



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6762/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

1.3. Property details

Property: Mineral Lease 244SA (AML 70/244)
Local Government Area: Shire of East Pilbara
Colloquial name: Eastern Ridge Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
10		Mechanical Removal	Construction and maintenance of fences, maintenance of infiltration basins and associated activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 29 October 2015

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. One Beard vegetation association is located within the application area (GIS Database):

Beard vegetation association 29: Sparse low woodland; mulga, discontinuous in scattered groups.

A number of flora and vegetation surveys have been conducted over the application area. Two broad vegetation communities and three vegetation associations were identified (BHPBIO, 2015):

Eucalyptus Woodland

- 1) Woodland of *Eucalyptus camaldulensis* subsp. *refulgens* and *Eucalyptus victrix* over High Open Shrubland of *Acacia citrinoviridis*, *Acacia pyrifolia* var. *pyrifolia* and *Melaleuca glomerata* over Tussock Grassland of **Cenchrus ciliaris*, *Eulalia aurea* and *Themeda triandra* on brown clay loam on banks of major drainage lines.
- 2) Woodland of *Eucalyptus victrix*, *Acacia citrinoviridis* and *Eucalyptus camaldulensis* subsp. *refulgens* over Low Open Shrubland of *Tephrosia rosea* var. *clementii*, *Corchorus crozophorifolius* and *Acacia pyrifolia* var. *pyrifolia* over Very Open Tussock Grassland of **Cenchrus ciliaris*, *Eulalia aurea* and *Themeda triandra* on brown loamy sand on channels of major drainage lines.

Triodia Hummock Grassland

- 1) Hummock Grassland of *Triodia wiseana* and *Triodia angusta* with Open Mallee of *Eucalyptus socialis* subsp. *eucentrica* and Open Shrubland of *Acacia bivenosa*, *Petalostylis labicheoides* and *Acacia pyrifolia* var. *pyrifolia* on light brown clay loam on calcrete plains and rises.

Note: * denotes weed species

Clearing Description Eastern Ridge
BHP Billiton Iron Ore Pty Ltd proposes to clear up to 10 hectares of native vegetation within a total boundary of approximately 59.25 hectares, for the purpose of construction and maintenance of fences, maintenance of infiltration basins and associated activities. The project is located approximately 10 kilometres east of Newman in the Shire of East Pilbara.

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 condition was derived from a regional vegetation mapping survey conducted by Onshore

3. Assessment of application against Clearing Principles

Comments

The application area within falls within the Augustus (GAS1) subregion of the Gascoyne Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). The Augustus subregion is characterised by rugged low Proterozoic sedimentary and granite ranges divided by broad flat valleys (CALM, 2002). Mulga woodland with Triodia occur on shallow stony loams on rises, while the shallow earthy loams over hardpan on the plains are covered by Mulga parkland (CALM, 2002).

The proposed clearing of up to 10 hectares of native vegetation will allow for the construction and ongoing maintenance of a fence line around the existing infiltration basins to prevent public access as well as the ongoing maintenance of the infiltration basins and associated activities (BHPBIO, 2015).

The vegetation under application is considered to range from 'Completely Degraded' to 'Very Good' condition (Keighery, 1994; Onshore Environmental, 2014). Vegetation within the local area is in a similar condition to that present within the application area and the vegetation types recorded within the application area are common and widespread. (BHPBIO, 2015).

Onshore Environmental (2014) completed a regional vegetation mapping survey and identified the presence of two broad floristic communities and three vegetation types within the application area, none of which are considered to be associated with, or representative of, a Threatened Ecological Community (TEC) or a Priority Ecological Community (PEC) (BHPBIO, 2015; Onshore Environmental, 2014).

According to available databases, there are no known Threatened or Priority listed flora species recorded within the application area (DPaW, 2015). Syrinx Environmental (2012) conducted a flora and vegetation survey of the wider area, which included parts of the application area. No Threatened or Priority flora were recorded (BHPBIO, 2015; Syrinx Environmental, 2012).

The application area is situated within the boundary of the 'Ethel Gorge aquifer stygobiont community' TEC (BHPBIO, 2015; GIS Database). Due to its subterranean nature and dependence on groundwater, this community is predominately impacted by groundwater drawdown or dewatering (CALM, 2002). The proposed clearing of 10 hectares of native vegetation is unlikely to impact the Ethel Gorge stygobiont community. There are no other Threatened or Priority Ecological Communities within the application area (GIS Database).

There are no conservation areas nearby. The closest conservation area (Karijini National Park) is located more than 130 kilometres from the application area (GIS Database; BHPBIO, 2015).

Five introduced flora species (weeds) were recorded within the application area: *Malvastrum americanum* (Spiked Malvastrum), *Cenchrus ciliaris* (Buffel Grass), *Cenchrus setiger* (Birdwood Grass), *Cynodon dactylon* (Couch) and *Vachellia farnesiana* (Mimosa Bush). The proposed clearing activities have the potential to result in the introduction or spread of weed species, which may negatively impact on the biodiversity of the local area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

One Beard vegetation association is mapped over the area under application. Beard vegetation association 29 retains over 99% of pre-European levels of vegetation within the state and bioregion (Commonwealth of Australia, 2001; Government of Western Australia, 2014). Based on aerial imagery, the application area is not, nor does it form part of, an area considered to be a significant remnant of native vegetation.

Based on the habitat types present within the application area and information from previous fauna surveys conducted in the surrounding area, seven fauna species of conservation significance listed as either threatened species under the *Environment Protection and Biodiversity Conservation Act* (EPBC) 1999 or protected under Western Australian legislation (*Wildlife Conservation Act 1950* (WC)) have the potential to occur within the application area (BHPBIO, 2015; DPaW, 2015):

- Rainbow Bee-eater (*Merops ornatus* – EPBC Act, Migratory);
- Cattle Egret (*Ardea ibis* – EPBC Act, Marine/Migratory);
- Eastern Great Egret (*Ardea modesta* – EPBC Act, Marine/Migratory);
- Fork Tailed swift (*Apus pacificus* – EPBC Act, Marine/Migratory);
- Wood Sandpiper (*Tringa glareola* – EPBC Act, Marine/Migratory); and
- Carpet Python (*Morelia spilota imbricata* – WC Act Schedule 4);

In addition to the species mentioned above, the Ghost Bat (*Macroderma gigas*), a Priority 4 listed species, recognised by DPaW as being of conservation significance, has also been identified as potentially utilising the application area (BHPBIO, 2015; DPaW, 2015). Given the highly mobile nature of the migratory species listed above, impacts from clearing activities to these species are unlikely to be significant. No fauna of conservation significance have been recorded within the application area (BHPBIO, 2015) and while the vegetation to be cleared is likely to provide foraging habitat for local fauna species, similar habitat in better condition persists in the local area.

The application area is situated within the Newman Water Reserve, which is classified as a Priority 1 Public

Drinking Water Source Area (PDWSA) (GIS Database; DoW, 2015). DoW (2015) has advised that the proposed clearing is unlikely to have a significant impact on the quality or quantity of groundwater, provided activities are carried out in accordance with DoW advice and guidelines.

A minor non-perennial watercourse (Homestead Creek) is located within the application area and riparian vegetation is growing in association with this watercourse (GIS Database; BHPBIO, 2015). The proponent will limit the amount of clearing within this area, however riparian vegetation will need to be cleared in order to complete maintenance and construction works on the infiltration ponds (BHPBIO, 2015). Potential impacts to the watercourse and riparian vegetation as a result of the proposed clearing may be minimised by the implementation of a watercourse/vegetation management condition.

Given the location, existing disturbances and local climate, land degradation issues, adverse impacts to surface water quality and an increased risk of flooding are unlikely to result from the proposed clearing.

The application to clear up to 10 hectares of native vegetation for the purpose of construction and maintenance of fences, maintenance of infiltration basins and associated activities, in an already highly disturbed setting, is unlikely to result in significant environmental issues or concerns.

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

Methodology BHPBIO (2015)
CALM (2002)
Commonwealth of Australia (2001)
DoW (2015)
DPaW (2015)
Government of Western Australia (2014)
Keighery (1994)
Onshore Environmental (2014)
Syrinx Environmental (2012)
GIS Database:
- DPaW Tenure
- Imagery
- Groundwater Salinity
- Hydrographic Catchments – Catchments
- Hydrography, linear
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation
- Public Drinking Water Source Areas (PDWSAs)
- RIWI Act, Groundwater Areas
- Soils, statewide
- Threatened and Priority Flora List
- Threatened and Priority Ecological Communities Buffers
- Threatened and Priority Ecological Communities Boundaries

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 (WC2005/006) 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 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 is one registered Sites of Aboriginal Significance located in/adjacent to the area applied to clear (GIS Database; DAA, 2014). 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, the 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 8 September 2015 by the Department of Mines and Petroleum (DMP) inviting submissions from the public. No submissions were received.

Methodology DAA (2015)
GIS Database:
- Aboriginal Sites of Significance

4. References

- BHPBIO (2015) Eastern Ridge Native Vegetation Clearing Permit Application Supporting Document for the Eastern Ridge Infiltration Basins. BHP Billiton Iron Ore Pty Ltd, Perth, Western Australia.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management.
- Commonwealth of Australia (2001) National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.
- DAA (2015) Aboriginal Heritage Inquiry System, Government of Western Australia, Department of Aboriginal Affairs, Perth, < <http://maps.dia.wa.gov.au/AHIS2/>>.
- DoW (2015) Advice for CPS 6762/1 – Clearing within a PDWSA (Newman Water Reserve). Department of Water, Pilbara Region, Karratha, Western Australia.
- DPaW (2015) NatureMap, Department of Parks and Wildlife <<http://naturemap.dec.wa.gov.au>>.
- Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Syrinx Environmental (2012) Orebody 37 Flora and Vegetation Assessment. *Supporting Information for CPS 6762/1*. Syrinx Environmental Pty Ltd, Perth, Western Australia.
- Onshore Environmental (2014) Consolidation of Regional Vegetation Mapping BHP Billiton Iron Ore Pilbara Tenure. *Supporting Information for CPS 6762/1*. Onshore Environmental Consultants Pty Ltd. Yallingup, Western Australia.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DPaW and DER)
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DotE	Department of the Environment, Australian Government
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
EPA	Environmental Protection Authority, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
s.17	Section 17 of the <i>Environment Protection Act 1986</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2013) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T	Threatened species: Specially protected under the <i>Wildlife Conservation Act 1950</i> , listed under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna or the Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora). Threatened Fauna and Flora are further recognised by the Department according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo <i>Calyptorhynchus latirostris</i> is specially protected under the <i>Wildlife Conservation Act 1950</i> as a threatened species with a ranking of Endangered. <u>Rankings:</u> CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild. EN: Endangered - considered to be facing a very high risk of extinction in the wild. VU: Vulnerable - considered to be facing a high risk of extinction in the wild.
X	Presumed Extinct species: Specially protected under the Wildlife Conservation Act 1950, listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation

(Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).

- IA Migratory birds protected under an international agreement:**
Specially protected under the Wildlife Conservation Act 1950, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.
Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.
- S Other specially protected fauna:**
Specially protected under the Wildlife Conservation Act 1950, listed under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P1 Priority One - Poorly-known species:**
Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.
- P2 Priority Two - Poorly-known species:**
Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.
- P3 Priority Three - Poorly-known species:**
Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.
- P4 Priority Four - Rare, Near Threatened and other species in need of monitoring:**
- (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.
 - (b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
 - (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.
- P5 Priority Five - Conservation Dependent species:**
Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.
- (d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.
- (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.
- (i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.
- (j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.