



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2444/4
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 Syncline 4 Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 21 August 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. The following Beard vegetation associations have been mapped within the application area (GIS Database):

Beard Vegetation Association 82: hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*; and

Beard Vegetation Association 567: Hummock grasslands, shrub steppe; mulga and Kanji over soft Spinifex and *Triodia basedowii* (GIS Database).

The application area was surveyed by Biota Environmental Sciences in 2004 and Pilbara Iron Staff in 2007 (Hamersley Iron, 2008). The following vegetation types were identified within the application area:

Vegetation of Stony Hills:

H2: *Eucalyptus leucophloia* scattered low trees over *Acacia atkinsiana* open shrubland over *Triodia wiseana* mid-dense hummock grassland. Other associated species include *Acacia aneura*, *Senna glutinosa*, *Hakea chordophylla*, *Paraneurachne muelleri*, *Paspalidium clementii*, *Ptilotus calostachyus* var. *calostachyus* and *Solanum lasiophyllum*;

H3: *Eucalyptus leucophloia* scattered low trees over *Acacia maitlandii* shrubland to open heath over *Triodia wiseana* mid-dense hummock grassland. Other associated species include *Acacia atkinsiana*, *Acacia hamersleyensis*, *Dampiera candicans*, *Eriachne mucronata*, *Indigofera monophylla*, *Keraudrenia nephrosperma* and *Triodia epactia*;

H8: *Acacia ancistrocarpa* open heath to tall open shrubland over *Triodia wiseana* mid-dense to closed hummock grassland. Other associated species include *A. bivenosa*, *A. marramamba*, *A. pruinocarpa*, *A. synchronicia*, *Senna pruinosa*, *Indigofera monophylla*, and *Ptilotus calostachyus* var. *calostachyus*;

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. Other associated species include *Acacia pyrifolia*, *Eriachne tenuiculmis*, *Gossypium robinsonii*, *Indigofera monophylla*, *Petalostylis labicheoides* and *Triodia wiseana*;

H14: *Eucalyptus leucophloia* scattered low trees over *Triodia wiseana* mid-dense hummock grassland. Other associated species include *Acacia pruinocarpa*, *Hakea chordophylla* and *Solanum lasiophyllum*; and

H15: *Eucalyptus leucophloia* scattered low trees over *Triodia epactia* mid-dense hummock grassland. Other associated species include *Acacia pruinocarpa*, *Goodenia stobbsiana*, *Indigofera monophylla* and *Ptilotus calostachyus* var. *calostachyus*.

Vegetation of Plains:

P1: *Acacia aff aneura* (narrow fine veined), *A. ayersiana*, *A. tetragonophylla* tall shrubland over *Eremophila forrestii*, *Acacia bivenosa* shrubland over *Triodia epactia* mid-dense hummock grassland. Other associated species include *A. synchronicia*, *Corymbia hamersleyana* and *Petalostylis labicheoides*;

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. Three forms of mulga were present as dominants in the over storey strata - *Acacia aff. aneura* (narrow fine veined), *A. aff aneura* (scythe shaped) and *A. aneura* var. *longicarpa*. Other associated species include *A. bivenosa*, *A. stowardii*, *A. synchronicia*, *Ptilotus exaltatus* var. *exaltatus* and *P. polystachyus* var. *polystachyus*;

P4: *Acacia xiphophylla*, *A. aneura* (flat curved) low woodland to tall open shrubland over *Eremophila cuneifolia*, *Rhagodia eremaea* low open shrubland over *Triodia wiseana* open to mid-dense hummock grassland. Other associated species include *A. bivenosa*, *A. synchronicia*, *Senna oligophylla*, *Senna stricta*, *Enchylaena tomentosa*, *Maireana georgei*, *Ptilotus obovatus* var. *obovatus*, *Salsola tragus* and *Solanum lasiophyllum*;

P5: *Acacia xiphophylla*, *A. aff aneura* (narrow fine veined) tall shrubland over *Triodia brizoides*, *T. epactia* open hummock grassland. Other associated species include *A. synchronicia*, *Senna stricta*, *Eucalyptus leucophloia* ssp. *leucophloia*, *Ptilotus schwartzii* and *Triodia longiceps*;

P11: *Acacia synchronicia* scattered shrubs over mid-dense hummock grassland. Other associated species include *A. bivenosa*, *Eucalyptus socialis*, *Maireana georgei*, *Pluchea dentex*, *Triodia brizoides* and *T. Longiceps*;

P12: *Acacia synchronicia*, *A. bivenosa*, *Senna pruinosa*, *S. luerksenii* mixed shrubland over *Triodia brizoides* closed hummock grassland. Other associated species include *A. exilis*, *S. oligophylla*, *Solanum lasiophyllum*, *Triodia epactia* and *T. Longiceps*; and

P15: *Acacia bivenosa*, *A. exilis*, *A. ancistrocarpa* tall open shrubland over *Triodia wiseana* mid-dense hummock grassland. Other associated species include *Petalostylis labicheoides*.

Vegetation of Drainage Areas:

C11: *Acacia citrinoviridis*, *A. ancistrocarpa* tall open shrubland to tall closed scrub over *Triodia epactia* mid-dense hummock grassland. Other associated species include *A. bivenosa*, *A. maitlandii*, *A. synchronicia*, *Bidens bipinnata* (weed), *Senna oligophylla*, *Eriachne tenuiculmis*, *Ptilotus obovatus* var. *obovatus* and *Scaevola spinescens*;

C12: *Acacia monticola*, *A. maitlandii*, *A. atkinsiana* tall open shrubland over *Triodia epactia*, *T. wiseana* mid-dense to open hummock grassland. Other associated species include *A. bivenosa*, *A. citrinoviridis*, *Gossypium robinsonii*, *Grevillea wickhamii* ssp. *hispidula*, *Petalostylis labicheoides*, *Porana commixta*, *Rulingia luteifolia* and *Themeda triandra*; and

C16: *Corymbia hamersleyana* scattered low trees over *Acacia bivenosa*, *Petalostylis labicheoides* shrubland over *Triodia epactia* hummock grassland. Other associated species include *A. tetragonophylla*, *Amaranthus pallidiflorus*, *Eriachne mucronata*, *E. tenuiculmis*, *Rhagodia eremaea* and *Santalum lanceolatum*.

A biological survey of the amendment area (amendment application CPS 2444/3) conducted by Biota (2005) and Pilbara Iron (2007) identified five additional vegetation units within the amended areas:

HG3: *Eucalyptus leucophloia* low open woodland over *Acacia bivenosa* open shrubland over *Triodia brizoides*, *T. epactia* hummock grassland and *Themeda* sp. Mt barricade, *Cymbopogon ambiguous* open tussock grassland;

CD4: *Eucalyptus victrix* scattered low trees to open woodland over *Goodenia lamprosperma*, *Pluchea dentex* very open herbland;

CD6: *Eucalyptus xerothermica* low open woodland over *Acacia citrinoviridis* tall open scrub over *Triodia epactia* open hummock grassland and/or mixed tussock grassland;

PS6: *Eucalyptus leucophloia* (*E. gamophylla*, *Corymbia deserticola*, *C. hamersleyana*) scattered low trees over *Acacia atkinsiana*, *A. exilis*, *A. bivenosa*, *A. ancistrocarpa*, *Senna* spp. Shrubland over *Triodia epactia* and/or *T. wiseana* hummock grassland;

PL2: *Eucalyptus socialis* and/or *E. leucophloia* low open woodland over *Acacia bivenosa*, *A. exilis* scattered shrubs over *Triodia wiseana*, *T. angusta* hummock grassland; and

Disturbed.

Clearing Description	Brockman Syncline 4 Project. Hamersley Iron Pty Ltd proposes to clear up to 76 hectares of native vegetation within a total boundary of approximately 470 hectares, for the purposes of mineral exploration. The project is located approximately 60 kilometres west of Tom Price, in the Shire of Ashburton.
Vegetation Condition	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994); To: Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).
Comment	Vegetation clearing will be undertaken by mechanical means and the vegetation and topsoil will be stockpiled for use in rehabilitation (Hamersley Iron, 2013). Clearing permit CPS 2444/3 was granted by the Department of Mines and Petroleum on 21 July 2011. On 17 April 2014, Hamersley Iron Pty Ltd applied to amend CPS 2444/3 for the purpose of increasing the clearing area from 58.68 hectares to 76 hectares and increasing the permit boundary from 410 to 470 hectares. The applicant also requested to extend the duration of the permit from 31 March 2016 to 31 March 2021. An additional 5 years has been added to the permit end date to allow for rehabilitation.

3. Assessment of application against Clearing Principles

Comments

Hamersley Iron Pty Ltd (Hamersley Iron) has applied to increase the area permitted to clear from 58.68 hectares to 76 hectares and the permit boundary from 410 hectares to 470 hectares. The duration of the permit was also extended from 31 March 2016 to 31 July 2026.

A biological survey of the amendment area conducted by Biota (2005) and Pilbara Iron (2007) identified an additional five vegetation communities occurring within the extended permit boundary. None of these vegetation communities are considered to be of higher diversity than those assessed within clearing permit decision report CPS 2444/3 and the vegetation types are not considered to be a remnant locally or regionally. No vegetation communities recorded are considered to be Threatened or Priority Ecological Communities (GIS Database).

There was one population of 100 individuals and another population of one individual of *Ptilotus subspinescens* (Priority 3) identified within the extended permit boundary. This species generally occurs in close association to vegetation type P11 which has been included in an exclusion zone within the application area; however these populations were identified within the vegetation type P4. The proposed clearing of the two populations of *Ptilotus subspinescens* is unlikely to impact the conservation significance of this species (Hamersley Iron, 2014).

Therefore, the proposed clearing may be at variance to Principles (a), is not likely to be at variance to Principles (c) and (d), and is not at variance to Principle (e).

There are three fauna habitats present within the application area; hillslopes, drainage and plains, which are consistent with those assessed in clearing permit decision report CPS 2444/3. Therefore, the proposed clearing is not likely to be at variance to Principle (b).

Vegetation mapping provided by Hamersley Iron (2014) identified two vegetation communities (CD4 and CD6) associated with the watercourse within the extended permit boundary. The clearing of established trees, shrubs and grasslands along the river banks could cause erosion. 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 these vegetation units. Potential impacts to riparian vegetation may be minimised through the implementation of a vegetation management condition. Therefore, the proposed clearing is at variance to Principle (f).

Current environmental information has been reviewed and the assessment of clearing principles (g), (h), (i) and (j) is consistent with the assessment in clearing permit decision report CPS 2444/3.

Methodology	Hamersley Iron (2014) GIS Database: - DEC Tenure - Evaporation Isopleths - Groundwater Salinity - Hydrography, linear - IBRA WA (Regions - Sub Regions) - Pre-European Vegetation - Public Drinking Water Source Areas - Rangeland Land System Mapping - Rainfall, Mean Annual - Threatened and Priority Flora - Threatened Ecological Sites Buffered
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Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

There is one Native Title claim over the area under application (GIS Database). The claim WC2001/005 has been registered with the National Native Title Tribunal on behalf of the claimant group. 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*.

There are several 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 amendment application was advertised on 19 May 2014 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the application.

Methodology

GIS Database:

- Aboriginal Sites of Significance
- Native Title Claims - Registered with the NNTT
- Native Title Claims - Filed at the Federal Court
- Native Title Claims - Determined by the Federal Court

4. References

- Biota Environmental Sciences (Biota) (2005) *A Vegetation and Flora Survey of the Brockman Syncline 4 Project Area near Tom Price*. Unpublished report prepared for Hamersley Iron Pty Ltd, July 2005.
- Hamersley Iron Pty Ltd (Hamersley Iron) (2013) *Statement Addressing the 10 Clearing Principles – Tails Dump Extension at Tom Price*. Unpublished Report, May 2013. Rio Tinto, Western Australia.
- Hamersley Iron Pty Ltd (Hamersley Iron) (2014) *Further information regarding CPS 2444/4*, Internal Document, July 2013. Rio Tinto, Western Australia.
- 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 (2007) *Botanical Survey Work for the BS4 – Marra Mamba South – Resource Drilling 2007 GD_06_01705 (Over ML) and GD_06_01706 (Over EL)*. Internal Document, prepared for Hamersley Iron Pty Ltd.

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.