



1. Application details

1.1. Permit application details

Permit application No.: 516/1
Permit type: Purpose Permit

1.2. Proponent details

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

1.3. Property details

Property: LOT 65 ON PLAN 241430 (PIPPINGARRA 6722)
Local Government Area: Shire Of East Pilbara & Town Of Port Hedland
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
31		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
Beard vegetation association 93: Hummock grasslands, shrub steppe; kanji over soft spinifex	Tabba Siding: Scattered Grevillea wickhamii and various Acacia species over Triodia basedowii and Triodia epactia steppe (BHP Billiton, 2004). 8 hectares of vegetation is proposed to be cleared at this location.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The description of the vegetation to be cleared was obtained from a survey performed by staff at BHP Billiton (DoE Ref: TRIM KNI934) and the Permit application (DoE Ref: TRIM IN20514).
	Turner Siding: Scattered Corymbia hammersleyana, Acacia inequilatera over a mixed Triodia steppe (BHP Billiton, 2004). 10 hectares of vegetation is proposed to be cleared at this location.		
	Woodstock Siding: Scattered Acacia inequilatera over Acacia bivenosa and various Triodia species (BHP Billiton, 2004). 13 hectares of vegetation is proposed to be cleared at this location.		
	The railway associated with these three sidings has already been constructed, therefore some level of disturbance has already been experienced at each of these sites.		

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 of the area comprises hummock grasslands and a shrub steppe (Hopkins et al, 2001). There are no Environmentally Sensitive Areas present within or in close proximity to the application area. A flora survey performed by Ecologia Environment (2004) identified a total of 176 species from 37 families and 86 genera at

the three siding locations. Two weed species were located during the survey, *Cenchrus ciliaris* and *Aerva javanica* (Ecologia Environment, 2004) and during previous surveys *Acetosa vesicaria* has been located in the Newman area which is likely to be abundant in some locations within the Newman to Port Hedland railway line (BHP Billiton, 2005). Given the small size of clearing at each of the siding locations, there is a low likelihood of the area under application having a higher biodiversity than the surrounding area.

Methodology Ecologia Environment (2004);
BHP Billiton (2005)

(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 hummock grasslands and shrub steppe (Shepherd et al, 2001) would provide some habitat for fauna species, however the application area is three long, narrow strips which will only remove 8 hectares at Tabba siding, 10 hectares at Turner siding and 13 hectares at Woodstock siding (BHP Billiton, 2005).

Methodology Shepherd et al (2001);
BHP Billiton (2005);
Permit application

(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

One Priority 3 species was sampled within the application area, *Bulbostylis burbridgeae* (Ecologia Environment, 2004), however this species was only located at the Tabba siding area on granite outcrops (BHP Billiton, 2005). It is unlikely that the proposed clearing will pose a significant impact on this species, as it is recommended by BHP that granite outcrops are avoided during the construction of the sidings (BHP Billiton, 2005). This species was not identified during a desktop survey.

Methodology Ecologia Environment (2004);
BHP Billiton (2005);
GIS Database: Declared Rare and Priority Flora List - CALM 13/08/04

(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 within the area proposed for 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 likely to be at variance to this Principle

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment, 2002).

reserves/CALM-	Pre-European area (ha) *	Current extent (ha) *	Remaining %*	Conservation Status**	% in managed land
IBRA Bioregion - Pilbara	17,944,694	17,944,694	~100%	Least concern	15.17
Shire of East Pilbara	No information available				
Town of Port Hedland	No information available				
Beard vegetation associations - 93	3,376,354	3,376,354	~100%	Least concern	2.1

* Shepherd et al. (2001)

** Department of Natural Resources and Environment (2002)

Vegetation complexes within this application are above 30% representation. The vegetation of the site is a component of Beard Vegetation Association 93 (Hopkins et al, 2001), of which there is ~100% of the pre-European extent still remaining (Shepherd et al, 2001). The vegetation type is therefore of 'least concern' for biodiversity conservation (Department of Natural Resources and Environment, 2002).

Methodology Hopkins et al (2001);
Shepherd et al (2001);

(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 vegetation to be cleared is not associated with a wetland or watercourse.

Methodology GIS Database:
-Hydrology, linear - DOE 1/2/04
-RAMSAR, Wetlands - CALM 21/10/02

(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 method of vegetation clearing is by blade down mechanical removal which, due to the disturbance of the soil, may result in increased land degradation risks. However, given the small area proposed for disturbance and onsite management for erosion (Connell G, 2004), the clearing is unlikely to represent a significant land degradation risk.

Methodology Connell G (2004);
Permit Application

(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 likely to be at variance to this Principle**
There are no conservation areas adjacent to the areas proposed for clearing.

Methodology GIS Database: CALM Managed Lands and Waters - 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**
The proposed clearing area is not in a Public Drinking Water Source Area and is unlikely to provide a major input to the recharge of groundwater. Given the clearing is in a discontinuous pattern over three locations, it is unlikely the clearing will have a significant impact on surface water or groundwater quality.

Methodology GIS Databases:
-Public Drinking Water Source Areas (PDWSA's) - DOE 2/11/04
-Hydrographic Catchments - Catchments - DOE 3/4/03
-Hydrography, linear - DOE 1/2/04

(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**
Flooding occurs seasonally over the December to March period, where flood height and duration can be extreme. The clearing of 31 hectares of vegetation is unlikely to increase the likelihood of these natural flood events.

Methodology GIS Database: Rainfall, Mean Annual - BOM 30/09/01

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

Comments
The vegetation to be cleared is within Special Lease 3116/3687 granted in accordance with Section 116 of the *Land Administration Act 1997* and the *Iron Ore (Mt Newman) Agreement Act 1964*.

An objection was received to the proposed clearing on the basis that the granting of the clearing permit will constitute a future act under the *Native Title Act 1993*. The area under application also has three Native Title Claims over it by the Kariyarra peoples (WC99_003), the Kariyarra / Yinjibarndi peoples (WC95_053) and the Palyku peoples (WC99_016). However the Mineral Lease has been granted so therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

The proposed clearing occurs in an area that is covered by the following Registered Indigenous Heritage Sites - Kartangku Talu (ID 6679) and Turner River (Tjirrlil) (ID 6653). 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.

The Environmental Protection Authority's advice given under Section 48 (CRN 131091) and Section 38 (CRN 101109, 203378) does not relate to the proposed land use. The EPA's advice given under Section 38 (CRN 207086) is specific to this application, however the level of assessment was set at 'Not Assessed - Managed Under Part 5 of the *Environmental Protection Act 1986*' therefore assessment of the clearing permit is compatible with this recommendation.

New bores are likely to be required along the main Port Hedland to Newman railway to supply water for the construction of the proposed Tabba, Turner and Woodstock sidings and for dust suppression (BHP Billiton, 2005). The proponent will be required to obtain a groundwater licence under the *Rights in Water and Irrigation Act 1914*.

Methodology There are no other Works Approval or EP licence that will affect the area that has been applied to clear. BHP Billiton (2005); GIS Database:
 -Native Title Claims - DLI 19/12/04
 -Aboriginal Sites of Significance - DIA 04/07/02
 -Environmental Impact Assessments, Polygon Features - DOE 29/11/04
 Environmental Protection Authority (2003) CRN 203378
 Environmental Protection Authority (2004) CRN 207086
 Environmental Protection Authority (2003) CRN 203378
 Environmental Protection Authority (1998) CRN 131091

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Railway construction or maintenance	Mechanical Removal	31	Grant	Assessable criteria have been addressed and all submissions addressed. It is recommended that the proponent avoid areas of rocky granite outcrop to minimise impacts to <i>Bulbostylis burbidgeae</i> . The Assessing Officer recommends that the permit be granted.

5. References

- BHP Billiton (2005) BHPBIO Tabba Turner and Woodstock Siding: Vegetation Clearing Permit. Unpublished Document. DoE Reference: TRIM KNI934
- Connell G (2004) Environmental Management System: BHP-Billiton Iron Ore Rail Construction Environmental Management Plan. Prepared for BHP-Billiton. Unpublished Document. DoE Reference: TRIM KNI935
- 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 Environment (2004) BHPBIO On-going Works. Rail Development Project - Tabba, Turner and Woodstock Sidings. Unpublished Document. DoE Reference: TRIM KNI933
- 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)