



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2446/3
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 2 Drilling Program

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 2 January 2015

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description Vegetation within the application area has been mapped as the following Beard vegetation association: (GIS Database):

- **82:** Hummock grasslands, shrub steppe; *Grevillea refracta* & hakea over soft spinifex.

The vegetation within the application area has been subject to several flora and vegetation surveys over the previous years. Botanists from Pilbara Iron conducted a survey over the original permit area in February 2008. A total of 13 vegetation communities were identified within the original permit boundary (Hamersley Iron, 2008).

1) Gorge: *Corymbia hamersleyana*, *C. ferritcola*, *Eucalyptus leucophloia* low open forest over *Acacia pruinocarpa* high open shrubland over *Acacia hamersleyensis*, *Dodonaea pachyneura*, *Senna glutinosa* open shrubland over *Triodia pungens*, *T. wiseana* hummock grassland over *Cymbopogon ambiguus*, *Eriachne mucronata* very open tussock grassland. 'Very Good' condition with no recent fire history.

2) Upperslope: *Eucalyptus leucophloia*, *Corymbia deserticola* low open forest over *Acacia pruinocarpa* tall open shrubland over *Acacia maitlandii*, *Senna glutinosa* open shrubland over *Triodia wiseana* hummock grassland over *Eriachne mucronata*, *Cymbopogon ambiguus* very open tussock grassland. 'Very Good' condition with no recent fire history.

3) Cliff, Breakaway, Upper Slope: *Eucalyptus leucophloia*, *Corymbia deserticola* low open woodland over *Astrotricha hamptonii*, *Acacia hamersleyensis* tall open shrubland over *Senna glutinosa* open shrubland over *Triodia wiseana* open hummock grassland over *Eriachne mucronata* open tussock grassland. 'Very Good' condition with no recent fire history.

4) Very Upper Slope, Crest: *Eucalyptus leucophloia*, *E. gamophila*, *Corymbia deserticola* low open forest over *Acacia pruinocarpa*, *A. pyriformis* tall open shrubland over *Triodia wiseana* open hummock grassland over *Eriachne mucronata* very open tussock grassland. 'Very Good' condition with no recent fire history.

5) Crest, Cliff, Breakaway: *Corymbia deserticola*, *Ficus brachypoda* low open woodland over *Astrotricha hamptonii* scattered tall shrubs over *Senna glutinosa* open shrubland over *Eremophila magnifica* subsp. *magnifica* low open shrubland over *Triodia wiseana* open hummock grassland over *Eriachne mucronata* open tussock grassland. 'Very Good' condition with fire history occurring within the last four years.

6) Steep East Slope: *Eucalyptus leucophloia* low open woodland over *Acacia pruinocarpa* high open shrubland over *Acacia exilis*, *Senna glutinosa* open shrubland over *Triodia wiseana* closed hummock grassland over *Themeda triandra*, *Eriachne mucronata* very open tussock grassland. 'Very Good' condition with no recent fire history.

7) Hilltop, Crest: *Eucalyptus leucophloia*, *Corymbia deserticola* low open woodland over *Acacia pruinocarpa*, *Hakea lorea* high open shrubland over *Acacia pyriformis*, *Senna glutinosa* open shrubland over *Triodia wiseana* hummock grassland. 'Very Good' condition with no fire history.

8) Mid Slope: *Eucalyptus leucophloia*, *Hakea lorea* low woodland over *Acacia pyriformis*, *Senna glutinosa* open

shrubland over *Triodia wiseana* open hummock grassland. 'Very Good' condition with no fire history.

9) Upper Slope, Drainage Line: *Eucalyptus leucophloia*, *E. pilbarensis* low woodland over *Acacia pruinocarpa*, *Hakea lorea* high open shrubland over *Triodia wiseana* open hummock grassland over *Eriachne mucronata* open tussock grassland. 'Very Good' condition with no recent fire history.

10) Very Steep Upper Slope: *Eucalyptus leucophloia* low woodland over *Acacia pruinocarpa* high open shrubland over *Acacia bivenosa*, *Senna glutinosa* shrubland over *Triodia pungens*, *T. basedowii* hummock grassland over *Cymbopogon ambiguus*, *Eriachne mucronata* very open tussock grassland. 'Very Good' condition with no recent fire history.

11) Steep Mid Slope: *Hakea lorea* scattered low trees low woodland over *Acacia bivenosa* open heath over *Triodia basedowii* hummock grassland over *Cymbopogon ambiguus*, *Eriachne mucronata* very open tussock grassland over *Lepidium pedicellosum* very open herbs. 'Very Good' condition with no recent fire history.

12) Lower Gully: *Corymbia ferritcola*, *Eucalyptus leucophloia* low open woodland over *Acacia pruinocarpa* high open shrubland over *Acacia bivenosa*, *A. exilis*, *Senna glutinosa* open shrubland over *Triodia pungens* hummock grassland over *Themeda triandra*, *Cymbopogon ambiguus* open tussock grassland

13) Mid Slope: *Eucalyptus leucophloia*, *E. gamophylla*, *Corymbia hamersleyana* low woodland over *Acacia monticola* open scrub over *Triodia wiseana* open hummock grassland over *Eriachne mucronata*, *Cymbopogon ambiguus* open tussock grassland.

Astron Environmental Services (Astron) conducted a flora and vegetation survey over the additional areas from 25 June to 4 July 2014. The survey identified the following vegetation associations within the additional area (Astron, 2014):

PI01: *Eucalyptus leucophloia* low open woodland over *Acacia exilis* and *Acacia sibirica* scattered tall shrubs to tall open shrubland over *Triodia wiseana* hummock grassland;

md01: *Corymbia hamersleyana* scattered low trees to low open woodland over *Acacia monticola* (*Grevillea wickhamii* subsp. *hispidula*) tall shrubland over *Triodia wiseana*, *T. epactia* hummock grassland;

GG01: *Corymbia ferritcola* low open woodland over *Acacia pruinocarpa* scattered tall shrubs to tall open shrubland over *Triodia epactia* very open hummock grassland and *Cymbopogon ambiguus*, *Aristida burbidgeae* scattered tussock grasses;

GG02: *Eucalyptus leucophloia* low open woodland over *Indigofera monophylla* scattered low shrubs over *Triodia epactia* very open hummock grassland and *Cymbopogon ambiguus* scattered tussock grasses;

Br01: *Eucalyptus leucophloia* scattered trees to low open woodland over, *Senna glutinosa* subsp. *glutinosa*, *Acacia bivenosa* and/ or *A. synchronicia* scattered shrubs over *Triodia epactia* open hummock grassland;

HS01: *Eucalyptus leucophloia* and/ or *Corymbia deserticola* subsp. *deserticola* low open woodland over *Triodia wiseana*, *T. epactia* open hummock grassland; and

HS02: *Eucalyptus gamophylla* low open woodland over *Acacia maitlandii* scattered shrubs to open shrubland over *Triodia wiseana* open hummock grassland.

Clearing Description

Brockman 2 Drilling Program.
Hamersley Iron Pty Ltd proposes to clear up to 48 hectares of native vegetation within a boundary of approximately 298.8 hectares for the purpose of mineral exploration. The project area is located approximately 50 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 condition of vegetation within the application area has been assessed based on the flora and vegetation assessments by Pilbara Iron (2008) and Astron (2014). The vegetation conditions used by Astron (2014) were described using a scale based on Trudgen (1988) and have been converted to the corresponding conditions from the Keighery (1994) scale.

Clearing permit CPS 2446/1 was granted by the Department of Industry and Resources (now the Department of Mines and Petroleum) on 28 August 2008 and authorised the clearing of up to 27.8 hectares of native vegetation within an area totalling approximately 154 hectares. CPS 2446/1 was amended on 11 March 2010 to extend the timeframe for rehabilitation from 6 months to 12 months following clearing. Hamersley Iron Pty Ltd has applied to amend CPS 2446/2 to increase the amount of clearing authorised to 48 hectares and increase the permit boundary from 153.6 hectares to 298.8 hectares. They have also requested the permit expiry date is extend to 31 July 2020.

3. Assessment of application against clearing principles

Comments

Hamersley Iron Pty Ltd has applied to increase the amount of clearing authorised by 20.2 hectares and increase the permit boundary by approximately 145.2 hectares. They have also applied to extend the permit duration by a further 5 years.

There have been seven vegetation associations mapped within the additional area (Astron, 2014). The majority of the vegetation was in 'pristine' condition with some areas in the north in 'completely degraded' condition due to historical test pitting (Astron, 2014). A fire has passed through some parts of the additional area within the previous 5-10 years, however none of the steep sided gorges and gully areas have been affected by fire (Astron, 2014). None of the vegetation associations within the additional area are considered a Threatened or Priority Ecological Community (Astron, 2014; GIS Database). The vegetation associations within the additional area are considered widespread and well represented in the broader region (Astron, 2014).

The flora survey of the additional area recorded a total of 144 flora taxa from 36 families and 73 genera (Astron, 2014). The suite of flora recorded was considered typical of the Hamersley Ranges (Astron, 2014). No Threatened flora species have been recorded within the additional area (Astron, 2014; GIS Database). The Threatened flora species *Lepidium catapycnon* has been recorded within 11 kilometres of the additional area and suitable habitat for this species is present throughout the area (Astron, 2014; DPaW, 2014). Suitable habitat was systematically searched however, this species was not recorded (Astron, 2014).

The following five Priority flora species were recorded during the flora survey of the additional area; *Hibiscus* sp. Mt Brockman (Priority 1), *Sida* sp. Hamersley Range (Priority 1), *Hibiscus* sp. Gurinbiddy Range (Priority 2), *Sida* sp. Barlee Range (Priority 3) and *Acacia bromilowiana* (Priority 4) (Astron, 2014). *Hibiscus* sp. Mt Brockman and *Sida* sp. Hamersley Range were both recorded from two locations within the additional area (Astron, 2014). Both were recorded from a steep rocky slope in the south-east corner of the additional area (Astron, 2014). *Hibiscus* sp. Mt Brockman was also recorded from one location in the original permit boundary however, this plant has since been cleared for the expansion of a waste dump (Pilbara Iron, 2008; Rio Tinto, 2012). Both species have only been found in the Hamersley Range area and have less than ten records lodged with the Western Australian Herbarium (2014). *Hibiscus* sp. Gurinbiddy Range is only known from three records at the Western Australian Herbarium (2014). A single plant was recorded within the additional area (Astron, 2014). Potential impacts to these three species may be minimised by the implementation of a flora management condition. *Acacia bromilowiana* was the dominant shrub recorded from a low hill in the east of the additional areas (Astron, 2014). *Sida* sp. Barlee Range was recorded from numerous locations within deep gullies and exposed ironstone ledges within the additional areas (Astron, 2014). The total abundance was estimated at 442 individuals (Astron, 2014). These two species have been more widely recorded and suitable habitat is available in the local region (Astron, 2014; DPaW, 2014). The proposed clearing is not expected to have a significant impact on *Acacia bromilowiana* and *Sida* sp. Barlee Range.

The following five broad fauna habitats have been mapped within the additional areas (Astron, 2014); stony plains, minor drainage lines, gorge/gully, breakaways, and hill crests and slopes. The majority of the application area is comprised of the 'hill crest and slopes' habitat (Astron, 2014). The 'gorge/gully' habitat has the potential to be significant habitat due to the numerous caves that are present. Caves within the additional area were searched but none of the caves visited appeared to have favourable characteristics or typical signs of activity for conservation significant bat species (Astron, 2014). However, there were numerous potential cave openings that were not visited so there is the potential for roosting caves to be present within the additional area (Astron, 2014). The majority of the *Sida* sp. Barlee Range was also recorded within this habitat. The remaining habitats are considered to be common and widespread in the bioregion.

There are numerous minor drainage lines within the additional areas (GIS Database). Small pools of water were observed within minor drainage lines during the survey however, these will only remain for short periods following rainfall (Astron, 2014). The vegetation association md01 is associated with minor drainage lines in the additional areas (Astron, 2014). Many of the drainage lines in the additional area are within the 'gorge/gully' fauna habitat (Astron, 2014). The additional clearing is not likely to significantly impact the quality or quantity of surface and groundwater in the local area.

Potential impacts to fauna, Priority flora and riparian vegetation may be minimised by the implementation of a vegetation management condition over the 'gorge/gully' habitat.

The additional areas are comprised of the Newman land system (GIS Database). The Newman land system is not prone to erosion (Van Vreeswyk et al., 2004).

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

Methodology Astron (2014)
DPaW (2014)
Pilbara Iron (2008)
Rio Tinto (2012)
Van Vreeswyk et al. (2004)
Western Australian Herbarium (2014)
GIS Database:
- Hydrography, linear
- Rangeland Land System Mapping
- Threatened and Priority Flora

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

Comments

There is one native title claim (WC1997/089) over the application area (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 numerous 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 13 October 2014 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 - Determined by the Federal Court

4. References

- Astron (2014) Brockman 2 AR-14-12192 & Silvergrass AR-13-11938 NVCP Level Biological Assessment. Unpublished report for Rio Tinto Iron Ore, dated June 2014.
- DPaW (2014) NatureMap: Mapping Western Australia's Biodiversity - Department of Parks and Wildlife. <http://naturemap.dec.wa.gov.au/default.aspx> (Accessed 3 November 2014).
- Hamersley Iron (2008). Application for a Clearing Permit (Purpose Permit) to clear Native Vegetation for: Pit 6 Extension Drilling Program at Brockman (AML 70/4), Documentation Accompanying Clearing Permit Application for CPS 2446/1, Prepared by Hamersley Iron Pty Ltd, January 2008.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Pilbara Iron (2008). Botanical Survey Work for Brockman 2 Pit 6 Expansion AR-07-02616A, Prepared by Pilbara Iron Pty Ltd, Prepared for Hamersley Iron Pty Ltd, February 2008.
- Rio Tinto (2012) Annual Clearing Report for the period 1 July 2011 to 30 June 2012.
- Trudgen, M.E. (1998) A Report on 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 & Hennig, P. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia, Department of Agriculture, Western Australia.
- Western Australian Herbarium (2014) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <<http://florabase.dpaw.wa.gov.au/>> Accessed 30 October 2014.

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.