



1. Application details

1.1. Permit application details

Permit application No.: 391/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

1.3. Property details

Property: LOT 47 ON PLAN 241374 (BOODARIE 6722)
LOT 46 ON PLAN 241368 (FINUCANE 6722)
LOT 125 ON PLAN 219861 (BOODARIE 6722)
UNALLOCATED CROWN LAND (SOUTH HEDLAND 6722)
LOT 379 ON PLAN 221147 (PIPPINGARRA 6722)
LOT 87 ON PLAN 213620 (PIPPINGARRA 6722)
LOT 65 ON PLAN 241430 (PIPPINGARRA 6722)
UNALLOCATED CROWN LAND (REDBANK 6721)
Local Government Area: Town Of Port Hedland
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
125		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
The area proposed for clearing traverses 5 of Beards vegetation communities: 43 - Low Forest; mangroves (Kimberley) or thicket; mangroves (Pilbara); 117 - Hummock grasslands, grass steppe; soft spinifex; 127 - Bare areas, mudflats; 589 - Mosaic: Short bunch grassland - savanna/grass plain (Pilbara) / Hummock grasslands, shrub-steppe; kanji over soft spinifex & T. basedowii; 647 - Hummock grasslands, dwarf-shrub steppe; Acacia translucens over soft spinifex (Shepherd et al., 2001).	Five vegetation communities were described in the vegetation survey by the consultants, within the site proposed for clearing: 1) Open Cenchrus ciliaris grassland and Triodia epactia hummocks; 2) Corymbia deserticola scattered trees over sparse Acacia colei var. colei shrubland over sparse Acacia stellaticeps over open Cenchrus ciliaris/Cenchrus echinatus grassland and open Triodia schinzii hummocks; 3) Sparse Acacia tumida/Carissa spinarum shrubland over moderately dense Acacia stellaticeps over sparse Cenchrus ciliaris grassland and open Triodia schinzii hummocks; 4) Salt marshes dominated by open, moderately dense to dense Halosarcia species low shrubland; and 5) Sparse Owenia reticulata over sparse Grevillea sp. with moderately dense Cenchrus spp. grassland (ecologia, 2004).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	A vegetation survey was conducted by ecologia in 2004 on behalf of BHP Billiton and an environmental management plan has been prepared for the proposed works.

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 area proposed for clearing is in an already built-up area adjacent to residential and industrial precincts of Port Hedland. There are no areas of ecological significance and the area is not expected to be of outstanding biological diversity.

Methodology GIS Database:

- Declared Rare and Priority Flora List - CALM 13/08/03
- Environmentally Sensitive Areas - DOE 22/10/04
- CALM Managed Lands and Waters - CALM 1/06/04

(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 may be at variance to this Principle**

The area proposed for clearing is potentially a habitat for the following species:

- Little North-western Mastiff Bat (*Mormopterus loriae cobourgiana*). Priority 1. This taxa is listed as 'Data Deficient' (IUCN (1994) Red List Categories) in the Action Plan for Australian Bats (Biodiversity Group Environment Australia, 1999). A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution is lacking. 'Data Deficient' is therefore not a category of threat or Lower Risk.
- Australian Bustard (*Ardeotis australis*) Priority 4

The condition of the vegetation under assessment has been assessed as ranging from good to highly degraded (ecologia Environment, 2004). Much of the clearing is aligned adjacent to the existing rail corridor and it is anticipated that the potential for impact on areas of pristine or non-degraded vegetation to be limited. Whilst there is potential for the proposed clearing to impact on the movement of fauna in the short term, this is expected to be minimal, considering the overall degraded nature of the surrounding residential and industrial areas and lack of significant habitat along the route alignment. It is possible for the project to be properly managed to minimise the impact on local fauna and habitat provided that proponent adheres to the recommendations contained within their document 'Rail Construction Environmental Management Plan', specifically the commitment (page 13) that 'All trenches, costins, pits and bores will be covered when not in use' (CALM, 2005). There appears to be a low probability of the proposed clearing to be at variance with Principle (b)

Methodology CALM, 2005

Ecologia Environmental, 2004

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

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

No Declared Rare Flora (DRF) or Priority flora were recorded in the survey area along the existing rail infrastructure corridor (ecologia Environment, 2004). The condition of the vegetation within the proposed area of disturbance ranges from good to highly degraded. There are sand tracks running along much of the southern rail line, with the existing bitumen road making up much of the 50 metre corridor between Boodarie and Finucane island.

The information available indicates that there appears to be a low likelihood of DRF and/or Priority Flora being present within the vicinity of the proposed clearing. The management protocols specified in the supporting documentation and Rail Construction Environmental Management Plan are considered to be sufficient in limiting any deleterious impact on native vegetation (CALM, 2005). There appears to be a low probability of the proposed clearing to be at variance with Principle (c).

Methodology CALM, 2005;

GIS Database:

- Declared Rare and Priority Flora List - CALM 13/08/03
- Ecologia Environmental, 2004
- Threatened Plant Communities - DEP 06/95
- Environmentally Sensitive Areas - DOE 22/10/04

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a significant ecological community.

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

No Threatened Ecological Communities (TEC) have been recorded in the local area. There appears to be a low probability of the proposed clearing to be at variance with Principle (d).

Methodology CALM, 2005;
GIS Database:
- Threatened Ecological Communities - CALM 15/7/03
- Environmentally Sensitive Areas - DOE 22/10/04

(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 area proposed for clearing traverses three of Beards vegetation communities: 127 - Bare areas, mudflats; 589 - Mosaic: Short bunch grassland - savanna/grass plain (Pilbara) / Hummock grasslands, shrub-steppe; kanji over soft spinifex & T. basedowii; 647 - Hummock grasslands, dwarf-shrub steppe; Acacia translucens over soft spinifex (Shepherd et al., 2001).

There is approximately 100% of the Pre-European extent remaining of all three of these vegetation communities so the clearing proposal is not expected to significantly affect the regional representation of these vegetation types (Hopkins et al, 2001).

Methodology Shepherd et al, 2001
Hopkins et al, 2001
GIS Database: Pre-European Vegetation - DA 01/01

(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**

There is a nationally important wetland located approximately 7km from the proposed clearing comprising the Leslie Saltfields (mangroves, lake and saline coastal flats), however the distance from the proposal is considered adequate as a buffer and not significant due to the nature of the existing built-up environment.

Methodology GIS Database:
- ANCA, Wetlands - CALM 08/01

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

Comments

The assessment identified the potential for spreading of declared weeds and weeds of concern, especially in riverine land surrounding the DeGrey and Strelley Rivers. These areas are currently infested with declared plants Parkinsonia (Parkinsonia aculeata) and Calotropis (Calotropis procera). Under the Agriculture and Related Resources Protection Act 1976 these species are not to be spread and should be eradicated. Another species of concern in that area is Indigofera longifolia. Strategies to reduce the spread of these weeds should be undertaken. To assist in this regard, it is suggested that the proponent liaise with the Department of Agriculture's Biosecurity Officer in Port Hedland (DAWA, 2005).

The assessment indicated that implementation of the management strategies outlined in the supporting documentation Nelson Point and Finucane Island Rail Works of October 2004 and Rail Construction Environmental Management Plan submitted with the permit application should address potential land degradation risks which may result from the intended clearing. In particular, the proposal includes management procedures to minimise disturbance to surface water flows and impacts on the quality of surface water, and for rehabilitation of disturbed areas (including borrow pits).

Therefore, the proposed clearing of 125 hectares for the purposes outlined in the clearing application (railway and road construction, maintenance, and fitting of an optic fibre cable) is not liable to cause appreciable on site and off site land degradation with the implementation of appropriate management strategies to address resultant impacts.

Methodology DAWA, 2005

(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**

No CALM managed conservation areas are in the vicinity of the proposed clearing. There appears to be a low probability of the proposed clearing to be at variance with Principle (h) (CALM, 2005).

Methodology CALM, 2005;
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

Surface drainage around the areas proposed for clearing will be managed in accordance with 'Rail Construction EMP management procedures (Surface Water - PR-EMP-008)' to ensure that the activities will not result in significant impact on natural drainage patterns or have potential to impact surface water quality (BHP Billiton, 2004 a/b).

Methodology BHP Billiton - Nelson Point and Finucane Island Rail Works, 2004 (a)
BHP Billiton - Rail Construction Environmental Management Plan, 2004 (b)

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

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

The proposed clearing is not expected to exacerbate the incidence of flooding. Surface water drainage will only be disturbed in accordance with BHP's Environmental Management system which aims to avoid disturbance and minimise disturbance (BHP Billiton, 2004 b)

Methodology BHP Billiton Iron Ore - Rail Construction Environmental Management Plan (2004 b)
GIS Database:
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The Pilbara Native Title Service raised concerns that the clearing of significant areas of vegetation may be a matter that affects native title, through the future act processes of the Native Title Act 1993. The areas for proposed clearing are under Special Lease agreements and under the granting of those leases native title has been extinguished, therefore the clearing should not fall under the future acts process (DoE Legal Advice, 2005).

Methodology Pilbara Native Title Service, 2005
DoE Legal Advice

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Railway construction or maintenance	Mechanical Removal	125		<p>The area proposed for clearing is already quite disturbed, being largely within the built up town centre of Port Hedland. The proposal does not impact on any identified areas of ecological sensitivity or significance. The clearing of native vegetation will be carried out in accordance with an environmental management plan.</p> <p>It is recommended that the proponent contact the Department of Agriculture (Port Hedland Biosecurity Officer) regarding weed management.</p>

5. References

- BHP Billiton Iron Ore - Nelson Point and Finucane Island Rail Works (2004a)
- BHP Billiton Iron Ore - Rail Construction Environmental Management Plan, (2004b)
- Department of Agriculture Western Australia (2005) (Office of the Commissioner of Soil and Land Conservation) Application for clearing permit CPS 391/1 BHP Billiton Iron Ore Pty Ltd Nelson Point and Finucane Island rail works. Unpublished Document. Department of Environment: TRIM KNI655.
- Department of Conservation and Land Management (2005) Application for clearing permit CPS 391/1 BHP Billiton Iron Ore, Crown Lease GE I-154279 along the BHP railway lease between Nelson Point and Finucane Island. Unpublished report. Department of Environment reference: TRIM KNI626.
- 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.
- Pilbara Native Title Service (2005) Submission. Department of Environment reference: TRIM IN19944.
- 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.
- Town of Port Hedland (2005) Submission. Department of Environment reference: TRIM KNI664.