



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4103/1
Permit Holder:	The Pilbara Infrastructure Pty Ltd
Duration of Permit:	7 March 2011 – 7 March 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 creating an access track to undertake geotechnical and hydrological investigations.

2. Land on which clearing is to be done

Lot 82 on Plan 220191 Chichester
Lot 116 on Plan 220191 Chichester
Lot 118 on Plan 221014 Chichester
Lot 119 on Plan 221014 Chichester
Lot 206 on Plan 221014 Chichester
Lot 207 on Plan 221014, Chichester
Lot 190 on Plan 91708, Marble Bar
unallocated Crown land, Marble Bar

3. Area of Clearing

The Permit Holder must not clear more than 19 hectares of native vegetation within the combined areas hatched yellow on attached Plan 4103/1a and Plan 4103/1b.

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.
- (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.

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 six 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 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 9(a) on the cleared area(s).
- (c) within 24 months 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.

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) 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 the *revegetation* and *rehabilitation* of areas pursuant to condition 9 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*.

11. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
- (i) of records required under condition 10 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 3 November 2015, the Permit Holder must provide to the CEO a written report of records required under condition 10 of this Permit where these records have not already been provided under condition 11(a) of this Permit.

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 *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;

term means the duration of this Permit, including as amended or renewed;

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*.

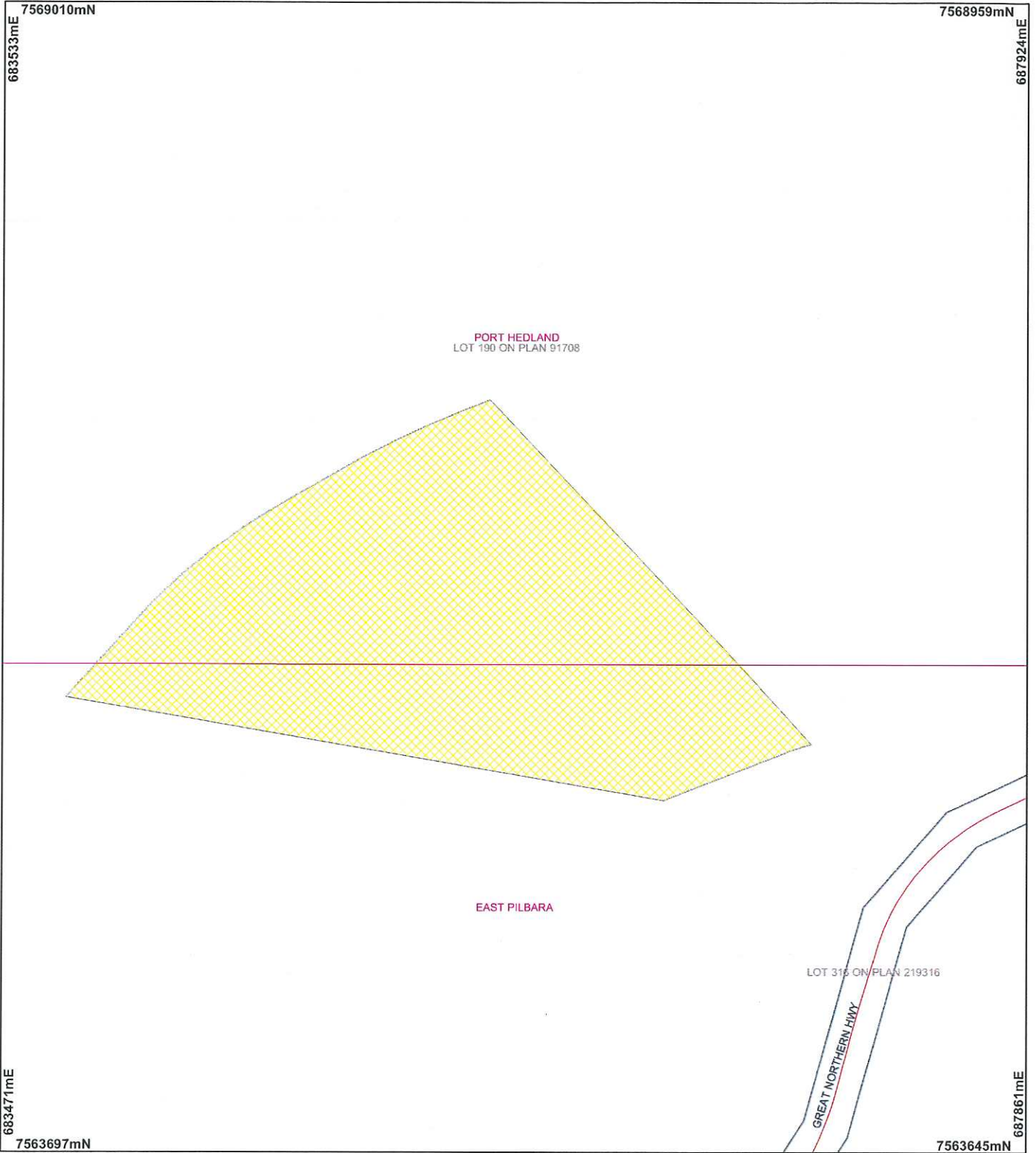


Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

10 February 2011

Plan 4103/1a



LEGEND

- | | |
|---|---|
| Clearing Instruments | <input type="checkbox"/> Local Government Authorities |
| <input checked="" type="checkbox"/> Areas Approved to Clear | |
| <input checked="" type="checkbox"/> Road Centrelines | |
| <input type="checkbox"/> Cadastre | |
| <input type="checkbox"/> Cadastre for labelling | |



Scale 1:24328
 (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 10/2/11

K Faulkner
 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 acknowledged by the agency acronym in the legend.

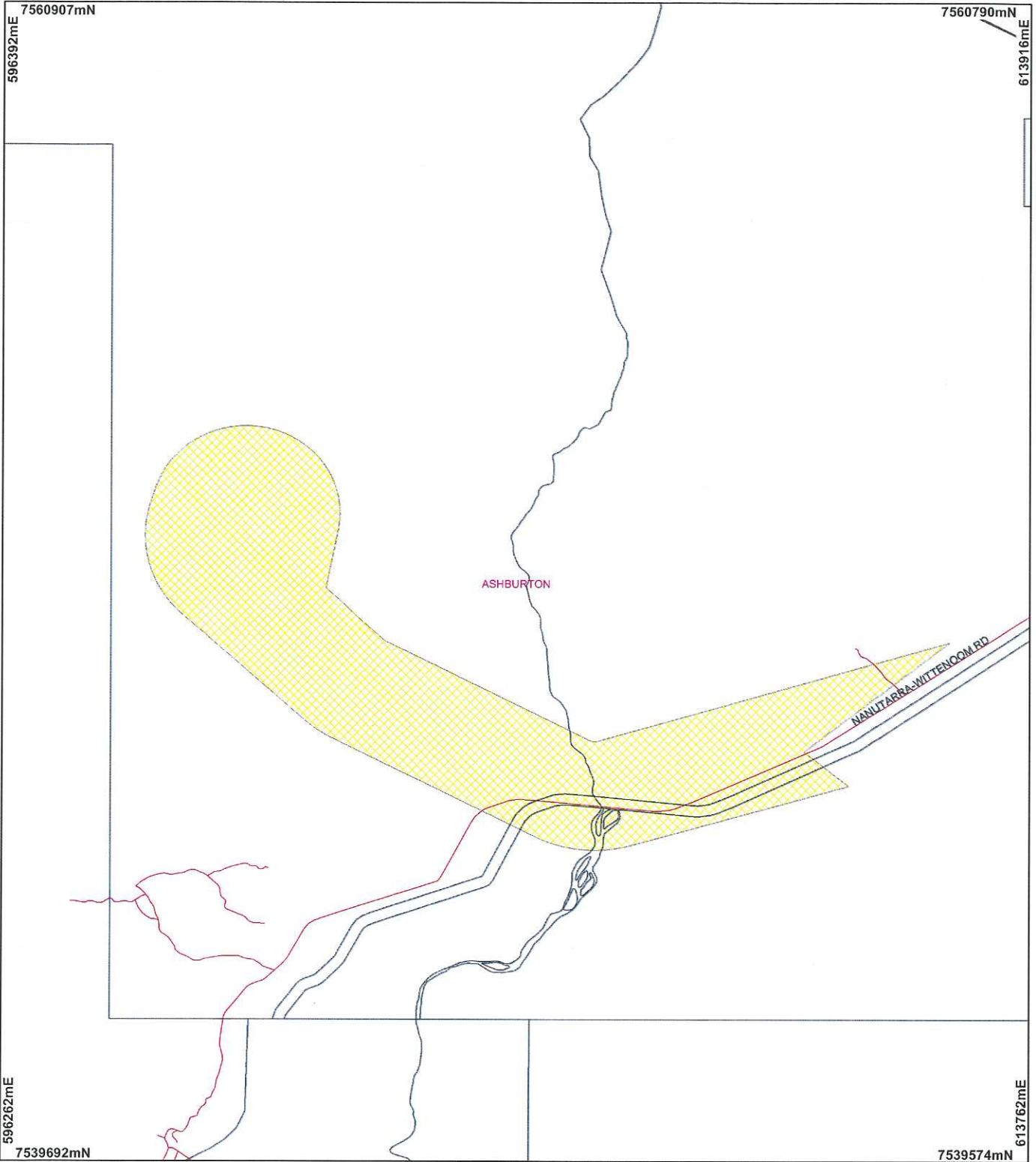


Department of Environment and Conservation

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

Plan 4103/1b



LEGEND

- | | |
|-----------------------------|------------------------------|
| Clearing Instruments | Local Government Authorities |
| Areas Approved to Clear | |
| Road Centrelines | |
| Cadastre | |
| Cadastre for labelling | |



Scale 1:97120
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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Date 10/2/11

K Faulkner

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



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1. Application details

1.1. Permit application details

Permit application No.: 4103/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: The Pilbara Infrastructure Pty Ltd

1.3. Property details

Property:
 LOT 116 ON PLAN 220191 (CHICHESTER 6751)
 LOT 82 ON PLAN 220191 (CHICHESTER 6751)
 LOT 207 ON PLAN 221014 (CHICHESTER 6751)
 WATER FEATURE (CHICHESTER 6751)
 UNALLOCATED CROWN LAND (CHICHESTER 6751)
 LOT 118 ON PLAN 221014 (CHICHESTER 6751)
 LOT 190 ON PLAN 91708 (MARBLE BAR 6760)
 UNALLOCATED CROWN LAND (MARBLE BAR 6760)

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
19		Mechanical Removal	Geotechnical investigations

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 10 February 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
82: Hummock grasslands, low tree steppe; snappy gum over <i>Triodia wiseana</i>	The proposal to clear 19 hectares of native vegetation is for the purpose of constructing an access track to undertaken geotechnical and hydrological investigations for the proposed Solomon Rail Spur. All works will be undertaken and managed in accordance with Fortescue Metals Group Limited, Exploration Environmental Management Plan (FMG, 2008).	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	Vegetation Condition was determined using Ecoscape (Australia) Pty Ltd (2010)'s, Flora and Vegetation Assessment Solomon Rail Project.
111: Hummock grasslands, shrub steppe; <i>Eucalyptus gamophylla</i> over hard spinifex, and		Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	As above
173: Hummock grasslands, shrub steppe; kanji over soft spinifex & <i>Triodia wiseana</i> on basalt (Shepherd (2009))		Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	As above
As above		Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	As above
As above			

3. Assessment of application against clearing principles

Comments

The proposed clearing of 19 hectares of native vegetation is for the purpose of constructing an access track to

undertake geotechnical and hydrological investigations for the proposed Solomon Rail Spur. All works will be undertaken and managed in accordance with Fortescue Metals Group Limited, Exploration Environmental Management Plan (FMG, 2008).

The vegetation under application is considered to be in a degraded to excellent (Keighery, 1994) condition. Parts of the area has been degraded by weeds and grazing (FMG, 2010). The proponent should endeavour to prevent the spread of these weeds into new areas.

No recorded threatened fauna, rare flora or threatened ecological communities are known to occur within the area in which clearing is proposed. Approximately 100% of pre-European vegetation remains for recorded vegetation associations and the Pilbara bioregion has 99.89% of vegetation extent remaining (Shepherd, 2009).

The application area crosses an area associated with the Fortescue River and contains vegetation broadly identified as creek line / drainage line and Mulga Woodlands. Mulga communities, particularly those fringing the Fortescue River are considered to be regionally significant. Sheet flow resulting from land clearing may impact on the surrounding sensitive Mulga communities within this area. Therefore there will be some disturbance to vegetation associated with watercourses and wetlands. Appropriate management measures should be adopted to minimise impacts on these vegetation communities.

Methodology GIS Databases:
- DEC Managed Lands & Waters - DEC 28/10/09
- Pre-European vegetation - DA 01/01
- ANCA, Wetlands - 26/03/99
- Hydrogeology, statewide - DoW 13/07/06
- Hydrography, linear - DoW 13/7/06
- SAC Biodatasets - 04/01/11
Keighery, 1994
Shepherd, 2009
FMG, 2010

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

Comments

The applicant has a Section 182 Licence under the Land Administration Act 1997 for the application area. This is to undertake feasibility studies for a portion of the Solomon Rail (A363171).

Native Title notification was given to the Kariyarra People, Palyku and Yamatji Marlpa Aboriginal Corporation. No response was received.

Methodology

4. References

- Ecoscope (Australia) Pty Ltd (2010), Flora and Vegetation Assessment Solomon Rail Project. DEC Ref: A348267
FMG (2008) Fortescue Metals Group Limited - Exploration Environmental Management Plan. DEC Ref: A318411
FMG (2010). Supporting information for Clearing Permit application - Solomon Rail Access Track, Part 2. 7 December 2010. A353884
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)