GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4317/1
Permit Holder:	Hamersley Iron Pty Ltd
Duration of Permit:	20 June 2011 – 20 June 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 powerline installation, access tracks and associated activities.

2. **Land on which clearing is to be done**
   Licence number 00616-1983_5_67 located within the following properties:
   Lot 26 on Plan 241873 (Tom Price 6751)
   Lot 10 on Plan 241873 (Tom Price 6751)
   Lot 20 on Plan 47816 (Tom Price 6751)
   Lot 3000 on Plan 44791 (Tom Price 6751)
   Lot 3013 on Plan 44791 (Tom Price 6751)
   Tom Price – Paraburdoo Road Reserve (Tom Price 6751)
   Lot 36 on Plan 51845 (Tom Price 6751)
   Unallocated Crown Land (Mount Sheila 6751)
   Lot 8 on Plan 241372 (Mount Sheila 6751)
   Lot 358 on Plan 58290 (Mount Sheila 6751)
   Lot 3007 on Plan 58290 (Mount Sheila 6751)

3. **Area of Clearing**
   The Permit Holder must not clear more than 8 hectares of native vegetation within the area shaded yellow on attached Plan 4317/1.

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 in accordance with of the *Land Administration Act 1997 (WA)* 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. Watercourse

(a) Where practicable the Permit Holder shall avoid clearing riparian vegetation.
(b) Where a watercourse is to be impacted by clearing, the Permit Holder shall maintain the existing surface flow of that watercourse by use of culverts.

10. Records to be kept

The Permit Holder must maintain the following records in relation to the clearing of native vegetation authorised under this Permit:

(a) 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 or decimal degrees;
(b) the date that the area was cleared; and
(c) the size of the area cleared (in hectares).

11. Reporting

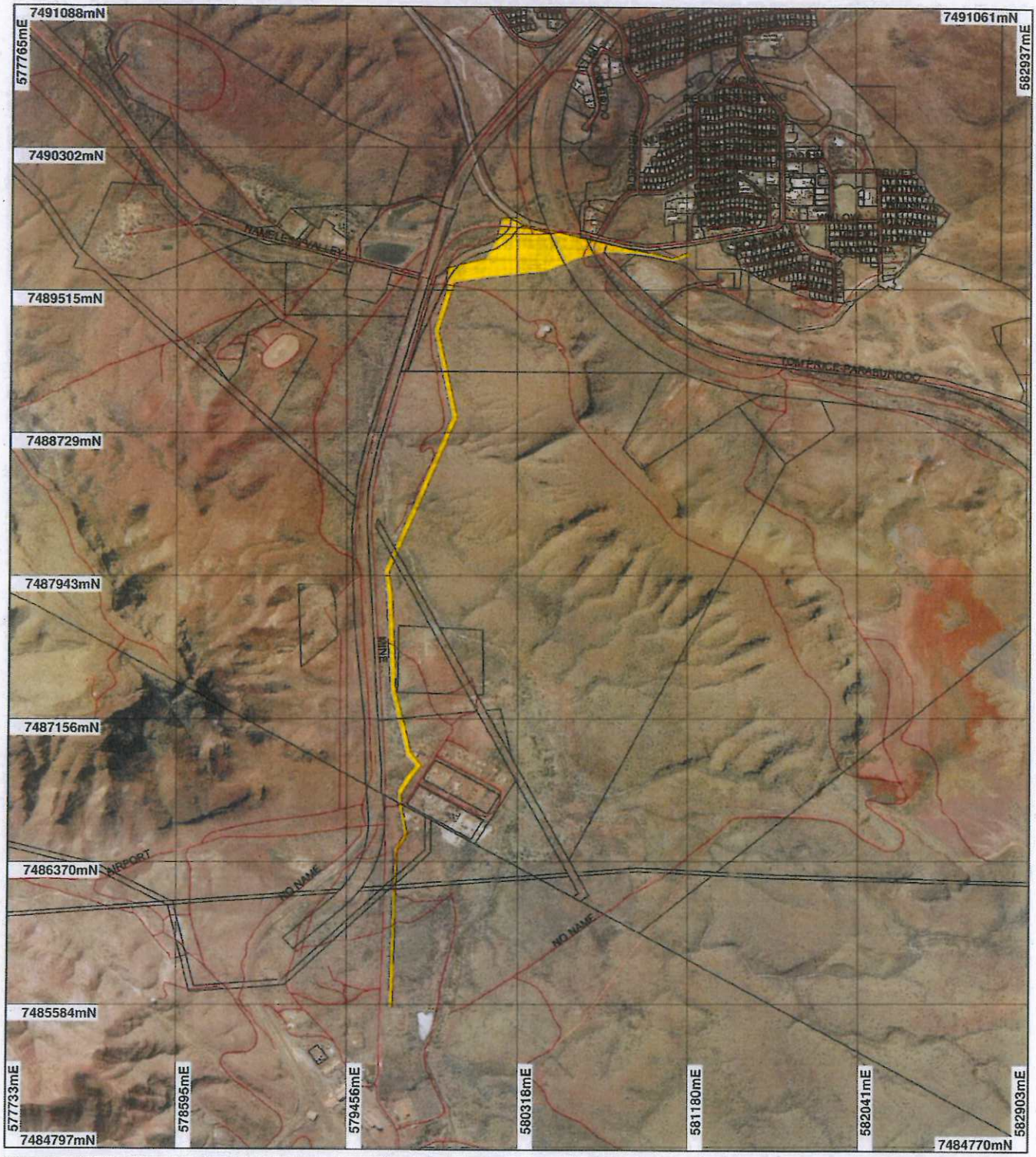
(a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
  (i) of records required under condition 10 of this Permit; and
  (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
(b) Prior to 20 March 2016, 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.

Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

Officer delegated under Section 20
of the Environmental Protection Act 1986

26 May 2011

Plan 4317/1



LEGEND

Clearing Instruments

- Areas Approved to Clear
- Road Centrelines
- Cadastre

Mount Lionel 50cm Orthomosaic - Landgate 2004

N

0 ~750 m

Scale 1:28751
(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 26/5/14

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 acknowleged by the agency acronym in the legend.

Department of Environment and Conservation

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Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4317/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Hamersley Iron Pty Ltd

1.3. Property details

Property: LOT 26 ON PLAN 241873 (TOM PRICE 6751)
LOT 10 ON PLAN 241873 (TOM PRICE 6751)
ROAD RESERVE (TOM PRICE 6751)
LOT 20 ON PLAN 47816 (TOM PRICE 6751)
LOT 3000 ON PLAN 44791 (TOM PRICE 6751)
LOT 3013 ON PLAN 44791 (TOM PRICE 6751)
LOT 56 ON PLAN 216344 (TOM PRICE 6751)
LOT 36 ON PLAN 51845 (TOM PRICE 6751)
UNALLOCATED CROWN LAND (MOUNT SHEILA 6751)
LOT 8 ON PLAN 241372 (MOUNT SHEILA 6751)
LOT 358 ON PLAN 58290 (MOUNT SHEILA 6751)
LOT 3007 ON PLAN 58290 (MOUNT SHEILA 6751)

Local Government Area: Shire of Ashburton

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 26 May 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 has been identified as Beard Vegetation Association 567, which is described as 'Hummock grasslands, shrub steppe; mulga & kanji over soft spinifex & Triodia basedowii' (Shepherd, 2009).	The 8 hectares of native vegetation under application ranges in condition from Excellent to degraded. The proposed powerline route intersects roads, access tracks and the Tom Price Industrial Area, these areas of disturbance are in a degraded condition and weeds are prevalent.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994) To Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition of the vegetation under application was determined via digital imagery (Mount Lionel 50cm Orthomosaic - Landgate 2004) and through supporting information provided by the applicant.

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 proposal is to clear 8 hectares of native vegetation for the purpose of installing a 33kV powerline, access tracks and associated activities. The proposed powerline links the town of Tom Price and Rio Tinto's Tom Price minesite. The proposed powerline will occur within the existing powerline corridor which intersects roads, tracks, a railway bridge and the Light Industrial Area (Pilbara Flora, 2011).

The local area (20km radius) is well vegetation containing approximately 98 vegetation cover.

Priority flora identified within the local area (20km radius) includes; Acacia bromilowiana, Astrebla lappacea, Dampiera anonyma, Goodenia sp. East Pilbara, Indigofera ixocarpa, Olearia mucronata, Ptilotus subspinescens, Scaevola sp. Hamersley Range basalts, Sida sp. Hamersley Range, Spartothamnella puberula and Stylidium weeliwolli.

A vegetation and flora survey conducted by Pilbara Flora (2011) did not identify any rare or priority flora within the application area.

The relatively small area which will be disturbed by the proposed clearing is not likely to have any impact on conservation significant fauna as the fauna habitats within the clearing area are well represented elsewhere in the region.

The disturbance resulting from the proposed clearing will increase the risk of weeds spreading into adjacent land. A weed condition will assist in mitigating this risk.

The application area is unlikely to represent an area of higher biodiversity value when compared to representative vegetation in a local and regional context.

Considering the above the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:
Pilbara Flora (2011)

GIS Databases:
- Mount Lionel 50cm Orthomosaic - Landgate 2004
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - accessed May 2011

(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

A search of NatureMap (DEC, 2007) identified the following conservation significant fauna within the local area (20km radius);
Liasis olivaceus subsp. barroni (Olive Python)
Falco peregrinus (Peregrine Falcon)
Falco peregrinus subsp. macropus
Amytornis striatus subsp. striatus
Ardeotis australis (Australian Bustard)
Leggadina lakedownensis (Short-tailed Mouse)
Pseudomys chapmani (Western Pebble-mound Mouse)
Sminthopsis longicaudata (Long-tailed Dunnart)

The fauna habitats within the area proposed to be cleared are well represented elsewhere within the local and regional area, and no significant loss of habitat for fauna indigenous to Western Australia is expected. The proposed clearing will not sever any wildlife corridors and therefore the clearing will not remove an ecological linkage that is necessary for the maintenance of fauna.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:
DEC (2007)

GIS Databases:
- Mount Lionel 50cm Orthomosaic - Landgate 2004
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - accessed May 2011

(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

Within the local area (20km radius) five records of rare flora, Lepidium catapycnon were identified.

Lepidium catapycnon is described as an open, woody perennial, herb or shrub which occurs on hillsides (WA Herbarium, 1998 - 2011).

The area under application was surveyed for rare flora by Pilbara Flora in January 2011 and did not identify any rare or priority flora within the survey area.

Therefore, the proposed clearing is not likely to be at variance to this clearing principle.

Methodology

References:
Pilbara Flora (2011)
WA Herbarium (1998 - 2011)

GIS Databases:
- Mount Lionel 50cm Orthomosaic - Landgate 2004
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - accessed May 2011

(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

No records of threatened or priority ecological communities have been recorded within the local area (20km radius).

Therefore, the proposed clearing is not likely to be at variance to this clearing principle.

Methodology

GIS Databases:
- Mount Lionel 50cm Orthomosaic - Landgate 2004
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - accessed May 2011

(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 at variance to this Principle

	Pre-European (ha)	Current extent (ha)	Remaining (%)
IBRA Bioregions*			
Pilbara	17 804 193	17 785 000.8	99.89
Shire*			
Ashburton	10 086 658.59	10 050 099.32	99.64
Beard Vegetation Association*			
567	777 506.85	777 506.85	100
Beard Vegetation Association within Bioregion*			
567	776 823.96	776 823.96	100

*(Shepherd et al. 2009)

Vegetation within the local area (20km radius) is well represented with approximately 98 per cent of its pre-European extent remaining.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

Considering the limited extent of proposed clearing and that the vegetation within local area is represented well above the national objective of 30 per cent, the applied area is not considered to significant as a remnant in an extensively cleared landscape.

This proposal is not at variance to this clearing principle.

Methodology

References:
Commonwealth of Australia (2001)
Shepherd (2009)

GIS Databases:
- Local Government Authorities - DLI 8/07/04
- Mount Lionel 50cm Orthomosaic - Landgate 2004
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - accessed May 2011

(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 at variance to this Principle

Four un-named watercourses occur within the powerline route. Pilbara Flora (2011) have stated that two of these watercourses have defined creekbeds of between 8m and 10m in width with fringing 'white-gum' Eucalyptus spp. woodlands (Eucalyptus camaldulensis subsp. obtuse and Eucalyptus victrix. Two minor creeklines also intersect the application area. All watercourses and drainage lines which intersect the application area connect with a major water course which is located just north of the area under application (Pilbara Flora, 2011).

Permit conditions will assist in preventing riparian vegetation being cleared.

No wetlands were identified within the local area (20km radius).

Considering the above the proposed clearing includes vegetation which is growing in association with a watercourse. Therefore, the proposal is at variance to this principle.

Methodology

References:
Pilbara Flora (2011)

GIS Databases:
- Hydrography, linear - DoW 13/7/06

(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 area under application is mapped as soil types Fa15 and Oc68 which Northcote (1960-68) describes as;

Fa15: Ranges of basalt along with shale, chert, jaspilite, and dolomite; some narrow winding valley plains. The soils are frequently shallow and there are extensive areas without soil cover: chief soils are shallow stony loams (Um5.51) along with (Um6.23) soils. (Dr2.33) soils occur on lower slopes extending onto the narrow valley plains where they are associated with (Uf6.71) and (Um5.52) soils.

Oc68: Dissected stony pediments with some steep stony hills: chief soils are hard alkaline red soils (Dr2.33) but quite large areas of hard neutral red soils (Dr2.32) occur too. There are also significant areas of (Um5.5) soils.

The area under application is quite resistant to erosion due to the stony nature of the soils.

Given the long linear nature of the proposed clearing area and the fact that it is surrounded by a large intact remnant appreciable land degradation is not likely to occur.

This proposal is not likely to be at variance to this clearing principle.

Methodology

References:
Northcote et al. (1960 - 1968)

GIS Database:
- Average Annual Rainfall Isohyets - WRC 29/09/98
- Hydrogeology, Linear - DOC13/07/06
- SAC Biodatasets - accessed May 2011
- Topographic contours statewide - DOLA and ARMY 12/09/02

(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

The nearest conservation estate is Karijini National Park, which is situated approximately 11.5 kilometres west of the application area. Based on the distance between the proposed clearing and the nearest conservation area, the proposal is not likely to impact on the environmental values of Karijini National Park.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

GIS Databases:
- DEC Managed Lands & Waters - DEC 28/10/09
- Mount Lionel 50cm Orthomosaic - Landgate 2004
- Pre-European vegetation - DA 01/01

(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 may be at variance to this Principle

The area under application is intersected by several un-named, non perennial watercourses. The proposed clearing may see an increase in sediment levels in surface water run off. All watercourses and drainage lines which intersect the application area connect with a major water course which is located just north of the area under application (Pilbara Flora, 2011). This larger water course runs through the Tom Price town site before passing the application area then into the King's Lake artificial lake system which is located approximately 2.8km downstream from the application area (Pilbara Flora, 2011). The runoff from the application area is mixed with the runoff from the townsite before entering King's Lake. Therefore the runoff from the application area is entering a lake system which already contains poor water quality (Pilbara Flora, 2011). Although King's Lake may already contain poor water quality the proposed clearing has the potential to further degrade surface water quality.

The existing vegetation consists mainly of shallow rooted grasses and shrubs with minimal tree root systems, thus the proposed clearing of vegetation is unlikely to significantly affect the level of the ground water table.

Considering the above surface water quality may be compromised, therefore the proposed clearing may be at variance to this principle.

Methodology

References:
Pilbara Flora (2011)

GIS Database:
- Hydrography, linear - DOW 13/7/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Pre-European vegetation - DA 01/01

(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

Natural flood events do occur in the Pilbara region following cyclonic activity. However, the proposed clearing is not expected to increase the incidence or intensity of such events given the size of the area to be cleared (8 hectares).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

GIS Database:
- Hydrography, linear - DoW 13/7/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The area under application falls within the Pilbara groundwater area which is an area proclaimed under the Rights in Water and Irrigation Act 1914.

The applicant has a Licence to Occupy Crown Land (Licence Number: Lic 00616-1983_5_67), in accordance with Section 91 of the Land Administration Act 1997 (WA).

There are no known Aboriginal Sites of Significance within the application area.

Native Title: The applied area is within the boundaries of the Eastern Gurrma Native Title Claimants area of interest. The claimants and their representatives have been notified of this proposal. No comments have been received

Methodology

GIS Database:
- Native Title Claims - LA 2/5/07
- RIWI Act, Groundwater Areas - DoW 13/07/06
- RIWI Act, Surface Water Areas - DoW 13/07/06
- Town Planning Scheme Zones - MFP 31/08/98
- Aboriginal Sites of Significance 26 April 2007

4. References

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

DEC (2007) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: http://naturemap.dec.wa.gov.au/. Accessed May 2011

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

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.

Pilbara Fora (2011) Flora and Vegetation Surveys for the Paraburdoo Magazine and the Tom Price Powerline Infrastructure Areas. Supporting Information for Clearing Permit Application CPS 4317/1. Prepared for Rio Tinto Iron Ore. January 2011. DEC Ref: A386359.

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.

Western Australian Herbarium (1998- 2011) FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.dec.wa.gov.au/ (Accessed May 2011).

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)