



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4549/2
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 4 Drilling Program

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 10 July 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 for the whole of Western Australia and are useful to look at vegetation in a regional context. One Beard vegetation association has been mapped within the application area:

Beard vegetation association 82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana* (GIS Database).

Hamersley Iron Pty Ltd (2011) identified 37 vegetation communities in the application area within seven vegetation types, using a primary vegetation survey of the CPS 4549/1 permit area by Biota (2005a) and supporting flora surveys by Biota (2007; 2009). Hamersley Iron Pty Ltd (2011) described the vegetation communities of the CPS 4549/1 permit area as follows:

Creepline:

1. AmoAmAaTeTw – *Acacia monticola*, *A. maitlandii*, *A. atkinsiana* tall open shrubland over *Triodia epactia*, *T. wiseana* open hummock grassland; and
2. ExAciAbTe – *Eucalyptus xerothermica* scattered trees to open woodland over *Acacia citrinoviridis*, *A. bivenosa* (tall) shrubs to closed shrubland over *Triodia epactia* very open hummock grassland to open hummock grassland.

Drainage:

1. PITe – *Petalostylis labicheoides* shrubland over *Triodia epactia* hummock grassland;
2. C11 – *Acacia citrinoviridis*, *A. ancistrocarpa* tall open shrubland to tall closed scrub over *Triodia epactia* mid-dense hummock grassland;
3. C12 – *Acacia monticola*, *A. maitlandii*, *A. atkinsiana* tall open shrubland over *Triodia epactia*, *T. wiseana*, mid-dense to open hummock grassland;
4. C14 – *Eucalyptus leucophloia* low woodland over *Acacia citrinoviridis*, *A. monticola*, *Dodonaea pachyneura* tall shrubland over *Triodia epactia* mid-dense hummock grassland;
5. C16 – *Corymbia hamersleyana* scattered low trees over *Acacia bivenosa*, *Petalostylis labicheoides* shrubland over *Triodia epactia* hummock grassland;
6. C20 – *Acacia* aff. *aneura* low open forest over *Acacia citrinoviridis* tall open shrubland over *Triodia epactia* open hummock grassland; and
7. C21 – *Petalostylis labicheoides* shrubland over *Triodia epactia* mid-dense hummock grassland.

Hills and Slopes:

1. AanEITe – *Acacia aneura*, *Eucalyptus leucophloia* subsp. *leucophloia* low open forest over *Triodia epactia* hummock grassland.

Hills, Slopes and Mesa:

1. AanGbcFte – *Acacia aneura*, *Grevillea berryana*, *Corymbia ferritcola* low open forest over *Triodia epactia* hummock grassland; and
2. AprTe – *Acacia pruinocarpa* open shrubland over *Triodia epactia* hummock grassland.

Plains:

1. AsyTloTa – *Acacia synchronicia* open shrubland over *Triodia longiceps*, *T. angusta* open hummock grassland;
2. AxTeTlo – *Acacia xiphophylla* tall open shrubland over *Triodia epactia*, *T. longiceps* hummock grassland;
3. ElAexTbr – *Eucalyptus leucophloia* subsp. *leucophloia* scattered trees over *Triodia longiceps*; *T. angusta*, *T. brizoides* hummock grassland;
4. ElTloTaTbr – *Eucalyptus leucophloia* subsp. *leucophloia* scattered trees over *Triodia longiceps*, *T. angusta*, *T. brizoides* hummock grassland;
5. P11 – *Acacia synchronicia* scattered shrubs over *Triodia angusta* mid-dense hummock grassland;
6. P12 – *Acacia synchronicia*, *A. bivenosa*, *Cassia pruinosa*, *C. luerssenii* mixed shrubland over *Triodia brizoides* closed hummock grassland;
7. P15 – *Acacia bivenosa*, *A. exilis*, *A. ancistrocarpa* open shrubland over *Triodia wiseana* mid-dense hummock grassland;
8. P2 – *Acacia ayersiana* low open forest/woodland over *Eremophila forrestii* open shrubland over *Triodia epactia*, *T. wiseana* hummock grassland;
9. P3 – *Eucalyptus leucophloia* scattered low trees over *Acacia aneura* (various forms), *A. ayersiana* tall open shrubland over *Triodia epactia*, *T. wiseana* mid-dense hummock grassland;
10. P4 – *Acacia xiphophylla*, *A. aneura* low woodland to tall open shrubland over *Eremophila cuneifolia*, *Rhagodia eremaea* low open shrubland over *Triodia wiseana* open to mid-dense hummock grassland;
11. P5 – *Acacia xiphophylla*, *A. aff. aneura* tall shrubland over *Triodia brizoides*, *T. epactia* open hummock grassland;
12. P6 – *Corymbia deserticola* scattered low trees over *Acacia atkinsiana*, *A. exilis* tall open shrubland over *Triodia wiseana* closed hummock grassland;

Stony Hills:

1. ElTw – *Eucalyptus leucophloia* scattered low trees over *Triodia wiseana* hummock grassland;
2. ElTwTm – *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Triodia wiseana*, *T. melvillei* hummock grassland;
3. H10 – *Eucalyptus leucophloia* low open woodland over *Acacia bivenosa* open shrubland over *Triodia brizoides*, *T. epactia* hummock grassland and *Themeda* sp. Mt. Barricade, *Cymbopogon ambiguus* open tussock grassland;
4. H12 – *Eucalyptus leucophloia* low open woodland over *Acacia hamersleyensis* open shrubland over *Triodia brizoides*, *T. epactia* mid-dense hummock grassland and *Themeda triandra*, *Eriachne mucronata* open tussock grassland;
5. H14 – *Eucalyptus leucophloia* scattered low trees over *Triodia wiseana* mid-dense hummock grassland;
6. H15 – *Eucalyptus leucophloia* scattered low trees over *Triodia epactia* mid-dense hummock grassland;
7. H16 – *Eucalyptus leucophloia* scattered low trees to low open woodland over *Astrotricha hamptonii*, *Ficus brachypoda* scattered tall shrubs over *Themeda* sp. Mt Barricade, *Eriachne mucronata* open tussock grassland;
8. H2 – *Eucalyptus leucophloia* scattered low trees over *Acacia atkinsiana* open shrubland over *Triodia wiseana* mid-dense hummock grassland;
9. H3 – *Eucalyptus leucophloia* scattered low trees over *Acacia maitlandii* shrubland to open heath over *Triodia wiseana* mid-dense hummock grassland;
10. H4 – *Acacia hamersleyensis* tall open shrubland over *Triodia wiseana* closed hummock grassland;
11. H8 – *Acacia ancistrocarpa* open heath to tall open shrubland over *Triodia wiseana* mid-dense to closed hummock grassland; and
12. H9 – *Eucalyptus leucophloia* scattered low trees over *Acacia inaequilatera* tall shrubland over *Triodia wiseana* mid-dense hummock grassland.

Stony Plains:

1. ElAanAayTeTw – *Eucalyptus leucophloia* scattered low trees over *Acacia aneura*, *A. ayersiana* tall open shrubland over *Triodia epactia*, *T. wiseana* hummock grassland.

A flora and vegetation of the additional areas was undertaken by Eco Logical on 19 July 2013. This survey identified the following four vegetation communities within the additional areas (Eco Logical, 2013):

- ElGrTp - *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Gossypium robinsonii* scattered tall shrubs over *Triodia pungens* very open hummock grassland occurring on drainage lines dissecting rocky hills;

- ChElTwTp - *Corymbia hamersleyana* and *Eucalyptus leucophloia* subsp. *leucophloia* low scattered trees over *Triodia wiseana* and *Triodia pungens* hummock grassland occurring on rocky hills and lower slopes;

- AbAsHI - *Acacia bivenosa*, *Acacia sibirica* and *Hakea lorea* open shrubland over *Eremophila forrestii* subsp. *forrestii* and *Ptilotus obovatus* very open shrubland over *Triodia pungens* hummock grassland; and

- ElAcApAb - *Eucalyptus leucophloia* subsp. *leucophloia* low scattered trees over *Acacia citrinoviridis*, *Acacia pruinocarpa* and *Acacia bivenosa* open shrubland over *Triodia pungens* hummock grassland occurring on drainage lines.

Clearing Description

Brockman 4 Drilling Program.

Hamersley Iron Pty Ltd proposes to clear up to 30 hectares of native vegetation within a boundary of approximately 219.5 hectares for the purpose of mineral exploration. The project area is located approximately 60 kilometres west of Tom Price within the Shire of Ashburton.

Vegetation Condition

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

To:

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Comment

The vegetation will be cleared using a blade down technique where practicable or scrub rake in level terrain. The vegetation and topsoil will be stockpiled separately for use in rehabilitation.

The vegetation condition was derived from a vegetation survey conducted by Biota (2005; 2007; 2009).

Clearing permit CPS 4549/1 was granted by the Department of Mines and Petroleum on 13 October 2011. Hamersley Iron Pty Ltd has applied to increase the amount of clearing authorised from 19.4 hectares to 30 hectares and increase the permit boundary from 157.6 hectares to 219.5 hectares. They have also requested that the permit duration is extended by a further five years. This amendment is to allow further exploration drilling in the area.

3. Assessment of application against clearing principles

Comments

Hamersley Iron Pty Ltd has applied to increase the amount of clearing authorised by 10.6 hectares and increase the permit boundary by a further 61.9 hectares.

A flora survey over the additional area identified four vegetation communities. None of these communities were identified as being a Threatened or Priority Ecological Community (Eco Logical, 2013; GIS Database). The vegetation communities are typical of the local region.

The condition of the vegetation in the additional areas ranges from 'very good' to 'completely degraded' with the greatest proportion being in 'good' condition (Eco Logical, 2013). There are parts of the additional areas that have been previously cleared for exploration activities, with some of these areas having undergone rehabilitation works.

No species of Threatened or Priority Flora have been recorded within the additional areas (Eco Logical, 2013; GIS Database). No weed species were recorded during the survey of the additional areas (Eco Logical, 2013).

The following three broad fauna habitats have been identified within the additional areas; stony plains and rises, rocky hills and ridges and steep rocky canyons and cliffs (Eco Logical, 2013). The majority of the additional areas is comprised of the stony plains and rises habitat. The steep rocky canyons and cliffs habitat is significant as it has the potential to provide critical habitat for the Northern Quoll (*Dasyurus hallucatus*), Pilbara Olive Python (*Liasis olivaceus* subsp. *barroni*), Pilbara Leaf-nosed Bat (*Rhinonictes aurantius*) and Ghost Bat (*Macroderma gigas*). This habitat was inspected and no areas were identified that would be suitable denning sites for Northern Quoll (Eco Logical, 2013). The caves that are present within the habitat are too shallow to create ideal micro climates for the Ghost and Pilbara Leaf-nosed Bats (Eco Logical, 2013). Potential breeding and foraging habitat for Pilbara Olive Python was considered to be marginal as there were no suitable gorges and outcrops located near permanent or semi-permanent water sources (Eco Logical, 2013).

There were two inactive Western Pebble-mound Mouse mounds recorded within the additional area (Eco Logical, 2013). Large areas of suitable habitat for this species are present within the local area and the proposed clearing is not likely to significantly impact this species.

There are a number of additional minor ephemeral watercourses within the additional areas (GIS Database). The proposed clearing is not likely to have a significant impact on surface or ground water quality in the local area. The land systems within the additional areas are generally not susceptible to erosion (Van Vreeswyk et al., 2004; 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

Eco Logical (2013)
 Van Vreeswyk et al. (2004)
 GIS Database:
 - 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 are two native title claims (WC2001/005; 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 two 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 12 May 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 – Registered with the NNTT
- Native Title Claims – Determined by the the Federal Court

4. References

- Biota (2005) Brockman 4 Vegetation and Flora Survey. Unpublished report prepared for Hamersley Iron.
- Biota (2007) A Vegetation and Flora Survey of the White Quartz Road Corridor near Tom Price. Unpublished report prepared for Pilbara Iron.
- Biota (2009) A Vegetation and Flora Survey of Beasley River. Unpublished report prepared for RioTinto Iron Ore.
- Eco Logical (2013) Brockman Syncline Project Area Biological Surveys - Brockman 4 East (AR-13-11385). Unpublished report for Rio Tinto Iron Ore Pty Ltd, dated August 2013.
- Hamersley Iron Pty Ltd (2011) Statement Addressing the 10 Clearing Principles. Brockman 4 Resource and Hydro Drilling. Unpublished report, December 2010.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- 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.

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.