



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 3738/4
Permit Holder:	BHP Billiton Iron Ore Pty Ltd
Duration of Permit:	9 October 2010 – 9 October 2015

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 haul road construction, realignment of existing road and installation of mining support infrastructure.

2. Land on which clearing is to be done

Lot 101 on Plan 238018, Marble Bar

3. Area of Clearing

The Permit Holder must not clear more than 44 hectares of native vegetation within the area shaded yellow on attached Plan 3738/4.

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 *Iron Ore (Mount Goldsworthy) Agreement Act 1964* 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:

- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- reduce the impact of clearing on any environmental value.

8. Flora management

- (a) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *botanist* to inspect that area for the presence of rare flora listed in the *Wildlife Conservation (Rare Flora) Notice 2010* and *priority flora*.
- (b) Where rare flora or *priority flora* are identified in relation to condition 8(a) of this Permit, the Permit Holder shall ensure that:
 - (i) no clearing occurs within 50 metres of identified rare flora, unless approved by the CEO; and
 - (ii) no clearing of identified *priority flora* occurs and no clearing occurs within 50 metres of identified *priority flora*, unless approved by the CEO.

9. 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.
- (b) At least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

10. 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 6 months following clearing authorised under this permit, *revegetate* and *rehabilitate* the area(s) that are no longer required for haul road construction, realignment of existing road and installation of mining support infrastructure by:
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
 - (ii) ripping the ground on the contour to remove soil compaction; and
 - (iii) laying the vegetative material and topsoil retained under condition 10(a) on the cleared area(s) that are no longer required for haul road construction, realignment of existing road and installation of mining support infrastructure.
- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 10(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 10(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.

PART III - RECORD KEEPING AND REPORTING

11. Records must be kept

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

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the species composition, structure and density of the cleared area;
 - (ii) 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;
 - (iii) the date that the area was cleared; and
 - (iv) the size of the area cleared (in hectares).

- (b) In relation to flora management pursuant to condition 8 of this Permit:
 - (i) the location of each rare and/or *priority flora* species recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (ii) the species name of each rare and/or *priority flora* species identified; and
 - (iii) a copy of the botanist's flora survey report.
- (c) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 10 of this Permit:
 - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares); and
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*.

12. Reporting

- (a) The Permit Holder must provide to the CEO on or before 1 October of each year, a written report:
 - (i) of records required under condition 11 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 July of the preceding year and 30 June of that year.
- (b) Prior to 2 July 2015, the Permit Holder must provide to the CEO a written report of records required under condition 11 of this Permit where these records have not already been provided under condition 12(a) of this Permit.

Definitions

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

botanist means a person with specific training and/or experience in the ecology and taxonomy of Western Australian flora;

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 100 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;

priority flora means those plant taxa described as priority flora classes 1, 2, 3 or 4 in the *Department's Declared Rare and Priority Flora List for Western Australia* (as amended);

regenerate/ed/ion means *revegetation* that can be established from in situ seed banks 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 *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*.

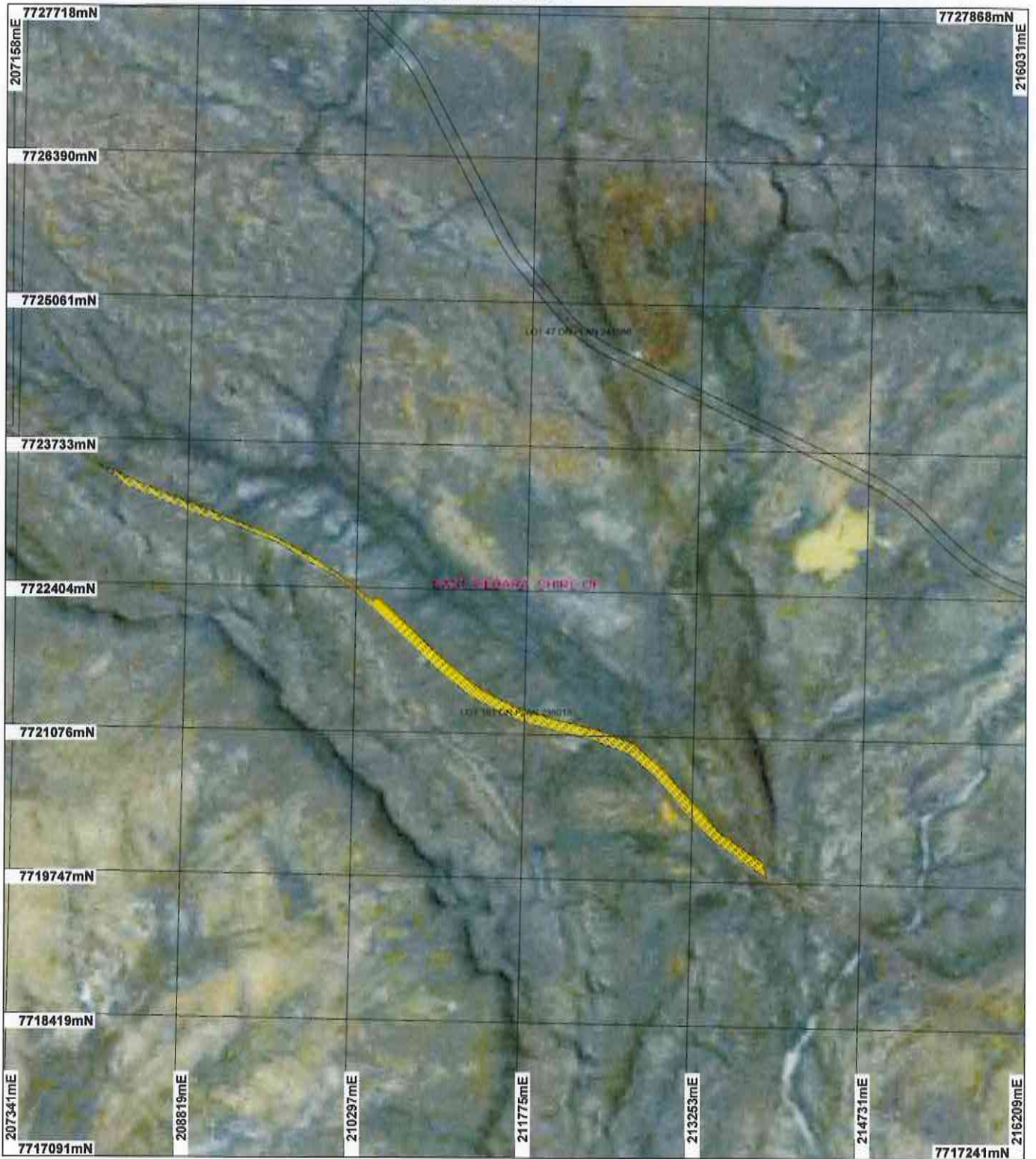
A handwritten signature in black ink, appearing to read 'K Faulkner', is written over a horizontal line.

Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

10 May 2012

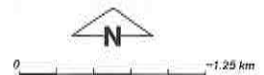
Plan 3738/4



LEGEND

Clearing Instruments
 Areas Approved to Clear

**Western Australia Landsat
 Mosaic 25m - AGO 2006**



Scale 1:48825
 (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.

Date 10/5/12
 K. Faulkner

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



**Department of
 Environment and Conservation**

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1. Application details

1.1. Permit application details

Permit application No.: 3738/4
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

1.3. Property details

Property: LOT 101 ON PLAN 238018 (House No. 101 WARRAWAGINE MARBLE BAR 6760)
Local Government Area: Shire of East Pilbara
Colloquial name: Cundaline Haul Road

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 10 May 2012

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 Associations: 93: Hummock grasslands, shrub steppe; kanji over soft Spinifex 171: Hummock grasslands, low tree steppe; snappy gum over soft Spinifex and Triodia brizoides (Shepherd, 2009).	BHP Billiton Iron Ore Pty Ltd (BHP) proposes to clear up to 44 hectares of native vegetation for the purpose of constructing a haul road of up to 40m width, realigning the existing light vehicle track and installing mining support infrastructure such as power lines, optic fibre cable and water pipelines. The proposed haul road will follow the existing light vehicle road from the Cundaline Mine and link with a pre-existing haul road between Cattle Gorge and Yarrie.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation condition was determined from aerial photography, photographs and descriptions of the vegetation surveyed in previous studies of the surrounding area (Ecologia, 2005; ENV, 2008).

The area under application is situated in the Pilbara bioregion and landforms in the area include low hills and rocky slopes, plains and floodplains (BHP, 2010). The vegetation under application is considered to be in a good to degraded condition due to disturbance by the construction and operation of vehicular tracks, railway and associated infrastructure.

3. Assessment of application against clearing principles

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

This amendment has been made to increase the applied footprint area by 6.7ha and to increase the clearing area by 4ha.

A review of current environmental information reveals no new additional information. Therefore, the assessment against the clearing principles has not changed and can be found in the Clearing Permit Decision Report CPS 3738/1.

Methodology

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

Comments

The proponent has applied to increase the application footprint area by 6.7ha and to increase the clearing area by 4 ha.

Methodology

4. References

- BHP (2010) Clearing permit application - supporting information. BHP Billiton Iron Ore Pty Ltd. DEC Ref: A302644, A322660, A333578
- Ecologia (2005) Goldsworthy Extension Project, Cattle Gorge Haul Road Biological Assessment Survey. Report prepared for BHP Billiton Iron Ore Pty Ltd. DEC Ref: A302645
- ENV (2008) Goldsworthy Iron Ore Mining Operations - Cundaline and Callawa Mining Operations, Flora and Vegetation Assessment. Report prepared for BHP Billiton Iron Ore Pty Ltd. DEC Ref: A302645
- 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)