



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 4859/2  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Hamersley Iron Pty Ltd

### 1.3. Property details

Property: Iron Ore (Mt Bruce) Agreement Act 1972, Mineral Lease 252SA (AML70/252)  
Local Government Area: Shire of Ashburton  
Colloquial name: Turee Syncline Project

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of:   |
|--------------------|-----------|--------------------|---|
| 26                 |           | Mechanical Removal | Hydrogeological Investigations, Mineral Exploration and Associated Activities |

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 2 February 2017

## 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):

**Beard vegetation association 82:** Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*; and **Beard vegetation association 567:** Hummock grasslands, shrub steppe; mulga & kanji over soft spinifex and *Triodia basedowii*.

Previous surveys in the area by GHD (2009a; 2009b) and Mattiske (2011) identified the following nineteen vegetation assemblages within the original permit area (which covered approximately 1,852 hectares).

#### Flowlines

MF (Minor Flowlines) - Low Open Woodland to High Open Shrubland of *Acacia aneura*, *A. pruinocarpa*, *A. pyriformis*, *Senna artemisioides* subsp. *oligophylla*, over Open Shrubland of *S. glutinosa x luerssenii*, *S. stricta*, *Corchorus lasiocarpus* over, Low Open Shrubland of *Ptilotus obovatus*, *Indigofera monophylla*, *Rhynchosia minima* over Open Tussock Grassland of *Aristida inaequiglumis*, *Themeda* sp. Mt Barricade, *Cymbopogon* sp., *Enneapogon caerulescens* with Open Hummock Grassland of *Triodia wiseana* with *Triodia* spp.

LW1 + HG3 (Low Woodland 1, Shrubland, Hummock Grassland 2) - Low Woodland of *Acacia aneura*, *A. pruinocarpa*, *A. citrinoviridis* over Open Shrubland of *Senna stricta*, *Senna artemisioides* subsp. *oligophylla*, *Eremophila forrestii*, over Low Open Shrubland of *Senna* spp., *Sida* spp., *Maireana* spp. over Very Open Hummock Grassland of *Triodia wiseana* with Very Open Tussock Grassland of *Enneapogon caerulescens*, *Paspalidium basicladum*.

LW2 + HG1 (Low Woodland 2, Shrubland, Hummock Grassland 1) - Low Woodland of *Acacia citrinoviridis*, *A. aneura*, *A. hamersleyensis*, over Open Shrubland of *Senna* spp., *Eremophila latrobei*, *Dodonaea pachyneura*, *Corchorus lasiocarpus*, over Low Open Shrubland of *Dipteracanthus australasicus*, *Lepidium pedicellosum*, over Open Hummock Grassland of *Triodia epactia* with Open Tussock Grassland of *Cymbopogon ambiguus*, *Enneapogon caerulescens*, *Aristida* spp.

W (Woodland, Shrubland, Hummock Grassland) - Low Woodland to Low Open Forest of *Eucalyptus victrix*, *Corymbia ferriticola*, *Acacia citrinoviridis*, *A. pruinocarpa*, *A. ayersiana* over Scattered Tall Shrubs of *Rhagodia eremaea*, *Gossypium robinsonii*, over Open Shrubland of *Senna* spp., *Jasminum didymum* subsp. *lineare*, over Low Shrubland of *Dipteracanthus australasicus*, *Dicladantha forrestii*, *Harniera kempeana*, *Corchorus lasiocarpus*, over Very Open Hummock Grassland of *Triodia epactia*, *T. longiceps*, with Very Open Tussock Grassland of *Cenchrus ciliaris*, *Themeda* sp. Mt Barricade, *Cymbopogon ambiguus*, *Enneapogon caerulescens*.

#### Hills

HG1 (Hummock Grassland 1) - Hummock Grassland of *Triodia epactia* with emergent Scattered Low Trees (variable) of *Eucalyptus leucophloia*, *Acacia pruinocarpa*, *Grevillea berryana*, *Hakea chordophylla*, *Codonocarpus cotonifolia*, with emergent scattered Tall Shrubs to Shrubs (variable) of *Petalostylis labicheioides*, *Acacia*

*maitlandii*, *A. pyrifolia*, *A. inaequilatera*, *Senna* spp., *Eremophila phyllopoa*, *E. jucunda*, with Low Scattered Shrubs of *Ptilotus calostachyus*, *Goodenia stobbsiana*, *Lepidium pedicellusum*, *Solanum lasiophyllum*.

HG2 (Hummock Grassland 2) - Hummock Grassland of *Triodia longiceps*, *T. epactia* with emergent Scattered Low Trees of *Acacia pruinocarpa*, with emergent Scattered Shrubs to Low Shrubs of *Eremophila cuneifolia*, *E. latrobei*, *Senna* spp., *Sida* spp., *Stylobasium spathulatum*, *Triumfetta leptacantha*, *Lepidium pedicellusum*.

HG3 (Hummock Grassland 3) - Closed Hummock Grassland to Hummock Grassland of *Triodia wiseana*, with emergent Scattered Low Trees of *Acacia pruinocarpa*, *A. inaequilatera*, with emergent Scattered Shrubs to Low Shrubs of *A. arida*, *A. bivenosa*, *A. synchronicia*, *A. tetragonophylla*, *Senna* spp., *Tribulus suberosus*, *Eremophila cuneifolia*, *E. jucunda*, *E. fraseri*.

HG1 + S1 (Hummock Grassland 1, Shrubland 1) - Open Scrub to High Open Shrubland of *Acacia maitlandii* with scattered *Senna* spp., *Eremophila* spp., *Petalostylis labicheoides*, *Tribulus suberosus*, *Goodenia stobbsiana*, *Ptilotus* spp., with emergent Scattered Low Trees of *Eucalyptus leucophloia*, *E. gamophylla*, *E. kingsmillii*, *Acacia pruinocarpa*, *A. pyrifolia*, over Closed Hummock Grassland to Hummock Grassland of *Triodia epactia* with occasional *Triodia pungens*, with Very Open to Scattered Tussock Grassland of *Amphipogon* spp., *Eriachne* spp.

HG1 + S2 (Hummock Grassland 1, Shrubland 2) - High Shrubland to High Open Shrubland of *Petalostylis labicheoides* with scattered *Senna* spp., *Eremophila* spp., *Acacia maitlandii*, *Tribulus suberosus*, *Goodenia stobbsiana*, *Ptilotus* spp., *Solanum lasiophyllum*, *Corchorus lasiocarpus*, with emergent Scattered Low Trees of *Acacia pruinocarpa*, *A. pyrifolia*, *A. aneura*, over Hummock Grassland to Open Hummock Grassland of *Triodia epactia*.

HG1 + S3 (Hummock Grassland 1, Shrubland 3) - High Shrubland to High Open Shrubland of *Acacia maitlandii*, *Petalostylis labicheoides* with scattered *Senna* spp., *Eremophila* spp., *Tribulus suberosus*, *Goodenia stobbsiana*, *Ptilotus* spp., with emergent Scattered Low Trees of *Eucalyptus leucophloia*, *Corymbia ferritcola*, *A. pyrifolia*, *Hakea chordophylla*, over Closed Hummock Grassland to Hummock Grassland of *Triodia epactia* with occasional *Triodia pungens*, with Very Open to Scattered Tussock Grassland of *Enneapogon caerulescens*.

HG1 + S4 (Hummock Grassland 1, Shrubland 4) - High Shrubland of Mixed *Acacia* spp. (typically: *Acacia pruinocarpa*, *A. pyrifolia*, *A. sibirica*, *A. inaequilatera*, *A. bivenosa*, etc.) over Shrubland to Open Shrubland of *Senna* spp., *Eremophila* spp., *Petalostylis labicheoides* scattered *Goodenia stobbsiana*, *Solanum lasiophyllum*, *Ptilotus* spp., with emergent Scattered Low Trees of *Eucalyptus leucophloia*, over Hummock Grassland of *Triodia epactia* Very Open Tussock Grassland of *Eriachne* spp., *Themeda* sp. Mt Barricade, *Cymbopogon ambiguus*.

HG3 + S4 (Hummock Grassland 2, Shrubland 4) - High Shrubland of Mixed *Acacia* spp. (typically: *Acacia pruinocarpa*, *A. pyrifolia*, *A. bivenosa*, *A. adsurgens*, *A. synchronicia*, etc.) over Shrubland to Open Shrubland of *Senna* spp., *Eremophila* spp., *Petalostylis labicheoides* over Hummock Grassland of *Triodia wiseana*.

HG1 + LW1 (Hummock Grassland 1 + Low Open Woodland 1) - Low Open Forest to Low Woodland of *Acacia aneura* with *A. ayersiana*, *A. hamersleyensis* over High Shrubland of *Acacia tetragonophylla*, *A. synchronicia*, *A. pruinocarpa*, *Psyrax latifolia* over Shrubland to Open Shrubland of *Senna* spp., *Eremophila* spp., over Low Shrubland to Low Open Shrubland of *Senna stricta*, *Maireana melanocoma*, *Enchylaena tomentosa*, *Sclerolaena* spp., over Hummock Grassland to Open Hummock Grassland of *Triodia epactia* with scattered *T. wiseana*, *T. longiceps*, with Open Tussock Grassland of *Eriachne* spp., *Aristida* spp., *Enneapogon* spp.

HG1 + LW2 (Hummock Grassland 1, Low Open Woodland 3) - Low Open Woodland to Very Open Tree Mallee of *Eucalyptus gamophylla*, *E. kingsmillii*, *E. leucophloia*, *E. trivalva* over High Open Shrubland of *Acacia pyrifolia*, *A. tumida*, *A. pruinocarpa*, *A. hamersleyensis* with *Petalostylis labicheoides* over Open Shrubland to Low Open Shrubland of *Eremophila* spp., *Senna glutinosa*, *Psyrax latifolia*, *Tribulus suberosus* over Hummock Grassland of *Triodia epactia* with Scattered Tussock Grasses of *Eriachne* spp., *Cymbopogon ambiguus*.

LW1 + HG1 (Low Woodland 1, Hummock Grassland 1) - Low Open Forest to Low Woodland of *Acacia aneura* with *A. ayersiana*, *A. hamersleyensis* over High Shrubland of *Acacia tetragonophylla*, *A. synchronicia*, *A. pruinocarpa*, *Psyrax latifolia* over Shrubland to Open Shrubland of *Senna* spp., *Eremophila* spp., over Low Shrubland to Low Open Shrubland of *Senna stricta*, *Maireana melanocoma*, *Enchylaena tomentosa*, *Sclerolaena* spp., over Hummock Grassland to Open Hummock Grassland of *Triodia epactia* with scattered *T. wiseana*, *T. longiceps*, with Open Tussock Grassland of *Eriachne* spp., *Aristida* spp., *Enneapogon* spp.

LW1 + HG2 (Low Woodland 1, Hummock Grassland 2) - Low Woodland of *Acacia aneura*, *A. pruinocarpa* over High Open Shrubland of *Acacia tetragonophylla*, *Santalum lanceolatum* over Open Heath to Shrubland of *Senna* spp., *Eremophila* spp., over Low Open Shrubland of *Ptilotus* spp. And mixed chenopods, over Very Open Hummock Grassland of *Triodia longiceps*.

## Plains

HG5 + S4 (Hummock Grassland 5, Shrubland 4) - High Shrubland of *Acacia tetragonophylla* with *A. aneura*, *A. hamersleyensis* over Shrubland of *Ptilotus obovatus*, *Eremophila cuneifolia* with *Senna* spp., *Chenopodium auricomum* over Open Shrubland of *Corchorus lasiocarpus*, *Enchylaena tomentosa*, *Tribulus suberosus*, *Ptilotus* spp. over Hummock Grassland of *Triodia longiceps*, *T. wiseana*.

## Minor Gullies and Creeklines

3a - Low shrubland of *Acacia pyrifolia*, *Petalostylis labicheoides* over *Triodia* species and low shrubs and herbs on minor gullies in undulating hills.

## Low Undulating Hills and Associated Slopes

10b - Hummock grassland of *Triodia wiseana* with patches of *Acacia arida*, *A. pyrifolia*, *A. tetragonophylla* over *Eremophila cuneifolia* over low herbs and grasses on lower undulating hills.

The amendment application area is broadly mapped as Beard vegetation association 82 (GIS Database). A flora and vegetation survey conducted by Rio Tinto in 2014, included the amendment application area (Rio Tinto, 2016). The following two vegetation types were recorded within the amendment area, associated with landform features (Rio Tinto, 2016):

**Rocky slopes**

S1: Low open woodland of *Eucalyptus leucophloia* subsp. *leucophloia* over scattered tall shrubs of *Acacia pyrifolia* over hummock grassland to open hummock grassland of *Triodia epactia*. This vegetation type represented the majority of the amendment application area.

**Gullies:**

G1: Low open woodland of *Eucalyptus leucophloia* subsp. *leucophloia* over open shrubland of *Dodonaea pachyneura*, *Acacia pruinocarpa*, *Senna glutinosa* subsp. *glutinosa* and *Eremophila* sp. Hamersley Range (K. Walker KW 136) over low open shrubland of *Ptilotus obovatus*, *Abutilon* sp. *Dioicum* (A.A. Mitchell PRP 1618) and *Corchorus crozophorifolius* over very open hummock grassland of *Triodia epactia* over very open tussock grassland of *Aristida burbridgeae*, *Cymbopogon ambiguus* and *Eriachne mucronata*. This vegetation association represented a small section (approximately 0.15 hectares) of the amendment area.

\* Denotes a weed species

|                             |  |
|-----------------------------|--|
| <b>Clearing Description</b> | Turee Syncline Project<br>Hamersley Iron Pty Ltd proposes to clear up to 26 hectares of native vegetation within a total boundary of approximately 1,856 hectares for the purpose of hydrogeological investigations, mineral exploration and associated activities. The project is located approximately 30 kilometres east of Paraburdoo in the Shire of Ashburton.   |
| <b>Vegetation Condition</b> | Completely degraded: No longer intact; completely / almost completely without native species (Keighery, 1994);<br>to:<br>Pristine: No obvious signs of disturbance (Keighery, 1994).   |
| <b>Comment</b>              | Clearing Permit CPS 4859/1 was granted by the Department of Mines and Petroleum (DMP) on 29 March 2012. The permit authorised the clearing of up to 24 hectares of native vegetation within a clearing permit boundary of approximately 1,852 hectares, for the purpose of hydrogeological investigations, mineral exploration and associated activities. Clearing was authorised from 21 April 2012 to 21 April 2017, with a permit expiry date of 21 April 2022 to allow for rehabilitation activities to be completed.<br><br>The Permit Holder has applied to amend CPS 4859/1 to increase the amount of clearing authorised from 24 hectares to 26 hectares, increase the permit boundary from approximately 1,852 hectares to approximately 1,856 hectares, extend the permit duration to 31 December 2026 and the clearing period to 31 December 2021, and change the annual reporting dates. |

### 3. Assessment of application against Clearing Principles

#### Comments

Hamersley Iron Pty Ltd (Hamersley Iron) has applied to amend the clearing permit to increase the amount of clearing authorised by two hectares, increase the permit boundary by approximately four hectares, and extend the permit duration by approximately four years. The amendment application area is approximately four hectares in size, and is located approximately 1.6 kilometres to the east of the original clearing permit area and approximately one kilometre west of the boundary of the Karijini National Park (GIS Database).

A flora and vegetation survey was conducted by Rio Tinto Iron Ore (Rio Tinto) during 2014, over an area of approximately 76.3 hectares which included the current amendment application area (Rio Tinto, 2016). A total of 169 native flora taxa from 87 genera and 37 families were recorded within the survey area (Rio Tinto, 2016). Four weed species were recorded within the total survey area, one of which (*Aerva javanica*) was recorded within the amendment application area (Rio Tinto, 2016). The vegetation condition of the amendment application area was described as Excellent on the Keighery scale, with minimal previous disturbance noted (Rio Tinto, 2016). Care should be taken to avoid the introduction or spread of weeds within the amendment area or towards the nearby Karijini National Park. The biodiversity within the amendment area was considered to be similar to that of the original permit area and surrounding areas (Rio Tinto, 2016).

The amendment area is mapped as Beard vegetation association 82, which is consistent with the majority of the original permit area (GIS Database). Approximately 99% of the pre-European extent of this vegetation association remains uncleared at both the state and bioregional level (Government of Western Australia, 2015). Hence, the vegetation proposed to be cleared does not represent a significant remnant of native vegetation in an area that has been extensively cleared.

No Threatened or Priority Ecological Communities have been recorded within or in close proximity to the amendment area (Rio Tinto, 2016; GIS Database).

No Threatened flora have been recorded within the amendment area (Rio Tinto, 2016). Two Priority flora species have been recorded within the amendment application area, and clearing of Priority flora should be avoided wherever possible.

The fauna habitats within the amendment application area have been broadly described as: "Rocky Slopes"; and "Gully" (Rio Tinto, 2016). These habitat types are considered to be common and widespread in the Pilbara bioregion, including within the nearby Karijini National Park (Rio Tinto, 2016). No restricted habitats, such as waterholes, significant drainage feature or large tree hollows were observed within the amendment application area (Rio Tinto, 2016). Several fauna species of conservation significance have the potential to occur within the amendment area, however none have been recorded during surveys conducted over the area (Rio Tinto, 2016). Although the proposed clearing will impact on fauna habitats at a local scale, the proposed two hectares of additional clearing is not likely to have a significant impact on fauna or fauna habitats in a regional context.

The amendment area is broadly mapped as occurring within the Newman land system, which is consistent with the majority of the original permit area (GIS Database). This land system is considered to be largely resistant to erosion (Payne et al., 1988), and the additional two hectares of clearing proposed is unlikely to result in appreciable land degradation.

The application area is not within or in close proximity to a Public Drinking Water Source Area, and there are no permanent watercourses or wetlands within the amendment area (GIS Database). Two minor ephemeral watercourses pass through the amendment area (GIS Database). Ephemeral drainage lines in the region only flow briefly following significant rainfall events, and localised flooding may occur (Rio Tinto, 2016). However, the additional two hectares of proposed clearing is unlikely to have any significant impact on surface or groundwater quality or on the incidence or intensity of flooding.

The application area does not fall within any conservation areas (GIS Database). However, the eastern end of the amendment area is approximately one kilometre from the boundary of the Karijini National Park (GIS Database). The proposed additional two hectares of clearing is unlikely to disrupt ecological linkages to the Karijini National Park.

The amendment application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*. Environmental information has been reviewed, and the assessment of the proposed clearing against the clearing principles remains consistent with the assessment contained in decision report CPS 4859/1.

**Methodology** GHD (2009a)  
GHD (2009b)  
Government of Western Australia (2015)  
Matiske (2011)  
Payne et al. (1988)  
Rio Tinto (2016)

GIS Database:  
- DPaW Tenure  
- Hydrography, linear  
- Imagery  
- Pre-European Vegetation  
- Public Drinking Water Source Areas  
- Threatened and Priority Flora  
- Threatened and Priority Ecological Communities - Boundaries  
- Threatened Fauna

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

**Comments** There is one native title claim over the area under application (DAA, 2016). This claim (WC2010/016) has been registered with the Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

According to available databases, there are no 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 amendment application was advertised on 29 August 2016, inviting submissions from the public. No submissions were received.

**Methodology** DAA (2016)

## 4. References

- DAA (2016) Aboriginal Heritage Inquiry System, Department of Aboriginal Affairs. <http://maps.dia.wa.gov.au/AHIS2/> (Accessed 29 December 2016).
- GHD (2009a) Report for Turee Syncline Project - Vegetation, Flora and Fauna Baseline Surveys. Report prepared for Rio Tinto Iron Ore, by GHD Pty Ltd, March 2009.
- GHD (2009b) Report for Turee Syncline - Phase 2 Flora Survey. Report prepared for Rio Tinto Iron Ore, by GHD Pty Ltd, October 2009.
- Government of Western Australia (2015) 2015 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2015. 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.
- Mattiske (2011) Flora and Vegetation Survey of the Turee Syncline Area. Report prepared for Rio Tinto Iron Ore, by Mattiske Consulting Pty Ltd, October 2011.
- Payne, A.L, Mitchell, A.A., and Holman, W.F. (1988) Technical Bulletin - An Inventory and Condition Survey of rangelands in the Ashburton River catchment, Western Australia. No. 62. Revised Edition. Department of Agriculture, Government of Western Australia, Perth, Western Australia.
- Rio Tinto (2016) Statement Addressing the 10 Clearing Principles at Turee South. Native Vegetation Clearing Permit - Supporting Report. Rio Tinto Iron Ore, August 2016.

## 5. Glossary

### Acronyms:

|                 |   |
|-----------------|---|
| <b>BoM</b>      | Bureau of Meteorology, Australian Government  |
| <b>DAA</b>      | Department of Aboriginal Affairs, Western Australia   |
| <b>DAFWA</b>    | Department of Agriculture and Food, Western Australia   |
| <b>DEC</b>      | Department of Environment and Conservation, Western Australia (now DPaW and DER)  |
| <b>DEE</b>      | Department of the Environment and Energy, Australian Government   |
| <b>DER</b>      | Department of Environment Regulation, Western Australia   |
| <b>DMP</b>      | Department of Mines and Petroleum, 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  |
| <b>DPaW</b>     | Department of Parks and Wildlife, Western Australia   |
| <b>DSEWPaC</b>  | Department of Sustainability, Environment, Water, Population and Communities (now DEE)                                    |
| <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 (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.

**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.