

# **Clearing Permit Decision Report**

# 1. Application details

1.1. Permit application details

Permit application No.: 4397/3

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Robe River Ltd

1.3. Property details

Property: Iron Ore (Robe River) Agreement Act 1964, Mineral Lease 248SA (AML70/248)

Local Government Area: Shire of Ashburton

Colloquial name: Jimmawurrada and Mesa H Project

1.4. Application

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

600 Mechanical Removal Mineral Exploration, Hydrological Drilling, Geotechnical

Investigations and Associated Activities.

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 19 March 2015

# 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. Four Beard vegetation associations are located within the permit area (GIS Database):

Beard vegetation association 82: hummock grasslands, low tree steppe; Snappy Gum over Triodia wiseana;

**Beard vegetation association 603:** hummock grasslands, sparse shrub steppe, *Acacia bivenosa* over hard Spinifex;

**Beard vegetation association 605:** Hummock grasslands, shrub steppe; *Acacia pachycarpa* & waterwood over soft spinifex; and

**Beard vegetation association 609:** mosaic: hummock grasslands, open low tree steppe; Bloodwood with sparse Kanji shrubs over soft Spinifex / hummock grasslands, open low tree steppe; Snappy Gum over *Triodia wiseana* on a lateritic crust.

Numerous flora surveys were conducted over the original permit area. These surveys were reviewed by Rio Tinto (2011) and the sections relevant to the original permit area were summarised in a report. Rio Tinto (2011) reported 34 vegetation communities within the original permit boundary which are detailed in Decision Report CPS 4397/1.

Further flora surveys were conducted by Rio Tinto (2014) over the original permit boundary and additional areas added for CPS 4397/2. An additional 14 vegetation communities were mapped in the expanded permit boundary which are detailed in Decision Report CPS 4397/2.

A flora survey was conducted of the additional areas for CPS 4397/3 by Astron Environmental Services (Astron) (2014) from 23 to 30 October 2014. The following 28 vegetation associations were recorded during this survey (Astron. 2014):

AacTw: Acacia acradenia tall shrubland over Triodia wiseana hummock grassland;

**AacTwTsr:** Acacia acradenia and Grevillea wickhamii tall shrubland over Triodia wiseana (Triodia sp. Robe River (M.E. Trudgen et al. MET 12367) open hummock grassland;

AbTw: Acacia bivenosa open shrubland to open heath over Triodia wiseana hummock grassland;

**AiAbTw:** Acacia inaequilatera scattered tall shrubs over *A. bivenosa* scattered shrubs over *Triodia wiseana* hummock grassland;

**AiTwTsr:** Acacia inaequilatera scattered tall shrubs over *Triodia wiseana* and *Triodia* sp. Robe River (M.E. Trudgen et al. MET 12367) open hummock to hummock grassland;

AprTw: Acacia pruinocarpa tall open shrubland over Triodia wiseana open hummock grassland;

AptAaTw: Acacia ptychophylla and Acacia ancistrocarpa open heath over Triodia wiseana hummock grassland;

AptTw: Acacia ptychophylla low open shrubland over Triodia wiseana open hummock grassland;

**AprTwTsr:** Acacia pruinocarpa low woodland over *Triodia wiseana* and *Triodia* sp. Robe River (M.E. Trudgen et al. MET 12367) hummock grassland;

**AsAbTwCspp:** Acacia synchronicia, Acacia bivenosa tall open shrubland over *Triodia wiseana* very open hummock grassland and \*Cenchrus ciliaris, \*C. setiger open tussock grassland;

AsTw: Acacia synchronicia open shrubland over Triodia wiseana open hummock grassland;

AtrPI: Acacia trachycarpa, Petalostylis labicheoides tall open scrub;

AtuTw: Acacia tumida var. pilbarensis tall open scrub over Triodia wiseana open hummock grassland;

AtuTwTrs: Acacia tumida tall shrubland over *Triodia wiseana, Triodia* sp. Robe River (M.E. Trudgen et al. MET 12367) open hummock grassland;

AxTw: Acacia xiphophylla low woodland to tall shrubland over Triodia wiseana open hummock grassland;

**ChAbTw:** Corymbia hamersleyana scattered low trees over Acacia bivenosa open shrubland open heath over Triodia wiseana hummock grassland:

**ChAbTwTe:** Corymbia hamersleyana scattered low trees to low woodland over Acacia bivenosa open shrubland over Triodia wiseana and T. epactia hummock grassland:

**ChAiAbTw:** Corymbia hamersleyana scattered low trees over Acacia inaequilatera scattered tall shrubs over Acacia bivenosa scattered shrubs over Triodia wiseana hummock grassland;

**ChAsppGOrGsppPISsTeTw:** Corymbia hamersleyana scattered low tree to low open woodland over Acacia species (spp.), Gossypium robinsonii, Grevillea spp., Petalostylis labicheoides, and Stylobasium spathulatum tall shrubland over Triodia epactia and T. wiseana hummock grassland;

**ChAtuTw:** Corymbia hamersleyana and/or Eucalyptus leucophloia subsp. leucophloia scattered low trees over Acacia tumida var. pilbarensis tall open scrub over Triodia wiseana open hummock grassland;

**ChPIAbGOrTw:** Corymbia hamersleyana low open woodland over Petalostylis labicheoides, Acacia bivenosa and Gossypium robinsonii tall open scrub over Triodia wiseana (T. angusta) open hummock grassland;

**EcEvAtrApyPITw:** Eucalyptus camaldulensis subsp. refulgens woodland over Eucalyptus victrix low woodland over Acacia trachycarpa, A. pyrifolia and Petalostylis labicheoides tall open shrubland over mixed open herbland and Triodia wiseana very open hummock grassland;

**EIAiAbTw:** Eucalyptus leucophloia subsp. leucophloia scattered low trees over Acacia inaequilatera scattered tall shrubs over Acacia bivenosa scattered shrubs to open shrubland over Triodia wiseana hummock grassland;

**EIAtuAbTwERIm:** Eucalyptus leucophloia subsp. leucophloia scattered low trees over Acacia tumida var. pilbarensis and/or Acacia bivenosa open shrubland over Triodia wiseana open hummock grassland and Eriachne mucronata open tussock grassland;

**EIGwAacTw:** *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Grevillea wickhamii* scattered tall shrubs to tall shrubland over *Acacia acradenia* scattered shrubs to shrubland over *Triodia wiseana* hummock grassland:

**EITwTsr:** Eucalyptus leucophloia subsp. leucophloia scattered low trees over *Triodia wiseana* and *T.* sp. Robe River (M.E. Trudgen et al. MET 12367) very open to open hummock grassland;

**ElAiTwTsr:** Eucalyptus leucophloia subsp. leucophloia low open woodland over Acacia inaequilatera scattered tall shrubs over *Triodia wiseana* (*Triodia* sp. Robe River (M.E. Trudgen et al. MET 12367) on Breakaways) open hummock grassland;

Tw: Triodia wiseana hummock grassland

\*denotes weed species.

# **Clearing Description**

Jimmawurrada and Mesa H Project.

Robe River Ltd proposes to clear up to 600 hectares of native vegetation within a boundary of 7,206 hectares for the purposes of mineral exploration, hydrological drilling, geotechnical investigations and associated activities. The project area is located approximately 115 kilometres east of Onslow within 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

The vegetation conditions were described using a scale based on Trudgen (1988) and have been converted to the corresponding conditions from the Keighery (1994) scale.

Clearing permit CPS 4397/1 was granted by the Department of Mines and Petroleum on 1 September 2011 and authorised the clearing of up to 196 hectares of native vegetation within an area totalling approximately 2,518 hectares. This permit was amended on 20 November 2014 to increase the amount of clearing authorised to 600 hectares and the permit boundary to 5,587 hectares. It was also amended to remove Conditions 2 and 3 from the permit and extend the duration of the clearing to 31 July 2020. Robe River Ltd has applied to amend CPS 4397/2 to increase the permit boundary to 7,206 hectares and add hydrological drilling, geotechnical investigations and associated activities to the purpose.

### 3. Assessment of application against clearing principles

#### Comments

Robe River Pty Ltd has applied to increase the clearing permit boundary by 1,618 hectares and include hydrological drilling, geotechnical investigations and associated activities in the purpose of the permit. The amount of clearing authorised will remain the same.

There were 28 vegetation associations within the additional area, of which 19 had been previously mapped (Astron, 2014). The majority of the vegetation was in 'pristine' and 'excellent' condition (Astron, 2014). The south-east of the additional area had been burnt in 2012 and vegetation cover was still sparse in this area (Astron, 2014). None of the vegetation communities within the additional area are considered to be a Threatened Ecological Community (Astron, 2014; GIS Database). The vegetation association AprTwTsr was identifed as representing the Priority Ecological Community (PEC) '*Triodia* sp. Robe River assemblages of mesas of the West Pilbara' (Astron, 2014). This vegetation association was recorded at eight locations and covers an area of 15 hectares (Astron, 2014). The proposed clearing will impact two hectares of this community (Rio Tinto, 2015). Potential impacts to this PEC may be minimised by a restricted clearing condition

The flora survey covering the additional area recorded a total of 153 flora taxa from 94 genera and 44 families (Astron, 2014). The flora species recorded were considered to be typcial of the same landforms in the Hamersley subregion (Astron, 2014). No species of Threatened flora have been recorded within the additional area (Astron, 2014; GIS Database). The Priority flora species *Triodia* sp. Robe River (Priority 3) and *Rhynchosia bungarensis* (Priority 4) were both recorded within the additional area (Astron, 2014). *Triodia* sp. Robe River was widespread on skeletal soils associated with rocky ledges and breakaways (Astron, 2014). The flora survey recorded in excess of 125,000 individuals of *Triodia* sp. Robe River. A flora survey of the CPS 4397/2 permit area also recorded 20,000 individuals (Rio Tinto, 2014). This species is known from the West Pilbara and a regional study of the species estimates that there are over 60 million individuals (Astron, 2010). The flora survey recorded a total of 966 *Rhynchosia bungarensis* individuals which were primarily found within riparian habitat associated with the Robe River (Astron, 2014). Within the additional area there were 73 individuals of *Rhynchosia bungarensis* recorded (Rio Tinto, 2015). Given the majority of habitat for this species will not be impacted, the proposed clearing is not likely to have a significant impact on this species.

A fauna survey of the additional area identified seven broad fauna habitats; riverine, gorge/gully, breakaway, hill top/hill slope, low spinifex hills, stony plain and drainage line (Astron, 2014). The majority of the additional area is comprised of the low spinifex hills habitat which was not considered to be significant for local fauna species (Astron, 2014). The riverine habitat is an uncommon habitat in the region and is considered significant as it contains a complexity of habitats and both permanent and semi-permanent pools (Astron, 2014). Of the 115 hectares that was recorded during the fauna survey, there is only 1.03 hectares of this habitat present within the additional area (Rio Tinto, 2015). The area of this habitat within the additional area does not contain any water pools (Astron, 2014). The gorge/gully habitat is also significant as it contains caves used for roosting by Ghost Bats (*Macroderma gigas* – Priority 4) and provides shelter and foraging habitat for other threatened species (Astron, 2014). Potential impacts to this habitat may be minimised by the implementation of a condition restricting clearing to access tracks. The fauna survey observed 77 fauna species, nine of which are of conservation significance.

The Northern Quoll (*Dasyurus hallucatus* – Schedule 1; Endangered) was recorded from two scats in the south of the additional area (Astron, 2014). The gorge/gully and breakaway habitats are likely to provide shelter for Northern Quolls as they contain numerous caves, overhangs and crevices (Astron, 2014). The caves in the gorge/gully habitat also have the potential to provide denning habitat for quolls. Potential impacts to this species may be minimised by the implementation of a condition restricting the clearing within gorge/gully habitat. The riverine habitat has greater floristic diversity and is likely to provide a greater prey density (Astron, 2014). The added presence of semi-permanent water pools means that the riverine habitat is likely to be significant foraging habitat for the Northern Quoll. The application area includes 1.03 hectares of riverine habitat, however, the proposed clearing will not impact on any water pools and is not likely to have a significant impact on this habitat.

The Pilbara Olive Python (*Liasis olivaceus barroni* – Schedule 1; Vulnerable) has been previously recorded in the vicinity of the permit boundary but was not recorded during this survey (Astron, 2014). However, as suitable habitat is present it is likely that it utilises the additional area. The gorge/gully, breakaway and riverine habitats contain potential shelter and foraging habitat for this species. The riverine habitat is the most significant due to the presence of permanent and semi-permanent water pools (Astron, 2014). The additional area does not include any water pools (Astron, 2014). There is 1.03 hectaresof the riverine habitat mapped within the additional area. This habitat was mapped more extensively outside of the permit boundary (115 hectares) (Rio Tinto, 2015). The proposed clearing is not likely to have a significant impact on the available

habitat for this species.

The Ghost Bat was recorded at 12 locations during the fauna survey (Astron, 2014). Scats of the Ghost Bat were observed from six caves within the additional area and there were also six locations where it was acoustically recorded (Astron, 2014). The caves are all located within the gorge/gully habitat. The Ghost Bat is likely to use this habitat for roosting and forage within the riverine habitat associated with the Robe River (Astron, 2014). Potential impacts to this species may be minimised by the implementation of a condition restricting clearing within the gorge/gully habitat.

The Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia* – Schedule 1; Vulnerable) was recorded acoustically, however, there was no evidence of this species utilising the caves inspected during the fauna survey (Astron, 2014). The timing of the calls recorded suggests the bats originate from a distant roost and utilise the riverine habitat for foraging (Astron, 2014). The additional area only includes 1.03 hectares of the 115 hectares of riverine habitat mapped during the fauna survey (Rio Tinto, 2015). Therefore, the proposed clearing is not likely to have a significant impact on this species.

There were a number of vegetation associations that were identified as growing in association with ephemeral watercourses (Astron, 2014). The most significant of these is EcEvAtrApyPITw which is growing in association with the Robe River (Astron, 2014). The flora survey mapped a total of 355 hectares of this vegetation association, of which 13.6 hectares is within the additional area (Rio Tinto, 2015). The proposed clearing is not likely to have significantly greater impacts on riparian vegetation and water quality than the previous permit. Potential impacts to watercourses may be minimised by the existing watercourse management condition.

The additional area is comprised of the Newman, River and Robe land systems (GIS Database). The Newman and Robe land systems are generally not prone to erosion (Van Vreeswyk et al., 2004). The River land system is highly to very highly susceptible to erosion if vegetation cover is removed (Van Vreeswyk et al., 2004). There is only a minor part of the additional area that is comprised of the River land system, which is associated with the Robe River. Potential impacts from erosion may be minimised by the existing staged clearing and watercourse management conditions.

The application has been assessed against the clearing principles and the proposed clearing is at variance to Principles (a), (b) and (f), may be at variance to Principle (g), is not likely to be at variance to Principles (c), (d), (h), (i) and (j) and is not at variance to Principle (e).

#### Methodology

Astron (2010) Astron (2014) Rio Tinto (2014) Rio Tinto (2015)

Van Vreeswyk et al. (2004)

GIS Database:

- Rangeland Land System Mapping
- Threatened Ecological Sites Buffered
- WA Herb

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

#### Comments

There is one Native Title claim (WC1999/012) over the area under application (GIS Database). This claim has been filed at the Federal Court 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*.

There are numerous registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

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

The clearing permit was advertised by the Department of Mines and Petroleum on 22 December 2014, inviting submissions from the public. No submissions were received.

#### Methodology

GIS Database:

- Aboriginal Sites of Significance
- Native Title Claims Filed at the Federal Court

### 4. References

Astron (2010) West Pilbara Iron Ore Project, Triodia sp. Robe River Mapping and Targeted Search. July 2010. Unpublished report prepared for API Management Pty Ltd, dated October 2010.

Astron (2014) Mesa H Level 1 Flora, Vegetation and Fauna Assessment. Unpublished report prepared for Rio Tinto Iron Ore,

dated October 2014.

- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Rio Tinto (2011) Statement Addressing the 10 Clearing Principles. Jimmawurrada & Mesa H evaluation drilling. May 2011. Rio Tinto Iron Ore, Western Australia.
- Rio Tinto (2014) Flora, Vegetation and Fauna Habitat Assessment at Jimmawurrada, Native Vegetation Clearing Permit Supporting Report (RTIO-HSE-0220213). Unpublished report dated May 2014.
- Rio Tinto (2015) Additional information supplied for clearing permit CPS 4397/3. Received by assessing officer on 28 January 2015.
- Trudgen, M.E. (1998) A Report on Flora and Vegetation of the Port Kennedy Area. Unpublished report prepared for Bowman Bishaw and Associates, West Perth.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P. and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

# 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)

DER Department of Environment Regulation, Western Australia
DMP Department of Mines and Petroleum, Western Australia

**DRF** Declared Rare Flora

**DotE** Department of the Environment, Australian Government

**DoW** Department of Water, Western Australia

**DPaW** Department of Parks and Wildlife, Western Australia

DSEWPaC Department of Sustainability, Environment, Water, Population and Communities (now DotE)

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

s.17 Section 17 of the Environment Protection Act 1986, Western Australia

TEC Threatened Ecological Community

#### **Definitions:**

{DPaW (2013) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

# T Threatened species:

Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna or the Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened Fauna and Flora are further recognised by DPaW according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorynchus latirostris* is specially protected under the *Wildlife Conservation Act 1950* as a threatened species with a ranking of Endangered.

#### Rankings:

CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild.

EN: Endangered - considered to be facing a very high risk of extinction in the wild.

VU: Vulnerable - considered to be facing a high risk of extinction in the wild.

## X Presumed Extinct species:

Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).

# IA Migratory birds protected under an international agreement:

Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.

Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.

# S Other specially protected fauna:

Specially protected under the Wildlife Conservation Act 1950, listed under Schedule 4 of the Wildlife

Conservation (Specially Protected Fauna) Notice.

## P1 Priority One - Poorly-known species:

Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.

# P2 Priority Two - Poorly-known species:

Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.

#### P3 Priority Three - Poorly-known species:

Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities 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 localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.

### 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 do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
- (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

### P5 Priority Five - Conservation Dependent species:

Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

### **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.