

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.:

5795/2

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)

Iron Ore (Hamersley Range) Agreement Act 1963, General Purpose Lease 3SA (AG 70/3)

Miscellaneous Licence 47/209 Miscellaneous Licence 47/136 Exploration Licence 47/1789

Local Government Area:

Shire of East Pilbara

Colloquial name:

Tom Price Mine

1.4. Application

Clearing Area (ha)

No. Trees

Method of Clearing

For the purpose of:

824

Mechanical Removal

Mineral Production, Mineral Exploration and Associated

Activities

1.5. Decision on application

Decision on Permit Application:

Decision Date:

27 February 2014

2. Background

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Grant

Vegetation Description

Beard vegetation associations have been mapped for the whole of Western Australia. Three Beard vegetation associations have been mapped within the application area:

82: Hummock grasslands, low tree steppe; snappy gum over Triodia wiseana;

162: Shrublands; snakewood scrub; and

567: Hummock grasslands, shrub steppe; mulga and kanji over soft spinifex and *Triodia basedowii* (GIS Database).

Botanists from ENV Australia Pty Ltd (ENV) conducted a flora, vegetation and fauna assessment survey over the application area in August 2011. A separate Priority Flora survey was undertaken in October 2011. A level 2 targeted fauna survey was undertaken in late November/ early December 2011. The flora, vegetation and fauna assessment included a review and summary of numerous previous flora and vegetation surveys. Forty vegetation associations were identified across six major landforms over the survey area (ENV, 2013):

Hill Tops

H1 - EgEkAhPITwERm: Eucalyptus gamophylla, E. kingsmillii subsp. kingsmillii and E. repullulans open tree mallee over Acacia hamersleyensis and Petalostylis labicheoides high open shrubland over Triodia wiseana open hummock grassland over Eriachne mucronata very open tussock grassland on skeletal red-brown silty clay loam on high rocky hill tops.

H2 - EIAp(s)Tw: Eucalyptus leucophloia subsp. Leucophloia and Acacia pruinocarpa low woodland over mixed Acacia spp. open scrub over Triodia wiseana closed hummock grassland on hill tops.

H3 - ElAbAmTw: Eucalyptus leucophloia subsp. Leucophloia low open woodland over Acacia bivenosa and A. maitlandii high shrubland over Triodia wiseana very open hummock grassland on red-brown sandy loam on hill tops and upper slopes.

H4 - ChEkEgAhTb: Corymbia hamersleyana, Eucalyptus kingsmillii subsp. kingsmillii and E. gamophylla very open mallee over Acacia hamersleyensis high shrubland over Triodia brizoides open hummock grassland on skeletal red-brown silty clay on upper slopes of high rocky hills.

H5 - ChEIAhAmTb: Corymbia hamersleyana and Eucalyptus leucophloia subsp. leucophloia scattered low trees over Acacia hamersleyensis and A. maitlandii open shrubland over Triodia brizoides hummock

grassland on skeletal red-brown sandy loam on high rocky hill slopes.

- H6 HcAarTb: Hakea chordophylla scattered tall shrubs over Acacia arida open shrubland over Triodia brizoides hummock grassland on red-brown silty clay on upper slopes of high rocky hills.
- H7 ChEIAbTwTHt: Corymbia hamersleyana and/or Eucalyptus leucophloia subsp. leucophloia scattered low trees over Acacia bivenosa A. inaequilatera and Petalostylis labicheoides scattered tall shrubs to open scrub over Triodia wiseana open hummock grassland over Themeda triandra scattered tussock grasses on red-brown sandy clay on hill tops and slopes.
- H8 ElEgAhAbTw: Eucalyptus leucophloia subsp. Leucophloia scattered low trees over E. gamophylla scattered mallees over Acacia hamersleyensis and A. bivenosa shrubland over Triodia wiseana hummock grassland on hill tops.
- **H9 EITw:** Eucalyptus leucophloia subsp. Leucophloia low open woodland over *Triodia wiseana* hummock grassland on skeletal red-brown silty clay on high ridges and hill tops.

Hill Slopes

- S1 ElErAbTwERIm: Eucalyptus leucophloia subsp. Leucophloia scattered low trees over E. repullulans open mallee over Acacia bivenosa scattered tall shrubs over Triodia wiseana scattered hummock grassland over Eriachne mucronata scattered tussock grasses on skeletal brown-orange silty clay on shale slopes.
- S2 AaAxTbTp: Acacia xiphophylla and A. aneura high shrubland over Triodia brizoides and T. pungens open to very open hummock grassland on skeletal red-brown silty clay on hill slopes.
- S3 AcAaAmPIAkAsp: Acacia citrinoviridis and A. aneura var. aneura low open woodland over A. maitlandii, Petalostylis labicheoides and A. kempeana open heath over A. spondylophylla low shrubland over Triodia wiseana and T. pungens hummock grassland on hill slopes.
- S4 EIAbSTsTwENspp: Eucalyptus leucophloia subsp. Leucophloia scattered low trees over Acacia bivenosa and Stylobasium spathulatum open shrubland over Triodia wiseana very open hummock grassland over Enneapogon spp. very open tussock grassland on red-brown clayey sand on hill slopes.
- S5 ElApAmaTp: Eucalyptus leucophloia subsp. Leucophloia scattered low trees over Acacia pruinocarpa and A. marramamba open shrubland over Triodia epactia open hummock grassland on red-brown silty clay on hill slopes.

Gorges, Gullies and Steep Slopes

- **G1 DpeDpTHtERIm**: *Dodonaea petiolaris* and *D. pachyneura* open scrub over *Themeda triandra* and *Eriachne mucronata* open tussock grassland over *Rhodanthe margarethae* scattered herbs on breakaways on skeletal red-brown clay loam on steep slopes and at the base of breakaways.
- **G2 AapApSAIERImARo:** Acacia aptaneura and A. pruinocarpa high open shrubland over Santalum lanceolatum open shrubland over Eriachne mucronata and Aristida obscura very open tussock grassland on redbrown sandy loam in the base of gorges and gullies and on very steep slopes.
- **G3 ChAhTb:** Corymbia hamersleyana low open woodland over Acacia hamersleyensis high open shrubland over Triodia brizoides open hummock grassland on red-brown sandy loam on the slopes of gorges and gullies and on steep slopes.
- **G4 EIEgTe:** Eucalyptus leucophloia subsp. Leucophloia low open woodland over *E. gamophylla* scattered mallees over *Triodia epactia* hummock grassland on red-brown sandy loam in on the slopes of gorges and gullies and on steep slopes of high rocky hills.

Low Hills

- L1 AcEICfDvAmTe: Acacia citrinoviridis, Eucalyptus leucophloia subsp. leucophloia and Corymbia ferriticola subsp. ferriticola low open forest over Dodonaea viscosa and A. maitlandii shrubland over Triodia epactia hummock grassland on low hills.
- L2 EITb: Eucalyptus leucophloia subsp. Leucophloia scattered low trees to low open woodland occasionally over E. repullulans scattered mallees occasionally over Acacia bivenosa and Petalostylis labicheoides high open shrubland over Triodia brizoides very open hummock grassland on red-brown silty clay on rocky low hills.
- L3 AapSaaERcTwERmSPa: Acacia aptaneura low open woodland over Senna artemisioides subsp. x artemisioides and Eremophila cuneifolia scattered low shrubs over Triodia wiseana very open hummock grassland over Eriachne mucronata and Sporobolus australasicus very open tussock grassland on red-brown sand on low hills.
- L4 AaaArApTbERIm: Acacia aff. aneura, A. rhodophloia and A. pruinocarpa tall closed scrub over Scaevola acacioides and Dodonaea pachyneura scattered shrubs over Triodia brizoides open hummock grassland over Eriachne mucronata scattered tussock grasses on low hills.
- L5 EIEgPIHcAhTw: Eucalyptus leucophloia subsp. Leucophloia scattered low trees over E. gamophylla scattered mallees over Petalostylis labischioides, Hakea chordophylla and Acacia hamersleyensis open shrubland to high open shrubland over Triodia wiseana very open hummock grassland on redbrown sandy loam on low rocky hills.
- **L6 ChEITeTw:** Corymbia hamersleyana and Eucalyptus leucophloia subsp. leucophloia open woodland over *Triodia epactia* and *T. wiseana* open hummock grassland on low hills.

- L7 EgAeApAhTw: Eucalyptus gamophylla scattered mallees over Acacia exilis, A. pruinocarpa and A. hamersleyensis high open shrubland over Triodia wiseana open hummock grassland on red-brown sandy clay on low rocky hills.
- L8 EIApAeAbTw: Eucalyptus leucophloia subsp. Leucophloia scattered low trees over Acacia pruinocarpa, A. exilis and A. bivenosa low scattered shrubs over Triodia wiseana very open hummock grassland on red-brown sandy loam on low hills.
- **L9 EIEgErTw:** Eucalyptus leucophloia subsp. Leucophloia scattered low trees to low open woodland over *E. gamophylla* and/or *E. repullulans* very open mallee over *Triodia wiseana* open hummock grassland on red-brown silty clay on low hills.

Drainage Lines

- **D1 EgAatTwTHt:** Eucalyptus gamophylla scattered mallees over Acacia atkinsiana open scrub over Triodia wiseana open hummock grassland over Themeda triandra very open tussock grassland on red-brown clayey loam in minor drainage lines.
- **D2 EIPIGrAcTHtERIm:** Eucalyptus leucophloia subsp. Leucophloia scattered low trees over Petalostylis labicheoides, Gossypium robinsonii and Acacia citrinoviridis open scrub over Themeda triandra and Eriachne mucronata open tussock grassland on red-brown sandy clay in minor drainage lines.
- D3 ElAayApAcTwTe: Eucalyptus leucophloia subsp. Leucophloia scattered low trees over Acacia ayersiana, A. pruinocarpa and A. citrinoviridis high open shrubland over Triodia wiseana and T. epactia open hummock grassland on red-brown sandy clay in minor drainage lines.
- D4 EluElEkTIARiTHt: Eucalyptus lucasii, E. leucophloia subsp. leucophloia and E. kingsmillii subsp. kingsmillii very open mallee over Triodia longiceps open hummock grassland over Aristida inaequiglumis and Themeda triandra open tussock grassland on redbrown sandy clay loam in drainage lines.
- D5 EvExAcTHtCEc: Eucalyptus victrix open woodland over E. xerothermica scattered low trees over Acacia citrinoviridis high open shrubland over Themeda triandra and *Cenchrus ciliaris tussock grassland on redbrown sandy clay in drainage lines.
- D6 ExAtTwCEc: Eucalyptus xerothermica and E. leucophloia subsp. leucophloia open woodland over Acacia tumida var. pilbarensis, A. maitlandii and Stylobasium spathulatum high open shrubland over Triodia wiseana and T. angusta scattered hummock grasses over *Cenchrus ciliaris and Themeda triandra tussock grassland on red-brown sandy clay in minor drainage lines.

Plains

- P1 EIApTw: Eucalyptus leucophloia subsp. Leucophloia and Acacia pruinocarpa low woodland over Triodia wiseana open hummock grassland on terraced plains.
- **P2 AapApAayTw:** Acacia aptaneura, A. pruinocarpa and A. ayersiana high shrubland to low woodland over *Triodia wiseana* scattered hummock grasses rehabilitated community on redbrown sandy loam on rocky plains.
- P3 ErAapAcoApTwTm: Eucalyptus repullulans very open mallee over Acacia aptaneura, A. colei var. colei and A. pruinocarpa high shrubland over Triodia wiseana and T. melvillei very open hummock grassland on redbrown sandy clay on rocky plains.
- P4 AapReCHRfCc: Acacia aptaneura open scrub over Rhagodia eremaea low open shrubland over Chrysopogon fallax and *Cenchrus ciliaris tussock grassland on red-brown sandy clay on alluvial plains.
- P5 AxTI: Acacia xiphophylla high shrubland over Triodia longiceps very open hummock grassland on redbrown clay loam on a rocky plain.
- P6 ApAapDIaTIARin: A. pruinocarpa and A. aptaneura open shrubland over Dipteracanthus australasicus subsp. australasicus low open shrubland over Triodia longiceps scattered hummock grassland over Aristida ingrata, Themeda triandra and Sporobolus australasicus very open tussock grassland on red-brown silty clay on alluvial plains.

Impacted Areas

- I1 CD: Completely degraded/ cleared areas including mining infrastructure and tracks.
- I2 *LI*Cc: *Leucaena leucocephala low woodland over *Cenchrus ciliaris tussock grassland on red-brown sandy clay on plains in previously cleared areas.
- 13 TAa: *Tamarix aphylla high shrubland to low open forest on red-brown cracking clay of tailings dam.
- 14 Tyd: Typha domingensis sedgeland on redbrown cracking clay of tailings dam.
- I5 D'AapAayApEITmCc: Degraded Acacia aptaneura, A. ayersiana, A. pruinocarpa and Eucalyptus leucophloia subsp. leucophloia high open shrubland to low open woodland over Triodia melvillei open hummock grassland over *Cenchrus ciliaris open tussock grassland on redbrown clay on rocky plains and low rocky hills.

^{*}denotes weed species

Clearing Description

Tom Price Mine.

Hamersley Iron Pty Ltd propose to clear up to 824 hectares within an application area of approximately 9,224 hectares for the purpose of mineral production, mineral exploration and associated activities. The application area represents the boundary of the Tom Price mine site, located approximately 1.5 kilometres south-west of Tom Price town site in the Shire of Ashburton.

Vegetation Condition

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994);

To:

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

Comment

The vegetation condition was assessed by botanists from Ecologia. The vegetation conditions were described using a scale based on Trudgen (1988) and have been converted to the corresponding conditions from the Keighery (1994) scale.

The proposed clearing is to enable on-going operational mining activities at the Tom Price mine site. Vegetation will be cleared by dozers. Topsoil and vegetative material will be stockpiled for use in rehabilitation.

Clearing permit CPS 5795/1 was granted by the Department of Mines and Petroleum (DMP) on 12 December 2013 and authorised the clearing of up to 824 hectares. On 28 January 2014, Hamersley Iron Pty Ltd applied to amend the clearing permit.

3. Assessment of application against Clearing Principles

Comments

This amendment is to amend Condition 9(b) of the clearing permit. Condition 9(b) requires that, "where a watercourse is to be impacted by clearing, the Permit Holder shall maintain the existing surface flow". Hamersley Iron Pty Ltd have identified that where minor ephemeral drainage lines are intersecting open pits and waste dumps it will not always be possible to maintain the existing surface water flow. As a result this amendment will amend the wording of the condition to require the maintenance of the existing surface water flow 'where practicable'. The total authorised clearing area and all other conditions will remain the same.

The proposed amendment is not likely to have any significant environmental impacts above those already assessed under Clearing Permit CPS 5795/1. Therefore, the assessment against the clearing principles has not changed and can be found in clearing permit decision report CPS 5795/1.

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 (WC2010/016) over the area under application (GIS Database). This claim 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 multiple registered Aboriginal Sites of Significance in the vicinity of 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 Environmental Regulation 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.

Methodology

GIS Database:

- Aboriginal Sites of Significance
- Native Title Claims Registered with the NNTT

4. References

- ENV (2013) Tom Price Life of Mine Flora, Vegetation and Fauna Assessment. Report Prepared by ENV Australia, January 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.

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}:-

- 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.
- Priority Two Poorly Known taxa: taxa which are known from one or a few (generally <5) populations, a 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.
- 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, whils being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- **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.
- Declared Rare Flora Presumed Extinct taxa: taxa which have not been collected, or otherwise verified, ove 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 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 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 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 an evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- 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 habita destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacan 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.
- 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 unde immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation c conservation status before consideration can be given to declaration as threatened fauna.
- Priority Four: Taxa in need of monitoring: Taxa which are considered to have been adequately surveyed, o for which sufficient knowledge is available, and which are considered not currently threatened or in need c special protection, but could be if present circumstances change. These taxa are usually represented or 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 pas range; or
 - (b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its par 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 th immediate future, as determined in accordance with the prescribed criteria.
- 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 wit the prescribed criteria.
- CD Conservation Dependent: A native species which is the focus of a specific conservation program, th cessation of which would result in the species becoming vulnerable, endangered or critically endangere 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.
- 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

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	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

(j)

