



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6075/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Robe River Mining Co Pty Ltd

1.3. Property details

Property: Exploration Licence 47/1781
Prospecting Licence 47/1337
Local Government Area: Shire of Ashburton
Colloquial name: Kangeenarina Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.5		Mechanical Removal	Mineral Exploration and Access Tracks

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 29 May 2014

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. One Beard vegetation association is located within the application area (GIS Database):

Beard vegetation association 175: Short bunch grassland - savanna/grass plain (Pilbara) (GIS Database).

A flora and vegetation survey of the application area and surrounding area conducted by Biota Environmental Sciences (2011; 2012) identified seven vegetation types within the application area:

THs – *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) tussock grassland on cracking clay plains;

HITHs – *Hakea lorea* subsp. *lorea* scattered tall shrubs to low open woodlands over *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) tussock grassland on cracking clay plains;

EvTHs – *Eucalyptus victrix* woodland over *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) tussock grassland on cracking clay plains;

EvExHITHs – *Eucalyptus victrix*, *E. xerothermica* scattered low trees over *Hakea lorea* subsp. *lorea* scattered tall shrubs to tall open shrubland over *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) open tussock grassland;

ERib – *Eriachne benthamii* tussock grassland in low-lying, seasonally damp areas of clay plains;

EvERib – *Eucalyptus victrix* scattered low trees over *Eriachne benthamii* very open tussock grassland in low-lying, seasonally damp areas of clay plains; and

SPINIFEX – Spinifex (*Triodia* spp.) hummock grasslands on stony plains and low rises.

Clearing Description Kangeenarina Project.
Robe River Limited proposes to clear up to 1.5 hectares of native vegetation within a total boundary of approximately 41.5 hectares, for the purpose of mineral exploration and access tracks. The project is located approximately 43 kilometres north of Tom Price, in the Shire of Ashburton.

Vegetation Condition Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994);
To:
Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Comment

The vegetation condition was derived from a vegetation survey conducted by Biota Environmental Sciences (2011; 2012).

3. Assessment of application against clearing principles**Comments**

The proposal to clear 1.5 hectare of native vegetation within an application area of 41.5 hectares for the purpose of mineral exploration and access tracks is unlikely to have any significant environmental impacts. The application area occurs within the Hamersley (PIL3) 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).

There is no Threatened Flora recorded within the application area (Biota Environmental Sciences, 2011; 2012; GIS Database). A population of *Teucrium pilbaranum* (Priority 1) Flora species was recorded within the north western part of the application area; however the track alignment has been altered to avoid this species (Rio Tinto, 2013). There were four Priority 3 Flora species recorded within the application area; *Themeda* sp. Hamersley Station (M.E. Trudgen 11431), *Iotasperma sessilifolium* (F. Muell.) G.L. Nesom, *Glycine falcata* Benth., and *Euphorbia* sp. Mt Bruce flats (S. van Leeuwen 3861). The *Themeda* sp. Hamersley Station represents one of the dominant structural layers of the vegetation within and surrounding the mapped boundary of the Threatened Ecological Community *Themeda* Grasslands. Both *Glycine falcata* and *Iotasperma sessilifolium* is also common within the TEC and as an annual is likely to be able to readily re-establish in areas disturbed by low impact activities. The species *Euphorbia* sp. Mt Bruce flats is common within the local and regional area (Western Australian Herbarium, 2014).

The application intersects the Threatened Ecological Community (TEC) *Themeda* Grasslands. Two dominate vegetation types (THs and HITHs) make up approximately 48% of the application area (Rio Tinto, 2013), however vegetation types EvTHs and EvExHITHs contain a significant *Themeda* sp. Hamersley Station grassland component, therefore is associated with the TEC. DPaW (2014a) advised that all occurrences of the *Themeda* Grasslands TEC are considered significant, with a number of occurrences occupying less than one hectare. DPaW (2014a) suggest avoidance of further clearing or disturbance wherever possible, and strict hygiene is required to avoid the introduction and spread of weeds to the area. The area proposed to be cleared constitutes for 0.032% of the total known area of the TEC, and it is considered that the proposed clearing of 1.5 hectares of native vegetation is unlikely to have a significant impact on the TEC (DPaW, 2014a).

The application area sits within the buffer of the Priority Ecological Community (PEC) No 12. *Brockman Iron cracking clay communities of the Hamersley Range*, however advice from DPaW (2014a) suggests that the PEC will not be directly cleared under this proposal. It is considered that the proposed clearing of 1.5 hectares of native vegetation is unlikely to have a significant impact on the surrounding PEC.

Based on the flora and vegetation survey conducted by Biota Environmental Sciences (2011; 2012), the application area does not contain significant fauna habitat (DPaW, 2014b; GIS Database) and the survey did not identify critical feeding or breeding habitat for any conservation significant fauna species.

There are no permanent watercourses or water bodies mapped within the area under application (Biota Environmental Sciences, 2011; 2012; GIS Database). There was no riparian vegetation surveyed within the application area (Biota Environmental Sciences, 2011; 2012).

The application area falls within the former leasehold 'ex Hamersley Station', which is a proposed 2015 pastoral lease exclusion for conservation by Department of Parks and Wildlife (GIS Database). Given the small disturbance foot print of the exploration activities (1.5 hectares) it is likely that the proposed clearing will have minimal impacts at a local or regional scale.

The land system associated with the application area has a low risk of erosion (Van Vreeswyk et al., 2004) and the proposed clearing is not likely to cause a deterioration in the quality of surface or underground water or increase the incidence or intensity of flooding (GIS Database).

There were several weed species identified within the application area and surrounding area (Biota Environmental Sciences, 2011; 2012). Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to the biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*, and the proposed clearing is at variance to Principle (d), is not likely to be at variance to Principles (a), (b), (c), (f), (g), (h), (i), and (j), and is not at variance to Principle (e).

Methodology

Biota Environmental Sciences (2011)
Biota Environmental Sciences (2012)
CALM (2002)
DPaW (2014a)
DPaW (2014b)
Keighery (1994)

- Van Vreeswyk et al (2004)
 Western Australian Herbarium (2014)
 GIS Database:
- DEC Tenure
 - Evaporation Isopleths
 - Groundwater Salinity
 - Hydrography, linear
 - IBRA WA (Regions - Sub Regions)
 - Mcrae 50cm Orthomosaic - Landgate 2004
 - Pre-European Vegetation
 - Public Drinking Water Source Areas
 - Rangeland Land System Mapping
 - Rainfall, Mean Annual
 - Threatened and Priority Flora
 - Threatened Ecological Sites Buffered

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

Comments

There is one Native Title claim over the area under application (GIS Database). The claim WC1997/089 has been registered with 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 is one 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 application was advertised on 21 April 2014 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

Methodology

- GIS Database:
- Aboriginal Sites of Significance
 - Native Title Claims - Registered with the NNTT
 - Native Title Claims - Filed at the Federal Court
 - Native Title Claims - Determined by the Federal Court

4. References

- Biota Environmental Sciences (2011) Themeda Grasslands Threatened Ecological Community – Phase 1 Botanical Survey. Prepared for Rio Tinto Iron Ore Pty Ltd, November 2011.
- Biota Environmental Sciences (2012) Themeda Grasslands Threatened Ecological Community – Seasonal Botanical Survey. Prepared for Rio Tinto Iron Ore Pty Ltd, July 2012.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Pilbara 3 (PIL3 – Hamersley subregion) Department of Conservation and Land Management, Western Australia.
- Department of Parks and Wildlife (DPaW) (2014a) Advice from Species and Communities Branch regarding TEC within application area. Internal document, May 2014.
- Department of Parks and Wildlife (DPaW) (2014b) NatureMap Department of Parks and Wildlife, viewed 26 May 2014 <<http://naturemap.dec.wa.gov.au>>.
- 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 (2013) 10 Clearing Principles Assessment Proposed Drilling Programme at Kangeenarina West. Internal report, June 2013.
- 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.
- Western Australian Herbarium (2014) Florabase, the Western Australian Flora. Department of Parks and Wildlife, viewed 26 May 2014 <<http://florabase.dpaw.wa.gov.au>>.

5. Glossary

Acronyms:

- BoM** Bureau of Meteorology, Australian Government
CALM Department of Conservation and Land Management (now DEC), Western Australia
DAFWA Department of Agriculture and Food, Western Australia

DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
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
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:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2** **Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P3** **Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4** **Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R** **Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):** taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X** **Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

- Schedule 1** **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2** **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3** **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4** **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2** **Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of

habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

- P3** **Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4** **Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5** **Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999*)

- EX** **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W)** **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR** **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- EN** **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
- VU** **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
- CD** **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.