



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5928/2
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:
18.5		Mechanical Removal	Mineral Exploration

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 23 October 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*.

Rio Tinto (2013) and Eco Logical Australia (Eco Logical) (2013) have both conducted level 1 flora and vegetation surveys over the Brockman 1 area which includes the application area. The surveys identified 12 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.

Eco Logical (2013):

EICdTpTw: *Eucalyptus leucophloia* subsp. *leucophloia* and occasionally *Corymbia deserticola* subsp. *deserticola* scattered low trees over *Triodia pungens* and *Triodia wiseana* hummock grassland occurring on rocky hills, slopes and outcropping;

ChEIAcPIGr: *Corymbia hamersleyana* and *Eucalyptus leucophloia* subsp. *leucophloia* scattered trees over *Acacia citrinoviridis*, *Petalostylis labicheoides* and *Gossypium robinsonii* open shrubland over *Triodia pungens* open hummock grassland occurring on drainage lines dissecting hills and slopes;

ChAaAmAp: *Corymbia hamersleyana* scattered low trees over *Acacia ancistrocarpa*, *Acacia monticola*, *Acacia pruinocarpa* tall open shrubland over *Triodia pungens* mid-dense hummock grassland occurring on low flats and broad drainage lines;

EIChAaTp: *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* scattered low trees over *Acacia aptaneura* open shrubland over *Triodia pungens* hummock grassland occurring on flat plains and low rises;

ChExAcApAb: *Corymbia hamersleyana* and *Eucalyptus xerothermica* scattered low trees (or mallee) over *Acacia citrinoviridis*, *Acacia pyrifolia* and *Acacia bivenosa* open shrubland over *Triodia wiseana* hummock grassland occurring on drainage lines and adjoining flats;

ChEgAiSg: *Corymbia hamersleyana* and *Eucalyptus gamophylla* scattered low trees (or mallee) over *Acacia inaequilatera* and *Senna glutinosa* subsp. *pruinosa* tall scattered shrubs over *Triodia pungens* hummock grassland occurring on plains; and

AxSITpTw: *Acacia xiphophylla* tall open shrubland over *Triodia pungens* and *Triodia wiseana* open hummock grassland occurring on flat plains.

Clearing Description	Brockman 1 Exploration Project. Hamersley Iron Pty Ltd proposes to clear up to 18.5 hectares within a boundary of approximately 145.66 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 Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).
Comment	The vegetation condition was derived from reports prepared by Eco Logical (2013) and 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. A site visit by the assessing officer observed that there were some areas that had been burnt in the previous five years. Clearing permit CPS 5928/1 was granted by the Department of Mines and Petroleum on 30 January 2014 and authorised the clearing of 3.5 hectares within a boundary of 17.5 hectares. Hamersley Iron Pty Ltd has applied to increase the amount of clearing authorised to 18.5 hectares and increase the permit boundary to 145.66 hectares. The increase in area is to facilitate further exploration drilling in the area.

3. Assessment of application against clearing principles

Comments

Hamersley Iron Pty Ltd has applied to increase clearing authorised by 15 hectares and increase the permit boundary by 128.16 hectares.

A flora and vegetation survey of the additional areas recorded a further seven vegetation communities within the permit boundary (Eco Logical, 2013). The condition of the vegetation ranged from 'Pristine' to 'Completely Degraded' with nearly three quarters of the additional area being in 'Pristine' condition (Eco Logical, 2013). Over 90 percent of the additional areas is mapped as the EICdTpTw vegetation community (Eco Logical, 2013). The vegetation communities in the additional area are well represented in the local and regional areas. None of the vegetation communities within the application area have been identified as a Threatened or Priority Ecological Community (Eco Logical, 2013: GIS Database).

The flora survey of the additional areas recorded a total of 79 flora taxa from 21 families and 41 genera (Eco Logical, 2013). No species of Threatened flora have been recorded within the application area (Eco Logical, 2013: GIS Database). The Threatened flora species *Lepidium catapycnon* has been recorded approximately 20 kilometres from the application area, however, it is unlikely to occur within the additional areas as there is a lack of suitable habitat (Eco Logical, 2013; GIS Database).

The Priority 3 flora species *Indigofera* sp. Bungaroo Creek and the Priority 4 flora species *Eremophila magnifica* subsp. *magnifica* were both recorded within the additional areas during the flora survey (Eco Logical, 2013). There was one individual of *Indigofera* sp. Bungaroo Creek recorded within the additional areas (Eco Logical, 2013). The removal of one individual will not have a significant impact on this species. *Indigofera magnifica* subsp. *magnifica* was recorded from six locations within the additional areas and also from one location outside of the application area (Eco Logical, 2013). A total of 98 individuals were recorded during the survey, 61 of which were located within the application area (Eco Logical, 2013). This species was found predominately within the EICdTpTw vegetation community which covers the majority of the additional areas and is common in the local area (Eco Logical, 2013). Rio Tinto has records of this species from 274 locations within 40 kilometres of the additional areas (Eco Logical, 2013). Given the number of records and available habitat in the local area, the potential removal of 61 individuals is not likely to have a significant impact on this species.

The following five broad fauna habitats were identified within the additional area (Eco Logical, 2013):

- Major creeks and rivers;
- Clay plains;
- Stony rises and lower stony hill slopes;
- Rocky hills and ridges; and
- Steep rocky canyons and cliffs.

The 'Stony rises and lower stony hill slopes' habitat covers 80 percent of the additional areas and the 'Rocky hills and ridges' habitat covers approximately 10 percent of the additional areas (Eco Logical, 2013). The 'Steep rocky canyons and cliffs' habitat contains large rocky outcrops and caves which have the potential to support conservation significant fauna species such as Northern Quoll (*Dasyurus hallucatus*), Pilbara Olive Python (*Liasis olivaceus barroni*), Pilbara Leaf-nosed Bat (*Rhinoicteris aurantius*) and Ghost Bat (*Macroderma gigas*). This habitat was searched and no denning habitat for the Northern Quoll was observed (Eco Logical, 2013). The caves within this area are too shallow to create ideal micro-climates for both bat species (Eco Logical, 2013). Pilbara Olive Pythons are usually found in close proximity to water that attracts suitable prey species (Department of the Environment, 2014). No permanent or semi-permanent water sources were identified in close proximity to rocky areas (Eco Logical, 2013). Based on these observations, this habitat is not likely to be critical for these fauna species.

Mounds of the Western Pebble-mound Mouse (*Pseudomys chapmani*) were recorded at ten locations within the additional areas (Eco Logical, 2013). Of the ten mounds found, six were potentially active and the other four were inactive (Eco Logical, 2013). The mounds were located within the 'Stony rises and lower stony hill slopes' habitat which is extensive in the local area (Eco Logical, 2013). The proposed additional clearing is not expected to have a significant impact on the local population of the Western Pebble-mound Mouse.

There are numerous minor ephemeral watercourses within the additional areas (GIS Database). Several of the vegetation communities are associated with drainage lines in the area (Eco Logical, 2013). Minor drainage lines are numerous and widespread in the surrounding area (GIS Database). The proposed clearing of 18.5 hectares for mineral exploration is not expected to have a significant impact on surface water drainage in the local area. The proposed clearing is also not likely to have a significant impact on local surface or groundwater quality.

The additional areas have been mapped as the Boolgeeda, Newman and Platform land systems (GIS Database). These land systems are generally not prone to erosion (Van Vreeswyk et al., 2004). A site visit by the assessing officer on 17 September 2014 did not observe any obvious signs of erosion in previously disturbed areas. The nearest conservation area is Karijini National Park which is located approximately 70 kilometres east of the application area (GIS Database).

The assessment against the clearing principles remains consistent with the assessment in decision report CPS 5928/1.

Methodology Eco Logical (2013)
Van Vreeswyk et al. (2004)
GIS Database:
- DEC Tenure
- Hydrography, linear
- Rangeland Land System Mapping
- 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, 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 18 August 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

- Eco Logical (2013) Brockman Syncline Project Area Biological Surveys. Unpublished report prepared for Rio Tinto, dated August 2013.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- 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
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.

