Government of **Western Australia**
Department of **Mines and Petroleum**

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6916/3
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Rio Tinto Exploration 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:
30		Mechanical Removal	Drill sites, access tracks and camp

1.5. Decision on application

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

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

Beard vegetation associations have been mapped for the whole of Western Australia. Two Beard vegetation associations have been mapped within the application area (GIS Database):

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 & *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:

Flowlines

MF (Minor Flowlines) - Low Open Woodland to High Open Shrubland of *Acacia aneura*, *A. pruinocarpa*, *A. pyrifolia*, *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, Dicladanthera forrestii, Harnieria 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 phyllopoda, E. jucunda*, with Low Scattered

Shrubs of *Ptilotus calostachyus, Goodenia stobbsiana, Lepidium pedicellosum, 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 pedicellosum*.

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 ferriticola, 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, Psydrax 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, Psydrax 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, Psydrax 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.

* Denotes a weed species

Flora and vegetation surveys have not been specifically conducted over the additional areas subject to amendment application CPS 6916/3. However, some parts of the amendment application areas have been covered by the above-mentioned surveys which were undertaken for other projects. A more recent flora and vegetation survey by Brian Morgan, Consultant Botanist, was conducted over part of the southern amendment area during 2012 (Morgan, 2013), and recorded similar vegetation types to those summarised above.

Clearing Description

Turee Syncline Project
Rio Tinto Exploration Pty Ltd proposes to clear up to 30 hectares of native vegetation within a total boundary of approximately 4,799 hectares for the purpose of mineral exploration activities, including drill sites, access tracks and a camp. The project is located approximately 14 kilometres east of Paraburdoo in the Shire of Ashburton.

Vegetation Condition

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

to:

Pristine: No obvious signs of disturbance (Keighery, 1994).

Comment

Clearing Permit CPS 6916/1 was granted by the Department of Mines and Petroleum (DMP) on 24 March 2016, authorising the clearing of up to 10 hectares of native vegetation within a clearing permit boundary of approximately 1,259 hectares, for the purpose of drill sites, access tracks and a camp for conducting mineral exploration activities. Clearing was authorised from 16 April 2016 to 31 August 2016, with a permit expiry date of 31 August 2021 to allow for rehabilitation activities to be completed.
Amended permit CPS 6916/2 was granted on 2 June 2016, extending the date within which clearing was authorised to 30 June 2021 and extending the permit expiry date to 30 June 2026. There was no change to the amount of clearing authorised or the permit boundary.
The Permit Holder has applied to amend CPS 6916/2 to increase the amount of clearing authorised from 10 hectares to 30 hectares, and increase the permit boundary from approximately 1,259 hectares to approximately 4,799 hectares.

3. Assessment of application against Clearing Principles

Comments

Rio Tinto Exploration Pty Ltd (Rio Tinto) has applied to amend the clearing permit to increase the amount of clearing authorised by 20 hectares to 30 hectares, and to increase the permit boundary by approximately 3,540 hectares to a total area of approximately 4,799 hectares. The amendment application area consists of two separate areas, identified in this report as amendment Area 1 and amendment Area 2, respectively. Area 1 is approximately 2,502 hectares in size and is located to the south and immediately adjoining the southern boundary of the original clearing permit area. Area 2 is approximately 1,038 hectares in size and is located to the east-northeast of the original permit area, with a gap of approximately 2.8 kilometres between the eastern end of the original permit boundary and the western end of amendment Area 2. The eastern edge of amendment Area 2 adjoins the boundary of the Karijini National Park (GIS Database).

Flora and fauna surveys have not been specifically conducted over the amendment application areas. However, parts of the amendment application areas have been covered by surveys conducted for other projects. Analysis of aerial imagery indicates that the vegetation associations, landforms, and fauna habitat types occurring within the unsurveyed areas are similar to those occurring within the surveyed sections of the amendment application areas, and are well represented in the region (GIS Database).

The permit area is located within the Hamersley subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by Mulga low woodland over bunch grasses on fine textured soils in valley floors, and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges (CALM, 2002). The application area is broadly mapped as Beard vegetation associations 82 and 567 (GIS Database). The majority of the two amendment areas are mapped as Beard vegetation association 82, which is consistent with the original permit area (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, 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.

Previous surveys conducted over the application area and surrounding areas recorded a moderately high level of biodiversity (GHD, 2009a; GHD, 2009b; Mattiske, 2011; Morgan 2013). Although biological diversity is likely to vary across the differing landform types which occur within the application area, overall the amendment areas are not likely to represent an area of greater biodiversity than the original permit area or surrounding areas. The various surveys conducted over parts of the amendment application areas, concluded that the vegetation types recorded were common within the local and regional area, and are likely to be well represented in the Hamersley subregion and within the nearby Karijini National Park (GHD, 2009a; Rio Tinto, 2009).

The amendment areas have suffered some previous disturbance from historical mining and grazing activities, however the vegetation condition of the surveyed areas was generally considered to range from Good to Pristine, with most areas rated as Excellent (GHD, 2009a; 2009b; Mattiske, 2011). Several weed species have been recorded within the proposed amendment areas and surrounding areas (GHD, 2009a; 2009b; Mattiske,

2011; Morgan, 2013), and care should be taken to avoid the spread of weeds into more pristine areas. No Threatened or Priority Ecological Communities have been recorded within or in close proximity to the application areas (GIS Database).

No Threatened flora have been recorded during the various surveys conducted over the permit area. Several Priority flora species have been recorded within the amendment application areas, and clearing of Priority flora should be avoided wherever possible.

The broad fauna habitats recorded within the application area are considered to be common and widespread in the Pilbara bioregion (Rio Tinto, 2009). Some restricted habitats, such as caves, breakaways and gorges/gullies have been recorded, and impacts to these areas should be avoided. Several fauna species of conservation significance are considered likely to occur within the application areas, mostly bird species (GHD, 2009a; Rio Tinto, 2009). Although the proposed clearing will impact on fauna habitats at a local scale, the proposed clearing of an additional 20 hectares of native vetetation is not likely to have a significant impact on fauna or fauna habitats in a regional context.

The proponent has advised that restriction zones have been established surrounding all known Priority Flora locations and restricted fauna habitat features such as caves, breakaways and gorges/gullies (Rio Tinto, 2009; Morgan, 2013). The proposed clearing of up to 30 hectares of native vegetation for exploration activities within a total permit area of approximately 4,799 hectares is unlikely to impact the conservation status of any conservation significant flora or fauna species.

The amendment areas are broadly mapped as occurring within the Newman, Paraburdoo, Platform, and Rocklea land systems (GIS Database). All of these land systems occur within the original permit area, with the exception of the Paraburdoo land system which is mapped over a small section of the southern amendment area (Area 1) (GIS Database). The Paraburdoo land system is described as stony gilgai plains supporting *Acacia* spp. shrublands, and may be moderately susceptible to erosion in parts (Payne et al., 1988). The other land systems within the amendment areas are considered largely resistant to erosion (Payne et al., 1988). The additional area of clearing proposed is unlikely to result in appreciable land degradation.

There are no permanent watercourses or wetlands within the amendment areas (GIS Database). There are numerous minor ephemeral watercourses passing through the application areas. Clearing of riparian vegetaion should be avoided, where possible, however, given the small area of proposed clearing compared to the large size of the application areas, the impacts to vegetation growing in association with watercourses are expected to be minimal. Ephemeral drainage lines in the region only flow briefly following significant rainfall events, and localised flooding may occur (GHD, 2009a). However, the additional clearing is unlikely to have any significant impact on surface or groundwater quality or on the incidence or intensity of flooding.

The application areas do not fall within any conservation areas. However, the eastern edge of the northern amendment area (Area 2) adjoins the Karijini National Park (GIS Database). The proposed additional 20 hectares of clearing is unlikely to disrupt ecological linkages to the Karijini National Park. However, clearing in close proximity to the boundary of the National Park should be avoided, to minimise the risk of spread of weeds into the park.

The amendment represents a substantial increase in the size of the permit boundary of approximately 3,540 hectares. However the amount of clearing authorised will only increase by 20 hectares within the amended permit area. The total area of proposed clearing (30 hectares) will impact approximately 0.6 percent of the total amended clearing permit area (approximately 4,799 hectares).

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 reports CPS 6916/1 and CPS 6916/2.

Methodology

CALM (2002)
GHD (2009a)
GHD (2009b)
Government of Western Australia (2015)
Mattiske (2011)
Morgan (2013)
Payne et al., (1988)
Rio Tinto (2009)

GIS Database:
- DPaW Tenure
- Hydrography, linear
- Imagery
- Pre-European Vegetation
- 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

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

DAA (2016) Aboriginal Heritage Inquiry System, Department of Aboriginal Affairs. http://maps.dia.wa.gov.au/AHIS2/ (Accessed 15 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.

Morgan, B., (2013) Flora, Vegetation and Fauna Survey for Turee Syncline Marra Mamba Evaluation Drilling. Turee Syncline Native Vegetation Clearing Permit Supporting Report. Report prepared for Rio Tinto Iron Ore, by Brian Morgan, Consultant Botanist, November 2013.

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 (2009) Botanical Survey for Multiple Areas at Turee Syncline. Rio Tinto Iron Ore, May 2009.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DPaW and DER)
DEE	Department of the Environment and Energy, Australian Government
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DoE	Department of the Environment, Australian Government (now DEE)
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
EPA	Environmental Protection Authority, Western Australia
EP Act	*Environmental Protection Act 1986*, Western Australia
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia

IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	*Rights in Water and Irrigation Act 1914*, Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2015) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

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

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

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

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

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

EN **Endangered species**
Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

VU **Vulnerable species**
Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EX **Presumed extinct species**
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.

IA **Migratory birds protected under an international agreement**
Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

CD **Conservation dependent fauna**
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.

OS **Other specially protected fauna**
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.

P **Priority species**
Species which are poorly known; or
Species that are adequately known, are rare but not threatened, and require regular monitoring. Assessment of Priority codes is based on the Western Australian distribution of the species, unless

the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1 **Priority One - Poorly-known species:**
Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

P2 **Priority Two - Poorly-known species:**
Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

P3 **Priority Three - Poorly-known species:**
Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

P4 **Priority Four - Rare, Near Threatened and other species in need of monitoring:**
(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.
(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for Vulnerable, but are not listed as Conservation Dependent.
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

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.