



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 9043/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Paddington Gold Pty Ltd

1.3. Property details

Property: Mining Lease 24/165
Mining Lease 24/182
Mining Lease 24/229
Mining Lease 24/451
Miscellaneous Licence 24/163

Local Government Area: City of Kalgoorlie-Boulder
Colloquial name: Rose Dam North Expansion

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
380		Mechanical Removal	Mineral production and associated activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 5 November 2020

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:
468: Medium woodland; salmon gum & goldfields blackbutt;
540: Succulent steppe with open low woodland; sheoak over saltbush; and
125: Bare areas; salt lakes (GIS Database).

* Note: More than ~96% of the clearing permit boundary is mapped as Beard vegetation association 468.

A reconnaissance flora and vegetation survey was conducted over the application area by Botanica Consulting (Botanica) in May and June 2020. The following three vegetation associations were recorded within the application area (Botanica, 2020):

- CLP-EW1: Low woodland of *Eucalyptus salmonophloia* over open low scrub of *Acacia kalgoorliensis* and dwarf scrub of *Atriplex vesicaria* / *Maireana pyramidata* / *Tecticornia disarticulata*;
- CLP-EW2: Low woodland of *Eucalyptus clelandiorum* / *E. oleosa* over low scrub of *Acacia hemiteles* / *Eremophila scoparia* and dwarf scrub of *Maireana sedifolia*; and
- DD-EW1: Low woodland of *Eucalyptus salmonophloia* over open low scrub of *Acacia kalgoorliensis* and dwarf scrub of *Atriplex vesicaria* / *Maireana sedifolia* / *Maireana pyramidata* / *Tecticornia disarticulata* in drainage depression.

Clearing Description Rose Dam North Expansion.
Paddington Gold Pty Ltd ('Paddington Gold') proposes to clear up to 380 hectares of native vegetation within a boundary of approximately 716.17 hectares, for the purpose of mineral production and associated activities. The project is located approximately 26 kilometres northwest of Kalgoorlie-Boulder, within the City of Kalgoorlie-Boulder.

Vegetation Condition Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).
To:
Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

Comment The vegetation condition was derived from a vegetation survey conducted by Botanica (2020) in May and June 2020.

The proposed clearing is for the redevelopment and expansion of existing open pits and associated waste rock dumps at the Rose Dam North (this application area, CPS 9043/1) and adjacent Rose Dam South (CPS 8756/1) project areas. Establishment of haul roads, service corridors, run-of-mine pad and other supporting infrastructure will also be required.

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 is located within the Eastern Goldfields subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Coolgardie Bioregion (GIS Database). The Eastern Goldfields subregion is characterised by a subdued relief comprised of gently undulating plains interrupted with low hills and ridges. Calcareous earths are the dominant soil group and cover much of the plains and greenstone areas (CALM, 2002). The vegetation is of Mallees, Acacia thickets and shrubheaths on sandplains. Diverse *Eucalyptus* woodlands occur around salt lakes, on ranges, and in valleys, and salt lake support dwarf shrublands of samphire. The area is rich in endemic Acacias (CALM, 2002).

The application area falls on the northern edge of the area known as the Great Western Woodlands, which represents the largest and most intact eucalypt woodland remaining in southern Australia and is one of the best examples of its type in the world (DEC, 2010). The Great Western Woodlands covers a total area of approximately 16 million hectares, and is recognised for its flora and fauna species richness and high number of endemic flora species (DEC, 2010). At approximately 380 hectares in size, the proposed clearing represents approximately 0.0024 percent of the area covered by the Great Western Woodlands, and the proposed clearing is unlikely to have any significant impact on the conservation values of the Great Western Woodlands.

Botanica (2020) completed a reconnaissance flora and vegetation survey over the application area in May and June 2020. Botanica (2020) identified three vegetation types comprising a single major vegetation group within the application area: *Eucalyptus* low open woodland (Botanica, 2020). The vegetation found in the application area is considered moderately diverse and regionally well represented (Paddington, 2020). Disturbance from mining, exploration and pastoral activities is evident across much of the application area, however the majority of vegetation was considered to be in 'Good' condition, while vegetation within the existing mining operational footprint is considered to be 'Completely Degraded' (Botanica, 2020; Paddington, 2020).

A total of 134 flora taxa from 61 genera and 28 families was recorded from within the application area (Botanica, 2020). A desktop assessment identified four Threatened and 26 Priority flora species previously recorded within 40 kilometres of the application area (Botanica, 2020; DAWE, 2020; DBCA, 2007-). Of these species, the majority are unlikely to occur due to a lack of suitable habitat, however 10 Priority species were considered to possibly occur due to the presence of suitable habitat. No Threatened or Priority flora species were identified during the field assessment of the application area (Botanica, 2020). As the field survey was conducted at a suboptimal time, it is possible that Priority flora species were present and not detected. However, the 10 species identified as possibly occurring are not locally or regionally restricted (Western Australian Herbarium, 1998-) and it is unlikely that the proposed clearing will have a significant impact on the conservation status of these species.

No Threatened or Priority Ecological Communities were identified as potentially occurring within the application area and none were recorded during any of the field assessments (Botanica, 2020; Paddington, 2020; GIS Database). No introduced flora species were recorded within the application area during the field survey (Botanica, 2020), however the desktop assessment identified 69 introduced flora species that were previously recorded within 40 kilometres of the application area, including five Weeds of National Significance and seven Declared Pest species (Botanica, 2020; DAWE, 2020). 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.

Within the application area Botanica (2020) mapped a single type of fauna habitat that is considered well-represented within the wider region. A desktop assessment identified 145 bird, 75 reptile, 31 mammal, five amphibians and one fish taxa with the potential to occur within the application area, including eight species of conservation significance (Botanica, 2020; DBCA, 2007-). No threatened or significant fauna species or habitats of significance were recorded within the application area during the field survey (Botanica, 2020). When considering habitat and distribution data, the Malleefowl (*Leipoa ocellata*, Vulnerable) is the only fauna species of conservation significance that is likely to occur within the application area (Botanica, 2020; DAWE, 2020; DBCA, 2007-).

The vegetation associations, fauna habitats and landform types found within the application area, are well represented regionally (Paddington, 2020; GIS Database), and 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 Botanica (2020)
CALM (2002)
DAWE (2020)
DBCA (2007-)

DEC (2010)
Paddington (2020)
Western Australian Herbarium (1998-)

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

Botanica (2020) conducted a fauna assessment of the application area in May and June 2020, which included a desktop review, site reconnaissance and fauna habitat survey.

A single type of fauna habitat was identified within the application area (Botanica, 2020):

- Low Eucalyptus Open Woodland.

Potential impacts on fauna as a result of the clearing are likely to be low as large areas of similar habitat exist adjacent to the application area, and are regionally common (Botanica, 2020; GIS Database).

No threatened or significant fauna species or habitats of significance were recorded within the application area during the field survey (Botanica, 2020). When considering habitat and distribution data, the Malleefowl (*Leipoa ocellata*, Vulnerable) is the only fauna species of conservation significance deemed likely to occur within the application area (Botanica, 2020; DAWE, 2020; DBCA, 2007-). No evidence of Malleefowl activity (inactive or active mounds, tracks, feathers or bird observations) was detected during the reconnaissance survey (Botanica, 2020), neither during a targeted search recently conducted by Native Vegetation Solutions (2019) over portions of the Rose Dam South project, which is adjacent to, and slightly overlapping, the application area.

Habitat within the application area appears very marginal or unsuitable for Malleefowl breeding, due to low vegetation density (Botanica, 2020). There is the potential for Malleefowl to forage in the area, however the proposed clearing will have minimal impact on the availability of foraging habitat in the region, as similar habitat occurs extensively outside of the application area (Botanica, 2020; GIS Database).

The application area contains one of the suitable habitats (*Eucalyptus salmonophloia* woodland) for the critically endangered Arid Bronze Azure Butterfly (*Ogyris subterrestris petrina*, CR), however the species is only known to be extant at two locations within the Wheatbelt region of WA and is presumed extinct in the Goldfields (Botanica, 2020; Harewood, 2020a). In June and August 2020, Paddington Gold commissioned targeted surveys for the butterfly's host ant species (*Camponotus* sp. nr. *terebrans*) in suitable habitat at two of its other sites located less than 30 kilometres from the application area, and the taxa was not found (Harewood 2020b; Spectrum Ecology, 2020).

The landforms and habitat type prevalent within the application area are considered widespread within the region and not restricted to the application area (Botanica, 2020; Paddington, 2020). The vegetation proposed to be cleared is unlikely to represent significant habitat for fauna.

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

Methodology

Botanica (2020)
DAWE (2020)
DBCA (2007-)
Harewood (2020a)
Harewood (2020b)
NVS (2019)
Paddington (2020)
Spectrum Ecology (2020)

GIS Database:

- Imagery
- 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 (rare) flora within the application area (GIS Database). Flora surveys of the application area did not record any species of Threatened flora (Botanica, 2020).

The vegetation associations within the application area are common and widespread within the region and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened flora (Botanica, 2020; GIS Database).

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

Methodology Botanica (2020)

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 (Botanica, 2020).

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

Methodology Botanica (2020)

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 Coolgardie Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 97% of the pre-European vegetation still exists in the IBRA Coolgardie Bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation associations 468: Medium woodland; salmon gum and goldfields blackbutt; 540: Succulent steppe with open low woodland; sheoak over saltbush; and 125: Bare areas; salt lakes (GIS Database). Approximately 90-98% of the pre-European extent of these vegetation associations remains uncleared at both the state and bioregional level (Government of Western Australia, 2019).

Although several large scale mining operations are located within a 50 kilometre radius of the application area (GIS Database), on a broader scale the Coolgardie bioregion has not been extensively cleared.

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

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DBCA managed lands
IBRA Bioregion – Coolgardie	12,912,204	12,648,491	~97	Least Concern	~16
Beard vegetation associations – WA					
468	592,022	583,902	~98	Least Concern	~23
540	202,423	200,158	~98	Least Concern	~28
125	3,485,785	3,146,487	~90	Least Concern	~9
Beard vegetation associations – Coolgardie Bioregion					
468	583,357	575,360	~98	Least Concern	~22
540	75,810	73,619	~97	Least Concern	no data
125	545,717	506,802	~92	Least Concern	~6

* Government of Western Australia (2019)

** 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)
Government of Western Australia (2019)

GIS Database:

- IBRA Australia
- Pre-European Vegetation
- Imagery

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

Comments **Proposal is at variance to this Principle**

There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database).

There are several minor, non-perennial watercourses situated within the area under application. All of these ephemeral watercourses drain into either Rose Dam, Black Flag Lake or various other salt lakes that are located approximately 2.2km south of the project area (Paddington, 2020).

Creek lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall (CALM, 2002). None of the vegetation recorded during the vegetation survey of the application area was considered riparian vegetation (Botanica, 2020).

Based on the above, the proposed clearing is at variance to this Principle. However, impacts to vegetation growing in association with the ephemeral watercourse are expected to be minimal.

Methodology Botanica (2020)
CALM (2002)
Paddington (2020)

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 soil of the application area is broadly mapped as soil types BB5 and SV15 (Northcote et al., 1960-68; GIS Database).

The BB5 soil type is described as: Rocky ranges and hills of greenstones – basic igneous rocks: chief soils seem to be shallow calcareous loamy soils and similar soils, with shallow brown and grey-brown calcareous earths below which weathered rock occurs at shallow depths (Northcote et al., 1960-68).

The SV15 soil type is described as: Salt lakes and their associated areas: common soils are gypseous and saline loams together with gypseous and saline soils on the lake beds. Associated are sandy red earths on lunettes; soils on plains; soils on eroded plains; and small areas of soils on clay pans (Northcote et al., 1960-68).

Based on advice received from the Commissioner of Soil and Land Conservation for an adjacent area, this application area is likely to represent several land units of the Gumland land system (DPIRD, 2020). Soils of the application area are likely to be red loamy earths or duplex soils, supporting scattered Eucalypt woodland with a chenopod understorey (DPIRD, 2020). These soils are not generally prone to erosion, however removal of vegetation and disturbance of the protective stony mantles may result in water erosion if surface water is not appropriately managed (DPIRD, 2020).

Land slopes on the application area are likely to range from level to about 1.5% (DPIRD, 2020), there are no permanent watercourses or waterbodies in the application area and the region receives a relatively low annual rainfall (GIS Database). Therefore the risk of wind and water erosion is likely to be low during normal weather conditions.

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)
Northcote et al. (1960-68)

GIS Database:
- Hydrography, Lakes
- Hydrography, linear
- Landsystem Rangelands
- Soils, Statewide
- Topographic Contours, Statewide

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

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

There are no conservation areas in the vicinity of the application area (GIS Database).

The nearest DBCA managed land is the former Credo Pastoral Lease, which is located approximately 29 kilometres west-northwest of the application area, at its nearest point (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 natural water bodies within the application area. The ephemeral creek lines found in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (CALM, 2002; GIS Database). Therefore, significant impacts to surface water are considered unlikely.

Groundwater in the application area is generally saline, with between 14,000 to 35,000 milligrams per litre of Total Dissolved Solids (GIS Database). It is unlikely the proposed clearing will result in all incremental increase in groundwater salinity, nor 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 CALM (2002)

GIS Database:
- Groundwater salinity, State wide
- Hydrography, Lakes
- 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 in the region is arid to semi-arid with 200-300 mm of rainfall, sometimes in summer but usually in winter. Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (CALM, 2002).

There are no permanent water courses or waterbodies within the application area (GIS Database). Seasonal drainage lines are common in the region and temporary localised flooding may occur briefly following heavy rainfall events (CALM, 2002). However, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.

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

Methodology CALM (2002)

GIS Database:

- Hydrography, lakes
- Hydrography, linear

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

Comments

The clearing permit application was advertised on 21 September 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.

There are two native title claims (WC2017/001; WC2017/007) over the area under application (DPLH, 2020). These claims have been registered with the National Native Title Tribunal on behalf of the claimant groups. 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, 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

- Botanica (2020) Rose Dam North Reconnaissance Flora/Vegetation and Fauna Survey, Version 1. Report prepared by Botanica Consulting Pty Ltd for Norton Gold Fields Pty Ltd, August 2020.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DAWE (2020) EPBC Act Protected Matters Search Tool. Department of Agriculture, Water and the Environment. <https://www.environment.gov.au/epbc/protected-matters-search-tool> (Accessed 29 October 2020).
- DBCA (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Biodiversity, Conservation and Attractions. <https://naturemap.dbca.wa.gov.au/> (Accessed 29 October 2020).
- DEC (2010) A Biodiversity and Cultural Conservation Strategy for the Great Western Woodlands Strategy. Department of Environment and Conservation, Western Australia.
- 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.
- DPIRD (2020) Advice received in relation to Clearing Permit Application CPS 9043/1. Commissioner of Soil and Land Conservation, Department of Primary Industries and Regional Development, Western Australia, November 2020.
- DPLH (2020) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <http://maps.daa.wa.gov.au/AHIS/> (Accessed 29 October 2020).
- 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>
- Harewood, G. (2020a) Arid Bronze Azure Butterfly (*Ogyris subterrestris petrina*) Review. Clearing Permit Area (CPS 8872/1) Mulgarrie Project Paddington Gold Pty Ltd. Review prepared by Greg Harewood, for Paddington Gold Pty Ltd, June 2020.
- Harewood, G. (2020b) Ant Survey. Clearing Permit Area (CPS 8872/1) Mulgarrie Project Paddington Gold Pty Ltd. Review prepared by Greg Harewood, for Paddington Gold Pty Ltd, June 2020.

- 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., 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.
- NVS (2019) *Threatened Flora and Malleefowl Mound Targeted Search* September 2019: Rose Dam South Mining Project. Report prepared for Norton Gold Fields Ltd, by Native Vegetation Solutions, September 2019.
- Paddington (2020) *Native Vegetation Clearing Permit Supporting Document: Mt Pleasant - Rose North Mining Area*. Report prepared by Paddington Gold Pty Ltd, September 2020.
- Spectrum Ecology (2020) *Binduli North Expansion Project Desktop Report Review, V.3*. Report prepared by Spectrum Ecology, for Talis Consultants and Norton Gold fields Ltd, August 2020.
- Western Australian Herbarium (1998-) *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions. <https://florabase.dpaw.wa.gov.au/> (Accessed 29 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.