



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8329/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Silver Lake Resources Limited

1.3. Property details

Property: Mining Lease 25/71
Mining Lease 25/125
Mining Lease 25/133
Mining Lease 25/236
Miscellaneous Licence 25/27
Miscellaneous Licence 25/41

Local Government Area: City of Kalgoorlie-Boulder
Colloquial name: Mt Belches Transportation Corridor

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 11 April 2019

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description The vegetation of the application area is broadly mapped as the following Beard vegetation associations:
468: Medium woodland; salmon gum and goldfields blackbutt;
501: Medium woodland; goldfields blackbutt; and
506: Succulent steppe with woodland; salmon gum and bluebush (GIS Database).

Flora and vegetation surveys were conducted over various sections of the application area by Botanica (2017) and Outback Ecology (2009a; 2013). Botanica (2017) conducted a reconnaissance flora survey of the Mount Monger Road (narrow western section of the application area), during September, 2015 and October, 2017. Field assessments of other sections of the application area were conducted by Outback Ecology during October, 2008 (Outback Ecology, 2009a) and March and October, 2012 (Outback Ecology, 2013). A desktop study of the application area was conducted by Botanica (2019), which incorporated results from all previous field surveys. The following vegetation associations were recorded within the application area (Botanica Consulting, 2019):

Acacia burkittii tall shrubland on rocky plain/ hill slope;
Acacia quadrimarginea tall shrubland on rocky plain/ hillslope;
Acacia aneura low woodland on rocky plain/ hillslope;
Casuarina pauper woodland in clay-loam plain;
Eucalyptus lesouefii/ Eucalyptus salmonophloia woodland in clay-loam plain;
Eucalyptus salmonophloia woodland in open depression;
Eucalyptus salmonophloia/ Eucalyptus moderata woodland on clay-loam plain;
Eucalyptus melanoxylon on clay-loam plain;
Eucalyptus celastroides subsp. *celastroides* on clay-loam plain;
Eucalyptus griffithsii/ Eucalyptus celastroides mallee woodland on clay-loam plain; and
Eremophila/ Maireana low shrubland on clay-loam plain/ rocky plain.

Clearing Description Mt Belches Transportation Corridor.
Silver Lake Resources Limited proposes to clear up to 70 hectares of native vegetation within a boundary of approximately 880 hectares, for the purpose of mineral production and associated activities. The project is located approximately 50 kilometres south-east 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 number of vegetation surveys conducted by Botanica (2017) and Outback Ecology (2009a; 2013), with the majority of the vegetation considered to be in good to very good condition. The proposed clearing is for mine related infrastructure including overhead power lines to the Mt Belches mining project. The majority of the clearing will be conducted adjacent to an existing road and existing/historical mining disturbance. Clearing is to be undertaken using raised blade clearing where possible.

3. Assessment of application against Clearing Principles

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

Comments **Proposal may be at variance to this Principle**

The clearing permit application area is located within the Eastern Goldfields (COO3) subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Coolgardie Bioregion (GIS Database). The Eastern Goldfields subregion is characterised by undulating plains interrupted by low hills and ridges, supporting mallees, *Acacia* thickets and shrub-heaths on sandplains, and diverse *Eucalyptus* woodlands around salt lakes, on ranges, and in valleys. Salt lakes support dwarf shrublands of samphire. The subregion is rich in endemic *Acacia* species (CALM, 2002).

The application area falls within 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). However, at approximately 70 hectares in size, the clearing permit application area represents less than 0.001% 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.

Field flora and vegetation surveys of various sections of the application area were carried out by Botanica (2017) and Outback Ecology (2009a; 2013). A desktop study of the application area was conducted by Botanica (2019), which incorporated results from all previous field surveys. Eleven broad vegetation units have been recorded within and adjacent to the application area (Botanica, 2019). Vegetation condition ranged from very good to degraded, with the majority of the area in good to very good condition (Botanica, 2019). Disturbance includes previous clearing for exploration and mining activities, grazing by cattle and public road use (Botanica, 2019). No Threatened Ecological Communities were identified during the desktop assessment or field assessments as occurring in the application area. One Priority 3 Ecological Community (PEC); Mount Belches *Acacia quadrimarginea* / *Ptilotus obovatus* banded ironstone community, was recorded in the application area (Outback Ecology, 2009a). This consisted of vegetation units associated with Banded Ironstone Formations (BIF) and BIF outwash geology of the Mount Belches Range and was present in the south-eastern section of the application area (Outback Ecology, 2009a; 2013). Advice sought from the Department of Biodiversity Conservation and Attractions (DBCA) estimates the total area of the Mount Belches PEC as being less than 19,000 hectares (DBCA, 2019a). During field assessments by Outback Ecology (2009a; 2013) 259.25 hectares of the PEC was mapped within the application area and surrounds, representing approximately 1.36% PEC. However, as majority of this 259.25 hectares was mapped outside the application area, it is unlikely that clearing of a small portion of the PEC within the application area will significantly impact the flora or vegetation values of the PEC.

Reconnaissance field assessments of sections of the application area recorded a total of 121 flora taxa from 62 genera and 27 families (Botanica, 2017; Botanica, 2019). Seven conservation significant flora were identified as potentially occurring within the application due to occurring within a 20 km radius of the assessment area, including two federally listed Threatened flora species; *Gastrolobium graniticum* (Endangered; also Threatened at state level) and *Tecticornia flabelliformis* (Vulnerable; Priority 1 at state level) (Botanica, 2019). Only two of the seven conservation significant species; *Eremophila arachnoides* subsp. *tenera* (P1) and *Eucalyptus websteriana* subsp. *norsemanica* (P1), were identified as possibly occurring in the application area due to the presence of suitable habitat (Botanica, 2019). However, no Threatened or Priority flora were recorded during the field assessments (Botanica, 2017; Outback Ecology, 2009a; 2013).

A number of introduced flora species were identified within and surrounding the application area (Botanica, 2017; Outback Ecology, 2009a; 2013). Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to the biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Vertebrate fauna surveys of various sections of the application area were carried out by Botanica (2017), Outback Ecology (2009b) and Terrestrial Ecosystems (2012). Botanica (2017) conducted a reconnaissance fauna survey of the Mount Monger Road (narrow western section of the application area), during September 2015 and October 2017. Field assessments of other sections of the application area and adjacent areas were

conducted by Outback Ecology (2009b) during November, 2008 and Terrestrial Ecosystems (2012) during February 2012 (Terrestrial Ecosystems, 2012). A desktop study, incorporating results from all previous field surveys, was conducted by Botanica (2019).

A desktop assessment of the application area identified 107 vertebrate fauna species with the potential to occur within the application area, including 67 bird species, 9 mammal species and 28 reptile species (Botanica, 2019). A total of 14 mammals (4 non-native), 40 reptile species and 57 bird species were recorded during field assessments of sections of the application area and surrounding areas (Outback Ecology, 2009b; Terrestrial Ecosystems, 2012). A desktop assessment of the application area identified ten conservation significant fauna species with the potential to occur, including three Threatened species (Botanica, 2019). However nine of these were determined to be unlikely to occur due to a lack of suitable habitat within the application area. No Threatened or Priority fauna were recorded during the field assessments of the application area (Botanica, 2017; Outback Ecology, 2009b; Terrestrial Ecosystems 2012).

The vegetation associations, fauna habitats and landform types present within the application area, are well represented in surrounding areas (Botanica, 2019; 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 may be at variance to this Principle.

Methodology Botanica (2017)
Botanica (2019)
CALM (2002)
DBCA (2019a)
DEC (2010)
Outback Ecology (2009a)
Outback Ecology (2009b)
Outback Ecology (2013)
Terrestrial Ecosystems (2012)

GIS Database:
- IBRA Australia
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers
- 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

The following six fauna habitats have been recorded within the application area (Botanica, 2019; Outback Ecology, 2009b):

Chenopod shrubland on river flats in open depressions;
Mallee woodland on greenstone hills;
Mulga woodland/*Acacia* shrubland on rocky hillslopes;
Open Blackbutt (*Eucalyptus lesouefii*) woodland over open shrubland on clay-loam plains;
Salmon Gum (*Eucalyptus salmonophloia*) woodland over shrubland on clay-loam plains; and
Mallee woodland over saltbush on rocky plains/hillslopes.

A desktop assessment of the application area identified ten conservation significant fauna species with the potential to occur, including three Threatened species (Botanica, 2019). However nine of these were determined to be unlikely to occur due to a lack of suitable habitat within the application area, including the three threatened species: Malleefowl, *Leipoa ocellata* (Vulnerable); Curlew Sandpiper, *Calidris ferruginea* (Critically Endangered); and Night Parrot, *Pezoporus occidentalis* (Critically Endangered). The remaining conservation significant species identified as possibly occurring within the application due to the presence of suitable habitat; Fork-tailed Swift, *Apus pacificus* (migratory), was determined to be unlikely to be impacted by the proposed clearing due to being highly mobile and utilising various habitat types that are widely available (Botanica, 2019).

It is unlikely that the vegetation within the application area represents significant habitat for fauna indigenous to Western Australia due to the fauna habitat types recorded within the application area being representative of the region and extensive habitat connectivity in adjacent areas.

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

Methodology Botanica (2019)
Outback Ecology (2009b)

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). A desktop flora survey by Botanica (2019) identified two threatened flora species; *Gastrolobium graniticum* and *Tecticornia flabelliformis*, as having the potential to occur within the application area based on known distributions. However, both of these were identified as unlikely to occur due to a lack of suitable habitat within the application area (Botanica, 2019).

The vegetation associations within the application area are common and widespread within the region (CALM, 2002; Botanica 2017; Outback Ecology 2009a; 2013; GIS Database), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened (rare) flora.

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

Methodology Botanica (2017)
Botanica (2019)
CALM (2002)
Outback Ecology (2009a)
Outback Ecology (2013)

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).

Flora and vegetation surveys of the application area did not identify any TECs (Botanica 2017; Outback Ecology 2009a; 2013).

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

Methodology Botanica (2017)
Outback Ecology (2009a)
Outback Ecology (2013)

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, 2018). The application area is broadly mapped as Beard vegetation associations 468: Medium woodland; salmon gum and goldfields blackbutt; 501: Medium woodland; goldfields blackbutt; and 506: Succulent steppe with woodland; salmon gum and bluebush (GIS Database). Approximately 98-99% of the pre-European extent of each of these vegetation associations remains uncleared at both the state and bioregional level (Government of Western Australia, 2018).

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

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DBCA managed lands
IBRA Bioregion – Coolgardie	12,912,204	12,648,491	~97	Least Concern	16
Beard vegetation associations – WA					
468	592,022	583,902	~98	Least Concern	22
501	48,022	47,889	~99	Least Concern	14
506	98,187	98,050	~99	Least Concern	12
Beard vegetation associations – Coolgardie Bioregion					
468	583,357	575,360	~98	Least Concern	22
501	43,938	43,805	~99	Least Concern	15
506	98,187	98,050	~99	Least Concern	12

* Government of Western Australia (2018)

** 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 (2018)

GIS Database:

- IBRA Australia
- Pre-European Vegetation

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

Comments Proposal is at variance to this Principle

There are no permanent watercourses or wetlands within the area proposed to clear (Botanica, 2019; GIS Database). A number of seasonal creek lines pass through the application area (GIS Database). Creek lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall.

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

Methodology Botanica (2019)

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 Woolibar and Lawrence land systems (DPIRD, 2019).

The Woolibar land system is described as undulating plains supporting bluebush shrublands and scattered *Eucalyptus*. It has extensive gently inclined to gently undulating plains with minor saline stony plains and alluvial fans between interfluvies. Relief is usually less than 15 metres with drainage lines converging to form wide (less than one kilometre) level drainage tracts that may become channelized in central parts where flows are connected. When corresponding with the occurrence of weathered felsic volcanoclastic rocks, saline plains and lower alluvial tracts, this land system is prone to erode where not protected by stony mantles and protective vegetation is cleared (DPIRD, 2019).

The Lawrence land system is a minor component of the application area and is described as low greenstone hills supporting pearl bluebush shrublands with *Casuarina* or mixed *Eucalyptus* overstorey. The narrow drainage tracts of the Lawrence system are very susceptible to water erosion, particularly in areas where the

perennial shrub cover has been substantially reduced and/or the soil surface disturbed (DPIRD, 2019).

The proposed clearing of up to 70 hectares of native vegetation within a boundary of approximately 880 hectares, for the purpose of an infrastructure corridor may cause land degradation. However, as much of the application area has previously been disturbed and raised blade clearing where possible will retain root stabilisation and seedbank within the topsoil, land degradation may be reduced by rehabilitating the area as soon as practicable (Botanica, 2019; DPIRD, 2019). Potential land degradation impacts as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition and a watercourse management condition.

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

Methodology Botanica (2019)
DPIRD (2019)

(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

Approximately 97% of the application area is located within the the Randell Timber Reserve (Botanica 2019; GIS Database). The condition of the vegetation in the Randell Timber Reserve has been previously degraded by stock and feral animals (Outback Ecology, 2009a; 2013), and historical mineral production has occurred within the application area (GIS Database). Advice from DBCA (2019b) indicates that the proposed clearing is not expected to significantly impact on the flora or vegetation values of the reserve. Given the section of the application area within the Randall Timber Reserve has been previously degraded by mining and grazing and the proposed clearing is to occur predominantly adjacent to existing roads and infrastructure, the proposed clearing is not likely to have a significant additional impact on the environmental values of the Randell Timber Reserve.

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

Methodology Botanica (2019)
DBCA (2019b)
Outback Ecology (2009a)
Outback Ecology (2013)

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). Creek lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall. The proposed clearing is unlikely to result in significant changes to surface water flows.

The 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 semi-arid, with a low average rainfall of approximately 250-300 millimetres per year, of mainly winter rainfall (CALM, 2002). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall. The nearest weather station is Bulong, approximately 55 kilometres north-west of the application area, with an average rainfall of approximately 257 millimetres per year (BoM, 2019).

There are no permanent water courses or waterbodies within the application area (GIS Database). Seasonal drainage lines are common in the region and temporary localised flooding may occur briefly following heavy

rainfall events. However, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.

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

Methodology BoM (2019)
CALM (2002)

GIS Database:
- Hydrography, linear

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

Comments

The clearing permit application was advertised on 21 January 2019 by the Department of Mines, Industry Regulation and Safety (DMIRS), inviting submissions from the public. No submissions were received in relation to this application.

There are no native title claims over the area under application (DPLH, 2019). However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2019). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

Methodology DPLH (2018)

4. References

- BoM (2019) Bureau of Meteorology Website – Climate Data Online, Bulong. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/> (Accessed 01 February 2019).
- Botanica (2017) Reconnaissance Flora and Fauna Assessment: Mount Monger Road. Report prepared for Silver Lake Resources Limited, by Botanica Consulting, November 2017.
- Botanica (2019) Desktop Flora and Fauna Assessment: Mt Belches Over Head Powerline Route. Report prepared for Silver Lake Resources Limited, by Botanica Consulting, February 2019.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DBCA (2019a) Advice received in relation to Clearing Permit Application CPS 8329/1. Species and Communities Branch, Department of Biodiversity, Conservation and Attractions, Western Australia, March 2019.
- DBCA (2019b) Advice received in relation to Clearing Permit Application CPS 8329/1. Regional Manager – Goldfields Region, Conservation, Department of Biodiversity, Conservation and Attractions, Western Australia, February 2019.
- DEC (2010) A Biodiversity and Cultural Conservation Strategy for the Great Western Woodlands. 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 (2019) Advice received in relation to Clearing Permit Application CPS 8329/1. Deputy Commissioner of Soil and Land Conservation, Department of Primary Industries and Regional Development, Western Australia, March 2019.
- DPLH (2019) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage. <http://maps.daa.wa.gov.au/AHIS/> (Accessed 14 February 2019).
- Government of Western Australia (2018) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Outback Ecology (2009a) Randalls Gold Project: Salt Creek Level 2 and Maxwells/Cock-Eyed Bob Level 1 Vegetation and Flora Surveys. Report prepared for Integra Mining Limited, by Outback Ecology Services, January 2009).
- Outback Ecology (2009b) Randalls Gold Project: Terrestrial Vertebrate Fauna Assessment. Report prepared for Integra Mining Limited, by Outback Ecology Services, January 2009.
- Outback Ecology (2013) Randall's Gold Project – Santa Deposit: Level 2 Flora and Vegetation Survey. Report prepared for Integra Mining Limited, by Outback Ecology Services, January 2013.
- Terrestrial Ecosystems (2012) Fauna Assessment for the Santa Area. Report prepared for Integra Mining Limited, by Terrestrial Ecosystems, May 2012.

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	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

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

T **Threatened species:**

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

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

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

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR **Critically endangered species**

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

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

EN **Endangered species**

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

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

VU**Vulnerable species**

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

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

Extinct Species:**EX****Extinct species**

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

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

EW**Extinct in the wild species**

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

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

Specially protected species:

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

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

MI**Migratory species**

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

Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

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

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

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

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

OS**Other specially protected species**

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

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

P **Priority species:**

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

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

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1 **Priority One - Poorly-known species**

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

P2 **Priority Two - Poorly-known species**

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

P3 **Priority Three - Poorly-known species**

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

P4 **Priority Four - Rare, Near Threatened and other species in need of monitoring**

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.