



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 7834/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Hastings Technology Metals Limited

### 1.3. Property details

Property: Miscellaneous Licence 09/80  
Miscellaneous Licence 09/81  
Local Government Area: Shire of Upper Gascoyne  
Colloquial name: Yangibana Rare Earths Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
52.5		Mechanical Removal	Accommodation camp, access road, topsoil storage, waste water treatment plant and irrigation field

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 18 January 2018

## 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:

- 18: Low woodland; mulga (*Acacia aneura*);
- 29: Sparse low woodland; mulga, discontinuous in scattered groups;
- 165: Low woodland; mulga and snakewood (*Acacia eremaea*); and
- 181: Shrublands; mulga and snakewood scrub (GIS Database).

Several flora and vegetation surveys have been conducted over the application area, most recently a Level 2 flora and vegetation assessment of the Yangibana Study Area (55,000 ha), which included the accommodation facilities and access road, respectively. Eco Logical Australia conducted the most recent survey during 28 April to 3 May 2017. The following vegetation associations were recorded within the application area (Hastings, 2017):

AaSaEs: *Acacia aptaneura* low open woodland over *Senna artemisioides* subsp. *oligophylla* low sparse shrubland over *Eragrostis setifolia* and *Eragrostis tenellula* low tussock grassland;  
AcAsCc: *Acacia citrinoviridis* and *Eucalyptus victrix* low open woodland over *Acacia sclerosperma* subsp. *sclerosperma* and *A. cuthbertsonii* subsp. *cuthbertsonii* tall sparse shrubland over *\*Cenchrus ciliaris* and *\*C. setiger* mid tussock grassland;  
AcEt: *Acacia cyperophylla* var. *cyperophylla* low open woodland over *Eragrostis tenellula*, *Eragrostis cumingii* and *Eriachne aristidea* low tussock grassland;  
ApEeTSS: *Acacia paraneura* and *Eremophila exilifolia* tall sparse shrubland over *Tribulus suberosus* low sparse shrubland over *Bulbostylis barbata* sparse sedgeland;  
ApSgAc: *Acacia pruinocarpa* and *Grevillea berryana* low open woodland over *Senna glutinosa* subsp. *x luerssenii* and *Eremophila phyllopoda* subsp. *obliqua* mid sparse shrubland over *Aristida contorta* and *Eriachne pulchella* subsp. *dominii* low grassland;  
AsFh: *Acacia synchronicia* and *Eremophila cuneifolia* mid sparse shrubland over *Frankenia hispidula* and *Aristida contorta* low open shrubland/ grassland;  
AxEcAc: *Acacia xiphophylla*, *A. synchronicia* and *A. macraneura* low open woodland over *Eremophila cuneifolia*, *Senna artemisioides* subsp. *oligophylla*, *S. glutinosa* subsp. *x luerssenii* mid open shrubland over *Aristida contorta* and *Enneapogon caeruleus* low sparse tussock grassland;  
EcBp: *Eremophila cuneifolia* and *Scaevola spinescens* mid sparse shrubland over *Brachyachne prostrata* and *Sclerolaena eriantha* low sparse grassland/chenopod shrubland;  
EcMgCc: *Eucalyptus camaldulensis* mid woodland over *Melaleuca glomerata* and *Acacia coriacea* subsp. *pendens* tall shrubland over *\*Cenchrus ciliaris* mid tussock grassland;  
EpAc: *Eremophila phyllopoda* subsp. *obliqua*, *Acacia tetragonophylla* and *Senna artemisioides* subsp. *helmsii* mid open shrubland over *Aristida contorta*, *Eriachne pulchella* subsp. *dominii* and *Portulaca oleracea* low grassland/forbland;  
\*denotes weed species

<b>Clearing Description</b>	Yangibana Rare Earths Project. Hastings Technology Metals Limited proposes to clear up to 52.5 hectares of native vegetation within a boundary of approximately 119.8 hectares, for the purpose of mining related infrastructure. The project is located approximately 175 kilometres South West of Paraburdoo on Wanna Station, within the Shire of Upper Gascoyne.
<b>Vegetation Condition</b>	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).
<b>Comment</b>	<p>The vegetation condition was derived from a vegetation survey conducted by Ecological (2017). Further observations described evidence of degradation along drainage lines occurs where hooved mammals and weeds were present. Other minor areas were classified as degraded from pastoral activities and exploration tracks and pads (to be rehabilitated at completion of exploration programme). Despite this, the majority of the survey area is in Excellent condition with native vegetation largely intact (Ecological, 2017).</p> <p>The proposed clearing is for construction and operation of an access road, accommodation facilities and associated infrastructure. The Yangibana Rare Earths Project is under formal assessment by the Environmental Protection Authority (EPA) however, the EPA has consented to these preliminary works being carried out (EPA, 2017).</p>

### 3. Assessment of application against Clearing Principles

#### Comments

The application area is located within the Augustus subregion of the Gascoyne Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). The Augustus subregion is characterised by rugged low sedimentary and granite ranges divided by broad flat valleys (CALM, 2002). Mulga woodland over *Triodia* species occurs on shallow stony loams on rises, while the shallow earthy loams over hardpan on the plains support open Mulga woodland. The dominant land-use of the subregion is grazing (CALM, 2002).

A Level 2 flora and vegetation survey was conducted by Ecological over the application area and surrounding areas during April and May 2017 (Ecological, 2017). The survey covered the whole broader project area of 55,000 hectares significantly larger than the 52.5 hectares associated with this application. A total Eight priority flora (listed by the Department of Biodiversity Conservation and Attractions (DBCAs) were recorded in the study area, *Acacia curryana* (Priority 1), *Rhodanthe frenchii* (Priority 2), *Solanum octonum* (Priority 2), *Wurmbea fluvialilis* (Priority 2), *Gymnanthera cunninghamii* (Priority 3), *Sporobolus blakei* (Priority 3), *Goodenia berrinbinensis* (Priority 4) and *Goodenia nuda* (Priority 4). No species of Priority flora were recorded within the proposed disturbance envelope, and therefore none are expected to be affected by proposed vegetation clearing (Hastings, 2017).

No Threatened Ecological Communities have been recorded within or in close proximity to the application area, and none were found during the survey (GIS Database; Hastings, 2017). The majority of the survey falls within the Gifford Creek Priority Ecological Community (PEC) buffer. The Gifford Creek PEC is necessary to conserve the Gifford Creek, Mangaroon, Wanna calcrete groundwater assemblage type on Lyons palaeo-drainage on Gifford Creek, Lyons and Wanna Stations (GIS Database). The application disturbs a small percentage of riparian vegetation however; the implementation of a watercourse management condition will reduce the likelihood of significant impacts of the Gifford Creek PEC.

Level 2 fauna surveys were conducted over the broader project, which was inclusive of this application area. The fauna survey was conducted with several phases during May and October 2015 (Ecoscape, 2016). A total of 134 species were recorded from the study area over the two phases of assessment which consisted of 20 species of mammal (12 species of non-volant mammals, eight species of bat), 85 species of bird, 25 species of reptile and four species of amphibian (Ecoscape, 2016).

The flora and fauna species, vegetation communities and fauna habitats found within the application area are well represented within the region, and the application area is unlikely to represent an area of higher biodiversity than surrounding areas, in either a local or a regional context (Hastings, 2017).

The following broad habitat types were identified within the application area within the level 2 fauna surveys conducted over the application area and surrounding areas during 2015 (Ecoscape, 2016):

- Rocky plain
- Sandy plain
- Granite outcrop
- Minor creekline

Ecoscape (2015) concluded that the fauna habitats occurring within the application area are not exclusive to the project area, and are well represented in surrounding areas (Ecoscape, 2016).

Four species of conservation significance were recorded during the Level 2 fauna surveys (Ecoscape, 2016): Rainbow Bee-eater (*Merops ornatus*, EPBC Migratory), Eastern Great Egret (*Ardea modesta*, EPBC Migratory),

Grey Falcon (*Falco hypoleuca*, EPBC Vulnerable) (recorded outside the project area) and Long-tailed Dunnart (*Sminthopsis longicaudata*, DBCA P4)

The Rainbow Bee-eater is widespread throughout most of Australia with several records in the vicinity of the study area, and does not depend on any particular habitat or vegetation type for feeding or breeding. They are scarce to common throughout much of Western Australia except for the arid interior, preferring lightly wooded, sandy country near water. Rainbow Bee-eaters were recorded during the survey from within the study area. Suitable foraging and breeding habitat is present in the form of major river systems and creeklines, in particular after rainfall events. The Rainbow Bee-eater is common throughout the region, with previous records from within the study area in 1978 and 2001 and the species is likely to utilise the major drainage lines as breeding and foraging habitat. The impact on the species by the proposed project is anticipated to be low due to its ability to utilise a variety of habitats and to move away from areas of disturbance. It is not considered that any of these species will be impacted on a local or regional level by the project (Ecoscape, 2016).

The Grey Falcon is uncommon but wide-ranging throughout Australia, preferring areas with rocky ledges, cliffs, watercourses, open woodland or margins with cleared land. Ledges, cliff faces, large tree hollows and spouts, electricity pylons and similar structures, or abandoned nests of other raptors are used for nesting (Ecoscape, 2016).

Individual Peregrine Falcons are occasionally sighted throughout the region and would certainly use the study area at least for foraging or may use the general area as part of a larger foraging range. Two individuals were sighted in 2000 and 2009 from 9 km south and 23 km west of the study area along major creeklines. Large trees along watercourses that may contain hollows, stick-nests of other raptor species (e.g. Nankeen Kestrel, Wedge-tailed Eagle), and ledges on steep faces of granite outcrops could provide suitable nesting sites. Impacts on adult individuals or foraging habitat are not likely to be significant, but destruction of tree hollows or existing nests of other birds could affect value of the habitat for breeding, especially if any are in use by this species. Impact is likely to be minor due to low density of population and ability to relocate to unaffected areas (Ecoscape, 2016).

The Long-tailed Dunnart (P4), is patchily distributed in rocky areas of central Western Australia (Pilbara, Murchison, north-eastern Goldfields, Ashburton, and Gibson Desert regions) and a few sites in central southern Northern Territory, but at times it can be locally common. It is found in rocky scree and plateau areas, generally with little vegetation or of spinifex hummock grassland, shrubs, and open woodland (Ecoscape, 2016).

The Long-tailed Dunnart was recorded from the study area. There are also records of this species in the vicinity with the closest record from 56 km south-east (in 1992) and from 66 km north-west (in 1994) of the study area. The local population is expected to be impacted by the development of the project due to the loss of habitat, however the impact is relatively local and is not expected to affect the species on a regional level. Due to the low detectability of the species and the low level of surveying (in particular for small sized mammals) in surrounding areas, additional populations are likely to exist outside the study area. This assumption is supported by the continuity of habitat in the region (Ecoscape, 2016).

The Eastern Great Egrets is widespread in Australia, occurring in a wide range of wetland habitats and breeding (November to April, depending on rainfall) in colonies in wooded and shrubby swamps. The Eastern Great Egret was recorded from within the study area (Lyons River) during the survey. There are also numerous records from the Lyons River to the south of the study area and within 30 km of the study area as shown on NatureMap, and the species is considered likely to occur when surface water is present after sufficient rainfall. Minor impact on this species may occur through reduction of wet-season foraging area, but this is unlikely to be significant at the population level because of the large area of similar habitats available in the region (Ecoscape, 2016).

In addition to the species recorded throughout the survey, four other conservation significant fauna species are likely to occur within the broader study area according to a desktop survey conducted by Ecoscape (2016). These species include the Fork-tailed Swift (*Apus pacificus*, EPBC Migratory), Yinnietharra Rock Dragon (*Ctenophorus yinnietharra*, EPBC Vulnerable), Peregrine Falcon (*Falco peregrinus*, WC Act S7) and the Golden Gudgeon (*Hypseleotris aurea*, DBCA P2) which are all likely to have habitat suitable within the surveyed area. Due to abundance of the critical habitats regionally for these species it would be unlikely the proposed clearing will have a detrimental impact on the species' populations.

The landforms, vegetation associations and fauna habitat types found within the application area are well represented within the region (Ecoscape, 2016; GIS Database), the vegetation proposed to be cleared is unlikely to represent significant habitat for fauna in a regional context.

There are no records of Threatened flora within or in close proximity to the application area (GIS Database), and a flora survey of the application area did not record any species of Threatened flora (Ecological, 2017).

The vegetation associations recorded within the application areas are well represented in surrounding areas (GIS Database; Ecological, 2017), the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened (rare) flora.

There are no known Threatened Ecological Communities (TECs) located within a 50 kilometre radius of the application area (GIS Database). Surveys of the application area did not identify any TECs (Ecological, 2017).

The area applied to be cleared is located within the Gascoyne IBRA Bioregion (GIS Database). There is approximately 99% of pre-European vegetation remaining within the bioregion (Government of Western Australia, 2016).

The application area is broadly mapped as Beard vegetation associations 18: Low woodland; mulga (*Acacia aneura*); 29: Sparse low woodland; mulga, discontinuous in scattered groups. 165: Low woodland; mulga and snakewood (*Acacia eremaea*); and 181: Shrublands; mulga and snakewood scrub (GIS Database). Approximately 99% of the pre-European extent of these vegetation associations remains uncleared at both the state and bioregional level (Government of Western Australia, 2016). Hence, the vegetation proposed to be cleared does not represent a significant remnant of vegetation in an area that has been extensively cleared.

Lyons river a seasonal watercourse runs through the application area (GIS Database). The Lyons River, a major tributary of the Gascoyne River, crosses the proposed access road and flows in a generally westerly direction. The Edmund River, a tributary of the Lyons River, is associated with the western boundary of the project and flows in a southerly direction. Both rivers are ephemeral and only flow following rainfall events, although permanent or semi-permanent waterholes occur along their length. Two semi-permanent pools also occur within 5 km of the application area (Hastings, 2017).

Clearing of 0.43 ha of a groundwater dependent ecosystems characterised by *Eucalyptus camaldulensis* is proposed (vegetation type EcMgCC: *Eucalyptus camaldulensis* mid woodland over *Melaleuca glomerata* and *Acacia coriacea* subsp. *Pendens* tall shrubland over \**Cenchrus ciliaris* mid tussock grassland) which represents only 0.10% of its mapped extent within the study area. This will occur at the Lyons River crossing (Hastings, 2017).

Based on the above, the proposed clearing may impact on vegetation growing in, or in association with, an environment associated with a watercourse. However, management practices and engineering solutions will be implemented to minimise the potential impacts to the Lyons River, other watercourses, and downstream vegetation (Hastings, 2017). Potential impacts as a result of the proposed clearing may be minimised by the implementation of a watercourse management condition.

The application area is broadly mapped as the Jamindie, Gascoyne, George, Augustus, Nadarra, Phillips, and Winmar land systems (GIS Database).

The majority of the above-mentioned land systems are protected by stony mantles, however they may be susceptible to erosion if the surface is disturbed. Due to the lack of stony surface mantles, the Gascoyne land system may be particularly susceptible to erosion if disturbed. The Gascoyne land system is described as river plains with grassy woodlands and tussock grassland which only covers a small percentage of the proposed disturbance area (GIS Database).

The proposed area to be cleared is not located within or adjacent to conservation areas and thus will not have an impact on the environmental values of a conservation area (GIS Database).

There are no Public Drinking Water Source Areas within or in close proximity to the clearing permit application area (GIS Database). There are no permanent watercourses or wetlands within the application area (GIS Database). Several seasonal watercourses pass through the application area including Lyons River (GIS Database). Management practices will be implemented to minimise the risk of erosion, including a concrete causeway which will be constructed to cross the width of the river preventing additional sediment loads during heavy rainfall events. A soils assessment has highlighted plains topsoil is unsuitable for use in rehabilitation due to its saline and sodic nature, and are highly erodible. This soil type will not be harvested or stored (Hastings, 2017).

The climate of the Augustus subregion is arid, with a highly variable summer and winter rainfall (CALM, 2002). Records from the nearest weather station to the application area (Lyons River), indicate a mean annual rainfall of approximately 212 millimetres (BoM, 2018).

There are no permanent watercourses or waterbodies within the application area (GIS Database). Several minor seasonal watercourses pass through the application area (GIS Database). Temporary localised flooding may occur during heavy rainfall events. However, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*, and the proposed clearing is at variance to Principle (f), may be at variance to Principle (g), is not likely to be at variance to Principles (a), (b), (c), (d), (h), (i) and (j) and is not at variance to Principle (e).

CALM (2012)  
 Ecoscape (2016)  
 Ecological (2017)  
 Government of Western Australia (2016)  
 Hasting (2017)  
 GIS Database:  
 - DPaW Tenure  
 - Hydrography, Lakes  
 - Hydrography, Linear  
 - IBRA Australia  
 - Imagery  
 - Landsystem Rangelands  
 - Pre-European Vegetation  
 - Public Drinking Water Source Areas  
 - Soils, Statewide  
 - Threatened and Priority Flora  
 - Threatened and Priority Ecological Communities boundaries  
 - Threatened and Priority Ecological Communities buffered  
 - Threatened Fauna

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

#### Comments

There are no Native Title claims over the area under application (DPLH, 2018). 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, 2018). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

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

The amendment application was advertised on 27 November 2017 by the the Department of Mines, Industry Regulation and Safety (DMIRS), inviting submissions from the public. No submissions were received in relation to this application.

The Yangibana Rare Earths Project is currently under formal assessment of the EPA however, on the 25<sup>th</sup> of August 2017, the EPA decided that preliminary works inclusive of this proposal would be acceptable to be carried out. The EPA stated that considering the limited nature of clearing, the need for further investigations and the constraints on the temporary camps due to seasonal weather, the proposed works are considered justified in their extent and timing.- Pursuant to section 41 A(3) of the *Environmental Protection Act 1986* the EPA consents to Hastings Technology Metals Limited undertaking minor or preliminary works within the assessed development envelope for the purposes of undertaking investigative works including water investigations, geotechnical assessments, environmental surveys and mineral exploration activities. The proposed works include the construction of an accommodation village and associated infrastructure including a wastewater treatment plant, irrigation field and access roads (EPA, 2017).

**Methodology** Hastings (2017)  
 DPLH (2018)  
 EPA (2017)

### 4. References

- BoM (2018) Bureau of Meteorology website - Climate Data Online. Australian Government, Bureau of Meteorology  
<http://www.bom.gov.au/climate/data> (Accessed 16 January 2018)
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DPLH (2018) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage.  
<http://maps.daa.wa.gov.au/AHIS/> (Accessed 16 January 2018).
- Ecological (2017) Yangibana Rare Earths Project Flora and Fauna Survey Prepared for Hastings Technology Metals Limited 8 June 2017. West Perth, Western Australia
- Ecoscape (2016) Yangibana Project Biological Assessment: Terrestrial Fauna. North Fremantle Western Australia

- EPA (2017) Notice of decision to consent to Minor or Preliminary Works, Environmental Protection Authority  
[http://www.epa.wa.gov.au/sites/default/files/minor\\_and\\_preliminary/Notice%20of%20decision%20to%20consent%20to%20minor%20or%20preliminary%20works%20%28s41A%283%29%29.pdf](http://www.epa.wa.gov.au/sites/default/files/minor_and_preliminary/Notice%20of%20decision%20to%20consent%20to%20minor%20or%20preliminary%20works%20%28s41A%283%29%29.pdf) (Accessed 12 January 2018)
- Government of Western Australia (2016) 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2016. WA Department of Parks and Wildlife. Perth, Western Australia.
- Hastings (2017) Preliminary or Minor Works Native Vegetation Clearing Permit Application Assessment Information. Hastings Technology Limited, Perth, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia (now DPLH)
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia (now DPIRD)
<b>DBCA</b>	Department of Biodiversity Conservation and Attractions, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia (now DBCA and DWER)
<b>DEE</b>	Department of the Environment and Energy, Australian Government
<b>DER</b>	Department of Environment Regulation, Western Australia (now DWER)
<b>DMIRS</b>	Department of Mines, Industry Regulation and Safety, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia (now DMIRS)
<b>DPIRD</b>	Department of Primary Industries and Regional Development, Western Australia
<b>DPLH</b>	Department of Planning, Lands and Heritage, Western Australia
<b>DRF</b>	Declared Rare Flora
<b>DoE</b>	Department of the Environment, Australian Government (now DEE)
<b>DoW</b>	Department of Water, Western Australia (now DWER)
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia (now DBCA)
<b>DSEWPac</b>	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
<b>DWER</b>	Department of Water and Environmental Regulation, Western Australia
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
<b>TEC</b>	Threatened Ecological Community

### Definitions:

{DPaW (2017) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

**T** **Threatened species:**  
 Published as Specially Protected under the *Wildlife Conservation Act 1950*, listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

**Threatened fauna** is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the *Wildlife Conservation Act 1950*.

**Threatened flora** is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the *Wildlife Conservation Act 1950*.

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

**CR** **Critically endangered species**  
 Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation

(Rare Flora) Notice for Threatened Flora.

- EN Endangered species**  
Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- VU Vulnerable species**  
Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- EX Presumed extinct species**  
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.
- IA Migratory birds protected under an international agreement**  
Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- CD Conservation dependent fauna**  
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- OS Other specially protected fauna**  
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P Priority species**  
Species which are poorly known; or  
Species that are adequately known, are rare but not threatened, and require regular monitoring. Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.
- P1 Priority One - Poorly-known species:**  
Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.
- P2 Priority Two - Poorly-known species:**  
Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.
- P3 Priority Three - Poorly-known species:**  
Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.
- P4 Priority Four - Rare, Near Threatened and other species in need of monitoring:**  
(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special

protection, but could be if present circumstances change. These species are usually represented on conservation lands.

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

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

**Principles for clearing native vegetation:**

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (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.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare 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.
- (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.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (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.
- (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.
- (j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.