



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6534/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Hamersley Iron Pty Ltd

1.3. Property details

Property: Iron Ore (Hamersley Range) Agreement Act 1963, Mineral Lease 4SA (AML 70/4)
Local Government Area: Shire of Ashburton
Colloquial name: Bourne Highway Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5		Mechanical Removal	Mineral Exploration and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 21 May 2015

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. One vegetation association has been mapped within the application area (GIS Database):

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

A biological survey of the application area and surround region was undertaken by a Rio Tinto Limited botanist and a consulting botanist from Astron Environmental Services from 18 to 20 September 2014. The following vegetation associations were identified within the application area (Rio Tinto, 2015):

Vegetation of Hills and Slopes

1 – *Eucalyptus leucophloia*, *Hakea lorea* low open woodland over *Acacia pruinocarpa* high open shrubland over *Acacia arida* shrubland to open heath over *Triodia wiseana*, *T. sp.* Robe River (M.E. Trudgen *et al.* MET 12367) hummock grassland;

2 – *Acacia monticola*, *A. pruinocarpa* high open shrubland over *Triodia sp.* Robe River (M.E. Trudgen *et al.* MET 12367), *T. wiseana* open hummock grassland over *Eriachne mucronata* tussock grassland;

4 – *Eucalyptus leucophloia* low open woodland over *Acacia citrinoviridis*, *A. pruinocarpa* high shrubland over *Scaevola acacioides*, *Senna glutinosa* open shrubland over *Eremophila latrobei* low open shrubland *T. wiseana*, *T sp.* Robe River (M.E. Trudgen *et al.* MET 12367) very open hummock grassland;

8 – *Eucalyptus leucophloia* low open woodland over *Acacia arida*, *Senna glutinosa* open shrubland over *Triodia sp.* Robe River (M.E. Trudgen *et al.* MET 12367), *T. wiseana* hummock grassland;

10 – *Eucalyptus gamophylla*, *E. leucophloia* low open woodland over *Acacia arida*, *Senna pruinosa*, shrubland over *Triodia wiseana*, *T. sp.* Robe River (M.E. Trudgen *et al.* MET 12367), *T. basedowii* hummock grassland;

13 – *Eucalyptus leucophloia* low open woodland over *Stylobasium spathulatum*, *Acacia pruinocarpa* open shrubland over *Triodia wiseana*, *T. sp.* Robe River (M.E. Trudgen *et al.* MET 12367) hummock grassland; and

14 – *Eucalyptus leucophloia* low open woodland over *Acacia pruinocarpa*, *A. marramamba* open shrubland over *A. arida*, *Corchorus sidoides* low open heath over *Triodia wiseana*, *T. sp.* Robe River (M.E. Trudgen *et al.* MET 12367) hummock grassland.

Vegetation of Drainage Lines

3 – *Eucalyptus leucophloia*, *Corymbia hamersleyana* low open woodland over *Acacia monticola*, *A. citrinoviridis* high shrubland over *A. marramamba* open shrubland over *Acacia arida* low open shrubland over *Triodia wiseana* hummock grassland.

Other mapping units

R – Previously rehabilitated areas; and

Clearing Description	<p>HD – Previously cleared areas, such as tracks. Bourne Highway Project. Hamersley Iron Pty Ltd proposes to clear up to 5 hectares of native vegetation within a total boundary of approximately 28.8 hectares, for the purposes of mineral exploration and associated activities. The project is located approximately 100 kilometres north-west of Tom Price, in the Shire of Asburton.</p>
Vegetation Condition	<p>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).</p>
Comment	<p>Clearing will be undertaken with a dozer using a raised blade clearing technique where possible. Approximately 30 drill holes and 6.6 kilometres of track will be established under this project.</p>

3. Assessment of application against clearing principles

Comments

The proposal to clear 5 hectares of native vegetation within an application area of 28.8 hectares for the purposes of mineral exploration and associated activities 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 bioregion (GIS Database). The vegetation associations within the application area are in a 'very good' to 'completely degraded' condition, with the degradation due to historical clearing of access tracks and mineral exploration (Keighery, 1994; GIS Database). The vegetation associations identified within the application area are well represented locally and regionally (Rio Tinto, 2015; GIS Database).

A total of 127 flora taxa from 75 genera and 35 families were recorded within the survey area (Rio Tinto, 2015). No Threatened Flora species and no Threatened Ecological Communities or Priority Ecological Communities were recorded within the application area (Rio Tinto, 2015; GIS Database). Rio Tinto (2015) identified two Priority Flora species within the application area; *Triodia* sp. Robe River (M.E. Trudgen *et al.* MET 12367) (Priority 3) and *Eremophila magnifica* subsp. *magnifica* (Priority 3). The Priority Flora species *Triodia* sp. Robe River (M.E. Trudgen *et al.* MET 12367) was recorded from 49 locations totalling 1,030 individuals (Rio Tinto, 2015). Rio Tinto's internal flora database has recorded 211,191 individuals from 2,761 records within the local and regional area. The Priority Flora species *Eremophila magnifica* subsp. *magnifica* was recorded from 5 locations totalling 25 individuals (Rio Tinto, 2015). Rio Tinto's internal flora database has recorded 12,435 individuals from 839 records within the local and regional area. The proposed clearing of 5 hectares of native vegetation within an application area of 28.8 hectares is unlikely to impact the conservation significance of these species.

Vegetation type 3 was mapped in association with ephemeral drainage lines within the application area (Rio Tinto, 2015; GIS Database). Clearing of areas which contain drainage line associated native vegetation have the potential to cause localised erosion and degrade faunal habitats. Provided disturbance to riparian habitats is avoided or minimised where possible, and strict weed hygiene procedures are followed, the proposed works are not expected to substantially impact these vegetation units. Potential impacts to riparian vegetation may be minimised through the implementation of a vegetation management condition.

Rio Tinto (2015) described three broad fauna habitat types within the application area:

- B1: Rockpiles, breakaways and gullies;
- D1: Drainage lines; and
- H1: Stony hills and slopes.

No caves, semi-permanent water holes or other microhabitats of significance were recorded in the study area (Rio Tinto, 2015) and there are no records of fauna of conservation significance occurring within the area applied to clear (GIS Database; DPaW, 2015). Although the recorded fauna habitat types are considered to be of elevated significance, the low impact nature and the small scale clearing proposed is unlikely to significantly impact the conservation significance of these faunal habitats or impact on any conservation significant fauna.

The application area is not located within any conservation area (GIS Database). There are no conservation areas within 10 kilometres of the application area (GIS Database).

The land system associated with the application area has a low risk of erosion (GIS Database) 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).

Rio Tinto (2015) identified several weed species during biological the survey. 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 (f), is not likely to be at variance to Principles (a), (b), (c), (d), (f), (g), (h), (i), and (j), and is not at variance to Principle (e).

- Methodology** DPaW (2014)
 Keighery (1994)
 Rio Tinto (2015)
 GIS Database:
 - DEC Tenure
 - Evaporation Isopleths
 - Groundwater Salinity
 - Hydrography, linear
 - IBRA WA (Regions - Sub Regions)
 - 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 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 is one registered Aboriginal Site of Significance located within the clearing permit 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 13 April 2015 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

- DPaW (2015) NatureMap Department of Parks and Wildlife, viewed 18 May 2015 <<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 (2015) Flora, Vegetation and Fauna Habitat Assessment at Bourne Highway. Native Vegetation Clearing Permit Supporting Information. Internal Report, March 2015.

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 *Wildlife Conservation Act 1950*, 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 DPaW according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorhynchus latirostris* is specially protected under the *Wildlife Conservation Act 1950* 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 *Wildlife Conservation Act 1950*, 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 *Wildlife Conservation Act 1950*, 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 *Wildlife Conservation Act 1950*, 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.