Government of **Western Australia**
Department of **Mines and Petroleum**

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5657/1
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 (AML70/4)
Local Government Area: Shire of Ashburton
Colloquial name: Western Turner Syncline Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 28 July 2013

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. Two Beard vegetation associations are located within the application area (GIS Database):

128: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*; and

567: Hummock grasslands, shrub steppe; mulga & kanji over soft spinifex & *Triodia basedowii* (Government of Western Australia, 2013; GIS Database).

A botanical survey conducted by Rio Tinto (2013) during 22 to 27 May 2012, identified eight distinct vegetation communities within three different landforms within the application area:

Slopes
S2: Low woodland of *Acacia aptaneura* with *Grevillea berryana, Acacia pruinocarpa* and *Acacia rhodophloia* over low open shrubland to scattered shrubs of *Eremophila exilifolia* over very open hummock grassland of *Triodia wiseana* with *Triodia epactia*;

S4: Scattered low trees of *Eucalyptus leucophloia* subsp. *leucophloia* over scattered tall shrubs of *Acacia pruinocarpa* over scattered low shrubs of *Acacia marramamba* over hummock grasslands of *Triodia wiseana* and/or *Triodia epactia*;

S5: Low open woodland to scattered low trees of *Eucalyptus leucophloia* subsp. *leucophloia* over open shrubland of *Acacia bivenosa* with *Senna glutinosa* subsp. *glutinosa* over hummock grassland of *Triodia wiseana, Triodia epactia* and/or *Triodia brizoides*; and

S9: Low woodland to low open woodland of *Acacia aptaneura* with tall shrubland of *Acacia aptaneura* over open shrubland of *Eremophila phyllopoda* subsp. *obliqua* and *Eremophila cuneifolia* over very open hummock grassland of *Triodia wiseana*.

Undulating Slopes
U1: Open shrubland to scattered shrubs of *Acacia bivenosa, Acacia ancistrocarpa* and *Acacia exilis* over open hummock grassland of *Triodia wiseana*.

Flats
F2: Tall open shrubland of *Acacia xiphophylla* with *Acacia aptaneura* over scattered shrubs of *Eremophila cuneifolia, Eremophila phyllopoda* subsp. *oblique* and *Maireana planifolia* over very open hummock grassland of *Triodia wiseana*.

Drainage Lines
D2: Low woodland of *Acacia aptaneura* with *Acacia pruinocarpa* over open shrubland of *Eremophila latrobei* subsp. *latrobei*, *Eremophila forrestii* subsp. *forrestii* and *Senna glutinosa* subsp. *glutinosa* over very open hummock grassland of *Triodia epactia* with very open tussock grassland of *Eriachne mucronata* and *Cymbopogon ambiguous*; and

D5: Scattered low trees of *Eucalyptus leucophloia* subsp. *leucophloia* with *Acacia pruinocarpa* over tall open mixed shrubland of *Petalostylis labicheoides, Senna glutinosa* subsp. *glutinosa, Acacia maitlandii, Acacia atkinsiana* and *Acacia citrinoviridis* over open hummock grassland of *Triodia wiseana* or *Triodia epactia*.

Clearing Description

Hamersley Iron Pty Ltd is proposing to clear up to 3.2 hectares of native vegetation within a 27 hectare application area for the Western Turner Syncline Project. The clearing of vegetation is required for the purposes of evaluation and exploration activities.

The vegetation will be cleared using a dozer, using raised blade clearing technique where possible. The vegetation and topsoil will be stockpiled separately for use in rehabilitation.

Vegetation Condition

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

To:

Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

Comment

The application area is located in the Hamersley subregion of Western Australia and is situated approximately 18 kilometres west of the Tom Price town site (GIS Database).

The vegetation condition was assessed during a survey undertaken by botanists from Rio Tinto (2013).

3. Assessment of application against Clearing Principles

Comments

The proposal to clear 3.2 hectares of native vegetation for the purpose of mineral exploration is unlikely to have any significant environmental impacts. The application area occurs within the Hamersley (PIL3) sub-region of the Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). The vegetation types identified within the application area are well represented locally and regionally (GIS Database, Rio Tinto, 2013).

There are no Threatened or Priority flora located within the application area (Rio Tinto, 2013; GIS Database). No Threatened Ecological Communities or Priority Ecological Communities were recorded within the application area (Rio Tinto, 2013; GIS Database). The condition of the vegetation types was classified as 'very good' to 'excellent' (Keighery, 1994).

There are no permanent watercourses mapped within the area under application however there are several ephemeral drainage lines (GIS Database). A survey conducted by Rio Tinto (2013) identified two vegetation types growing in association with these watercourses which are common throughout the local and regional area. 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 any watercourses or wetlands. Potential impacts to riparian vegetation may be minimised through the implementation of a vegetation management condition.

A biological survey conducted by Rio Tinto (2013) did not identify critical feeding or breeding habitat for any conservation significant fauna species as the application area does not contain significant fauna habitat.

The land systems associated with the application area have a low risk of erosion (Van Vreeswyk et al., 2004) 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).

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

Methodology

Keighery (1994)
Rio Tinto (2013)
Van Vreeswyk et al. (2004)
GIS Database:
- DEC Tenure
- Evaporation Isopleths
- Groundwater Salinity
- Hydrography, linear
- IBRA WA (Regions - Sub Regions)
- Mount Lionel 50cm Orthomosaic – Landgate 2004
- 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, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

There is one Native Title Claims over the area under application (GIS Database). The claim WC97/89 was determined by the Federal Court on 1 March 2007. 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 two registered Aboriginal Sites of Significance within the application area (Site IDs: 25399 and 25400) (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 1 July 2013 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received to the proposed clearing.

Methodology

GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims – Determined by the Federal Court

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.

Rio Tinto (2013) Flora and Vegetation Survey of Western Turner Syncline Evaluation Drilling – Section 09 and Section 258, Native Vegetation Clearing Permit Supporting Report. Internal report, January 2013.

Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia, Department of Agriculture, 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.