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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6689/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Robe River Limited**

1.3. Property details

Property: *Iron Ore (Robe River) Agreement Act 1964*, Mineral Lease 248SA (AML 70/248)
Local Government Area: Shire of East Pilbara
Colloquial name: Mesa A, Mesa G Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
600		Mechanical Removal	Mineral exploration, hydrogeological and geotechnical investigations and associated activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 23 June 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. Seven Beard vegetation associations are located within the application area (GIS Database):

Beard vegetation association 82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana;*

Beard vegetation association 93: Hummock grasslands, shrub steppe; kanji over soft spinifex;

Beard vegetation association 583: Hummock grasslands, sparse shrub steppe; kanji & *Acacia bivenosa* over hard spinifex *Triodia basedowii* & *T. wiseana*;

Beard vegetation association 600: Sedgeland; sedges with open low tree sananna; *Eucalyptus* sp. aff *aspera* over various sedges;

Beard vegetation association 604: Hummock grasslands, shrub steppe; kanji & snakewood over soft spinifex;

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

Beard vegetation association 620: Hummock grasslands, shrub steppe; snakewood over soft spinifex.

The following vegetation types are considered to best represent the vegetation types present the application area based on mapping by Rio Tinto (2015):

Vegetation of Hills and Slopes

H1 - *Acacia acradenia* scattered shrubs to open heath over *Triodia wiseana* hummock grassland;
H2 - *Acacia arida* scattered shrubs to open heath over *Triodia wiseana* hummock grassland;
H3 - *Acacia atkinsiana* tall shrubland over *Tephrosia uniovulata* open shrubland over *Triodia wiseana* mid-dense hummock grassland;
H4 - *Acacia tumida* var. *pilbarensis* (*Petalostylis labicheoides*) tall closed scrub over *Acacia acradenia* low open shrubland over *Triodia wiseana* (Triodia sp. Robe River (M.E. Trudgen et al. MET 12367)) very open hummock grassland;
H5 - *Corymbia hamersleyana* scattered low trees over *Acacia acradenia* open heath over *Triodia wiseana* hummock grassland; and
H6 - *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Triodia wiseana*, Triodia sp. Robe River (M.E. Trudgen et al. MET 12367) very open to open hummock grassland.

Vegetation of Plains

P1 - *Acacia atkinsiana* tall open shrubland over *Acacia bivenosa* open shrubland over *Triodia wiseana* hummock grassland;
P2 - *Acacia inaequilatera* scattered tall shrubs over *Acacia ancistrocarpa*, A. *bivenosa* open shrubland to

shrubland over *Triodia wiseana* hummock grassland;

P3 - *Acacia inaequilatera* scattered tall shrubs over *Acacia ancistrocarpa* and *Acacia bivenosa* shrubland over *Acacia atkinsiana* low open shrubland over *Triodia wiseana* hummock grassland;

P4 - *Acacia synchronicia*, A. *bivenosa*, A. *ancistrocarpa* open shrubland over *Triodia wiseana* open hummock grassland;

P5 - *Eucalyptus leucophloia* scattered low trees over *Acacia trachycarpa*, A. *atkinsiana*, A. *arida* tall shrubland over *Triodia* wiseana hummock grassland;

P6 - *Acacia xiphophylla* low woodland to tall shrubland over *Triodia wiseana*, *Triodia epactia* open hummock grassland;

P7 - *Corymbia candida* scattered low trees to low open woodland over *Acacia ancistrocarpa* open shrubland over *Triodia epactia* hummock grassland; and

P8 - *Corymbia zygophylla* scattered low trees over *Acacia trachycarpa, Acacia ancistrocarpa* shrubland over *Triodia epactia, Triodia wiseana* hummock grassland.

Vegetation of Flowlines

F1 - *Corymbia hamersleyana* low open woodland over *Acacia tumida* var. *pilbarensis* tall open shrubland over *Triodia wiseana* open hummock grassland.

A flora and vegetation survey was undertaken by MWH (2016a) during June to September 2015 of the amended permit boundary (amendment application CPS 6689/2). Three vegetation units were mapped within this area:

Vegetation of Stony Plains

AatCtTw - *Acacia atkinsiana* tall to mid open shrubland over *Corchorus tectus* low sparse shrubland over *Triodia wiseana* hummock grassland; and

AxTw - *Acacia xiphophylla* tall open shrubland over *Triodia wiseana* open hummock grassland.

Vegetation of Mesa Plateau and Rocky Slopes

AatAanCtTw - *Acacia atkinsiana* and *Acacia ancistrocarpa* mid to low open to sparse shrubland over *Corchorus tectus* low open to sparse shrubland over *Triodia wiseana* sparse hummock grassland.

Clearing Description

Mesa A, Mesa G Project
Robe River Limited proposes to clear up to 600 hectares of native vegetation within a total boundary of approximately 4,600 hectares, for the purpose of mineral exploration, hydrogeological and geotechnical investigations and associated activities. The project is located approximately 20 kilometres south of Pannawonica in the Shire of East Pilbara.

Vegetation Condition

Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994);

To:

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

Comment

A number of flora and vegetation surveys have been conducted within and surrounding the application area (Rio Tinto, 2015). Given the large size of the application area, a vegetation consolidation exercise was undertaken by Rio Tinto and Eco Logical Australia (Rio Tinto, 2015). Vegetation types identified as occurring within the application area have been based on the results of selected surveys that were deemed to provide the best overall coverage of the application area (Rio Tinto, 2015).

The vegetation condition for the amended area (CPS 6689/2) was described using a scale based on Trudgen (1988) and has been converted to the corresponding condition from the Keighery (1994) scale.

An application for an amendment to clearing permit 6689/1 was received on 20 April 2016 to increase the amount of clearing from 500 to 600 hectares and increase the clearing permit boundary from 3,750 to 4,600 hectares. The amendment has also requested to align the reporting date, reporting period and expiry date to Robe River Limited's new standard reporting dates.

3. Assessment of application against Clearing Principles

Comments

Robe River Limited has applied to increase the area permitted to clear from 500 hectares to 600 hectares, and to increase the permit boundary from 3,750 hectares to 4,600 hectares. The amendment also includes changing the reporting period and date, and the duration of permit.

The flora and vegetation survey within the amended permit boundary identified three vegetation associations, which are well represented within the local and regional area (Rio Tinto, 2016; GIS Database). None of the vegetation associations recorded are associated with a Threatened Ecological Community (MWH, 2016a; Rio Tinto, 2016). The southern point of the amendment area intersects the Priority 1 Ecological Community (PEC) 'Subterranean invertebrate community of pisolitic hills in the Pilbara' (GIS Database). Potential impacts to this PEC as a result of the proposed clearing may be minimised by the existing restricted clearing condition.

MWH (2016a) recorded 331 vascular flora taxa within the amendment area, none of which were identified as a Threatened or Priority Flora species (Rio Tinto, 2016). One Priority 4 species *Goodenia nuda* was considered likely to occur in the amendment area, however the proposed clearing is unlikely to impact the conservation significance of this species as it is common within the local and regional area (DPaW, 2016). There was no

suitable habitat within the amendment area for the three known Pilbara species of Threatened Flora (DPaW, 2016; Rio Tinto, 2016).

The amendment area is comprised mostly of the rocky plains and Acacia on stony plain fauna habitats, and does not contain significant faunal habitats such as permanent waterbodies, caves or gorge/gully habitats (MWH, 2016b; Rio Tinto, 2016). Potential for conservation significant fauna within the amendment area include those identified within the decision report for Clearing Permit CPS 6689/1. A fauna management and fauna habitat management condition was implemented in Clearing Permit CPS 6689/1 to minimise impacts to conservation significant species identified during previous fauna surveys.

No weed species were identified within the amendment area (Rio Tinto, 2016). Clearing activities have the potential to result in an increase in the incidence of weed species, which may negatively impact on the biodiversity of the local area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of existing weed management conditions.

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*. The assessment against the remaining clearing Principles remains unchanged, and further information can be found in previous decision reports.

Methodology

DPaW (2016)
MWH (2016a)
MWH (2016b)
Rio Tinto (2016)

GIS Database:
- Hydrography, Lakes
- Hydrography, linear
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened and Priority Ecological Communities (TEC/PEC) – Buffered

Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

There is one native title claim over the application area (WC1999/012) (Department of Aboriginal Affairs, 2016). 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 no Sites of Aboriginal Significance located in the area applied to clear (Department of Aboriginal Affairs, 2016). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation, the 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 9 May 2016 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

Methodology

Department of Aboriginal Affairs (2016)

4. References

Department of Aboriginal Affairs (2016) Aboriginal Heritage Enquiry System. Government of Western Australia, http://maps.dia.wa.gov.au/AHIS2/. (Accessed 16 May 2016).

Department of Parks and Wildlife (DPaW) (2016) NatureMap Department of Parks and Wildlife, http://naturemap.dec.wa.gov.au. (Accessed 26 April 2016).

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

MWH (2016a) Level 2 Flora and Vegetation Survey: Mesa B-C, Warramboo BWT and Highway to Todd Bore – Phase 1 and Phase 2. Unpublished report prepared for Rio Tinto.

MWH (2016b) Level 2 Terrestrial Fauna Surveys: Mesa B-C, Warramboo BWT and Highway to Todd Bore. Unpublished report prepared for Rio Tinto.

Rio Tinto (2015) Desktop Flora, Vegetation and Fauna Habitat Assessment at Robe Valley: Native Vegetation Clearing Permit – Supporting Report. Rio Tinto Iron Ore, Perth, Western Australia.

Rio Tinto (2016) Desktop Flora, Vegetation and Fauna Habitat Assessment at Robe Valley – Native Vegetation Clearing Permit Supporting Report. Rio Tinto Iron Ore, April 2016.

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
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.