

# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 7708/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: BASF Australia Limited

### 1.3. Property details

Property: Mining Lease 70/1158  
General Purpose Lease 70/207  
Local Government Area: Shire of Manjimup  
Colloquial name: 48 Acre Swamp Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2		Slashing	Firebreaks

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 28 September 2017

## 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:  
3: Medium forest; jarrah-marri;  
27: Low woodland; paperbark (*Melaleuca* sp.); and  
126: Bare areas; freshwater lakes (GIS Database).

A flora and vegetation survey was conducted over an area of approximately 52 hectares by Rapallo Environmental in March 2014, which included the current clearing permit application area and surrounding areas (Rapallo, 2014). Based on vegetation mapping undertaken by Rapallo (2014), the following three vegetation communities occur within the application area:

**Marri-Zamia medium woodland:** An upper storey of tall (12 to 25 metres) marri trees (*Corymbia calophylla*), with different combinations of jarrah (*Eucalyptus marginata*), and blackbutt (*Eucalyptus patens*). *Melaleuca preissiana* and flooded gum (*Eucalyptus rudis*) may also be present in the lower tree layer. Shrub layer defined by the presence of zamia (*Macrozamia riedlei*) cycads and *Leucopogon capitellatus* shrubs, with different combinations of *Xanthorrhoea preissii* grass trees, *Taxandria juniperina* and *Billardiera heterophylla* shrubs, and bracken fern (*Pteridium esculentum*). *Persoonia longifolia* and *Callitris pyramidalis* also occur in the lower tree or tall shrub layer.

**Melaleuca-Rudis low woodland:** Characterised by melaleucas, with tree forms of *Melaleuca preissiana* and *Melaleuca raphiophylla* forming the upper storey, growing to a height of 8 metres. Flooded gum (*Eucalyptus rudis*) forms part of the upper storey in most areas, occasionally rising as 15 metres tall emergent trees above the melaleuca layer. Typical jarrah forest trees are absent. The mid-storey comprises a diverse combination of shrubs, between 1 and 4 metres tall. Typical jarrah forest species such as zamias and grass trees are absent. Includes scattered, dense, impenetrable, melaleuca thickets, which lack a tree over-storey, and are made up of either *Melaleuca viminea* subsp. *viminea*, or shrub forms of *Melaleuca raphiophylla* and *Melaleuca preissiana*, occasionally with *Kunzea ericifolia* subsp. *ericifolia* along the edges.

**Melaleuca-Rudis shrubland on lake bed:** Covers the lake bed of the 40 Acre Swamp. Characterised by the peat soil on which it grows. Melaleucas and flooded gum are present as shrubs or low trees, with the density and height of shrubs decreasing from the edges towards the centre of the swamp, while the amount of sedges increases.

**Clearing Description** 40 Acre Swamp Project  
BASF Australia Ltd proposes to clear up to 2 hectares of native vegetation within a boundary of approximately 2.7 hectares, for the purpose of firebreaks. The project is located approximately 50 kilometres southeast of Manjimup, within the Shire of Manjimup.

**Vegetation Condition** Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994);

To

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

**Comment** The vegetation condition was derived from a vegetation survey conducted by Rapallo (2014).

This permit occurs over the same footprint as existing clearing permit CPS 5211/1, which was granted by the (former) Department of Mines and Petroleum (now the Department of Mines, Industry Regulation and Safety) to Becker Underwood Pty Ltd on 29 November 2012. Becker Underwood Pty Ltd subsequently changed its name to BASF Agricultural Specialities Pty Ltd. The proponent has reapplied for the permit in order to change the name of the Permit Holder to BASF Australia Ltd, due to a change of company structure.

### 3. Assessment of application against Clearing Principles

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

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

The clearing permit application area is located within the Southern Jarrah Forrest subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Jarrah Forrest Bioregion (GIS Database).

The proposed clearing is for firebreaks around a seasonally inundated peat wetland. Peat swamp communities within the Southern Jarrah Forrest bioregion are known to contain local endemic species of significance (CALM, 2002). The application area has been cleared for firebreaks under a previously granted permit (CPS 5211/1), and it is proposed to continue to maintain these firebreaks.

A Level 1 flora, vegetation and fauna survey was conducted by Rapallo Environmental (Rapallo) over an area of approximately 52 hectares, which included the application area and surrounding areas, during March 2014 (Rapallo, 2014). A total of 61 flora species, from 25 families were recorded within the survey area (Rapallo, 2014).

No Threatened Ecological Communities or Priority Ecological Communities have been recorded within or in close proximity to the application area (GIS Database), and none were found within the broader area covered by the flora and vegetation survey (Rapallo, 2014).

Desktop surveys of available databases identified numerous conservation significant flora species with the potential to occur within the survey area, based on known distributions (Rapallo, 2014). No Threatened or Priority flora species were recorded during the on-site survey (Rapallo, 2014). However, as the survey was conducted during Autumn, the majority of the conservation significant species were not flowering, and it was considered that some species, notably orchids and annual herbs may occur within the survey area (Rapallo, 2014). A follow up flora survey was conducted by Rapallo during September and October 2015, specifically targeting flora of conservation significance considered likely to occur within the area (Rapallo, 2016). The targeted flora survey primarily covered the swamp area, and only covered a small part of the current application area, which surrounds the swamp. No flora species of conservation significance were recorded during the targeted flora survey of the swamp area (Rapallo, 2016).

The vegetation condition within the survey area was described as Good to Excellent on the Keighery scale (Rapallo, 2014). Five weed species were recorded during the flora survey (Rapallo, 2014). None of these weeds are listed as a declared plant under the *Biosecurity and Agriculture Management Act 2007* (Rapallo, 2014). Weeds have the potential to out-compete native flora and reduce the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The Level 1 fauna survey recorded a total of seven mammal species, three reptiles, one frog species and 39 bird species within the broader survey area, including six fauna species of conservation significance (Rapallo, 2014).

Although the surveys recorded substantial biodiversity within the broader survey area, it should be noted that the clearing permit application area is only 2.7 hectares in size, and has been previously cleared for firebreaks. Furthermore, the proposed method of clearing is to slash the vegetation above ground level, not completely clear it, which will minimising impacts to biodiversity.

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

**Methodology** CALM (2002)  
Rapallo (2014)  
Rapallo (2016)

- GIS Database:
- IBRA Australia
  - Pre-European Vegetation
  - Threatened and Priority Flora
  - Threatened Ecological Sites Buffered
  - 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 may be at variance to this Principle**

A Level 1 fauna survey was conducted by Rapallo Environmental (Rapallo) over an area of approximately 52 hectares, which included the application area and surrounding areas, during March 2014 (Rapallo, 2014). Several fauna species of conservation significance were recorded during the survey, including black cockatoos and chuditch (Rapallo, 2014).

The landforms and habitat types found within the application area are relatively common and widespread in the region (CALM, 2002; GIS Database). The small area of vegetation proposed to be cleared is unlikely to represent significant habitat for fauna in a regional context.

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

**Methodology Rapallo (2014)**

- 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**

According to available databases, there are no records of Threatened Flora within the application area (GIS Database), and none were recorded during the flora surveys Rapallo, 2014; 2016). However, the targeted flora survey for conservation significant species considered likely to occur within the area, did not cover the majority of the current application area (Rapallo, 2016). There are records of the following three Threatened Flora species within two kilometres of the application area:

- *Caladenia christineae*
- *Caladenia harringtoniae*
- *Diurus drummondii*

All three species are known from the margins of lakes and swamps, therefore, may be present within the application area (Western Australian Herbarium, 2017). The applicant has advised that the area will be cleared via slashing which will cause minimal ground disturbance. This method of clearing may cut the tops of the Threatened Flora however the plant itself is not likely to be killed.

The proposed clearing may be at variance to this Principle.

**Methodology Rapallo (2014)  
Rapallo (2016)  
Western Australian Herbarium, 2017).**

- GIS Database:
- Pre-European Vegetation
  - Threatened and Priority Flora

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

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

There are no known Threatened Ecological Communities (TECs) located within or in close proximity to the application area (GIS Database).

A flora and vegetation survey of the application area did not identify any TECs (Rapallo, 2014).

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

**Methodology** Rapallo (2014)

GIS Database:

- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities 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 likely to be at variance to this Principle**

The application area falls within the Southern Jarrah Forrest subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Jarrah Forrest Bioregion (GIS Database). Approximately 50% and 53%, respectively, of the pre-European vegetation still exists in the subregion and bioregion (Government of Western Australia, 2016). The application area is broadly mapped as Beard vegetation associations:

- 3: Medium forest; jarrah-marri;
- 27: Low woodland; paperbark (*Melaleuca* sp.); and
- 126: Bare areas; freshwater lakes (GIS Database).

More than 50% of the pre-European extent of vegetation associations 3 and 27 remains uncleared at both the state and bioregional level (Government of Western Australia, 2016).

Beard vegetation association 126 has less than 30% remaining in the Jarrah Forrest IBRA bioregion (Government of Western Australia, 2011). The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30% of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). Whilst there is less than 30% of vegetation association 126 within the bioregion, there are no areas of bare areas of freshwater lakes within the application area (GIS Database). As the application area is not representative of this vegetation association, the proposed clearing will not have an impact on its remaining extent.

Aerial imagery indicates that the local area (10 kilometre radius) retains approximately 70% vegetation (GIS Database). The vegetation within the application area itself is neither a remnant nor does it form part of any remnants within the local area (GIS Database).

The proposed re-clearing of firebreaks is unlikely to further reduce the remaining extents of these vegetation associations.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DBCA Managed Lands (and post clearing %)
IBRA Bioregion - Jarrah Forest	4,506,660	2,416,018	53	Least Concern	39 (69)
IBRA Subregion - Southern Jarrah Forest	2,607,879	1,306,449	50	Least Concern	37 (69)
Local Government - Manjimup	697,368	586,852	84	Least Concern	81 (93)
Beard vegetation associations - State					
3	2,661,405	1,806,812	67	Least Concern	58 (81)
27	130,384	92,795	71	Least Concern	60 (83)
126	23,503	9,563	40	Depleted	47 (38)
Beard vegetation associations - Bioregion					
3	2,390,591	1,607,399	67	Least Concern	57 (80)
27	49,877	37,049	74	Least Concern	60 (79)
126	9,957	2,537	25	Vulnerable	71 (61)
Beard vegetation associations - subregion					
3	1,482,491	884,324	59	Least Concern	49 (78)

27	49,877	37,049	74	Least Concern	60 (79)
126	9,957	2,537	25	Vulnerable	71 (61)

\* Government of Western Australia (2016)

\*\* Department of Natural Resources and Environment (2002)

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

**Methodology** Commonwealth of Australia (2001)  
Department of Natural Resources and Environment (2002)  
Government of Western Australia (2016)

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**

The application area surrounds a seasonally inundated sumpland associated with Cowerup Swamp (GIS Database). The vegetation within the application area is predominantly Eucalyptus and Melaleuca woodland (Rapallo, 2014). Cowerup Swamp is part of the Byenup Lagoon system which is listed on the Directory of Important Wetlands in Australia (Environment Australia, 2001; GIS Database). The application area is also located within the Deep River catchment which has been classified as a Priority 2 Wild Rivers area (GIS Database).

Whilst, the vegetation is associated with a wetland of significance, the effect of fire upon peat wetlands would have a greater and longer term impact on the wetland than the clearing for a firebreak (Department of Water, 2012). Given the hydrological inter-connectivity of wetlands in the local area, any fire has the potential to spread between wetlands (Department of Water, 2012).

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

**Methodology** Department of Water (2012)  
Environment Australia (2001)  
Rapallo (2014)

GIS Database:

- Hydrography, Lakes
- Hydrography, linear
- Wild rivers

**(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**

The area under application has been mapped as soil type Cd22, which Northcote (1960-68) describes as flat to gently undulating portions of lateritic plateau at moderate elevation, occasional low hills, chief soils are leached sands, underlain by thick ironstone gravel and boulder layers and mottled kaolinitic clays at depths below 2-5 feet.

The topography of the application area is relatively flat (GIS Database).

Given the small size of clearing (two hectares), soil types present and the topography of the site appreciable land degradation is unlikely to occur.

The proposed clearing is not likely to be at variance to this Principle.

**Methodology** Northcote et al (1960-68)

GIS Database:

- Soils, Statewide
- Topographical 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**

Part of the application area directly abuts the Tone-Perup Nature Reserve (GIS Database). The proposed clearing for the establishment of a fire break will potentially protect the Nature Reserve from fire. The proposed clearing has the potential to increase the likelihood of weeds and dieback being spread into the Nature Reserve. Potential impacts from dieback and weeds may be minimised by the implementation of a weed and dieback management condition.

The proposed clearing will not disrupt any ecological linkages connected to the Nature Reserve (GIS Database).

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

**Methodology** GIS Database:  
- DPaW Tenure  
- Imagery

**(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.**

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

The application area is located within the Deep River Public Drinking Water Source Area (PDWSA) (GIS Database). Advice from the Department of Water (2012) indicates that whilst the proposed clearing may have a short term impact on the wetland it surrounds, the effect of fire upon peat wetlands would have a much greater longer term impact. The proposed clearing may result in some short term increase in sedimentation levels within seasonally wet areas, however, impacts are likely to be minimal.

The groundwater within the application area is between 3,000 to 7,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be brackish. The proposed clearing of two hectares is not likely to alter the salinity levels within the local area.

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

**Methodology** Department of Water (2012)  
  
GIS Database:  
- Groundwater Salinity Statewide  
- Hydrography, Lakes  
- Hydrography, Linear  
- Public Drinking Water Source Areas

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.**

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

Given that the application area surrounds a seasonally inundated sumpland, the proposed clearing of two hectares for the purpose of a firebreak is not likely to increase the incidence or intensity of flooding in the local area (GIS Database).

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

**Methodology** GIS Database:  
- Hydrographic Catchments - Catchments  
- Hydrography, linear

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

### Comments

The clearing permit application was advertised on 28 August 2017 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 is one registered Aboriginal Site of Significance located within the application area (DPLH, 2017). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

There are two native title claims (WC98/70 and WC96/109) over the area under application (DPLH, 2017). These claims have been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenements have 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*.

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 (2017)

## 4. References

- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2010) A Biodiversity and Cultural Conservation Strategy for the Great Western Woodlands Strategy. Department of Environment and Conservation, Western Australia.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Department of Water (2012) Advice for Clearing Permit Application CPS 5211/1. Department of Water, Western Australia.
- DPLH (2017) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage, Western Australia. <http://maps.daa.wa.gov.au/AHIS/> (Accessed 26 September 2017).
- Environment Australia (2001) A Directory of Important Wetlands in Australia, Third Edition. Environment Australia, Canberra.
- Government of Western Australia (2016) 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2016. WA Department of Parks and Wildlife, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Northcote, K. H. with Beckmann G. G., Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): Atlas of Australian Soils, Sheets 1 to 10, with explanatory data. CSIRO and Melbourne University Press, Melbourne.
- Rapallo (2014) Level 1 Terrestrial Flora and Fauna Survey of the 40 Acre Swamp Peat Project. Report prepared for BASF Agricultural Specialties Pty Ltd by Rapallo Pty Ltd, June 2014.
- Rapallo (2016) BASF 40 Acre Swamp Targeted Rare Flora Search 2015. Report prepared for BASF Agricultural Specialties by Rapallo Pty Ltd, January 2016.
- Western Australian Herbarium (2017) FloraBase - The Western Australian Flora. Department of Environment and Conservation. <<http://florabase.dec.wa.gov.au/>> (Accessed 19 September 2017).

## 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}:-**

<b>T</b>	<p><b>Threatened species:</b> Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, 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).</p> <p><b>Threatened fauna</b> is that subset of ‘Specially Protected Fauna’ declared to be ‘likely to become extinct’ pursuant to section 14(4) of the <i>Wildlife Conservation Act 1950</i>.</p> <p><b>Threatened flora</b> 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 <i>Wildlife Conservation Act 1950</i>.</p> <p>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.</p>
<b>CR</b>	<p><b>Critically endangered species</b> Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.</p>
<b>EN</b>	<p><b>Endangered species</b> Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.</p>
<b>VU</b>	<p><b>Vulnerable species</b> Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.</p>
<b>EX</b>	<p><b>Presumed extinct species</b> 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 <i>Wildlife Conservation Act 1950</i>, 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.</p>
<b>IA</b>	<p><b>Migratory birds protected under an international agreement</b> 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 <i>Wildlife Conservation Act 1950</i>, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.</p>
<b>CD</b>	<p><b>Conservation dependent fauna</b> 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 <i>Wildlife Conservation Act 1950</i>, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.</p>



- 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.