



## 1. Application details

### 1.1. Permit application details

Permit application No.: 392/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

### 1.3. Property details

Property: AM70/266  
AML70/244  
Local Government Area: Shire Of East Pilbara  
Colloquial name: Jimblebar-Newman Rail Works

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
14.4		Mechanical Removal	Railway construction or maintenance

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Vegetation of the area is Beard Vegetation Association: 18 (Low woodland; mulga ( <i>Acacia aneura</i> )); 82 (Hummock grasslands, low tree steppe; snappy gum over <i>Triodia wiseana</i> ; and 216 (Low woodland; mulga (with spinifex) on rises (Shepherd et al, 2001).	Three typical vegetation units were described for the area: 1) scattered <i>Eucalyptus vitrix</i> medium woodland over <i>Grevillea striata</i> medium shrubs over sparse medium low shrubs with herbs, soft grasses and <i>Triodia pungens</i> ; 2) moderately dense <i>Eucalyptus victrix</i> tall woodland over medium/low shrubs, including <i>Acacia farnesiana</i> and open <i>Malvastrum americanum</i> and other non-weeds over grasses and herbs with scattered <i>Cyperus bifax</i> and <i>Typha domingensis</i> sedges on a river bank; and 3) scattered <i>Eucalyptus leucophloia</i> subsp <i>leucophloia</i> medium woodland over sparse tall to medium-low shrubs of <i>Codonocarpus cotinifolius</i> and <i>Acacia</i> aff. <i>inaequilatera</i> and open low shrubs of <i>Acacia aneura</i> and <i>Gompholobium polyzygum</i> over scattered herbs, sedge <i>Fimbristylis simulans</i> , soft grasses and <i>Triodia</i> spp. hummock grasses.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	A vegetation survey was conducted by Ecologia for BHP and an Environmental Management Plan has been prepared to guide clearing activities (BHP-Billiton, 2004a).

## 3. Assessment of application against clearing principles

### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

**Comments** **Proposal is not likely to be at variance to this Principle**  
The vegetation species diversity is reasonably high for a small area, with 258 species from 46 families and 131 genera being found by survey but quite a few different habitats were surveyed which would explain the diversity

(Ecologia, 2004a).

The long, narrow, discontinuous disturbance footprint will allow for the retention of local flora and fauna assemblages and this proposal is unlikely to represent a significant loss to local biodiversity.

**Methodology** Ecologia (2004a)

**(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.**

**Comments Proposal is not likely to be at variance to this Principle**

The proposal is for a small area of proposed clearing across three discontinuous patches and the vegetation communities proposed for clearing have 99-100% extent remaining. Therefore the proposed clearing is not likely to represent a threat to significant fauna habitats.

**Methodology** GIS Database:  
- Pre-European Vegetation - DA 01/01  
- Threatened Ecological Communities - CALM 15/7/03  
Hopkins et al, 2001

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

**Comments Proposal is not likely to be at variance to this Principle**

The Priority 1 Listed species *Eremophila* sp. *Ophthalmia* Range (D. Brearley s.n. 20/3/2004) was found within the vicinity of the proposed project (Ecologia 2005a). This species has only one voucher specimen in the WA Herbarium and is a novel species in the state and therefore is of considerable conservation interest (S. Van Leeuwin, CALM pers comm, 2005).

BHP conducted further survey work (via a Secondary Assessment) to ascertain the presence of this species within the proposed disturbance area and in adjacent areas to ensure that the clearing would not significantly impact local populations of this species (Ecologia 2005b). There were no individuals or populations of this species found in the disturbance footprint, although there was 2 plants found very close to the proposed area. These plants should be flagged and avoided during clearing if possible (Ecologia, 2005b).

Further surveys found considerable sized populations of this species in the *Ophthalmia* Dam region located to the south-west of the project area, and other scattered populations to the south and to the south-east of the area proposed for clearing (Ecologia 2005b).

Due to the presence of significant populations outside of the proposed area it is unlikely that this proposal to clear will be at variance to this principle.

Management actions should include those outlined in the Environmental Management Plan (BHP Billiton Iron Ore, 2004).

**Methodology** Ecologia (2005a)  
Ecologia (2005b)  
CALM pers comm (2005) KNI757

**(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.**

**Comments Proposal is not likely to be at variance to this Principle**

There are no known Threatened Ecological Communities in the vicinity of the clearing.

**Methodology** GIS Database:  
- Threatened Ecological Communities - CALM 15/7/03

**(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.**

**Comments Proposal is not at variance to this Principle**

The area proposed for clearing traverses three of Beard's Vegetation Associations: 18 (Low woodland; mulga (*Acacia aneura*)); 82 (Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*); and 216 (Low woodland; mulga (with *spinifex*) on rises (Shepherd et al, 2001). 99-100% of these vegetation types are intact (Hopkins et al, 2000).

**Methodology** GIS Database:  
- Pre-European Vegetation - DA 01/01  
Hopkins et al (2000)

**(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**

**Comments Proposal is not likely to be at variance to this Principle**

The area proposed for clearing traverses part of the Fortescue River. A small area of riparian vegetation (approximately 1.62ha) will be disturbed in the proposed clearing (Ecologia, 2005b). The area is adjacent to an already existing access track and has therefore been previously disturbed, and shows signs of degradation from grazing (Ecologia, 2005b).

The loss of such a small amount of riparian vegetation is not considered to be regionally significant, especially given its somewhat degraded condition.

To minimise disturbance of riparian vegetation, the clearing will be undertaken in accordance the Rail Construction Environmental Management Plan (BHP-Billiton, 2004a). The large habitat trees will be avoided where possible and the clearing will be restricted to the minimum required (Ecologia, 2005b).

**Methodology** Ecologia, 2005b  
GIS Database:  
- Hydrography, linear - DOE 1/2/04  
- Wild Rivers - DEWCP 05/12/02  
- Rivers 250K - GA  
BHP-Billiton Iron Ore, 2004a

**(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**

**Comments Proposal is not likely to be at variance to this Principle**

The proposal is located in an already disturbed location and the areas for clearing are relatively small, so there is unlikely to be appreciable land degradation as long as the clearing and disturbance activities comply with the BHP Rail Construction Environmental Management Plan (BHP-Billiton Iron Ore, 2004a). Any disturbance to the banks of the Fortescue River should be done in compliance with the Department of Environment's Bed and Banks Policy and a permit should be sought if required.

**Methodology** Permit Application  
BHP-Billiton Iron Ore, 2004a

**(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.**

**Comments Proposal is not at variance to this Principle**

There are no conservation reserves in the vicinity of the proposed clearing.

**Methodology** GIS Database:  
- CALM Managed Lands and Waters - CALM 1/06/04

**(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.**

**Comments Proposal is not likely to be at variance to this Principle**

Part of the area proposed for clearing is located within the Newman Water Reserve and just downstream of the Ophthalmia Dam which is the water supply for Newman township. Therefore any clearing should avoid waterways and minimise disturbance to riparian areas within the catchment area.

The area proposed for clearing is relatively small and it is located downstream of the water supply so clearing is unlikely to degrade water quality.

**Methodology** GIS Database:  
- Hydrography, linear - DOE 1/2/04  
- Rivers 250K - GA

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.**

**Comments Proposal is not likely to be at variance to this Principle**

The area has an average annual rainfall of ~500mm, which falls predominantly over December to March with rainfall events often resulting in localised flooding. The proposal represents a relatively small amount of clearing, 14.4ha in three discontinuous patches, and would be unlikely to exacerbate natural flood regimes.

The development in and around the drainage line should be carefully managed to avoid erosion in the Wet season.

**Methodology** BHP-Billiton, 2004a

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

**Comments**

An indigenous site (Ethel Gorge Rockshelter Area) is listed on the Register of the National Estate and is located 300m from the proposed site. To avoid disturbance of any Aboriginal sites, clearing will be undertaken in accordance with the BHP-Billiton Rail Construction Environmental Management Plan (BHP-Billiton Iron Ore, 2004a).

The Pilbara Native Title Service has raised concern about the granting of a clearing permit as a future act under the Native Title Act. The DoE believes that Special Lease 3116/11333 has extinguished native title over the land the subject of that lease. Further, as the grant of clearing permit CPS 392 enables the permit applicant to perform any clearing necessary to exercise rights granted under Mineral Lease 244SA and Mining Lease 266SA, it constitutes a secondary approval. Accordingly, the CEO is not required to comply with future act procedures under the Native Title Act 1993.

A Bed and Banks permit is required before disturbance of the banks of a watercourse from the Department of Environment.

**Methodology** GIS Database:  
- Register of National Estate - EA 28/01/03  
BHP-Billiton Iron Ore, 2004a

### 4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Railway construction or maintenance	Mechanical Removal	14.4	Grant	Clearing should be carried out in accordance with the BHP-Billiton Railway Construction Environmental Management Plan and with consideration for the location within the Newman Water Reserve. Clearing of riparian vegetation should be minimised where possible. Any potential interference with the Fortescue River should be avoided and should only be carried out with appropriate Bed and Banks permits from the Department of Environment. The proponent should contact the Department of Conservation and Land Management with a view to developing a weed management plan for the control of Ruby Dock ( <i>Rumex vesicarius</i> ) within the Crown Lease.

### 5. References

BHP Billiton (2004a) BHP Billiton Iron Ore: Rail Construction Environmental Management Plan. Unpublished Document. DoE Reference: TRIM KNI712

BHP Billiton (2004b) BHPBIO Jumblebar-Newman: Rail Works. Unpublished Document. DoE Reference: TRIM KNI711

Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales ; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

Ecologia Environmental (2004a) BHPBIO On-going Works. Rail Development Project - Jumblebar Junction to Newman Rail Duplication. Unpublished Document. DoE Reference: TRIM KNI713

Ecologia Environmental (2005b) Jumblebar Wye Rail Junction: Priority Flora and Riparian Vegetation Assessment. Prepared for Mine and Port Developments Joint Venture. DoE Reference: TRIM KNI1083

Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.

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

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

### 6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)

DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DoE)