Government of Western Australia
Department of Mines, Industry Regulation and Safety

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6545/3
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 (AML 70/248)
General Purpose Lease 47/1235
General Purpose Lease 47/1236
Local Government Area: Shire of East Pilbara
Colloquial name: West Angelas Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
540		Mechanical Removal	Mineral Exploration, Hydrogeological and Geotechnical Investigations, Construction Camp and Associated Activities.

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 20 December 2018

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 application area (GIS Database):

Beard vegetation association 18: Low woodland; mulga (*Acacia aneura*);

Beard vegetation association 29: Sparse low woodland; mulga, discontinuous in scattered groups;

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

Beard vegetation association 169: Shrublands; mulga & minnieritchie scrub

Multiple flora surveys have been conducted within the clearing application area and a total of 250 vegetation units have been mapped. The main landform types within the application area are: plains, including Mulga woodlands and cracking clays; hills; gorges and gullies; and major and minor drainage lines (Rio Tinto, 2015).

Clearing Description

West Angelas Project.
Robe River Limited proposes to clear up to 540 hectares of native vegetation within a total boundary of approximately 29,761 hectares, for the purpose of mineral exploration, hydrogeological and geotechnical investigations, construction camp and associated activities. The project is located approximately 100 kilometres north west of Newman in the Shire of East Pilbara.

Vegetation Condition

The majority of the vegetation in the application area appears to be in a "Very Good" to "Excellent" condition. An operational mine site is located within the application area boundary and historic clearing has occurred throughout the area, therefore parts of the vegetation have been highly disturbed or completely cleared.

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

To:

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Comment

The vegetation condition was derived from available aerial imagery, previous clearing permit assessments and information obtained from past surveys within the area (Rio Tinto, 2015; GIS Database).

Clearing permit CPS 6545/1 was granted by the Department of Mines and Petroleum (now Department of Mines, Industry Regulation and Safety) on 11 June 2015 and was valid from 4 July 2015 to 31 July 2030. The permit authorised the clearing of 500 hectares of native vegetation within a permit boundary of approximately 29,761 hectares. CPS 6545/1 was amended on 17 November 2016 to change the annual reporting date and period and extend the duration of the permit to 31 December 2030.

Robe River Limited has applied to amend CPS 6545/2 to increase the amount of clearing authorised to 540 hectares and include construction camp as a purpose of clearing. The permit boundary will remain unchanged.

3. Assessment of application against Clearing Principles

Comments

Robe River Limited has applied to increase the amount of clearing authorised by 40 hectares and include construction camp as a purpose for which clearing may be undertaken. The clearing permit boundary will remain unchanged.

Flora and vegetation surveys of the permit area have mapped 250 different vegetation units (Rio Tinto, 2015). The majority of the vegetation units are considered to be widely distributed within the Hamersley bioregion (Rio Tinto, 2015). The 'West Angelas Cracking Clay' Priority Ecological Community (PEC) is present within the permit area (Rio Tinto, 2015; GIS Database). Conditions are on the existing permit that restrict the clearing of the PEC within the permit boundary. Therefore, the proposed amendment will not have any additional impacts to the PEC.

Previous flora surveys have recorded twenty four Priority flora within the Permit area, which includes four Priority 1, five Priority 2, thirteen Priority 3 and two Priority 4 flora species (Rio Tinto, 2015, Western Australian Herbarium, 2018). Advice from the Department of Parks and Wildlife (now the Department of Biodiversity, Conservation and Attractions) for clearing permit CPS 6545/1 was that impacts to the following eight flora species were considered to be of greatest significance (DPaW, 2015):

- *Eremophila* sp. West Angelas (S. van Leeuwen 4068) (P1)
- *Hibiscus sp.* Mt Brockman (E. Thoma ET 1354) (P1)
- *Sida sp.* Hamersley Range (K. Newbey 10692) (P1)
- *Josephinia* sp. Marandoo (M.E. Trudgen 1554) (P1)
- *Aristida lazaridis* (P2)
- *Eremophila forrestii* subsp. Pingandy (M.E. Trudgen 2662) (P2)
- *Euphorbia clementii* (P2)
- *Oxalis* sp. Pilbara (M.E. Trudgen 12725) (P2)

It was also recommended that *Aristida jerichoensis* var. *subspinulifera* (P3), *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen 15708) (P2) and *Vittadinia pustulata* (P3) be avoided within the permit area. A condition is on the existing permit that restricts clearing of these Priority flora species. *Josephinia* sp. Marandoo is more recently known as *Josephinia eugeniae* which is not listed as a Threatened or priority species (Western Australian Herbarium, 2018). This species has a wide distribution from the Kimberley through to the Murchison region (Western Australian Herbarium, 2018). Given the potential level of impact to this species is no longer as significant, it has been removed from the flora management condition on the permit. The clearing of an additional 40 hectares will impact on habitat for other Priority flora species within the permit area. The majority of the habitats within the permit area are common and widespread within the Hamersley bioregion (Rio Tinto, 2015). Restricted habitats such as gorge/gullies and the West Angelas Cracking Clay PEC have restricted clearing conditions on the existing permit. The proposed amendment is not likely to have a significant additional impact on conservation significant flora within the permit area.

A number of fauna surveys have previously covered the permit area and over 63 fauna habitats have been described from the previous reports (Rio Tinto, 2015). The main landform types identified within the permit area are: plain, including Mulga woodlands and cracking clay; hills; gorges and gullies; and major and minor drainage lines (Rio Tinto, 2015). The gorge/gullies habitat is considered the most significant fauna habitat as it has the potential to provide critical habitat for the conservation significant species Pilbara Leaf-nosed Bat, Ghost Bat and Pilbara Olive Python. A condition is on the existing permit that restricts the clearing within the gorge/gully habitat to clearing for access tracks only. There is also a condition on the permit which prevents clearing within 50 metres of a significant Ghost Bat cave at Deposit F known as cave AA1. This cave has significant usage by Ghost Bats and probably represents a maternity cave (Biologic, 2018). This cave is of very high conservation significance and Hamersley Iron Pty Ltd has committed to avoiding disturbance within 100 metres of the cave (Rio Tinto, 2018). Given the significance of this cave and the current commitments of avoidance, the clearing buffer has been increased to 100 metres.

There are several other caves within the permit boundary near Deposit B that are known to provide roosts for Ghost Bats (Biologic, 2018). Based on records of activity, two of the caves which have recorded ghost bat activity were considered unlikely to be of high significance (Biologic, 2018). Additionally the caves are small, relatively exposed and uncharacteristic of typical Ghost Bat roosting sites (Biologic, 2018). The caves known as L3 and A1 have recorded higher levels of activity and are of greater significance (Biologic, 2018). Historical records from cave L3 indicate that it was historically used as a diurnal roost or even a maternity roost however,

there has been low levels of activity recorded during recent surveys (Biologic, 2018). The low activity levels recorded recently may be due to natural fluctuations, the presence of nearby mining or the erection of a sound barrier at the entrance of the cave (Biologic, 2018). Despite the recent low levels of activity, this cave should be considered a potential diurnal roost, potentially being used as a maternity roost and is considered to be of moderate significance (Biologic, 2018). Diurnal roosting has been previously recorded at cave A1 and the latest monitoring found high visitation by pregnant females (Biologic, 2018). The cave represents a diurnal roost and a potential maternity roost and therefore is considered to be of high significance (Biologic, 2018). Given the significance of these two caves, a 50 metre clearing buffer has been imposed by the permit conditions to minimise impacts to the Ghost Bat.

There are no significant wetlands or watercourses within the permit area, however several small, minor ephemeral drainage lines and Turee Creek east branch are present (Rio Tinto, 2015; GIS Database). These drainage systems are likely to contain water following large rainfall events. Riparian vegetation is likely to occur along drainage lines and the proponent has committed to minimising disturbance to these areas (Rio Tinto, 2015). A watercourse management condition was placed on the original permit to minimise impacts to riparian vegetation and watercourses within the permit area. The proposed additional clearing is not likely to significantly increase the impacts on riparian vegetation within the permit area.

Ten land units were identified within the application area (Rio Tinto, 2015). Of these, two are considered prone to erosion under pastoral use; the Brockman land system and the Jamindie land system (DAFWA, 2015). A staged clearing condition was placed on original permit to minimise the potential of erosion occurring within the permit area. The proposed additional clearing is not likely to lead to a significant increase in the risk of erosion.

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*, and the proposed clearing is at variance to Principles (a) and (f), may be at variance to Principle (b), is not likely to be at variance to Principles (c), (d), (g), (h), (i) and (j) and is not at variance to Principle (e).

Methodology

Biologic (2018)
DAFWA (2015)
DPaW (2015)
Rio Tinto (2015)
Rio Tinto (2018)
Western Australian Herbarium (2018)

GIS Database:
- DPaW Tenure
- Hydrography, Lakes
- Hydrography, Linear
- Imagery
- Landsystem Rangelands
- Pre-European Vegetation
- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffers
- Threatened and Priority Flora
- Threatened Fauna

Planning Instrument, Native Title, previous EPA decision or other matter.

Comments

There are three Native Title claims over the area under application (DPLH, 2018). These claims have been registered with the National Native Title Tribunal on behalf of the claimant groups. 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 44 registered Aboriginal Sites of Significance within the application area (DPLH, 2018). 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 Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, 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 10 September 2018 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

Methodology DPLH (2018)

4. References

Biologic (2018) 2017 West Angelas Ghost Bat Monitoring. Report prepared for Rio Tinto Iron Ore by Biologic, January 2018.

DAFWA (2015) Land degradation advice for CPS 6545/1. Department of Agriculture and Food Western Australia, South Perth, Western Australia.

DPaW (2015) PEC Advice for CPS 6545/1 – Robe River Limited – Clearing of 500 ha of native vegetation within Mineral Lease 248SA, General Purpose Lease 47/1235 and General Purpose Lease 47/1236. Department of Parks and Wildlife, Species and Communities Branch, Kensington, Western Australia.

DPLH (2018) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage. http://maps.daa.wa.gov.au/AHIS/ (Accessed 23 October 2018).

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

Rio Tinto (2018) Environmental Management Plan - West Angelas Iron Ore Project. Robe River Mining Co Pty Ltd, April 2018.

Western Australian Herbarium (2018). FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. https://florabase.dpaw.wa.gov.au/ (Accessed 21 September 2018).

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DBCA	Department of Biodiversity Conservation and Attractions, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DBCA and DWER)
DEE	Department of the Environment and Energy, Australian Government
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia
DMP	Department of Mines and Petroleum, Western Australia (now DMIRS)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora
DoE	Department of the Environment, Australian Government (now DEE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
DWER	Department of Water and Environmental Regulation, Western Australia
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 (2017) 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 1950*.

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 1950*.

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.