GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4540/1
Permit Holder:	BHP Billiton Iron Ore Pty Ltd
Duration of Permit:	24 October 2011 – 24 October 2016

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. **Purpose for which clearing may be done**
   Clearing for the purpose of Jimblebar Mine Project power infrastructure construction, maintenance and associated works.

2. **Land on which clearing is to be done**
   Great Northern Highway road reserve, Newman 6753 (Lot 175 on Deposited Plan 219293, Newman 6753)
   Lot 17 on Deposited Plan 219293, Newman 6753
   Unallocated Crown Land, Newman 6753

3. **Area of Clearing**
   The Permit Holder must not clear more than 0.5 hectares of native vegetation within the area hatched yellow on attached Plan 4540/1.

4. **Application**
   This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. **Type of clearing authorised**
   This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the power to clear native vegetation for those activities under the *Land Administration Act 1997* or any other written law.

6. **Compliance with Assessment Sequence and Management Procedures**
   Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

7. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

(a) avoid the clearing of native vegetation;
(b) minimise the amount of native vegetation to be cleared; and
(c) reduce the impact of clearing on any environmental value.

8. Weed control

(a) When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds*:
    (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
    (ii) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
    (iii) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

9. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

(a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared
(b) within 12 months following clearing authorised under this permit, *revegetate* and *rehabilitate* the area(s) that are no longer required for the purpose for which they were cleared under this Permit by laying the vegetative material and topsoil retained under condition 9(a) on the cleared area.
(c) within 2 years of laying the vegetative material and topsoil on the cleared area in accordance with condition 9(b) of this Permit:
    (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
    (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 9(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used
(d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 9(c)(ii) of this permit, the Permit Holder shall repeat condition 9(c)(i) and 9(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
(e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 9(c)(i) and (ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 9(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 9(c)(ii).

PART III - RECORD KEEPING AND REPORTING

10. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

(a) the species composition, structure and density of the cleared area;
(b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
(c) the date that the area was cleared; and
(d) the size of the area cleared (in hectares).

DEFINITIONS

The following meanings are given to terms used in this Permit:

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

fill means material used to increase the ground level, or fill a hollow;

local provenance means native vegetation seeds and propagating material from natural sources within 50 kilometres of the area cleared.

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

regenerate/ed/ion means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

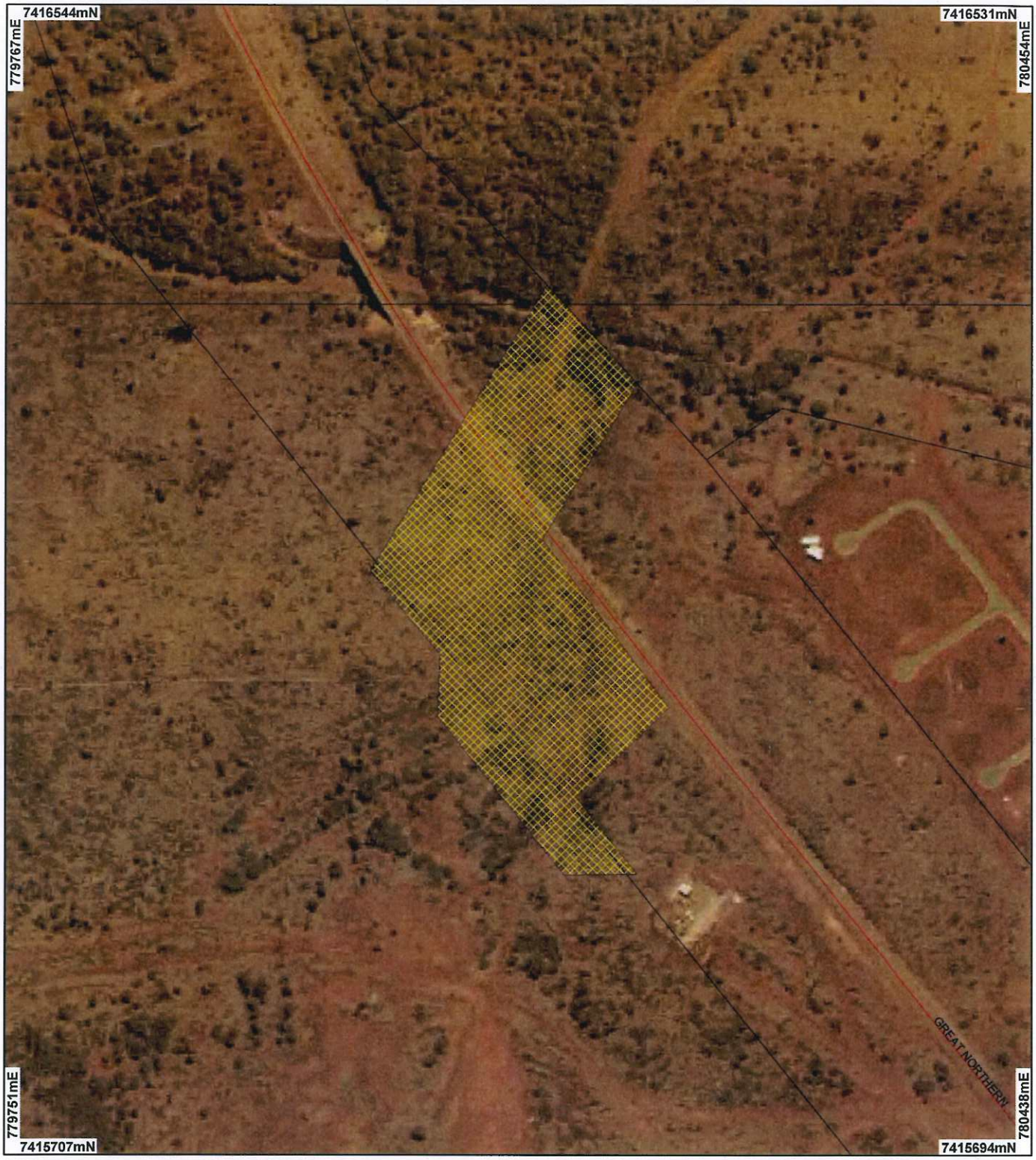
weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976.*

Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

Officer delegated under Section 20
of the Environmental Protection Act 1986

29 September 2011

Plan 4540/1



LEGEND

- Road Centrelines
- Cadastre for labelling
- Clearing Instruments
- Areas Approved to Clear

Newman 1.4m Orthomosaic - Landgate 2003

N

0 ~100 m

Scale 1:3827
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

K Faulkner ..... Date 29/9/11

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowleged by the agency acronym in the legend.

Department of Environment and Conservation

Our environment, our future

** Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.*

Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4540/1
Permit type: Purpose Permit

1.2. Proponent details

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

1.3. Property details

Property: UNALLOCATED CROWN LAND (NEWMAN 6753)
LOT 175 ON PLAN 219293 (NEWMAN 6753)
LOT 176 ON PLAN 219293 (NEWMAN 6753)
Local Government Area: Shire of East Pilbara
Colloquial name: Great Northern Highway Road Reserve

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.5		Mechanical Removal	Water/gas/cable/pipeline/power installation

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 29 September 2011

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 vegetation under application is mapped as Beard vegetation association 18: woodland- mulga (*Acacia aneura*).	The application is to clear up to 0.5 hectares within a 4.05ha footprint area of native vegetation within the Great Northern Highway Road reserve, Newman, for the purpose of Jimblebar Mine Project power infrastructure construction, maintenance and associated works. The vegetation under application was indentified during a 2009 survey as consisting of three vegetation types; 1) Hummock grassland of Triodia sp. Shovelanna Hill (S. van Leeuwen 3835) and Triodia pungens with Open Shrubland of Acacia bivenosa and Acacia aneura var. aneura with scattered low trees of Eucalyptus leucophloia subsp. Leucophloia. 2) Open hummock grassland of Triodia pungens with open shrubland of Acacia aneura var. aneura, Acacia bivenosa and Acacia synchronicia with scattered trees of Corymbia aspera. The riparian vegetation in the northeast of the application area, associated with Whaleback Creek, was identified in 2008 as: 3) Moderately dense Acacia citrinoviridis, sometimes with Acacia aneura var. aneura medium trees, over scattered mixes Corymbia aspera and Corymbia candida subsp. dipsodes low trees, over scattered Rhagodia eremaea medium shrubs, over moderately dense Cenchrus ciliaris (tussock grass). The applicant has advised the 0.5ha proposed to be cleared consists of predominantly degraded land, with some areas in good to excellent condition, adjacent to the 66kV transmission line poles and existing access tracks (BHP, 2011).	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)	The vegetation condition and description was determined from 2009 survey results supplied by the applicant (ENV, 2009).

3. Assessment of application against clearing principles

Comments

Proposal is not likely to be at variance to this Principle

The proposal is to clear up to 0.5 hectares within a 4.05ha footprint area of native vegetation within the Great Northern Highway Road reserve, Newman, for the purpose of Jimblebar Mine Project power infrastructure construction, maintenance and associated works is unlikely to have any significant environmental impacts.

The works include upgrading existing access tracks, construction of access tracks and vehicle turnaround areas, installation of a power pole foundation, stringing of optical ground wire and installation of structure poles. The area under application is adjacent to the Great Northern Highway, approximately 200m north of BHP's Kurra Village and 1km north of the township of Newman (BHP, 2011).

The vegetation is considered to range from a degraded to excellent condition due to the presence of weeds, proximity to existing infrastructure, and previous disturbance from mining and stock grazing (BHP, 2011).

There are no declared rare flora species or threatened ecological communities in the vicinity of the project. The vegetation to be cleared is well represented in the local area, does not comprise a higher level of biological diversity than the surrounding area is unlikely to have a detrimental impact on fauna due to the proximity to the Great Northern Highway.

The applicant has advised one individual of the priority 4 flora species *Goodenia nuda* was recorded approximately 700m northeast of the application area in a 2009 survey (ENV, 2009) and is likely to occur within the application area (BHP, 2011). However, due to the small amount of clearing (0.5ha) within a large area of suitable habitat for this species in the surrounding landscape it is unlikely this species is dependent on habitat in the application area.

Whaleback Creek runs through the northeast corner of the application area therefore the proposed clearing may be at variance to Principle (f) if vegetation associated with this watercourse is cleared.

The applicant has advised the clearing of native vegetation associated with watercourses will not occur, a minimum set back of 50m from drainage lines will be implemented, and clearing and land disturbance during the Jimblebar Mine Project will be minimised and best practice management standards will be implemented in accordance with BHPBIO's Environmental Management System (BHP, 2011).

The assessment of the application identified that the clearing may be at variance to Principle (f) and is not or not likely to be at variance to any of the principles.

Methodology

BHP, 2011
DoW, 2011

GIS Databases:
- Hydrography, linear
- SAC Bio Datasets (Accessed 19 August 2011)
- Pre- European Vegetation

Planning instruments, Native Title, Previous EPA decisions or other matters.

Comments

The area under application falls within both a proclaimed surface water area and groundwater area under the *Rights in Water and Irrigation Act 1914* (RIWI Act).

Any taking or diversion of surface water in this proclaimed are for purposes other than domestic and/or stock watering is subject to a licence by the DoW. Where the clearing area intersects a waterway not within a BHPBIO tenement, the normal regulatory instruments under the RIWI Act may apply (DoW, 2011).

Any groundwater abstraction in this proclaimed area is subject to licensing by the DoW. The issuing of a groundwater licence is not guaranteed but if issued will contain a number of conditions that are binding upon the landowners (DoW, 2011). DoW is satisfied the proposed clearing of 0.5ha for the purpose of power infrastructure construction, maintenance and associated works 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 BHPBIO's construction environmental management plans (DoW, 2011).

DoW advise that all activities associated with the clearing, including infrastructure, laydown areas, refuelling and topsoil storage, should be compatible with DoW's Land Use Compatibility Tables, managed using current best practices and follow the DoW's Water Quality Protection Notes and Guidelines (DoW, 2011).

The applicant has advised they will progressively rehabilitate areas associated with temporary works no longer required for the Jimblebar Mine Project (BHP, 2011).

The proposed clearing is within the Nyiyaparli People Native Title Claim. The applicant has advised they will

avoid all heritage sites where possible and seek approval to disturb an Aboriginal Heritage Site in accordance with the provisions of the *Aboriginal Heritage Act 1972* if necessary (BHP, 2011).

No Aboriginal Sites of Significance are mapped within the application area.

Methodology

BHP, 2011
DoW, 2011

GIS Databases;
- Aboriginal Sites of Significance

4. References

BHP (2011) Great Northern Highway 66kV Transmission Line Crossing- Application for a Native Vegetation Clearing Permit (Purpose Permit) under the Environmental Protect Act 1986, BHP Billiton, WA.

DoW (2011) Clearing permit application CPS 4540/1 - Direct Interest Response. Department of Water, Pilbara Region, Western Australia. Received 8/09/2011. DEC Ref: A429220).

ENV (2009) Orebody 25 to Newman Flora and Vegetation Assessment, ENV, Western Australia.

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

Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

5. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
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 DEC)