



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5928/1
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: Brockman 1 Exploration Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 30 January 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 over the whole of Western Australia and are useful to look at vegetation in a regional context. One Beard vegetation association has been mapped over the application area (GIS Database):

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

A level 1 flora and vegetation survey was undertaken over the Brockman 1 area which included the application area. This survey identified five vegetation units within the application area (Rio Tinto, 2013):

Rocky Hills and Slopes (with minor drainage lines)

H2: EIAiAbTw – *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Acacia inaequilatera*, *Acacia citrinoviridis* and *Acacia pruinocarpa* high open shrubland to scattered tall shrubs over *Acacia bivenosa*, *Acacia atkinsiana* and *Acacia ancistrocarpa* open shrubland to scattered shrubs over *Triodia wiseana* very open hummock grassland;

H4: AcSITp – *Acacia citrinoviridis* and *Santalum lanceolatum* low open forest over *Triodia pungens* open hummock grassland;

H5: AaApAcTw – *Acacia aneura*, *Acacia pruinocarpa*, *Acacia citrinoviridis* and *Acacia rhodophloia* low open forest over *Eremophila tietkensis* shrubland over *Triodia wiseana* open hummock grassland;

Lower Undulating Plains with Dissecting Drainage Lines (calcrete)

P1: ExEsTw – *Eucalyptus xerothermica* and *Eucalyptus socialis* subsp. *eucentrica* low open woodland over *Acacia bivenosa* and *Capparis umbonata* open shrubland over *Cymbopogon ambiguus* scattered tussock grasses over *Triodia wiseana* and *Triodia lanigera?* very open hummock to hummock grassland on calcrete low undulating plains;

Floodplains

F1: ExGrTe – *Eucalyptus xerothermica* scattered low trees over *Gossypium robinsonii* and *Acacia tumida* high open shrubland over *Acacia citrinoviridis* open shrubland over *Acacia bivenosa* low open shrubland over *Triodia longiceps* and *Triodia epactia* very open to hummock grassland.

Clearing Description Brockman 1 Exploration Project. Hamersley Iron Pty Ltd proposes to clear up to 3.5 hectares within a boundary of approximately 17.5 hectares for the purposes of mineral exploration. The project is located approximately 74 kilometres north-west of Tom Price within the Shire of Ashburton.

Vegetation Condition Pristine: No obvious signs of disturbance (Keighery, 1994);
to

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

Comment The vegetation condition was derived from a report prepared by Rio Tinto (2013). The vegetation condition was described using a scale based on Trudgen (1988) and has been converted to the corresponding condition from the Keighery (1994) scale.

3. Assessment of application against clearing principles

Comments

The vegetation units recorded within the application area are considered to be typical of vegetation within the Hamersley subregion. None of the vegetation units recorded within the application area are representative of a Threatened or Priority Ecological Community (Rio Tinto, 2013; GIS Database). The vegetation unit AaApAcTw was identified as being representative of an ecosystem at risk as highlighted by Kendrick (2001). The AaApAcTw vegetation unit is consistent with lower-slope mulga communities which are being threatened by frequent fires preventing regeneration. There is 0.91 hectares of this vegetation unit within the application area (Rio Tinto, 2013).

A total of 173 flora taxa from 79 genera and 36 families were recorded within the larger survey boundary (Rio Tinto, 2013). This number of species is slightly greater than similar sized surveys in the nearby area, however, the application area only represents a portion of the survey area (Rio Tinto, 2013). No species of Threatened Flora were recorded during the flora survey and the application area does not contain any preferred habitat for Threatened Flora species in the Pilbara (Rio Tinto, 2013). There were 704 individuals of the Priority 3 flora species *Indigofera* sp. Bungaroo Creek recorded within the larger survey area (Rio Tinto, 2013). There were three populations recorded within 20 metres south-west of the application area. Whilst the proposed clearing will not clear any recorded *Indigofera* sp. Bungaroo Creek, it will remove some significant habitat for this species. Although not recorded during the survey, the application area may also provide habitat for a number of other Priority flora species known from the local area (Rio Tinto, 2013). Given the relatively small scale of the clearing, it is not expected to have a significant impact on Priority flora species in the local area.

There were five fauna habitats identified in the larger survey area, three of which are present within the application area; floodplains and riparian zones, lower slopes and plains and rocky hills (Rio Tinto, 2013). These habitats are all well represented within the region. The large majority of the application area is comprised of the rocky hills habitat. This habitat contained termite mounds which are known to provide microhabitat for a number of fauna species. A number of conservation significant fauna species have the potential to occur within the application area (Rio Tinto, 2013). However, given the relatively small scale of the proposed clearing, it is not likely to have a significant impact on local fauna species.

There are no permanent watercourses within the application area, however, there are a number of ephemeral drainage lines that pass through (GIS Database). The vegetation units within the application area were identified as being associated with minor drainage lines (Rio Tinto, 2013). The proposed clearing of 3.5 hectares for mineral exploration is not likely to have a significant impact on local drainage systems.

The application area is comprised of the Newman and Table land systems (GIS Database). These land systems are generally not prone to erosion (Van Vreeswyk et al., 2004). Given the relatively small amount of clearing and the low risk of erosion, the proposed clearing is not likely to cause any appreciable land degradation. The proposed clearing is not likely to cause a deterioration in the quality of surface or groundwater or increase the incidence or intensity of flooding (GIS Database).

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), (g), (h), (i), and (j), and is not at variance to Principle (e).

Methodology Kendrick (2001)
Rio Tinto (2013)
Van Vreeswyk et al. (2004)
GIS Database:
- Evaporation Isopleths
- Groundwater Salinity
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)
- 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 (WC2001/005) over the application area (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant groups (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*.

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 Regulation (formerly 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 6 January 2014 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

- Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Kendrick, P (2001) Pilbara 3 (Hamersley subregion) Subregional description and biodiversity values, dated August 2001. In: "A biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002". Report published by the Department of Conservation and Land Management, Perth, Western Australia.
- Rio Tinto (2013) *Flora and Vegetation Survey for BS1W Brockman and MM Drill Program*. Supporting information for a clearing permit application prepared by Rio Tinto Pty Ltd, dated December 2013.
- 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
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.

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.