



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7366/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Matsa Gold Pty Ltd

1.3. Property details

Property: Mining Lease 39/709
Mining Lease 39/710
Mining Lease 39/1065
Local Government Area: Shire of Menzies
Colloquial name: Lake Carey Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
98		Mechanical Removal	Mineral Production

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 22 December 2016

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. Two Beard vegetation associations have been mapped within the application area (GIS Database).

125: Bare areas; salt lakes; and
389: Succulent steppe with open low woodland; mulga over saltbush.

A Level 2 flora and vegetation survey of the Fortitude Gold Mine area was conducted by Plantecology in September 2016 (Matsa Gold). This survey identified the following seven vegetation associations:

Tall *Acacia caesaneura* Shrubland

Tall shrubland of *Acacia caesaneura* over open shrubland of *Eremophila latrobei* subsp. *glabra* and *Senna artemisioides* subsp. *petiolaris* over grassland of *Eragrostis eriopoda* with herbs of *Ptilotus polystachyus* and *Calandrinia polyandra* on red loamy sands of dune crests and slopes.

Open *Eremophila* Shrubland

Open shrubland of *Eremophila miniata*, *Eremophila scoparia* and *Hakea preissii* over shrubland of *Senna artemisioides* subsp. *petiolaris* and *Dodonaea viscosa* subsp. *angustissima* over low shrubland of *Ptilotus obovatus* with *Aristida contorta* and *Calandrinia polyandra* on red clay loam sands on flats.

Tall *Melaleuca leiocarpa* Shrubland

Tall shrubland of *Melaleuca leiocarpa* with emergent *Pittosporum angustifolium* over *Dodonaea viscosa* subsp. *angustissima* and *Rhagodia drummondii* over herbs of *Calandrinia polyandra* in closed depressions and adjacent accumulated red sands.

Open *Acacia tysonii* Shrubland

Open tall shrubland of *Acacia tysonii* over low shrubland of *Atriplex vesicaria* and *Frankenia pauciflora* over herbs of *Brachyscome blackii* and *Senecio gregorii* on grey medium heavy clays on low rises.

Low *Frankenia pauciflora* Shrubland

Low shrubland of *Frankenia pauciflora* and *Lawrenzia helmsii* over herbs including *Minuria gardneri*, *Gnephosis macrocephala* and *Senecio gregorii* on yellow clay loam sands and light clays of shallow lower slopes.

Low *Atriplex* Shrubland

Low shrubland of *Atriplex vesicaria* and *Frankenia pauciflora* with over herbs of *Sclerolaena eurotioides* and *Calandrinia polyandra* on red-brown medium clays on flats.

Low *samphire* Shrubland

Low open shrubland of *Tecticornia halocnemoides*, *Tecticornia pergranulata* and *Tecticornia undulata* on red-brown medium clays of closed depressions and lake edges.

Clearing Description	Lake Carey Project Matsa Gold Pty Ltd proposes to clear up to 98 hectares of native vegetation within a total boundary of approximately 168 hectares for the purposes of mineral production. The project is located approximately 185 kilometres north-east of Kalgoorlie in the Shire of Menzies.
Vegetation Condition	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994); To: Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).
Comment	The vegetation condition was assessed by botanists from Plantecology Consulting (Plantecology, 2016).

3. Assessment of application against clearing principles

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

Comments	<p>Proposal is not likely to be at variance to this Principle</p> <p>The clearing permit application area is located within the East Murchison subregion of the Murchison Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The East Murchison subregion represents a total area of approximately 7.8 million hectares, and is characterised by an arid climate with a mainly winter rainfall of approximately 200 millimetres (Cowan, 2001). The subregion is rich and diverse in both its flora and fauna however most species are wide ranging and usually occur in at least one, and often several subregions (Cowan, 2001). Vegetation in the subregion is dominated by mulga woodlands, often rich in ephemerals, hummock grasslands, saltbush shrublands and samphires (Cowan, 2001).</p> <p>The vegetation within the application area consists of Beard vegetation associations 125 and 389, both of which are common and widespread throughout the Murchison bioregion with over 90% of the pre-European vegetation extent remaining (Government of Western Australia, 2015; GIS Database). A flora and vegetation survey of the application area was conducted by Plantecology in September 2016 (Plantecology, 2016). This survey recorded a total of 88 flora species representing 24 families and 51 genera. Seven vegetation communities were identified in the application area, with the condition of these vegetation types classified from 'completely degraded' to 'excellent' (Plantecology, 2016; Keighery, 1994).</p> <p>No Threatened Ecological Communities or Priority Ecological Communities were recorded or identified within the application area (Matsa Gold; 2016; GIS Database). The nearest Threatened or Priority Ecological Community is the Priority Ecological Community, Priority 3 Mt Linden Range banded ironstone vegetation complex, which is located approximately 12 kilometres to the west of the application area (Matsa Gold, 2016).</p> <p>A search of the Department of Parks and Wildlife NatureMap database revealed no Threatened Flora species which may potentially occur within a 20 kilometre radius of the application area (DPaW, 2016). One Priority Flora species may potentially occur within this same area (<i>Tecticornia mellarium</i> – Priority 1). This species was identified during the flora survey along the shore of the lake playa to the west of the site, outside of the disturbance footprint (Matsa Gold, 2016). A total of 147 individuals were recorded in this area, however previously recorded individuals along the shore of Lake Carey were not observed (Plantecology 2016). <i>Tecticornia mellarium</i> has a restricted distribution but is often locally common. It has also been observed to be an early coloniser, which implies that population extents may alter over time (Plantecology 2016). Potential impacts to <i>Tecticornia mellarium</i> may be minimised by the implementation of a flora management condition.</p> <p>One weed species has been recorded within the survey area, which is not listed as a declared pest under the <i>Biosecurity and Agriculture Management Act, 2007</i> (Matsa Gold, 2016). 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.</p> <p>Fauna surveys have indicated that there are no significant features or unique habitats within the application area that indicate ecological function values significantly different to those within surrounding areas. In addition, parts of the application area are already disturbed by previous mining operations (Matsa Gold, 2016)</p> <p>Based on the above, the proposed clearing is not likely to be at variance to this Principle.</p>
-----------------	--

Methodology	<p>Cowan (2001) DPaW (2016) Government of Western Australia (2015) Keighery (1994) Matsa Gold (2016) Plantecology (2016)</p> <p>GIS Database: - IBRA WA (Regions - Sub Regions) - Pre European Vegetation</p>
--------------------	---

- Threatened and Priority Flora
- 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 fauna survey was undertaken over the application area in September 2016 (Terrestrial Ecosystems, 2016). Based on the results of this survey, four broad habitat types were identified within the application area:

- Flat hard pan salt lake;
- White-red substrate flats vegetated with halophytes adjacent to the salt lake;
- Red sandy low dunes covered with low shrubs;
- Low red sandy dunes vegetated with scattered trees, low shrubs and chenopods.

The density of vegetation in the undisturbed areas varied across the project area, but was mostly sparse (Terrestrial Ecosystems, 2016). The area has been lightly grazed by cattle with this disturbance being minimal, with further disturbance having been caused by exploration and drilling activity.

Seven threatened species of fauna and six migratory species of birds identified under the *Environment Protection and Biodiversity Conservation Act 1999* or *Wildlife Conservation Act 1950* potentially occur in the application area or surrounds (Terrestrial Ecosystems, 2016). There are also two Schedule 7 species as listed under the *Western Australian Wildlife Conservation Act 1950* and three species listed on the Department of Parks and Wildlife's Priority Fauna List that potentially occur in the application area or surrounds:

Species	DPaW Schedule / Priority	Status under Commonwealth EPBC Act	Potential impact on species
Night Parrot (<i>Pezoporus occidentalis</i>)	Critically Endangered	Endangered	Highly unlikely to occur in the project area.
Painted Snipe (<i>Charadrius benghalensis</i>)	Endangered	Endangered	May infrequently be seen in the area; however, clearing vegetation is unlikely to impact on this species.
Curlew Sandpiper (<i>Calidris ferruginea</i>)	Vulnerable	Critically Endangered	May infrequently be seen in the area; however, clearing vegetation is unlikely to impact on this species.
Malleefowl (<i>Leipoa ocellata</i>)	Vulnerable	Vulnerable	Not present in the project area.
Giant Desert Skink (<i>Liopholis kintorei</i>)	Vulnerable	Vulnerable	Highly unlikely to be in the project area, so the potential for impact on this species is low.
Princess Parrot (<i>Polytelis alexandrae</i>)	Priority 4	Vulnerable	May infrequently be seen in the area; however, clearing vegetation is unlikely to impact on this species.
Mulgara (<i>Dasycercus blythi / cristicauda</i>)	Priority 4	Vulnerable	Not present in the project area.
Oriental Plover (<i>Charadrius veredus</i>)	Migratory	Migratory	May infrequently be seen in the area; however, clearing vegetation is unlikely to impact on this species.
Fork-tailed Swift (<i>Apus pacificus</i>)	Migratory	Migratory	May infrequently be seen in the area; however, clearing vegetation is unlikely to impact on this species.
Grey Wagtail (<i>Motacilla cinerea</i>)	Migratory	Migratory	Highly unlikely to be seen in the project area, so the potential for impact on this species is low.
Yellow Wagtail (<i>Motacilla flava</i>)	Migratory	Migratory	Highly unlikely to be seen in the project area, so the potential for impact on this species is low.
Common Greenshank (<i>Tringa nebularia</i>)	Migratory	Migratory	Unlikely to be seen in the project area, so the potential for impact on this species is low.
Peregrine Falcon (<i>Falco peregrinus</i>)	Schedule 7	Least Concern	May infrequently be seen in the area; however, clearing vegetation is unlikely to impact on this species.
Rainbow Bee-eater (<i>Merops ornatus</i>)	Schedule 7	Migratory	May infrequently be seen in the area; however, clearing vegetation is unlikely to impact on this species.
Hooded Plover (<i>Charadrius rubricollis</i>)	Priority 4	Least Concern	May infrequently be seen in the area; however, clearing vegetation is unlikely to impact on this species.

Terrestrial Ecosystems (2016) reports the habitats within the application area as being typical of those found widely distributed throughout the region. Additionally, some of the application area is already disturbed

(Matsa Gold, 2016). Although the proposed clearing may have some localised impacts upon fauna species and cause some fragmentation of habitat, the proposed clearing is unlikely to have a major impact on significant habitat for any fauna species.

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

Methodology Matsa Gold (2016)
Terrestrial Ecosystems (2016)

(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 records of Threatened Flora within the application area (GIS Database). A search of the Department of Parks and Wildlife NatureMap identified no Threatened Flora species as occurring within a 20 kilometre radius of the application area (DPaW, 2016).

Plantecology Consulting (Plantecology, 2016) conducted a vegetation and flora survey of the application area during September 2016. No Threatened Flora were recorded within the survey area.

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

Methodology DPaW (2016)
Plantecology (2016)

GIS Database:
- Threatened and Priority Flora

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

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

There are no known Threatened Ecological Communities (TEC's) located within a 50 kilometre radius of the application area (GIS Database). Comprehensive traverses of the application area did not identify any Threatened Ecological Communities (Matsa Gold, 2016).

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

Methodology Matsa Gold (2016)

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 falls within the Murchison IBRA bioregion (GIS Database). The vegetation within the application area is broadly mapped as the following vegetation associations:

125: Bare areas; salt lakes; and

389: Succulent steppe with open low woodland; mulga over saltbush (GIS Database).

These vegetation associations have not been extensively cleared as over 90% remains at both a State and bioregional level for vegetation association 125 and 99% for vegetation association 389 (see table) (Government of Western Australia, 2015).

The vegetation within the application area is not a remnant of native vegetation within an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPaW Managed Land
IBRA Bioregion - Pilbara	28,120,587	28,044,823	~99.73	Least Concern	7.78
Beard vegetation associations - State					

125	3,485,787	3,146,496	~90.27	Least Concern	9.28
389	642,357	640,469	~99.71	Least Concern	3.57
Beard vegetation associations - Bioregion					
125	711,484	710,255	~99.83	Least Concern	7.2
389	493,978	492,089	~99.62	Least Concern	4.65

* Government of Western Australia (2015)

** 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 (2015)

GIS Database:

- IBRA WA (Regions - Sub Regions)

- 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 application area (GIS database).

There are two minor non-perennial watercourse passing through the southern side of the application area (GIS Database). These drainage lines are dry for most of the year, only flowing briefly following significant rainfall events (Matsa Gold, 2016).

Matsa Gold (2016) have advised that the min plan will maintain natural drainage lines where possible. Further impacts may be minimised by the implementation of a watercourse management condition.

Based on the above, the proposed clearing is at variance to this Principle. However, the proposed clearing of 98 hectares of native vegetation within a total application area of approximately 168 hectares is unlikely to result in any significant impact on this or any other watercourse or wetland.

Methodology Matsa Gold (2016)

GIS Database:

- Geodata, Lakes

- Hydrography, Linear

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

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

According to available datasets the application areas intersect two land systems (GIS Database):

- Carnegie
- Lake Bed

The Carnegie land system is described as salt lakes with extensively fringing saline plains, dunes and sandy banks, supporting low halophytic shrublands and scattered tall acacia shrublands; lake beds are highly saline; gypsiferous and mainly unvegetated (GIS Database). The Lake Bed land system is described as bare lake beds inundated for short periods after rain (GIS Database). These land systems are comprised mostly of lake beds and are generally not susceptible to erosion (Curry et al., 1994).

The size of the application area is relatively small in the context of the extensive areas of intact native vegetation adjacent to it and it is highly unlikely to cause appreciable land degradation (Plantecology 2016). Potential soil erosion as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

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

Methodology Curry et al. (1994)
Plantecology (2016)

GIS Database:
- Rangeland Land System Mapping
- 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

The closest conservation area to the application area is Goongarrie National Park which is located greater than 50 kilometres to the south-west (GIS Database). Given the large distance between these two areas it is unlikely that the environmental values of Goongarrie National Park will be compromised from the proposed clearing.

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

Methodology GIS Database:
- DPaW Tenure
- Register of National Estate (Status)

(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 not located within a Public Drinking Water Source Area (GIS Database). The groundwater in the area is hypersaline, with salinity ranging from 230,000 to 260,000 milligrams/Litre Total Dissolved Solids (Matsa Gold, 2016). The removal of 98 hectares of vegetation is unlikely to cause deterioration of underground water quality.

The application area is located within an arid to semi-arid region. No permanent waterbodies or watercourses occur within the application area, however there are several minor ephemeral watercourses that transect the application area (GIS Database). Surface water runoff is only likely to occur during and immediately following significant rainfall events.

Matsa Gold Pty Ltd (2016) will have a Surface Water Management Plan in place before construction commences to ensure the effective implementation of mitigation measures to minimise environmental impact.

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

Methodology Matsa Gold (2016)

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 application area is located within an arid to semi-arid region where the evaporation rate greatly exceeds the average annual rainfall (Matsa Gold, 2016). According to available databases there are no permanent watercourses mapped within the application area, however, there are two minor ephemeral watercourses within the application area (GIS Database). These drainage lines are expected to be dry for most of the year and would likely only flow immediately following significant rainfall events that originate from the north-west primarily during January to March (BoM, 2016; Matsa Gold, 2016).

Considering that the proposed clearing of 98 hectares is within the Lake Carey catchment area of 11,378,213 hectares, it is not considered likely that the proposed clearing will increase the incidence or intensity of flooding.

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

Methodology BOM (2016)
Matsa Gold (2016)

GIS Database:
- Hydrographic Catchments - Catchments

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

There are no Native Title claims over the area under application (DAA, 2016). 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 several registered Aboriginal sites of significance within the application area (DAA, 2016). 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 Environment Regulation, Department of Parks and Wildlife and the Department of Water, 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 28 November 2016 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

Methodology DAA (2016)

4. References

- BoM (2016) Bureau of Meteorology Website - Climate statistics for Australian locations, Newman Aero. Available online at: http://www.bom.gov.au/climate/averages/tables/cw_012046.shtml Accessed on 19 December 2016.
- Cowan, M (2001) Murchison 1 (MUR1 - East Murchison subregion) Subregional description and biodiversity values, dated August 2001. In: "A biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002". Report published by the Department of Conservation and Land Management, Perth, Western Australia.
- Curry PJ, Payne AL, Leighton KA, Hennig P, Blood DA (1994). Technical Bulletin No. 84. An inventory and condition survey of the Murchison River catchment and surrounds, Western Australia. Department of Agriculture, Western Australia.
- DAA (2016) Aboriginal Heritage Inquiry System, Government of Western Australia, Department of Aboriginal Affairs, Perth <<http://maps.dia.wa.gov.au/AHIS2/>> accessed 19 December 2016.
- 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.
- DPaW (2016) NatureMap Department of Parks and Wildlife, <<http://naturemap.dec.wa.gov.au>> accessed 19 December 2016.
- Government of Western Australia (2015) 2015 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, 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.
- Matsa Gold (2016) Matsa Gold Supporting Information for the Native Vegetation Clearing Permit Application - Purpose Permit - Lake Carey Project – Fortitude Gold Mine. Unpublished report prepared by Matsa Gold Pty Ltd, November 2016.
- Plantecology (2016) Fortitude Project, Lake Carey. Flora and Vegetation Survey. Unpublished report prepared by Plantecology Consulting for Matsa Gold Pty Ltd, November 2016.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DPaW and DER)
DEE	Department of the Environment and Energy, Australian Government
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DoE	Department of the Environment, Australian Government (now DEE)
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
EPA	Environmental Protection Authority, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<i>Environmental 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:

{DPaW (2015) 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.
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.
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.