Government of **Western Australia**
Department of **Mines and Petroleum**

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2765/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **BHP Billiton Iron Ore Pty Ltd**

1.3. Property details

Property: *Iron Ore (Mount Newman) Agreement Act 1964*,
Special Lease for Mining Operations 3116/3687, Document I 154279 L, Lot 19 on Deposited Plan 48921, Lot 65 on Deposited Plan 48920;
Special Lease for Mining Operations 3116/4028, Lots 92, 93, 94, 95, 96, 24, 25 & 26 on Deposited Plan 241430;
Special Lease for Mining Operations 3116/6298, Document I 123599 L, Lot 141 on Deposited Plan 48923.
Local Government Area: Shire of East Pilbara & Town of Port Hedland
Colloquial name: Walla Siding to Turner Camp Rail Duplication Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
358		Mechanical Removal	Railway construction and maintenance, and associated works

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 22 August 2013

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

The area applied to clear has been broadly mapped at a scale of 1:250,000 as:

Beard Vegetation Association 93 - Hummock grasslands, shrub steppe; kanji over soft spinifex; and

Beard Vegetation Association 619 - Medium woodland; River Gum (*Eucalyptus camaldulensis*) (GIS Database).

Ecologia Environment Pty Ltd (2008b) conducted a Level 1 flora and vegetation survey of the proposed rail duplication area and Rail Repeater Station Two lease between 4 and 8 April 2008 in order to describe finer scale vegetation types than those described by Beard vegetation mapping.

The flora and vegetation survey of the proposed rail duplication area consisted of 28 quadrats, each 50 metres x 50 metres (the standard size for surveys carried out in the Pilbara) (Ecologia Environment Pty Ltd, 2008a). In addition, 15 transects were walked through different vegetation types along the length of the proposed rail duplication to ensure that a representative species list was produced for the survey area. The following six vegetation units (associated with four distinct landforms) were described from the proposed rail duplication area (Ecologia Environment Pty Ltd, 2008b):

Sandy/rocky plain
1. Scattered *Corymbia hamersleyana* low trees, over open to moderately dense patches of mixed Acacia spp. high shrubs (including *A. ancistrocarpa*, *A. orthocarpa*, *A. pyrifolia*, *A. bivenosa* and *A. acradenia*), sometimes with *Petalostylis labicheoides* and *Grevillea wickhamii*, over mixed low shrubs dominated by *Acacia stellaticeps*, with moderately dense mixed *Triodia pungens*, *T. epactia*, *T. basedowii* and *T. lanigera* hummock and open to moderately dense patches of **Cenchrus ciliaris* tussock grasses;

2. Very scattered *Corymbia hamersleyana* and Acacia spp. high shrubs, dominated by *A. inaequilatera*, over moderately dense mixed *Triodia pungens*, *T. wiseana* and *T. basedowii* hummock grasses;

Creek bed/bank
3. Open patches of *Eucalyptus victrix* medium trees, over scattered *Acacia coriacea subsp.pendens* and sparse to open *Corymbia hamersleyana* low trees, over sparse **Aerva javanica* low shrubs, with varying mixed open **Cenchrus ciliaris*, *Themeda triandra* tussock and sometimes with moderately dense *Triodia lanigera* and *Triodia angusta* hummock grasses;

4. Occasional outcropping *Eucalyptus camaldulensis var. obtusa* and *E. victrix* medium trees, over scattered *Melaleuca argentea* low trees, over open to moderately dense *Acacia trachycarpa* high shrubs, sometimes with *A. pyrifolia*, *A. bivenosa* and *Melaleuca*

glomerata, over varying open *Triodia pungens* hummock and **Cenchrus ciliaris* tussock grasses, sometimes with open mixed Cyperus spp. sedges;

Drainage channel
5. Sparse to open *Eucalyptus victrix* low to medium trees, over sparse mixed *Petalostylis labicheoides*, *Grevillea wickhamii*, *Acacia trachycarpa* and *A. bivenosa* high shrubs, over sparse mixed medium and low shrubs, including *Stemodia grossa*, with sparse to open mixed *Chrysopogon fallax* and **Cenchrus ciliaris* tussock and sparse mixed *Triodia epactia*, *T. pungens* and *T. lanigera* hummock grasses; and

Ridgetop
6. Open *Acacia maitlandii* and *A. inaequilatera* high shrubs, sometimes over open *A. ancistrocarpa* medium shrubs, over open mixed low shrubs, dominated by *Acacia stellaticeps*, *Indigofera monophylla*, *Hybanthus aurantiacus* and *Pterocaulon sphacelatum*, with dense mixed *Triodia pungens* and *T. lanigera* hummock grass (Ecologia Environment Pty Ltd, 2008b).

The Rail Repeater Station Two lease area is only 2.3 hectares in total, and this was surveyed by two botanists grid searching the area by walking approximately 10 metres apart and zigzagging back and forth across the lease (Ecologia Environment Pty Ltd, 2008b). Two vegetation units associated with one landform type were recorded:

Rocky low hillslope
1. Scattered *Corymbia hamersleyana* low trees, over sparse to open mixed medium shrubs of *Grevillea wickhamii subsp. hispidula* high shrubs and *Acacia ancistrocarpa*, over moderately dense *Acacia acradenia* medium-low shrubs, over open *Bonamia rosea* low shrubs, with moderately dense *Triodia basedowii* hummock grass; and

2. Recently burnt area with sparse *Fimbristylis simulans* sedges and moderately dense *Triodia wiseana* hummock grass regrowth (Ecologia Environment Pty Ltd, 2008b).

Ecologia Environment Pty Ltd (2008c) undertook a Level 1 flora and vegetation survey of the Quarry Two lease area on 8 April 2008. The flora and vegetation survey consisted of 8 quadrats, each 50 metres x 50 metres. In addition, transects were walked through different vegetation types within the lease to ensure that a representative species list was produced for the survey area. The following five vegetation units (associated with three distinct landforms) were described from the Quarry Two lease area:

Sandy Plain
1. Open *Acacia pyrifolia* high shrubs, with sparse patches of *Acacia tumida var. tumida*, over moderately dense mixed *Pterocaulon sphacelatum*, *Indigofera monophylla* and *Corchorus lasiocarpus subsp. lasiocarpus* low shrubs, over moderately dense *Triodia epactia* hummock grass and sparse mixed tussock grasses;

2. Sparse *Acacia pyrifolia* high to medium shrubs, over scattered mixed low shrubs, over moderately dense *Triodia epactia* hummock grass;

3. Sparse *Corymbia hamersleyana* low trees, over moderately dense *Acacia colei var. colei* medium to high shrubs, over moderately dense *Cajanus cinereus* medium shrubs, over open mixed *Indigofera monophylla*, *Pterocaulon sphacelatum* and *Pluchea tetranthera* very low shrubs, with open *Chrysopogon fallax*, **Cenchrus ciliaris* tussock and moderately dense *Triodia epactia* hummock grasses;

Ferrous/granite low hill crest
4. Isolated *Acacia inaequilatera* low trees over sparse *Senna glutinosa subsp. glutinosa* and *Senna glutinosa subsp. pruinosa* medium to high shrubs, over sparse *Tephrosia sp. B Kimberley Flora* low shrubs, over moderately dense *Triodia epactia* hummock grasses; and

Granite Outcrop
5. Sparse *Terminalia canescens* low trees, over open *Acacia tumida* high shrubs, over moderately dense parches of mixed low shrubs (including *Corchorus lasiocarpus subsp. lasiocarpus*, *Pterocaulon serrulatum*, *Tephrosia sp. B Kimberley Flora* and *Abutilon aff. dioicum*; sometimes over open mixed *Cyperus squarrosus* and *Fimbristylis dichotoma* sedges, with moderately dense mixed *Triodia epactia* hummock and tussock grasses, dominated by *Aristida holathera var. holathera* (Ecologia Environment Pty Ltd, 2008c).

It is noted that BHP Billiton's clearing permit application includes approximately 12 hectares of the Quarry Two lease area (totalling approximately 55 hectares). Only the three vegetation units associated with the Sandy Plain landform unit described above occur in the application area (Ecologia Environment Pty Ltd, 2008a). The Ferrous/granite low hill crest and Granite Outcrop landform units (and associated vegetation units 4 and 5) occur throughout sections of the Quarry Two lease area which are not subject to this application.

Ecologia Environment Pty Ltd (2008d) undertook a Level 1 flora and vegetation survey of the Rail Repeater Station One lease area on 5 April 2008. Like Rail Repeater Station Two, this area is 2.3 hectares in size and was surveyed using the same methods. Three vegetation units (associated with two distinct landforms) were described:

Rocky ferrous hillslope
1. Scattered *Corymbia opaca* low trees, over open mixed *Acacia ancistrocarpa* and / or *A. inaequilatera* medium shrubs, sometimes over *Triumfetta maconochieana* dwarf shrubs, over moderately dense *Triodia pungens* hummock grass;

2. Scattered *Acacia inaequilatera* medium shrubs, over open *Triodia angusta* hummock grass; and

Sandy floodplain
3. Sparse to open *Corymbia opaca* low to medium trees, over scattered *Acacia ancistrocarpa* tall shrubs, over sparse *Carissa lanceolata* medium shrubs, over moderately dense *Acacia stellaticeps* low shrubs, with moderately dense *Triodia lanigera* hummock grass (Ecologia Environment Pty Ltd, 2008d).

* = introduced flora species

Clearing Description

BHP Billiton Iron Ore Pty Ltd (BHP Billiton) has applied for a Purpose Permit to clear up to 358 hectares of native vegetation within a boundary of approximately 556 hectares (GIS Database). The proposed clearing involves duplicating a 67 kilometre section of the Newman to Port Hedland rail line between Walla Siding and Turner Camp, located approximately 61 - 128 kilometres south of Port

Hedland. Associated works will include upgrading signalling infrastructure, installation of power and communications cabling, establishment of access roads, borrow pits, temporary construction site office facilities and laydown areas. In addition, three new dual track railway bridges will be constructed at Chinnamon Creek North, Chinnamon Creek South and Gillam Creek (Ecologia Environment Pty Ltd, 2008a).

A majority of the proposed vegetation clearing is within the existing rail lease (Special Lease 3116/3687) which is approximately 80 metres wide. A quarry lease (Special Lease 3116/6298) will be used to source borrow material and will accommodate the temporary construction site office facilities, laydown areas, and a mobile concrete batching plant due to the limited space available within the narrow rail corridor. Upgrades to Rail Repeater Stations One (located approximately 55 kilometres south of Port Hedland) and Two (located approximately 102 kilometres south of Port Hedland), both located on Special Lease 3116/4028, are also part of this clearing permit application (Ecologia Environment Pty Ltd, 2008a).

Vegetation clearing will be undertaken using mechanical means.

Vegetation Condition

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994);
to
Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Comment

The vegetation condition rating was determined by Ecologia Environment Pty Ltd (2008b; 2008c; 2008d) during Level 1 flora and vegetation surveys of the proposed rail duplication area, Quarry Two lease and Rail Repeater Stations One and Two lease. Factors taken into consideration when determining the vegetation condition were: weeds, grazing, litter and ground disturbance (tracks and other cleared areas).

Clearing permit CPS 2765/1 was granted by the Department of Industry and Resources (now the Department of Mines and Petroleum (DMP)) on 4 December 2008, authorising the clearing of 358 hectares of native vegetation within a permit boundary of approximately 556 hectares.

An application to amend this permit was received by DMP on 24 June 2013. Permit CPS 2765/1 was due to expire on 1 September 2013, however the full extent of the authorised clearing had not yet been completed. The amendment application requested an extension of the duration of the permit by ten years (to 2023) and a change of the annual reporting date from 1 September to 1 October each year. There is no change to the permit boundary or the amount of clearing authorised.

3. Assessment of application against clearing principles

Comments

BHP Billiton Iron Ore Pty Ltd has applied to amend clearing permit CPS 2765/1 to extend the duration of the permit to 1 September 2023, and to change the annual reporting date from 1 September to 1 October each year. There is no change to the permit boundary or the amount of clearing authorised.

The proposed amendment has been assessed against the clearing principles, and is unlikely to have any significant additional environmental impacts.

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

Comments

There is one native title claim over the area under application (GIS Database). This claim (WC99_003) has been registered with the National Native Title Tribunal on behalf of the claimant group (GIS Database). However, the 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 30 registered Sites of Aboriginal Significance within 2 kilometres of the proposed clearing areas (Ecologia Environment Pty Ltd, 2008a; GIS Database). The proposed clearing intersects the buffer zone of three of these sites (Ecologia Environment Pty Ltd, 2008a). Recent ethnographic surveys have been undertaken by the traditional owners of the land, confirming that there are no registered sites within the proposed clearing areas (Ecologia Environment Pty Ltd, 2008a). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation (formerly the Department of Environment and Conservation) 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 - Determined by the Federal Court
- Native Title Claims - Filed at the Federal Court
- Native Title Claims - Registered with the NNTT

4. References

Ecologia Environment Pty Ltd (2008a) Walla Siding South to Turner Camp Rail Duplication Project. Application to clear native vegetation (Purpose Permit) under the Environmental Protection Act 1986. Unpublished report for BHP Billiton Iron Ore Pty Ltd.

Ecologia Environment Pty Ltd (2008b) Rapid Growth Project 5 (RGP5). Walla Siding to Turner Camp and Repeater Two Flora and Vegetation Report. Version 3. Unpublished report for BHP Billiton Iron Ore Pty Ltd.

Ecologia Environment Pty Ltd (2008c) Rapid Growth Project 5 (RGP5). Quarry Two - Flora and Vegetation Report. Version 3. Unpublished report for BHP Billiton Iron Ore Pty Ltd.

Ecologia Environment Pty Ltd (2008d) Rapid Growth Project 5 (RGP5). Walla to Bing Sidings and Repeater One Flora and Vegetation Report. Unpublished report for BHP Billiton Iron Ore Pty Ltd.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, 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.