. Carnaby's cockatoo habitat occurs in uncleared and remnant areas of woodland,

shrubland and kwongan heath dominated by proteaceous species, which is not present in the application area (NatureMap, 2017).

A flora survey undertaken by Botanical Consultants in November 2013 identified four vegetation types within the application area, however extensive areas of the application area consists of low shrubs and samphire species. Tecticornia scrub\heath vegetation associations recorded within the application area are extensive throughout the Lake Magenta salt lake chain. The Mallee vegetation association covers higher ground on the edge of the lake is also reportedly extensive in the region. Melaleuca Scrub/Thicket was also present on a strip of vegetation adjacent to the lake bed this vegetation is common throughout the Lake Magenta salt lake system. (Botanical Consultants, 2014).

Whilst there are records of conservation significant fauna species Carnaby's Cockatoo located within 20 kilometres of the application area, these are located within different vegetation types. The application area is not likely to provide significant habitat for fauna.

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

Methodology Botanical Consultants (2014)
Nature Map (2017)
GIS Database:
- Newdegate Orthomosaic - Landgate 2014
- 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 available databases, there are no known records of any Threatened flora within the application areas (GIS Database). The flora survey of the application areas did not record any Threatened flora species. The vegetation of the application areas is not likely to be necessary for the continued existence of Threatened flora (GIS Database).

Eremophila verticillata (Threatened flora) is located within the region which has two sub populations adjacent to Lake Cobham. The proposed gypsum mine at Lake Morris is about 2.5 kilometres from the rare flora populations and should not impact on them (Botanical Consultants, 2014)

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

Methodology Botanical Consultants, (2014)
GIS Database:
- Declared Rare and Priority Flora List

(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 the application area (GIS Database). The following ecological community is recorded approximately 9.5 kilometres south of the proposed gypsum mine. 'Herblands and Bunch grasslands on gypsum lunette dunes alongside saline playa lakes'. This community was not found during the present survey at Lake Morris (Botanical Consultants, 2014).

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

Methodology Botanical Consultants (2014)
GIS Database:
- Threatened Ecological Sites 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 occurs within the Western Mallee subregion of the Mallee Interim Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 35% of the pre-European vegetation remains (see table) (Government of Western Australia, 2016); (GIS Database).

The application area contains the following three Beard vegetation associations (Government of Western Australia, 2016):

125: Bare areas; salt lakes;
511: Medium woodland; salmon gum & morel; and
519: Shrublands; mallee scrub, *Eucalyptus eremophila*.

Beard vegetation associations 125, 511 and 519 retain approximately 39%, 48% and 51% respectively of their pre-European extent at the subregional level (Government of Western Australia, 2016). The majority of the application area (90%) consists of Beard vegetation association 125. At a subregional level this vegetation association has a conservation status of 'Depleted' according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002). Similar habitats to the lake beds are abundant throughout the local region with large lake beds conserved in the nearby Lake Magenta Nature Reserve, however the more bio-diverse a habits are contained within the lake edges which are likely to have little impact due to this application.

At a bioregional and state level Beard vegetation association 125 is better represented retaining approximately 67% and 90% respectively of its pre-European extent (Government of Western Australia, 2016). A review of aerial imagery for the local area (GIS Database) reveals an extensive chain of salt lake vegetation in the local area.

Bottanical (2014) highlights that the Tecticornia scrub\heath vegetation associations recorded within the application area are extensive throughout the Lake Magenta salt lake chain. The Mallee and Melaleuca Scrub/Thicket covers smaller areas but is not rare (Botanical Consultants, 2014).

	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	4,181,002	~56	Least Concern	18(31)
Local Government - Kondinin	741,929	389,733	52	Least Concern	4(6)
Beard Veg Assoc. – State					
125	3,485,788	3,146,492	~90	Least Concern	7(6)
511	700,409	520,623	~74	Least Concern	14(19)
519	2,333,413	1,440,063	~62	Least Concern	10(17)
Beard Veg Assoc. – Bioregion					
125	160,327	107,845	~67.3	Least Concern	28(23)
511	139,877	67,480	~48.4	Depleted	11(18)
519	2,100,314	1,248,661	~59	Least Concern	11(18)
Beard Veg Assoc. – Subregion					
125	81,604	31,801	~39	Depleted	43(58)
511	139,877	67,480	~48	Depleted	12(18)
519	1,563,571	783,035	~51	Least Concern	13(25)

* Government of Western Australia (2016)
** Department of Natural Resources and Environment (2002)

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

Methodology

Department of Natural Resources and Environment (2002)
Botanical Consultants (2014)
GIS Database:
- IBRA WA (Regions - Subregions)
- Newdegate Orthomosaic - Landgate 2014
- 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 application area is located within Lake Morris, which is mapped as a non-perennial lake and an area subject to inundation (GIS Database). A survey was conducted by Botanical Consultants (2014) which provides vegetation mapping of the application area. A total of four vegetation associations were identified within the application area however the majority of the vegetation within the application area is associated with the Tecticornia scrub\ of the Lake Magenta salt lake chain (Botanical Consultants, 2014). The vegetation of the application area is considered to be growing within an environment associated with a wetland which is sparsely vegetated, the more biodiverse and densely vegetated areas located on the edges of the lake.

Based on the above, the proposed clearing is at variance to this Principle. However, the vegetation associations recorded within the application area are extensive throughout the Lake Magenta salt lake with 90% of the proposed clearing to occur on the sparsely vegetated lake bed. Given the above there are unlikely to be any significant environmental issues associated with the proposed clearing.

Methodology

Botanical Consultants (2014)
GIS Database:
- Hydrography, Linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments

Proposal is not likely to be at variance to this Principle

There is one mapped soil type within the application area SV1: Saline valleys and salt lakes-salt-lake channels, mostly devoid of true soils, and their fringing areas (Northcote et al., 1960-68).

The application area is located within Lake Cobham which is a non perennial salt lake (GIS Database) and the vegetation to be cleared consists of predominantly salt tolerant species. The application area is flat with no change in topography and is also located in an area where the average annual evaporation rate (1,900 millimetres) greatly exceeds the local annual rainfall (400 millimetres) and high saline surface water (GIS Database). Given the above there is unlikely to be any significant surface water movements and the application area has a low risk of water erosion.

The application area is located within a salt lake and salinity levels are already high (greater than 35,000 milligrams per litre Total Dissolved Solids). The removal of 65.38 hectares of native vegetation in this area 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

Northcote et al. (1960-68)
GIS Database:
- Groundwater Salinity
- Soils, Statewide
- Rainfall, Mean Annual
- Evaporation Isopleths

(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 DBCA (formerly DPaW) managed Lake Magenta Nature Reserve is located within close proximity of the application area (1 kilometre East). The majority of the application area contains sparsely populated lakebed vegetation and the proposed clearing is not likely to impact on any ecological linkages into the nature reserve (GIS Database). The proposed clearing could pose a potential risk to the local environmental values due to an increase in the spread of weeds, if weed communities colonise in the disturbed areas they may perhaps spread through habitat linkages to the Nature reserve. Potential impacts from weeds may be minimised by the implementation of a weed management condition.

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

Methodology

GIS Database:
- DBCA Tenure
- Imagery

(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

The application area is located within Lake Morris, which is mapped as a non-perennial lake and an area subject to inundation (GIS Database). The application area is not within a Public Drinking Water Source Area (PDWSA) (GIS Database).

The average annual evaporation rate (1,900 millimetres) in the local area greatly exceeds the local annual rainfall (400 millimetres) (GIS Database) and any surface water is likely to be short lived and saline in nature. Given the above the removal of 65.38 hectares of salt lake vegetation is unlikely to negatively impact on the quality of surface water.

Groundwater salinity levels are already high (between 14,000-35,000 milligrams per litre Total Dissolved Solids) within the application area and the proposed clearing is unlikely to cause any appreciable 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:
- Evaporation Isopleths
- Groundwater Salinity
- Hydrography Linear
- Public Drinking Water Source Areas (PDWSAs)
- Soils, Statewide
- Rainfall, Mean Annual

(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 application area is located within the Magenta Internal catchment area of the Albany Coast basin (GIS Database). Given the size of the area to be cleared (65.38 hectares) in relation to the size of the catchment area (36,745 hectares) (GIS Database), the proposed clearing is not likely to increase the potential of flooding on a local or catchment scale.

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

Methodology

GIS Database:
- Hydrographic Catchments - Catchments

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

Comments

There are three Native Title Claims (WC2003/006,WC1996/109 and WC1998/70) over the area under application (GIS Database). These claims have been registered with the National Native Title Tribunal 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, 2017). 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.

The clearing permit application was advertised on 18 September 2017 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received.

Methodology

DPLH (2017)

4. References

Botanical Consultants (2014) Lake Morris. Proposed Gypsum Mine. Vegetation and Flora Survey. Report prepared for Regan Scott Grant and Melita Grant, by Botanical Consultants, 2014.

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management, Western Australia.

DPLH (2017) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage. http://maps.daa.wa.gov.au/AHIS/ (Accessed 06 November 2017).

Government of Western Australia (2016) 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2016. WA Department of Parks and Wildlife, Perth.

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

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.

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.