



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3419/3
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 (AML70/248)
Local Government Area: Shire of East Pilbara
Colloquial name: Angelo River Drilling Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
8		Mechanical Removal	Mineral exploration and associated activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 1 May 2014

2. Background

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:

18: Low woodland; mulga (*Acacia aneura*); and
82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana* (GIS Database).

A flora survey of the application area was conducted by Rio Tinto and consultant botanists in May 2013. Eight previous flora, vegetation and fauna surveys have been conducted within 20 kilometres of the study area (Rio Tinto, 2013). Vegetation units have been inferred based on mapping conducted by ENV (2012a) and interpretation of aerial photography (Rio Tinto, 2013). Rio Tinto (2013) identified eight vegetation units within the application area;

Drainage Line

MF1 - ChPaARcERIp: *Corymbia hamersleyana* scattered low trees over *Ptilotus astrolasius* low open shrubland over *Aristida contorta* and *Eriachne pulchella* subsp. *pulchella* very open tussock grassland on soft red brown silty clay loam in drainage lines.

MF2 - ExEgPEIRUITHmdCHRF: *Eucalyptus xerothermica* scattered low trees over *Eucalyptus gamophylla* scattered mallees over *Petalostylis labicheoides* high shrubland over *Rulingia luteiflora*, *Ptilotus obovatus* and *Indigofera georgei* shrubland over *Themeda* sp. Mt Barricade (M.E. Trudgen 2471) and *Chrysopogon fallax* open tussock grassland on red brown silty clay in drainage lines.

Gully

MF3 - EIDvTmeTHmb: *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Dodonaea viscosa* subsp. *mucronata* scattered shrubs over *Triodia* sp. Mt Ella (M.E. Trudgen 12739) open hummock grassland over *Themeda* sp. Mt Barricade (M.E. Trudgen 2471) very open tussock grassland on skeletal red brown silty clay in gullies.

Hill Slopes

HS1 - EICdEgTshTp: *Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *Eucalyptus gamophylla* open mallee over *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) and *Triodia pungens* hummock grassland on red brown clay loam on hill slopes.

HS2 - EIChAmHAgTpTw: *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* low open woodland over *Acacia maitlandii* open heath over *Halgania gustafsenii* var. *gustafsenii* low open shrubland over *Triodia pungens* and *Triodia wiseana* hummock grassland on red brown loam on slopes.

	<u>Low Hills</u>
	HSR – ElAmTshTw: <i>Eucalyptus repullulans</i> and <i>Eucalyptus trivalva</i> very open mallee occasionally over <i>Acacia bivenosa</i> or <i>Melaleuca eleuterostachya</i> open shrubland over <i>Triodia wiseana</i> hummock grassland on red brown loam on low hills.
	<u>Pediment</u>
	BS - EgAaAbTsh: <i>Eucalyptus gamophylla</i> very open mallee over <i>Acacia aneura</i> high open shrubland over <i>Acacia bivenosa</i> scattered shrubs over <i>Triodia</i> sp. Shovelanna Hill (S. van Leeuwen 3835) open hummock grassland on red brown silty clay on pediments.
	<u>Plain</u>
	AA - AaApAcaTp: <i>Acacia aneura</i> , <i>Acacia pruinocarpa</i> and <i>Acacia catenulata</i> subsp. <i>occidentalis</i> high open shrubland over <i>Triodia pungens</i> very open hummock grassland on red brown silty clay on plains.
Clearing Description	Angelo River Drilling Project. Robe River Limited propose to clear up to 8 hectares within an application area of approximately 147 hectares for the purpose of mineral exploration. The application area is located approximately 100 kilometres west of Newman in the Shire of East Pilbara.
Vegetation Condition	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).
Comment	The vegetation condition was inferred based on the mapping of ENV (2012a) and was confirmed during the survey conducted in May 2013 by Rio Tinto. Clearing permit CPS 3491/1 was granted by the Department of Mines and Petroleum (DMP) on 10 December 2009 and authorised the clearing of up to 0.16 hectares. On 1 February 2010 amendment application CPS 3419/2 was incorrectly applied for and subsequently withdrawn on 15 February 2010. A further application to amend the clearing permit was received on 13 February 2014.

3. Assessment of application against Clearing Principles

Comments

This amendment is required to change the permit boundary, increase the area approved for clearing from 0.16 hectares to 8 hectares and extend the duration of the permit. In addition an administrative amendment is required to correct an error in the name of the permit holder from Robe River Pty Ltd to Robe River Limited.

The amended 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 on the ranges (CALM, 2002).

The proposed amended application area includes the additional Beard vegetation association 82, which is well represented in the state and bioregion retaining almost 100% of its pre-European extent (Government of WA, 2013). Several additional landform types will be impacted by the amended proposal including seven vegetation units none of which have been identified as Threatened or Priority ecological communities (Rio Tinto, 2013). Rio Tinto (2013) identified a total of 182 taxa from 85 genera representing 39 families in the survey area. The survey recorded eleven flora taxa of conservation significance including the Threatened flora species *Lepidium catapycnon*. The remaining Priority flora species recorded from the study area are well represented within the wider Angelo River locality and region; however populations of *Hibiscus* sp. Mt Brockman (E. Thoma ET 1354) (P1) and *Sida* sp. Hamersley Range (K. Newbey 10692) (P1) represent range extensions for these species (Rio Tinto, 2013). Based on the above the proposed clearing may be at variance to Principle (a) and is at variance to Principle (c). The implementation of a flora management condition to avoid the clearing of critical habitat for conservation significant species will minimise the impact of the proposal upon these flora species.

The amended application will impact upon three additional fauna habitat types and all have the potential to support conservation significant fauna. However, the fauna habitats identified are typical of the Pilbara bioregion (ENV, 2012b). One species of conservation significance has been recorded; Western Pebble-mound Mouse (P4). This species was recorded from two broad fauna habitats; Hills and Lower Slopes and Plains. In addition, a further three species are considered 'Likely' to occur within the amended application area as it provides them with suitable habitat; Australian Bustard (P4), Bush Stone-curlew (P4) and Rainbow Bee-eater (Migratory). However, there is similar and extensive habitat for these species surrounding the study area and these habitats occur widely in the Pilbara region. Therefore, the application area does not represent a significant habitat for these species. Based on the above the proposed clearing is not likely to be at variance to Principle (b).

Two of the vegetation units identified by Rio Tinto (2013) are associated with drainage lines. The amended application area intersects numerous minor non-perennial watercourses (GIS Database). However these drainage lines and the vegetation associated with them is well represented outside of the application area and the clearing of this vegetation is unlikely to have any significant environmental impacts. The proposed clearing is at variance to Principle (f).

The amended application area will intersect two additional land systems, the Boolgeeda and Newman land

systems (GIS Database). These land systems are not generally susceptible to erosion and the proposed clearing has a low risk of causing any significant land degradation (Van Vreeswyk et al., 2004). The proposed amendment is required for low impact exploration activities and will require the clearing of 8 hectares within an amended application area of 147 hectares. The current environmental information has been reviewed and the assessment of clearing principles (d), (e), (g), (h), (i) and (j) is consistent with the assessment in clearing permit decision report CPS 3419/1 (GIS Database).

Methodology	CALM (2002) ENV (2012b) Rio Tinto (2013) Keighery (1994) Government of WA (2013) Van Vreeswyk et al. (2004) GIS Database: - DEC Tenure - Evaporation Isopleths - Groundwater Salinity, Statewide - Hydrography, linear - IBRA WA (Regions - Sub Regions) - Mean Average Rainfall - Pre-European Vegetation - Public Drinking Water Source Areas (PDWSAs) - Threatened and Priority Flora - Threatened Ecological Sites Buffered - Rangeland Land System Mapping
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Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

There are no Native Title Claims over the area under application (GIS Database). 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 registered Aboriginal Sites of Significance in the vicinity of 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 Environmental 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 amended clearing permit application was advertised on 24 February 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
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4. References

- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management, Western Australia.
- ENV (2012a) Angelo River Flora and Vegetation Survey. Report prepared for Rio Tinto Iron Ore.
- ENV (2012b) Angelo River Vertebrate Fauna Baseline Survey. Report prepared for Rio Tinto Iron Ore.
- Government of Western Australia (2013) 2013 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, 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.
- Rio Tinto (2013) Rio Tinto Statement addressing the 10 Clearing Principles, Deposit J Angelo River, February 2014.
- Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A. and Hennig, P. (2004) Technical Bulletin - An Inventory and Condition Survey of the Pilbara Region, Western Australia, No. 92. Department of Agriculture, Government of Western Australia, Perth, 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	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
s.17	Section 17 of the <i>Environment Protection Act 1986</i> , 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 <i>Wildlife Conservation Act 1950</i> , 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 the Department according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo <i>Calyptorhynchus laticaudis</i> is specially protected under the <i>Wildlife Conservation Act 1950</i> 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 <i>Wildlife Conservation Act 1950</i> , 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 <i>Wildlife Conservation Act 1950</i> , 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 <i>Wildlife Conservation Act 1950</i> , 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.

