



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5078/1
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: West Angelas Drilling Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.3		Mechanical Removal	Mineral Exploration

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 5 July 2012

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 and are useful to look at vegetation in a regional context. The following Beard vegetation association is located within the application area (GIS Database):

82: Hummock grasslands, low tree steppe; snappygum over *Triodia wiseana*.

Rio Tinto Iron Ore (RTIO) has conducted a flora and vegetation survey over the application area and a slightly larger area to the east. The field survey was conducted by a RTIO botanist on 18 March 2011. The survey identified the following seven vegetation units over the larger survey area (RTIO, 2011):

1. Hill Slope 1 (HS1): *Acacia pruinocarpa* high shrubland over *Acacia marramamba* open shrubland over *Eremophila fraseri* and *Ptilotus rotundifolius* low open shrubland over *Triodia pungens* hummock grassland.

2. Hill Slope 2 (HS2): *Acacia aneura*, *Acacia rhodophloia* open scrub over *Eremophila fraseri* open shrubland over *Eremophila exilis* low open shrubland over *Triodia pungens* hummock grassland.

3. Hill Slope 3 (HS3): *Eucalyptus leucophloia* low woodland over *Acacia pruinocarpa* high open shrubland over *Senna glutinosa*, *Senna glaucifolia* open shrubland over *Triodia pungens* hummock grassland.

4. Hill Slope 4 (HS4): *Eucalyptus leucophloia*, *Corymbia hamersleyana* low open woodland over *Acacia pruinocarpa* high open shrubland over *Acacia marramamba* open shrubland over *Triodia basedowii* and *Triodia pungens* hummock grassland.

5. Hill Slope 5 (HS5): *Eucalyptus leucophloia* low open forest over *Acacia maitlandii*, *Senna glutinosa*, *Eremophila latrobei* open shrubland over *Triodia pungens* hummock grassland over *Eriachne mucronata* open tussock grassland.

6. Hill Slope 6 (HS6): *Eucalyptus leucophloia*, *Corymbia deserticola* low open woodland over *Acacia pachyacra*, *Acacia aneura* high open shrubland over *Acacia dictyophleba*, *Acacia bivenosa*, *Acacia marramamba* open shrubland over *Ptilotus rotundifolius* low open shrubland over *Triodia pungens*, *Triodia basedowii* hummock grassland.

7. Drainage Line (DL1): *Eucalyptus xerothermica*, *Corymbia hamersleyana* low woodland over *Acacia pruinocarpa*, *Acacia pyrifolia*, *Acacia bivenosa* open scrub over *Indigofera brevidens* open shrubland over *Triodia pungens* hummock grassland over *Themeda triandra* tussock grassland.

Clearing Description

Robe River Limited has applied to clear 1.3 hectares within an application area of approximately 4.69 hectares (GIS Database). The application area is located approximately 90 kilometres east of Paraburdoo and 17.4 kilometres west of the Rio Tinto West Angelas iron ore mine (GIS Database; RTIO, 2011).

The purpose of the application is for an exploration drilling program within the West Angelas locality and involves the construction of drill holes/lines and pads (RTIO, 2011). Clearing will be by bulldozer using a raised blade clearing technique where possible and blade down where required in steep or rough terrain to provide a safe working environment. Vegetation and topsoil will be stockpiled for use in rehabilitation.

Vegetation Condition

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

Comment

The overall condition of each vegetation unit was determined by RTIO using a scale based on Trudgen (1988). These condition ratings have been converted to the Keighery (1994) scale.

The main signs of disturbance in the survey area are existing exploration tracks (RTIO, 2011).

RTIO (2011) notes that the application area was assessed over a single period only and was not seasonally assessed to capture short-lived and annual species. Ephemeral species with short or sporadic growth windows such as short-lived forbs and grasses may have also been missed as the area was fairly dry despite rainfall in the months preceding the survey (RTIO, 2011).

A fauna survey of the application area was not undertaken. Fauna information was based on incidental fauna sightings and dominant landforms and vegetation types observed during the vegetation survey (RTIO, 2011).

3. Assessment of application against clearing principles

Comments

The application to clear up to 1.3 hectares of native vegetation for the purpose of exploration is unlikely to have any significant environmental impacts.

The vegetation types and assortment of species identified within the survey area are considered well represented in this section of the Hamersley sub-region and are typical of the local area (RTIO, 2011). The total number of flora species recorded was deemed to be within the expected range for the area surveyed in the locality (RTIO, 2011). Three primary fauna habitats were identified during the survey and were also considered reasonably widespread and abundant in the West Angelas locality (RTIO, 2011). It is, therefore, unlikely that the application area provides significant habitat for fauna or higher biological diversity than surrounding areas.

No Threatened or Priority Flora have been recorded within the application area (RTIO, 2011, GIS Database). The vegetation survey recorded one Priority 3 Flora species, *Indigofera gilesii* subsp. *gilesii*, approximately one kilometre east, south east of the application area, however, at this distance the priority flora is unlikely to be impacted by the proposed clearing. According to the online Department of Environment and Conservation (DEC) database, Naturemap, only one other conservation significant flora species, *Eremophila forrestii* subsp. *Pingandy* (M.E. Trudgen 2662) (Priority 2), has been recorded within ten kilometres of the application area (DEC, 2012). This species was not recorded during the vegetation survey.

No known Threatened Ecological Communities (TEC), Priority Ecological Communities (PEC) or conservation areas occur within the application area (RTIO, 2011, GIS Database). The nearest known TEC and PEC is approximately 100 kilometres north west and seven kilometres east, north east of the application area, respectively (GIS Database). The nearest known conservation area is Karijini National Park, located approximately 550 metres north of the application area at its closest point (GIS Database). Given the low impact and non-contiguous nature of the proposed clearing, it is unlikely it will impact on the TEC, PEC or environmental values of Karijini National Park. However, at a distance of 550 metres the proposed clearing may pose a risk of introducing weeds into the national park. According to RTIO (2011), four introduced species were recorded during the vegetation survey and strict weed hygiene protocols are to be implemented during clearing of vegetation and subsequent earth works. Potential impacts to the conservation area as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

There are no permanent watercourses within the application area, however, several minor, non-perennial watercourses cross through the application area (GIS Database, RTIO, 2011). It is expected that these would only flow after or during significant seasonal rainfall events, or substantial localised falls (RTIO, 2011). One vegetation unit was identified as growing in association with minor drainage lines, however, numerous minor drainage lines occur in the area and the vegetation types identified are considered well represented in the Hamersley subregion (RTIO, 2011). Land system mapping indicates the application area has a low erosion risk (GIS Database; Van Vreeswyk et al, 2004) and the small scale and low impact nature of the proposed clearing is unlikely to result in significant impacts leading to appreciable land degradation or deterioration in the quality of surface or underground water.

The assessment of the application identified that the proposed clearing is at variance to Principle (f), is not likely to be at variance to Principles (a), (b), (c), (d), (g), (h), (i) and (j) and is not at variance to Principle (e).

Methodology

DEC (2012)
RTIO (2011)
Van Vreeswyk et al (2004)
GIS Database:
- DEC Tenure
- Governor 50cm Orthomosaic - Landgate 2004

- Hydrography, linear
- Rangeland Land System Mapping
- Threatened and Priority Flora
- Threatened Ecological Sites Buffered
- Threatened Fauna

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

Comments There is one native title claim over the area under application: WC10/11 (GIS Database). This claim has been registered with the 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*.

According to available databases, there are no 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 and Conservation 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 4 June 2012 by the Department of Mines and Petroleum inviting submissions from the public. There were no submissions received.

Methodology GIS Database:
 - Aboriginal Sites of Significance
 - Native Title Claims – Registered with the NNTT

4. References

- DEC (2012) NatureMap - Mapping Western Australia Biodiversity, Department of Environment and Conservation. <http://naturemap.dec.wa.gov.au/default.aspx>, viewed 26 June 2012.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA.
- RTIO (2011) Flora and Vegetation Survey for Proposed Evaluation Drilling at Brockman Target Native Vegetation Clearing Permit Supporting Report. Unpublished report dated July 2011.
- Trudgen, M.E. (1988) A Report on the 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., 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
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

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.

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.